Examining the Characteristics of Wildlife Tourists and their Responses to Australian Wildlife Tourism Experiences

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STATEMENT OF ACCESS

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ABSTRACT

Wildlife tourism has attracted increasing academic and industry attention in recent times. There is a general consensus that wildlife tourism is a substantial industry, and consequently there is a need for greater understanding of both visitors and wildlife to ensure sustainable progress. While there has been a dramatic increase in wildlife tourism literature over the past decade, one of the major criticisms levelled at the existing body of research is the lack of conceptual or theoretical basis. Most studies are site specific and focus on particular species, visitors or settings. Consequently, the ability to generalise results is limited.

The overall aim of this thesis is to identify features of successful wildlife tourism experiences from the perspective of the visitor, and apply appropriate theory to explain why these features are important. Features suggested by reviewing the literature were organised broadly into four categories, namely:

- features of the setting,
- characteristics of the tourists,
- features of the wildlife that make them attractive to visitors, and
- features of the interpretation available at the site.

These four dimensions were used to guide the direction of research and the organisation of results in this thesis. In addition to reviewing specific studies of wildlife tourism, the wider recreation and tourism literature was examined for potential theories that may assist a broader understanding of wildlife tourism.

The first study in this thesis had two broad aims. The first aim was to identify which features of the experience were important to visitors and to begin to assess the relative importance of these features. The second aim was to begin an examination of the usefulness of various theories for explaining why these features were important. The study (n=790) asked respondents to describe their best and worst wildlife experiences in an open-ended survey. A qualitative approach was considered valuable for obtaining a respondent-generated list of features and to set the context for more quantitative steps. From these open-ended descriptions, recurring themes were identified. These included interacting with wildlife, being in the natural environment, and learning about wildlife. Further analysis indicated that the theory of 'Mindfulness' (Langer, 1989) was a useful explanatory framework, and that the concept of 'Recreation Specialisation' (Bryan, 1979) was worthy of further research attention.

Using the list of features from the first study, a structured questionnaire was developed. This was applied to visitors in a captive wildlife setting (n=957) and a non-captive setting (n=710). The aim of these studies was to examine the relative importance of features both overall and between different groups of visitors. These studies confirmed the importance of the natural environment, and in captive settings, the issue of animal welfare was paramount. Visitors were segmented according to their level of 'interest in wildlife viewing', as this was a key variable in identifying visitors with different levels of specialisation. Across the two studies there were some results that were consistent with the Specialisation framework, however overall the results were inconclusive. The specialisation framework showed potential for

explaining differences in preferences for wildlife tourism experiences, but further research in defining specialisation amongst visitors was required.

In the final study (n=403) a more focussed examination of specialisation amongst wildlife tourists was conducted. Several indicators of specialisation were identified from the literature, and these variables identified significant differences between respondents. However, when the specialisation groups were compared on dependent variables such as preference for wildlife tourism scenarios and participation in interpretive activities, few significant differences were found. The study concluded that while it is possible to identify visitors with varying levels of specialisation in wildlife tourism, this framework is of limited value in explaining differences in preferences for wildlife settings and participation in other wildlife tourism related activities.

Overall, these studies show that wildlife tourists have much in common. Viewing wildlife is considered to be an enjoyable activity, and features such as natural environments, viewing animals in their natural habitats, interacting with wildlife, and learning about wildlife are central and critical components of the wildlife experience. The theory of Mindfulness was considered to be a useful framework for understanding successful wildlife experiences, and a Mindfulness model for wildlife tourism experiences was proposed.

Parts of this thesis have been published in refereed journals and proceedings. References for these are:

Woods, B. (1998). Animals on display: Principles for interpreting captive wildlife. *Journal of Tourism Studies, 9* (1), 28-37.

Woods, B. (2000). Beauty and the beast: Preferences for animals in Australia. *Journal of Tourism Studies, 11* (2), 25-35.

Woods, B (2001). Wildlife tourism and the visitor experience at Flinders Chase National Park, Kangaroo Island. *Proceedings of the Eleventh Australian Tourism and Hospitality Research Conference,* February 2001, Canberra, pp. 377-393.

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STATEMENT OF SOURCES

DECLARATION

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

All research procedures reported in this thesis have received the approval of the Ethics Review Committee (Human Ethics Sub-Committee) of James Cook University.

Signature

3 February 2003
Date

CHAPTER ONE

Animals, People and Tourism

1.1 Why Study Wildlife Tourism?

1.1.1 Background and definitions

The phenomenon of wildlife tourism is one that has attracted increasing academic and industry attention. This increased focus is set in the context of the growing environmental awareness of the general public (Shackley, 1996, Wright, 1992). People are generally indicating a positive attitude toward the environment (Tarrant, Bright &, Cordell, 1997; Kellert, 1996) and environmental issues are receiving more attention in the media and educational curriculums in schools (Newby, 1999). Activities such as hunting, trapping and use of animals in research have come under considerable public criticism from those concerned with animal welfare (Schmidt, 1989). Because people can identify with the plight of animals, they have become the focus for environmental conservation movements, and much wildlife tourism focuses around endangered or threatened species (Shackley, 1989). Greaves, Stanisstreet, Boyes & Williams, (1993) found that when discussing conservation, children most frequently mention large animals with a high public profile, for example elephants, whales and pandas. In addition to the uniqueness of these animals, this reflects the media attention that has been concentrated on conservation of these species.

Developing alongside this new environmental awareness has been the emergence of 'new' tourism forms such as ecotourism. Variously labeled 'alternative tourism', 'green tourism', appropriate tourism', and 'responsible tourism', the concept of ecotourism is to develop tourism opportunities in natural environments that is sustainable (Wight, 1993). Ecotourism can be defined as *"responsible travel to natural areas which conserves the environment and improves the welfare of local people"* (Western, 1993:8) and is believed by some to be a growing form

of tourism (Markwell, 1993, Orams, 1994). However, not all authors agree with this assessment of growth. For example, Blamey (1995) suggests that overall, little evidence exists to support the claim that nature-based tourism and ecotourism is growing at a rate higher than Australian inbound tourism as a whole. All estimates of growth, and comparisons between estimates, must be viewed with caution as they depend heavily on which activities and tourism ventures are included as 'ecotourism'.

Wildlife tourism is connected to ecotourism, because many ecotourism experiences include wildlife as a valuable dimension of the experience (Davies, 1990; Beaumont, 1998; Russell & Ankenman, 1996; Hvenegaard, 1994), and wildlife is usually closely connected to natural environments. However, not all wildlife tourism opportunities can be considered ecotourism under the definitional constraints of 'conserving the environment' and 'contributing to local communities'. Like ecotourism, wildlife tourism has developed as a special interest tourism segment, and benefited from modern attention to environmental issues. In the mid 1900's, human interactions with wildlife typically involved the death (primarily through hunting) or removal of organisms from their habitats (Duffus & Dearden, 1990). Over the past two to three decades, the relationship has evolved to one where increasing numbers of people are seeking to view and interact with wildlife in non-consumptive ways (Duffus & Wipond, 1992; Amante-Helweg, 1996). This change has been a catalyst to the growth and development of wildlife tourism worldwide.

The development of whale watching is a case in point for these changes. From a background of extensive worldwide hunting of whales for human consumption, the widespread publicity of the 'save the whale' movement in the 1980's marked a change in the tide of public opinion – *"almost overnight, creatures that were widely considered to be consumable resources and an object of fear were being promoted as gentle, social and intelligent victims of cruelty and mindless over-exploitation"* (Hodda, 1996:25). Whales, from once having the dubious distinction of being among the most persecuted of animals in the eighteenth, nineteenth and early twentieth centuries, have been the center of profound attitudinal change in the

late twentieth century, and this has transformed them into a powerful symbol for wildlife protection and restoration (Kellert, 1996).

Today, wildlife tourism has many forms, encompasses a range of experiences from luxury safaris to wilderness backpacking, and includes visits to local national parks or trips to zoos and sanctuaries (Shackley, 1996). It includes a wide range of both terrestrial and aquatic wildlife species, and recent years have witnessed a growing interest in observation of butterflies and other invertebrates (Kellert, 1996). Wildlife tourism spans all types of tourism venture, from large to small, land-based to water-based, single site to multiple site, day operations and night operations. It can be casual and locally based, it can be an incidental part of a longer trip (Roe, Leader-Williams & Dalal-Clayton, 1997), or it can be purposeful and involve a considerable outlay of time, expense and equipment (Kellert, 1996; Duffus & Dearden 1990). Higgingbottom (1999:6) offers the following definition of wildlife tourism: "*Tourism based on interactions with wild (non-domesticated) animals, whether in their natural environment or in captivity. It includes 'non-consumptive' activities like viewing, handling and photographing, and 'consumptive' activities like fishing and hunting.*"

The inclusion of consumptive activities has been a source of contention, and has been excluded from many definitions of wildlife tourism. Some authors (Duffus & Dearden, 1990; Tilt, 1987), have argued that non-consumptive forms do not exist in reality because all contact with wildlife has the potential to cause impacts. Indeed, some wildlife tourism operators or tourists themselves may harrass or cause detriment to wildlife in the search for close viewing or photography. With reference to birdwatching, Kellert (1996, p82-83) notes "*birding is not an intrinsically benign or inconsequential activity. Birders and other wildlife observers can trample vegetation, damage habitat, cause soil erosion, disturb and harass animals, and even directly harm wildlife*". There is also the argument that controlled hunting can be sustainable, by keeping wildlife population numbers at a level that provides benefit to the habitat and health of the total wildlife population.

While recognising the existence and importance of consumptive activities, this thesis will focus on what is generally regarded as non-consumptive wildlife tourism, or rather, tourism that is not intentionally consumptive. The common thread within the diversity of wildlife tourism ventures under the definition used in this thesis is that wildlife is an essential component of the experience. In other words viewing, or seeking to view or interact with animals, is a necessary condition for an activity to be considered 'wildlife tourism' in this thesis. The definition of wildlife tourism adopted is therefore ***tourism based on viewing or seeking to view wild, non-domestic animals in both captive and non-captive settings, where the aim is to view or interact with animals in a manner that does not intentionally cause detriment to wildlife or habitats.***

1.1.2 Estimates of growth in wildlife tourism

There is a common opinion that people are "*increasingly interested in active, experiential and educational activities involving wild animals in their natural habitat*" (Amante-Helweg, 1996:131; Roth & Merz, 1997). Some figures from international sources provide support for the claim that wildlife tourism is a substantial sector of the tourism industry. For example, a 1994 Gallup survey found that 90% of UK holidaymakers believed that enjoyment of wildlife was a holiday priority (Roe, et.al., 1997). Between 1980 and the mid 1990's, around 16% of the US population (16 years and over) took trips away from home with the main purpose being the observation, photography and feeding of wildlife (US Department of the Interior Fish and Wildlife Service, 1991). In an Australian example, a 1998 survey of visitors to Queensland found that 79% were interested in seeing animals in the wild, while 56% actually had viewed animals (Tourism Queensland, 1999). Some authors estimate that wildlife tourism accounts for 20-40% of international tourism, and the scale of wildlife tourism is even greater if domestic visitors are included (Roe, et.al., 1997). Kellert (1996) cites studies which estimate nature and wildlife tourism as accounting for 10% of the $300 billion world tourism market, growing at an estimated rate of 10% to 20% in recent years (see also Barney, Burgess & Pearce, 1992). America's national parks accommodate some 300 million visitors per year, and in countries such as Kenya,

wildlife viewing has become the single biggest contributor to foreign exchange earnings (Kellert, 1996, p79).

There are also numerous specific case studies and examples that illustrate the growth of some types of wildlife tourism. Using an Australian example, whale watching in Hervey Bay attracted 83,000 visitors in 1997, and growth was estimated to be at around 10% per year (Stirling, 1998, QTTC, 1998). Worldwide, between 1991 and 1994 the number of whale watching participants grew at a rate of 10.3% per year, reaching 5.4 million in 1994 (Hoyt, 1996). Between 1977 and 1985, participation in birdwatching, wildlife photography and wildlife observation increased by over 30% in the United States (Hammitt, Dulin & Wells, 1993). Shackley (1996) provides other worldwide examples of wildlife based tourism growing in terms of both tourist numbers and revenue. Furthermore, participation in fishing and nonconsumptive wildlife-dependent recreation is projected to more than double in the next 50 years in the United States (Flather & Cordell, 1995).

However, there are a number of problems associated with the widespread optimism regarding the growth of wildlife tourism (Moscardo, Woods & Greenwood, 2000). Firstly, there are many instances of authors simply stating that wildlife tourism is growing, and quoting other authors who have made the same claim, thus perpetuating a belief that has limited empirical support. Where references are made to data sources, these are often old. Secondly, figures showing increase in a particular type of wildlife viewing activity (for example whale watching) are often extrapolated to encompass wildlife tourism in general. Thirdly, the use of the US Fish and Wildlife Service surveys is particularly common (see Duffus & Dearden, 1990; Duffus & Wipond, 1992; Hammitt, Dulin & Wells, 1993; Whittaker, 1997; & McFarlane, 1994). Yet the surveys used are often old, and include recreational activities pursued within one mile of the of the respondent's residence. While non-residential wildlife recreation did increase between 1980 and 1990, the most recent surveys indicated a decline over the period 1990-1994 (US. Department of the Interior Fish and Wildlife Service, 1991, 1996). The 1996 report indicated that there was a substantial 21% decline in non-residential wildlife viewing during this time.

Another major difficulty associated with estimating the growth or value of wildlife tourism is the inconsistency with which wildlife tourism is defined (Kellert, 1996). The sources referred to above vary in the ways they define wildlife tourism. For example, some figures exclude captive animals (even those which free-range in large protected areas), while others include the consumptive activities of fishing and hunting. Some figures include residential based wildlife viewing, and others exclude wildlife viewing that is not commercial in nature. Overall, the lack of consistency in definitions makes meaningful comparisons of data sources difficult.

A further inadequacy of growth figures is the inability to capture the less direct contributions of wildlife and wildlife tourism. Even for visitors who may not directly participate in wildlife tourism, wildlife may play an important role in the imagery that attracts them to destinations. In Australia, the koala appears to have achieved iconic status as a symbol of Australia being a land of exotic, fascinating and attractive creatures, set in a natural environment (Hundloe & Hamilton, 1997). A 1997 study of outbound tourists revealed that wildlife influenced 22% of visitors to come to Australia, 72% of visitors wanted to see koalas, and 66% wanted to see kangaroos. Hundloe & Hamilton (1997) suggest that tourist revenue from koalas alone is $1.1 billion annually (1997 figures), and directly accounts for 9,000 jobs. According to Buchanan (1996), the koala is *"an international celebrity that the Australian Tourism Commission counts as priceless in terms of tourism"* (p2).

1.1.3 Overview of existing wildlife tourism research

Despite the optimistic perception on the growth and significance of wildlife tourism, research on a broad level has been relatively scarce. Little is known about the specific needs and preferences of wildlife viewing recreationists (Martin, 1997). At present, it is mostly confined to numerous site-specific examples and case studies of wildlife tourism, with little in the way of theoretical bases or attempts at integration. Few substantive generalisations can be made from the literature, and a great deal of research has been descriptive and lacking in conceptual foundation or theory development (Manfredo, Vaske & Decker, 1995). Little is known about the viewing habits, interests, motivations or attitudes of

wildlife tourists outside of specific groups such as birdwatchers (Wright, 1992; Manfredo, Vaske & Decker, 1995; Pearce & Wilson, 1995). In particular, there has been little work done in an Australian context, with most of the studies conducted overseas. Because the types of animals and the cultural perceptions of animals vary between countries (Bart, 1972; Kellert, 1991b; Newby, 1999), many international examples may have limited application in an Australian context.

The need for research extends beyond academic interest in a growing market, to concern over sustainability of tourism. Little is known about tolerance levels for wildlife tourism, or the impacts it may have on the habitats and animals in focus. Some of the documented impacts that have occurred in wildlife tourism destinations include disturbance of wildlife, injury or death to wildlife, modification of/damage to natural habitats, behaviour changes such as disruption of feeding/ breeding patterns, or habituation to human presence. (e.g. Shackley, 1996; Galacia & Baldassarre, 1997; Klein, Humphrey & Percival, 1995; Flather & Cordell, 1995, Burger, Gochfeld & Niles, 1995; Reynolds & Braithwaite, 2001). Some authors suggest that the impacts from tourists interested in observation and photography of wildlife are disturbing, because they seek and approach wildlife, and encounters are frequent and of longer duration (Boyle & Samson, 1985, Knight & Cole, 1995). A review of 166 articles by Boyle & Samson (1985) found that in nonconsumptive outdoor recreation involving wildlife, 81% of cases had negative effects on the wildlife.

On the other hand, some wildlife tourism operations appear to have minimal negative impact on the wildlife and environment. For example, some species of whales and dolphins voluntarily approach whale watching vessels and appear playful or inquisitive, and some studies conclude that there is no noticeable negative impact (Barstow, 1986). A comprehensive review of the possible impacts of wildlife tourism can be found in Roe et.al, (1997); Boyle & Samson (1985); Roggenbuck (1992) and Shackley (1996). The conclusion drawn from these studies is that assessment of impact on wildlife from wildlife tourism needs to be conducted on a case-by-case basis, as it depends on a complex interplay of factors (Klein, Humphrey & Percival, 1995; Wright, 1992; Knight & Cole, 1995).

Despite the difficulty of assessing impacts, there is a recognition that tourism of a sustainable nature is essential for the wellbeing of the environment, the host communities and the economic viability of the tourism industry (WTO, 1997). Wildlife tourism can have an important contribution to the sustainable management of protected areas, through creation of revenue, employment, improved conservation and stimulation of economic activity (Roe et.al., 1997). The importance of human factors in the conservation and sustainable development equation is increasingly recognised, as opposed to a sole emphasis on biological issues (Jacobson & McDuff, 1998). Manfredo, Vaske & Decker (1995) argue for such a human dimensions approach. They define this as the *"acquisition of sound information that explains human thought and action regarding wildlife using the concepts and methods of social science"*(p17); which is followed by a consideration of how to use that information in wildlife decision making.

The need for research in wildlife tourism is clear on a number of levels. Wildlife tourism is a substantial component of the tourism industry, and has the potential to foster environmental awareness and contribute to conservation. It has many forms, encompasses many ventures, and attracts a diversity of visitors. It involves a range of habitats and species of wildlife, and has potential to contribute to negative impacts and damage to wildlife and environments. Yet there is a lack of broad understanding of wildlife tourists and what they are seeking in their experiences. The challenge is to identify what constitutes a high quality experience for visitors, thus enabling operators to make informed decisions on the type and structure of experience they provide. This in turn will contribute to the sustainability of wildlife tourism.

1.1.4 The wildlife tourism experience – structure of literature review

In general, there has been little research conducted into the experience of the wildlife tourist. However, directions and partial answers can be gained from considering three levels of inquiry. These levels are overlapping rather than discrete categories, and they progress from a general to a more specific focus for research.

a) **The human – animal relationship**. There has been a range of studies conducted on the broad topic of humans' relationship with animals, and this is particularly the case for domestic animals. This provides a context for study of the tourist-wildlife experience, and assists in understanding human attraction to animals and wildlife. Wildlife tourism is set within the long history of human association with animals in the home, work, in medical fields, and in the media.

b) **The human-wildlife relationship**. This level moves away from considering domestic animals, and focuses on wild animals. Research has been conducted on people's attitudes and perceptions of wildlife, and the features of animals which make them attractive to people.

c) **The tourist-wildlife experience**. This level looks specifically at wildlife experiences in tourism settings. It includes visitor characteristics and preferences for wildlife tourism, particularly in terms of their levels of specialisation. Other important factors include features of the wildlife tourism experience that visitors find appealing, and the importance of education and interpretation. This level has received the least integrated, broad scale and conceptually based research attention.

Consideration of the information categorised into these three levels of inquiry provides direction for the study of wildlife tourism.

1.2 The Human – Animal Relationship

1.2.1 The social context of human-animal relations

The belief that contact with nature is good or beneficial to humans is an old and widespread notion. Part of the justification for the development of parks and natural areas has been the idea that nature fosters psychological and physical wellbeing (Ulrich, 1993). The term "biophilia" is used to refer to the innate attraction people hold towards animals and nature in general (Wilson, 1984). The biophilia hypothesis suggests that human reliance on nature extends beyond material needs to encompass a "*fundamental physical, emotional, and intellectual dependence on nature and living diversity. Above all, the meaningful and satisfying experience of these values may represent a vital expression of healthy human functioning and relationship to the natural world. Conversely, the erosion of this dependence on nature might signify considerable risk to humans materially, affectively, cognitively, and even spiritually*" (Kellert, 1996, p7). This theory proposes that humans have a genetic basis for what we refer to as instinct, and these inherited tendencies include responses to natural settings (Newby, 1999). Explanations in support of a biophilia hypothesis include evolution, culture, religion, and emotional compensation for the alienation of industrialised societies from nature (Roth & Merz, 1997; Wilson, 1984; Newby, 1999).

Whatever the basis for this attraction, it sets the scene for human involvement with animals. Arluke & Sanders (1996) highlight the complexity and intensity of the relationships and interactions between humans and animals by use of some interesting figures:

> *" What does it mean that zoos draw far more people than professional sporting events...or that pet owners spend more on animal food than parents spend on baby food...or that by the 1980's the US Congress was receiving more letters about animal welfare than any other issue?"(Arluke & Sanders, 1996:1).*

These authors delve into the social attitudes concerning animals, and find surprises and contradictions. For example, why is it that people take pets into their homes and transform them into family members who are *"named, fed, groomed, dressed, photographed, talked to, mourned, slept with, given birthday parties and taken to 'therapists' for behaviour problems"*? (p10). Why is it that human emotional response to the death of a pet can often be as intense as it is when a family member dies (Arluke & Sanders, 1996)? Why is it that the custody of the pet is one of the bigger bones of contention in a divorce, or that 41% of people let their pets sleep on their beds? (Newby, 1999). The reasons for attachment to animals are varied, but the evidence is widespread. Animals (particularly dogs) are being made welcome in hospitals, nursing homes, shelters and recently, in public schools. Their presence and behaviour provides comfort, affection and other psychological benefits (Wendt, 1996). Based on routine and established interactions with their pets, owners come to regard their animals (particularly dogs) as *"unique individuals who are minded, empathetic, reciprocating and well aware of basic rules and roles that govern the relationship"* (Sanders, 1993:207). The relationship is certainly reciprocal. Not only do humans develop strong attachment to their canine 'friends', but dogs' *"obsession with human company is legendary. Dogs can literally pine to death at the loss of their owner"* (Newby, 1999, p149).

While dogs and other pets may have human-like qualities and actions, they are not usually considered as literally human (Sanders, 1993). Hickrod & Schmitt (1982 in Arluke & Sanders, 1996) affirm that pets usually fall short of being considered absolutely human-like and taking a place as a fully fledged family member. This is mainly because of ever present 'frame breaks' such as the instances where pets vomit in the living room, eat their own excrement or mate in public. They are, at best, make believe family members. Regardless, animals are commonly seen as objects of affection or loved ones, and can induce strong manifestations of emotion (Kellert, 1996). This is reflected in their portrayal in the media, where a study found that the most frequent theme of animal articles focussed on affection between people and animals, and the most common animal featured was a dog (Herzog & Galvin, 1991).

Despite the strong attraction that exists between humans and companion animals, there is a further contradiction within this relationship. This centres on the long and continuing history of cruelty to animals. In eighteenth century Britain, animal cruelty was widespread, and the British were known throughout Europe as the 'hell of horses' (Newby, 1999). The streets were full of neglected animals, and sports like bull baiting and sport fighting were fully supported by British parliament. There were, however, voices of opposition to these activities, and in 1820, the first Act to prevent animal cruelty to livestock and draught animals was passed. In the 1830's, legislation was passed to protect bulls, and later the comprehensive prevention of cruelty to animals Acts were introduced. These Acts characterise the Western legislative frameworks of today. Today, people can, and frequently are, prosecuted for acts of cruelty towards animals. Despite these measures and the supposedly strong attachment society has toward its pets, companion animals are still treated cavalierly. In 2000, the RSPCA in Australia received 138, 607 animals, including 67,204 dogs and 50,485 cats. Fewer than a third of the unwanted pets found new homes, and 55,000 were destroyed (Cosic, 2001). These figures serve to highlight the complexity and contradictions inherent in the human-animal relationship.

1.2.2 Emotional, social and health related benefits of animals

The help and comfort provided by animals can be particularly powerful for people in need. The following excerpt illustrates the depth of attachment that can be felt by humans to their animal companions:

> *In my early twenties, after a suicide attempt, I was under treatment for depression. For two years I received shock treatment and extensive medication, and I never left the house except to visit the therapist. Those are lost years to me now, but I wanted to tell you about Sunshine. She was a small, white poodle with wild, untrimmed hair and an incredibly loving spirit. She was my only companion during those years, and the only living being that could connect with me.*

> *She'd sit in my lap, quiet, as I rocked her for hours in my room. I held her, hugged her, hummed, and whispered to her, and cried into her fur. At night, when it seemed like the whole world slept on without me, I'd bring her into my room and she'd keep watch with me against whatever I imagined was out there. She was the only truly safe being in my world.*
>
> *I'm in my forties now. Years of good health and deep faith have given me what I couldn't imagine at twenty. Sunshine left us a long time ago. Maybe she didn't 'heal' me, but she saved me so that with time and strength, I could heal myself.*
>
> (McElroy, 1996, p98)

Similar stories are told of the calming effects that pets can have on terminally ill or dying patients (McElroy, 1996). Newby (1999) argues that the need for pet ownership is increasing in the western world, due to reducing family sizes, the loss of extended families, high divorce rates, increasing urbanisation and the growing number of aged citizens. From 1995 figures, one in five Australian households is a one-person unit. People living alone also spend a lot of time alone, particularly the elderly. In a 1996 Australian Bureau of Statistics survey, people living alone spent an average of 16.9 hours a day alone, and this increased to 19.2 hours a day for the elderly (Newby, 1999). Pets can assist in filling shortfalls of human company, and thereby help to allay one of the worst enemies of the socially oriented human species: loneliness. As James Serpell (1986) suggests

> *"Dogs and cats have maintained popularity as animal companions not, primarily, because they are home loving, active during the day, non aggressive or easy to house-train...By seeking to be near us and soliciting our caresses, by their exuberant greetings and pain on separation, these animals persuade us that they love us and regard us highly...People need to feel liked, respected, admired; they enjoy the sensation of being valued and needed by others.....Our confidence, or self esteem, our ability to cope with the*

> *stresses of life and, ultimately, our physical health depend on this sense of belonging"* (p114-115).

In addition to providing company, animals can provide social and physiological benefits. For example, research shows that talking to and petting a dog results in lower blood pressure than does engaging in human conversation (Wendt, 1996). Pets can also reduce human heart rates, anxiety and depression (Wilson, 1994), and survival rates after heart attacks have been shown to improve by pet ownership (Friedman et. al., 1983; Freidman & Thomas, 1995). A number of clinical studies confirm positive responses through the use of animals for autistic children, (Redefer & Goodman, 1981) where the presence of animals resulted in focused attention, increased social responding, and, critically, speech (Katcher & Wilkins, 1993). These results are consistent for patients with a wide variety of functional mental disorders (Beck, Saradarian & Hunter, 1986; Katcher & Wilkins, 1993).

There is even evidence that pet ownership and the companionship of animals makes a difference in overall health (Seigel, 1990). For example, a major Melbourne-based study into cardiovascular disease found that pet owners had significantly lower systolic blood pressure and plasma triglycerides than non-pet owners, concluding that the impact of owning a pet was a 4% reduction in risk factors for heart disease. This was roughly equivalent to starting a low fat, low salt diet (Anderson, Reid & Jennings, 1992). In a long term study by Serpell (1991), nearly 100 non-pet owning volunteers were divided into three groups. One was given a cat, the second a dog, and the third group had no pet. At the beginning of the study they were given a health test. When the test was repeated at one month, the no-pet group stayed the same, but the dog and cat groups had less reported illness or complaints. By ten months, the cat group had increased the level of reported illness to almost that of the no-pet group, but the dog group had maintained their better general health (Serpell, 1991). Some authors suggest that the ownership of pets by 64% of Australian households saves Australians an estimated $2.2 billion per year in medical bills (Cosic, 2001).

Alongside health benefits, there is also evidence of social benefits associated with pet ownership. For example, adults in wheelchairs and people walking in parks receive a greater number of social acknowledgements when a dog is present than when no dog is present. (Serpell,1986; Messent, 1983). Both normal adults and handicapped children are more likely to be approached in social settings if they are in the presence of an animal (Hoyt & Hudson, 1980; Hart, Hart & Bergin, 1987, in Katcher & Wilkins, 1993). Newby (1999) suggests that the presence of a pet seems to 'normalise' social situations, acting like an 'ice-breaker' for social interaction. Overall, there is substantial evidence of social, medical and psychological benefits associated with contact with domestic animals. These serve to highlight the dominant and important roles that pets play in human lives.

1.2.3 The influence of culture

Time, place and culture are particularly influential for the development of attitudes toward, and relationships between animals and humans. Eating dogs is taboo in Western cultures, but commonplace in many Asian nations (Newby, 1999). In illustrating the influence of culture and media, Arluke and Sanders (1996) use the example of primates, which have been transformed from something exotic and wild to something tame and almost human. They cite the contribution of studies reported in popular magazines, documentaries and movies which give the impression of extreme similarity between the species; of studies in which primates were given names and their personalities described in human terms; and additional anthropomorphism from studies of animals in human settings. Gold & Benveniste (1995) support this empirically, with a study of visitors to a great ape zoo exhibit. They found that images of the ape species were dominated by perceptions of human-like characteristics, and visitors often spoke of connotations and impressions that were formed from watching films and television shows. The popular perception of whales has also been influenced by input from conservation groups and the media. This has encouraged a transformation of attitudes from viewing whales as a source of meat and blubber, to viewing them as a charismatic species that should be protected and admired (Ris, 1993). Photographs of animals in the tabloid press are often blatantly anthropomorphic, depicting animals

supposedly displaying human emotional characteristics such as affection (Herzog & Galvin, 1991). The consequence of such media, according to these authors, is a blurring of the border between humans and non-humans.

Permeating these discussions about human-animal relationships is the common belief that most humans have an innate interest in animals. Even babies and very small children appear to have an innate curiosity about animals (Durci, 1991). People are attracted to sharing their lives with pets because *"they perceive an animal's response to a caretaker, unlike the responses of fellow humans, as uniquely simple, honest, loving and undemanding"* (Arluke & Sanders, 1996, p4). This general attraction to animals may begin to explain why tourists are interested in observing or interacting with wildlife in a tourism setting. It is also possible that people's experiences and attitudes toward pets may influence their attitudes toward wildlife, which has relevance to the tourist-wildlife experience.

1.3 The Human-Wildlife Relationship

1.3.1. Attitudes toward wildlife

An important influence on the participation in and experience of wildlife is the attitude held toward animals. This is considered here in a broad sense, in terms of the attitudes held towards animals in general rather than specific species. The concept of attitudes refers to "broadly integrated feelings, beliefs and values possessed by individuals" (Kellert, 1980: 63). Attitudes are an evaluation or a feeling state about a person, object or action, and are often described as 'preferences', 'opinions', 'perceptions' or 'images' (Manfredo, Vaske & Decker, 1995). Some researchers contend that the foundations for attitudes are laid during early childhood, and the attitudes, values and beliefs developed during youth influence behaviour throughout adult life (Gray, 1993). Research points to the ages of ten to thirteen as the best for teaching children about wildlife (Gray, 1993). Attitudes may change over time, however there is usually a large degree of attitude stability. (Kellert, 1986). Attitudes are considered the preferred method of measurement because they are considered to be the specific indicators of broadly integrated feelings, beliefs and values (Gray, 1993; Kellert, 1980).

The complexity surrounding attitudes to animals is reflected in issues such as the use of animals in education and research. Studies show that children and adults do not have clear-cut opinions on whether it is justifiable to use animals in this way, however most children in the 13-14 year age group found animal experimentation and dissection unacceptable (Foster, Stanisstreet & Boyes, 1994). The importance of such studies lies not only in the idea that foundational attitudes are set in childhood, but that a substantial proportion of children are opposed to keeping animals in zoos. For example, Stanisstreet, Spofforth and Williams (1993) found that 37% of surveyed secondary school students disapproved of animals in captivity, and suggested that such attitudes toward zoos/wildlife parks may mar the educational benefits of such places. Pet ownership during childhood may influence attitudes toward animals, and influence a persons' ability to relate to others (Newby, 1999). Some studies indicate that pet ownership contributes to general

social skills, better self esteem and empathy (Poresky et. al., 1987; Newby, 1999). Life skills are also acquired – coping with grief and death, caring and nurturing, and undertaking responsibilities.

Groups of people who hold similar attitudes often have other characteristics in common. When investigating attitudes or attempting to change them, these other characteristics may be important. For example, Bjerke, Reitan & Kellert (1998) found that hostile attitudes toward wolves were expressed mainly by respondents older than 55 with a low level of education, and who were usually pensioners. They often grew up on a farm with livestock production, and thus also grew up with a strong anti-predator feelings that were based on rational concern for the safety of themselves and their livestock. By understanding these features, the authors conclude that the anti-wolf attitudes will be resistant to change for this group.

1.3.2 The contribution of anthropomorphism

An interesting aspect of attitudes in relation to animals is the extent to which people have anthropomorphic orientations toward animals. Anthropomorphic explanations refer to the attribution of human reasoning to non-human beings, commonly as a way to explain behaviour, (e.g. the monkey is rocking because it is sad and lonely). The debate over the appropriateness of anthropomorphic explanations has raged in education and zoos because there is a danger of it leading to incorrect perceptions and explanations of animal behaviour. The difficulty surrounding anthropomorphism is that it is so prevalent in society, particularly in children's books and cartoons (Rosenfeld, 1981). Representations of animals in the media typically have anthropomorphic connotations (Herzog & Galvin, 1991) and conservation messages play on it to gain audience sympathy. For example, Ris (1993) criticised the 'Save-the Whale' movement for creating a non-existent, mythical "super-whale", made up of anthropomorphic traits from several species of whale. This invented whale is *"even more powerful than real whales, since it comes to possess a whole set of human-like characteristics. Such a whale is perceived as at least as intelligent as humans, friendly and caring, fond of music,*

able to effect inter-species communication.....and holding all these traits in one imaginable body" (Ris, 1993, p158). This example shows that while some animals may naturally possess human-like traits, inaccurate information can consistently overstate these features to the extent that they become part of the common perception of the animal.

On the other hand, anthropomorphism has value in assisting people, especially children, to understand and organise what they are experiencing (Friedler, Zohar and Tamir, 1993). Indeed, the tendency to anthropomorphise is illustrated by visitors to zoos, and particularly demonstrated by analysis of conversations with children. Such studies show that in zoo environments, (Tait, 1995; Wolf & Tymitz, 1981) and on wildlife tours (Amante-Helweg, 1996) anthropomorphic interpretations of behaviour are the norm. Anthropomorphic attitudes toward animals are encouraged and perpetuated by print media, movies and documentaries (Herzog & Galvin, 1991; Gold & Beneviste, 1995; Sanders, 1993). Carmack (1997) reports that anthropomorphism regularly occurs in comic art in the USA. The largest category relates to the positive aspects of human-pet interaction, those which focus on attachment, devotion and companionship. Newby (1999) suggests that *"anthropomorphism is almost impossible to prevent....asking a human to stop seeing the world anthropomorphically is like asking them to stop eating or exploring or imagining"* (p139). She suggests that the tendency to perceive agency in all that surrounds has been a deeply ingrained feature of humans throughout history. A similar viewpoint is expressed by animal behaviourist John S. Kennedy (in Cosic, 2001), who suggests that in relation to dogs "*we are compulsive anthropomorphisers – always on the lookout for behaviours that mimic, even superficially, human social phenomena such as loyalty, betrayal, reciprocity...we are primed to seize on what are, in truth, fundamental, programmed behaviours in dogs and read into them extravagant tales of love and fidelity"*(p23).

However, some authors argue that the current negativity toward anthropomorphism is not entirely justified or appropriate. Newby (1999) suggests *"there is, of course, another potential danger from anthropomorphism. That is: of under-using it. In the fear of too loosely applying human emotions to animals, we may deny them*

emotional experience"(p141). Some scientists now believe that animals do have emotions, and that they can be studied through the behaviour and responses of animals. Emotions serve to make things matter and provide motivation for action. These actions, even in animals, can be observed and measured (Masson & McCarthy, 1995).

1.3.3 Research into attitudes toward wildlife

The most extensive research into attitudes toward animals and wildlife has been conducted by Stephen Kellert and colleagues in the United States. Kellert defined a taxonomy of basic values as a way of organising and describing peoples' feelings and beliefs about animals and nature. These values facilitated measurement of the American public's attitudes toward wildlife and conservation. Kellert surveyed 3107 American individuals and concluded that there were 10 basic attitudes toward animals, which are described in Table 1.1 (Kellert, 1980). While questions concerning domestic animals were included in the study, the main focus was on wildlife. This focus on wildlife can be seen in the descriptions of the attitude categories summarised in Table 1.1. Kellert (1980) warns that the attitude types may describe elements of a persons' perception, but rarely will all of an individual's actions be explained by just one attitude. Furthermore, most people are likely to hold a combination of attitudes in hierarchical order according to primary, secondary and tertiary attitudes. Thus in understanding public attitudes to proposed wildlife management tactics, it is better to focus on specific reactions to the proposals rather than attempt to generalise. This was evident in a study predicting reactions to a moose hunt where general attitudes and socio-demographic variables were poor predictors of attitude toward the hunt (Donnelly & Vaske, 1985). Kellert (1996) warns of the complexity of attitudes, because individuals holding certain attitude orientations may not necessarily behave as expected. For example, *"negativistic sentiments are sometimes expressed by people with strong humanistic feelings for animals and nature: species falling outside their restricted sphere of affection are regarded as irrelevant and unappealing. These people might "love" pets, but they may harbor sentiments of apathy, even hostility, toward the broader realm of life"* (Kellert, 1996, p42). Nonetheless, Kellert estimated the percentage

of the American population strongly oriented toward each attitude, and concluded that the most common were the humanistic (35%), naturalistic (35%), moralistic (20%), utilitarian (20%) and aesthetic (15%). He suggests that *"the most common view overall is strong affection for individual animals, especially pets; as for wildlife, there is a special preference for large charismatic species with strong cultural, historical and aesthetic associations. Most respondents also indicate a humanistic affinity for wildlife possessing physical and mental attributes frequently associated with humans – particularly animals of large size, considerable intelligence, familiarity, and the capacity for social bonding"* (Kellert, 1996, p41).

Kellert's typology of attitudes has been applied in a variety of settings to understand differences in attitudes toward wildlife for various demographic groups, as well as understanding attitudes towards specific species such as wolves (e.g. Kaltenbord, Bjerke & Vitterso, 2000; Kellert, 1991a, 1991b; Bjerke, Reitan & Kellert, 1998; Menning, 1995).

Interestingly for wildlife tourism, Kellert's analysis of demographic variables suggested that wildlife tourists may have a tendency toward certain attitudes. For example birdwatchers and nature enthusiasts tended to score highly on the naturalistic and ecologistic attitude scales, while zoo visitors scored highly on the humanistic scale. Striking and consistent differences also existed between males and females, with females scoring higher on the humanistic and moralistic scales. Males were higher on dominionistic attitudes, mostly due to the presence of hunters in this group (Kellert, 1989; 1996).

Table 1.1

The Ten Basic Attitudes toward Animals (Kellert, 1980)

1) The Naturalistic Attitude:	Strong interest in and affection for outdoors and wildlife; active contact with natural settings; observation and personal involvement with wildlife important to interest in the outdoors as animals provide meaning and context. Strong recreational focus.
2) The Ecologistic Attitude:	Focus primarily on wildlife, with high importance placed on intellectual understanding of nature- ecosystems, dependency between animals and ecosystems. Attention focussed on large number of species rather than individual species.
3) Humanistic Attitude:	Emphasised feelings of strong attachment and affection to individual animals, typically pets. Animals likened to humans, and value animal as sources of affection and companionship. Considerable empathy for animal emotion and thought, anthropomorphic orientation. Usually involves strong affection for animals phylogenetically close to humans, as well as those that are large and aesthetically attractive. Concern is for individual animals.
4) Moralistic Attitude:	Primary concern is the ethically appropriate human treatment of animals. Often associated with feelings of strong affection for animals, but philosophical emphasis on human conduct toward nature. Strong opposition to inflict pain, harm or suffering, exploitation without extreme justification is ethically wrong.
5) Scientistic Attitude:	Predominant concerns are the biological and physical characteristics of animals. Values animals as objects of curiosity, study & observation. Fosters feelings of emotional detachment, though not necessarily lack of affection.
6) Aesthetic Attitude:	Emphasises the attractiveness or symbolic significance of animals. Major concern is the artistic merit and beauty of animals.
7) Utilitarian Attitude:	Concern with the practical and material value of animals. Significance of animals based primarily on their usefulness to people. Does not necessarily result in indifference or lack of affection, but emotional considerations subordinated to practical concerns.

8) Dominionistic Attitude:	Satisfaction derived from mastery and control of animals, typically in sporting context. Animals are challenging opponents which provide opportunities to display skill, strength, often masculinity.
9) Negativistic Attitude 10) Neutralistic Attitude	Negativistic is characterised by active dislike or fear of animals. Neutralistic is a passive avoidance of animals due to indifference. Both attitudes share emotional separation from animals. Both consider animals to have lack of affective and rational capacities, and both have little affinity for animals.

1.3.4 Preferences for wildlife species

When considering attitudes toward specific animals, it is clear that some animals appear to be inherently more attractive to humans than others. One of the easiest places to see this is in the zoo environment, where large collections of a variety of animals are housed in the same area. Most zoos would be able to list their most popular animals, based on which ones draw the most crowds, attract the most interest or generate the most questions from visitors. Studies confirm this species bias. Animals identified as popular include big cats, primates, penguins and seals (Shackley, 1996), polar bears, monkeys, big cats and zebras (Deans, Martin, Noon, Nusea, & O'Reilly, 1987), and whales and other cetaceans (Barstow, 1986). However, a problem with studies of animal preference conducted with zoo visitors is that the techniques used to exhibit the animal may influence preference as much as the animal itself. For example, naturalistic or interactive settings attract the attention of visitors more than traditional and repetitive enclosures (Bitgood, Benefield, Patterson & Nabors, 1986).

In a more general sense, Arluke & Sanders (1996) reflect on preferences for animals in the context that human societies tend to rank everything on a ladder of worth, and this includes animals. They suggest that a hierarchical model of animals permeates public attitudes toward species. This model stems from both theological and evolutionary ideas of worth, which places humans at the top of the linear progression of life. Animals are ranked on a phylogenetic scale with the animals

most similar to humans at the top, and the animals least similar to humans at the bottom. Thus the "good" animals are tame and human-like and include pets and animals that are useful to humans. These are often large, charismatic vertebrates (Kellert, Black, Rush & Bath, 1996), which possess features and exhibit behaviour that humans can understand. For example, part of the attraction to viewing primates appears to be that it is so easy for humans to relate to the behaviour of these animals (Shackley, 1996). Other animals such as *"...penguins, pandas, seal pups, monkeys, dogs, cats and many other 'higher' vertebrates evoke inordinate amounts of sympathy. They are easy to anthropomorphise, and therefore relatively difficult to exploit with impunity"* (Serpell, 1986:141). Conversely, the "bad" animals are least like humans, they are wild and unpredictable (Arluke & Sanders, 1996).

While other authors have agreed with the concept that preferred animals are most like humans (eg Kellert, 1980, 1986,1989; Arluke & Sanders, 1996; Serpell, 1986), the available research suggests that this is only a partial answer. For example, the most recent and large scale empirical study reported by Kellert (1989) found that the most popular wild animals were birds, an insect and two fish species, whose characteristics are rather dissimilar to humans. Ryan's (1998) study of saltwater crocodiles in northern Australia exemplifies this contradiction. He argues that *"at a vernacular level it might be argued that dolphins attract through their intelligence, gorillas and monkeys through (similarity to humans), furry animals through cuddly connotation...saltwater crocodiles do not possess any of these attributes. They continually possess a latent threat in that the human watcher is safe only at a distance or through a safety barrier...(the saltwater crocodile) is both inhuman (reptilian) and dangerous"* (p319).

1.3.5 The influence of childhood preferences and symbolism

Gray (1993) hypothesises that attitudes formed in childhood may influence our preference for animal species in adult life:

> *"I wonder if a kind of 'bonding' occurs even sooner (than ages 7-10), in early childhood. I suspect we carry with us into adult life a special affection for the familiar animals of childhood stories and stuffed toys – deer and rabbits, and especially bears with their large eyes and round, furry bodies"*(p132).

Studies of animal popularity among children reveal that most popular animals are often mammals, particularly furry, mobile, less threatening mammals with humanoid features (Surinova, 1971; Morris, 1960). Based on these studies, popular animals include the monkey, dog, horse, cat – those that can be raised at home or are useful to man. Unpopular animals included snakes, rats, wolves, lions and animals that invoke fear, are ugly, harmful or smell. Younger children had more definitive ideas about animals they liked or disliked, and girls were more likely to dislike animals because they feared them than were males (Surinova, 1971). There is also a link between animals popular with children and those represented in children's books. More (1979) reports that the majority of children's books were about mammals (62%) and birds (18%); and the top 10 animals featured overall were horse/pony, dog, cat, bear, mouse, rabbit, lion, goose, elephant, and pig. In addition, stories about mammals were targeted at a younger readership, which suggests that young children start learning about the animal world through mammals. The characters are often highly anthropomorphised, encouraging familiarity and affection for animals that are presented as having thoughts, feelings and behaviour that children can understand and relate to.

Other authors speak of symbolic aspects of preference. The example of attitudes toward the wolf in USA and Canada illustrates that it can be difficult to generalise preference, because some species can evoke strong emotions that may be conflicting between different groups. Scarce (1998) reports *that "wolves are a huge management problem because nobody is neutral. They play most strongly to people's emotions, and not to people's reasonability or logical side. You hate them or you love them. Its religious on both sides..."*(p32). Other species also have strong symbolic or superstitious connotations. Serpell (1986) notes that the

existence of bear cults in the circumpolar region is likely to be due to their ease of anthropomorphism, since the skinned bear carcass looks disconcertingly like a human corpse in physical proportions. Childs (1997) speaks anecdotally in support of this perception of bears:

> *"...at our tent, I watched the bear's eyes... I sensed a peculiar familiarity, like looking at my parents and seeing my own traits. I have never seen a bear skinned open, but I've heard some say that beneath the fur, the bear is human. I know some hunters, methodical people who dress animals in the field with precise, wordless turns of a knife. When they stripped the fur loose from a bear, exposing a pale, pink corpse, they covered their mouths in fear. Never killed a bear again, any of them...."* (p28).

1.3.6 The plight of the least-preferred animals

As well as the most popular animals, it is important to consider the least popular animals, and the reasons for their lack of favour. Studies indicate that invertebrates are almost universally disliked. Kellert (1993) found that the large majority of the general public in the United States *"indicated a dislike of ants, bugs, beetles, ticks, cockroaches, and crabs; an aversion to insects in the home; a fear of stinging insects, spiders and scorpions; a desire to eliminate mosquitoes, cockroaches, fleas, moths and spiders; and a view of the cockroach and octopus as highly unattractive animals"* (p849). Reasons for these aversions included the perceived lack of capacity for affection, conscious decision making and future thinking in arthropods, and the general alienation humans have from species so behaviourally and morphologically different to our own. Further reasons include the connection between many arthropods and human disease, their role in damage to agriculture and horticulture, and the autonomy invertebrates have from human control which is frequently illustrated by their invasion of human space.

Kellert (1996) suggests that negative attitudes and emotions can foster excessive, irrational and extremely cruel behaviour toward certain species. This underlying

loathing may explain the widespread efforts to exterminate the wolf in the United States. Lopez (1978, cited in Kellert, 1996) comments that *"ever since man first began to wonder about wolves..he has made a regular business of killing them. At first glance the reasons are simple enough and justifiable...But the wolf is fundamentally different because the history of killing wolves has showed far less restraint and far more perversity...Killing wolves has to do with fear based on superstitions...The most visible motive, and the one that best explains the excess of killing, is a type of fear: theriophobia. Fear of the beast. Fear of the beast as an irrational, violent, insatiable creature"*(p25). The case of the rattlesnake further exemplifies the difficulties faced by less popular animals. Arena, Warwick & Duvall (1995) describe how rattlesnakes are "rounded up" each year in some American states, with little research into the implications of the round-ups. Methods of collection range from the relatively benign practice of collecting snakes that cross roads, to the use of explosives and introduction of toxic substances (gasoline, insecticides) into crevices, dens or any place that rattlesnakes may use for shelter. At the time of publication these authors note that there was only one published report addressing the animal welfare considerations of rattlesnake round-ups, perhaps due partly to the general lack of popularity of snakes. Generally, most people perceive animal cruelty to apply predominantly to animals that are thought to have the capacity for pain and suffering, and for most people this is limited to the higher vertebrates. Consequently, most people tolerate abusive behaviour toward insects, spiders, fish, and even vertebrate 'pests' such as rodents and snakes (Kellert, 1996).

1.3.7 Empirical studies of preference for animals

In terms of empirical studies of preference outside of zoo environments, major work has been conducted by Kellert (1980, 1986, 1989) and Bart (1972) in relation to animals familiar to the American public. Bart's study found the most popular animals to be the horse, dog and deer, with the least popular animals being the snake, rat and scorpion (Bart, 1972). Kellert's studies required respondents to rank 33 species on a seven point like/dislike scale. The most preferred animals overall were the dog and the horse, which is an expected result because people generally

have more exposure to domestic animals, and experiences with individual animals may influence their preference. More interestingly, the most favoured wild animals were the swan and robin, followed by the butterfly and trout. The most popular predator was the eagle (ranked 8th) and the most popular mammal was the elephant (ranked 9th). The least favourite animals were insect pests such as the cockroach and mosquito. These tendencies are reinforced through the tabloid press. Herzog & Galvin (1991) found that dogs and cats were portrayed as objects of affection or admiration, however *"there were no stories in which the heroes were sharks, spiders, snakes or insects, reflecting the roles of these species as threats rather than saviours"*(p82).

A difficulty with these studies of preference for animals is that they tend to use a researcher-generated list of animals, thereby possibly excluding animal species that the public liked or disliked more than the listed species. From the results gained in his study of preferences, Kellert (1989) concluded that the following factors (Table 1.2) can help predict human preference for animals. Unfortunately, Kellert does not always specify how these factors influence preference. For example, some animals that are dangerous to humans may be least preferred (eg snakes) yet others are attractive to visitors (eg big cats such as lions). A second problem is that preference has a cultural basis (Bart, 1972; Kellert, 1996). For example, snakes were an unpopular species in Kellert's (1989) study of American respondents. However, Newby (1999) notes *"it is impossible to exclude the influence of culture...in Papua New Guinea, for example, the locals aren't afraid of all snakes, they just say white people are too stupid to tell the harmless from the dangerous ones"* (p213). For wildlife tourism in Australia a list of respondent-generated preferred animals, and the reasons why they are preferred, would be a useful extension to Kellert's and Bart's work.

Table 1.2

Factors Important to Preference for Animals

1. Size: larger species more preferred
2. Aesthetics: animals considered "attractive" are more preferred
3. Intelligence: animals considered to have capacity for reason, feeling and emotion preferred
4. Danger to humans
5. Likelihood of inflicting property damage:
6. Predatory tendencies
7. Phylogenetic relatedness to humans
8. Cultural and historical relationships to humans
9. Relationship to human society : pet, domestic animal, game, pest etc
10. Texture: bodily appearance and structure. The more unfamiliar to humans, the less preferred
11. Mode of locomotion: generally, the more unfamiliar to humans, the less preferred
12. Economic value of the species to humans.

1.4 The Tourist-Wildlife Experience

In the reported literature, there is a large and growing body of literature under the heading of 'wildlife tourism'. There has been a proliferation of articles in mainstream tourism journals, as well as new journals exclusively devoted to publishing academic articles on human-animal interactions. There are also a number of recently published books relevant to wildlife tourism, and publications from non-profit organisations and government reports. Despite this growth in attention to wildlife related topics, there has been a lack of broad studies focussing on the key features of the tourist-wildlife experience. In particular, there has been a lack of research into the key features of the experience which has been informed or generated by the tourists themselves (Duffus & Wipond, 1992), and this is certainly the case in the Australian context. Pearce and Wilson (1995) note that *"little empirical research has been carried out on the demand side to establish the actual characteristics and attitudes of wildlife tourists"*(p19). The studies that do consider wildlife tourists tend to look at specific types of wildlife tourist, in particular birdwatchers and whale watchers.

In organising the available research on the wildlife tourism experience, there are two main categorisations relevant to this thesis. The first is that of the setting, which ranges from captive environments such as zoos, to wild settings such as national parks. The second categorisation focuses on the visitor, and on studies that contemplate similarities and differences between wildlife tourists. This section will be organised as follows:

- The wildlife tourism setting.
    - captive wildlife settings
    - non captive settings/ natural habitats
- The wildlife tourist.
    - differences between visitors: the concept of 'Specialisation'
    - similarities amongst visitors

1.5 The Wildlife Tourism Setting

1.5.1 Captive wildlife settings – the importance of zoos

A discussion of wildlife tourism cannot be complete without attention given to the role of zoological parks, more commonly referred to as zoos. Zoos and wildlife sanctuaries have the advantage of displaying collections of real, live, often rare and unique, animals from all over the world. They also attract huge numbers of visitors: 120 million a year in the United States alone (Croke, 1997) and estimates vary between 350 million (Kellert, 1996) and 600 million visitors worldwide (Whitehead, 1995). According to a 1987 study, 98% of adults in the United States and Canada had been to a zoo before, and one third of the public had visited a zoo in the previous year (Croke, 1997). Zoos and aquariums are defined as *"public parks which display animals, primarily for the purposes of recreation or education"* (Jamieson, 1985:108), and there are an estimated 10,000 of these captive wildlife settings worldwide (Shackley, 1996).

i) Captive wildlife settings are a large and important segment of the wildlife tourism industry (Shackley, 1996). Not only do they attract a large number of visitors, they may represent one of the few opportunities for contact with wild animals for some visitors, and certainly the only opportunity for contact with exotic species for many visitors (Croke, 1997; Kellert, 1996). Zoos make exotic animals from different regions of the world accessible to the general public. Underneath the umbrella of 'captive wildlife settings' exists a great diversity in type, style and size of attraction

Zoos and the concept of keeping animals in captivity has sparked considerable debate and controversy over the years. Croke (1997) in a book on the history of zoos, reflects on the nature of this dilemma. On the one hand "*Even in the decrepit L.A. zoo, which is finally being renovated, one comes to realise that zoos are intrinsically a celebration of life. These magnificent animals, no matter the setting, are sparks of light in a dark world. The zoogoing experience strikes a primitive, visceral and yes, even spiritual chord*" (p12). On the other hand *"In a society*

increasingly disconnected from nature, the zoo provides a venue for us to link souls with wildness. If we continue to lock beasts up in barren enclosures, the heart of darkness will belong to mankind. Just as bear-baiting seems barbaric to us now, so will confining wild animals in cement bunkers seem to our grandchildren" (p14).

1.5.2 Changes in zoo design

Zoos and wildlife sanctuaries have changed radically in the past one hundred years. In the late 1800's zoos were places to see wild, exotic animals primarily for entertainment. Wide formal walkways displayed cages of animals, and the main emphasis was on species identification and classification (Wineman & Choi, 1991). This style of presentation has been termed 'first-generation exhibits', which were characterised by small barred cages or pits (Shettel-Neuber, 1988). The aim was for 'scientific presentation' in uniform, systematic rows. A typical view was that *"Birds look best, on the whole, in uniform rows, assorted according to size as far as classification allows"* (Hancock in Wonders, 1989, p135).

The greatest revolution in zoo design was led by the German designer Carl Hagenbeck, who introduced the concept of the zoo as a park. His first park opened outside Hamburg in 1900, with landscaping, moats and trees to give the illusion of freedom (Shackley, 1996). These 'second generation' exhibits are common today, and are typified by concrete enclosures surrounded by moats and hidden fences. The 'third generation' exhibits, which display animals in species-natural groups and in environments close to the natural habitat, are currently receiving more attention (Shettel-Neuber, 1988). Zoos today tend to be dominated by second-generation exhibits, with a few isolated third-generation exhibits. Overall, zoos are decidedly more natural looking than ever before, with plants and bushes filling the visitors' vision (Croke, 1997). However, vegetation is usually kept out of reach of the animals. Attempts to truly and accurately mimic the natural environment introduce a number of hazards and problems. Real dirt and grass harbour bacteria, vegetation is destroyed by animals, natural interactions between animals is often violent, and allowing predators to stalk would mean enrichment for one creature

but death to the other. The necessity of keeping animals safe is at odds with the nature of nature. A further major problem is that naturalistic enclosures allow the animals to hide from the view of the public seeking to view them (Croke, 1997). Many modern zoos tend to contain a mixture of exhibits – the old style concrete enclosures side by side with naturalistic exhibits which encourage and stimulate natural behaviours of the wildlife inhabitants.

There is some evidence that visitors enjoy these naturalistic, 'third generation' exhibits more than the older ones, although they are more difficult and costly to maintain (Shettel-Neuber, 1988). The arguments in favour of naturalistic exhibits are not only based on benefits for the animals (e.g. Bacon & Hallet, 1981; Robinson, 1994; Dengate, 1993; Markowitz, 1979; Shettel-Neuber, 1988), but on the educational and philosophical benefits to the visitors. Coe (1985) refers to 'landscape immersion' and argues that enclosures should provide abundant, believable and reliable cues, and that the landscape should 'feel' right. The aim is that the visitor experiences the animal as if he/she came upon it in the wild. Ackley (1936) argues the case for accurate presentation of environments when stating *"an animal cannot be isolated, even conceptually, from the particular environment to which it has become adapted...without a serious misunderstanding of its true nature"*(p11). The apparent progress in zoo design is still subject to criticism however. For example, Croke (1997) notes:

> *"in zoos today we imitate the rainstorms of the tropics, the light cycle of the arctic regions, the sounds of the savanna. But much of this is just high-tech mural painting. Man is a visual species, and though today's zoos may look very different to us, they may not feel any different to the animals. The rough, molded granite of some new gorilla pavilion probably doesn't feel or smell like the wild to gorillas. Such enclosures are often safe, sterile magician's props that provide only the illusion of nature"*(p24).

1.5.3 The zoo visitor

The progression of change in zoo design has been paralleled with changes in visitor attitudes. Animal rights have become regarded as an important issue. The keeping of animals in captivity is considered by many as ethically indefensible, even for educational purposes (Shackley, 1996). Visitors to zoos are *"better informed, better travelled and more environmentally aware than their 1950's counterparts"* (Shackley, 1996, p105). A wealth of information exists regarding who visits the zoo. In the United States, the American Zoo and Aquarium Association compiled figures from 40 attendance studies across the country, and found that zoo visitors tended to have higher income and education levels, and the majority were women attending with younger children (Andereck & Caldwell, 1994; Holzer, Scott & Bixler, 1998). Social motivations dominate over educational ones (Croke, 1997). Other studies are consistent with these demographic findings, and find that zoo visitation occurs within a social context and largely with family groups (Andereck & Caldwell, 1994; Holzer, Scott & Bixler, 1998; Wineman, Piper & Maple, 1996; Wolf & Tymitz, 1981). The average zoo visitor seeks a pleasant encounter with wildlife that does not involve strenuous learning, and some studies show that a visit to the zoo only exerts a slight influence on people's understanding of animal biology, behaviour or conservation. While there is evidence to suggest that visitors develop more emotional affinity for animals after a visit to the zoo, this is rarely based on increased understanding (Kellert, 1996).

Some authors have suggested that the ability of zoos to impress visitors and encourage appreciation are being eroded by technology. Today's tourists are sophisticated consumers of nature documentaries, and are influenced by 'green' policies and attitudes which are taught in schools from an early age (Shackley, 1996). Croke (1997) reflects that *'children watch wildlife documentaries with spectacular footage of powerful, tawny lions running down prey, but how does this correspond to the lethargic lions seen heaped in the corner of a cage?* (p16)." Kellert (1996) argues that wildlife documentaries have influenced ideas and knowledge about wildlife, but this has been limited to increasing general appreciation and affection rather than intellectual change or increasing ecological

awareness. However, the impact of television based wildlife shows depends on the content and nature of the show. He suggests that on network television, which reaches a broader range of people in the United States, the programs tend to emphasize entertainment, adventure and action with beautiful scenery and a good dose of sentimentality, rather than ecology or conservation. Regardless of the nature and educational impact of these presentations, they typically have dramatic footage of active wild animals in their natural environment, which may not be consistent with what visitors experience at the zoo. The effect of animal welfare and environmental concerns may also impact on zoos. Stanisstreet et. al. (1993) found that over one third of secondary students disapproved of animals in captivity. A study by Wolf & Tymitz (1981) found that the primary concern of most zoo visitors is that captivity is comfortable for the animals, and that they appear healthy and happy. It appears that for zoos must increasingly take care to address animal welfare concerns in order to continue to attract and satisfy visitors.

Overall, zoos have a vital role play in our society, particularly in the areas of education, conservation and reproduction. They also have a vital role in wildlife tourism, in terms of visitor numbers, revenue generation, and in shaping the attitudes and perceptions of the general public towards wildlife.

1.5.4 Non-captive settings/ natural habitats

Just as there is a large range of variation in the experiences available to visitors in captive settings, there is an even greater diversity of experiences available in natural habitats. These can be as unstructured as a chance meeting with wildlife along a forest trail, or as structured as guided tours of predictably present species. The experience may be with a large tour group, or during a solitary hike, it may occur during the day or night, involve distant travel or be in the local area, and it may or may not involve financial cost (Shackley, 1996). The species viewed are also wide ranging, involving terrestrial species, birds and marine animals (e.g. Shackley, 1996; Davies, 1990; Hammitt et al, 1993).

It has been suggested that people are increasingly searching for more realistic wildlife experiences with animals in their natural environment, and are moving away from captive or semi-captive facilities. (Amante-Helweg, 1996; Roth & Merz, 1997). Whether or not this suggestion can be substantiated, the natural environment does appear to have an important bearing on the wildlife experience. However, as previously discussed, there are substantial contradictions and difficulties associated with the measurement of the growth of wildlife tourism. Some particular types of wildlife tourism show growth, others show decline, and there is a general lack of reliable, consistently defined data on the numbers of people participating in wildlife tourism. It is also debatable whether people are increasingly desiring, as opposed to participating in, experiences in natural environments. If the biophilia hypothesis (Wilson, 1984) is correct, then people have always had an innate attraction to natural environments. Perhaps it is the greater opportunity for leisure and greater accessibility of natural environments and commercial nature/wildlife tours that has resulted in some figures showing a growth of wildlife tourism. That is, people are not becoming more interested in wildlife, they just have more opportunity to view wildlife in a leisure setting. Regardless of debate over growth or exact figures, viewing wildlife in the natural environment is a substantial component of wildlife tourism, and of tourism in general.

Studies of wildlife tourism in natural settings are plentiful, but somewhat specific and disparate. Most of the studies have emerged from United States outdoor recreation literature, and much is descriptive or anecdotal (Applegate & Clark, 1987; Roe et al., 1997). There is a large and growing body of literature, set in natural environments, on the impacts of tourism on wildlife (e.g. Shackley, 1996; Galcia & Baldassarre, 1997; Klein et al., 1995; Flather & Cordell, 1995), and on case studies of specific sites (e.g. Higham, 1995, Orams, 1995; Pearce & Wilson, 1995, Shackley, 1996, Schanzel & McIntosh, 2000). Many of these studies are site specific, few are tourism or attraction based, and few are conceptually based (Schanzel & McIntosh, 2000). Part of the difficulty associated with reviewing studies in natural settings is the variety of wildlife experiences which are incorporated under this heading. The studies that are most relevant to this thesis are

more usefully categorised under the heading of the visitor, and will hence be covered in the following section.

1.6 The Wildlife Tourist

1.6.1 Differences between visitors – the concept of 'Specialisation'

Studies of tourists in all aspects of tourism have found that different groups or segments of tourists exist. With respect to wildlife tourists, Duffus & Dearden (1990, p 222) argue that *"tourists cannot be considered an homogenous population; even tourists that may primarily be motivated by the same stimulus, such as wildlife viewing".*

One avenue for research into differences among groups of visitors lies in the distinction between wildlife "generalists" and "specialists". This distinction is based on the intensity of interest and participation in wildlife tourism. This concept is related to the social psychological concept of involvement, which is defined as *"a state of motivation, arousal or interest with regard to a product, an activity or an object"* (Kim, Scott & Compton, 1997, p321). Although this implies an internal state variable, a number of authors have argued that it can be conceived of in behavioural terms. In the context of leisure, some of the behavioural indicators of involvement include *"frequency of participation, money spent, miles travelled, ability or skill, ownership of equipment/books, and number of memberships"* (Kim et.al, 1997, p321). Some of the pioneering work in recreation was conducted by Bryan, (1979) who proposed a recreation specialisation framework and suggested that differentiating between recreationists based on this framework would assist in understanding the experiences sought by different groups. The segments were arranged in a behavioural continuum from novice (less skilled, devote less time to the activity, spend less money and have less specific needs) to expert (participate more frequently, higher skill levels, spend more money and have specific preferences regarding the setting). Some factors which can assist the identification of generalist and specialist tourists may include the frequency of participation in the tourist activity, the importance it plays in their travel or recreational decisions,

and the types of experience they seek. This concept of generalist/specialist tourists has been applied to a variety of outdoor recreation settings, including some studies of wildlife viewers and birdwatchers (e.g. McFarlane, 1994; Cole & Scott, 1999). A discussion of theoretical issues related to the concept of specialisation will be provided later in Section 1.9.2 of this Chapter. The present review will summarise studies of specialisation that are more directly relevant to wildlife tourism.

1.6.2 Studies of specialisation amongst wildlife viewers

Overt the past two decades, the concept of specialisation has received substantial attention for its potential in explaining differences between people undertaking recreational pursuits in predominantly natural environments. The pursuits and recreational activities that have been the focus of studies have included camping (e.g. McIntyre & Pigram, 1992), rafting and river based activities (e.g. Watson & Niccolucci, 1992; Donnelly, Vaske & Graefe, 1986; Wellman, Roggenbuck & Smith, 1982; Kuenzel & McDonald, 1992), adventure recreation (e.g. Ewert & Hollenhorst, 1994), recreational angling (e.g. Choi, Loomis & Ditton, 1994; Bryan, 1977; Chipman & Helfrich, 1988), rock climbing (Merrill & Graefe, 1997; Hollenhorst, 1990), hunting (Kuentzel & Heberlein, 1992), and use of wilderness areas (e.g. Hammitt, McDonald & Hughes, 1986; Schreyer & Beaulieu, 1986; Watson, Roggenbuck & Williams, 1991). There has been a relative lack of attention focussed on wildlife viewers, and particularly the broad spectrum of wildlife viewers. Studies to date have focussed predominantly on specialist segments, such as birdwatchers.

Within studies of specialisation amongst wildlife viewers, even fewer have applied specialisation in a way comparable to the construct's use in outdoor recreation. More studies have contemplated specialisation as a loosely defined term, and have not specifically or systematically investigated the characteristics of visitors with varying levels of specialisation. An Australian example of this kind of study was one that involved the viewing of Southern Right Whales in South Australia. Some of the visitors were specifically interested in, and passionate about, whales; while others just happened on the opportunity (Reid, 1995). This study found differences

in motivation and interest in viewing whales, but other variables associated with specialisation did not form part of the study. Similarly, a New Zealand study used demographic variables as a basis for specialisation, and found wildlife viewers to be younger, well educated, relatively more affluent, and with high participation rates in a number of activities. The authors concluded that while small groups of specialist wildlife tourists do exist, for most people viewing wildlife is but one activity amongst many (Pearce & Wilson, 1995). An Australian study (Tourism Queensland, 1999) of ecotourists had similar findings to the New Zealand study reported by Pearce & Wilson (1995). This study found that the more committed ecotourists undertook more holidays and spent more time on holiday than less committed groups (Tourism Queensland, 1999). A further study of Tasmanian wildlife viewers found that wildlife visitors stayed longer and participated in a greater range of activities than other visitors. They enjoyed visiting wildlife parks and had a high level of interest in learning (Ellingford, 1995).

Studies applying specialisation theory to wildlife tourists have mainly focussed on birdwatchers. One example of specialisation applied to birdwatching was a study of Canadian birdwatchers undertaken by McFarlane (1994). This study identified four distinct groups of birders based on past experience, economic commitments and on how important birdwatching was to their lifestyle. Later, (McFarlane & Boxall, 1996), using the same definition of specialisation amongst birdwatchers, found specialisation to be a better indicator of participation in conservation activities than socioeconomic variables. As specialisation increased, larger proportions of birdwatchers engaged in activities such as keeping species lists, photographing birds, participating in conservation efforts, belonging to wildlife organisations, donating money and improving habitats. A study of birdwatchers undertaken by Kellert (1985) found that although 25% of the American sample in the study reported birdwatching, when questioned about their use of specialised equipment a much smaller group emerged. Only 30% of the birdwatchers used binoculars, and just 4% (or less than 1% of the sample) used a field guide. On the basis of ability to identify bird species, Kellert (1985) concluded that almost one quarter of the sample were 'casual' birdwatchers, and only 3% might be regarded as 'committed' birdwatchers.

A study of birdwatchers by Cole & Scott (2000) used a different method of segmenting birdwatchers from casual wildlife viewers. This study defined casual wildlife viewers as those holding passes to state parks in Texas (TCP holders), and serious birders as those being members of the American Birding Association (ABA). Differences were identified between the groups which confirmed that the ABA group were more serious wildlife watchers. These included a higher frequency of trips, more money spent on birdwatching, and longer length of trips. Results indicated that serious birders made trip decisions primarily based on the types of birds they expected to see, while casual wildlife viewers enjoyed seeing a variety of flora and fauna, as well as sites with other attractions and opportunities. However, this study did not examine differences in interest within the two defined groups, it only compared behavioural differences between the two groups. Results from the analyses in the study indicate that although there was sufficient empirical support for placing ABA members and TCP holders at different ends of the specialisation spectrum, not all ABA members were actually serious birders, and not all TCP holders were casual wildlife watchers.

One study that applied the concept of specialisation to general wildlife viewers was undertaken by Manfredo & Larson (1993). This study measured the number of trips taken (excluding consumptive activities and captive environments), interest in viewing wildlife, and the importance of various wildlife related statements to conclude that there were four types of wildlife viewers in the sample. These were a 'High Involvement' group (22% of the sample) who were interested in seeing many animals, wanted more information about the animals, and had high physical activity levels. The 'Creativity Experience' group (15% of the sample) was interested in photography and viewing animals in the wild, the 'Generalists' (32% of sample) were interested in escape, relaxation and studying nature, and the 'Occasionalists' (31% of sample) were more passive and were interested in scenery and escape. Involvement in wildlife viewing recreation decreased from the first group through to the last group.

Duffus & Wipond (1992) suggest that there may be different aspects of specialisation amongst wildlife viewers, as some visitors may be intensely interested in viewing specific species, while others may have a more general interest in seeing wildlife (Duffus & Wipond, 1992). There have been no studies reported which examine similarities and differences between such groups of wildlife viewers. The broad nature of wildlife viewing may make it difficult to examine specialisation amongst general wildlife viewers, due to the diverse range of wildlife viewing opportunities available. While it may be intuitively appealing to expect that specialisation may be applicable to wildlife viewing, it may be more difficult to operationalise the concept and define useful and valid items by which levels of specialisation can be measured. Donnelly, Vaske & Graefe (1986) suggest that activities themselves have implicit ranges of specialisation, and by their very nature lend themselves more easily to participation by individuals with high or low specialisation. Activities that are most specialised are likely to have the narrowest range of participants, and this makes measurement of variables associated with specialisation easier. Conversely, less specialised activities have a broader range of participants and definition of variables associated with specialisation becomes more difficult. Indeed, the specialisation concept has predominantly been applied to birdwatching, which is a more specific and defined activity, and carries with it definable and measurable equipment, skill and participation elements.

Considered together, these studies suggest some conclusions regarding specialisation levels and wildlife tourists. Firstly, there is evidence that different levels of specialisation do exist, and that certain characteristics such as participation rates, ownership of equipment, and skill/knowledge are often related to these levels of specialisation. However, when considering wildlife viewers in general, the stereotype of a committed wildlife tourist who travels to remote places in search of 'peak experiences' with wildlife (Shackley, 1996) is relatively rare in the population of wildlife tourists. For the most part, wildlife tourists, and even those who may be regarded as more serious in their interest (Pearce & Wilson, 1995; Ellingford, 1995) appear to have high participation in a range of other activities, and wildlife is not their only motive for travel. Wildlife tourists, even

specialised wildlife tourists, do not appear to be as narrow in their focus as stereotypical descriptions would suggest.

1.6.3 Specialisation and goal-orientation

There have been suggestions that specialised nature tourists, including wildlife tourists, are less easily satisfied and may have specific preferences for settings (Shackley, 1996; Buckley & Pannel, 1990). Some reasons why specialist wildlife tourists are less easily satisfied may be because they have more experiences to compare with, or they have specific goals in relation to wildlife viewing. Their focus may be on the outcome (e.g. sighting of an animal or a particular experience) rather than the broader experience (Applegate & Clark, 1987). On this basis Vaske, Donnelly, Heberlein & Shelby, 1982) suggest that birdwatching can be a particularly goal-oriented activity, since species added to the birdwatcher's list are no longer available for search once present on the 'seen' list. The birdwatcher's satisfaction may be closely related to sightings of particular species of birds. A relationship between species sightings and satisfaction has been found in studies of birdwatchers (Applegate & Clark, 1987) and wildlife viewers in a national park (Hammitt, Dulin & Wells, 1993). In the latter study, experienced (repeat) visitors were more interested in seeing unique and lesser-seen species, and failure to see a specific species led to reduced satisfaction.

An example of specific goals was provided by Russel & Ankenman (1996) in the context of wildlife being 'commodified' through photography. They suggest photographs echo hunting trophies of the past, and reduce wildlife to collectibles that are taken home for display. Photography consumes the experience, and becomes the goal on which evaluations of the experience are made. The authors suggest that such a focus on the photogenic can deny the experience itself, and the pleasure of exotic wildlife photography may be pursued in more remote and remarkable places as the tourist becomes desensitised to the exotic they have already experienced. Photography has also been linked with zoo visitors engaging in distraction techniques, such as waving arms, making noise and banging cages, (Kellert & Dunlap, 1989). While photography may form one of the goals of the

wildlife tourism experience, it is not necessarily a negative activity. Photography can also potentially be a memory trigger to reinforce the positive aspects of the wildlife experience, such as appreciation and learning (Schanzel & McIntosh, 2000; Eagles, 1992). Furthermore, there is no evidence to suggest that specialist wildlife tourists are more disposed to photography than other tourists.

1.6.4 Specialisation and substitute experiences

The idea of substitutability *"refers to the extent to which one alternative recreation activity can effectively replace another in terms of its ability to produce desired experiences (e.g. recreation satisfaction)"* (Choi, Loomis & Ditton, 1994, p143). This is based on the generally accepted notion that people participate in recreational experiences in order to fulfill certain needs, and that when they are constrained from participating in desired recreation activities, they will seek alternatives that provide similar experiences and satisfy similar needs (Choi et.al, 1994).

In relation to wildlife tourists, the main issue concerning substitution is whether specialised tourists are more or less likely to participate in substitute wildlife experiences. Zoos, sanctuaries and aquariums fill this role, as do various tours and cruises. Such experiences may be considered substitutes for 'authentic' experiences with wild animals in their natural habitats.

In the broader specialisation literature, there is support for the idea of an inverse relationship between the level of specialisation and the probability of substitution. A study by Choi, Loomis & Ditton (1994) of recreational anglers found that while there were no straightforward differences between groups of differing specialisation levels and probability of substitution, the propensity to substitute was influenced by the social group they were participating with. Specialists were significantly more likely to substitute the experience where they were engaging in activities with their family. These authors concluded that although an activity may become more central in a person's life as their specialisation increases, willingness to substitute for that activity is modified or altered by social group circumstances.

Individuals not facing family obligations would be less open to alternative activities.

However, the concept of zoos and sanctuaries as substitute experiences assumes that specialist wildlife viewers consider them to be substitutes, and are ideally seeking to view wildlife in natural environments. There is evidence from the literature that the more specialised and experienced the individual, the greater the preference for more natural and remote settings (Bryan, 1979; Virden & Schreyer, 1988; Ewert & Hollenhorst, 1994). Yet this has not been empirically confirmed for wildlife viewers in general. It is not known whether specialised viewers actually participate in such general wildlife attractions, or whether they seek greater authenticity and avoid substitute experiences. In a study of wildlife viewers in New Zealand, Pearce & Wilson (1995) found that the mix of visitors at wildlife parks and zoos indicated that these structured wildlife ventures constituted a more general tourist attraction. The study reported that whale watching and viewing wildlife in natural surroundings appealed to smaller and more specialised segments, however this was based primarily on demographic characteristics rather than variables associated with specialisation. Overall, there is no empirical evidence on which to base expectations regarding the activity participation in, or preferences for, substitute wildlife experiences amongst more specialised viewers.

1.6.4 The development of specialisation in wildlife tourists

An important consideration for both education and maintenance of wildlife tourism is the question of how people develop into specialist (and therefore repeat) wildlife tourists. Duffus & Dearden (1990) suggest that interest in wildlife tourism may begin with visits to zoos, and develop into participation in tourism activity with some wildlife component. As specialisation increases, the wildlife tourist will engage in specific trips to view wildlife in particular areas or to view particular species. However, there is little empirical support for such a linear progression from generalist to specialist. Some tourists may inherit a specialist wildlife interest from their parents, while others may be forever content with viewing animals at zoos. The influence of childhood experiences on adult participation in recreational

activities is one that has been confirmed through a number of studies, particularly in the case of hunting (e.g. Applegate, 1989). Other authors argue that while childhood involvement plays a part, socialization to leisure activities is a life-long process (McFarlane, 1996). A study of birdwatchers by McFarlane (1996) supported both models. The majority of birders started as adults, which indicated that childhood participation was not a prerequisite for adult involvement. However, childhood participation was associated with increased specialisation, as advanced birders were more likely to have started during childhood.

Overall, previous research indicates that the generalist/specialist continuum may be a useful construct for wildlife tourism, although the information regarding the features they are seeking is limited. In particular, the majority of studies have been conducted with birdwatchers or whale watchers, with few studies covering the broad diversity of wildlife tourists. There is also very little information about wildlife tourists in an Australian context.

1.6.6 Similarities amongst wildlife tourists

The discussion so far has focussed on differences between wildlife tourists on the features important to them in their wildlife experiences. However, there is some evidence that certain features of the experience are appealing across a broad range of visitors. Interacting with animals (for example swimming with dolphins), or viewing animals in their wild habitat are said to result in higher levels of visitor satisfaction in a tourism setting (Shackley, 1996). Opportunities to have contact with animals are a popular and enduring feature of most zoos, and in some non-captive settings (McDonald, 1995, Orams, 1994; Kreger & Mench, 1995). This is evident in the popularity of children's zoos (where visitors are able to touch the animals), keeper talks and demonstrations. Even the tendency of visitors to feed and tease captive animals may be motivated by a desire to interact with the animal (Kreger & Mench, 1995; Burger, 1997; Kellert & Dunlap, 1989). This emphasis on interaction is supported by a study of San Francisco Zoo, which concluded that

> *"the single most predictable pattern of the zoo visit can be described as the 'search for interaction': visitors spent considerably more time at exhibits where the most animal-animal and human-animal interactions occurred, and human-animal interactions held visitors' attention longer than did animal-animal interactions. For example, in the San Francisco zoo study, feeding the non-captive pigeons and squirrels held visitors' attention longer than did 80% of the animal exhibits*" (Rosenfeld, 1981:17).

Moore, Olsson, O'Reilly & Johnson (1997) notes that many people visit national parks for the opportunity to feed and interact with wildlife. The curator of the Bronx Zoo argues the case for interaction when educating people about wildlife. He suggests:

> *"the immediacy and sensory stimulation accorded to learners who come in contact with live animals cannot be duplicated through other means. No textbook or TV documentary can equal the experience of touching the soft coat of a fennec fox....no video can make real the musky smell of a ferret. The highly motivating learning that results from such contact goes a long way toward helping zoological parks and aquariums achieve their educational objectives....the zoo educator and wildlife promoter attempts to reach the intellect through the heart. And nothing has a more compelling effect in human emotions than contact with a living, breathing animal..."* (Breheny, 1998, p2)

One of the ways that visitors interact with wildlife is through feeding them, and this is a topic that generates much controversy. There is a lack of systematic research into the effects of wildlife feeding, both from the wildlife and the humans' perspective, and decisions against wildlife feeding are often based on a 'precautionary principle" or personal philosophy (Burger, 1997). In a review of wildlife feeding and case studies of areas within Australia, Burger (1997) reported that some of the reasons given for wildlife feeding were to see the animals close

up, to photograph them, and to touch them, and this is particularly attractive to overseas visitors. However, these reasons were provided by the site rangers, and not from empirical studies. The arguments in favour of feeding include increased presence of wildlife at tourist facilities, ability to get close to the wildlife, and opportunities for interpretation and education. Some operators feel that controlled and minimal feeding with monitoring of impacts replaces the ongoing destruction of native habitat (Quirk, 1997). The opposing argument is based on concerns over overpopulation; species imbalance; poor health caused by incorrect diet; habituation of animals leading to lack of fear of humans and subsequent risk of poaching and mistreatment; and concerns over safety to humans from demanding wildlife, (Burger, 1997; West, 1997; Ranger Section Homebush Bay, 1997). While there is anecdotal evidence that visitors enjoy feeding wildlife, it is unclear how important it is to their experience, or whether it is a means to achieve other goals such as close proximity, interaction or photography. It could be the case that some visitors feed wildlife because it is a familiar and comfortable action when faced with unfamiliar circumstances, namely the close proximity of unpredictable animals.

Getting close to animals and experiencing the natural environment are also features that appear to have widespread appeal. A study of penguin viewing in New Zealand found that getting close to penguins and experiencing the naturalness of the environment was integral to visitor satisfaction (Schanzel & McIntosh, 2000). A separate study of general wildlife visitors to New Zealand identified the natural surroundings and getting close to wildlife as the most important aspects of wildlife tourism, followed by the provision of information about the wildlife (Pearce & Wilson, 1995).

A case study by Higham (1998) suggested that the expectation of interacting with wildlife could be a characteristic of less experienced wildlife tourists. This study featured albatross colonies in New Zealand and noted that serious wildlife viewers initially came to view the albatross because they were a rare and special species and did not attempt to interact with the nesting birds. However, once the colony

was opened up for more general tourism, there was an increased expectation of being able to touch and/or feed the birds.

Movement is another feature suggested as having widespread appeal. Gray (1993) describes elements of movement which he considers attractive:

> *..wild lives are spontaneous in motion. Unlike art in museums or a scenic vista, animals move....There is rhythmic beauty in the symmetrical dynamics of a gazelle on the run, an eagle in flight, or a slithering snake.* (p103-104).

In a similar vein, Robinson (1994:41) suggests that the biological and conservation messages of zoos are "best reinforced by beautiful, exciting and mind expanding activity from our animals". Other work conducted in zoos confirms that movement attracts the attention of visitors (see Appendix A), and an empirical study of polar bear exhibits found that the most important variable influencing visitor viewing times was the activity levels of the animals (Johnston, 1998).

The "wildness" or authenticity of wildlife may also be of great appeal. Duffus & Wipond (1992:341) suggest that

> "*much of what is unique in the aesthetics of wildlife encounters is the spontaneity and motion in their form. Excitement lies in the surprise and anticipation, the potential adventure. When the surprise is gone, or the motion captured, much of the aesthetic experience of wildlife is removed. That is why television, photographs, domestic pets and captive displays can never be aesthetic substitutes...*"

One travel writer adds to the debate, suggesting

> *"The vital word in wildlife tourism is "big". People who travel the world to see animals want them to be large-and preferably*

> *deadly – or they want to see huge numbers. There is another vital ingredient. Your must be able to get close up. Distant wildlife does not sell, the experts agree."* (Newlands, 1997, p19).

One finding that seems to regularly apply to tourists interested in wildlife and nature is that they consider learning and education to be an important feature of their experience (Knudson, Cable & Beck, 1995). Examples include Shackley's (1996) study of visitors to London Zoo which found that education (28%) was considered the second most important function of a zoo, after conservation of endangered species (53%). Studies by Manfredo & Larson (1993) and Martin (1997) found that more specialised wildlife viewers had greater interest in interpretive topics and were more likely to seek out information. A further example is a study of birdwatchers in North Queensland, which found that this group had a strong desire for knowledge and education (QTTC, 1998). Visitors to the Great Barrier Reef in general indicate that learning and education are important to their experience, and there is a group of reef visitors who are primarily seeking an educational experience (Moscardo 1999a). Young, independent travellers to the rainforests of North Queensland indicated that they have high levels of concern with conservation issues, and wanted information on how they could assist with the conservation of the area (Moscardo, Verbeek & Woods, 1998). Visitors to a turtle rookery at Mon Repos Conservation Park were primarily interested in learning in addition to social motives (Howard, 1999) Such studies confirm that visitors do seek information about the places, people and animals they are visiting. However, assuming that all visitors participating in a wildlife activity have the same interest in learning needs to be avoided. For example, a study of whale watchers in Hervey Bay found that clusters of visitors indicated differing interest in and potential for interpretation (Foxlee, 1999).

However, aside from anecdotal reflections and suggestions from expert opinion, there are few studies that empirically examine visitor preferences for varying aspects of the experience. There is a need to look closely at the features of wildlife experiences that are appealing to tourists, from the tourist's point of view.

1.7 The Importance of Interpretation to Wildlife Tourism

Interpretation broadly refers to educational activities used in places like zoos, museums, heritage sites and national parks, to tell visitors about the significance or meaning of what they are experiencing. The Society for Interpreting Britain's Heritage (1998:27) defines interpretation as *"the process of communicating to people the significance of a place or object so that they enjoy it more, understand their heritage and environment better; and develop a positive attitude toward conservation."* Interpretation can provide an important contribution to wildlife tourism in the following ways:

- Interpretation is of key relevance to sustainable tourism operations
- Interpretation can lead to increased enjoyment
- Interpretation is an important focus of zoos

1.7.1 Interpretation and sustainable tourism

Tourism has attracted criticism from authors concerned about its damaging effects on the environments and people who act as hosts. This has generated discussion on the conditions and principles necessary to encourage ecologically sustainable tourism (Moscardo, Verbeek & Woods, 1998). Lane (1991:2) highlights the features of sustainable tourism as "satisfying jobs without dominating the local community; and which does not "abuse the natural environment". His argument is that

> *"the visitor will gain an in-depth understanding and knowledge of the area, its landscapes and peoples. The tourist will become concerned and, therefore, protective of the host area" (1991:2).*

Interpretation is recognised as important in many descriptions of sustainable tourism (Moscardo, 1996), and a number of authors argue that interpretation should be an important part of the ecotourism experience (Orams, 1996; Alcock,

1994). There are three main aspects involved in the argument for interpretation supporting sustainable tourism. Firstly, interpretation is suggested as a means of managing the interactions between wildlife and tourists, to minimise impacts on both the site and the wildlife. Secondly, interpretation can raise the knowledge and awareness of wildlife and habitats. Thirdly, interpretation can encourage pro-conservation attitudes and motivation to act on broader conservation issues (Whitehead, 1995).

An example of the effectiveness of interpretation in managing the interactions between humans and wildlife occurred at a bald eagle viewing site. This study found that well explained regulations combined with interpretation was successful in modifying visitor behaviour (Frost & McCool, 1988). Through interpretation, almost 90% of the visitors understood that the restrictions were necessary, and 88% felt the restrictions either had no effect or facilitated their experience. However, there are many influences on how messages are received, ranging from how the message is designed to the methods used for delivery. For example, a study of persuasive trailside signs aimed at encouraging low-impact behaviour found that visitors have a limited ability to retain numerous messages. As information quantity increased, attention per message and retention of message content both declined (Cole, Hammond & McCool, 1997). Furthermore, it is widely acknowledged that simple provision of information does not automatically lead to improved behaviour (Blanchard, 2000).

The use of information dissemination strategies sometimes assumes that rule-breaking is caused by a lack of knowledge or awareness about proper use of the resource (Johnson & Swearingen, 1992) It assumes, further, that an effective deterrent to unwanted behaviour is the provision of knowledge reinforced by appeals to ethics or values. Not all attempts are successful in changing behaviour. In Denali National Park (Alaska) an interpretive campaign significantly increased knowledge of precautions to take regarding bears for 74% of visitors. However, a large number of visitors did not apply that knowledge (Wright, 1992). There is a need to understand which techniques are effective in encouraging not only desired attitudes, but desired behaviour as well (Orams, 1994). Interpretation and

education may need to be innovative and out of the ordinary to successfully impact the target audience. For example, an education program aimed at reducing illegal harvest of seabirds in Quebec, Canada targetted children in order to ease hostility and get the message across to their adult parents. Role plays and interpretive drama techniques were used in conjunction with other community-based education activities, and the program was successful in encouraging increases in most seabird populations (Blanchard, 2000). Other studies, such as that involving whales in USA , concluded that a change in behaviour of boaters (in this case keeping distance from whales) was not likely to occur in the absence of an enforcement presence (Wiley & Jahoda, 1999). This was supported by a study on the effectiveness of trailside signs designed to deter off-trail hiking (Johnson & Swearingen, 1992). A comparison of different sign designs found that while signs reduce the instance of off trail hiking, the most effective sign was a sanction sign with references to fines, and the second most effective was an ethical appeal. However, off trail hiking was about twice as high under the ethical appeal sign as it was under the sanction sign.

In addition to site management and raising knowledge, Hair and Pomerantz (1987) suggest that wildlife education extends beyond learning facts about animals, it can create interest in, and motivation to act, on broader environmental issues. The more people learn about specific animals and habitats, the more their general knowledge and appreciation of the natural environment grows. There are studies that support the idea that the provision of adequate information through persuasive communication and education can lead to improvement in individual conservation behaviour (see for example Ebreo & Vining, 1994), environmentally responsible behaviour (Orams, 1996) and attitudes toward wildlife (Dettmann-Easler & Pease, 1999). However, the methods used need to be thoughtfully tailored to the target groups. Studies in zoos also indicate that improved attitudes to animals such as snakes can be gained from interpretation, but this depends upon the techniques used. Morgan and Graman (1988) for example, found that mere exposure to snakes did not improve attitudes, but interpretation through keeper talks using modelling behaviour and direct contact did. A further study by de White and Jacobson (1994) confirmed that mere exposure to animals was insufficient to

create affective and cognitive gains in children. The assumption that interpretation will automatically translate into positive gains in attitudes and conservation behaviour is simplistic and lacking in research backing (Orams, 1996). This is compounded by the difficulties associated with researching attitudes. Environmental issues have been discussed widely in recent years and as a result, many respondents know the 'correct' responses to attitude statements even if they do not hold that attitude. Thus social desirability effects may be strong in such attitude research (Orams, 1996).

One area of interest lies in the interpretation of the least popular animals. Studies generally indicate the unpopularity of invertebrates (Kellert, 1993). Yet invertebrates have suffered catastrophic loss from extinction, and the public appears largely unaware of any impact on human well-being (Kellert, 1993). Futhermore, Mazur (1999) argues that zoos over-emphasise charismatic fauna, "*especially large, colourful, cute, mammalian species*"(p2), and this does little to encourage interest and appreciation of the lesser known and less liked invertebrates. While education is unlikely to encourage affection for these animals, an appreciation of the role they play in ecosystems and their contribution to human wellbeing may dampen the prevailing negative attitudes. Kellert (1993) reports the association between education and increased appreciation and concern for conservation. A study by Broad (1996) confirmed that awareness of endangered species was heightened after a visit to the zoo, especially for less charismatic and lower profile animals. Thus interpretation may assist the recognition of the positive values of invertebrates and least popular animals.

1.7.2 Interpretation and visitor enjoyment

As previously mentioned, a consistent feature of motivational studies of wildlife tourists, ecotourists and nature-based tourists is that they consider learning and education an important feature of their experience. If visitors seek interpretation, it follows that the provision of quality interpretation will lead to greater enjoyment. Indeed, enjoyment is one of the main goals of interpretation, particularly as interpreters are dealing with people at leisure (Knudson, Cable & Beck, 1995;

Orams, 1998). There have been some specific studies that confirm that people who participate in interpretation enjoy their tourist experiences more than those who do not participate. A study of visitors to the Skyrail Rainforest Cableway in Australia (Moscardo & Woods, 1998) found that visitors who went on the interpretive boardwalk, went into the interpretive centre, or talked to a ranger were significantly more satisfied than those who didn't. Such visitors also learnt more about the rainforest, indicated by significantly higher correct scores for knowledge tests administered after the Skyrail experience as opposed to pre-visit scores. This study confirmed the value of interpretation for commercial nature-based tourism ventures, as it contributed to both the knowledge and the enjoyment of visitors, and satisfied visitors are crucial to long-term economic viability. Further support for the positive impact of interpretation on enjoyment was found in a study of visitors on whale watching trips in Hervey Bay, Australia (Foxlee, 1999), and visitors participating in interpretation during a dolphin feeding experience at Tangalooma Resort, Australia (Orams, 1996). As was the case in the Skyrail study, the dolphin feeders who were exposed to interpretation also demonstrated significant gains in knowledge about dolphins.

1.7.3 Interpretation and zoos

The concepts of education and interpretation are particularly relevant to zoos because zoos are important vehicles for public education about biodiversity and conservation (Whitehead, 1995; Broad, 1996). Education is an expressed goal of zoos (Larcombe, 1995). Not only do zoos have the advantage of displaying collections of real, live, active wild animals from all over the world, but an estimated 600 million people visit the worlds 1000+ federated zoos each year (Whitehead, 1995). The exotic, rare, unusual or beautiful animals can trigger appreciation in humans but even if this is achieved, people need assistance to interpret what they see and hear. It is important to provide them with accessible, interesting information through effective interpretive techniques.

Shackley (1996) found that zoo visitors valued education and learning, however studies of this topic have yielded conflicting results. Social motivations are often

highly valued, and many zoo visitors place more importance on a family outing than on learning as a specific motivation (Croke, 1997; Andereck & Caldwell, 1994; Kellert, 1996; Holzer, Scott & Bixler, 1998). Some authors argue that zoo visitors are not seriously interested in learning, have limited knowledge and appreciation of wildlife, and the zoo visit has little impact on their understanding of animal biology, behaviour or conservation (Kellert, 1996). In a summary of research into learning through visits to zoos, Kellert & Dunlap (1989) concluded that for the typical visitor, the emphasis is on the social benefits derived from visiting a safe, entertaining, park-like setting. Learning is perceived as difficult and arduous, and exposure to contemporary conservation issues is often regarded as gloomy and depressing.

However, many visitors speak of wanting to see what animals are really like – they are interested in learning, but it is informal, experiential learning rather than the emphasis on biological information. Learning may also occur through social behaviours, such as discussing the exhibit and pointing out interesting features of the animals (Kellert & Dunlap, 1989). It appears that learning and education are important to visitors, but visitor surveys have defined learning in the sense of a formal digestion of facts and thus underestimated its importance (Whittall, 1992).

While there is very little research on the impact and techniques of interpretation in other wildlife tourism contexts, there is more written about interpretation in zoos (see Woods, 1998 for a review). A number of authors have put forward suggestions and conducted research into best ways to display animals to visitors, with the aim of creating favourable attitudes toward both conservation and the zoos themselves. Appendix A summarises some of these guidelines. However, despite the long history of research in zoos, little is known about how effective different methods are in educating visitors (Ford, 1995). Much research has been driven by practical problems rather than the development or testing of theory (Martin & O'Reilly, 1988), and the result has been that many studies are site-specific and limited in their applicability to other zoos. There is a need for continuing research into effective techniques for interpreting animals that can be applied across a range of zoos and wildlife tourism situations.

In particular, there is little known about the content of information that appeals to visitors. Most signs are written from a management point of view, by presenting the information that zoo staff want people to know. This can be a valid and important basis because there are certain topics relating to the management, conservation and behaviour of wildlife that need to be covered. For example, Whittall (1992) suggests that where animals naturally spend many hours asleep/stationery in the wild, signs should draw this to the attention of visitors in order to avoid incorrect perceptions of animals being bored in captive environments. However, is also important to consider the information that the visitors themselves find interesting. Gold and Benveniste (1995) asked visitors state their preferred content of interpretive information relating to a great ape exhibit, from a list of 11 possible topics. They found that ape intelligence was the topic of most interest (18.3% of visitors), followed by preventing extinction (15.4%), similarities with humans (14.5%) and social behaviour (12%). Tunnicliffe (1993) suggests that topics of broad appeal across different species are those which relate the animals' structural and behavioural characteristics to humans, and those which tell the animals story. The story should be told in relation to both the individual animal on display, and the group it comes from, in terms of human interest factors, care and needs, activity, comparison with humans and relationship to other animals. However, these factors have not been tested, and more research on the content of wildlife interpretation is needed before firm guidelines can be developed.

1.8 Summary of Research Knowledge

Overall, research which allows a broad and generalised understanding of the preferences, motivations and needs of wildlife tourists has been scarce. Some specific segments, for example zoo visitors and birdwatchers, have received more emphasis, but little attention has been paid to the broad spectrum of wildlife tourists. The following summary highlights the main findings from the existing body of research and commentary relevant to wildlife tourism and this thesis.

1. People in general are attracted to animals and wildlife. A number of explanations contribute to understanding this attraction. The main suggestions are summarised as follows:
   - The term 'biophilia' (Wilson, 1984) refers to the innate attraction that people seem to hold toward animals and nature in general. This theory proposes that humans have a genetic basis for this attraction, and that contact with nature is a physical, aesthetic, intellectual and even spiritual need (Kellert, 1996). According to this theory, people will almost instinctively seek contact with nature, and this may be an underlying motivation for participation in wildlife tourism.
   - There is widespread ownership of domestic pets in human society, and the pet-owner relationship is often characterised by strong emotional attachment and positive attitudes toward domestic animals (Sanders, 1993; Wendt, 1996; Arluke & Sanders, 1996; Newby, 1999). There is medical evidence to suggest that contact with domestic animals and pet ownership has a positive impact on human physical, social and mental health (e.g. Wendt, 1996; Wilson, 1994; Katcher & Wilkins, 1993; Seigel, 1990; Anderson, Reid & Jennings, 1992; Serpell, 1991; Newby, 1999). The context of long association with domestic animals may encourage and perpetuate an attraction to animals in general.
   - The human-like features of animals are often emphasised in the print media and on television, particularly in the context of wildlife conservation (Arluke & Sanders, 1996; Ris, 1993). This emphasis on features in common may encourage anthropomorphic orientations toward wildlife and

blur the distinction between humans and animals. This in turn may foster positive, albeit sentimental, attitudes (Kellert, 1996).

- The effect of childhood exposure to animals may encourage favourable views of some types of animals. Early exposure is often through children's books, which are dominated by highly anthropomorphised mammals (Rosenfeld, 1981; Herzog & Galvin, 1991; More, 1979). In the zoo environment, anthropomorphism has dominated explanations given to children, which encourages a view of animals as having thoughts and feelings like humans (Friedler, Zohar & Tamir, 1993; Tait, 1995; Wolf & Tymitz, 1981). Pet ownership during childhood may also encourage generally positive attitudes toward animals, and contribute to anthropomorphic orientations (Poresky et. al. 1987; Newby, 1999).
- While the classification and study of attitudes toward wildlife is complex and the dominant attitudes vary between groups of people, there is a general orientation toward humanistic and naturalistic attitudes in the American public (Kellert, 1996). The dominance of humanistic attitudes is characterised by strong affection for individual animals (especially pets), and particularly for animals considered phylogenetically close to humans. There is also empathy for the thoughts and feelings of animals, and considerable tendency toward anthropomorphic orientations (Kellert, 1996). This tendency may be encouraged and perpetuated by widespread pet ownership and the prevalence of anthropomorphism in childrens' books, in the media, and in society generally.
- It is important to note that the possible existence of a general attraction to animals does not necessarily extend to every species of animal. Indeed, many species of invertebrates and reptiles are generally disliked (Kellert, 1993). Different features of animals may be considered appealing or not appealing to people. For example, features such as aesthetic attractiveness, intelligence, larger size, and positive association with humans are said to be attractive (Kellert, 1989). Thus the concept of a general attraction to animals does not extend to all animals, and perceptions of animals also varies between groups of people (e.g. attitudes toward wolves, (Bjerke,

Reitan & Kellert, 1998)), or between different cultural groups (Kellert, 1996; Newby, 1999).

2. In the context of wildlife tourism, there are a number of factors and characteristics that influence the overall wildlife tourism experience. While it is difficult to integrate findings from the bulk of studies due to their site/species specificity, some commonalities have been noted. Factors which may have an influence the visitors' experience can be grouped under the broad headings of: features of the setting, features of the animals, features of the tourists and features of interpretation.

Features of the Setting

- Natural settings, movement of animals and ability to get close to animals are three features of the setting said to be important to the visitor experience (Shackley, 1996, Schanzel & McIntosh, 2000; Pearce & Wilson, 1995; Gray, 1993; Robinson, 1994; Johnston, 1998). Even in captive environments, naturalistic settings are appreciated (Shettel-Neuber, 1988; Croke, 1997).
- Interaction with animals is said to be appealing to a broad range of visitors (Shackley, 1996; McDonald, 1995; Kreger & Mench, 1995). The tendency for visitors to feed wildlife and zoo animals may be motivated by a desire to interact with animals (Rosenfeld, 1981; Moore, et.al, 1997). Wildlife feeding is controversial, and it is unclear how important it is to the visitor experience.

Features of the Animals

- While preferences for animals will vary between individuals and may vary between cultures and nationalities, there are some suggestions of consistent trends. The first is that preference for animals varies according to likeness to humans, with animals most like humans on the top of the preference scale, and those least like humans on the bottom. (Arluke & Sanders,

1996). However, similarity to humans is subjective and difficult because it relies not only on physical characteristics, but perceptions of the character and behaviour of animals. Kellert (1989) suggested that in addition to likeness to humans, features such as large size, pleasing aesthetics, intelligence, safety, and positive cultural and historical relationships to humans also influence preference.

Features of the Tourists

- Research in natural environments has indicated that a distinction exists between visitors based on their levels of specialisation. This continuum extends from 'generalists', who are characteristically less skilled, devote less time to the activity, spend less money, and have less specific needs; to 'experts', who participate more frequently, have higher skill levels, spend more money and have specific preferences regarding the setting (Bryan, 1979). This categorisation of visitors has to date been applied to visitors in a variety of recreational pursuits in natural settings, but has not been applied extensively to wildlife viewing.

Features of the Interpretation

- The use of interpretation may influence the visitor's experience of wildlife tourism. Interpretation can have a positive impact on enjoyment and learning (Knudson, Cable & Beck, 1995; Orams, 1998; Moscardo & Woods, 1998) and management of visitors at sites (Frost & McCool, 1988; Blanchard, 2000), and on fostering positive attitudes toward wildlife and conservation (Hair & Pomerantz, 1987; Ebreo & Vining, 1994; Dettman-Easler & Pease, 1999). Much of the work on interpreting wildlife has been conducted in zoo settings.

1.9 Gaps in Research Knowledge

Alongside the knowledge that exists regarding humans, animals and wildlife tourism there exists some substantial gaps. The greatest gaps in knowledge occur in the specific context of tourist-wildlife experiences. The aim of this project is to address some of the areas where gaps in knowledge about the wildlife tourism experience occur. The gaps can be summarised into four main areas:

1.9.1 Features of the setting

This includes features or aspects of the wildlife tourism setting that visitors consider important to an enjoyable wildlife experience. No published Australian study has empirically examined the features of the experience that are important to visitors. Whilst more is known about features important to zoo visitors or birdwatchers, there is a lack of information that is relevant to a diversity of wildlife tourists. This is particularly apparent in a tourism based and an Australian context.

1.9.2 Features of the animals

Evidence suggests that some animals are inherently more appealing to humans than others. There have been a few studies indicating the most popular animals, and some suggestions regarding the features of the animals that make them appealing. However, the lists of animals have been researcher rather than respondent generated, which may give a false impression of the most popular animals. Similarly, the features of the animals that people find appealing have been extrapolated from study results and other sources, rather than from asking respondents. Finally, no studies have been conducted in an Australian or a tourism context.

1.9.3 Features of the Tourists

There are a number of tourist characteristics that may influence how visitors perceive tourist-wildlife experiences and what they want or expect from these experiences. Two broad areas for consideration are attitudes toward wildlife, and the concept of specialisation. The generalist-specialist continuum is a useful construct for explaining some of these differences. Much of the research conducted on specialisation amongst wildlife viewers has focussed on birdwatchers. There is a lack of knowledge of how specialist wildlife viewers fit into the broad diversity of wildlife tourists, and a lack of understanding of who specialist wildlife tourists are and what they are seeking. There is also a lack of information on wildlife tourists at the more general level of the spectrum.

1.9.4 Features of the Interpretation

While there are guidelines in the general interpretation literature regarding characteristics of effective interpretation, there has been little research into wildlife interpretation. Most of the studies concerning animals have been conducted in zoos and other captive environments, and much of the research has focused on the features of the exhibits. In particular, knowledge is lacking regarding the content of interpretation, and effective interpretive techniques for different wildlife tourism situations.

The areas for research can be depicted in the following model (Figure 1.1). This model depicts some of the specific research questions that will be addressed in this thesis. The first area relates to features of the experience. This is conceptualised as including features of both the natural and the man-made environment, the facilities available to the visitor, and the nature of contact or interaction between tourists and wildlife. The second area relates to visitor characteristics. While there is evidence to suggest that wildlife tourists may differ in their preferences and characteristics based on levels of specialisation, this has not been tested in an empirical or comprehensive manner. There is a lack of knowledge about possible segments of wildlife tourists, and what they are seeking from their experiences. The third area

represented in the model relates to the animals that are the focus of the wildlife tourism experience. Of particular interest are the features of the animals, and what makes them attractive or unattractive to visitors. The final area is that of interpretation. In particular, knowledge about the topics that are of interest to visitors, and the most effective methods used to communicate information about wildlife is lacking in the literature. These four areas are viewed as interacting to influence the outcomes such as enjoyment, satisfaction, learning, impacts on wildlife and attitudes toward wildlife. In this thesis, focus will be placed on visitor enjoyment and satisfaction.

1.10 Model of Research Questions

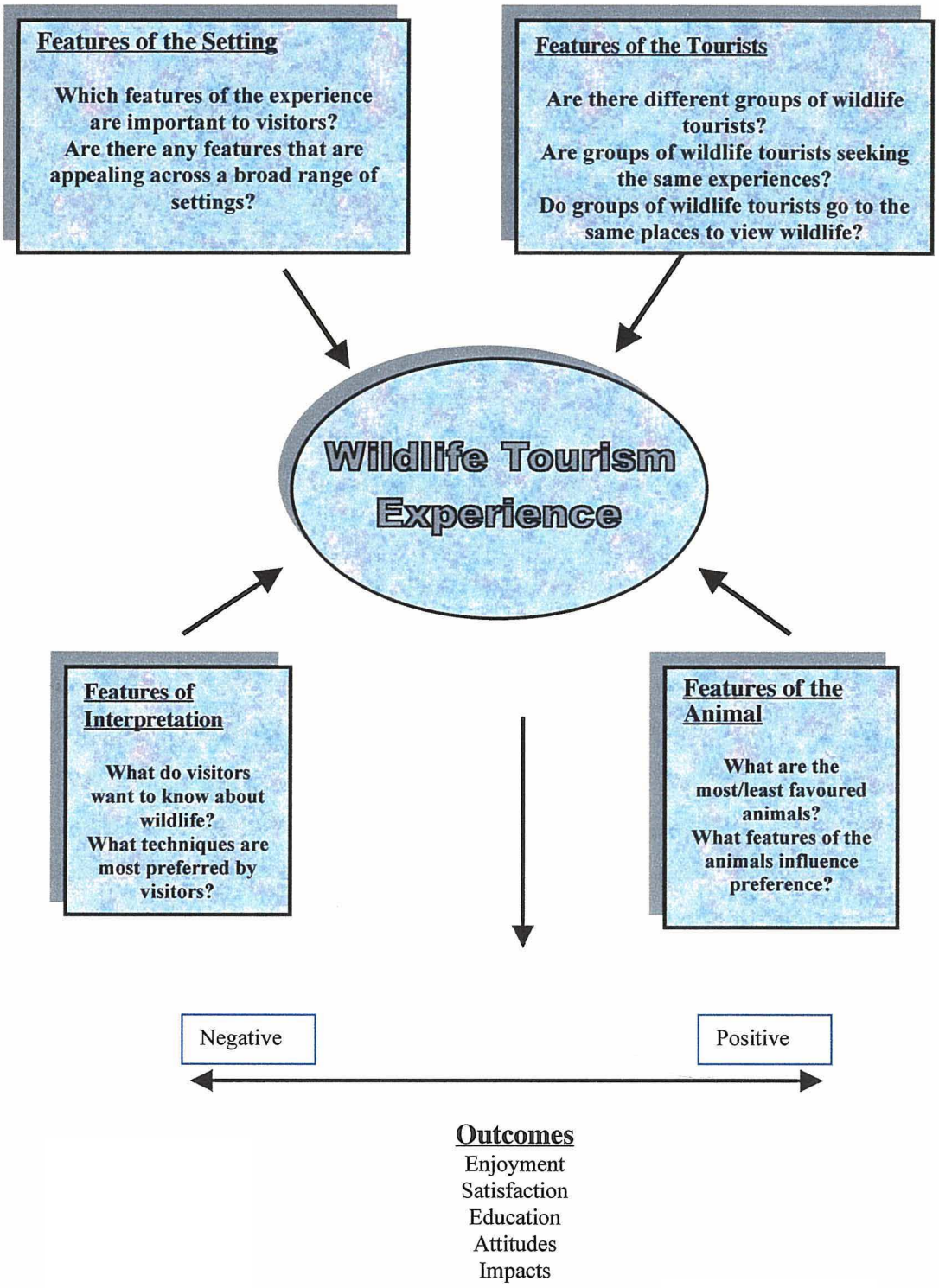


Figure 1.1: Model of research questions

1.11 Theories, Concepts and Approaches Relevant to Wildlife Tourism

1.11.1 The importance of theory

One of the major criticisms levelled at the existing body of research on wildlife tourism centers around the lack of a conceptual basis or attempts at theory development (Manfredo, Vaske & Decker, 1995). The majority of studies are site specific, and focus on specific species, visitors or settings. In particular, zoo visitors and bird watchers have received the bulk of focussed research attention. Few substantive generalisations can be made from such studies, and it is difficult and unwise to extrapolate findings to different settings. There is a lack of knowledge about the full spectrum of wildlife tourists, and few attempts have been made to develop conceptual foundations that can apply to a variety of settings.

The problem of site specific, descriptive studies that lack integration and conceptual bases has been noted in the field of tourism generally. Over 20 years ago, Cohen (1979) called for research that was longitudinal, capable of generalisation, approached from the perspective of the visitor, and which focussed on a variety of visitors and settings. A decade later, Dann, Nash & Pearce (1988) drew on methodologies from other disciplines to argue that quality tourism research must show both sophistication and rigour in methodological approach, and an awareness of theory. However, they concluded that only a small proportion of studies satisfied these fundamental criteria. While there has been some improvements in these areas, Dann and Phillips (2000) argue that these deficiencies in tourism research are still evident and that there has been a serious lack of attention given to qualitative research approaches. These authors conclude that an over-reliance on quantitative methods is detrimental to the advancement of the body of knowledge in tourism, and that *"just as tourism itself is not simply a numerical phenomenon whose success is solely measured in terms of body counts through destinational turnstiles, so too will a greater appreciation of tourism's qualitative attributes lead to parallel advances in their qualitative treatment"* (Dann & Phillips, 2000, p261).

Figure 1.1 depicted some of the gaps in research knowledge that exist regarding wildlife tourism and the tourist/wildlife experience. These were presented as specific research questions that can be used to guide study design. However, it is also important to consider these gaps in knowledge in the context of underlying theories that may be applied to wildlife tourism to inform the specific study topic. Figure 1.2 shows a modified version of the model of research questions depicted in Figure 1.1. In this model, the specific questions have been deleted and replaced by theories from a variety of disciplines. The benefit of deliberate inclusion of theory is to both provide the study of wildlife tourism with theoretical foundation and underpinning, and to guide the focus of future inquiry and interpretation.

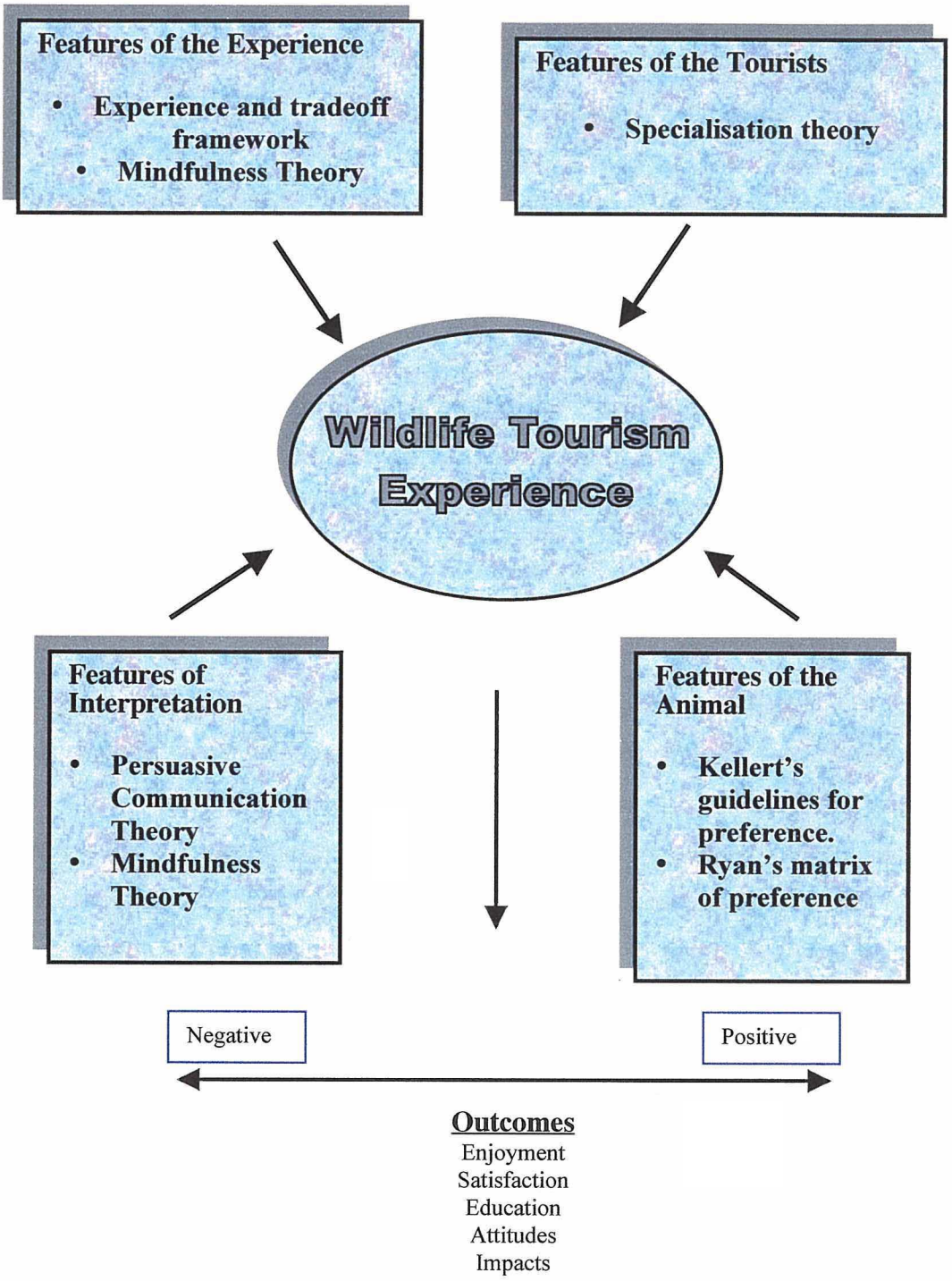


Figure 1.2: Model of theoretical approaches

There are six conceptual models or theories that will be reviewed in this section. While there are other possible theoretical platforms or conceptual bases that could be included, these six were considered to be useful for guiding the direction of research in this study. An explanation of each theory and its application to wildlife tourism will be considered under the headings outlined in the model.

Features of the Setting

There has been a lack of studies that have focussed on the broad context of features of the wildlife tourism setting. An article by Reynolds & Braithwaite (2001) provides a framework into which various forms of wildlife tourism may be placed. One of the dimensions of this framework, the 'richness/intensity of experience' dimension, is of particular relevance to this study. It provides six factors that are suggested to be intrinsic to the wildlife situation and capture the essence of quality and richness of the experience to the tourist.

Features of the Tourists

A promising theoretical approach to understanding differences between visitors is the concept of specialisation proposed by Duffus & Dearden (1990). A review of relevant studies relating to specialisation has been discussed earlier in this chapter. In this section, consideration of the broader theoretical concept will be covered, which relates to both the characteristics of visitors at either end of the specialisation continuum, and also the relationship between specialisation and the evolution of wildlife tourism sites.

Features of the Animal

There are two approaches that may be useful in understanding attitudes toward, and preferences for, wildlife species. These are proposed by Kellert (1996) and Ryan (1998). The model proposed by Kellert contemplates some of the influences that shape visitors' attitudes toward wildlife. As discussed earlier in this chapter, attitudes can play an important role in how visitors view wildlife, and on their experience of wildlife tourism in general. The second approach, proposed by Ryan (1998) depicts a matrix for predicting the popularity or attractiveness of animals.

Features of Interpretation

The theoretical approaches to interpretation share a common connection. The first model, referred to as Persuasive Communication theory (Petty & Cacioppo, 1986) provides a platform for understanding how to influence attitudes and learning, and this can be applied to wildlife interpretation. The second model is also relevant to interpretation, and has some parallels to Persuasive Communication theory. Known as Mindfulness theory (Langer, 1989), this approach has been directly applied to improving the effectiveness of interpretation in tourism settings (Moscardo, 1996, 1999b). However, this theory has potential for broad application to wildlife tourism beyond interpretation, by providing an underlying explanation for why certain features of the experience may be attractive to visitors.

1.11.2 Features of the Setting: The 'Experience and Tradeoff' framework

Reynolds & Braithwaite (2001) have proposed a framework by which wildlife tourism experiences are positioned on two dimensions (Figure 1.3). The first is an 'effect on wildlife' dimension, which relates to the level of impact on wildlife caused by the wildlife tourism activity. The specific points on the 'effect on wildlife' dimension are:

- *vicarious experiences* (books, documentaries, and television shows that have low impacts based on the number of people that experience them),
- *general access wildlife areas* (national parks, wilderness areas and walking trails where animals are in their natural environment and behaving naturally, although some habituation may occur. The interface between the visitor and the wildlife may be managed or unmanaged),
- *contrived experiences* (zoos, circuses, wildlife parks, and pets. The interaction is contrived, the animals are not in their natural habitats),
- *limited access, rare animals* (animals in natural habitat. Visitor is interested in rarity value of species and desires close interaction), and
- *restricted access, rare/endangered animals* (animals are in their natural habitat, where contact with wildlife likely to incur high physical and/or monetary cost).

Reynolds & Braithwaite (2001) suggest that access to and availability of the experience has an inverse relationship with impacts on habitat and wildlife. The second dimension, 'richness/intensity of experience' is of more interest to this present thesis, and incorporates six quality factors. These factors are suggested to capture the essence of quality and richness of the wildlife tourism encounter for the person experiencing it. The factors are:

- *Authenticity* (the degree of natural behaviour exhibited by fauna and environment in which it is viewed),
- *Intensity* (excitement generated by the experience),
- *Uniqueness* (sense of the experience being special and unusual),
- *Duration* (length of exposure to the stimuli. Beyond a certain point the visitor is saturated with the particular experience),
- *Species popularity* (includes physical attractiveness, size, danger and publicity factors), and
- *Species status* (rarity of the animal. Rarer animals hold a special attraction).

The Experience and Tradeoff framework is depicted in Figure 1.3, along with examples of types of experiences that may fit into various dimensions of the grid. The authors note that these examples are indicative only and not based on empirical evidence.

Effect on Wildlife	1	2	3	4	5	
5		Small group guided tours		Group hunting, game fishing	Individual hunting safari	Rare & endangered
4		Wildlife boat cruises	Animal sanctuary	Hides/ water hole watching		Limited access, rare habitat
3		Zoos	Wildlife parks	Feeding f wild animals	Circus type animal shows	Contrived experiences
2	Urban park	Bush-walking	Recreational fishing, general birdwatching			General access
1	Text book	Natural history books	Entertainment films/books	Stories by naturalists	Extreme animal adventure book	Vicarious experiences

Richness/Intensity of Experience

Figure 1.3: Experience and tradeoffs framework (Reynolds and Braithwaite, 2001)

This framework provides one method of categorising the diversity of experiences that are included under the broad heading of wildlife tourism. The factors which make up the 'richness/intensity of experience' dimension provide a possible direction for studying factors that are central to satisfaction with the wildlife tourism experience. However, the importance of these factors are as yet untested, and it is unclear on what basis the authors selected these factors as capturing "*the essence of quality an richness of the wildlife tourism encounter for the person experiencing it*" (Reynolds & Braithwaite, 2001, p35). It also appears that each of the factors in this dimension can be explained by use of Mindfulness theory. This theory is discussed later in this section, and is presented as a potential theory by which both the features of the interpretation, and the features of the experience, can be understood. Each of the factors listed in the 'richness/intensity of experience' dimension can be found in Table 1.3, which lists the precursors and conditions for Mindfulness in wildlife tourism situations. Although the framework proposed by

Reynolds and Braithwaite (2001) is directly related to wildlife tourism, the stronger theoretical background associated with Mindfulness theory makes this a more appropriate concept for guiding study into features of the wildlife tourism setting.

1.11.3 Features of the Tourists: 'Specialisation Theory'

The concept of specialisation is one approach useful to understanding differences between visitors. While a detailed review of studies relating to specialisation and its application to wildlife tourism has been provided earlier in the literature review, a brief summary is appropriate in the context of specialisation theory. The concept of specialisation is related to the social psychological concept of involvement, which is defined as *"a state of motivation, arousal or interest with regard to a product, an activity or an object"* (Kim, Scott & Compton, 1997, p321). Although this implies an internal state variable, a number of authors have argued that it can be conceived of in behavioural terms. In the context of leisure, some of the behavioural indicators of involvement have included frequency of participation, money spent, miles travelled, ability or skill, ownership of equipment/books, number of memberships of organisaitons, study of wildlife behaviour, participation in organised wildlife counts or surveys, preferences for setting attributes, enjoyment of the activity, activity involvement at home, method of decision making, perceptions of risk, and participation in conservation efforts (e.g. McFarlane & Boxall, 1996; Ewert & Hollenhorst, 1994; Choi, Loomis & Ditton, 1994; Donnelly, Vaske & Graefe, 1986; Cole & Scott, 1999; Kellert, 1985; McIntyre & Pigram, 1992; Ewert & Hollenhorst, 1994; Martin, 1997; Manfredo & Larson, 1993; Duffus & Dearden, 1990). Some of the pioneering work in recreation was conducted by Bryan, (1979) who proposed a recreation specialisation framework and suggested that differentiating between recreationists based on this framework would assist in understanding the experiences sought by different groups.

In terms of wildlife viewing, the concept of specialisation has been applied to birdwatchers (e.g. Mc Farlane, 1994; 1996; Cole & Scott, 1999), and the concept

applied to wildlife tourists in general by Duffus & Dearden (1990). The overall concept of specialisation amongst wildlife tourists is depicted in the following diagram (Figure 1.4). The characteristics of specialists and non-specialists listed in Figure 1.4 have been combined from Duffus & Dearden (1990) and Bryan (1979).

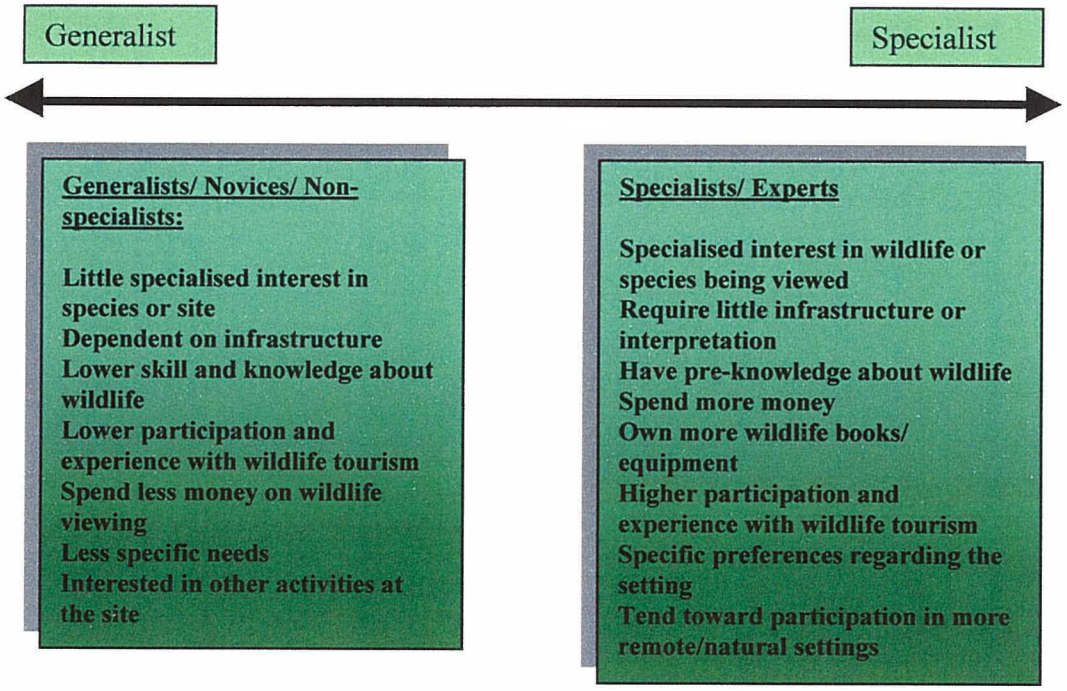


Figure 1.4: Wildlife specialisation continuum

Duffus & Dearden (1990) suggest that over time, the individual becomes more specialised. What may begin with visits to zoos or captive displays, gradually changes to viewing wildlife in local areas and undertaking specific trips to view particular species. In this way, specialists eventually move away from viewing animals in captive environments. However, not only do wildlife tourists change in their specialisation over time, but the wildlife sites also change. Duffus & Dearden (1990) propose that a site may start off as one which is dominated by specialists, who require little infrastructure or interpretation and are few in number. As awareness of the site grows, a greater number of less specialised visitors dominate the visitor mix, and bring with them greater demand for infrastructure and management. As the site changes, these authors suggest that specialists will be

fewer in number in the visitor population. Figure 1.5 illustrates the relationship between user specialisation and site evolution.

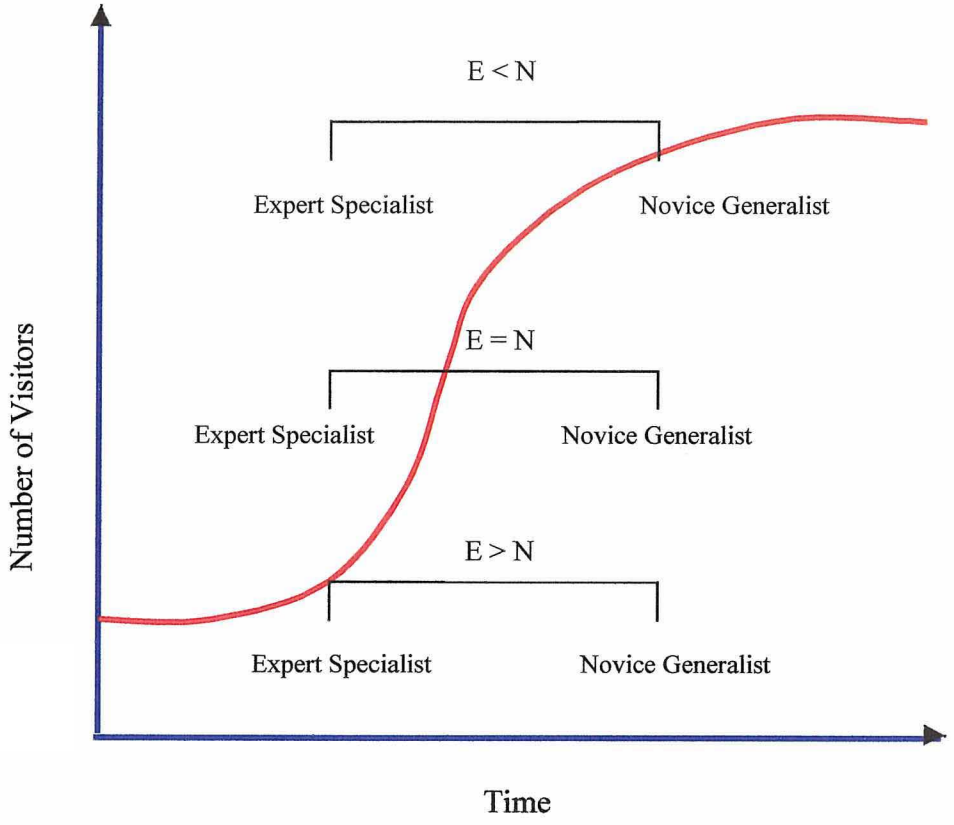


Figure 1.5: The relationship between user specialisation and site evolution (Duffus & Dearden, 1990)

An example of the development of a tourist site from remote and unmanaged to a mass commercial tourism venture is that of the Penguin Parade on Phillip Island in Victoria, Australia. Penguin viewing began in the early 1920's where small groups would sit on blankets and watch the penguins come in to shore by moonlight. When a bridge to the island was built in 1940, attendance at the penguin site increased, and by the 1960's damage from erosion and uncontrolled access led to the first fences and viewing stands being constructed. Today, the site attracts almost half a million visitors per year (1998/99 figures) and has substantial boardwalks, concrete viewing areas, and a major commercial and interpretive centre. It is marketed both nationally and internationally, and is visited by many

tour groups (Phillip Island Nature Notes, 1998). However, there is no information regarding the types of visitors to the site, or how that may have changed over time.

There are a number of problems associated with the application of specialisation theory to wildlife tourists. Firstly, there has been very little previous research conducted with wildlife tourists. Secondly, there is little consistency with regard to methods used to define specialists, and the methods that have been used to define specialists have received criticism (Watson & Niccolucci, 1992). Criticisms have focussed on the common practice of combining components of specialisation (for example prior experience, skill etc) to form a specialisation index, which is then used to divide people into sub-groups. This method hides variations in the components that make up the index, and this is problematic for a construct that is likely to be multidimensional in nature such as specialisation (McIntyre & Pigram, 1992; Keuntzel & Heberlein, 1992). Watson & Niccolucci (1992) criticise the lack of mathematical rigor associated with combining variables of different scales with poor or no standardisation. They also argue that *"although these studies have been aimed primarily at investigating the value of specialisation as a segmentation tool, there is little theoretical support for the dimensions selected to represent the concept. Within the specialisation literature, there is generally little theoretical discussion of specific variables to measure and use in the composite indexes. The problem occurs when the individual elements are combined within dimensions and across the specialisation index and all ability to advance and test theoretical reasoning has been lost. It is nearly impossible to draw conclusions or advance hypotheses about the contributions past experience, or any other dimension, makes to the findings of this research"(p 91)*

The main difficulty associated with the model of site evolution proposed by Duffus & Dearden (1990) (Figure 1.5) is the lack of empirical evidence to support its accuracy. Regarding wildlife tourism sites, there is no evidence that sites necessarily grow and attract more people as suggested by the model. For some sites, remoteness precludes development. Regarding the visitors, there has been no research into the mix of visitors at wildlife sites, no longitudinal studies of changes in visitor mix, and therefore there is little evidence to support the idea that

specialists avoid developed sites. However, the models of the specialisation continuum and specialisation and site development depicted in Figures 1.4 and 1.5 provide a useful basis for further research. In particular, they suggest some characteristics of specialists and non-specialists, and suggested patterns of site visitation, that are able to be tested.

1.11.4 Features of the Animals: 'Factors shaping attitudes toward animals', and 'Matrix for Classifying Animals'

Factors shaping attitudes toward animals

Attitudes toward wildlife exert an important influence on the participation in and experience of wildlife tourism. Attitudes may change over time, although there is usually a large degree of attitude stability (Kellert, 1986). Attitudes refer to broadly integrated feelings, beliefs and values possessed by individuals (Kellert, 1980). However, the measurement and study of attitudes is highly complex, and despite the vast amount of literature concerning attitudes, difficulties continue regarding exactly how attitudes are formed, how they are changed or how they relate to behaviour (Fishbein & Ajzen, 1975). In the field of wildlife attitudes, Stephen Kellert and associates have undertaken extensive studies into the attitudes held by the American public. Kellert (1996) provides a framework that summarises the key factors important to shaping attitudes toward wildlife. In discussing this model, Kellert (1996) refers to attitudes toward a given species rather than wildlife in general, and suggests they are formed through a range of influences including knowledge, values, experience, culture, history and biology. This model is depicted in Figure 1.6.

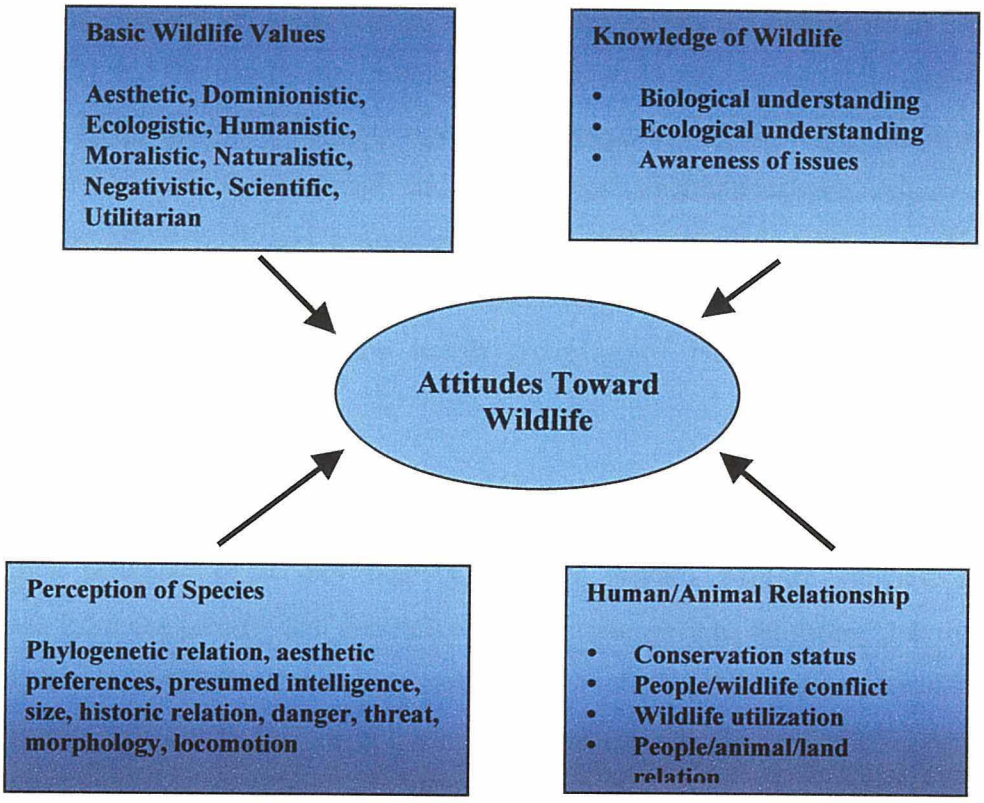


Figure 1.6: Factors shaping attitudes toward wildlife (Kellert, 1996)

The 'basic wildlife values' referred to in the model constitute a conceptual framework for organising and describing peoples' feelings and beliefs about nature and animals. They are shaped by the formative influences of experience, learning and culture (Kellert, 1996). The identification of these values facilitated Kellert's (1980) work into measuring the attitudes toward wildlife held by the American public. These values, which developed into descriptions of attitude types as described by Kellert (1980), have been listed in Table 1.1 of this chapter. These values predispose people into thinking about animals in a certain way, and are briefly reviewed as follows: A *naturalistic* orientation for direct contact with wildlife and the outdoors; an *ecologistic* and *scientistic* inclination to understand the biological functioning of organisms and their habitats; a *humanistic* affection and emotional bonding with animals, particularly domestic animals; a *moralistic* concern for ethically appropriate relations with the natural world; an *aesthetic*

attraction to the appearance or symbolic significance of animals; a *utilitarian* interest in pragmatically exploiting wildlife and nature; a *dominionistic* interest in exercising mastery and control over wildlife; and finally a *negativistic* avoidance of animals and the natural environment for reasons of fear, dislike or indifference (Kellert, 1996). The second grouping of factors suggest that attitudes are shaped by a creature's particular physical and behavioural characteristics, such as size, aesthetics, intelligence and a number of other influencing factors as previously listed in Table 1.2 of this chapter. The third grouping of factors relates to knowledge of wildlife, and the fourth grouping of factors are derived from human/animals relationships.

The advantage of Kellert's (1996) model is that it provides an overview of a complex interplay of factors shaping attitudes toward wildlife species. As is evident from the prolific and detailed body of literature into attitudes, this topic is highly complex. Each of the areas referred to in the model is also complex and difficult to measure. The exception is for the examination of the underlying wildlife values, which Kellert and others have applied in a number of studies (e.g. Kellert 1991a; 1991b; Bjerke, Reitan & Kellert, 1998; Menning, 1995). However, an understanding of how people come to form these underlying wildlife attitudes would be informative to the study of wildlife tourism.

The second approach for studying features of the animal draws from Kellert's work, particularly in relation to the most popular animals having the greatest likeness to humans. Ryan proposes a matrix (Figure 1.7) for classifying animals on two intersecting dimensions. The first is perceived danger or safety, and the second relates to the extent to which the animal is perceived as friendly or similar to humans. Examples of classification of dolphins, gorillas and saltwater crocodiles are provided with reference to this matrix (Ryan, 1998, p319). However, while this scale may be intuitively appealing, it is difficult to classify many animals in practice, particularly on the human oriented/non-human scale. This is primarily due to lack of clarity in the definition of the dimension. In particular, it is unclear whether this dimension means the animals have physical similarities to humans such as shape; whether it relates to perceived character similarities such as the

capacity for emotion, or whether it is related to being associated with humans such as the case with domestic animals. A further difficulty is that the dimensions of the matrix are based on a researcher-defined concept of what makes animals attractive or unattractive. While this does not mean that these dimensions are not important, there is no empirical and respondent-generated evidence to assess both whether these dimensions are important, and if so how important they are in predicting preference.

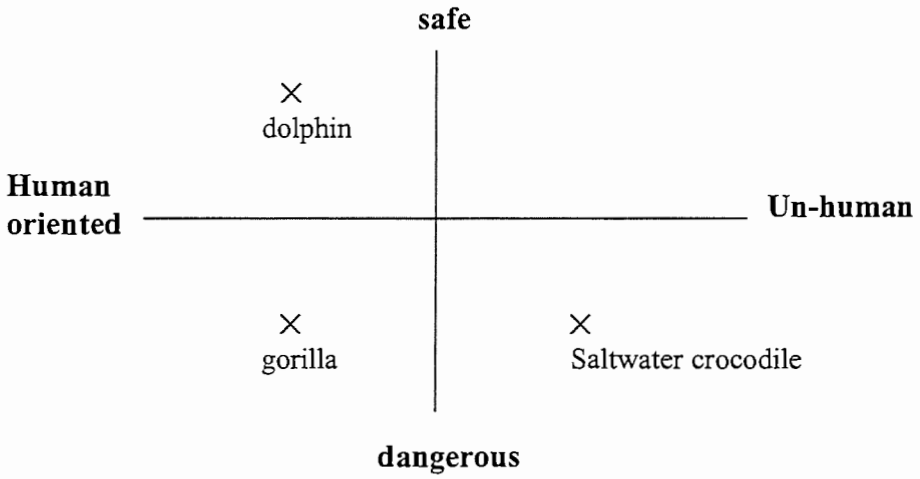


Figure 1.7: Matrix for classifying animals

1.11.5 Features of Interpretation: 'Persuasive Communication Theory' and 'Mindfulness Theory'

Interpretation can provide an important contribution to wildlife tourism. In the tourism context, the purpose of interpretation is to encourage the enjoyment of visitors (Knudson, Cable & Beck, 1995). This is a valid goal for commercial tourism ventures, which depend upon satisfied visitors for their long-term viability. Further to this argument, there is evidence to suggest that visitors to natural environments are interested in learning and educational experiences (QTTC, 1998; Moscardo, 1999b; Moscardo, Verbeek & Woods, 1998; Howard, 1999). Interpretation also has importance to sustainable tourism. Firstly, interpretation is

suggested as a means of managing the interactions between wildlife and tourists in order to minimise impacts on both the site and the environment (Frost & McCool, 1988; Blanchard, 2000). Secondly, interpretation can raise the knowledge and awareness of wildlife and habitats (Hair & Pomerantz, 1987). Thirdly, interpretation can encourage pro-conservation attitudes and motivation to act on broader conservation issues (Whitehead, 1995; Dettman-Easler & Pease, 1999).

Persuasive communication theory has clear implications for interpretation within wildlife tourism settings. The basic aim of persuasive communication is to use verbal (written or spoken) messages to influence beliefs, attitudes and behaviour (Ajzen, 1992). Persuasive communication has applications in persuading visitors to observe safety rules, avoid conflicts with other visitors, and avoid behaviours which cause detriment to the environment (Roggenbuck, 1992). Persuasion attempts to *"appeal to reason, attempting to effect change and compliance by convincing the receiver of the validity or legitimacy of the advocated position"* (Ajzen, 1992, p6).

The receiver's involvement is key to their motivation to process the message. This is influenced by the topic, by internal factors (e.g. familiarity with issues, cognitive ability and intelligence, preoccupation with other matters, and lack of time) and by external factors (e.g. message repetition, clarity of presentation) (Ajzen, 1992). Where ability and motivation to process and contemplate information is low, the receiver may rely on other cues to form opinions. Such cues can include the communicator's credibility (for example accepting a position advocated by a credible source), or the attractiveness or trustworthiness of the communicator. Such reliance on cues other than information processing has been labelled 'peripheral cues' (Petty & Cacioppo, 1986) or 'cognitive heuristics' (Chaiken, 1980). However, change via this 'peripheral' route does not represent true persuasion, as the core of persuasion is acceptance of an advocated position only after contemplation of the message. In addition, peripheral attitude change tends to be short-lived, susceptible to counter-propaganda and has little effect on actual behaviour (Ajzen, 1992).

The 'central' route to persuasion is the desired alternative to the peripheral route, and is characterised by high attention to the persuasive message content, careful thought and deliberation of the content, and integration of the content into existing belief systems (Roggenbuck, 1992). For learning through the central route to occur, the recipient must be motivated to attend to the message, be able to process the information, accept the arguments and have the ability to act on the arguments. The success of this ideal kind of learning depends on many variables, including characteristics of the recipient (e.g. personal involvement, prior knowledge, prior experience); of the message (e.g. relevance of content, strength of argument, complexity of message, structure of message); of the method of delivering the message (e.g. signs, presentations, audio-visuals); and of the context (e.g. timing of message, distractions on attention) (Roggenbuck, 1992). Attitudes changed by the central processing route have been found to be "*relatively accessible, persistent over time, predictive of behaviours, and resistant to change until they are challenged by cogent contrary information*" (Petty, McMichael & Brannon, 1992, p81). A schematic diagram of the central and peripheral routes to persuasion is illustrated in Figure 1.8.

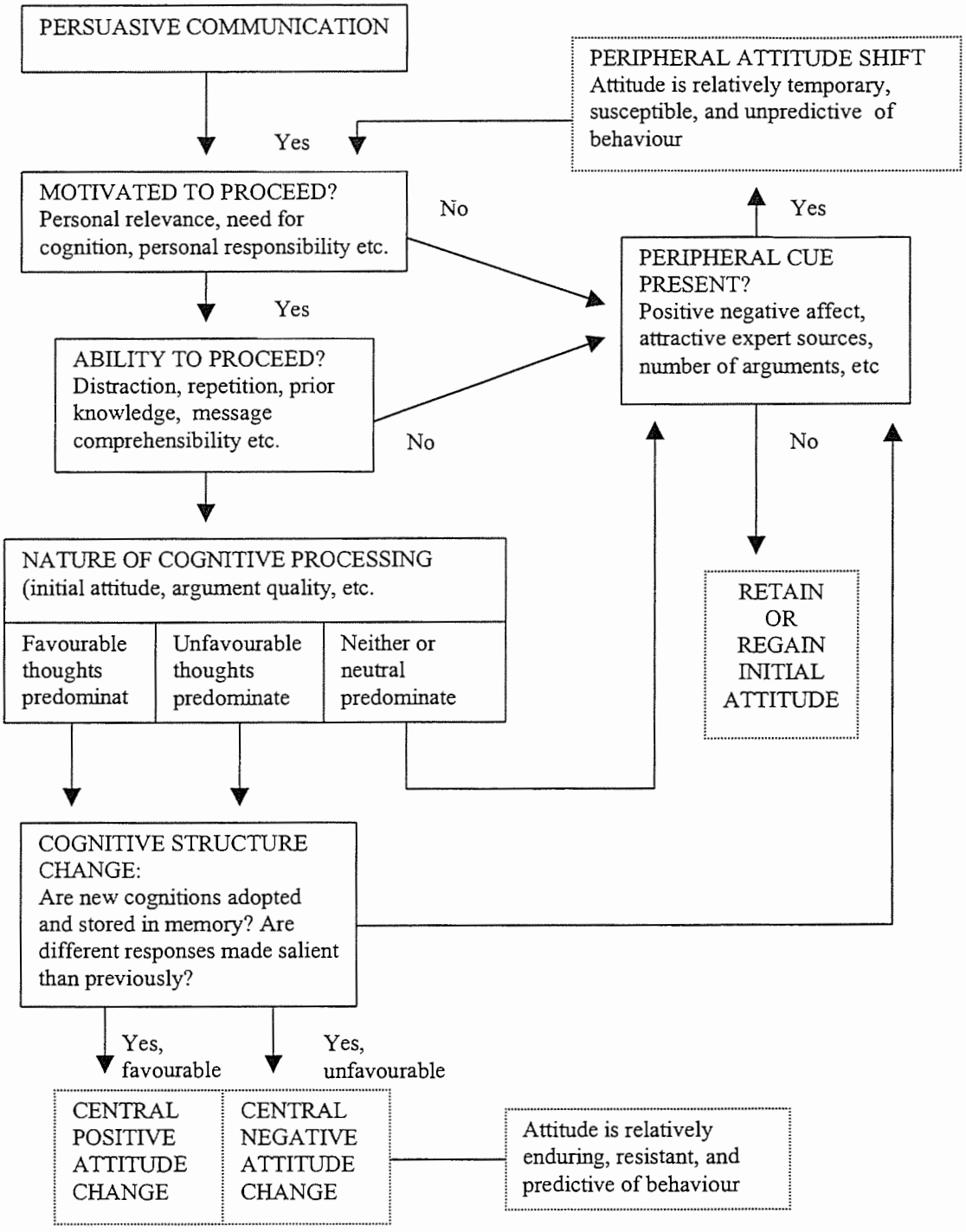


Figure 1.8: Elaboration likelihood model of persuasion

Given that central processing is the most desirable and effective route to attitude change, it is necessary to understand how to design interpretation for visitors which

encourages such deliberate information processing. One theoretical approach that has been applied directly to interpretation in tourist settings is the concept of 'Mindfulness and Mindlessness' (Langer, 1989). The distinction between mindfulness and mindlessness had parallels with central and peripheral processing. Mindlessness is characterised by people not processing new information, and relying on existing behaviour or thought structures (Moscardo, 1999b). An example would be someone forgetting to incorporate a change of routine (e.g. stopping to pick up groceries) to the usual routine of driving home from work. Mindfulness, on the other hand, *"is the opposite state to mindlessness and can be defined as a mode of functioning through which the individual actively engages in reconstructing the environment through creating new categories or distinctions, thus directing attention to new contextual cues that may be consciously controlled"* (Moscardo, 1999b, p21). People who are mindful pay attention to the world, react to new information, and create new routines, behaviour and views of the world. Mindfulness is necessary for learning to occur (Moscardo, 1999b).

Moscardo (1999b) suggests there are at least three pathways to Mindlessness. The first is by relying on familiar or repetitive routines, such as forgetting to incorporate something different into the familiar and repetitive routine of driving home from work. The second is acceptance of given definitions or labels which subsequently guides behavior. An example includes a study which found that clinical psychologists gave more negative judgements of interviewees labelled 'patient' compared to those labelled 'job applicants' (Langer & Abelson, 1974, in Moscardo, 1999b). The psychologists in this study were mindless because they relied on the assigned labels rather than the available information. The third pathway to mindlessness is for the receiver to decide the information is irrelevant to them personally.

Moscardo (1999b) suggests a Mindfulness model for communicating with visitors in interpretive settings, which summarises studies conducted into interpretation. This model is depicted in Figure 1.9. In this model, a combination of communication factors and visitor factors influences a cognitive state of Mindfulness or Mindlessness. Communication factors include use of variety and

change, multisensory media, novelty, conflict and surprise, visitor control, connections to visitors and use of questions. In the interpretive setting these can be achieved through the design of the exhibit itself, through the design and wording of text, or the design of presentations. Visitor factors which encourage Mindfulness include high interest in content, and low levels of fatigue.

In addition to Moscardo's (1999b) model is the inclusion of distractions as a factor which may hinder Mindfulness or 'central' processing, as suggested by Petty, McMichael & Brannon (1992). Conversely, exhibits or interpretation that is repetitive, unisensory, static, not connected to visitors in ways they understand or relate to, and which allow the visitor no control are likely to encourage Mindlessness. Visitor factors of low interest in content, and high fatigue and distractions can also encourage mindlessness.

Once the communication and visitor factors combine to form a predisposition towards Mindfulness, it is important that the information is clearly structured. This is based on work in educational, cognitive and environmental psychology that indicates that learning is enhanced by use of a structure which assists the organisation of new information (Moscardo, 1996). The consequences of Mindful visitors as proposed by the model is that *"Mindful visitors will be more likely than Mindless visitors to enjoy their visit, express satisfaction with their visit, learn more from their visit and be interested in discovering more about a topic or place. Mindful visitors should also be more aware of the consequences of their behaviour and more appreciative of the ..site"* (Moscardo, 1996, p382).

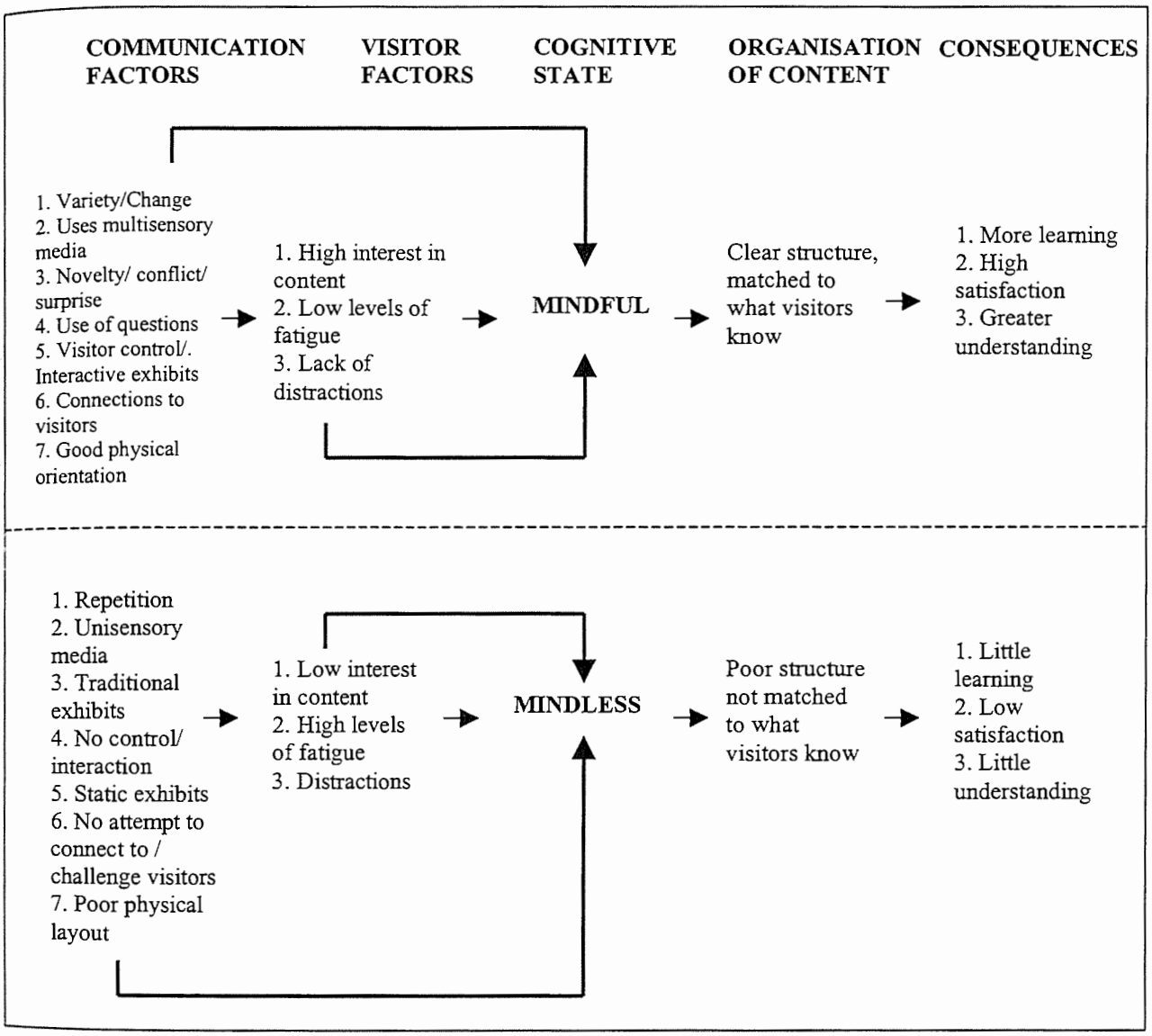


Figure 1.9 Mindfulness model for communicating with visitors

Mindfulness has clear implications for the design and structure of interpretation, however it also has a broader application to the wildlife tourism experience, in particular the features of the setting and the animals. For example, variety in the setting, or visitor interaction with animals, is likely to encourage Mindfulness. Thus in wildlife tourism, the animals, the setting, the characteristics of the visitor and the interpretation or communication design can interact to encourage mindfulness or mindlessness. Animals that make people mindful, for example those that are dangerous, colourful, or active, are likely to be preferred by visitors

under Mindfulness theory. Mindfulness theory suggests that visitors are more likely to be mindful or mindless depending on their characteristics, such as having special interest in the topic. Features of the experience that are surprising, different, unique or authentic are likely to make visitors mindful, and different features of interpretation can encourage visitors to be mindful or mindless (Moscardo, 1999). Mindfulness theory therefore has potential relevance to all aspects of wildlife tourism presented in this thesis. A diagram depicting the possible applicability of Mindfulness theory to the wildlife tourism experience is depicted in Figure 1.10.

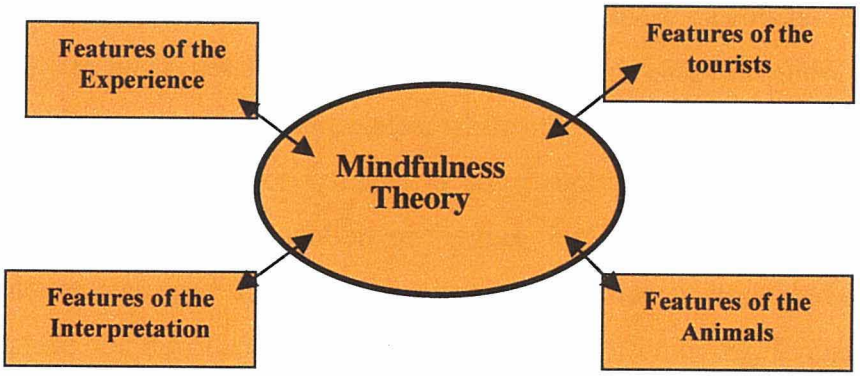


Figure 1.10: Mindfulness theory and the tourism wildlife experience

When considering Mindfulness theory in the context of the broader wildlife tourism experience, a distinction needs to be made between factors that attract attention, which could more accurately be described as precursors to Mindfulness, and conditions that sustain attention and a Mindful cognitive state. Moscardo (1999b) lists a number of factors that attract the attention of visitors, which is a necessary precursor to sustained and Mindful processing. This is founded in the work of Berlyne (1960, 1966, 1967 in Moscardo, 1992), who argued that there were three groups of stimulus which can result in arousal and curiosity. Arousal and curiosity serve to activate the nervous system and this results in heightened attention to the environment. The first of these groups was psychophysical variables, which relate to extremes in the quantity or quality of physical properties of a stimulus. Examples include loud noises, bright lights, intense smells and bright colours. The second was ecological variables, which were stimuli related to

survival. For example proximity to danger would result in arousal. The third group of variables was collative variables, which related to information available in the environment. In this case, variables such as novelty, surprise, complexity, and ambiguity create conflict and result in curiosity.

Moscardo (1999b, p59-62) provides a review from interpretation and museum studies which provide empirical support for these factors and some additional factors. Table 1.3 combines factors from Moscardo's (1999b) Mindfulness model for communicating with visitors, and factors related to gaining the attention of visitors. However, there is some overlap between these categories. Some factors are likely to be successful in attracting and holding visitor attention, and thus are more likely to encourage Mindfulness, while others are likely to be successful only in attracting attention. For example, a large and colourful interpretive panel or display may attract the attention of visitors, but not hold their attention if the information contained in the display is not relevant, poorly structured or difficult to understand. On the other hand, a large touch tank with moving, living animals that visitors can touch is likely to attract and hold visitor attention.

Table 1.3:

Precursors and Conditions for Mindfulness in Interpretive Settings

Precursors – Attracting Attention	Conditions – Sustaining Attention	Visitor Factors
• Extreme stimuli – large, colourful, loud, smelly things • Movement • Use of contrast, patterns • Unexpected, novel, surprising things • Other living things generally	• Variety and Change • Multisensory settings or interpretation • Novelty, conflict and surprise • Use of questions • Visitor control, interactive exhibits Things personally connected to the visitor • Good physical orientation • Clear structure of	• High interest in content • Low levels of fatigue • Low levels of distractions

	content • Content understandable to visitors/matched to what visitors know • Unique, rare things • Authenticity	

* Adapted from Moscardo (1999b)

The factors listed in Table 1.3 have been developed specifically with reference to interpretation. However, using the same logic as was used to develop the items in Table 1.3; it is possible to develop a similar table that relates to the broader wildlife tourism experience. Examples include the reported attraction visitors have to, for example, movement or animals or interactions with wildlife. The extrapolation of Mindfulness theory to wildlife tourism in general is provided in Table 1.4. A detailed justification of each item is provided in Appendix N.

Table 1.4

Precursors and Conditions for Mindfulness in Wildlife Tourism Settings

Precursors – Attracting Attention	Conditions – Sustaining Attention	Visitor Factors
• Extreme stimuli – large, colourful, loud, smelly dangerous, large numbers, close proximity • Movement/ activity of animals • Use of contrast, patterns • Unexpected, surprising things • Other living things generally (infant animals) • Excitement or emotion	• Variety, diversity • Multisensory experiences • Interacting with animals, visitor control • Things personally connected to the visitor • Good physical orientation • Unique, rare animals • Authentic, natural environments or habitats • New experiences, new animals seen	• High interest in content • Low levels of fatigue • Low levels of distractions

* Adapted from Moscardo (1992, 1999)

1.12 Rationale and Scope of the Thesis

In developing the specific aims of the thesis, consideration was given to both evidence from previous studies in the literature, and from theories related to the topic. Overall, there is a substantial lack of information about wildlife tourism that:

1. has a theoretical basis
2. is conducted in an Australian context, and
3. that has a qualitative component.

Because the foundation of knowledge for wildlife tourism in Australia was not substantial, the broad aim of this thesis was to begin an investigative process that was initially exploratory in nature. Use of theory and previous studies was then used to interpret results and guide the direction of later studies.

While the literature review identified a number of gaps in research knowledge, it is not possible to study every aspect of the topic in this thesis. The following aims were considered to be achievable within the time, logistical and financial constraints of the project.

a) Features of the setting

1.12.1: To identify respondent-generated features of wildlife settings that are commonly desired by a broad range of wildlife tourists.

1.12.2: To examine whether there are differences and/or similarities between visitors regarding the features they desire in their settings.

1.12.3: To evaluate the relative importance of features of the setting.

1.12.4: To examine the applicability of Mindfulness theory in explaining the attraction to various features of the wildlife tourism setting.

b) Features of the animals

1.12.5: To identify a respondent-generated list of most preferred animals.

1.12.6: To examine why respondents prefer these animals.

d) Features of the tourists

1.12.7: To apply the concept of specialisation to a diversity of wildlife tourists in an Australian setting.

1.12.8: To examine differences between wildlife tourists with varying levels of interest in viewing wildlife in terms of their demographic characteristics, travel preferences and preferences for different features of the wildlife tourism setting.

e) Features of the interpretation

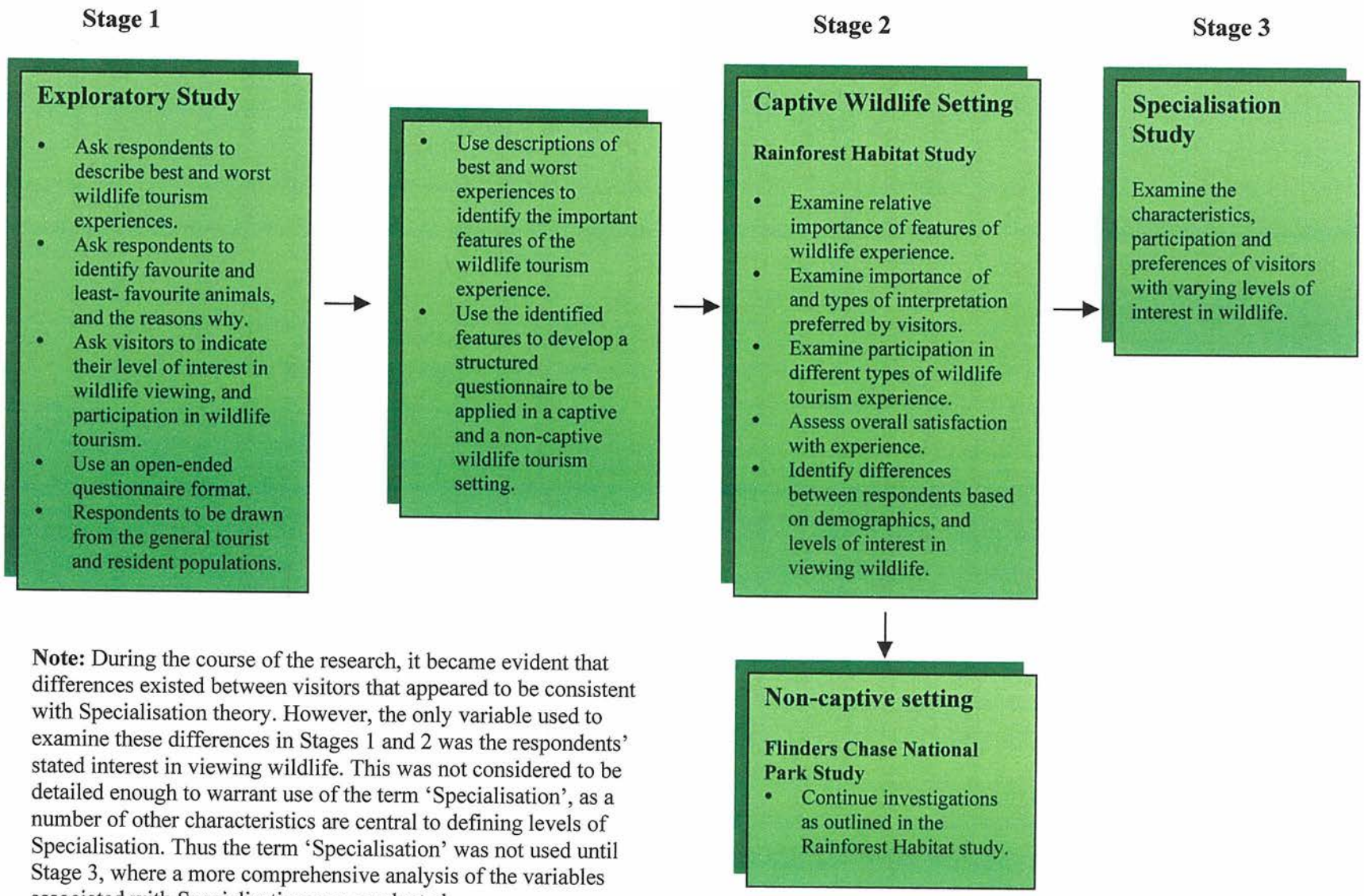
1.12.9: To examine the importance of interpretation in the context of other features of the wildlife tourism experience.

1.12.10: To investigate whether preferences for interpretation varies based on the level of interest in viewing wildlife.

1.12.11: To examine visitor preferences for wildlife interpretation topics and methods of delivery.

The plan of research for this thesis is outlined in Section 1.13.

1.13 Plan of Research



Note: During the course of the research, it became evident that differences existed between visitors that appeared to be consistent with Specialisation theory. However, the only variable used to examine these differences in Stages 1 and 2 was the respondents' stated interest in viewing wildlife. This was not considered to be detailed enough to warrant use of the term 'Specialisation', as a number of other characteristics are central to defining levels of Specialisation. Thus the term 'Specialisation' was not used until Stage 3, where a more comprehensive analysis of the variables associated with Specialisation was conducted.

CHAPTER TWO

Exploring Themes in Wildlife Tourism

2.1 Introduction

A review of the literature on wildlife tourism indicated that there was very little research conducted with wildlife tourists in general. Most of the existing studies are site specific, and conducted with particular groups of wildlife tourists such as birdwatchers or zoo visitors. Much of the research was conducted overseas, particularly in the United States, and a most obvious shortfall was the lack of empirical research conducted in an Australian context. The types and characteristics of wildlife in Australia vary greatly from those featured in most of the existing studies, which may limit the usefulness of results from studies conducted overseas. A further obvious shortfall was the absence of research with a qualitative component (Duffus & Wipond, 1992).

The purpose of this study was to generate a broad range of wildlife tourism experiences, and examine the features or characteristics of experiences that visitors considered to be important or memorable. Previous research and commentary in this aspect of wildlife tourism has been based on researcher-generated suggestions of important features, or opinions of managers connected to wildlife tourism. This study asked the visitors themselves to describe, in their own words, their best and worst wildlife tourism experiences. Use of this technique enabled the identification of key recurring themes in the descriptions provided by respondents to develop a platform upon which further research could be based.

A second purpose of the study was to identify favourite and least favourite animals, and the features of these animals that influenced their popularity. It is clear, both intuitively and from research findings, that humans have different

preferences for animals. This has been established empirically since the early 1970's by a few large general studies (e.g. Kellert, 1980, 1986; Bart, 1972), and supported by a number of studies in zoos and other wildlife tourism venues (e.g. Shackley, 1996; Barstow, 1986; Hammitt, Dulin & Wells, 1993). The suggestion that not all animals are equal in the eyes of visitors has implications for the management of tourism and recreation. In particular, knowing why animals are popular (or unpopular) is important to the development of education and interpretation programs. The reasons why people like or dislike animals can be used as a valuable tool to attract the attention of visitors for education campaigns, or to address misconceptions. However, the available previous research has been conducted overseas, and there are no comparable Australian examples. Since preferences for animals is likely to be influenced by culture (Bart, 1972), information was needed on the relative attractiveness and features of the species unique to Australia. Furthermore, previous research used researcher-defined lists of animals and asked respondents to indicate their preferences for the animals in the lists. This may give incomplete or incorrect results for preferred animals, as respondents may prefer animals that are not on the list. The studies also fail to explore respondent-generated reasons for why the animals were preferred, providing only the researcher's explanation or opinion.

Finally, this study aimed to identify tourists with differing levels of interest in wildlife, and examine whether this was related to preferences for types of wildlife tourism experiences. The literature suggests that the concept of specialisation may be an important variable in wildlife tourism (e.g. Duffus & Dearden, 1990; Kim, Scott & Compton, 1997; Cole & Scott, 1999), however the research has been conducted primarily with birdwatchers, or has focussed attention on the specialists. There have been no Australian studies conducted on levels of specialisation amongst general wildlife viewers, and very few studies worldwide covering a broad range of visitors.

In summary, this study aimed to fill some of the gaps in research knowledge identified by the literature review, namely:

a) What is the range of interest in wildlife tourism?
b) How does interest in wildlife tourism influence participation?
c) What are the key features of the wildlife tourism setting?
d) Which are the most/least favoured animals?
e) Which features of the animals influence preference?

The key features of this study that differed from previous research were:

- An open-ended questionnaire format.
- A focus on wildlife tourism in general, not a specific animal species or type of experience.
- A focus on a broad range of visitors, not only specialists.

2.2 Methodology

2.2.1 Survey procedure

The study was conducted in two stages. In the first stage, 84 first year university students from Townsville and Cairns participated in the study as part of a practical component of a tourism subject. They were asked to complete a survey, and then take five other surveys to be completed by their family and/or friends. Surveys were collected between the dates 6-15 March 1999. Students incurred no penalty for non-participation, and family and friends were made aware that their participation was also voluntary and that the student would incur no penalty if they chose not to participate. This stage yielded 496 correctly completed surveys, primarily from North Queensland residents. This group was important to the study for two main reasons. Firstly, residents were likely to have been tourists at some time, and are therefore likely to have useful past experiences to describe. Secondly, this group of respondents was more likely to include people with limited travel experience, which is important when attempting to gather a range of wildlife tourism experiences. In this stage of the research, the features important to a family watching turtles in a local national park are as valid as the features important to a dedicated enthusiast viewing penguin colonies in Antarctica.

The second stage of the survey was conducted in English at a series of tourist venues around Townsville. A sample of tourists was selected in order to complement the results from the primarily resident sample, and generate as broad a range of experiences as possible. Interviewers collected 294 surveys from visitors to transport nodes and accommodation venues around Townsville between the dates 18-25 August 1999. Interviewers visited tourist transport nodes at times spaced throughout the day and approached one person from each group, until they collected 10 surveys. Respondents were screened to ensure they were visitors to Townsville, and informed that their participation was voluntary. Visitors who completed the survey were given a postcard as a token of appreciation. Each

interviewer recorded any refusal to participate, and the response rate was 84%. The literature indicates that preferences for wildlife tourism are likely to vary between culture and language groups, and it should be noted that the study results are limited to English speaking visitors. The total sample size was 790, and results in this chapter are based on this total sample.

The method of sampling selected for the student/resident sample was a nonprobability convenience approach (Shaugnessy & Zechnmeister, 1997), which involves selecting respondents primarily on the basis of their availability and willingness to respond. The method used for the tourist sample was nonprobability purposive sampling (Shaugnessy & Zechnmeister, 1997), whereby visitors were selected on the basis of their special characteristics, namely people who are currently travelling. This was not a probability or random sample, as all possible venues for tourists were not exhausted, nor were they randomly selected. Rather, places where tourists usually gather were selected, and the times of sampling were spread throughout the day. These methods of sampling were selected for two reasons. Firstly, the study was not aiming to obtain a representative sample of the opinions of North Queensland residents and tourists. The purpose was to obtain a wide range of the types of experiences people have with wildlife, and the features they identified as memorable or important. Thus the aim was not to investigate how many Townsville tourists had, for example, been on safari in Zimbabwe. Rather, if a tourist had been on safari, what features of the experience did they comment on? Was it the landscape, or the animals themselves, or the knowledge of the tour guide? The non-probability sampling methods were therefore considered appropriate to the aims of this specific study. Secondly, the reality of time and cost restraints made this a useful method of reaching a broad group of respondents.

2.2.2 Participants

These two stages yielded a total sample size of 790, with 43% males and 57% females. The average age was 31.2 years, and the breakdown of ages is provided in Table 2.1.

Table 2.1

Age of Respondents

Age	**Percent of sample**
15 – 30	65.9
31-50	21.8
51 and over	12.3

The usual place of residence for respondents is provided in Table 2.2. All respondents were English-speaking. The origin of overseas visitors was 10.7% from the United Kingdom; 6.4% from European countries; 5.7% from the United States, 2.1% from Japan and the remaining 3.8% from South East Asia, Africa, South America, New Zealand, Middle East and Russia.

Table 2.2

Usual Place of Residence

Usual place of residence	**Percent of sample**
North Queensland	53.2
Other Queensland	9.7
Other Australia	8.4
Overseas	28.7

2.2.3 Instruments

In both the student/resident sample and the tourist sample, self-completion questionnaires were used. These were selected as an appropriate method of data collection because self completion surveys enable large samples to be collected, have good to high precision or resistance to bias, and a medium to high response rate (Ham, 1986). Further advantages were the ability to collect a large number of responses with minimum time and cost required, and ability to standardize questions asked of respondents (de Vaus 1990). In both samples, interviewers were present to answer any comprehension questions the respondent may have had, but otherwise did not assist the respondent with the completion of the questionnaire. The first stage questionnaire (student and resident sample) was a three-page survey which focused primarily on best and worst wildlife tourism experiences, favourite and least-favourite animals, and questions regarding interest in wildlife tourism. A copy of the survey is provided in Appendix B. The survey was mainly open ended, asking respondents to describe their best and worst holiday experiences involving wildlife (where it occurred, what kinds of animals, a description of the experience and the features which made it a best/worst experience). Respondents were asked to list their favourite and least favourite animals, and describe why they held these preferences. No restriction was placed on the types of animals people could select as favourites, as both domestic and wild animals were included. It was considered important to include domestic animals in order to provide a complete framework and a context for rankings of animals.

A primarily open-ended questionnaire format was selected to allow the respondent freedom in expression and spontaneity (Oppenheim, 1972). Respondents were asked to describe their best and worst experiences with wildlife. This 'critical incident' methodology is best used where the researcher is aiming to measure complex or less well-defined factors (Flanagan, 1954). It has the advantage that because the incidents described are 'critical', the subjects usually have good recall, and are able to recount the factors and events that were important to the incident

(Chell, 1998). Using this technique across a number of respondents and sites enables the researcher to look for evidence of commonalities in themes, which may be particularly useful in the beginning stages of research projects (Chell, 1998). Difficulties lie mainly with standardisation, coding and the difficulty associated with assessing the accuracy of respondent's memories (Flanagan, 1954; Gregory & Burroughs, 1989). The critical incident methodology has been adapted to a number of studies in a variety of fields, and the techniques vary depending on the aims of the study. A study with a similar approach and topic area to the present study was that by Pearce & Caltabiano (1983) who studied travel motivation by asking respondents to describe positive and negative tourist experiences.

A pre-test of the questionnaire was undertaken with a sample of 20 respondents. The benefits of pre-testing are well documented (Oppenheim, 1972; Veal, 1992; Ritchie & Goeldner, 1994). It serves to ensure respondents can understand the wording, sequence and layout of the questions, as well as provide an estimate of the time required to complete the questionnaire and likely response rate.

Analysis of the first stage questionnaire (primarily resident sample, n = 496) revealed large variations in the way people described their experiences. In the second stage questionnaire (tourist sample, n=294) it was decided to include some structured questions so that there was some uniformity of information available for analysis (Appendix C). However, respondents were still able to describe their experience in an open-ended format. A further modification was the reorganisation of the way respondents were asked the reasons why they preferred particular animals. In the first stage questionnaire, respondents were asked to describe why they liked their most favourite animal. In the second stage questionnaire, they were asked to provide reasons why they liked all five of their most favourite animals. This change was made because the animals in the favourite lists were extremely varied and shared few characteristics. By allowing respondents to indicate what they liked about each different animal, a larger sample size was generated for each animal mentioned by respondents. The same change was made with respect to

least-favourite animals. Thus all respondents answered the same core open-ended questions, while the second stage sample completed a longer questionnaire which had some additional structured questions. Both surveys encouraged people to use their own words for describing their experiences. The surveys and sampling was designed to generate more qualitative information than quantitative results, and to include a range of experiences.

2.2.4 Presentation of results and assumption testing

Throughout this present chapter and the remainder of the thesis, an abbreviated version of crosstabulation tables will be used. In order to simplify results and minimise use of unnecessary figures in each cell, the tables have been abbreviated to show only the counts and the row percentages. These row percentages in each cell are compared down each column to the total row percentage, to see how the distribution of responses varies from the expected distribution based on sample sizes in each column category (Norusis, 1997). Where the Chi-square results indicate a significant difference, large differences between the cell row percentage and the total row percentage indicate that this may be the source of the difference. This technique works in a similar manner to the analysis of residuals. Residuals are the difference between the observed and expected counts in a cell, and a positive residual means that there are more observed cases in a cell than expected (Norusis, 1997). Similarly, a cell percentage that is greater than the corresponding column total percentage indicates there are more observed cases in a cell than expected. Row percentages were used rather than residuals because these are more immediately understandable as representing the distribution of responses across the sample. The example below demonstrates the presentation of crosstabulation tables. In the first column, the percentage of Enthusiasts who do not own any bird books (20.0%) is much less than the total percentage based on the distribution of bird book ownership across the entire sample (35.5%). Conversely, respondents in the General group are more likely to say they do not own any bird books (49.7% compared to 35.5%). Comparisons of the other columns, combined with the Chi-

square result, supports the conclusion that Enthusiasts are significantly more likely to own bird books/guides than respondents in the General group.

	Do not own any bird books/guides	Own one or two	Own several	Total
Enthusiast group	13 20.0%	21 49.2%	20 30.8%	65 100%
Interested group	54 29.7%	88 48.4%	40 22.0%	182 100%
General group	73 49.7%	64 43.5%	10 6.8%	147 100%
Total	140 35.5%	184 46.7%	70 17.8%	394 100%

Before applying the relevant statistical tests to the data, analyses were first undertaken to ensure the distribution and nature of the data did not violate any of the assumptions of the tests. Guidance regarding the assumptions that are critical to each test were found in the statistics guidebooks designed for use with the statistical package SPSS version 10 for Windows, authored by Coakes & Steed (2000) and Norusis (1997). In this chapter, this relates to the use of Chi-square and ANOVA as tests of significance. For analyses using Chi-square, the assumptions of independence of observations and size of expected frequencies above 5 were met. It is recognized that the Chi-square statistic is influenced by large sample sizes and this is taken into account when interpreting the results. In addition, analysis of crosstabulation tables and measures of association (Phi, Cramer's V and Contingency Coefficient) were incorporated into the interpretation of the Chi-square statistic. For analyses using ANOVA, the assumption of normal distribution was assessed using normality statistics such as skewness and Shapiro-Wilks. Homogeneity of variance was assessed using Levene's test.

2.3 Results

The questionnaires yielded a wide range of wildlife tourism experiences. The experiences reported ranged from exotic safaris in India and South America, to families visiting local national parks and wildlife sanctuaries. Experiences occurred in a variety of environments including coral reefs, mountains, rainforest, grasslands, coastlines, and oceans, as well as captive places. Overall, 67% of best experiences occurred in Australia, 24% occurred overseas and the remaining 9% were not classified. 52% of worst experiences occurred in Australia, with 40% overseas and 8% unclear. For best experiences, 46% occurred in captive environments; 8% with non-captive habituated wildlife; and 46% with wild animals. For worst experiences 63% occurred in captive environments, 9% with non-captive habituated wildlife, and 27% with wild animals.

2.3.1: Features of best experiences

Despite the wide range in types of experiences described by visitors, there was a core of features that respondents found attractive. Sixty individual features of experiences were identified, and these were categorised into 8 basic groups. Interactions with animals and enjoyment of the natural environment were the most frequently mentioned categories. The 8 categories and corresponding frequencies are listed in Table 2.3, and the full set of responses is listed in Appendix D. Appendix F contains transcripts of a random sample of 100 best experience responses from which the features were coded. These were selected using a random numbers table (Eaton Statistical and Math Tables, 1980) based on the survey numbers.

Table 2.3

Key Features of Best Wildlife Experiences

Features	**Percentage of respondents including a response in this category**	**Percentage of responses falling into category**
Enjoyment of interactions/close proximity with animals	74.0	28.0
Appreciation of aspects of natural environment	49.6	18.8
Learning things, or good opportunities to learn	31.2	11.8
Large number or variety of animals	28.8	10.9
A memorable or emotional experience	25.5	9.6
Appreciation of the animal itself	24.2	9.1
Good built facilities/service/management	17.0	6.4
Good care of animals/ condition of enclosures	14.2	5.4

Most descriptions of best experiences contained a number of different features. When coding responses, each of the features mentioned was recorded separately. As Table 2.3 indicates, the features of best experiences were dominated by interactions with animals. Almost three-quarters (74%) of respondents included some sort of interaction or close proximity to wildlife in their descriptions of best experiences. These ranged from watching animals, to active touching and interacting with animals. The Oxford Dictionary defines 'interaction" *as acting reciprocally, or acting on each other.* Watching animals was included in this category because in many descriptions of best experiences, the presence of people appeared to influence the behaviour of the animals. This phenomenon is also noted in a number of research articles considering the impact of tourists on wildlife (see review in section 1.0 of this report). However, even when 'watching animals' is

excluded from the category, human-animal interactions were still the most frequently mentioned feature of best experiences. The main types of interactions included in this category were:

- Being close to the animals (8.2% of responses)
- See animals /watch animals (6.2%)
- Touch animals (4.2%)
- Be amongst animals (3.6%)
- Feed animals (3.1%)

One advantage of allowing respondents an open-ended question is the richness of descriptions of such interactions. The following quotes indicate some of the different types of experiences people had involving interactions with wildlife.

Getting close to animals

> *"I was walking along the beach and sealions were coming ashore... I was able to walk within two metres of these wonderful creatures. To see them riding the waves, rolling around and playing was just amazing." (42 year old female)*

> *"Whilst holidaying on the (Atherton) Tablelands a cassowary crossed the road about 20 metres from us. It was just wonderful to see the cassowary so close and the fact that it was unexpected. I was so thrilled to see it, a magnificent creature". (35 year old female)*

Watching animals

> *"I learnt so much from just watching animals. Looking at how they behave with each other, and what they do was really interesting" (26 year old male)*

> *"We were watching wild kangaroos. I think they could smell us, because every now and then they would all stand alertly looking in our direction. They seemed to communicate – one would look up and then the rest would. One would hop off and others would follow....."(48 year old female)*

Touching animals

> *"I didn't expect the wombat's fur to be so stiff. They look cuddly, but when you touch them, they are solid. They have a curious smell too..." (38 year old male)*

Feeding animals

> *"It was great because you could feed the moneys. The monkeys were cute. I love monkeys now. I got to make contact with the animals, and the monkeys looked happy and free." (19 year old female)*

Being part of animal's world

> *"...we were swimming amongst coral and fish. It was so natural, we were part of the animals world, without cages or barriers. I felt as though I was on the animal's level" (46 year old male)*

The second dominant feature of best experiences related to aspects of the natural environment, and 18.8% of responses related to this category. The features included in this grouping included:

- A natural environment (5.6% of responses)
- Pleasant/ attractive environment (5.9%)
- Natural habitat of animals (1.9%)
- Wild/natural (2.4%)

Some examples of respondents highlighting aspects of the environment include:

> *"I visited the major national parks in Utah...(important features were) the solitude and peaceful nature of a barren landscape...we saw few animals, and they seemed much more powerful and well adapted to their environment." (21 year old male)*

> *"There were huge shady trees and green lawns. There was plenty of greenery in the enclosures too...the animals had space and shade." (34 year old female)*

> *" It was breath-taking. The water was clear and smooth. Visibility was exceptional. The weather was perfect, the water was clear and the beaches were unspoiled." (18 year old female)*

Opportunities to learn, or having learnt new things was mentioned by 31.2% of respondents, and accounted for 11.8% of responses. The coding of this factor was straightforward, and comments included *'I learnt new things', "fascinating information", "informative guides/signs"* and that the experience was *"interesting and different"*. A good description of the effectiveness of interpretation during a spotlighting tour is given in the following description:

> *"We saw some pademelons and a couple of common possums, but the experience was made great by our guide. He was so interesting, and really made us feel like we were in the animal's world. He knew lots of interesting things about the animals which might, just might, be in the next tree. It was an adventure." (28 year old female)*

Similarly, the number or variety of animals was a straightforward response, and was mentioned by 28.8% of respondents. Some examples included:

> *"I was startled by the sheer number of fish swimming around us. It seemed that everywhere I looked, there was a flash of fins." (32 year old male)*

> *"I could see so many animals. There were hundreds of different kinds of animals swimming and lying around. It was wonderful to see so many species of animals and marine life." (19 year old female)*

The category 'memorable or emotional experiences' included experiences where visitors specifically mention feeling emotional in some way. Just over one quarter of respondents mentioned an emotional aspect of their best wildlife experience. This category was important because some people simply explained where their best experience occurred and said that it was "enjoyable" that they "loved it" or

that it was "brilliant", "unforgettable" or "awe inspiring". More detailed examples include:

> *"Natural beauty [of the dolphins] -unexpected. An unpredictable, delightful experience – like a blessing. I felt a deep connection with them." (46 year old female)*
>
> *"I felt a deep peace in the barren landscape. It was old, enduring, lasting."*
>
> *"We had so much fun, relaxation and good times with the kids. They really loved the wildlife." (28 year old male).*

The category 'appreciation of the animal itself' was mentioned by 24.2% of respondents and accounted for 9.1% of responses. This category included:

- the physical appearance of the animal: size, colour, beauty, cute, looks strong, infant,
- the behaviour or movement of the animal: movement, interaction with other animals, hibernating, eating, roaring, playful
- perceived nature of the animal: intelligent, gentle, friendly, nice personality, human-like

Examples of responses from visitors included:

> *"The colour of the tigers was startling. It is such a contrast, the orange and black." (35 year old female)*
>
> *"The gazelle ran and sprung into the air an amazing height." (25 year old female)*
>
> *"I can remember being amazed at how human-like the orangutangs were- their gestures, movements, expressions etc. Captivated me (18 year old male."*

The built facilities, service, or management of the premises were mentioned by 17% of respondents, and accounted for 6.4% of responses. This almost always related to captive wildlife environments. Features of orientation, facilities and service were the main items mentioned in this category. Examples included:

"It was a great zoo, wide footpaths and easy to find my way around." (30 year old male)

"The staff were really knowledgeable and friendly." (28 year old female)

"The café was great, and looked out over the monkey island. You could watch them swing and play while you ate." (50 year old male)

A total of 14.2% of respondents (5.4% of responses) specifically mentioned that good care of animals was a feature of their best experience. This category only related to captive wildlife situations. For example:

"the animals had great facilities and were well looked after." (17 year old male)

It seems likely that the features of best experiences would vary between environments, particularly those where the animals are wild or captive. Overall, the distribution of best experiences was even between captive environments (45.7% of best experiences), and non-captive environments with wild animals (45.2%). The remaining 9.1% of experiences occurred with non-captive animals that were tame or habituated. Table 2.4 shows the distribution of best experiences for each of these environments.

Table 2.4

Comparison of Best Experience Features for Captive and Wild Animals

Feature	**Captive (% of responses)**	**Non-captive wild (% of responses)**	**Habituated/ tame (% of responses)**
Enjoyment of interactions with animals	27.8	26.6	40.0
Appreciation of aspects of natural environment	4.6	32.8	20.0
Learning things, or good	18.9	5.5	6.7

opportunities to learn			
Large number or variety of animals	11.0	11.3	8.9
A memorable or emotional experience	10.3	9.0	9.6
Features of the animal itself	6.3	11.8	11.9
Good built facilities/service/management	10.3	3.1	1.5
Good care of animals/condition of enclosures	10.8	0.0	1.5
Total	100.0	100.0	100.0

When describing best experiences, respondents tended to provide general categories for the animals that featured in those experiences, for example 'birds' or 'fish', as well as specific species. The ten most frequently mentioned animals in Table 2.5 were therefore a mixture of individual species and general categories of animals.

Table 2.5

Animals Featured in Best Experiences

Animal	**Percentage of respondents identifying animal**
Fish	16.5
Birds	13.7
Kangaroo	9.7
Koala	9.7
Zoo animals general	10.5
Crocodiles	10.4
Marine animals	7.9
Dolphin	7.8
Elephant	6.7
Whales	5.2

Table 2.6 shows the animals featured in best experiences which occurred in captive, wild and habituated environments. Percentages indicate the percentage of

respondents listing the animal in each type of experience. Koalas, kangaroos and birds were popular on all lists, while larger marine species such as whales and dolphins only appeared on the non-captive lists.

Table 2.6

Best Experience Animals for Different Wildlife Settings

Captive environments (n=348)	**Non captive-habituated/tame (n=58)**	**Non captive – wild (n=345)**
Zoo animals general (21.8%)	Koala (17.2%)	Birds (30.3%)
Koala (14.4%)	Kangaroo/wallaby (15.5%)	Fish (27.0%)
Kangaroo/wallaby (13.5%)	Birds (15.5%)	Whales (12.3%)
Birds (12.6%)	Dolphin (10.3%)	Crocodiles (10.4%)
Crocodile (11.5%)	Monkeys (8.6%)	Kangaroo/wallaby (9.0%)
Tiger (9.2%)	Whales (6.9%)	Dolphin (7.2%)
Elephant (8.6%)	Fish (6.9%)	Coral (6.1%)
Fish (8.6%)	Marine animals general (6.9%)	Elephant (5.1%)
Snake (6.6)	Possum (5.2%)	Lion (4.3%)
Monkey (5.2%)	Dingo (5.2%)	Koala (4.1%)

2.3.2 Features of worst experiences

It is important to recognise that whilst nearly everyone in the sample reported a 'best' experience, 35% of respondents did not report any 'worst' experiences. Of the surveys with no 'worst' experiences, 67% specifically stated that they had not had a worst experience. From those who did report a worst wildlife experience, Table 2.7 provides a summary of the key features of these worst experiences, and the full set of responses is provided in Appendix E. Appendix G contains transcripts of a random selection of 100 worst experience descriptions.

Table 2.7

Key Features of Worst Wildlife Experiences

Feature	**Percentage of respondents including a response in this category**	**Percentage responses falling into category**
Poor management of captive animals	72.8	33.5
What the animal did (bite, attack, chase, swoop)	38.1	17.5
General service/management features	33.7	15.5
Illness, weather, unusual experience	24.9	11.5
Poor management of the human/wildlife interaction	22.2	10.2
Poor treatment of non-zoo animals	18.7	8.6
Perceived nature of animal	7.0	3.2

The most common feature in worst experiences was poor management of captive animals. A total of 72.8% of respondents describing a worst experience included this in their response. Some of the examples include:

> *"My worst experience was watching a polar bear in a 16ft by 16ft cage in 32 degree heat" (32 year old male)*
>
> *"I observed hundreds of animals staring unhappily at all the tourists from behind bars, concrete and squashed cages" (21 year old male)*
>
> *"The cages were tiny, smelly and dirty. The animals looked sick and unhappy" (32 year old female)*
>
> *"The enclosures were not appropriate for the animals". (40 year old male)*
>
> *"The cages were quite small and the cats were pacing up and down. It seemed very unnatural and cruel." (21 year old female)*

"The animals were all kept in cages and most of them looked pretty shocking and unhappy. They needed to be in a larger, more open environment". (17 year old male)

The second most frequently mentioned category of response was related to an action of the animal, usually an aggressive action toward humans. Actions included animals biting grabbing, swooping, pestering for food, chasing, and destroying belongings. Such incidents were reported by 38.1% of respondents. Some examples include:

"A large male roo attacked a member of our party – has since been put down (the roo that is!)." (46 year old female)

"The monkeys kept chasing me and although other people thought it was funny, I was very scared." (18 year old female)

" The dolphin bit me when I was trying to pat it. It caused a lot of damage to my hand" (23 year old male)

"We were walking through the grounds when a kangaroo came up and grabbed me. It wouldn't let go and kept growling, even when my husband tried to get rid of it. I was pregnant at the time and quite scared." (28 year old female)

"The magpie swooped me and pecked me in the eye region." (30 year old male)

The category 'general service/management features' accounted for 15.5% of responses. This category included poor facilities, cost, unfriendly staff, crowding, and the facilities not living up to recommendations. However, the largest contributor to this category was that it was boring. Some examples include:

"it was so boring, just cage after cage. I was very disappointed." (24 year old female)

"the toilets were so dirty and the whole place was just grotty." (40 year old female)

The category 'illness, weather and unusual experiences' accounted for 11.5% of responses. These responses included illness of the respondent, fires, floods and poor weather, and unusual experiences such as falling into a bear cage or off a boat. Examples include:

> *"We went at the wrong time of the year. The weather was [bad], the water was choppy and cold and it was windy." (27year old male)*
>
> *"I fell off the boat and I can't swim very well so it was terrifying." (19 year old female)*
>
> *"There had been a forest fire and nothing was alive. There were dead kangaroos and everything was black." (39 year old female)*

Poor management of human/wildlife interaction (10.2% of responses) covered situations where the respondent did not like the way interactions were handled, or were unhappy about the lack of interaction. The majority of these were that visitors were not allowed to get close to animals, or that they saw no/few animals. Examples include:

> *"The dolphins were only allowed to approach us when their handlers told them to, then they had to do tricks like jump over us. It was all so superficial and plastic and controlled." (34 year old female)*
>
> *"We were promised to see wildlife but saw none. It was long, hot, inconvenient and boring." (18 year old male)*
>
> *"It was a hot day, I was getting sunburnt and we walked for miles to see koalas. We only saw one koala, high up in a tree doing nothing. It was very disappointing." (17 year old female).*
>
> *"We couldn't see the animals very well because we were not allowed to go close." (40 year old female)*
>
> *"There were supposed to be tigers in the enclosure, but you couldn't see them because of all the greenery, and the large size of the enclosure. I suppose they might have been lying down in the grass, but you would never know. I felt ripped off'. (40 year old male)*

The poor treatment of non-zoo animals accounted for 8.6% of responses. These included animals for sale in markets, poor treatment of circus animals, animals killed on roads, animals eaten and live animals fed to captive exhibits.

> *"The markets had dogs with buckets on their heads for sale, and skinny monkeys in cages. It was hot, and they all looked ill. It was sickening, disgusting." (23 year old female)*

> *"There were dead wombats on the road everywhere. We stopped and tried to help one, it had just been hit. It was so sad." (38 year old female)*

The perceived nature of the animal included animals that were considered noisy, disgusting, aggressive , lazy or scary.

> *"The show was not really bad, but I just hate looking at the snakes. Especially the big ones. Very scary." (19 year old female)*

As was the case for best experiences, worst experiences also varied depending on whether the experience was with wild or captive animals. Overall, 39.7% of worst experiences occurred in captive environments, 6.4% with non-captive habituated animals and 17.1% with non-captive wild animals. Table 2.8 shows the key features of worst experiences in each of these categories.

Table 2.8

Worst Experience Features for Captive/Non-Captive Environments

Factor	**Captive (% of responses)**	**Non-captive wild (% of responses)**	**Habituated / tame (% of responses)**
Poor management of captive animals	45.8	0.0	0.0
What the animal did (bite, attack, chase, swoop)	10.0	34.5	45.4
General service/management features	16.9	12.8	10.8
Illness, weather, unusual experience	7.6	22.8	8.0

Poor management of the human/wildlife interaction	7.9	17.4	13.3
Poor treatment of non-zoo animals	9.9	4.8	18.8
Perceived nature of animal	1.9	7.7	3.6
Total	100.0	100.0	100.0

Table 2.9 shows the 10 most frequently mentioned animals that featured in the worst experiences of respondents. These results pertain to the entire sample of 517 worst-experience descriptions. As shown in Table 2.7, the poor management of captive animals was a key feature of worst experiences. This is also reflected in Table 2.9, as many respondents simply listed 'zoo animals' as those who were kept in the perceived poor conditions.

Table 2.9

Animals Featured in Worst Experiences

Animal	**Percentage of respondents listing animal**
Zoo animals	15.1
Crocodile	10.4
Kangaroo/Wallaby	9.9
Fish	8.3
Birds	7.5
Snakes	5.4
Elephants	5.0
Monkeys	4.8
Tiger	3.5
Lions	3.3

The most frequently mentioned animals in respondents' worst experiences with captive, wild and habituated animals are listed in Table 2.10. Percentages indicate the percentage of respondents listing the animal in each type of experience. Kangaroos/wallabies appear in all lists, while zoo animals are the main animals involved in worst experiences in captive environments.

Table 2.10

Worst experience Animals for Different Wildlife Settings

Captive environments (n=311)	**Non captive-habituated/tame (n=46)**	**Non captive – wild (n=345)**
Zoo animals general (21.5%) Crocodiles (13.8%) Fish (8.4%) Kangaroo/Wallaby (8.0%) Birds (7.4%) Elephants (6.4%) Monkeys (6.1%) Tiger (5.8%) Bears (4.5%) Lions (4.5%)	Kangaroo/wallaby (26.1%) Birds (13.0%) Possums (10.9%) Monkeys (8.7%) Crocodile (4.3%) Fish (4.3%) Elephants (4.3%) Scrub turkey (4.3%)	Snakes (9.6%) Fish (9.6%) Kangaroo/wallaby (7.4%) Birds (6.7%) Crocodile (5.9%) Mosquito (5.2%) Shark (4.4%) Whales (4.2%) Possums (4.2%) Jellyfish (3.7%)

2.3.3 Favourite animals and features of favourite animals

Respondents were asked to list their 5 most favourite animals. Table 2.11 shows the 30 animals that were most frequently mentioned in respondents' lists of favourites. After these top 30, there were 124 additional animals which are not listed because they had relatively few mentions (less than 0.7% of responses). The first 10 listed animals are similar to those reported by Kellert (1989) and Bart (1972). Also consistent was the absence of insects from the list of favourites. However, the introduction of animals such as sharks, crocodiles, snakes and frogs in the top 20 listed animals was contrary to expectations based on previous research. Percentages in Table 2.11 indicate the percentage of respondents who identified the animal as one of their favourite animals.

Table 2.11

Favourite Animals (Individual Species)

Rank	Animal	%	Rank	Animal	%
1	Dog	46.6	16	Wombat	6.5
2	Dolphin	32.8	17	Snake	6.0
3	Koala	29.0	18	Giraffe	5.7
4	Cats	23.8	19	Frogs	5.7
5	Birds	22.1	20	Bears	5.5
6	Horses	21.4	21	Seal	5.1
7	Tigers	20.2	22	Possum	4.8
8	Kangaroo	20.0	23	Eagles	4.6
9	Fish	16.1	24	Cows	4.4
10	Whales	15.0	25	Penguins	4.2
11	Elephant	13.6	26	Platypus	4.2
12	Lion	11.4	27	Pigs	3.9
13	Monkey	9.3	28	Rabbit	3.7
14	Sharks	8.7	29	Polar bears	3.3
15	Crocodile	7.8	30	Panda	3.2

One difficulty experienced while coding the responses for favourite animals was that some respondents gave a general category of animal (e.g. 'birds') while others gave specific species (e.g. Rainbow bee-eater). This was due to the open-ended nature of the survey, where respondents were not given any prompts for answering the question, except that they could include both domestic and wild animals. Table 2.12 shows the 10 most frequently mentioned animals, with some individual species grouped into larger groups of similar types of animals. The purpose of Table 2.12 was to group together similar animals to summarise the listings given in Table 2.11. Some of the most popular individual species (dolphins, koalas, horses) were kept separate, firstly because they combined less easily into logical groupings, and secondly to provide a context for their popularity. Overall, the domestic dog was clearly the most popular animal.

Table 2.12

Most Popular Groups of Animals

Animal type	**Percentage of respondents listing animal as one of favourites**
Domestic dogs	48.2
Big cats (tiger, lion, leopard, cheetah)	43.9
Dolphins	33.2
Birds (excluding raptors and domestic birds)	31.1
Koala	29.0
Fish (Mostly sport/fishing)	27.9
Large zoo animals (elephant, rhino, giraffe, zebra)	24.7
Domestic cats	24.2
Horses	21.4
Kangaroo/Wallaby	20.0
Whales	17.1
Monkeys/Primates	15.3
Farm animals (sheep, cows, goats, pigs)	14.8
Bears	12.0

The favourite animals listed were similar when comparing respondents who resided in Australia and those who resided overseas. The content of favourite animal lists were identical, but with some changes in order of preference. Table 2.13 shows the top 10 favourite individual animals for overseas and domestic residents. Statistical tests were unable to determine whether these differences were significant, due to the multiple-response nature of the table, which means that each individual can be counted in a number of categories. It was interesting to note the relative similarities in species listed between the groups, as a greater number of exotic species were expected to be listed by international visitors.

Table 2.13

Favourite Animals for Domestic and International Residents

Australian Residents		**International Residents**	
Animal	% of respondents selecting animal as a favourite	Animal	% of respondents selecting animal as a favourite
Dog	46.8	Dog	46.1
Dolphin	34.8	Koala	39.2
Birds	24.3	Dolphin	28.6
Koala	24.3	Cats	24.4
Cats	23.2	Kangaroo	24.0
Tigers	23.4	Whales	18.9
Horses	22.7	Horses	18.4
Kangaroo	18.6	Birds	16.6
Fish	16.9	Fish	13.8
Elephant	14.3	Tigers	13.4
Whales	13.8	Elephant	12.8

Respondents used over 150 different words or expressions to describe what they liked about their favourite animals. The top 20 words or expressions used by respondents are listed in Table 2.14. Descriptions relating to aesthetic features were dominant, as were perceived character qualities such as intelligence and faithfulness.

Table 2.14

Words or Phrases Used to Describe Favourite Animals

Word/phrase	**Percentage of respondents using the word or phrase to describe favourite animal**
Beautiful	17.1
Intelligent	14.7
Large size	12.4
Beautiful colour	11.9
powerful	11.2
Cute	11.2
Fluffy	11.1

Nice personality	10.4
Friendly	9.4
Graceful	9.4
Faithful/loyal	8.5
Serene	7.7
Magnificent	7.0
Playful	7.0
Cuddly	6.8
Movement	6.8
Unique	6.3
Interesting	6.3
Companionship	5.8
Easy to care for	4.2

Despite the commonalities shown in Table 2.14, the animals that respondents were referring to when using these words differ greatly in their characteristics. Table 2.15 shows the words that were used for the top 5 favourite animals. The words used to describe domestic animals have greater familiar connotations (e.g. faithful, affectionate), while descriptions of wild animals are more aesthetic and admiring (e.g. beautiful, majestic).

Table 2.15

Describing Favourite Animals

Favourite animals	**Most frequent descriptive words used**
Domestic dog	Faithful/loyal Companionship A friend Intelligent Affectionate
Big cats	Power Majestic/magnificent Colour Size-large Beauty
Dolphins	Intelligent Move Serene

	Beauty Playful
Birds	Colour Variety Ability to fly Beauty Sound/call
Koala	Cuddly Cute Colour Soft
Domestic cats	Independent Affectionate Soft playful

2.3.4 Least-favourite animals and features of least-favourite animals

Table 2.16 shows the 30 most frequently mentioned animals on respondents' least-favourite lists. This table lists responses in the same format as they were written by respondents, and thus includes a mixture of individual species and groups of animals. While 12.2% of respondents did not list any least-favourite animals, snakes were disliked by over half of the respondents who listed a least-favourite animal. The presence of cane toads, crocodiles and box jellyfish high in the least-favourite list may reflect the cultural bias of North Queensland, as respondents residing in North Queensland comprised slightly over half of the sample. These species are well known and common in North Queensland, and are not found in many other parts of Australia or the world. Many of the animals listed were consistent with predictions based on previous research. However some animals, particularly domestic cats, crocodiles and sharks, appeared on both the most and the least favourite lists.

Table 2.16

Least-Favourite Animals (Individual Species)

Rank	Animal	%	Rank	Animal	%
1	Snake	54.0	16	Mice	4.5
2	Spider	37.8	17	Lizards	4.2
3	Cane toad	25.2	18	Frogs	4.2
4	Cats	24.2	19	Beetles	4.2
5	Crocodile	23.3	20	Leech	4.0
6	Sharks	16.0	21	Feral pig	4.0
7	Rats	15.0	22	Dogs	3.8
8	Cockroach	12.6	23	Kangaroo	3.7
9	Mosquito	10.2	24	Bats	3.7
10	Box jellyfish	6.4	25	Ants	3.7
11	Pigs	5.9	26	Gecko	3.3
12	Insects	5.7	27	Rabbit	3.0
13	Birds	5.7	28	Goats	3.0
14	Hyena	5.1	29	Eels	2.8
15	Flies	4.7	30	Camels	2.3

When individual species are grouped into similar categories of animals (Table 2.17), insects (including spiders) were included in the least-favourite lists of 88.5% of respondents. The animal types grouped together are listed in parenthesis, and include respondents who listed the general category (e.g. 'birds', as well as those specifying particular types (e.g. 'pigeons'). The exception is for insects, where the number of types of insects listed was too lengthy to be reported in Table 2.17. This list included ants, bees, bugs, beetles, blowflies, caterpillars, cockroaches, centipedes, crickets, cicadas, dust mites, flies, fleas, green ants, grasshoppers, horseflies, insects, lice, mosquitoes, moths, sandflies, sea-lice, stick insects, spiders, termites, ticks, wasps, and head lice.

Table 2.17

Least Popular Groups of Animals

Animal type	**Percentage of respondents listing animal as one of favourites**
Insects	88.5
Snakes	54.0
Cane toads	25.2
Domestic cats	24.2
Crocodiles	23.9
Rodents	21.9
Domestic farm animals (cows, donkeys, goats, mules, pigs, sheep)	19.1
Birds (including magpies, crows, pigeons)	16.7
Sharks	16.0
Lizards/reptiles (excluding snakes & crocodiles)	10.2
Feral animals	8.2

There were some differences for least-favourite animals depending on whether respondents resided in Australia or overseas. Table 2.18 shows the top 10 most frequently mentioned least-favourite animals for Australian and International respondents. Snakes and spiders were the least favourite animals, while Australian residents included species such as cane toads and box jellyfish that are prevalent in North Queensland. As was the case for favourite animals, the multiple-response nature of the results precluded further statistical analysis.

Table 2.18

Least-Favourite Animals for Domestic and International Residents

Australian Residents		**International Residents**	
Animal	% of respondents selecting animal as a least favourite	Animal	% of respondents selecting animal as a least favourite
Snake	55.4	Snake	50.8
Spiders	36.8	Spiders	41.4
Cane toads	33.5	Rats	18.3
Crocodiles	28.8	Cats	16.2
Cats	27.4	Mosquitoes	14.1
Shark	20.5	Flying fox	11.5
Mice	14.0	Birds	9.4
Flying fox	12.8	Crocodiles	8.9
Box jellyfish	6.7	Bugs	6.3
Flies	6.6	Rabbits	5.8

In total, respondents used over 120 words or phrases to describe their least favourite animals. The 20 most frequently used words or phrases are listed in Table 2.19. These words are consistent with some of the guidelines suggested by Kellert (1989), particularly with reference to peoples' aversion to animals that cause harm, those that are aesthetically unattractive, and those that are physically different to humans (e.g. creepy, slimy). Overall, the dominant theme in words or phrases used to describe least-favourite animals was a concern over their potential danger or harm to humans.

Table 2.19

Words or Phrases Used to Describe Least-Favourite Animals

Word or phrase	**Percentage of respondents using the word or phrase to describe least favourite animal**
Cause harm	24.3
Ugly	21.9
Dangerous	19.7

Dirty/unhygienic	13.5
Deadly/kills	11.8
Creepy	10.3
Detrimental impact on environment	8.8
A pest	7.7
Annoying	6.7
Cause allergies	5.6
Smell	5.0
Slimy	4.9
Damage things	4.1
Disgusting	3.8
Spread disease	3.6
Slippery	3.5
Boring	2.9
Feral	2.4
Useless/no useful value	2.1
Movement generally	2.0

Table 2.19 listed words that were most frequently used to describe least favourite animals. As was the case for favourite animals, the animals that respondents are referring to when using these words differ greatly in their characteristics. Table 2.20 shows the words that were used for the top 5 least favourite animals.

Table 2.20

Describing Least-Favourite Animals

Least favourite animals	**Most frequent descriptive words used**
Insects	Creepy Dirty/unhygienic Cause harm to humans Ugly/unattractive Dangerous
Snakes	Poisonous/deadly Ugly Scary Dangerous Slimy
Cane toads	Ugly

	A pest Detrimental impact on wildlife/environment Poisonous Useless
Cats	Detrimental impact on wildlife/environment Can't be trained Dirty/unhygienic Unaffectionate/unfriendly Annoying
Crocodiles	Ugly Dangerous Kills/deadly Aggressive Fear personal safety

2.3.5 Relationship between best experience animals and favourite animals

Analyses were conducted to examine whether the animals featured in respondents' best experiences were included in their list of favourite animals. A Goodman and Kruskal tau indicated a significant relationship ($p<0.01$) but not a strong relationship, with a value of .058, when comparing the first-listed best experience animal with the first listed favourite animal. However, this analysis may fail to identify a relationship, as people may list their best experience animal as the third or fourth animal in their list of favourites. A multiple response crosstabulation table revealed results consistent with the relationship suggested by the Goodman and Kruskal tau, however a statistic to test significance could not be computed due to the multiple response nature of the question and the large number of cells for favourite/best experience animals. To investigate further, the expected frequency for a random distribution was computed for each cell, and compared to the actual frequency of best experience animals that were also a favourite animal. Expected frequency was computed with the formula:

$\frac{\text{Row total x column total}}{\text{Grand total}}$, and the results are listed in Table 2.21. Where there are

substantial differences between expected and actual frequencies, such as for kangaroos, it suggests that respondents who have a positive wildlife experience involving kangaroos are more likely to consider kangaroos as one of their favourite animals. Animals with a difference between scores greater than or equal to 20 are marked with an asterisk. The animals included in Table 2.21 were the animals that appeared as people's best experience animal and favourite animal. Domestic animals, such as dogs, were not included because while they appeared as a favourite animal, they were not mentioned in respondents' best wildlife experiences. Care must be taken when interpreting these results however, because the animals associated with best experiences may have simply been foremost in the respondents' mind when listing their favourite animals.

Table 2.21

The Relationship Between Best-Experience Animals and Favourite Animals

Animal type	**Expected frequency**	**Actual frequency**
Turtle	1	3
Crocodile	5	21
Kangaroo*	15	51
Koala*	21	42
Possum	0.5	4
Raptors	0.2	1
Other birds*	45	73
Big cats*	27	60
Dolphins*	21	47
Whales	11	30
Fish*	44	73
Other marine life	6	15
Snakes	4	6
Monkeys	7	22
Large zoo animals*	45	115
Other Australian natives	5	5
Bears	7	5

The same analysis was conducted to see whether there was a relationship between animals featured in worst experiences, and animals listed as least-favourite. A

Goodman and Kruskal tau indicated no significant relationship between the first listed worst experience animal and the first listed least-favourite animal. As for favourite/best experience animals, this result may be misleading because respondents may list their worst experience animal elsewhere in the list of least-favourites. However, a multiple-response crosstabulation table confirmed a lack of relationship for most animal types. By comparing expected frequency with actual frequency, only insects and snakes had an actual frequency substantially greater than the expected frequency. The expected frequency for snakes was 13 compared to an actual frequency of 25, and the expected frequency for insects was 17 compared to an actual frequency of 32. For all other animals, the actual frequency was very close to the expected frequency.

2.3.6 Comparisons between features of favourite/least favourite animals

Respondents used over 150 words to describe favourite animals, and over 120 words to describe their least-favourite animals. Most words relating to favourite animals (e.g. 'beautiful') had an opposite adjective used with least favourite animals (e.g. 'ugly'). Table 2.22 shows that the majority of references to favourite animals centered on aesthetic attributes (what they look like), while the majority of references to least-favourite animals related to their danger or harm to humans.

Table 2.22

Features of Favourite and Least-Favourite Animals by Category

Favourite animal feature	**% of responses**	**Least-favourite animal feature**	**% of responses**
Benefits to humans	4.7	Danger/harm to humans	43.9
Positive companionship/ relationship with humans	25.9	Negative relationships with humans	12.9
Positive aesthetic characteristics (what they look like)	43.1	Negative aesthetic characteristics (what they look like)	7.1
Positive biological	12.8	Negative biological	15.7

characteristics (what they do)		characteristics (what they do)	
Favourable influence on ecosystems and habitats	3.3	Negative effect on ecosystems and habitats	5.4
Positive emotional/character qualities	10.1	Negative emotional/ character qualities	15.1

2.3.7 Interest in viewing wildlife

Respondents were asked to indicate how interested they were in viewing wildlife while on holidays. The five response options, and the percentage of respondents selecting each response, is listed in Table 2.23.

Table 2.23

Interest in Viewing Wildlife

Interest Level	Percent of sample
The opportunity to view wildlife is one of the most important factors in my travel decisions	7.1
The opportunity to view wildlife is included as part of my travel decisions	32.1
Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	56.5
I am not interested in viewing wildlife while on holidays	3.4
I prefer to avoid viewing wildlife while on holidays	0.8

Overall, the majority of respondents had a general level of interest in viewing wildlife. That is, they do not specifically plan to view wildlife during their travels, but they enjoy seeing wildlife while doing other things. Based on the indicated level of interest in wildlife, analyses were conducted to identify other differences between respondents. The groups will be described as the following:

Enthusiast: The opportunity to view wildlife is one of the most important factors in my travel decisions.

Interested: The opportunity to view wildlife is included as part of my travel decisions.

General: Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

A One-way ANOVA was conducted to confirm that people who reported being more interested in wildlife visit wildlife tourism places more frequently. Results in Table 2.24 indicated that there was a significant relationship (F=23.0; sig.= 0.000) between interest in wildlife and overall participation in wildlife tourism. Table 2.24 shows that as interest in wildlife increases, so does participation in wildlife travel. Respondents in the Enthusiast group visited a wildlife venue an average of 14.3 times in the past 5 years; as compared to respondents in the General group who travelled an average of 3.8 times.

Table 2.24

Overall Participation in Wildlife Viewing by Interest Group

Interest in Wildlife	**Mean number of times travelled to wildlife venues in the last 5 years**
Enthusiast: The opportunity to view wildlife is one of the most important factors in my travel decisions	14.30 times
Interested: The opportunity to view wildlife is included as part of my travel decisions	7.98 times
General: Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	3.81 times

In addition to travelling more frequently, those visitors with a specific interest in wildlife also visited different types of places. An ANOVA indicated a significant difference between the three levels of interest groups and visits to captive wildlife

attractions as well as wildlife specific trips and visiting places where wildlife is often seen (Table 2.25). A post hoc test (Scheffe) indicated that the significant differences were between the General group and the Enthusiast/Interested groups for visits to captive environments and places where wildlife is often seen. Thus for these environments the Enthusiast and Interested groups had similar visitation patterns, while the General group were significantly different. For specific wildlife tours, the significant differences were between all groups.

Table 2.25

Participation in Different Wildlife Experiences by Interest Group

Type of wildlife experience	**General group: mean times visited**	**Interested group: Mean times visited**	**Enthusiast group: Mean times visited**	**F**	**Sig.**
Trips to zoos/sanctuaries/ aquarium	2.03	5.34	6.29	24.1	.000
Land based wildlife specific trips	.32	1.04	3.62	21.7	.000
Land based trips to where wildlife often seen	1.02	5.63	6.43	28.3	.000
Water based wildlife specific trips	.39	1.04	2.43	17.7	.000
Water based trips to where wildlife often seen	.42	1.65	1.94	8.6	.001

Differences were also evident when looking at the types of best experiences described by the different groups. A crosstabulation table (Table 2.26) indicated that respondents in the Enthusiast and Interested groups tended to focus more on wild animals in their descriptions of best experiences. The converse is true for the General group, who were more likely to describe best experiences with captive animals rather than wild animals.

Table 2.26

Best Experience Settings by Interest Group

	Enthusiast	Interested	General	Total
Captive environment	11 1.9%	89 26.6%	235 71.6%	335 100.0%
Habituated non-captive environment	5 8.6%	19 32.8%	34 58.6%	58 100.0%
Wild environment	46 13.8%	140 39.9%	155 46.4%	334 100.0%
Total	**51** **7.0%**	**248** **34.1%**	**428** **58.9%**	**727** **100.0%**

* Chi-square value 33.3, sig. = 0.000

For worst experiences, a Chi-square also indicated significant differences between groups. Enthusiast respondents had relatively more worst-experiences with non-captive habituated animals; while the general group had fewer worst experiences with non-captive habituated animals. Respondents in the interested group had fewer worst experiences with captive animals and more with wild animals. Table 2.27 shows the crosstabulation table for these results.

Table 2.27

Worst Experience Settings by Interest Group

	Enthusiast	Interested	General	Total
Captive environment	21 7.0%	102 34.0%	177 59.0%	300 100.0%
Habituated non-captive environment	10 22.2%	14 31.1%	21 46.7%	45 100.0%
Wild environment	6 4.6%	51 39.2%	73 56.2%	130 100.0%
Total	37 7.8%	167 35.2%	271 57.1%	475 100.0%

* Chi-square value = 16.0; sig. = 0.018

Respondents with a stronger interest in wildlife were also more likely to reside overseas, with 50% of Enthusiast group respondents residing overseas. Those in the general group were more likely to reside in North Queensland (Table 2.28). There were no significant differences between the groups for age or gender.

Table 2.28

Usual Place of Residence by Interest Group

Interest in Wildlife	Reside Local North Queensland	Reside within Australia	Reside overseas	Total
Enthusiast group	10 18.5%	17 31.5%	27 50.0%	54 100%
Interested group	103 41.0%	37 14.7%	111 44.2%	251 100%
General group	268 61.8%	83 19.1%	83 19.1%	434 100%
Total	**381** **51.6%**	**137** **18.5%**	**221** **29.9%**	**739** **100.0%**

*Chi-square value 73.8; sig. = 0.000

2.3.8 Mindfulness Model applied to wildlife tourism settings

Analysis was conducted to ascertain the usefulness of using the Mindfulness model (Langer, 1989) for examining best experiences. In order to test the applicability of the Mindfulness model to best wildlife experiences, adaptations were made to the list of factors that encourage mindfulness in interpretive settings, which were based on the work of Moscardo (1996, 1999) and listed in Table 1.3. The factors listed in Table 1.3 were adapted to cover a broader range of wildlife experiences, rather than a focus on interpretation which was the context in which Moscardo's (1996, 1999) work was based. Table 2.29 shows the adapted list of factors which should encourage mindfulness in wildlife tourism settings. These factors were used as a basis for coding the open-ended descriptions of best

experiences, to examine whether Mindfulness was an appropriate construct for wildlife tourism. The adaptation of each factor to a wildlife tourism context is explained and justified in Appendix N, and examples of coding from the transcripts of best experiences are provided.

Table 2.29

Precursors and Conditions for Mindfulness in Wildlife Tourism Settings

Precursors – Attracting Attention	Conditions – Sustaining Attention	Visitor Factors
• Extreme stimuli – large, colourful, loud, smelly dangerous, large numbers, close proximity • Movement/ activity of animals • Use of contrast, patterns • Unexpected, surprising things • Other living things generally (infant animals) • Excitement or emotion	• Variety, diversity • Multisensory experiences • Interacting with animals, visitor control • Things personally connected to the respondent • Good physical orientation • Unique, rare things • Authentic, natural environments or habitats • New experiences, new animals seen	• High interest in content • Low levels of fatigue • Low levels of distractions • Visitors described specific learning

* Adapted from Moscardo (1992, 1999)

When coding the responses of visitors, a conservative approach was used. According to the Mindfulness model, some of the predicted outcomes of visitors being mindful should be increased enjoyment, and remembering the experience. Because the respondents in this study were by definition describing experiences that they enjoyed and remembered, it was likely that they were describing experiences where they were mindful. However, it is possible that visitors enjoyed and remembered their experience for reasons outside of the Mindfulness model. Thus when coding responses, care was taken to only include factors that were

specifically mentioned by respondents. For example, if a respondent said that their best wildlife experience occurred when Killer Whales swam close to them and right under their kayaks, it would not be coded as unexpected or surprising unless the respondent specifically said that it was. This approach was adopted because events which may seem unusual or surprising to the person coding may actually be commonplace and expected to the respondent. Coding of each best experience was undertaken twice to avoid coding or entry errors, and 10% of the sample was cross-checked by a different coder.

Using the formula $\frac{\text{number of times two coders agree}}{\text{number of opportunities to agree}} \times 100$

the inter-coder reliability score was 87%, which was considered acceptable (Shaughnessy & Zechmeister, 1997). Use of this coding approach ensures a conservative estimate of the presence of mindfulness factors in the descriptions of visitors.

Table 2.30 shows that the large majority (83.9%) of respondents described an experience that was consistent with the Mindfulness model.

Table 2.30

Percentage of Respondents Describing Mindfulness Factor

Mindfulness factor included in description	83.9%
No Mindfulness factor described	16.1%

Analysis was also conducted to see which of the mindfulness factors were mentioned most frequently in respondents' descriptions. Table 2.31 shows that descriptions under the heading of 'extreme stimuli' were mentioned most frequently of all factors. This included large, colourful, dangerous, loud, smelly animals, or close proximity to animals. Authentic, natural environments were the

second most frequently mentioned. Results are provided for both the percentage of responses and the percentage of cases, as respondents' may have included more than one Mindfulness factor in their open-ended descriptions of best experiences.

Table 2.31

Mindfulness Factors Mentioned in Descriptions of Best Experiences

Mindfulness Factor	**Percentage of Responses**	**Percentage of Cases**
Extreme stimuli – large, colourful, loud, smelly, dangerous, close animals	18.0	29.9
Authentic, natural environments	16.1	26.8
New experiences, new animals seen	15.5	25.7
Unexpected, surprising things	10.4	17.4
Variety, diversity	9.8	16.3
Interacting with animals, visitor control	9.6	16.0
Excitement or emotion	4.8	7.9
Multisensory experiences	3.2	5.3
Movement/activity of animals	3.1	5.1
High visitor interest in animal/habitat	3.0	5.0
Rare or unique animals	2.8	4.7
Visitor described specific learning	1.2	2.0
Good physical orientation	1.0	1.7
Infant animals	1.0	1.7
Things personally connected to respondent	0.4	0.6
Patterns/contrast	0.1	0.2
Total	**100%**	N/A

2.4: Discussion

2.4.1 Features of best and worst experiences

Despite the wide range in types of experiences described by respondents, there was a core of features that wildlife tourists sought after or found attractive. The results confirmed that visitors seek to interact with animals. Shackley (1996) suggested that interaction with animals leads to higher visitor satisfaction, and the analysis of best wildlife tourism experiences confirms that interactions with animals is the dominant feature in best experiences. People enjoyed getting close to animals, touching them, feeding them, or experiencing some sort of 'connection' with the animals. Interactions with animals were the dominant feature for captive animals, non-captive wild animals and non-captive habituated animals. This result is consistent with research conducted into the relationship between humans and companion animals, where interaction and reciprocation were dominant reasons for strong attachment to animals (Sanders, 1993).

The reasons given for why respondents liked their favourite animal clearly show that companionship/relationship benefits are important. We live in a world where interaction with other living beings is the norm, and thus positive interactions with animals we consider attractive is a pleasurable experience. Respondents particularly appreciated interactions where they felt the animal was friendly or affectionate. However, the converse is also true. Negative interactions made up a large proportion of factors involved in worst experiences. These occurred where animals threatened, attacked or harmed respondents. The message from these results indicates that in wildlife tourism experiences, visitors desire interactions with animals that are positive and safe. This can be difficult to achieve in a tourist setting. In captive environments, the nature of interactions is often controlled, and relatively fewer negative interactions occurred in captive environment. It is with non-captive habituated animals that management problems are more evident. In environments such as campgrounds and national parks, visitors can get the

opportunity to see and interact with wildlife in a natural setting. However, the familiarity of these animals to human presence can also be a disadvantage. Animals attracted by food can become demanding and aggressive. Animals drawn to an area because of the relative abundance of food can have their nests and/or young threatened by human presence, and become aggressive and protective (Boyle & Samson, 1985; Shackley 1996). In such areas both the humans (in terms of feeding animals) and the wildlife (in terms of begging/stealing) are difficult to control. The safety of both wildlife and visitors is an important issue in such situations.

The second strongest overall feature in best experiences was the enjoyment of aspects of the natural environment, and this was particularly the case in non-captive environments. This result confirms results from a study by Schanzel & McIntosh (2000) which suggested that the setting in which the animal is encountered is important to the overall appreciation of the experience. In captive environments, learning and education was the second most dominant factor in best experiences. This is likely to be because zoos have a specific educational charter (Larcombe, 1995) and deliberately seek to educate the visitor through interpretive signs and ranger talks/shows. For visitors viewing non-captive animals, education was not a strong feature of best experiences, and this could be the result of limited interpretation being available, or that it was not a strong feature of the experience. For experiences with wild or habituated animals, concern over the management of interactions was a notable feature of worst experiences. The main complaints were of not seeing any animals, or not getting a good view of animals.

In captive environments, many respondents were particularly concerned with animal welfare. Animals that appeared unhappy, neglected or in inappropriate enclosures were common elements of worst experiences. Zoo animals were the most frequently mentioned animals involved in worst experiences and the main reason was poor management of captive animals. However, many best experiences occurred in captive environments, and a large number of respondents enjoyed

seeing animals in zoos, sanctuaries and aquariums. It appears that respondents visiting zoos and sanctuaries do not usually object to captivity itself, but they expect that captivity be comfortable for the animals.

It is important to recognise that in many cases, the animals involved in worst experiences did not necessarily cause the negative impressions of the experience. An example is fish, which featured strongly as wild animals involved in worst experiences, however in many of these experiences illness/bad weather was also listed as a negative feature. Thus the worst experience was caused by being sick or having bad weather while out on the ocean/river, rather than caused by the fish. Taking these factors into account, it is notable that there were a large number of worst experiences involving kangaroos/wallabies and birds that threatened or attacked respondents. This occurred most frequently with non-captive, habituated animals (such as in campgrounds), and less frequently in captive environments.

The results suggest that animals involved in respondents' best wildlife experiences are viewed positively after the experience, and may become included as a favourite animal. Humans tend to like animals that they are familiar with (Serpell, 1986), and a positive tourism experience is likely to encourage a sense of familiarity. This is particularly the case where effective interpretive techniques are employed, which aim to generate familiarity, understanding and favourable attitudes toward the animal. While the results in this study are indicative only, they support the idea that positive experiences with animals can encourage favourable attitudes. There was some support for the idea that animals involved in worst experiences become included as least favourite animals, but the results were not as strong as for best experience animals/favourite animals.

Overall, the three most notable features of best experiences were the desire for interactions or closeness to wildlife, the importance of the natural environment, and the value of learning. This supported a study of New Zealand wildlife tourists which found these three features to be rated as the most important features of the

experience (Pearce and Wilson, 1995). In terms of worst experiences, the most notable features were the dislike of captive animals kept in poor conditions, and concerns regarding aggressive animals that attack or threaten visitors.

2.4.2 Interest in wildlife and wildlife specialisation

For all but 4.4% of respondents, wildlife is an appealing element of a tourist experience. Even for the majority (56.5%) who do not specifically plan to view wildlife, the presence of animals is welcomed and enjoyed. This is consistent with the general opinion that humans have an innate interest in animals (Durci, 1991; Wilson, 1984; Kellert, 1996). The results identified a group of people for whom wildlife featured as more important in their travel decisions, and a smaller group of wildlife enthusiasts who consider wildlife to be one of the most important factors in their travel decisions. As expected, results confirmed that people with a stronger interest in wildlife also visited significantly more wildlife venues than those who have a general interest in wildlife. Respondents with a keen interest in wildlife were also significantly more likely to be international visitors. Australia's unique animals are heavily promoted as a key destination feature. Thus it may be the case that a higher proportion of wildlife Enthusiasts are attracted to Australia in response to the wildlife promotion.

A notable result was that there was a significant difference between people with different levels of interest in wildlife in terms of the types of places they travel to. As interest in wildlife increased, not only did the frequency of overall wildlife trips increase, but an increase in participation was evident in all types of wildlife experience. These results do not support Duffus & Dearden's (1990) suggestion that as specialisation increases, wildlife visitors will move from captive environments to specialised tours and remote areas in search of wildlife. While it is clear that the tendency to go on specialised tours does increase as interest in wildlife increases, so too does the tendency to participate in captive wildlife viewing. However, Enthusiasts tended to describe wild settings in their

descriptions of best experiences, while General group respondents tended to describe captive settings. This may indicate that Enthusiasts prefer or enjoy experiences with wild animals more, however they continue to visit captive settings. General group visitors tend to go on specialised tours and view wildlife in natural areas significantly less than Enthusiast or Interested respondents, so their range of experiences to draw from is likely to be more limited. It appears true that Generalists tend to visit captive settings more than other settings, however it appears that as interest in wildlife increases, rather than move away from captive settings, participation in wildlife tourism expands to include more specialised settings.

2.4.3 Favourite and least favourite animals

Respondents had clear preferences for different animals. As predicted (Serpell, 1986), the animals at the top of the list were relatively tame, easy to anthropomorphise and mostly easy for humans to interact with. Domestic dogs were the most preferred animal, and many respondents spoke with the kind of strong affection that was described in the literature (Sanders, 1993). Dogs are presented as affectionate and human-like in children's books and popular press (Herzog & Galvin, 1991), and these themes were reflected in respondents' descriptions. Dogs were described as loyal, faithful, a friend, intelligent and affectionate. Dogs were spoken of in anthropomorphic terms, and as an important part of the lives of many respondents. Domestic animals were considered favourites because of their companionship and ability to interact with humans. It appears that interaction is an important feature of human/animal relationships. This finding does not only apply to domestic animals, but can be generalised to other types of animals as well. For example, the desire to interact has been suggested as a motivating factor for visitors to feed wild animals in national parks (Moore, Olsson, O'Reilly & Johnson, 1997), and for feeding and teasing zoo animals (Kreger, & Mench, 1995).

The second most popular group of animals was big cats (tigers, lions, and leopards), followed by dolphins. There was little overlap in the reasons given for liking these animals as each type of animal has different characteristics. However, many of the features influencing preference as predicted by Kellert (1989) held true: preferred animals tended to have one or more of the following features: they were larger, aesthetically attractive, considered intelligent, had a history of association with humans and/or were beneficial to humans.

Interestingly, there was little difference between the favourite animals for Australian residents and the favourite animals for overseas residents. The top 10 animals were almost the same for international and domestic residents, although the order changed slightly. One would expect that overseas visitors would have their own list of favourite animals that were relevant to the country they live in. However, it appears that being in Australia places Australian animals foremost in the minds of overseas respondents, as kangaroos and koalas were listed as favourites. It may be that the situation or context has a substantial impact on which animals are considered favourite. Overall favourite animals were mostly mammals and birds, although fish were also popular.

The case of domestic cats is interesting, as they appear as the 4th most favourite animal and the 4th least favourite animal. Cat-advocates say they are affectionate, independent, playful and soft, while cat-opponents describe cats as detrimental to wildlife, untrainable, unhygienic, unaffectionate and annoying. It seems that cats, like wolves, evoke strong emotions (Scarce, 1998:32): "*You hate them or you love them. It's religious on both sides...*" Snakes also appeared as the 17th most favourite animal, yet they were clearly the most disliked animal, and were mentioned as least favourite by over half the respondents. Crocodiles were the 5th most favourite animal, and they were also the 5th most disliked animal, supporting Ryan's (1988) study which suggested that crocodiles and possibly other animals have an inverse appeal – they attract because they are dangerous and different

from humans. This also demonstrates a clear link to Mindfulness theory, as people pay attention to animals or situations that are dangerous.

Aside from these animals, the list of least favourite animals confirms that invertebrates are almost universally disliked (Kellert, 1993), as insects were mentioned by 88.5% of respondents as a least-favourite animals. It is also clear that preferences for animals vary depending on the location the question is asked. Cane toads, for example, appear as the 3rd most disliked animal, and box jellyfish as the 10th most disliked animal, yet they are particularly common in North Queensland, where the study was conducted and the majority of respondents resided. For most of the least-favourite animals, the reasons given for why they were disliked centered around them being a threat to human safety in terms of being dangerous, poisonous, or unhygienic. The second most common reason was that they were considered ugly.

Overall, the results provide support for the idea that preference is based on a hierarchical ladder of worth, with animals most like humans at the top of the ladder (Arluke & Sanders, 1996). When looking at the list of animals themselves, this may appear to be contradictory, as animals such as dolphins and fish have little structural or other similarities to humans. However, analysis of the words used to describe these animals reveals anthropomorphic and human-like qualities that are admired in these animals, such as friendship, playfulness, serenity and aesthetic qualities such as beauty or being 'cute'. The characteristics we admire in animals, it seems, are similar to those we admire in humans. The charismatic vertebrates, which have features and exhibit behaviour that humans can understand or explain (Kellert, Black, Rush & Bath, 1996; Shackley, 1996), are preferred over other animals. Conversely, the least favorite animals are shown in this study to be those which are least like humans, are wild, unpredictable or dangerous (Arluke & Sanders, 1996). In terms of Ryan's (1988) (Figure 1.1) matrix for classifying animals, it appears that favorite animals are often animals that are in the "safe-human oriented" sector of the diagram. Even if they are not human oriented and

are dangerous animals, the features that people are attracted to are those that are positive in a human context, and pose no threat to humans. For example, the big cats (tigers, lions) are dangerous animals and not particularly human-oriented in their behaviour, habitat or association with humans. However, the reasons why these animals were listed as favorites do not include any aspects of danger, and focus on positive human-like qualities such as beauty, power and magnificence. Conversely, the least favorite animals have qualities that place them in the "dangerous-unhuman" quadrant. These include characteristics that may be represented by the terms creepy, slimy, dangerous, unhygienic and ugly. Thus it is not the features of the animals themselves that influence preference so much as it is the perception of their features that is important.

Also apparent in the descriptions of favorite and least favorite animals was the anthropomorphic terms used to describe animals. The features we admire in animals, we also admire in people. Conversely, the features we don't like in animals, we tend not to like in people. Most descriptions are placed firmly in the context of the human-oriented world, as illustrated by the frequent comment that favorite animals had nice 'personalities'.

The reasons given for why respondents liked or disliked certain animals makes intuitive sense. The notion that dogs provide companionship, that koalas are cute, or that snakes are dangerous does not constitute surprising results. However, it is important to note that these features mentioned by respondents are the ones that encourage people to take notice of the animals. The features are therefore a useful tool for interpretation and education, because they can provide a focus to attract visitors' attention. This is not only useful for the top 5 favorite animals, but for any animal featuring as the topic of interpretation. These are things that draw people's attention, and can therefore be useful tools when trying to educate visitors. The descriptions used for least-favourite animals also illustrate misconceptions commonly held by people. For example, not all snakes are poisonous, deadly or dangerous, and no snake is slimy to touch, yet these were the words most

frequently used to describe snakes. Education campaigns can therefore address these misconceptions and possibly reduce the level of dislike generated by incorrect information. Studies have shown (Morgan & Gramann, 1988) that attitudes toward animals such as snakes are unlikely to change by mere exposure to snakes, however interpretation by a guide who handles and demonstrates the characteristics of the animal can improve attitudes. Thus an interpretive approach which combines correct information with an element of familiarity holds potential for changing negative attitudes.

The listings of favorite and least favorite animals support the idea that preferences vary according to time and culture, as suggested by Bart (1972). There were relatively few similarities between the listing of preferences between the present study, and that reported by Bart (1972) and Kellert (1989) in the United States. This could, in part, be due to the study region and animals prevalent in other countries. Another reason may be that the Bart (1972) and Kellert (1989) studies used researcher-generated rather than open-ended lists of animals. Futhermore, the methodologies used in the studies differed. Despite the difficulties associated with comparisons between the studies, the common finding was that domestic animals, birds and larger mammals were favorites, while insects and snakes were least preferred.

The results of this study into preferences for animals provides a comparison and extension to the work of Bart (1972) and Kellert (1989). Asking respondents to state the reasons why they liked or disliked animals provided information to assist the understanding of factors important to preference. These results, combined with guidelines suggested by Kellert (1989) are revised into clearer guidelines and listed in Table 2.32.

Table 2.32

Factors which Influence Preference for Animals (modified from Kellert, 1989)

1. Size: larger species are preferred over very small species.
2. Aesthetics: animals considered 'attractive' are more preferred. Aesthetic attraction can be based on shape (e.g. sleek), texture (e.g. fluffy, cuddly), colour (e.g. bright or contrasting) or movement (e.g. fast, athletic).
3. Intelligence: animals considered to have capacity for reason, feeling and emotion are preferred.
4. Danger to humans: Animals that pose a perceived threat or danger to humans, through injury or poor hygiene, are generally disliked.
5. Likelihood of inflicting property damage: animals that have a detrimental impact on property are disliked.
6. Predatory tendencies: unclear factor. Predators were on both the favourite and least-favourite animal lists.
7. Phylogenetic relatedness to humans: Animals that are perceived to have structural, behavioral or 'character' similarities to humans are liked.
8. Cultural and historical relationships to humans: Animals that play an important role in the history or culture of a geographic area are likely to be favourites in that area.
9. Relationship to human society: Animals that are pets, or useful to humans are likely to be considered favourably, while pest or feral animals are likely to be considered unfavourably.
10. Texture: Bodily appearance and structure: The more familiar to humans, the more preferred.
11. Geographic variations: Variations amongst species considered favourite or least-favourite are likely to occur across geographic regions, depending on particular species found in those areas.
12. Perceptions of characteristics can influence preference more than the actual characteristics of the animal.

2.4.4 The concept of Mindfulness applied to wildlife tourism settings

While individual components of the results are consistent with various themes and ideas from the literature, the theoretical framework of 'Mindfulness' (Langer, 1989) and its application to tourism and interpretation (Moscardo, 1996, 1999) appears to be relevant and useful in connecting together various components of the wildlife tourism experience. This framework is based on the social cognition field of psychology and argues that people can be mindful or mindless in any given situation. Mindlessness, as the word suggests, refers to behaviour that is routine, not actively thought about, where people are not deliberately paying attention to what they are doing. Alternatively 'Mindfulness' involves active information processing, and is defined as "...a state of mind that results from drawing novel distinctions, examining information from new perspectives, and being sensitive to context....when we are mindful we recognise that there is not a single optimal perspective, but many possible perspectives on the same situation" (Langer, 1993:381). Mindful visitors are more likely to enjoy their visit, learn more from their visit, be more aware of the consequences of their behaviour and be more appreciative of the site (Moscardo, 1996). This framework indicates that there are several predictable factors which, if present in an experience, will encourage visitors to pay attention to the experience and process the experience in a mindful manner. According to this theory, the presence of these factors should result in visitors enjoying and remembering their experience (Moscardo, 1999). If this holds true for wildlife tourism situations, then the descriptions of best wildlife tourism experiences should contain descriptions of factors consistent with the Mindfulness model.

The results clearly show that mindfulness factors were dominant in respondents' descriptions of their best wildlife experiences. The large majority (83.9%) of descriptions of best experiences contained at least one factor related to Mindfulness. As a result of careful and restrictive coding, and because the survey was open-ended and contained no prompts for respondents, these results are

conservative. It is likely that an even higher proportion of descriptions were consistent with mindfulness, but were excluded because the wording was insufficiently specific.

The high proportion of descriptions consistent with the Mindfulness Model confirms the usefulness of this model to wildlife tourism. It can be used to predict which features of a wildlife tourism experience are likely to be enjoyable and memorable for visitors. It also assists in identifying features of both the broader experience and the interpretation used that encourage mindful processing of information, and thereby increase learning and attitude change (Moscardo, 1992, 1996, 1999). This could potentially be valuable where management agencies and educators are attempting to foster positive conservation attitudes, or manage the behaviour of visitors in order to minimise impacts on the wildlife and the environment.

Results for worst wildlife experiences were excluded from the Mindfulness investigation. There were a number of reasons why it was considered inappropriate to pursue the model with respect to worst experiences. Firstly, the majority of respondents (72.8%) described animals that were sick, injured, mistreated or kept in poor conditions as one of the reasons for that being their worst experience. This concern relates more directly to animal welfare issues than it does a Mindfulness model. While it may be argued that visitors may have been made mindful of the welfare of captive animals through Mindfulness factors such as surprise or emotion, the survey was not designed to investigate responses with sufficient detail to assess these factors. A further problem with worst experiences was the contradiction between the outcomes of mindfulness and the nature of worst experiences. According to the model, visitors who are mindful are predicted to enjoy their experience more, rather than less. This makes an analysis of worst experiences fundamentally difficult to fit within the model.

The factors most frequently mentioned by respondents in their descriptions of best wildlife experiences were those classified as 'extreme stimuli'. This includes experiences with large, colourful, loud, dangerous animals, and those where visitors were in close proximity to wildlife. This is consistent with the work of Patterson & Bitgood (1988) in zoo settings, which includes these as things which visitors are likely to pay attention to. The second most dominant Mindfulness factor was related to authenticity in experiences, and in this context was considered to be the experience of viewing wild animals in their natural habitats (26.8% of respondents). While the importance of the natural environment has been mentioned in the literature (e.g. Shackley, 1996; Duffus & Wipond, 1992; Pearce & Wilson, 1995), the critical role played by the natural environment in the context of wildlife experiences has not been fully appreciated. The third most frequently mentioned Mindfulness factor was that the experience was new to them, or the animals seen had never been seen before. New experiences or novel situations are strongly linked to mindfulness, because people are less likely to have routine behavioural scripts to rely on in such situations. Langer (1978) suggests that social behaviour research undertaken in laboratories is not representative of everyday behaviour because the novelty of the situation makes people mindful. Wildlife tourism has the initial benefit that visitors are likely to be engaging in an activity that is not part of the everyday routine, and this in itself may encourage them to be mindful, at least initially. However, if they are engaging in a familiar activity, or viewing rows of similar, repetitive enclosures at a zoo, this initial advantage may not translate into sustained mindfulness.

Overall, wildlife tourism has a number of advantages which make it more likely that visitors will be mindful, and thereby enjoy their experience and learn from it. Firstly, the experiences occur in a tourism or recreation context, which is different from normal routine and may be a new experience for the visitor. Secondly, the topic of the experience is live animals, which are likely to attract attention. Experiences with wild animals have the advantage of the authenticity of natural habitats and environments, and the element of surprise or chance associated with

viewing wild animals. Experiences with captive animals have the advantage of rare or unique animals, opportunities for interaction with animals, and a variety of animals to view. There is strong potential in many wildlife tourism experiences for some elements of the Mindfulness model to be present, and this presents the opportunity for operators or guides to emphasise these elements in order to encourage greater visitor satisfaction, learning and pro-conservation attitudes.

2.5 Conclusions

2.5.1: Interest in viewing wildlife has proven to be a useful method of categorising respondents. Results indicated that respondents with a keener interest in wildlife have different characteristics and report different experiences to those with a general interest. Most notably, visitors with higher levels of interest in wildlife also participate in wildlife tourism more frequently, and this includes captive as well as wild settings. However, when describing their best experiences, respondents with higher levels of interest in wildlife tended to describe wild animals and natural settings, while those with general levels of interest tended to describe captive settings. The apparent contradiction in results may be due to a combination of experience (Enthusiasts have relatively more wildlife experiences, both natural and captive, to choose from when describing best experiences) and preferences (Enthusiasts may prefer natural settings although they still visit captive settings).

2.5.2: Overall, visitors enjoy interacting with animals and getting close to them. Dominant interactions included close proximity, touching, feeding, and watching. However, many worst experiences occurred as a result of negative interactions where the animal attacked or threatened respondents. The results indicate that visitors desire interactions that are positive and safe.

2.5.3: In captive environments, the results indicate strongly that people are sensitive to the care and condition of animals. Many best experiences occurred in captive environments, which demonstrate the value of zoos and sanctuaries. However, the majority of worst wildlife experiences involved poor care or condition of captive animals. While many respondents visit captive settings and most gave no indication that they objected to captivity itself, respondents clearly expect captivity to be comfortable for the animals.

2.5.4: Features of the setting or natural environment were important factors in the wildlife tourism experience, particularly for wild animals. Learning was also an important factor in best experiences, which supports the value of interpretation in wildlife tourism.

2.5.5: Results provided support for the suggestion that favourite animals are usually mammals and often familiar to people; while invertebrates and animals considered dangerous are generally disliked. The results provided rankings of favourite and least-favourite animals in an Australian context, and compared both domestic and wild animals.

2.5.6: Features that are admired in animals varied from animal to animal. Often the traits or characteristics we admire in fellow humans (e.g. beauty, intelligence, companionship) are those that we admire in animals. Least favourite animals are usually those that are harmful to humans or unattractive. Importantly, the perception of characteristics influences preference, rather than actual characteristics.

2.5.7: The Mindfulness (Langer, 1993) approach is a useful conceptual framework for understanding best experiences in wildlife tourism situations. The features of the experiences described by respondents were consistent with Mindfulness theory, and this provides guidance regarding features of experiences that are likely to encourage enjoyment and learning.

2.6 Directions for Further Study

This study provided support for the idea that wildlife tourists have different levels of interest in wildlife, and that this may influence preferences for, and participation in, wildlife tourism. This study highlighted some of the features that visitors find memorable in their wildlife tourism experiences, and provided a starting point for examining wildlife tourism. The next step in the research process will be to use the results from the present study to develop more structured questions examining features of the wildlife experience. Using structured questions and rating scales will be useful in standardising responses, providing information on relative importance of features, and enabling a more rigorous statistical analysis of results. Investigations will focus more directly on differences between visitors with varying levels of interest in wildlife. Other areas for further investigation include interpretation, as interpretation and learning was revealed as an important feature of best experiences. Satisfaction with wildlife tourism experiences will also be examined further, and comparisons will be made between visitors with different demographic characteristics and levels of interest in wildlife. Visitor preferences for wildlife species will continue to be included in questionnaires. However, the focus will narrow from all animals to the animals that feature in the settings relevant to the studies, and attention will focus more on consistencies between the features of favourite animals than on the animals themselves. Overall, the present study provided a respondent-generated list of features that were important to wildlife experiences. These features will be used to guide the development of further questionnaires examining wildlife tourism experiences.

CHAPTER THREE

Rainforest Habitat

3.1 Introduction

Results from the exploratory study in Chapter Two provided support for the idea that respondents may be usefully categorised by considering their level of interest in wildlife. Those with a keener interest in wildlife appeared to have different characteristics and seek different experiences than those with a more general interest. For example, respondents with a general interest in wildlife had significantly more best experiences in captive environment settings, while those in the Enthusiast group had significantly more best experiences viewing wild animals. Some features of best experiences were common to all levels of respondent, particularly enjoyment of getting close to wildlife and interacting with wildlife. Similarly for worst experiences, all types of respondents appeared to strongly dislike any perceived mistreatment of animals.

These results indicated some further avenues for research. While there was some evidence to suggest that visitors with different levels of interest in wildlife were seeking different experiences, more detail was required in identifying what these differences were. The exploratory study also indicated that a more detailed investigation of learning and interpretation was required, because learning was one of the dominant features of best experiences for captive environments. In captive environments such as zoos and sanctuaries, interpretation and learning has been established as an important goal and visitors usually have access to information about the animals displayed in these environments. However, interpretation did not appear as a strong feature of best experiences with wild animals. Perhaps this is because the provision of interpretation is less consistent, and may not be available where visitors are viewing wildlife independently in places like national parks. From the literature, it

would be expected that respondents with higher levels of specialisation (and who tended to have best experiences with wild animals) would rate learning as more important. Further research is therefore required to assess both how important learning is, and what topics/methods are preferred by different groups of visitors.

The exploratory study highlighted some of the features of the experience that respondents found memorable in their best and worst wildlife experiences. It served as a starting point for examining wildlife tourism and the facets of the experience which make it enjoyable or not enjoyable for visitors. These facets were used to develop more structured questions that could investigate the relative importance of these features for wildlife tourists. This present study used the results gained from the exploratory study in Chapter Two to develop structured questions for features of the setting, interpretation and satisfaction. The use of structured questions allowed for statistical comparisons between groups of visitors having different levels of interest in wildlife.

Rainforest Habitat was selected as a venue for research for the following reasons:

a) It is a captive environment that utilizes a naturalistic method of displaying wildlife. Rainforest Habitat markets to visitors with an interest in wildlife and birds, and has accreditation as an ecotourism operation. Interpretation is a strong focus of the experience. It was expected that this venue would draw a broad range of visitors with all levels of interest in wildlife represented in the sample. It is a tourist attraction in the region, and is therefore likely to draw wildlife tourists with a more general interest in wildlife, and a unique immersion-style sanctuary, which is likely to attract visitors with a keener interest in wildlife.
b) A captive environment was selected to complement a similar study conducted with wild animals in a national park that is renowned for its wildlife viewing opportunities (Flinders Chase National Park in Chapter Four). The aim of using these two environments was to gain access to a broad range of wildlife visitors, in

order to examine the experiences of general visitors as well as those of the specialised visitors who have received more attention in the literature to date.

The aims of the Rainforest Habitat study were to:

a) **Setting:** to measure the relative importance of the features of the wildlife setting that were identified from the exploratory study in Chapter Two. Respondents were asked to assess the importance of these features with reference to both captive and non-captive environments.
b) **Interpretation:** to examine the importance and types of interpretation preferred by different groups of visitors.
c) **Satisfaction:** to both assess the overall satisfaction of visitors to Rainforest Habitat, and to examine comparisons between groups of visitors in terms of their satisfaction with different aspects of the experience.
d) **Levels of interest:** to further identify differences between respondents with differing levels of interest in wildlife.

The chapter is organised as follows:

3.2 The Rainforest Habitat

The Rainforest Habitat Wildlife Sanctuary is located in tropical North Queensland, at Port Douglas. Port Douglas is approximately 50 minutes drive north of Cairns, along the scenic coastline of the Cook Highway. Cairns is a major Australian tourist destination, and the region boasts 2 major nature based attractions, namely the Great Barrier Reef and the Wet Tropics rainforests. The importance and beauty of these two environments has been recognised internationally through World Heritage listing.

The Rainforest Habitat has focussed on the unique beauty of the rainforest environment, by developing a replica rainforest ecosystem. The area was previously agricultural land of low yield, and in 1988 was developed into a wildlife park. Covering over two hectares, the park was opened to the public in June 1989 as a bird and butterfly sanctuary. In 1994 park management realised the growing concern about conservation of flora and fauna, and put in place a plan to interpret wildlife and plants of North Queensland. Today the Habitat has 168 species and 1600 animals inside its boundaries, which are displayed as mixed immersion exhibits. In 1999, 114,000 visitors entered the park, which was an 8% increase on the previous year (Rainforest Habitat, 1999).

The center is divided into three main areas: *The Wetlands* features wading birds, parrots, fruit bats, the Southern Cassowary, macropods and koalas. The *Rainforest Aviary* houses over 84 species of birds and animals, and visitors walk on multi level boardwalks that cover the different levels of the rainforest. The *Grasslands* exhibit displays kangaroos, wallabies and crocodiles. This is an open-air exhibit where visitors are able to hand feed kangaroos and wallabies.

The stated aim for Rainforest Habitat centers around education and conservation. The purpose of Rainforest Habitat

"is to enable visitors to appreciate and understand with a little more detail, the intricate interdependence of the rainforest fauna and flora by experiencing close up some of its inhabitants, and through this appreciation, aid its conservation."

Observe. Appreciate. Conserve

Through observation.....Appreciation
Through Appreciation.....Conservation

(Rainforest Habitat, 1999)

Visitors to Rainforest Habitat typically attend a guided tour through the complex. These tours are included in the entry price and commence hourly, and half hourly in peak times. Visitors are encouraged to participate in a tour as they are considered an important part of the visitors' experience. The tour takes approximately half an hour and visitors are then able to experience the sanctuary independently and at their leisure. A small number of interpretive signs are displayed throughout the complex, however guides provide most of the interpretation. Figures 3.1 to 3.4 depict the surrounds of Rainforest Habitat.

Figure 3.1: The Wetlands exhibit

Figure 3.2: Along the boardwalk

Figure 3.3a

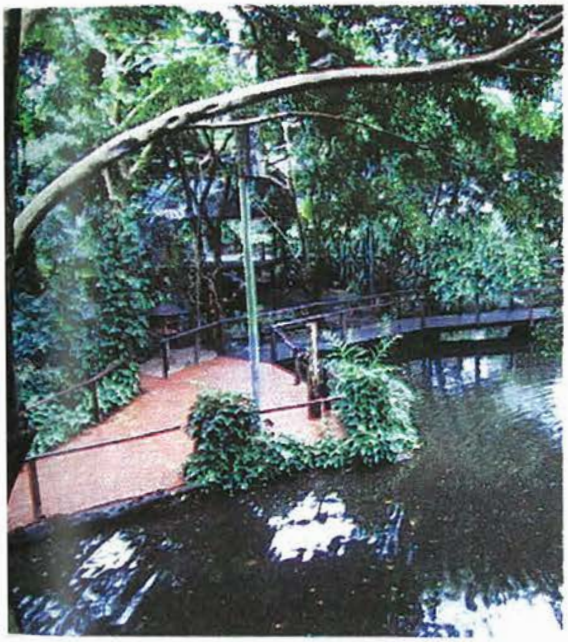


Figure 3.4: Multi-level boardwalks

Figure 3.3b

Figures 3.3a and 3.3 b: Visitors are able to get close to wildlife

3.3 Methodology

3.3.1 Survey Procedure

Surveys were conducted between the 20th and 27th July 1999. These dates included a public holiday and a weekend to ensure both the holiday market and the local market were captured. Research staff members, who were trained in survey techniques, conducted all surveys with visitors. Visitors were informed that participation was voluntary, and their responses were completely confidential and anonymous. Participating visitors were able to place their names and contact details into a draw for one of five rainforest gift packs, which consisted of rainforest books and memorabilia from Rainforest Habitat. The study consisted of a pre-visit survey and a post-visit survey, with independent samples (i.e respondents completed either the pre or the post-visit survey but not both). Overall, 87.5% of visitors who were approached agreed to participate in the study (89% pre-visit, 86%post-visit). Of the 12.5% who refused, the main reason was due to time pressure, and the majority of these visitors (68%) belonged to a tour group.

As a result of time pressure, and the comparatively fewer tour groups entering Rainforest Habitat at the time of year the study was conducted, the opinions of tour group visitors may be under-represented in this study. Other tourism based studies indicate that tour group visitors tend to be less satisfied with their experience, mainly due to tight schedules which do not permit time for exploring or relaxing at the attractions (Moscardo & Woods, 1998). The study was only conducted in English, which may have under-represented other nationalities and particularly those who travel by tour group. However, Rainforest Habitat management confirmed that the breakdown for place of residence in this study closely matched the results gained from their ticket desk. The results are therefore representative of the visitor mix that is typical during the winter season, based on place of residence.

Surveyors approached the first person entering (for pre-visit surveys) or leaving (post-visit surveys) Rainforest Habitat. Once they had finished explaining the survey and handing it to that person, they approached the next person to enter or leave.

3.3.2 Participants

The total number of visitors completing surveys was 957. Of this total, 380 completed the pre-visit survey, and 577 the post visit survey. The average age of the total sample was 43.2 years old, and the breakdown of age groups is given in Table 3.1. This breakdown of age groups will be used in all demographic comparisons throughout the chapter. There were no significant differences in age between the pre visit sample and post visit sample.

Table 3.1
Age of Respondents in Total Sample

Age	Percent of respondents
15-30	22.4
31-50	38.4
51 and over	39.2

The gender distribution of respondents was 48.6% male and 51.4% female. Again, there were no differences between the pre-visit sample and the post-visit sample for sex of respondent. Almost half of the sample (48%) consisted of overseas visitors. An analysis of postcodes indicated that Australian visitors to Rainforest Habitat were dominated by those residing in Victoria (19% of the sample) and NSW (14% of the sample). The usual place of residence for Rainforest Habitat visitors is depicted in Table 3.2. There were no significant differences between the pre-visit and post-visit samples for usual place of residence.

Table 3.2

Usual Place of Residence

Usual place of Residence	Percent of sample
Overseas	48
Victoria	19
NSW	14
Queensland	11 (locals 6%)
South Australia	5
Australian Captial Territory	2
Northern Territory	1

Looking at international visitors in more detail, the largest numbers come from the United Kingdom, New Zealand and the United States. Table 3.3 shows the country of origin for international visitors.

Table 3.3

Usual Place of Residence for International Visitors

Country	% of sample	Country	% of sample
USA	7.5	Italy	.6
Canada	1.0	Other European	4.5
New Zealand	13.2	Japan	0.8
UK	12.5	Hong Kong	0.6
Ireland	0.7	Singapore	1.2
Germany	2.3	China	0.1
Netherlands	1.3	Other Asia	0.2
France	0.7	Other	0.4

There was no significant relationship between the age of respondents and gender, between age and usual place of residence, or between gender and usual place of residence.

3.3.3 Instruments

The surveys consisted of a pre-visit questionnaire (Appendix I) and a post-visit questionnaire (Appendix J). While some questions were added for the benefit of Rainforest Habitat management, the ones which are relevant to the present study were as follows:

a) Features of the wildlife tourism setting.
   - Respondents were asked to rate how important a number of features of the setting were to their wildlife experience. There were 7 features for captive environments and 16 that related to wildlife settings in general. These items were developed using the most frequently mentioned features from the Exploratory study of best and worst wildlife experiences.
   - Respondents rated the importance of these features on a 4-point scale, ranging from very important to not at all important. The scale did not include a 'neutral' response as it was desirable to have respondents decide whether the feature was fundamentally important or not important to them. The purpose of using closed ended questions in this study was to simplify coding, to standardise questions across respondents, and to be able to apply statistical tests to assist analysis of results (Shaughnessy & Zechmeister, 1997). There was a possibility that individual respondents may have considered other features as more important than the listed features, however the purpose of open-ended questions in the exploratory study in Chapter 2 was to identify the dominant features of settings that applied to wildlife tourists in a variety of environments. The list of features generated for the present study therefore represents the features of the setting that should be important to most visitors in a variety of wildlife experiences
   - Visitors in the pre-visit study were also asked to rate how important a list of 9 features were in attracting them to visit Rainforest Habitat. These were primarily included at the request of Rainforest Habitat management in return

for permission to survey, as these included features that had been important in marketing efforts. No attempt was made to develop a comprehensive list of motives, as a detailed analysis of motivation was beyond the aims and scope of this study. However, the results pertaining to these 9 features show interesting distinctions between visitors and will therefore be reported in this chapter.

b) Importance and types of interpretation.

- Results from the exploratory study indicated that interpretation was an important feature of best experiences for captive environments. The Rainforest Habitat study examined this further by asking respondents to rate how important the item 'interesting information' was to their experience. Further questions asked respondents to rate their preference towards a number of interpretive methods that can be used when learning about the animals, and their relative interest in 11 topics about animals. The topics were selected from previous studies and suggestions from the literature, most notably Gold & Benveniste (1995) and Tunnicliffe (1993). Respondents were also able to suggest other topics of interest that were not listed on the questionnaire.

c) Satisfaction

- A set of 15 features were listed, and respondents were asked to rate them on a 6-point scale from not at all satisfied to very satisfied. Again, no 'neutral' option was included on the scale, so respondents would indicate fundamental satisfaction or dissatisfaction with the item. The features were the same as those listed in a) as the key features of wildlife tourism settings that were developed from the exploratory study in Chapter Two. Features were replicated so that it was possible to analyse both importance of features, and satisfaction with those same features. Open-ended questions were also used to ask visitors about the best features of Rainforest Habitat, and offer suggestions for improvement.

d) Levels of interest in wildlife tourism

- Respondents were asked to rate how interested they were in wildlife tourism, and frequency of participation in wildlife tourism. These questions were identical to those used in the exploratory study, as they represent a key variable by which respondents can be compared.

This study consisted of a pre-visit and a post-visit questionnaire. The post-visit questionnaire had identical questions to those in the pre-visit questionnaire for features of the setting, interest in wildlife and interest in interpretation. The post-visit survey had additional questions regarding satisfaction and assessment of the Rainforest Habitat experience. On both pre-visit and post-visit questionnaires there were a number of questions regarding travel patterns and information sources, which were included at the request of Rainforest Habitat management. These questions are not relevant to the present study and will not be reported in this chapter. The questions relating to attitudes were also included at the request of Rainforest Habitat management, who wanted to examine whether the experience had an effect on their visitors' attitudes. These attitude statements were taken from Kellert's (1989) typology of attitude types, and simplified into single core statements that reflected the basic attitude types described by Kellert. The results from the attitude statements will also be excluded from analysis because a thorough examination of attitudes and attitude change is beyond the scope and aims of this study.

3.3.4 Organisation of results

The results in this chapter are presented as follows:

Section 3.4: Overall results for important features of the wildlife experience, interpretation and satisfaction with Rainforest Habitat. These results are based on the entire sample, with comparisons made on demographic variables.

Section 3.5: Results based on levels of interest in wildlife. Comparisons were made for important features of the wildlife experience; demographics, interpretation and satisfaction based on the respondents' indicated level of interest in wildlife viewing. These results were conducted with the entire sample, with the exception of satisfaction items, which were relevant to the post-visit sample only.

Section 3.6: Results based on cluster analysis of respondents. Comparisons were made for interest in wildlife, demographics, interpretation and satisfaction using a cluster analysis solution based on the importance of features of the wildlife tourism experience. These analyses were conducted using results from the total sample of respondents.

As was the case in Chapter Two, an abbreviated version of crosstabulation tables will be used with Chi-square results in this chapter. The explanation and justification for use of the abbreviated presentation format has previously been provided in Section 2.2.4 of Chapter Two. Also as outlined in Section 2.2.4 of Chapter Two, analyses have been conducted on the data to ensure that the assumptions of the relevant statistical tests have not been violated, and that conclusions drawn from Chi-square results are conservative due to the large sample size.

3.4 Overall Results

3.4.1 Features of the wildlife tourism setting

Visitors were asked to indicate how important particular features of the setting were to their wildlife tourism experiences. They were given a list of the features, and asked to indicate how important they were on a scale of 1 (not at all important) to 4 (very important). Table 3.4 shows the response for importance of different features of the setting, ordered from highest mean rating to lowest mean rating. Most features (except for touching and feeding animals) had a mean score of 3 or above, which indicates that most of the features are generally considered important. However, some features were less important, (particularly those relating to touching and feeding animals), and a substantial proportion of visitors considered these features as not important to their experience. Results highlighted in bold font show that animal welfare is a dominant concern in captive environments, and a clean, natural environment is most important all wildlife tourism environments.

Table 3.4

Features of the Wildlife Tourism Setting

Feature	Not at all important (% sample)	Not very important (% Sample)	Somewhat important (% sample)	Very important (% sample)	Mean
Captive Environments					
Animals appear well cared for	.2	1.5	3.5	**94.8**	**3.92**
Animals have lots of space to live	.4	-.9	9.8	**88.8**	**3.87**
Animals appear content	.6	2.2%	10.3	**86.8**	**3.83**
Easy to find your way around	3.7	8.9	37.4	49.6	3.32
Being able to get close to animals	1.3	9.0	48.3	41.3	3.29
Fences and barriers	3.9	15.9	42.3	37.3	3.12

are hidden from view					
Being able to touch animals	14.8	38.3	29.5	16.9	2.47
All wildlife tourism settings					
Clean environment	0.0	1.7	20.9	**77.4**	**3.76**
Seeing animals in the natural environment	.2	2.1	20.9	**76.8**	**3.74**
Staff are knowledgeable	.2	1.9	25.5	72.4	3.70
Pleasant environment	.2	3.0	33.5	63.3	3.60
Animals are easy to see	.7	4.3	38.6	56.4	3.51
Staff are friendly	.9	5.2	37.3	56.5	3.49
Interesting information about animals	.6	5.0	44.2	50.2	3.44
Suitable facilities for visitors	1.3	10.2	40.2	47.9	3.36
Feeling safe	3.4	10.3	33.6	52.6	3.36
Rare, unique or exotic animals	1.1	11.1	50.8	37.0	3.24
Rare/endangered animals	3.4	12.4	44.2	39.7	3.22
Large variety of animals	2.4	15.3	47.6	34.5	3.15
Shelter provided from the sun/rain	3.4	16.8	41.4	37.9	3.15
Large number of animals to see	22	15.9	54.2	27.7	3.08
Being able to get close to animals	3.5	17.2	49.6	29.7	3.06
Being able to feed the animals	25.4	37.8	22.6	14.0	2.26

There were significant differences identified for importance of various features based on the demographic variables age, gender and place of residence. Table 3.5 shows the results of One-way ANOVAs that compared the mean importance ratings given by respondents who were categorised into three age groups: the 15 to 30 year olds, 31-50 year olds and 51years and over. Results of ANOVAs in Table 3.5 show that for eight of the 23 features a significant difference was indicated. While results for the other

features were not significant, there was a consistent finding that older group respondents scored all features as more important than did younger group respondents.

Table 3.5

Features of the Wildlife Tourism Setting by Age

Feature	15-30 year old group mean	31-50 year old group mean	51 and older group mean	F	Sig.
Interesting information	3.32	3.41	3.55	4.55	.004
Animals easy to see	3.36	3.48	3.61	4.52	.004
Barriers hidden from view /disguised	2.92	3.18	3.18	3.83	.010
Able to get close to animals	3.09	3.32	3.35	3.82	.010
Easy to find way around	3.14	3.33	3.43	3.70	.012
Facilities for visitors	3.20	3.34	3.45	3.68	.012
Shelter from sun/rain	3.00	3.10	3.27	3.21	.023
Able to get close	2.88	3.15	3.04	2.95	.032

*Rating scale was from 1 (not at all important) to 4 (very important)

* Post-hoc tests (Scheffe) indicated that significant differences existed between all groups, except for the variable 'barriers hidden from view', where there was no significant difference between the 31-50 and 51+ age groups.

Differences were also noted for importance of features based on the gender of the respondent. Table 3.6 shows results of independent samples T-tests for differences between mean importance ratings for males and females. The results showed a consistent trend whereby females placed more importance on all features of the setting, and the differences were significant for 10 of the 23 features.

Table 3.6

Features of the Wildlife Tourism Setting by Gender

Feature	Males mean	Females mean	t	Sig.
Feeling safe	3.22	3.51	-4.13	.000
Shelter from sun/rain	2.99	3.28	-3.94	.000
Facilities for visitors	3.23	3.45	-3.40	.001
Pleasant environment	3.52	3.69	-3.26	.001
Staff are friendly	3.42	3.58	-2.85	.005
See animals in natural environment	3.68	3.81	-2.76	.006
Easy to find way around	3.24	3.43	-2.62	.009
Animals easy to see	3.43	3.56	-2.27	.024
Clean environment	3.71	3.81	-2.16	.031
Lots of space for animals to live	3.82	3.90	-2.042	.042

*Rating scale was from 1 (not at all important) to 4 (very important)

Because there was a consistent pattern of results where older respondents and females both tended to score features of the setting as more important than other respondents, analyses were conducted to examine any relationship between age and gender. Both Chi-square (using age re-coded into a categorical variable) and One-way ANOVA (using age as a ratio-level variable) indicated there were no significant relationship between these variables.

There were also some differences for the importance of features based on place of residence. Table 3.7 shows the results of One-way ANOVAs for importance of features based on whether the respondent lived locally, within Queensland, interstate or overseas. Results indicate significant differences for 6 of the 23 features listed. Visitors who normally reside in Queensland but not locally gave the highest mean importance ratings for the features listed.

Table 3.7

Features of the Wildlife Tourism Setting by Place of Residence

Feature	Local group mean	Other QLD group mean	Inter-state group mean	Overseas group mean	F	Sig.
Shelter from sun/rain	3.19	3.58	3.25	3.00	6.70	.000
Easy to find way around	3.42	3.68	3.44	3.21	5.35	.001
Large variety of animals	2.73	3.23	3.06	3.21	4.05	.007
Animals easy to see	3.27	3.65	3.59	3.46	3.49	.016
Feel safe	3.31	3.63	3.46	3.28	3.18	.024
Staff are knowledgeable	3.65	3.90	3.76	3.65	3.15	.025

*Rating scale was from 1 (not at all important) to 4 (very important)
*Post-hoc test (Scheffe) indicated that while the differences were significant overall, the mean scores for age groups were not all significantly different from each other on all variables. Thus caution must be employed when analysing results.

3.4.2 Reasons for visiting Rainforest Habitat

The above tables present results on the importance of different features in wildlife tourism settings generally. Visitors were also asked what features attracted them to Rainforest Habitat specifically (Table 3.8). This question was only asked on the pre-visit questionnaire (n=380). These results showed that 'natural rainforest surroundings'; 'an opportunity to get close to animals'; and 'an opportunity to learn about the rainforest' were the most highly rated features. Almost everyone in the sample was interested or strongly interested in these features. The items "see animal shows", "be entertained" and "photo opportunities" had the lowest mean scores for importance. For these three items, a division in the sample was evident, with substantial proportions of the sample indicating that the items were important to their experience, and substantial proportions indicating they were not important.

Table 3.8

Features that Attracted Visitors to Rainforest Habitat

Feature	Not Interested	Interested	Strongly Interested	Mean
Natural Rainforest Surroundings	2.1%	57.6%	40.3%	2.38
Get close to animals	6.8%	50.7%	42.4%	2.36
Learn about the Rainforest	4.2%	62.3%	33.4%	2.29
Environmental Experience	3.9%	70.2%	25.9%	2.22
Ecotourism experience	13.8%	65.4%	20.8%	2.07
Good recommendation from others	20.8%	59.4%	19.8%	2.00
Photo opportunities	35.9%	44.0%	20.1%	1.84
Be entertained	37.3%	48.7%	14.0%	1.77
See animal shows	47.3%	43.7%	9.1%	1.62

*Scale was from 1 (not interested) to 3 (strongly interested)

There were no statistically significant differences on the importance of features attracting visitors to Rainforest Habitat based on gender, however significant differences were noted for age and place of residence. Table 3.9 shows results of One-way ANOVAs for the differences in mean importance for features attracting visitors specifically to Rainforest Habitat by age group. Results in Table 3.9 show that for the items 'see animal shows' and 'be entertained', interest declined as age increases. For the items 'learn about the rainforest' and 'get close to animals', the 31-50 year old age group indicated the most interest. Analyses on these variables were also conducted using Chi-square, because the questions were used with a three-point scale. The significant differences indicated were the same as those indicated by ANOVA, however the crosstabulation tables were more difficult to interpret than comparing the mean interest scores as shown in Table 3.10.

Table 3.9

Features Attracting Visitors to Rainforest Habitat by Age

Feature attracting visitors to Rainforest Habitat	**15-30 year old group mean**	**31-50 year old group mean**	**51 and older group mean**	**F**	**Sig.**
Be entertained	2.02	1.68	1.63	9.37	.000
Learn about the rainforest	2.15	2.39	2.29	5.26	.006
See animal shows	1.78	1.58	1.55	3.45	.033
Get close to animals	2.39	2.42	2.23	3.36	.036

*Scale was from 1 (not interested) to 3 (strongly interested)

Chi-square indicated a significant difference existed between respondents for interest in the item 'be entertained', based on their place of residence (Table 3.10). This indicates that visitors from overseas, interstate and other Queensland areas were more likely to be strongly interested or interested in being entertained than local visitors. There were no other differences in importance of the features that attracted visitors to Rainforest Habitat based on place of residence.

Table 3.10

Interest in Being Entertained by Place of Residence

	Strongly interested	Interested	Not interested	Total
Local North Qld	10 41.7%	10 41.7%	4 16.7%	24 100%
Other Qld	6 62.5%	5 37.5%	-	11 100%
Interstate	32 25.6%	75 60.0%	18 14.4%	125 100%
Overseas	69 45.1%	63 41.2%	21 13.7%	153 100%
Total Sample	**116** **37.4%**	**151** **48.7%**	**43** **13.9%**	**310** **100%**

*Chi-square value 15.32; sig. = 0.018

3.4.3 Interpretation

Visitors were asked to rank the methods they preferred for learning about animals at Rainforest Habitat. The order of preference from 1 (most preferred) to 8 (least preferred) was:

1. Guides (mean rank 2.9)
2. Interpretive signs (3.3)
3. Just watch animals (3.5)
4. Brochure with information (3.8)
5. Guidebook (4.4)
6. Animal shows/demonstrations (4.9)
7. TV documentaries/video loop (5.0)
8. Interactive computers/CD ROM (6.1)

These results are consistent with other studies that suggest guides are a preferred and effective method of interpretation (Wolf & Tymitz, 1981, Wineman *et al.*, 1996).

However, signs were also viewed favourably. Interactive computers and CD-ROM were the least preferred methods of interpretation.

The results for preferences for interpretation were compared pre- and post-visit to analyse whether exposure to interpretation at Rainforest Habitat had an effect on preferences. Guides remained the most preferred method of interpretation after visiting Rainforest Habitat. An independent samples t-test indicated that there was a significant improvement in preference for interpretive signs ($t=2.55$, $p<0.05$); and brochures ($t=2.56$, $p<0.05$) after visiting Rainforest Habitat. There was a significant decline in preference for documentaries ($t=-5.5$, $p<0.05$) and computers/CD-ROM ($t=-2.77$, $p<0.05$). There were no significant differences in preferences for interpretive topics based on age, gender or place of residence.

Visitors were asked to indicate on a scale of 1 (not interested) to 5 (very interested) how interested they were in 11 interpretive topics. The list below is ordered from the most interesting topic to the least interesting, and shows that 'peculiar and strange characteristics' and 'importance in the ecosystem' were the topics considered most interesting by Rainforest Habitat visitors.

1. Peculiar and strange characteristics (average rating 3.9)
2. Importance in the ecosystem (3.9)
3. Social habits, relationships within groups (3.8)
4. Where to find them in the wild (3.8)
5. Relationships with other species (3.8)
6. Breeding/rearing young (3.6)
7. What they eat (3.6)
8. Daily activities of the animals (3.6)
9. Numbers and distribution (3.6)
10. Details about individual animals on display at Rainforest Habitat (name, history etc) (3.2)
11. Features similar to humans (2.9)

A One-way ANOVA was conducted to determine whether there were any changes in interest in interpretive topics after a visit to Rainforest Habitat. The mean scores indicated that overall there was an increase in interest in all topics, and this difference was significant for four of the 11 topics:

- 'breeding/rearing young' (F=6.03; sig=0.014, pre mean 3.53, post mean 3.70)
- 'importance in ecosystem' (F=8.42; sig=0.004, pre mean 3.85, post mean 4.05)
- 'peculiar and strange characteristics' (F=6.04; sig. = 0.014, pre mean 3.87, post mean 4.02)
- 'social habits, relationships within groups' (F=3.9, sig. 0.048, pre mean 3.76, post mean 3.88).

Chi-square analyses were also conducted to establish whether there were any differences for interest in interpretive topics based on demographic variables. No significant differences existed based on place of residence. One-way ANOVAs indicated differences for interest in interpretive topics based on age, and these results are reported in Table 3.11. Results indicated that for these topics, interest decreases with age.

Table 3.11

Interest in Interpretive Topics by Age

Interpretive topic	**15-30 year old group mean**	**31-50 year old group mean**	**51 and older group mean**	**F**	**Sig.**
Features similar to humans	3.27	2.98	2.81	8.58	.000
Peculiar and strange characteristics	4.06	4.00	3.86	3.40	.034
Social habits, relationships within groups	3.91	3.90	3.74	3.18	.042

* Rating scale was from 1 (not interested) to 5 (very interested)
* Post hoc test (Scheffe) indicated no sig. diff between 15-30 and 31-50 age groups.

A number of significant differences were noted for interest in interpretive topics based on gender of the respondent. Table 3.12 shows the results from T-tests and indicates that for these topics, females are more interested than males. While differences in other mean scores were not statistically significant, females were consistently more interested in all interpretive topics than males.

Table 3.12

Interest in Interpretive Topics by Gender

Topic	Males mean	Females mean	t	Sig.
Daily activities of animals	3.51	3.70	-2.85	.004
Breeding/rearing young	3.47	3.78	-4.47	.000
What they eat	3.53	3.72	-2.8	.005
Features similar to humans	2.81	3.14	-4.00	.000
Social habits, relationships between groups	3.74	3.93	-3.64	.003
Details about individual animals at Rainforest Habitat, e.g. birthday, name etc.	3.13	3.42	-3.64	.000

* Rating scale was from 1 (not interested) to 5 (very interested)

3.4.4 Satisfaction and evaluation of Rainforest Habitat experience

Visitors in the post visit sample (n=577) were highly satisfied with their Rainforest Habitat experience. On a scale of 0 (not at all satisfied) to 5 (very satisfied), each of the 15 features rated a mean score higher than 4. Table 3.13 shows the mean ratings for each feature of the experience, and the percentage of respondents scoring each category. The results are presented in descending order, with the feature with the highest mean score listed first. The features 'interesting information', 'opportunities to learn', and 'knowledgeable staff' all have at least 20% of respondents giving a

satisfaction score of 3 or below. While the means are still high, this indicates some variation in response for these variables. Hannan & Karp (1989, in Noe, 1999) analyse measurement of satisfaction and conclude that a high level of satisfaction exists if the top categories add up to between 85 and 95%. Moderate satisfaction ranks from 70 to 80%, while anything under 60% is considered low. In Table 3.13, the features 'interesting information', 'opportunities to learn', 'space available for animals', 'ability to touch animals', and 'knowledgeable staff' all score between 70% and 80% when the two top categories are added together. These items therefore scored a moderate level of satisfaction, while all other features scored a high level of satisfaction.

Table 3.13

Satisfaction with Features of Rainforest Habitat

Feature	**Not at all satisfied 0**	**1**	**2**	**3**	**4**	**Very satisfied 5**	**Mean**
Feel safe	-	0.4	5.2	21.1	73.0	0.2	4.68
Pleasant environment	-	0.2	0.4	4.8	29.7	64.9	4.58
Easy to find my way around	-	-	0.4	5.4	30.1	64.1	4.58
Animals well cared for	0.2	-	1.2	7.4	30.2	61.0	4.50
Animals in natural environments	-	0.2	0.4	4.8	29.7	64.9	4.42
Ability to see animals	-	-	1.2	9.4	36.5	52.9	4.41
Ability to get close to animals	0.2	0.4	1.8	8.8	36.1	52.7	4.38
Friendliness of staff	0.2	0.4	2.8	9.6	34.2	52.8	4.36
Shelter from	-	0.2	2.9	11.6	35.0	50.3	4.32

sun/rain							
Interesting information	0.6	0.6	4.2	20.5	37.6	36.4	4.26
Knowledgeable staff	0.6	0.4	2.7	16.2	36.2	43.9	4.19
Space available for animals	-	1.6	4.0	14.7	33.6	46.1	4.19
Ability to touch animals	0.6	0.8	3.7	18.9	33.1	42.9	4.19
Opportunities to learn	-	1.0	4.4	20.0	37.6	37.0	4.07

There were no statistically significant differences in satisfaction based on place of residence of respondents, however there were differences based on gender and age. Table 3.14 shows the result of independent samples T-tests for satisfaction based on gender of the respondent. These results indicate that females generally indicated higher satisfaction than males. This result is consistent for all of the satisfaction items, although the differences were significant only in the items listed in Table 3.14. There were no significant differences for intention to return to Rainforest Habitat based on age, gender or residence.

Table 3.14

Satisfaction with Features of Rainforest Habitat by Gender

Satisfaction Item	**Males mean**	**Females mean**	**t**	**Sig.**
Opportunities to learn	3.92	4.20	-3.52	.000
Easy to find way around	4.49	4.67	-3.10	.002
Ability to touch animals	4.00	4.24	-2.60	.010
Interesting information	3.93	4.12	-2.30	.022
Animals in natural environments	4.33	4.50	-2.28	.023
Number of animals seen	4.34	4.47	-2.11	.035
Shelter from sun/rain	4.25	4.40	-2.05	.041

* Scale was from 0 (not at all satisfied) to 5 (very satisfied)

Significant differences were evident for 12 of the 15 satisfaction items based on age. Table 3.15 shows results of One-way ANOVAs and indicates that the consistent result was that satisfaction increased with age. In many cases, differences between mean satisfaction was substantial as well as significant. For most of these satisfaction items, post-hoc tests (Scheffe) indicated that the significant differences were mainly between the 51 years and older group, and the younger groups. This is also reflected in the mean differences between the groups. For most of the items, the differences between mean scores is greater between the 51 and older group and the 31-50 year old group, than between the 31-50 year old and 15-30 year old group.

Table 3.15

Satisfaction with features of Rainforest Habitat by Age

Satisfaction Item	**15-30 year old group mean**	**31-50 year old group mean**	**51 and older group mean**	**F**	**Sig.**
Interesting information	3.79	3.93	4.33	14.27	.000
Animals in natural environments	4.17	4.39	4.60	10.00	.000
Shelter from sun/rain	4.19	4.23	4.54	9.36	.000
Space for animals	3.93	4.16	4.40	9.18	.000
Opportunities to learn	3.89	4.00	4.28	8.13	.000
Knowledgeable staff	4.05	4.09	4.41	7.88	.000
Friendliness of staff	4.26	4.26	4.54	7.12	.001
Ability to see animals	4.22	4.46	4.50	5.73	.003
Pleasant environment	4.49	4.56	4.68	3.59	.028
Feel safe	4.59	4.64	4.80	5.33	.005
Number of animals seen	4.17	4.22	4.40	3.30	.038

Easy to find way around	4.50	4.56	4.67	3.25	.039

Analyses were conducted to see whether there were any differences in travel party for older people compared to younger people, and females compared to males. Ryan (1998) suggests that travel party may have an influence on satisfaction with tourist experiences. Table 3.16 shows the proportion of males and females travelling with relatives, and results indicate that females were significantly more likely to be travelling with relatives.

Table 3.16

Travelling with Relatives by Gender

	Not travelling with relatives	**Travelling with relatives**	**Total**
Males	370 88.1%	50 11.9%	420 100%
Females	351 78.7%	95 21.3%	446 100%
Total	**721** **83.3%**	**145** **16.7%**	**866** **100%**

Chi-Square value 13.70, sig. = 0.000

Further analyses found significant differences in travel party based on age (Tables 3.17 and 3.18). Older respondents were travelling with a spouse more frequently than expected, but less likely to be travelling with children. Respondents in the 15-30 age group are more likely to be travelling with children, but less likely to be traveling with a spouse.

Table 3.17

Travelling with Spouse by Age

	Not travelling with spouse	**Travelling with spouse**	**Percentage**
15-30 year old	120 56.9%	91 43.1%	211 100%
31-50 year old	64 17.6%	299 82.4%	363 100%
51 + year old	79 21.4%	291 78.6%	370 100%
Total sample	**263** **27.9%**	**681** **72.1%**	**944** **100%**

Chi-square value 115.12, sig.= 0.000

Table 3.18

Travelling with Children by Age

	Not travelling with children	**Travelling with children**	**Percentage**
15-30 year old	190 89.6%	22 10.4%	212 100%
31-50 year old	257 70.8%	106 29.2%	363 100%
51 + year old	346 93.5%	24 6.5%	370 100%
Total	**793** **83.9%**	**152** **16.1%**	**945** **100%**

Chi-square value 76.64, sig.= 0.000

When asked to list their favourite Rainforest Habitat animal, 91% of the post-visit sample responded. 41.2% listed birds/particular bird species, and 58.7% listed other animals as their favourites. In terms of individual species, the 10 top ranking animals were:

1. Kangaroo (19.4% of responses)
2. Koala (18.5)
3. Crocodiles (15.4)
4. Birds general (11.7)
5. Cassowary (6.7)
6. Parrots (5.1)
7. Wallaby (4.0)
8. Tawny Frogmouth (3.1)
9. Brolga (1.7)
10. Buff Chested Kingfisher (1.4)

The list of 10 favourite animals did not change substantially based on age, gender or place of residence. Respondents were asked to describe why they liked these animals. The most frequently mentioned responses were:

1. They had never seen them before (23.1% of responses)
2. The animals were unique (12.4%)
3. They were able to feed/touch (11.3%)
4. Animals were cute (10.4%)
5. Animals were interesting (8.5%)
6. Able to get close (6.4%)
7. Animals had beautiful colours (5.8%)
8. It was hard to see these animals in the wild (5.7%)
9. Animals were beautiful (5.6%)
10. Variety of species (usually when referring to birds as favourite animal) (4.2%)

Crosstabulation tables indicated there were no substantial differences for the reasons why respondents liked different animals based on age or gender. However, some differences were noted based on usual place of residence (Table 3.19). International visitors emphasised that they had never seen the animal before, that the animal was

unique, interesting or cute, and that they could feed/touch the animal in their descriptions. Interstate visitors were more likely to say the animal was hard to see in the wild, had variety and was colourful, and that they were able to get close to the animal. Visitors from other places in Queensland tended to emphasise that the animals had beauty, variety and were interesting. Local residents did not use any description that was more than 5 percentage points above the expected percentage. Due to the multiple-response nature of the question and the numbers of cells with a zero value, statistical analyses could not be conducted to establish whether the differences were significant. However, many of the differences between expected percentage and actual percentage were substantial. Response rates for answering the question were above 88% for all residence groups.

Table 3.19

Reasons for Liking Rainforest Habitat Wildlife by Place of Residence

Reason	**Local residents**	**Other QLD residents**	**Interstate residents**	**Overseas residents**	**Total**
Never seen before	2 2.7%	5 6.7%	26 34.6%	42 56.0%	75 100%
Unique	2 2.8%	1 2.0%	9 23.0%	26 72.2%	36 100%
Able to feed/ touch	2 6.1%	2 6.1%	6 18.2%	23 69.7%	33 100%
Cute	3 10.3%	2 6.9%	5 17.2%	19 65.5%	29 100%
Interesting	1 4.8%	4 19.0%	4 19.0%	12 57.1%	21 100%
Able to get close	-	-	11 64.7%	6 35.3%	17 100%
Colours	-	-	11 52.4%	10 47.6%	21 100%
Hard to see in wild	-	-	11 64.3%	6 35.7%	17 100%
Beauty	1 5.6%	3 16.7%	8 44.4%	6 33.3%	18 100%
Variety	1 6.3%	3 18.8%	10 62.5%	2 12.5%	16 100%
Total sample	**12** **5.5%**	**20** **5.9**	**101** **39.6%**	**152** **48.9%**	**285** **100%**

Respondents were also asked what they thought were the best features of Rainforest Habitat, and any suggestions for improvement. Overall, the natural environment or the natural setting was most appreciated, as was the layout and design of Rainforest Habitat and the variety of birds and wildlife. The most frequently suggested improvements were expanding the premises and adding more animals, and providing more or better interpretive signs. Table 3.20 lists the most frequently mentioned best features and suggested improvements. Crosstabulation tables did not indicate substantial differences for these results based on age, gender or residence. Because the questions were open ended and allowed multiple responses, it was not possible to examine statistical differences.

Table 3.20

Best Features and Suggested Improvements

Best Features	**% of Responses**
Natural environment, natural setting	12.4
Good organisation, good walkways	10.0
Tropical rainforest style habitat	9.7
Variety/number of birds/wildlife	7.2
Birds	6.9
Suggested Improvements	**% of Responses**
More animals	14.5
Expand premises	11.6
More signs, more information on signs	7.6
More interpretation generally	6.4
Too expensive	4.7

*Best features: 80.5% of respondents answered question (n=464)

*Suggested improvements: 24.8% of respondents answered question (n=143)

3.4.5 Summary of results from total sample

Table 3.21 is a summary table and shows which variables were analysed in the preceding Results section, and shows where significant differences were identified. The description following the table explains the nature of the differences found.

Table 3.21

Summary of Analyses from Total Sample

Variables	Pre/Post	Age	Gender	Residence
Age	No	N/A	No	No
Gender	No	No	N/A	No
Residence	No	No	No	N/A
Features attracting respondents to Rainforest Habitat	N/A	Yes	No	Yes
Features of Wildlife experiences	No	Yes	Yes	Yes
Interpretive methods	Yes	No	No	No
Interpretive topics	Yes	Yes	Yes	No
Satisfaction	N/A	Yes	Yes	Yes
*Favourite animal	N/A	No	No	No
*Reasons for favourite animal	N/A	No	No	Yes
*Best features/ Suggested improvements	N/A	No	No	No
Intention to return to Rainforest Habitat	N/A	No	No	No

* These questions were open-ended and allowed multiple responses, thus they were not able to be examined using statistical tests. These results are indicated by comparisons using crosstabulation tables only.

Features of the wildlife setting and reasons for visiting Rainforest Habitat

- All features of the setting were generally rated as important. This confirms the results of the exploratory study, which suggested that these features should be important as they were frequently mentioned in descriptions of best experiences. In particular, features concerning animal welfare scored high and consistent ratings. Seeing animals in the natural environment, having knowledgeable staff, and a pleasant, clean environment also scored highly. Touching and feeding animals received the lowest mean scores for importance, with substantial proportions of respondents indicating lack of interest in these features.
- There was a general pattern in the results that features were rated as more important by older age groups (this was significant for 8 of 23 features) and by females (this was significant for 10 of the 23 features). There was no relationship between age and sex of the sample.
- Almost every respondent indicated that natural rainforest surroundings, opportunities to get close to wildlife, and opportunities to learn about the rainforest attracted them to visit Rainforest Habitat. Overall, being entertained and seeing animal shows were less important in attracting visitors to Rainforest Habitat, however there were some differences in response to these features. Visitors in the 51 years and older group were significantly less attracted by being entertained and animal shows, while visitors from outside of the local area were significantly more interested in being entertained. Visitors in the 31-50 year group were significantly more attracted by learning and getting close to wildlife.

Interpretation

- Guides, interpretive signs and just watching animals were the most popular methods of interpretation. Technological resources such as computers and videos were less popular. There was a significant increase in preference for use of interpretive signs and brochures in the post-visit sample.
- Topics concerning ecosystems, social relationships between animals and peculiar and strange characteristics were rated as most interesting to visitors. These

features were rated as significantly more interesting in the post-visit sample. Details about individual animals, and features similar to humans were rated as less interesting. Females were consistently more interested in all topics than males.

Favourite animals/ reasons for favourite animal

- Favourite animals were the kangaroo, koala, crocodile and birds, mainly because respondents had never seen them before, they were considered unique or cute, and respondents were able to touch/feed them. The lists of favourite animals did not differ substantially between international and domestic visitors, however international visitors were more likely to say they had never seen the animal before and that they could touch/feed them, while local visitors tended to focus on the particular features of the animal such as beauty or variety.

Satisfaction

- Satisfaction with the Rainforest Habitat experience was generally high, although slightly less so for interpretive elements of the experience. Consistent patterns were noted for higher satisfaction ratings scored by females (significant differences for 7 of 15 satisfaction items) and by older respondents (significant for 12 of 15 satisfaction items).

3.5 Results Based on Level of Interest in Viewing Wildlife

3.5.1 Interest in wildlife

Results in Chapter Two indicated that visitors seem to seek different wildlife experiences based on their level of interest in viewing wildlife. This section of results compares responses from Rainforest Habitat visitors who indicated varying levels of interest in viewing wildlife. Table 3.22 shows the proportion of Rainforest Habitat respondents with differing levels of interest in wildlife tourism, and compares this with results from the same question used in the Exploratory Study.

Table 3.22

Interest in Viewing Wildlife

Interest Level	Percent of Rainforest Habitat sample	Percent of Exploratory Study sample
The opportunity to view wildlife is one of the most important factors in my travel decisions	16.0	7.1
The opportunity to view wildlife is included as part of my travel decisions	46.2	32.1
Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	37.0	56.5
I am not interested in viewing wildlife while on holidays	0.5	3.4
I prefer to avoid viewing wildlife while on holidays	0.3	0.8

Overall, Rainforest Habitat visitors had a higher level of interest in viewing wildlife than the resident/tourist sample discussed in Chapter Two. The respondents who indicated that they were not interested/ prefer to avoid wildlife will be excluded from further analyses due to the very small number. The remaining groups will be described as:

Enthusiast: The opportunity to view wildlife is one of the most important factors in my travel decisions.

Interested: The opportunity to view wildlife is included as part of my travel decisions.

Generalist: Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things.

3.5.2: Frequency of participation in wildlife viewing

A one-way ANOVA was conducted to establish whether people who are more interested in wildlife also travel more frequently to wildlife venues. Respondents were asked to specify how many times in the last 12 months they had visited captive wildlife venues, visited places to view wildlife, and participated in wildlife specific tours. Results indicate there was a significant relationship (F 41.8; $p<0.01$) between interest in wildlife and participation in wildlife tourism. Table 3.23 shows the mean number of times each interest group had traveled to wildlife venues in the previous 12 months, and shows that participation in wildlife tourism overall increases as interest in wildlife increases.

Table 3.23

Overall Participation in Wildlife Viewing by Interest Group

Interest in Wildlife	**Mean number of times visited wildlife venues**
Enthusiast	12.6 times
Interested	4.9 times
General	2.8 times

A post-hoc test (Scheffe) indicated there was a significant difference between all groups. The difference in frequency of travel was significant between all groups at $p<0.05$.

In addition to traveling more frequently overall, there was also a significant difference in frequency of travel to different types of wildlife experiences. The mean number of times these venues were visited in the last 12 months by interest group is shown in Table 3.24. ANOVAs indicated that significant differences for participation in all types of wildlife experiences existed between the groups. In all cases, as interest in wildlife increases, so too does participation in wildlife tourism. Post-hoc tests (Scheffe) indicated that the differences were between the Enthusiast group and the other groups for every type of experience, except for trips to zoos/aquariums, where the difference was between all groups. This result is similar to the results from the Exploratory study, except that no significant differences were found for travel to water based venues in that study.

Table 3.24

Participation in Different Wildlife Experiences by Interest Group

Type of wildlife experience	**General group: mean times visited**	**Interested group: Mean times visited**	**Enthusiast group: Mean times visited**	**F**	**Sig**
Trips to zoos/aquarim	.94	1.51	2.77	24.1	.000
Land based wildlife specific trips	.29	.70	2.59	31.9	.000
Land based trips to where wildlife often seen	.60	1.22	3.97	38.2	.000
Water based wildlife specific trips	.42	.68	1.66	17.7	.000
Water based trips to where wildlife often seen	.51	.79	1.76	8.6	.001

3.5.3 Demographic differences

There were no significant differences between the interest groups for age or gender. There was a significant difference between the groups based on place of residence (Chi Square value 14.9, $p<0.05$). Visitors in the Enthusiast group were more likely to live locally or within QLD, while General group respondents were more likely to be form interstate (Table 3.25).

Table 3.25

Usual Place of Residence by Interest Group

	Enthusiast	Interested	Generalist	Total
Local North Qld	15 27.3%	26 47.3%	14 25.5%	55 100%
Other Qld	12 27.3%	17 38.6%	15 34.1%	44 100%
Interstate	45 12.8%	161 45.7%	146 41.5%	352 100%
Overseas	69 16.5%	199 47.7%	149 35.7%	417 100%
Total sample	**141** **16.2%**	**403** **46.4%**	**324** **37.3%**	**868** **100%**

*Chi-square value 14.91; sig. = 0.021

3.5.4 Features of the wildlife tourism setting

There were few significant differences on the importance of features of wildlife tourism settings based on levels of interest in wildlife. Respondents tended to indicate that all of the features were important. The only differences identified by ANOVA was for the features 'Easy to find way around'($F=3.3$; $p<0.05$); 'animals easy to see'($F=4.9$; $p<0.05$); and 'facilities for visitors'($F=3.4$, $p<0.05$). These features were all rated as less important for respondents with higher levels of interest in viewing wildlife. Post-hoc tests (Scheffe) indicated that the differences were between the

General group and the Interested/Enthusiast groups. The General group rated these features as more important than the other groups.

3.5.5 Features that attracted respondents to Rainforest Habitat

When asked what features attracted visitors to Rainforest Habitat, a number of significant differences were found based on levels of interest in viewing wildlife. Table 3.26 shows the ANOVA results for these statements. The mean scores for each group indicated that respondents with high levels of interest in wildlife are more attracted by environmental experiences, natural rainforest surroundings, learning, getting close to animals, photo opportunities and ecotourism experiences.

Table 3.26

Features Attracting Respondents to Rainforest Habitat by Interest Group

Feature	General group mean score	Interested group mean Score	Enthusiast group mean score	F	Sig.
Natural rainforest surroundings	2.24	2.40	2.78	20.16	.000
Get close to animals	2.10	2.49	2.59	19.94	.000
Learn about the Rainforest	2.09	2.37	2.60	19.24	.000
An environmental experience	2.07	2.25	2.56	17.35	.000
An ecotourism experience	1.90	2.11	2.39	12.06	.000
Photo opportunities with animals	1.65	1.93	2.07	7.54	.001
See animal shows	No significant difference				
Be entertained	No significant difference				

Good recommendation from others	No significant difference

*Rating scale was from 1 (not at all important) to 3 (very important)
* Post-hoc tests (Scheffe) indicated significant differences between all groups

3.5.6 Interpretation

When asked to rate 8 different methods of interpretation, there were few significant differences between the groups. A one-way ANOVA indicated a significant difference for interpretive signs ($F=3.86$, $p<0.05$) and guides ($F=3.45$, $p<0.05$), where the Enthusiast group had a lower preference for these methods. Although there were no other significant differences, the Enthusiast group generally rated all methods lower than the other groups, with the exception of guidebooks and documentaries. These methods were rated higher by Enthusiasts than either the Generalist or Interested groups.

Respondents were asked to rate how interested they were in a number of different topics about wildlife. Table 3.27 shows that there were significant differences between the groups on their interest in all topics. Post hoc tests (Scheffe) indicated that the differences were between all groups for almost every topic. The only exceptions were 'Peculiar and strange characteristics' (difference was between Enthusiasts/Generalists); and 'Features that are similar to humans' (difference was between Interested/Generalists). In every case, the means indicated a straightforward relationship. As interest in wildlife viewing increased, so too did interest in the listed interpretation topics.

Table 3.27

Interest in Interpretive Topics by Interest Group

Topic	Generalist group mean	Interested group mean	Enthusiast group mean	F score	Sig.
Where to find them in the wild	3.54	3.90	4.29	37.0	.000
Daily activities of animals	3.35	3.64	4.13	35.7	.000
What they eat	3.40	3.67	4.08	27.6	.000
Breeding/ rearing young	3.39	3.68	4.07	24.4	.000
Relationships with other species	3.61	3.86	4.16	18.9	.000
Numbers and distribution	3.40	3.64	3.99	18.8	.000
Social habits, relationships within groups	3.63	3.89	4.16	18.2	.000
Importance in the ecosystem	2.78	4.00	4.24	13.2	.000
Details about individual animals at Rainforest Habitat	3.09	3.39	3.50	8.7	.000
Peculiar and strange characteristics	3.84	4.00	4.17	6.8	.010
Features similar to humans	2.82	3.10	3.08	5.2	.006

*Rating scale was from 1 (not at all interested) to 5 (very interested)

3.5.7 Satisfaction

A number of differences were identified between the groups based on their satisfaction with a number of features of the setting. Table 3.28 shows the features where significant differences were found using One-way ANOVA. As the means indicate, satisfaction tended to increase as interest in wildlife increased. However,

post-hoc tests (Scheffe) indicated the differences were not significant between the Interested and Enthusiast groups. This pattern was consistent for the remaining 18 features, although differences were not significant.

Table 3.28

Satisfaction with Features of Rainforest Habitat by Interest Group

Topic	**Generalist group mean**	**Interested group mean**	**Enthusiast group mean**	**F score**	**Sig.**
Ability to touch animals	3.90	4.23	4.32	7.89	.000
Feel safe	4.55	4.76	4.74	5.9	.003
Easy to find way around	4.46	4.64	4.66	5.3	.005
Friendliness of staff	4.18	4.38	4.45	4.6	.011
Animals in natural environment	4.30	4.45	4.50	4.2	.034

*Rating scale was from 1 (not at all satisfied) to 5 (very satisfied)

The list of favourite Rainforest Habitat animals did not vary substantially between the Enthusiast, Interested and Generalist groups. The ten most frequently listed animals were the same as described for the total sample in Section 3.4.3, and the order of favourite animals only varied slightly between groups. Although statistical tests were precluded because of the multiple response nature of the question (where each individual could be counted more than once), the crosstabulation table did not indicate any notable differences between the groups for favourite animal.

A similar result was found when examining reasons for favourite animals. The order of reasons given was very similar between the groups, and the crosstabulation table did not suggest that substantial differences existed. Overall, there were no substantial differences between the Enthusiast, Interested and General group for the reasons they gave for liking their favourite Rainforest Habitat animal.

Visitors in the Enthusiast group were significantly more likely to say that they would return to Rainforest Habitat if they had the opportunity. Respondents who said they would not return to Rainforest Habitat were more likely to be in the General group, although the overall number of people who would not return was low (Table 3.29). There were no significant differences between the groups for willingness to recommend Rainforest Habitat to others.

Table 3.29

Intention to Return to Rainforest Habitat by Interest Group

	Enthusiast	**Interested**	**Generalist**	**Total**
Yes, definitely	57 27.1%	87 41.4%	66 31.4%	210 100%
Yes, if return to region	23 11.0%	105 50.0%	82 39.0%	210 100%
Not sure	10 13.7%	27 37.0%	36 49.3%	73 100%
No	2 15.4%	1 7.7%	10 76.9%	13 100%
Total sample	**92** **18.2%**	**220** **43.5%**	**194** **38.3%**	**506** **100%**

*Chi-square value 32.95; sig. = 0.000

3.5.8 Summary of results based on levels of interest in viewing wildlife

Table 3.30 is a summary table that shows the variables where a significant difference was identified between the Enthusiast, Interested and General groups. The following discussion explains the nature of the differences identified.

Table 3.30

Summary of Results Based on Levels of Interest in Wildlife

Variables	**Significant differences between interest groups?**	**Nature of difference**
Participation in wildlife tourism overall	Yes	Participation increased as interest in wildlife increased
Travel to zoo/aquarium	Yes	Participation increased as interest in wildlife increased
Land based wildlife specific trips	Yes	Participation increased as interest in wildlife increased
Land based trips to where wildlife often seen	Yes	Participation increased as interest in wildlife increased
Water based wildlife specific trips	Yes	Participation increased as interest in wildlife increased
Water based trips to where wildlife often seen	Yes	Participation increased as interest in wildlife increased
Gender	No	-
Age	No	-
Residence	Yes	Enthusiast group more likely to live locally or within Queensland
Important features of wildlife setting	Yes	Only 3 of the 23 features showed significant differences. General group placed more importance on orientation

		and visitor facilities
Features attracting respondents to Rainforest Habitat	Yes	Respondents with higher interest more attracted by nature, wildlife and learning related featues
Interpretive methods	Yes	Enthusiasts had lower preference for signs and guides
Interpretive topics	Yes	Interest in most topics increased as interest in wildlife increased
Satisfaction	Yes	Satisfaction with most features increased as interest in wildlife increased
*Favourite animal	No	-
*Reasons for favourite animal	No	-
Intention to return	Yes	Enthusiasts more likely to say they would return
Recommend to others	No	-

* No statistical tests used

Key Findings

- Based on levels of interest in wildlife viewing, the sample consisted of 16% Enthusiast group, 46% Interested Group, and 37% General group respondents. The number of visits to wildlife venues in the previous 12 months significantly increased as interest in wildlife increased. Enthusiast group respondents were distinguished from the other group members by their participation in specialised wildlife tours.
- There were no significant differences between the General, Interested and Enthusiast groups for age or sex, however Enthusiast group respondents were more likely to live locally or within QLD, and more likely to say they would return to Rainforest Habitat.
- There were few significant differences between the groups on the importance of features of the wildlife experience. Enthusiast group respondents placed

significantly less importance on orientation, facilities and ease of seeing animals than did other respondents.

- When asked to indicate the importance of features in attracting them to Rainforest Habitat, Enthusiast group visitors were significantly more attracted to an environmental experience, natural rainforest surroundings, learning, getting close to wildlife and an ecotourism experience than were other respondents.
- There were significant differences for interest in interpretive topics among the General, Interested and Enthusiast group respondents. For all of the 11 topics, interest in the topic significantly increased as interest in wildlife increased. When asked to rate preferences for interpretive methods, Enthusiast group respondents indicated less preference for interpretive signs and guides.
- There were no differences between the groups for the types of animals they indicated as favourite at Rainforest Habitat, or the reasons the animals were considered favourite. Enthusiast group visitors tended to list specific species (e.g. 'Rainbow Bee Eater' rather than 'birds') more than the other groups.
- Satisfaction with various features of Rainforest Habitat tended to increase as interest in wildlife increased. This pattern was significant in the case of 5 of the 23 listed features.

3.6 Results Based on Cluster Analysis of Respondents

3.6.1 Features of the wildlife tourism setting

Results from the previous sections relating to the importance of features of the wildlife experience indicated the following:

- Overall, most features had means above 3 on a scale of 1 (not at all important) to 4 (very important), indicating that most features were generally important to most visitors.
- Features relating to animal welfare had very high scores, with over 85% of respondents indicating these features are very important to their experience.
- Features relating to touching and feeding wildlife had the largest spread of responses and the lowest means. A majority of respondents indicated these features were not important or not at all important to their experience.
- Few significant differences were found for importance of features based on respondents' levels of interest in viewing wildlife.
- Older respondents and females generally scored features higher than did younger respondents and males.

The literature concerning wildlife tourists suggests that they are not a homogenous group, and therefore could have differing preferences for features of the wildlife tourism setting. The results in the previous sections support this suggestion, as there was variation in responses to some variables. However, the fact that few significant differences existed based on levels of interest in wildlife may indicate that level of interest was not the only or best variable that identifies differences amongst the groups. Consequently, a cluster analysis procedure was conducted to identify groups of respondents who rated the importance of features in a similar fashion.

3.6.2 Cluster analysis

The K-Means Cluster Analysis procedure was selected as the most appropriate method, because of the large size of the data set (SPSS Applications Guide, 1999). The variables used for the cluster analysis were the set of 23 features of the wildlife experience. These variables were selected because they most accurately represented the concept of similarity amongst wildlife viewers, in that similar wildlife viewers should rate the importance of features of the setting in a similar fashion. Aldenderfer & Blashfield (1984) state that it is important for theory to guide the selection of cluster analysis variables. They suggest that it is dangerous to "succumb to the naive empiricism (of the) collection and subsequent analysis of as many variables as possible in the hope that the structure will emerge if only enough data are obtained". The variable 'interest in wildlife viewing' was not included in the cluster analysis because it was selected as a key external variable to assist evaluation of the appropriateness of the cluster solution (Aldenderfer & Blashfield, 1984). The data was initially run using hierarchical cluster analysis with Ward's method in order to determine an appropriate number of clusters (SPSS Applications guide, 1999). The data set was divided into two equal components, and the procedure was run on both components to validate the solution through replication (Aldenderfer & Blashfield, 1984). This procedure indicated that a three-cluster solution was appropriate. K-means cluster analysis was then conducted, selecting three clusters as the solution. K-means cluster analysis was selected as hierarchical methods have the general disadvantage of not allowing for reallocation of entities that may have been poorly classified at an early stage in the analysis (Everitt, 1980). The k-means cluster solution was re-run, saving the cluster means from the previous analysis until there was no further change in the numbers of respondents allocated to the cluster groups. Table 3.31 shows the number of respondents classified into each cluster, and Table 3.32 provides the mean importance scores for each feature of the experience by the cluster groups.

Table 3.31

The Three-Cluster Solution

Cluster number	Number in cluster
1	138
2	184
3	136

Table 3.32

Mean Scores for Features of the Wildlife Experience by Cluster Group

Feature of the experience	Cluster number	Mean score
Captive environments:	1	3.92
Animals appear content	2	3.74
	3	3.88
Able to get close to animals	1	3.11
	2	3.23
	3	3.66
Animals well cared for	1	3.96
	2	3.88
	3	3.99
Able to touch animals	1	2.00
	2	2.41
	3	3.21
Lots of space for the animals to live	1	3.93
	2	3.76
	3	3.96
Barriers hidden/disguised	1	3.10
	2	2.84
	3	3.57
Easy to find way around	1	3.58
	2	2.84
	3	3.76
Wildlife environments generally:	1	3.06
Large numbers of animals to see	2	2.84
	3	3.49
Rare, unique or exotic animals	1	3.07
	2	3.10
	3	3.60

Able to get close to animals	1	2.82
	2	2.92
	3	3.55
Interesting information	1	3.58
	2	3.18
	3	3.65
See animals in the natural environment	1	3.80
	2	3.66
	3	3.88
Able to feed animals	1	1.73
	2	2.03
	3	3.18
Large variety of animals	1	3.04
	2	2.88
	3	3.66
Friendly staff	1	3.64
	2	3.19
	3	3.79
Knowledgeable staff	1	3.93
	2	3.46
	3	3.79
Clean environment	1	3.93
	2	3.51
	3	3.93
Animals easy to see	1	3.62
	2	3.19
	3	3.89
Pleasant environment	1	3.78
	2	3.30
	3	3.85
Good facilities for visitors	1	3.66
	2	2.88
	3	3.74
Shelter from sun/rain	1	3.31
	2	2.65
	3	3.62
Feel safe	1	3.60
	2	2.90
	3	3.82
Rare/endangered animals	1	3.17
	2	2.90
	3	3.67

From the mean scores in Table 3.32, two clusters have consistent patterns of responses. Respondents in Cluster 2 tended to score features low in importance, while respondents in Cluster 3 scored most features high in importance. Cluster 3 was the only group that indicated an interest in touching and feeding the wildlife. Clusters 1 and 2 had differences in their ratings of the importance of factors, however the differences were more difficult to detect due to the number of variables under consideration. Factor Analysis and Discriminant Analysis were therefore used to identify which variables were most useful in discriminating between the cluster groups.

3.6.3 Factor Analysis

In the first instance, Factor Analysis (Principle Components) was used to summarise the features of wildlife experiences. From the frequency distribution it appeared that some features were being answered in a similar way by respondents, for example the features relating to animal welfare. This was confirmed by a correlation matrix, which indicated that a considerable number of correlations exceeded 0.3, and thus the matrix was suitable for factoring (Coakes & Steed, 1999; SPSS Applications Guide, 1999). Factor Analysis was used to reduce the total number of variables to a smaller set which summarised the essential information contained in the variables (Coakes & Steed, 1999). It was also necessary to use factor analysis prior to using discriminant analysis, due to the problems associated with multicollinearity among the independent variables (Bishop & Drew, 1999). The initial eigenvalues indicated that six components had eigenvalues greater than one, and this explained 60.62% of the variance. The scree plot confirmed that a six factor solution was reasonable. Table 3.33 shows the rotated component matrix, which summarised the variables as follows:

Factor 1: Features of the Facilities

- Shelter from sun/rain
- Feeling safe
- Facilities for visitors
- Easy to find way around

Factor 2: Animal Interaction

- Able to touch animals
- Able to get close (captive)
- Able to get close (non-captive)
- Able to feed animals

Factor 3: Generally pleasant features

- Staff are knowledgeable
- Clean environment
- Staff are friendly
- Interesting information
- See animals in natural environment

Factor 4: Features of the animals

- Rare, unique or exotic animals
- Large number of animals to see
- Endangered or rare animals
- Large variety of animals

Factor 5: Animal Welfare

- Animals appear content
- Animals appear well cared for

In addition, the variables 'pleasant environment', 'animals easy to see' and 'lots of space to live' were more complex variables which loaded on more than one factor. Coakes & Steed (1999) advise that such variables can be excluded at the discretion of

the analyst. Because they do not contribute to the reduction of data, they were excluded from the Discriminant Analysis. Similarly, Factor 6 was also removed for the same reason. Factors 1 to 5 were defined as new factor-based variables for use in Discriminant Analysis.

Table 3.33

Rotated Factor Matrix

	Component					
Variable	1	2	3	4	5	6
Shelter from sun/rain	.776					
Feeling safe	.730					
Facilities for visitors	.732		.317			
Easy to find way around	.691					
Animals easy to see	.516	.410				
Able to touch animals		.775				
Able to get close to animals		.775				
Able to get close (captive)		.751				
Able to get close (non capt)		.748		.319		
Able to feed animals		.685				
Staff are knowledgeable			.817			
Clean environment			.694			
Staff are friendly			.670			
Interesting information			.513	.390		
See animals in natural environ			.504			.353
Pleasant environment	.469		.502			
Rare, unique, exotic animals				.722		
Large number animals to see		.338		.661		
Endangered animals				.613		
Large variety of animals		.377		.607		
Animals appear well cared for					.842	
Animals appear content					.819	
Barriers hidden from view						.740
Animals have space to live			.319		.433	.439

Extraction Method: Principal Component Analysis
Rotation method: Varimax with Kaiser Normalisation. Rotation converged in 11 iterations

The Cronbach's Alpha for Factors 1 to 5 was .7182. This increased to .7411 if Factor 5 was deleted, but not improved by deletion of any other Factor.

3.6.4 Discriminant Analysis

Using the three-cluster solution as the grouping variable, and the new factor-based variables as the independent variables, discriminant analysis was used to determine which variables were most important in characterising the groups. Table 3.34 and 3.35 show that Function 1 had the highest eigenvalue, explained 74.4% of the variance, and had the highest Chi-square statistic. While function 2 still shows a significant chi-square result in Table 3.35, the result is not strong.

Table 3.34

Eigenvalues of Discriminant Analysis

Function	Eigenvalue	% of variance	Cumulative %	Canonical correlation
1	1.518a	76.4	76.4	.776
2	.469a	23.6	100.0	.565

a. First 2 cannonical discriminant functions were used in the analysis.

Table 3.35

Chi-square Values for Discriminant Analysis

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.270	590.733	16	.000
2	.681	173.787	7	.000

Table 3.36 shows the function coefficients for each of the functions in the discriminant analysis. Function 1 is mostly explained by Factor 1 the Visitor Facilities factor ('shelter from sun/rain', 'safety', 'facilities for visitors', and 'easy to find way around') and Factor 4, the Features of the Animals factor ('rare/endangered animals', 'number of animals', 'variety of animals'). Function 2 was mostly explained by Factor 2, the Animal Interaction factor ('able to touch animals', 'able to

get close', 'able to feed animals'). The classification results indicated that 81.7% of cases were correctly classified.

Table 3.36

Discriminant Function Coefficients

	Function	
	1	2
Factor 1	.593	-.320
Factor 2	.179	.913
Factor 3	.257	-.234
Factor 4	.416	.112
Factor 5	.065	-.082

3.6.5 Cluster group description based on important features of the wildlife experience

All groups rated the variables concerned with animal welfare as very important to their experience. The scores were consistently high and did not distinguish between groups. The results from the discriminant analysis indicate that Factors 1 and 4 are most important in distinguishing between groups. Therefore the variables that make up these factors should receive greater attention when describing the differences between the cluster analysis groups. The description of the cluster groups, with particular focus on the variables that make up Factors 1 and 4 are as follows:

Low Importance Group (2, n=184)

This group placed generally low importance on all of the features of the wildlife experience. They indicated low importance for touching, feeding and getting close to wildlife. They also indicated the least importance on Features of the Animal factor variables, such as numbers and variety, and most of the variables comprising the Features of the Facilities factor. They indicated relatively high levels of importance for variables concerning 'generally pleasant features' including knowledgeable staff, clean environment, and seeing animals in the natural environment.

High Importance Group (cluster 3, n=136)

This group generally placed the highest importance on all the features of the wildlife experience. They scored highest for interaction factors such as touching, feeding, and getting close to animals. This group was the only group to indicate that touching and feeding wildlife was important to their experience. They were the highest scoring group on the Features of the Facilities factor variables, such as shelter, safety, facilities and orientation. They also scored the highest of the groups on the Features of the Animals variables such as numbers, variety and uniqueness/rarity of the animals, although the scores for these were lower than the scores for other features.

High Facilities Group (cluster 1, n=138)

This group had a moderate interest in most features. They were the least interested of all groups in getting close to, touching and feeding wildlife, but rated variables comprising the Features of the Facilities factor as important to their wildlife experience (such as shelter, safety, facilities and orientation). Also highly rated were knowledgeable staff and a pleasant, clean and natural environment. They indicated a lower interest in the Features of the Animals variables, such as numbers, variety, and uniqueness/rarity of animals.

3.6.6 Interest in wildlife by cluster group

There were no significant differences in interest in wildlife between the cluster groups. There was also no significant difference in the frequency of travel to wildlife venues by the cluster groups.

3.6.7 Demographic differences by cluster group

There were no significant differences between the cluster groups for age. Chi-square tests indicate a significant difference in the gender of respondents between the cluster groups (Table 3.37). The High Importance Group had more females than expected, while the Low Importance group had more males than expected. The High Facilities group had slightly more females than expected, while the Low Importance group had slightly more males.

Table 3.37

Gender of the Cluster Groups

	High Importance Group	**Low Importance group**	**High Facilities group**	**Total**
Male	57 28.2%	71 35.1%	74 36.6%	202 100%
Female	85 39.4%	51 23.6%	80 37.0%	216 100%
Total	**142** **34.0%**	**122** **29.2%**	**154** **36.8%**	**418** **100%**

Chi-Square value = 8.57; sig. = 0.014

Chi-square tests also indicated a significant difference between the cluster groups for the place of residence (Table 3.38). The High Facilities group had more Queensland residents than expected, while local residents were more likely to be in the Low Importance group. Interstate residents were more likely to be in the High Facilities group.

Table 3.38

Place of Residence by Cluster Group

	High Facilities Group	**Low Importance group**	**High Importance group**	**Total**
Local residents	3 15.0%	11 55.0.%	6 30.0%	20 100%
Other Queensland	16 39.3%	8 25.0%	10 35.7%	33 100%
Interstate residents	61 35.3%	63 36.4%	49 28.3%	173 100%
Overseas residents	52 25.2%	91 44.2%	63 30.6%	206 100%
Total sample	**129** **29.7%**	**173** **40.3%**	**129** **30.0%**	**431** **100%**

Chi-square value 12.21, sig. = 0.013

3.6.8 Interest in interpretation by cluster groups

ANOVAs indicated that significant differences existed between the cluster groups for their interest in various wildlife interpretation topics. Table 3.39 shows the mean scores for interest in the topic. The High Importance group had the highest mean score for every topic, while the Low Facilities group had the lowest mean interest scores for most topics. The High facilities group indicated generally high interest in most topics. A post-hoc test (Scheffe) indicated that the significant differences were mainly between the High Importance and Low Importance groups. There were no significant differences between the groups on their preferences for methods of interpretation.

Table 3.39

Interest in Interpretive Topics by Cluster Group

Topic	High Facilities Group mean	Low Importance Group mean	High Importance Group Mean	F Score	Sig.
Features similar to humans	3.01	2.71	3.57	14.7	.000
What they eat	3.71	3.50	3.89	5.74	.001
Numbers and distribution	3.70	3.43	3.78	5.07	.002
Peculiar and strange characteristics	4.13	3.90	4.19	4.05	.007
Where to find in the wild	3.88	3.72	3.97	3.90	.009
Details about individual animals	3.41	3.13	3.63	3.81	.01
Breeding/rearing young	3.71	3.57	3.84	3.20	.023

* Rating scale was from 1 (not interested) to 5 (very interested)

3.6.9 Satisfaction with Rainforest Habitat by cluster group

ANOVAs indicated that significant differences existed between the cluster groups for their satisfaction with the Rainforest Habitat wildlife experience (Table 3.40). These results indicate that the High Importance group and the High Facilities group both had high mean satisfaction scores, with the High Importance group having the highest mean scores on the majority of features listed. The Low Importance group had the lowest satisfaction scores of all the groups, although the scores still indicated that this group was satisfied with their visit to Rainforest Habitat. Post-hoc tests (Scheffe) indicated that the differences between the groups were significant mainly between the High Importance and the Low Importance groups, with the exception of 'space available for animals' where the difference was between all groups.

Table 3.40

Satisfaction with Rainforest Habitat by Cluster Group

Feature of the Experience	High Facilities Group mean	Low Importance Group mean	High Importance Group Mean	F Score	Sig.
Interesting information	4.17	3.71	4.24	15.75	.000
Opportunities to learn	4.19	3.79	4.24	12.00	.000
Animals in natural environments	4.54	4.20	4.60	11.87	.001
Pleasant environment	4.72	4.45	4.62	6.86	.001
Knowledgeable staff	4.26	3.94	4.25	5.86	.003
Shelter from sun/rain	4.41	4.14	4.41	5.85	.003
Easy to find way around	4.64	4.46	4.68	4.07	.018
Space available for the animals	4.28	4.02	4.43	3.70	.025

* Rating scale was from 1 (not at all satisfied) to 5 (very satisfied)

3.6.10 The cluster groups profiled

The following description of the cluster groups in the Rainforest Habitat sample incorporates the results from the comparisons made for demographics, interest in interpretation and satisfaction with the experience.

Low Importance Group (cluster 2, n=184)

This group placed the least importance on all of the features of the wildlife experience. They indicated low importance for touching, feeding and getting close to wildlife. They also indicated the least importance on features of the animal, and most of the variables related to visitor facilities. Their pattern of lower scores was repeated for their interest in interpretation and satisfaction. This group was less interested in interpretive topics, and although their mean satisfaction scores were still high, they scored significantly lower than the other groups. There were significantly more males in this group than females.

High Importance Group (cluster 3, n=136)

This group placed the highest importance on all the features of the wildlife experience. They scored highest for interaction factors such as touching, feeding, and getting close to animals. This group was the only group to indicate that touching and feeding wildlife was important to their experience. They were the highest scoring group on visitor facility variables, such as shelter, safety, facilities and orientation. They also scored the highest on numbers, variety and uniqueness/rarity of the animals. When the groups were compared for their satisfaction and interest in interpretation, this group consistently scored higher than the other groups. They were significantly more interested in most interpretive topics, and significantly more satisfied than the other groups. The High Importance group had significantly more females than males in the group.

High Facilities Group (cluster 1, n=138)

This group had a moderate interest in most features. They were least interested in getting close to, touching and feeding wildlife, but rated visitor facilities such as shelter, safety, facilities and orientation as important to their wildlife experience. They indicated a moderate interest in the features of the animals themselves, such as numbers, variety, and uniqueness/rarity. This group indicated a high level of interest in information/ knowledgeable staff, and a high interest in a pleasant, clean and

natural environment. This group had generally high interest in all interpretation topics, and generally high satisfaction with features of Rainforest Habitat. Demographically, this group contained more Interstate visitors.

3.7 Discussion

3.7.1 Features of the wildlife tourism setting

Results in the Rainforest Habitat study found that most features of the setting received high ratings for importance. This was an expected result, since they were developed from the most frequently mentioned features in open-ended responses from the exploratory study. The features with the highest means and the most consistent responses were those relating to animal welfare. Seeing animals in a natural environment, knowledgeable and friendly staff, and a pleasant, clean environment were also seen as important by most respondents. More variation in responses were evident for the importance of visitor features relating to visitor facilities, with some visitors indicating these were very important and others indicating they were less important. The features which had the greatest amount of variation in response were touching animals and feeding animals. In comparison to the other features, these were rated overall as much less important.

Turning to the existing literature, there are a few issues worthy of further consideration. Firstly, the issue of wildlife feeding is a long-standing and controversial one, and this was also the case in the Rainforest Habitat results. In terms of feeding wildlife, the sample was spread across the scale from being not at all important to very important. In many national parks, wildlife feeding is a great concern of management (Burger, 1997). In case studies of national parks, it seems that some visitors are particularly attracted to feeding and touching animals, and previous studies suggest that this may be due to an innate and compelling desire for interaction. More (1979), and Arluke & Sanders (1996) suggest that it is the ability of dogs to interact with humans that has allowed them to become such important companion animals, able to draw out the deepest levels of emotional attachment from their humans. Perhaps it is a similar desire for interaction that made 36% of visitors to Rainforest Habitat consider that feeding animals was important to their experience.

The nature of contact and interaction with wildlife may be connected to levels of specialisation amongst wildlife visitors. Higham (1998) suggested that the expectation of interaction with wildlife is a feature of less experienced wildlife tourists. In a study of albatross colonies in New Zealand, Higham (1998) found that when the colony was opened for visitation by general tourists through the development of tourism infrastructure, there was an increased expectation of being able to touch or feed the albatross. The viewers who visited the colony in the early days tended to be specialists who were interested in viewing a rare species, and did not expect such close interaction. This suggestion is not supported by the Rainforest Habitat results, because there was no significant difference found for importance placed on feeding or touching wildlife between the Enthusiast, Interested and General groups. Furthermore, when asked what features specifically attracted visitors to Rainforest Habitat, Enthusiast group visitors were significantly more interested in getting close to animals than the Interested or General group visitors.

It may be that the presence of infrastructure for wildlife viewing itself generates an expectation of being able to interact closely with the animals. There has been a long tradition of being able to touch or feed animals at zoos and aquariums, which may encourage this perception. Perhaps some visitors expected that feeding animals would be a feature of Rainforest Habitat because they had experienced it in other places, and this is why a substantial proportion indicated they were interested in the activity. Analysis of demographic variables provided no explanation to the division in the sample regarding the importance of touching and/or feeding wildlife, nor did comparing interest in touching or feeding wildlife based on levels of interest in viewing wildlife. Some explanation was provided from the cluster analysis. Only one group, the High Interest group, indicated that touching and feeding wildlife was important to their experience. The conclusion regarding touching and feeding is therefore unclear: while the literature suggests that feeding and touching wildlife is something that visitors desire, and that management agencies have trouble controlling, most of the Rainforest Habitat sample indicate they are not interested in

the activity. This result is particularly interesting considering the high importance scores given to all other features of the wildlife tourism experience. However, one of the most frequently mentioned open-ended reasons why visitors listed a particular Rainforest Habitat animal as their favourite was because they could touch and/or feed it. Thus, the issue of wildlife feeding remains complex and more detailed questions are required to examine why visitors indicated they were not interested in feeding wildlife at Rainforest Habitat. It may be the case that visitors would like to experience the interaction that is associated with feeding wildlife, but have concerns over impacts on the wildlife or safety. Alternatively, respondents may have felt that indicating little interest in wildlife feeding was the 'correct' answer, as there are interpretive messages throughout the Wet Tropics region encouraging visitors not to feed wildlife.

In terms of demographic differences, both females and older respondents consistently rated features of the setting as more important than did other respondents. There was, however, no significant relationship between age and gender of the sample. Older respondents rated 8 of the 23 features as significantly more important than did younger respondents, and most of these features related to visitor facilities. These results are not surprising, as older visitors may have physical limitations that make access, orientation and comfort more important to an enjoyable experience. Females generally rated all features as more important than did males, and the differences were significant for 10 of the 23 features. Most of the features, as was the case for older visitors, related to the provision of visitor facilities. This may be influenced by the fact that females are significantly more likely to be visiting with relatives, which may increase the priority of social and comfort considerations. The other features related to a concern for animals, such as the animals having adequate space and be housed in natural environments. Kellert (1989) found that females tend to have orientations toward animals that feature affection, attachment and empathy more than males do, and this may explain a higher level of concern with the perceived comfort of the captive animals at Rainforest Habitat.

Turning now to the comparisons between the General, Interested and Enthusiast groups on the other important features of the wildlife experience, few significant differences were found. Respondents tended to indicate that all of the features were important. The only significant differences were for the features "easy to find my way around", "animals easy to see" and "facilities for visitors". In all cases, these features were rated as less important for visitors with higher levels of interest in wildlife. These results are consistent with the specialisation literature, which predicts that facilities for visitors will be less important to the committed wildlife viewer. Buckley & Pannel (1990) suggest that specialised viewers prefer to avoid noise, visual impacts and facilities. When asked what attracted them to Rainforest Habitat specifically, significant differences were also noted between groups. The higher the level of interest in wildlife tourism, the more important were the features "an environmental experience", "natural surroundings", "get close to animals", "photo opportunities with animals", and "an ecotourism experience". These differences were expected and also consistent with specialisation theories. (Shackley, 1996; Buckley & Pannel, 1990). However, more differences were expected for preferences for features of the setting. Differences were particularly expected for features such as those relating to learning (Knudson, Cable & Beck, 1995; QTTC, 1998; Moscardo, 1999), and viewing rare/endangered animals (Shackley, 1996; Applegate & Clark, 1987). It may be the case that Rainforest Habitat, as a structured tourism attraction, tended to attract a more general market of visitors, and therefore the differences were not as noticable. There is some support for this in the literature. For example, in a study of New Zealand wildlife tourists, Pearce & Wilson (1995) found that visitors to wildlife sanctuaries were similar in their characteristics to general international visitors. They also participated in many other tourist activities as well as visiting wildlife sanctuaries and zoos.

While there were few significant differences between the interest groups for features of the setting, there were differences for the features that attracted them specifically to

Rainforest Habitat. It is possible that visitors find it more difficult to rate how important features are to theoretical rather than actual wildlife experiences. Without a specific context to apply it to, they may just indicate a general interest in all features. This may explain why, in the present study, most of the features were rated as somewhat important or very important by most of the respondents, yet significant differences were noted when respondents were indicating the importance of features with reference to Rainforest Habitat. In this case, respondents with higher levels of interest were significantly more interested in an environmental experience, natural rainforest surroundings, learning about the rainforest, an ecotourism experience and photo opportunities. These results are consistent with the expected preferences of more specialised wildlife viewers.

Because there were variations in the importance that respondents placed on various features of the wildlife experience, and these differences were not fully explained by differences in respondents' interest in wildlife viewing, a cluster analysis was conducted. In order to reduce the number of variables under consideration, factor and discriminant analyses were applied to the 23 listed features. The factor/discriminant analyses indicated that the dimensions most important for distinguishing between respondents was an '*Animal Interaction*' factor (feeding, touching and getting close to animals), a '*Features of the Animals*' factor (numbers, variety, rarity, uniqueness) and a '*Visitor Facilities*' factor (shelter, safety, facilities, orientation). The cluster analysis indicated that there were three main underlying groups: one that scored all features as important (High Importance Group); one that scored all features relatively low (Low Importance group); and one with overall moderate importance scores but high on the importance of visitor facilities, and low on animal interaction (High Facilities group). While this was a statistically sound cluster solution, there is some concern regarding the pattern of responses. There was an overall pattern of one consistently high scoring group, one consistently low scoring group, and a middle group, and this pattern remained consistent not only for importance of features of the setting (the variables used in the cluster analysis), but also for satisfaction with Rainforest Habitat and

interest in interpretive topics. The consistency of results indicates that caution should be employed when using these groups to explain differences. It is difficult to ascertain whether the cluster analysis identified groups who respond to survey questions differently, or whether these groups reflect genuine differences in interest, enthusiasm and satisfaction. The gender balances in the groups also cause concern: the High Interest group and the High Facilities group both contain significantly more females than males. This echoes a pattern in the overall results, whereby females were consistently more satisfied than males, and more interested in interpretive topics than males. It is possible that females in the sample tended to give more positive scores, and thus the differences between the mean ratings provided by the groups may have been influenced by demographic/response differences rather than underlying preferences for wildlife tourism. However, it is also possible that these cluster groups do identify genuine differences in interest, satisfaction and general enthusiasm between respondents. Further research is required to ascertain whether differences are due to differences in survey response or genuine differences in wildlife preference.

3.7.2 Interpretation

When asked to rate how interested they were in different interpretive topics, respondents rated most of the listed topics highly. The most highly rated topics were "peculiar and strange characteristics" and "importance in the ecosystem". The high rating for "peculiar and strange characteristics" is consistent with Mindfulness theory (Moscardo, 1996) which predicts that objects or information that is new, different or novel will attract visitor attention. The high rating for 'importance in the ecosystem' may partly be the result of the increased media focus on environmental issues and the growing environmental awareness of the general public (Shackley, 1996, Wright, 1992). Interestingly, the lowest scoring topics were 'information about individual animals' and 'features similar to humans'. These have been suggested as topics which have the broadest appeal (Tunnicliffe, 1993) and generate the most interest (Gold & Benveniste, 1995). These topics were also the most anthropomorphic in nature, which

is also said to appeal to visitors because it has value in assisting people to understand animals. In zoo environments (Tait, 1995, Wolf & Tymitz, 1981) and on wildlife tours (Amante-Helweg, 1996) anthropomorphic interpretations of behaviour are the norm. The expected popularity of anthropomorphic topics was not supported by the Rainforest Habitat results. There are a couple of possible interpretations of this result. Firstly, some studies suggest that children in particular respond well to anthropomorphic interpretations, because it helps them link behaviour to things they understand (Friedler, Zohar & Tamir, 1993). It is possible that any usefulness of anthropomorphism in wildlife tourism may be limited to children's programs, and that adults are able to understand alternative explanations. The second explanation may be that anthropomorphism is not interesting as a topic in itself (people are not particularly interested in features that are similar to humans), however they appreciate explanation of other topics in anthropomorphic terms. Perhaps the prevalence of anthropomorphism was because it provided a simple method of explaining complex phenomenon, and visitors were drawn to the simplicity of explanation rather than the anthropomorphism. It would be preferable to look for other simple frameworks to base explanation of wildlife behaviour and thereby avoid fostering the undesirable potential of incorrect anthropomorphic perceptions.

Results for interpretation confirm the expected result that respondents with higher levels of interest in wildlife are also more interested in learning (Knudson, Cable & Beck, 1995; QTTC, 1998; Moscardo, 1999). It appears that the relationship is relatively straightforward – as interest in wildlife increases, so does interest in all interpretation topics. In terms of methods used to present information, Enthusiasts had lower preferences for nearly all methods compared to other groups, and the difference was significant for interpretive signs and guides. The exceptions were for guidebooks and documentaries, where Enthusiasts had higher preference for these methods than other groups, (however these differences were not significant). From these results it appears that Enthusiasts were more interested in learning, but may be

more independent in their learning style and less dependent on interpretive signs and guides.

A comparison of pre and post scores for interest in interpretive topics showed that in general, there was an increase in interest in all topics after a visit to Rainforest Habitat, and these differences were significant for four of the topics. The general trend of increased interest indicates that the experience of viewing wildlife at Rainforest Habitat had engaged the interest of visitors. This creation of more interest is one of the purposes of interpretation (Knudson et. al, 1995), by encouraging curiosity, questioning and mindful processing of information (Moscardo, 1996). That interest was significantly increased in the case of 'importance in the ecosystem' and 'relationships within groups' was consistent with the stated aim of Rainforest Habitat, to encourage appreciation of "intricate interdependence of rainforest flora and fauna" (Rainforest Habitat, 1999).

For three of the topics, interest in the topic decreased significantly with age. There were no significant differences in interest levels for other topics, and mean interest scores indicated no consistent patterns. Two of the topics showing significant differences ('peculiar and strange characteristics' and 'social habits, relationships within groups') were among the highest scored topics for interest, while the third topic ('features similar to humans') was the lowest scored topic overall. Since the topics were varied in their themes, and varied in their overall popularity, it is unclear why they are significantly less interesting to older visitors.

Females were consistently more interested in interpretive topics than males, and the differences were significant in the case of six of the 11 topics. Females were significantly more interested in the anthropomorphic topics, which is consistent with Kellert's (1989) suggestion that females consistently score higher in humanistic attitudes toward wildlife, which is characterised by affection, attachment, anthropomorphic orientations and concern over individual animals. The remaining

topics that showed a significant difference were topics that tended to echo daily concerns of humans, namely 'daily activities of animals', 'breeding/rearing young', what they eat', and 'social habits, relationships within groups'. This may be the result of females taking more notice of topics that they can make a personal connection to, which is something that is predicted by a Mindfulness approach to interpretation (Moscardo, 1996). Analyses were conducted to see whether the females in the sample were more likely to be travelling with children, because this may have the effect of increasing interest levels as the information is explained to children. There was no significant difference for travelling with children, however females were significantly more likely to be travelling with relatives. This may increase interest in interpretive topics, as the information may be shared and discussed amongst the travel group.

There were significant differences in interest in interpretive topics based on the cluster groups. The High Importance group and the High Facilities group both rated a number of topics significantly more interesting than did the low importance groups.

The result that guides are the most preferred method of interpretation is not a surprising one. A number of other studies and authors (e.g. Gold & Benveniste, 1995; Morgan & Gramann, 1988; Wolf & Tymitz, 1981; Wineman et al., 1996) suggest that live interpreters and guides are a popular form of interpretation. Visitors naturally respond to someone talking to them and interacting with them, and guides are able to tailor the information to suit the interests and questions of the audience, including children. Visitors are able to ask questions and interact with guides in a manner that is difficult to replicate with other methods. However, like all interpretive methods, the success of guides depends primarily on how good they are (Knudson, Cable & Beck, 1995). The ability to present information in a manner that is interesting and informative requires skill and experience.

At Rainforest Habitat, the primary method of interpretation is a tour and explanation by interpretive guides. Almost all of the visitors go on a guided tour of the

establishment, with tours leaving every hour, and every half-hour in peak times. Entry to the tour is free with admission and participation is strongly encouraged. Guides were thought to be the best method of interpreting Rainforest Habitat, as the management would like to avoid crowding the area with numerous interpretive signs. The use of guides appears to be successful as guides remained the most preferred method of interpretation both before and after a visit to Rainforest Habitat. There was a significant improvement in preference for interpretive signs and brochures, and a significant decline in preference for documentaries and computers/CD-ROM after visiting Rainforest Habitat. It seems likely that respondents are evaluating these methods in the context of the Rainforest Habitat environment. The addition of signs and interpretive brochures would be useful interpretive methods, particularly for the very small minority of visitors who do not attend a guided tour, visitors with language difficulties or visitors seeking further information. Indeed, there is very little interpretation available for people who do not participate in a tour. It is understandable that documentaries and CD/ROM may be less popular, as Rainforest Habitat is a primarily open-air immersion type experience, which emphasises the natural environment. Respondents could believe that computers and other technological methods would be inconsistent with the naturalistic environment. While guides were generally considered one of the preferred methods of interpretation, the ranking of preferred methods was very similar to a ranking of the most frequently used methods. Thus it may be difficult to separate preference from familiarity, and also separate preference from the context of Rainforest Habitat. There were no significant differences on preferences for methods of interpretation between the cluster groups or the interest groups.

3.7.3 Satisfaction

Overall, visitors were highly satisfied with their Rainforest Habitat experience. It is difficult to generalise results for satisfaction with a particular establishment except to say that a naturalistic immersion-style exhibit, with good orientation and boardwalks, and which uses guides as the primary interpretive method, is a successful captive-wildlife formula. Rainforest Habitat, from the opinion of visitors, is a pleasant, positive wildlife tourism experience for visitors with at least a general interest in wildlife. However, the high mean satisfaction scores can also mask differences in responses of different groups of visitors.

For satisfaction with Rainforest Habitat, some significant differences were noted. Enthusiasts were more satisfied with visitor facilities such as "shelter from sun/rain", "easy to find way around" and "feel safe." This is likely to be because the Enthusiast group rated visitor facilities as a significantly less important feature of wildlife experiences. It is possible that because facilities are less important to them, they are easier to satisfy. The enthusiast group was significantly less satisfied with the feature "animals in natural environments". This may be because they participate in wildlife tourism more frequently than other groups and therefore have more to compare the experience to. It also may be the case that they do not perceive a captive environment to be 'natural'. With the exception of these four items, the remaining 11 satisfaction items showed no significant difference in satisfaction based on levels of interest in wildlife.

Significant differences were found in satisfaction levels based on age and gender. Females were consistently more satisfied than males, and the results were significant for six of the 15 areas examined. Satisfaction also consistently increased with age, and results were significant for 12 of the 15 areas examined. In many cases, differences between mean satisfaction were substantial as well as significant. For most of the items, the satisfaction scores are notably higher for the 51 and older group

compared to the younger groups. Ryan (1998) suggests that tourist satisfaction is influenced by a number of variables, including skill levels, time available to enjoy the experience, expectations, experience with travelling, self development goals, and who they are travelling with. Perhaps because older people have more leisure time, and are significantly less likely to be travelling with children, they are more able to enjoy the experience. Younger visitors are more likely to be travelling with children, and therefore have other demands on their attention. There were also significant differences for satisfaction based on the cluster-analysed groups. The High Importance and High Facilities groups were significantly more satisfied with many satisfaction items compared to the Low Facilities group.

When considering satisfaction with the experience, it is also worthwhile to look at the features which, although they may have had a high mean score, also have substantial proportions of respondents rating them in the middle of the rating scale (neither satisfied nor dissatisfied) or lower. Four of the 15 features had at least 20% of the sample indicate they were less than satisfied with that component of the experience. Three of the four features were related to interpretation, which may be a reflection on the lack of alternative interpretation available at Rainforest Habitat outside of guided tours. If visitors do not attend a tour, or they have a less skilled, motivated or experienced guide, there is no other means of obtaining information. The quality of the guided tour may vary for a number of reasons. Factors such as language difficulties, weather, group size, distractions during the tour, topics covered and the skill, motivations and experience of guides all have an impact on satisfaction (Knudson, Cable & Beck, (1995). An assessment of the quality of all guided tours at Rainforest Habitat was beyond the scope of this study. However, the result highlights one difficulty with guides. While they are generally considered one of the most preferred interpretive means, the effectiveness depends on the skill and experience of the individual guide (Morgan & Gramann, 1988; Knudson, Cable & Beck, 1995). The lower scores for interpretation may have occurred because of inconsistencies with the skill or experience levels of the guides.

The results for favourite animals show some similarities with results from the open-ended questions reported in Chapter Two. Koalas, kangaroos, crocodiles and birds were the most popular species, and these were present in the list of open-ended favourite animals in Chapter Two. However, there was a limited number of species present at Rainforest Habitat, so visitors were selecting favourites from a smaller sample of animals. These results are mostly consistent with Kellert's (1989) prediction that favoured animals tend to be larger, aesthetically attractive, and familiar. The crocodile is the exception to the generalisations made by Kellert (1989). Crocodiles were the third most popular species at Rainforest Habitat, while in the exploratory study in Chapter Two they were the 5th most favourite, but also the 5th least favourite animal. It is possible that crocodiles draw extreme results because they hold an inverse appeal to some people who are attracted to their reptilian and dangerous characteristics, as suggested by Ryan (1998). Alternatively, they may be listed as a favourite simply because people have not seen them before, and therefore they are appealing on the basis of novelty or interest. This latter explanation is supported by the results for reasons why people liked the animals they listed as favourites. When asked why these animals were a favourite, the overall most frequent response was that the visitor had never seen them before. In terms of similarities with the open-ended list in Chapter Two, the most frequently used descriptive words that were common to both samples were 'cute', 'interesting', 'beautiful', 'colourful' and 'unique'. Both the favourite animals and the reasons why they are favourites are consistent with Mindfulness theory (Moscardo, 1996; Langer, 1989), and principles of visitor behaviour in interpretive settings (Bitgood et.al., 1986). These principles predict that the attention of people is drawn by certain characteristics of the animal or setting, including the characteristics of novelty/uniqueness, attractiveness, movement, large size, close viewing, of special interest to the visitor, colourful and cute (e.g. infant animals).

As was the case with the open-ended favourite animals in Chapter Two, there were few differences for favourite animals between Australian and international visitors.

The most favourite animals at Rainforest Habitat also coincided largely with the wild animals featured in the open-ended list of favourite animals. Part of Rainforest Habitat's success may be that they display some of the species that people are attracted to most, such as kangaroos, koalas and crocodiles. However, there were more differences noted for the reasons given why respondents liked certain animals. International visitors emphasised that they had never seen the animal before, that the animal was unique, interesting or cute, and that they could touch/feed the animal. However, international visitors did not indicate that touching or feeding animals was particularly important to their experience. Overall, touching and feeding was rated the lowest in importance, and there were no significant differences in the importance of feeding/touching based on the residence of the respondent.

While Australian residents were less likely to say that they had never seen the animal before, interstate visitors were more likely to say that the animal was difficult to see in the wild, and that they could get close to the animal. The reasons given seem to follow a logical progression from international visitors who tended to focus more on the novelty and uniqueness of animals they had never seen before; to interstate visitors who focused more on getting close to animals that are difficult to see in the wild; and then to Queensland residents who focussed more on the beauty, variety and interesting nature of the animals. However, while there were differences in the way different residence groups described their favourite animals, the most numerically frequent reason why all groups of respondents liked their favourite animal was the novelty of seeing it for the first time.

3.7.4 Differences based on levels of interest in viewing wildlife

Analysis of visitors to Rainforest Habitat confirms the idea that visitors appear to seek different wildlife experiences, based on their level of interest in viewing wildlife. Overall, visitors to Rainforest Habitat had higher levels of interest in wildlife tourism compared to the general sample in Chapter Two. This was an expected result, as the

survey was conducted at a wildlife tourism venue and thereby more likely to have people who are interested in wildlife visiting it. The majority of visitors were in the Interested or General category. As was the case in Chapter Two, there was a significant relationship between interest in wildlife and participation in wildlife tourism. In addition to travelling to wildlife tourism venues more frequently overall, there were also significant differences in frequency of travel to different types of wildlife experiences. Enthusiast wildlife viewers were distinguished by their higher participation in all wildlife tourism activities, from visits to captive environments to participation in specialised tours. This is inconsistent with Duffus & Dearden's (1990) suggestion which predicts that as specialisation increases, the wildlife tourist will engage in specific trips to view wildlife and move away from captive environments. In this study, and in the exploratory study, Enthusiasts participate significantly more frequently in visits to captive environments as well as specialised tours.

There were no significant differences noted for age or sex. However, visitors in the Enthusiast group were more likely to live locally or within Queensland, while visitors in the Generalist group were more likely to live outside of Queensland. Enthusiasts also indicated they were more likely to return to Rainforest Habitat, while generalists were more likely to say they would not return. It appears that these factors are related – the enthusiasts were more likely to return to Rainforest Habitat because they tended to live locally as well as have a specialised interest in wildlife tourism. On the other hand, Generalists lived further away and were therefore less likely to return because of distance as well as lower interest in wildlife. That Enthusiast visitors in this sample lived locally is worthy of further discussion. Previous studies of birdwatchers (e.g McFarlane, 1994; Kim, Scott & Compton, 1997; Cole & Scott, 1999) indicate that specialists tend to travel further to engage in wildlife viewing than non-specialists. According to these studies, it would be expected that a sample of more serious wildlife viewers would contain more visitors from interstate or overseas. However, the presence of relatively more local residents in the Enthusiast group at Rainforest

Habitat may be influenced by the nature of the establishment as a tourist attraction. Rainforest Habitat is located in a region that draws a large number of international visitors. Because Rainforest Habitat is one of the major attractions in that region, it may draw international and interstate visitors due to its tourist attraction status more than its wildlife tourism status.

Overall, interest in viewing wildlife was useful for explaining some of the differences between wildlife tourists at Rainforest Habitat. It assisted particularly in the case of interest in interpretation, and the features that attracted visitors specifically to Rainforest Habitat. It was less useful in explaining satisfaction, provided little explanation for the differences in ratings for the importance of features of the setting and had no relationship to the groups identified by the cluster analysis. It was expected that interest in wildlife would be a key feature for explaining differences amongst visitors, and that it would show consistent differences amongst the variables in the survey. There are some possible explanations for the lack of differences noted between the interest groups for important features of the setting, and also for satisfaction with Rainforest Habitat. Firstly, it is possible that wildlife tourists are less specialised or different from each other than previously thought. There is some evidence to suggest that special interest tourists share many common features with general visitors. For example, Schreyer and Beaulieu (1986:244) in a study of attribute preferences in wildland recreation settings conclude that "*persons at varying levels of experience and commitment do not appear to differ significantly in the types of attributes they identify as important in selecting wildland recreation environments*". In a study of wildlife tourists in New Zealand, Pearce and Wilson (1995) found that while small groups of specialist wildlife tourists do exist, for most people viewing wildlife is one activity among many. These authors also found that visitors to captive environments had similar demographic characteristics to general tourists. In the case of Rainforest Habitat, most features were considered important to most visitors, which provides support for this idea. Perhaps specialised wildlife viewers are interested in the same kinds of features as general wildlife visitors. The

second area of possible explanation for the relative lack of differences based on interest in wildlife relates to research methodology. There are a number of issues concerning methodology and sampling. Firstly, it is possible that people find it difficult to rate how important different features are in a hypothetical sense. In the Rainforest Habitat survey, visitors were asked which features were important in captive wildlife environments generally, and non-captive environments generally. They were not asked to rate how important different features were with reference to Rainforest Habitat. When wording the question in a hypothetical sense, there were few differences between visitors: almost all features were important to almost all visitors. However, when visitors were asked what attracted them specifically to Rainforest Habitat, some clear differences were found between the Enthusiast, Interested and General groups, which made sense from the specialisation literature. This provides support for the idea that visitors may need a specific context to provide meaning to the questions. A second methodological problem may be that the questions are not specific enough to draw out differences from visitors with varying levels of interest in wildlife. For example, 'suitable facilities for visitors' may have a different meaning for specialised visitors than general visitors. It may be important to both, but the nature of the facilities may be different in the minds of different visitors. A third methodological issue relates to the sample at Rainforest Habitat. Because of the nature of the environment as a built tourist attraction with captive animals, it may not have attracted the specialised wildlife tourists that are described in the literature. Finally, it is possible that the specialisation construct may not apply to wildlife tourists at all. Williams & Huffman (1985) concluded that the specialisation concept was not particularly useful when analysing backcountry hikers. Overall, in the present study, comparing visitors on their interest in wildlife viewing provides only limited explanation for differences in responses.

3.7.5 Differences based on cluster analysis groups

Results from cluster analysis indicated that there were three groups of respondents that gave different ratings to the importance of different features of the setting. While these groups had statistically sound differences in their responses, they contributed little to the overall understanding of wildlife tourists. There was no difference between the groups on the key variables of interest in wildlife and participation in wildlife tourism. Aldenderfer & Blashfield (1984) suggest that one of the important ways to test for the appropriateness and interpretability of a cluster solution is to examine differences on key external variables that were not included amongst the cluster variables. Lack of expected differences means that the cluster solution should be viewed with some caution. The significant differences identified for other variables followed the basic description of the groups. There was a high rating group that consistently gave high ratings to all variables, a low scoring group that gave low scores to all variables, and a moderate group. This confirms the cautions highlighted by Aldenderfer & Blashfield (1984), who suggest that although the strategy of cluster analysis may be seeking structure in the data, its operation is one of structure imposing. Thus care must be taken in identifying when these groups are 'real', and when they are merely imposed on the data by the method. Overall, it is unclear whether the cluster analysis identified groups of respondents who answer questions in different ways, or whether it identified groups with genuine differences in their preferences for wildlife tourism.

3.8 Conclusions and directions for further study

3.8.1: Features of the wildlife tourism setting: Results in the Rainforest Habitat study found that most features of the setting received high ratings for importance. The features with the highest means and the most consistent responses were those relating to animal welfare. This confirms that animal welfare in captive environments is a critical component of the setting. Adequate space for animals, animals being well cared for and animals appearing content is very important to all groups of visitors.

Other features that have widespread importance are seeing animals close up in a pleasant, natural environment with friendly and knowledgeable staff. The relative importance of visitor facilities and touching/feeding animals varies across different groups of visitors.

3.8.2: Interpretation. Guides were the most preferred method of interpretation, however interpretive signs and brochures were also considered useful. Where guides are used, there should also be other forms of interpretation available for visitors who do not participate in tours. Topics that visitors were most interested in were the peculiar and strange characteristics of animals, and their importance in the ecosystem.

3.8.3: Satisfaction. Respondents generally indicated high levels of satisfaction with the style of captive wildlife establishment represented by Rainforest Habitat. There were some indications that improvements could be useful in the area of interpretation, particularly the provision of signs and/or brochures.

3.8.4: Levels of interest. This study provided some support for the usefulness of asking respondents their levels of interest in wildlife viewing as a component of specialisation. A number of important differences were revealed based on levels of interest. Enthusiast wildlife viewers tended to:

- Participate in wildlife tourism overall more frequently than other groups

- Travel more frequently to captive wildlife settings, places where wildlife are often seen, and specialised tours more than other visitors.
- Place less importance on visitor facilities in wildlife tourism experiences
- Be attracted to environmental or ecotourism experiences, natural rainforest surroundings, learning about the rainforest, and photo opportunities with animals.
- Be more interested in learning and all types of interpretation topics, but had lower preferences for signs and guides than other groups
- Were more satisfied with features relating to visitor facilities (possibly because they were less important to them), but less satisfied with the animals being in natural environments.

However, interest in wildlife did not provide the level of explanation that was expected from previous research discussed in the literature review. A number of possible explanations have been raised, however further research is required.

3.8.5 Cluster analysis groups. The groups identified by clustering respondents based on their ratings of the importance of different features of the setting provided some explanation for differences in responses of visitors. There appears to be a group which indicates high importance of all features, one which indicates relatively low importance, and group which scored moderately for most features, but high for those relating to visitor facilities. Because the pattern of results were consistent for satisfaction with Rainforest Habitat and interest in interpretive topics, it is unclear whether these results are due to differences in response tendencies of visitors, or reflect genuine differences in preferences for wildlife tourism. It was a concern that the cluster groups were not related to interest in wildlife.

3.8.6 Directions for further study. Overall, the Rainforest Habitat study provided some useful information regarding the preferences and characteristics of wildlife tourists, particularly pertaining to captive wildlife settings. There were some

inconclusive results which may have been influenced by methodological issues, such as the way questions were asked on the survey, and the effect of the Rainforest Habitat context on the way respondents answered the questions. However, because this sample was surveyed at a single location and a particular style of wildlife experience, no substantial conclusions can be drawn at this point. It is necessary to replicate the study in a second site in order to confirm some of the conclusions made in this study, and provide information from an alternative style of wildlife tourism venue. Therefore, a similar survey will be conducted at Flinders Chase National Park (FCNP). This study site is a non-captive wildlife tourism experience and will therefore complement and further investigate results found in the present study.

CHAPTER FOUR

Flinders Chase National Park – Kangaroo Island

4.1 Introduction

The study at Rainforest Habitat indicated that some features of the wildlife experience were consistently important to all visitors, particularly those relating to animal welfare, and seeing animals close-up in a pleasant natural environment. Overall, respondents indicated high levels of satisfaction with the style of wildlife experience represented by Rainforest Habitat. The study provided limited support for the usefulness of categorising respondents based on their level of interest in viewing wildlife as part of their usual travel plans. This approach revealed a number of important differences, such as the result that Enthusiast visitors travelled to other wildlife venues more than other visitors, tended to place less importance on visitor facilities, and were more interested in all interpretive topics than visitors with a General level of interest in wildlife.

However, interest in wildlife alone did not explain all of the differences in the sample. Based on the literature review and the results of the Exploratory study, a greater differentiation was expected between visitors with different levels of interest in wildlife. More differences were expected with respect to the importance placed on different features of the wildlife tourism setting. The use of a cluster analysis solution of respondents based on the importance ratings of various features of the wildlife experience also failed to provide a satisfactory explanation of differences. This was particularly the case since the cluster solution showed no significant difference between the cluster groups based on levels of interest in wildlife, which was a key evaluative variable for the cluster solution.

There are four possible explanations for these results. The first explanation is that wildlife tourists to Rainforest Habitat were not substantially different in terms of the features they considered to be important to their experience. That is, despite

indicating different levels of interest in viewing wildlife, the sample was relatively homogenous in what they were seeking from their wildlife experience.

The second possible explanation is related to the setting of the survey. It may have been the case that the setting influenced the way questions were answered, and that assessment of preference for various features were considered in the context of the immediate setting. Because Rainforest Habitat is a pleasant, well-managed naturalisic wildlife sanctuary, this setting may have reduced differences between visitors. It was clear from the consistently high satisfaction scores that Rainforest Habitat is an enjoyable experience which appeals to a broad range of visitors.

The third explanation is that specialisation is of limited use for explaining differences amongst wildlife tourists. This may be because wildlife tourists are a broad grouping rather than a group defined by specialist skill, knowledge or equipment requirements. The final explanation is the possibility that the survey instrument failed to identify differences that existed between visitors. However, the results are unable to indicate which of these explanations is most accurate. In order to examine whether these results were particular to Rainforest Habitat, or applicable to wildlife tourists generally, the same basic survey instrument was used with a different sample of wildlife tourists. Flinders Chase National Park, on Kangaroo Island in South Australia, was selected as an appropriate site to continue to investigate the importance of different features of the wildlife tourism setting.

Flinders Chase National Park (FCNP) provided a contrasting environment to that of Rainforest Habitat. While Kangaroo Island is noted for its abundance of wildlife, there are no captive displays in FNCP, and visitors are not permitted to feed wildlife. FCNP is actively marketed for its wildlife tourism opportunities, and because it is a relatively remote location, requires considerable outlay of time and resources to experience. The combination of a site with a strong wildlife emphasis, a non-captive environment and relative difficulty of access suggested that this site was likely to draw more specialist wildlife tourists than Rainforest Habitat (Kim, Scott & Compton, 1997; Cole & Scott, 1999). Further, because the National Park is located on an island, surveying of respondents was made easier by establishing

sampling points at the airport and the ferry terminal, which were the only access points. Overall, the addition of a sample of visitors from FCNP was expected to complement the sample from Rainforest Habitat, provide a comparison to the Rainforest Habitat sample and provide further data to enable examination of differences between visitors based on their levels of interest in wildlife tourism.

In addition to features of the experience, another area for further study was that of interpretation. Results from Rainforest Habitat indicated that interpretation was important to visitors, particularly those with a keener interest in wildlife, and that guides were the most popular method of interpretation. This was examined further in the Kangaroo Island study, where wildlife interpretation was considered in the context of other interpretive topics, in order to establish its relative importance.

The aims of the Kangaroo Island study were:

a) **Features**: to continue investigation into features of the setting that are important to visitors.
b) **Interpretation**: to examine how important wildlife interpretation is in the context of other topics of interest.
c) **Satisfaction**: to investigate how satisfied visitors were with their wildlife experience, and the factors that influenced satisfaction.
d) Levels of interest: to continue investigation into the differences between wildlife tourists based on their levels of interest.

This chapter is organised as follows:

4.2 Kangaroo Island

Kangaroo Island is located 15km off the coast of South Australia, close to Adelaide. It is the third largest Australian island, 155km long, 55 km wide, with 450km of coastline and a resident population of over 4000 (Tourism Kangaroo Island, 1999). First mapped in 1802 by Captain Matthew Flinders, the early history of the island centered on whaling and sealing. The island experienced only sporadic development until after World War II, when land improvement schemes made agriculture an established industry. After the 1950's tourism increased and in recent years the island has attracted around 160,000 visitors annually.

The main attractions of Kangaroo Island are the scenery, wildflowers, history of early settlement, shipwrecks and, of predominant importance, the wildlife. Visitors are almost guaranteed to see a number of species during a visit to the island. The Australian Sea Lions are always present at Seal Bay, and visitors are able to walk amongst them resting on the beach. The island has over 180 resident bird species and many migrants, and whales are often visible off the coast. Kangaroo Island Kangaroos, Tammar Wallabies and Koalas are usually present in FCNP, and New Zealand Fur Seals play and rest at Cape du Couedic. Fairy Penguins return to predictable places along the shore at night, and Ring-Tail, Brush-tail, and Little Pygmy Possums also reside on the island. Short beaked Echidnas and Rosenburg's Goannas are abundant, and the island is marketed both nationally and internationally as a wildlife-viewer's paradise.

FCNP is located at the western end of the island, and is one of Australia's largest reserve areas. Covering 74,000 hectares, it is considered to be South Australia's most significant National Park area because of its natural state, abundant wildlife and lack of introduced predators. FCNP contains many of the island's scenic and wildlife viewing attractions, and attracts approximately 60% of the islands visitors, or 96,000 visitors annually (2000 visitor guide; Haylock, 2000). Figures 4.1 to 4.6 depict some of the wildlife and features of FCNP. Appendix K illustrates a map and promotional material of wildlife on Kangaroo Island.

In summary, FCNP was selected as a study site for the following reasons:

- It is recognised and marketed as a wildlife tourism destination.
- Because of its reputation as a wildlife destination, it is likely to attract visitors with higher levels of interest in wildlife.
- It provides an environment which contrasts with the captive environment of Rainforest Habitat.

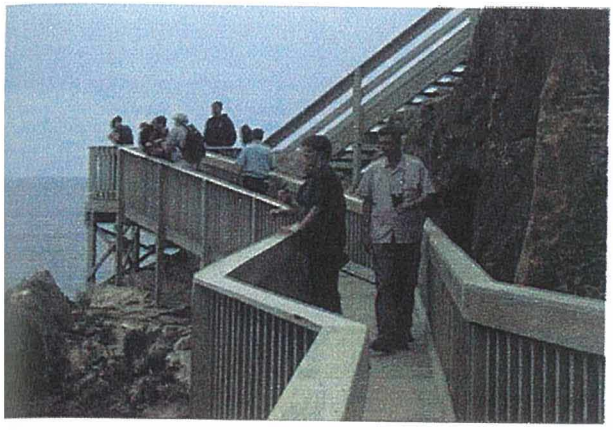


Figure 4.1: The boardwalk overlooking the seal colony at Cape du Couedic

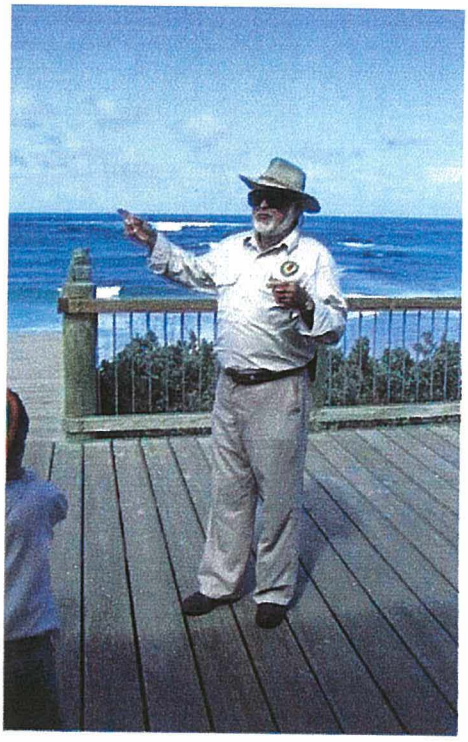


Figure 4.2: A guide interpreting the sealions at Seal Bav

Figure 4.3: A Kangaroo Island Kangaroo at Cape Borda

Figure 4.4: Fairy penguin footprints in the limestone caves at Ravine des Casoars

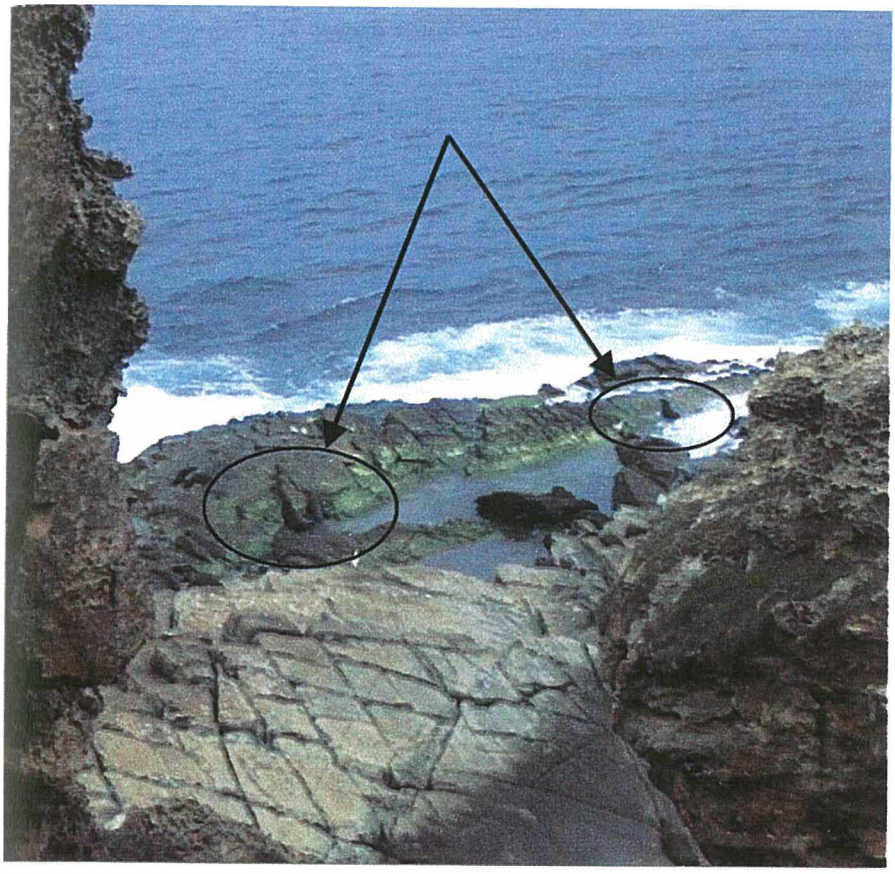
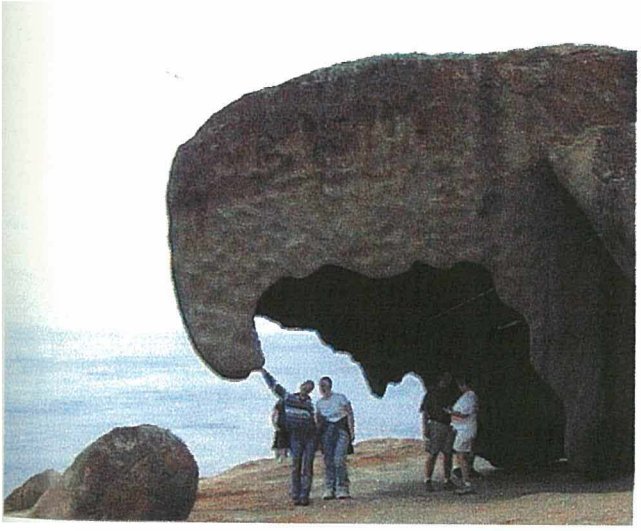


Figure 4.5: View of the New Zealand Fur Seals and Sealions the Cape du Couedic boardwalk.



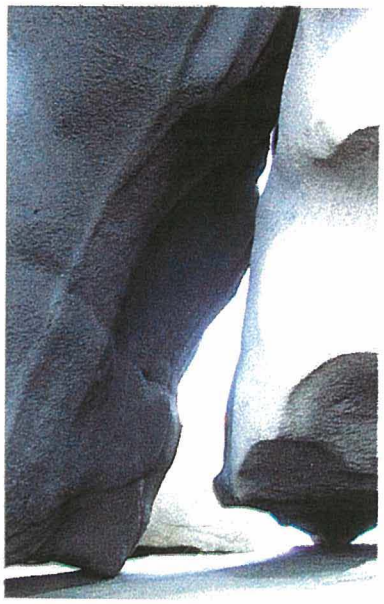


Figure 4.6 a) and b): The Remarkable Rocks

4.3 Methodology

4.3.1: Survey Procedure

Surveying of visitors was conducted in September and October 1999, over a ten day period. The survey days included a public holiday weekend and the beginning of school holidays to ensure that a broad range of visitors from local, interstate and international origins were surveyed. Research staff members, who were trained in survey techniques, distributed all of the self-completion questionnaires. The study consisted of a pre-visit questionnaire and a post-visit questionnaire, with independent samples. Respondents were asked if they had already completed a survey to ensure the samples were independent. The two versions of the questionnaires shared a range of common questions, but differed with the inclusion of questions relating to expectations in the pre-visit questionnaire, and satisfaction/ evaluation items in the post-visit questionnaire.

A stratified sampling technique was used (de Vaus, 1990) whereby a quota was set for each target group. A number of sites were selected as likely distribution points for each of the target groups, namely pre-visit and post-visit respondents drawn from both tour group visitors and independent travellers. Permission to conduct questionnaires was gained from tour operators who visited the sites as part of their tour itinerary, and from the appropriate site managers. At each survey site, all visitors were approached to complete the questionnaire. This usually occurred while visitors were waiting to visit an area, waiting to attend a wildlife tour, or while they were stopping for a lunch break during a tour. The questionnaires were conducted in English only and the overall response rate was 97%. With each questionnaire distributed, the respondent received a complementary postcard as a token of appreciation for their participation.

4.3.2 Participants

The total number of respondents completing the survey was 710. Table 4.1 shows the breakdown of respondents in the pre and post-visit samples. The average age of

the total sample was 43.8 years old, and the breakdown of age groups is provided in Table 4.2. The three age groups depicted in Table 4.2 will be used for demographic comparisons throughout Chapter Four.

Table 4.1

Sample Size and Breakdown

Pre-sample	345
Post-sample	365
Total	710

Table 4.2

Age of Respondents in Total Sample

Age in years	Percent of respondents
15 – 30	25
31-50	40
51 and over	35

The gender distribution of respondents was 47% male and 53% female. There were no significant differences for age or gender between the pre-visit sample and the post-visit sample. Of the total sample, nearly three-quarters (73%) were Australian residents, with the majority of these residing in South Australia and New South Wales. The usual place of residence for respondents shown in Table 4.3 indicates that almost three quarters of respondents were from Australia, with the largest proportion from South Australia. There were no significant differences for place of residence in the pre and post-visit samples.

Table 4.3

Usual Place of Residence

Residence		Percent of Sample
National	South Australia	30
	Victoria	14
	New South Wales/ACT	20
	Tasmania	0
	Queensland	4
	Northern Territory	0
	Western Australia	5
	Total Australia	**73**
International	New Zealand	1
	United Kingdom/ Ireland	5
	United States/Canada	6
	Europe	12
	Asia	3
	Total International	**27**

There was no significant relationship between age of respondents and gender, or between residence and gender. However, respondents in the 15-30 year age group were significantly more likely to be from overseas, those in the 31-50 age group were more likely to be from the local South Australian area, and those in the 51+ year group were more likely to be from interstate (Table 4.4).

Table 4.4

Age of Respondents by Place of Residence

	15-30 years	31-50 years	51+ years	Total
Local South Australia	58 30.5%	91 47.9%	41 21.6%	190 100%
Interstate	32 11.6%	116 41.9%	129 46.6%	277 100%
Overseas	71 39.7%	51 28.5%	57 31.8%	179 100%
Total	161 24.9%	258 39.9%	227 35.1%	646 100%

* Chi-square value 67.81, sig. = 0.000

Analyses were conducted on the pre- and post-visit samples to ensure there were no significant differences between these samples on variables in the survey. Results indicated there were no significant demographic differences between the samples, nor were there any significant differences in their responses to motives for FCNP, features they considered important to the wildlife experience, or interest in interpretive topics.

4.3.3 Instruments

The surveys consisted of a pre-visit questionnaire (Appendix L) and a post-visit questionnaire (Appendix M). Some questions on the questionnaires (particularly relating to travel patterns, visitation to sites and evaluation of facilities and services) were designed for the benefit of the National Park rangers and management. The questions which related directly to the study were as follows:

a) **Features**: Both the pre-visit questionnaire and the post-visit questionnaire asked respondents to rate the importance of 15 setting features to their wildlife tourism experiences. In the Rainforest Habitat study, the features were split into captive and non-captive environments. In the present FCNP study, repetitive and highly correlated features of wildlife experiences were removed, reducing the number of features from 23 in the Rainforest Habitat study to 15 in the FCNP study. Twelve of these features were common to both samples, while the features 'little evidence of human impact', 'seeing animals behaving naturally', and 'visitor numbers are limited' were added to the FCNP questionnaire. These were features that may have been important to visitors in a natural wildlife setting such as FCNP. The distinction between features pertaining to captive environments and those pertaining to non-captive environments was excluded primarily due to repetition and lack of relevance to the study site. Visitors in the pre-visit study were also asked to rate how important twelve factors were in their decision to visit FCNP, with wildlife viewing being one of those factors. This enabled an examination of how important wildlife viewing was in the context of other activities available at FCNP. These variables were derived from activities available at FCNP, and

some items from the Recreation Experience Preference Scale of Driver, Brown and Peterson (1991). The Recreation Experience Preference Scale defines and measures motives for, or expected benefits from, taking an outdoor recreation trip, and the full scale is extensive. No attempt was made in this study to use the scale in its full capacity, or provide detailed analysis of motives for participating in wildlife tourism. The aim was simply to enable a comparison of the relative importance of wildlife viewing in the context of some main alternative activities available in FCNP.

b) **Interpretation**: Respondents were asked to rate their level of interest in interpretive topics in both the pre and post-visit questionnaires. Three specific wildlife topics were included ('information about wildlife', 'hints to see wildlife' and 'minimising impacts on wildlife') in amongst 13 other topics. This aided understanding of the relative interest in wildlife as a topic for interpretation. This approach was different to that used in the Rainforest Habitat questionnaire. At Rainforest Habitat, visitors were asked to rate how interested they were in a number of topics. Generally, most people were interested in most topics, however there was a significant increase in interest between the General, Interested and Enthusiast groups. In the present study, visitors were also asked to list two questions that they would like to ask about the park, in both the pre and the post-visit questionnaires. This aimed to reveal topics that may have not been included in the list provided to respondents.

c) **Satisfaction**: The post-visit questionnaires contained a number of questions relating to satisfaction with various features of the Park (including wildlife and interpretation), and visitors were able to suggest improvements in an open-ended question. Wildlife encounters were specifically evaluated for satisfaction with the number of sightings, the types of animals seen, variety of wildlife, ease of viewing, condition of the environment, and open ended questions about the best features and suggested improvements. Visitors were also asked to describe the best features of FCNP in the post-visit questionnaire.

d) **Levels of interest**: The same question, which asked visitors to rate their interest in wildlife, was used again in the FCNP study in the same form as in the open ended study and the Rainforest Habitat study. Visitors were also asked to indicate how many times they participated in wildlife tourism in the previous 12 months.

4.3.4 Organisation of Results

The following results section is organised as follows:

Section 4.4: Overall results for importance ratings of the features of the wildlife setting, ratings of interest in interpretive topics, and satisfaction with FCNP. These results are based on the entire sample, with comparisons made on demographic variables.

Section 4.5: Results based on levels of interest in wildlife. Comparisons were made on variables relating to features of the wildlife setting, demographics, interpretation and satisfaction, based on the respondents' indicated level of interest in wildlife viewing. These were conducted using results from the total sample, with the exception of satisfaction comparisons, which were based on the post-visit sample only.

Section 4.6: Results based on cluster analysis of respondents. Comparisons made for interest in wildlife, demographics, interpretation and satisfaction using a cluster analysis solution based on the importance of features of the wildlife tourism setting. These analyses were conducted using results from the total sample.

As was the case in the previous chapters, an abbreviated version of crosstabulation tables will be used with Chi-square results in this present chapter. The explanation and justification for use of the abbreviated presentation format has previously been provided in Section 2.2.4 of Chapter Two. Also as outlined in Section 2.2.4 of Chapter Two, analyses have been conducted on the data to ensure that the assumptions of the relevant statistical tests have not been violated.

4.4 General Results (total sample)

4.4.1 Motives for visiting FCNP

Wildlife and wilderness experiences were the dominant motives for wanting to visit FCNP for the majority of visitors. Table 4.5 lists the motives in order from the highest to lowest mean score, and shows that the opportunity to see wildlife was the feature most important in attracting visitors to FCNP. Opportunities to see wildlife was rated as at least 'somewhat important' for 95.2% of visitors, and 'very important' for 69.1%. The dominance of wildlife and nature related motives are highlighted in bold font in Table 4.5. There was also a high level of interest in learning and educational motives. Results referring to motives for visiting FCNP (Tables 4.5 - 4.8) were conducted with the pre-visit sample (n=345) only.

Table 4.5

Motives for Visiting FCNP

Features	**Not at all important**	**Not very important**	**Somewhat important**	**Very important**	***Mean***
Opportunities to see wildlife	1.6	3.2	26.1	**69.1**	**3.63**
Chance to get close to nature	1.6	5.4	31.7	**61.3**	**3.53**
Opportunity to experience wilderness	2.6	5.9	35.6	**55.9**	**3.45**
Important part of K.I experience	4.8	7.9	35.4	51.9	3.35
To visit famous scenic sites	3.8	12.4	43.9	39.8	3.20
Learning or educational experience	7.4	13.6	45.7	33.3	3.05
Opportunity for rest and relaxation	10.2	22.7	36.0	31.1	2.88
A place to spend time with family	18.3	16.4	28.4	36.9	2.84

and friends					
Opportunity to visit a historic site	10.5	25.4	41.2	22.9	2.77
Opportunity to be active	15.8	32.1	33.6	18.5	2.55
Chance to get away from others	24.7	27.2	26.9	21.1	2.44
Other person wanted to come	47.5	16.3	19.4	16.8	2.05

* Scale was from 1 (not at all important) to 4 (very important)

In terms of motives for visiting FCNP, there were some differences between respondents based on demographic variables. Females rated all motives as more important than did males, and independent-samples T-Tests indicated that this trend was significant for seven of the 12 motives assessed (Table 4.6). Females were significantly more attracted by wildlife, nature, wilderness and learning, as well as historic and scenic sites.

Table 4.6

Motives for Visiting FCNP by Gender

Motive	**Male mean score**	**Female mean score**	**F**	**Sig.**
Opportunity to visit a historic site	2.60	2.91	18.43	.000
Chance to get close to nature	3.44	3.61	10.13	.002
Opportunity to visit famous scenic sites	3.10	3.30	9.72	.002
Important part of K.I. experience	3.21	3.48	8.91	.000
Opportunity to experience wilderness	3.39	3.52	4.91	.027
Opportunities to see wildlife	3.58	3.68	3.78	.05
Learning or educational experience	2.97	3.13	3.25	.024

*Rating scale was from 1 (not at all important) to 4 (very important).

There were also significant differences based on age, as indicated by One-way ANOVA (Table 4.7). Respondents in the 15-30 year age group indicated stronger social motives and were more interested in spending time with family and friends and getting away from others. Respondents in the 31-50 age group were more attracted by experiencing wilderness and getting away from others, while respondents in the 51+ year age group were more attracted by learning, scenic and historic sites. Post-hoc tests (Scheffe) indicated that for all motives except "chance to get away from others", significant differences existed between all age groups.

Table 4.7

Motives for Visiting FCNP by Age

Motive	**15-30 years mean score**	**31-50 years mean score**	**51 + years mean score**	**F**	**Sig.**
Place to spend time with family and friends	3.1	2.9	2.4	6.15	.000
A learning/educational experience	2.76	3.09	3.20	5.72	.000
Opportunity to visit a historic site	2.52	2.72	2.96	4.59	.000
Visit famous scenic sites	2.95	3.29	3.35	3.72	.001
Opportunity to experience wilderness	3.31	3.51	3.46	2.96	.007
Chance to get away from others	2.53	2.54	2.13	2.92	.008

* Rating scale was from 1 (not at all important) to 4 (very important).

One-way ANOVA also indicated significant differences based on place of residence (Table 4.8). Overseas visitors were significantly more attracted by seeing wildlife and getting close to nature, while local South Australian residents were attracted by more general holiday motives, such as spending time with family and friends, being active, getting away from others and having an opportunity for rest and relaxation. Post-hoc tests (Scheffe) indicated that most of the significant differences existed between local South Australians and Overseas visitors.

Table 4.8

Motives for Visiting FCNP by Place of Residence

Motive	Local South Aust. Mean score	Inter-state mean score	Over-seas mean score	F	Sig.
Place to spend time with family and friends	3.33	2.76	2.39	36.15	.000
Opportunity for rest and relaxation	3.16	2.95	2.53	21.09	.000
Opportunity to visit historic sites	2.72	2.99	2.46	18.32	.000
Opportunity to see wildlife	3.46	3.64	3.79	13.65	.000
Opportunity to be active	2.73	2.61	2.30	9.57	.000
Opportunity to visit famous scenic sites	3.21	3.32	3.02	7.67	.001
Chance to get away from others	2.71	2.35	2.33	7.42	.001
Learning or educational experience	2.87	3.15	3.09	6.31	.002
Chance to get close to nature	3.42	3.53	3.63	4.57	.011
Other person wanted to come	2.17	2.12	1.86	3.51	.031

* Rating scale was from 1 (not at all important) to 4 (very important).

Despite evidence of significant differences between demographic groups for importance of motives, the motives concerning wildlife, nature and wilderness were the overall most highly rated motives for the sample, and all visitors indicated that they were interested in these aspects of FCNP. This was reflected in the rankings of activities that visitors expected to participate in while visiting FCNP. From the eight activities suggested, (scenic driving, short or long walks, scenic places, picnics, historic sites, camping, and wildlife viewing), 78% of visitors expected to view wildlife, which was the highest proportion for all suggested activities.

4.4.2 Features of the wildlife tourism setting

The previous Tables 4.5 to 4.8 reported results for reasons why visitors travelled specifically to FCNP and found that overall, opportunities to view wildlife and get close to nature were the highest rated motives. Table 4.9 focuses more specifically on the features of wildlife settings, and shows the relative importance of various wildlife features to visitors. The results for importance of features of the wildlife experience pertain to both the pre-visit and post-visit samples. Because no significant differences were identified between these groups, analysis was conducted on the entire sample (n=710). Results highlighted in bold font show that 'seeing wildlife in their natural environment', 'seeing wildlife behaving naturally', and 'unique/unusual wildlife' had the largest proportion of visitors indicating that they were very important. These results suggest that natural wildlife experiences are of dominant importance. Visitors rated 'natural environments' and 'wildlife behaving naturally' more highly than having wildlife easy to see, or being able to touch or feed wildlife. The ability to touch and feed animals had the highest proportions of visitors indicating that this feature of wildlife settings was not important to them, and distribution of responses was more evenly spread across the scale for this item (Table 4.9).

Table 4.9

Features of the Wildlife Tourism Setting.

Feature	Not at all important	Not very important	Somewhat important	Very important	Mean 1= not imp. 4 = very important
Seeing wildlife in their natural environment	.9	1.9	25.6	**71.6**	**3.68**
Seeing wildlife behaving naturally	.6	3.6	26.2	**69.5**	**3.65**
Unique/unusual wildlife	1.0	5.4	37.6	**56.0**	**3.49**
Ability to get close to wildlife	1.7	9.3	40.8	48.2	3.36

Seeing rare/endangered wildlife	1.8	11.3	38.4	48.4	3.33
Little evidence of human impact	4.0	10.2	39.2	46.5	3.29
Interesting information about the wildlife	2.0	9.2	48.2	40.6	3.27
Knowledgeable guides/staff	3.5	12.1	40.5	43.9	3.25
Pleasant environment	1.5	13.9	43.7	40.7	3.25
Large variety of wildlife	1.4	13.6	46.8	38.2	3.22
Wildlife easy to see	2.7	15.0	44.7	37.5	3.17
Large numbers of wildlife to see	2.9	17.2	47.1	32.8	3.10
Feeling safe	6.8	17.7	36.7	38.8	3.07
Visitor numbers are limited	5.7	19.1	45.6	29.5	2.99
Ability to touch/feed	**25.4**	36.2	24.5	13.9	2.27

One-way ANOVA indicated significant differences for importance of features of the wildlife tourism setting based on gender, age and place of residence. Table 4.10 shows that there was a consistent trend for females to rate features more highly than males, and this was significant for 12 of the 15 features listed. Table 4.11 compares interest in wildlife features based on age. There was a trend that importance of wildlife setting features increased with age, however this tendency was only significant for 4 of the 15 features. These results were similar to those found for the Rainforest Habitat sample. In the Rainforest Habitat sample, females and older visitors consistently rated features as more important than did males and younger visitors. Table 4.12 shows differences in importance of setting features based on place of residence, and shows that international visitors were more interested in unique wildlife, getting close to wildlife, interesting information, and

natural environments. Interstate visitors were more interested in knowledgeable guides, wildlife being easy to see and interesting information about the wildlife.

Table 4.10

Features of Wildlife Tourism Settings by Gender

Feature of Wildlife Experiences	**Male mean score**	**Female mean score**	**F**	**Sig.**
Feeling safe	2.81	3.31	50.51	.000
Wildlife easy to see	3.00	3.33	28.92	.000
Knowledgeable guides/staff	3.12	3.37	15.65	.000
Pleasant environment	3.12	3.36	14.87	.000
Seeing wildlife behaving naturally	3.57	3.72	11.13	.001
Ability to touch/feed	2.14	2.39	10.23	.001
Interesting information about wildlife	3.19	3.36	9.52	.002
Seeing wildlife in natural environment	3.62	3.74	7.94	.005
Large variety of wildlife	3.13	3.29	6.89	.009
Limited visitor numbers	2.90	3.08	6.83	.006
Seeing rare/endangered wildlife	3.26	3.42	7.33	.007
Little evidence of human impact	3.22	3.37	5.17	.023

* Rating scale was 1 (not at all important) to 4 (very important).

Table 4.11

Features of the Wildlife Setting by Age

Feature of Wildlife Experience	**15-30 years mean score**	**31-50 years mean score**	**51 + years mean score**	**F**	**Sig.**
Knowledgeable guides/staff	3.04	3.20	3.48	4.92	.000
Interesting information about wildlife	3.11	3.27	3.27	4.22	.004
Wildlife easy to see	3.04	3.11	3.35	2.42	.026
Ability to touch/feed wildlife	2.44	2.22	2.17	2.24	.038

* Rating scale was 1 (not at all important) to 4 (very important).

* Post-hoc test (Scheffe) indicated significant differences between all groups except for "interesting information about wildlife" and "ability to touch/feed wildlife" where there was no sig. diff. between 31-50 and 51+ year groups.

Table 4.12

Features of the Wildlife Setting by Place of Residence

Feature of Wildlife Experience	**Local South Aust. Mean score**	**Inter-state mean score**	**Over-seas mean score**	**F**	**Sig.**
Knowledgeable guides/staff	3.02	3.42	3.22	15.05	.000
Interesting information about wildlife	3.05	3.36	3.39	14.84	.000
Pleasant environment	3.34	3.30	3.06	7.23	.001
Seeing wildlife in natural environment	3.58	3.72	3.74	4.88	.008
Unique/unusual wildlife	3.28	3.49	3.52	4.21	.015
Little evidence of human impact	3.40	3.30	3.18	3.08	.042
Wildlife easy to see	3.16	3.25	3.06	3.10	.046
Ability to get close to wildlife	3.27	3.37	3.45	3.04	.049

*Rating scale was from 1 (not at all important) to 4 (very important).

* Post hoc tests (Scheffe) indicated no significant difference between interstate and overseas residents on 'unique/unusual wildlife', 'ability to get close to wildlife', 'interesting information about wildlife', 'seeing wildlife in natural environment'. No sig. diff. between local and interstate residents for 'pleasant environment'.

4.4.3 Interpretation

When asked to indicate interest in potential interpretive topics, wildlife related topics generated the most interest. Table 4.13 shows the levels of interest indicated for a number of topics for interpretation at FCNP. Results highlighted in bold font show that information about wildlife and geographical features such as Remarkable Rocks had the highest interest ratings of all topics. High ratings for interest in wildlife topics was consistent with the high importance placed on viewing wildlife as an activity and a motive for visiting FCNP. The high interest indicated in the topic 'places of geographical interest' is likely to be influenced by

the inclusion of the Remarkable Rocks as an example. This rock formation is unusual and remarkably different from the surrounding terrain (see Figures 4.6a and 4.6b).

Table 4.13

Interest in Interpretive Topics

Topics	**Not at all interested**	**Not very interested**	**Somewhat interested**	**Very interested**	**Mean 1= not int. 4 = very int.**
Wildlife in Flinders Chase National Park	.8	2.8	29.7	**66.7**	**3.63**
Places of geographical interest (e.g. Remarkable Rocks)	1.5	5.1	37.1	**56.4**	**3.48**
Hints to help visitors see wildlife	2.2	6.5	38.0	**53.3**	**3.43**
Environmenta l impact minimisation	2.0	7.1	40.2	50.7	3.40
Wildlife impact minimisation	1.6	7.0	44.0	47.4	3.37
Ancient giant animals of Flinders Chase	2.6	13.2	43.4	40.8	3.22
Plants of Flinders Chase National Park	2.7	14.5	45.0	37.8	3.18
Understanding of ecosystems	3.3	15.0	49.1	32.6	3.11
How feral animals are managed	4.0	17.9	41.4	36.5	3.11
Shipwrecks	4.3	15.3	48.8	31.7	3.08
Understanding of biodiversity	4.4	17.2	49.5	28.8	3.03

Lighthouses	4.6	22.1	46.9	26.3	2.95
Aboriginal history with K.I	10.5	15.7	43.1	30.7	2.94
How fire is managed	5.0	25.3	41.5	28.1	2.93
How weeds are managed	6.4	26.8	38.4	28.3	2.89
Pastoral land use	10.8	34.0	41.2	13.9	2.59

One-way ANOVA indicated significant differences for interest in interpretive topics based on gender, age and place of residence. There was a consistent finding that females gave higher scores for interest in interpretive topics than did males, and this was significant for 9 of the 16 topics (Table 4.14).

Table 4.14

Interest in Interpretive Topics by Gender

Interpretive topic	**Male mean score**	**Female mean score**	**F**	**Sig.**
Wildlife impact minimisation	3.19	3.42	17.2	.000
How fire is managed	2.70	2.96	13.4	.000
Hints to help visitors see wildlife	3.25	3.43	8.2	.004
How weeds are managed	2.97	3.08	6.7	.010
Places of geographical interest (e.g. Remarkable Rocks)	3.35	3.49	6.3	.012
Wildlife in FCNP	3.49	3.63	6.2	.013
How Feral animals are managed	2.69	2.89	4.9	..028
Pastoral land use	2.40	2.57	4.8	.030
Environmental impact minimisation	3.26	3.39	4.6	.032

* Rating scale was 1 (not at all interested) to 4 (very interested).

Further significant differences were noted for interest in interpretive topics based on age. Table 4.15 shows the results for the topics where significant differences were indicated by One-way ANOVA. In general, interest in interpretive topics

increased with age, and this was the case for the 6 out of 15 topics where a significant difference was found.

Table 4.15

Interest in Interpretive Topics by Age

Interpretive Topic	**15-30 years mean score**	**31-50 years mean score**	**51 + years mean score**	**F**	**Sig.**
How weeds are managed	2.63	2.87	3.19	6.3	.000
How fire is managed	2.72	2.92	3.13	5.2	.000
How feral animals are managed	2.95	3.1	3.34	4.5	.000
Plants of FCNP	2.91	3.24	3.31	4.5	.000
Wildlife impact minimisation	3.33	3.35	3.50	2.4	.026
Environmental impact minimisation	3.32	3.39	3.55	2.3	.037

* Rating scale was from 1 (not at all interested) to 4 (very interested).
* Post-hoc tests (Scheffe) indicated no sig. diff between 15-30 and 31-50 age groups for 'wildlife impact minimisation' and 'environmental impact minimisation'.

One-way ANOVA also indicated significant differences in interest in interpretive topics based on place of residence. Table 4.16 shows that local South Australians were more interested in shipwrecks and lighthouses; overseas visitors were more interested in Aboriginal history; and Interstate visitors were more interested in all other listed topics. Overall, interstate visitors indicated a higher interest in most interpretive topics.

Table 4.16

Interest in Interpretive Topics by Place of Residence.

Interpretive Topic	Local South Aust. Mean score	Inter-state mean score	Over-seas mean score	F	Sig.
Shipwrecks	3.23	3.18	2.77	19.7	.000
Lighthouses	3.13	2.94	2.70	15.4	.000
How weeds are managed	2.76	3.11	2.70	15.0	.000
How feral animals are managed	3.08	3.26	2.94	8.4	.000
How fire is managed	2.88	3.08	2.71	7.5	.001
Aboriginal history with Kangaroo Island	2.86	2.87	3.15	5.9	.003
Hints to help visitors see wildlife	3.33	3.51	3.39	4.1	.018
Environmental impact minimisation	3.36	3.49	3.31	4.0	.020
Places of geographical interest (e.g. Remarkable Rocks)	3.52	3.54	3.38	3.5	.030
Wildlife in FCNP	3.54	3.71	3.64	3.2	.022

* Rating scale was from 1 (not at all interested) to 4 (very interested).

*Post-hoc test (Scheffe) indicated no significant difference between local and interstate residents on 'Aboriginal history', and 'places of geographical interest'. No significant differences were found between local S.A. and overseas residents for 'hints to help visitors see wildlife' and 'how weeds are managed'.

Visitors were asked in an open-ended format to write down the questions that they would like to ask about FCNP. This was asked both in the pre-visit and post-visit questionnaires. Table 4.17 lists the five most frequently mentioned topics. Percentages represent the percentages of respondents that answered the question. However, only 29% of pre-visit respondents and 31% of post-visit respondents gave a response, and the high proportion of missing data indicates that these results should be viewed with caution. The most common question that visitors had both before and after a visit to FCNP was "where can we see the animals/wildlife?" There were no significant differences based on age, gender and place of residence with reference to questions that visitors would like to ask.

Table 4.17:

Questions Visitors Would Like To Ask about FCNP

Questions: Pre-visit	**Percentage of respondents answering question**
Where do I find/see wildlife	19
Are visitors careless/damaging?	16
Why was Flinders Chase selected as a National Park	11
How much does it cost to maintain the park	6
What can I see/do?	4
Question: Post-visit	**Percentage of respondents answering question**
Where do I find the wildlife or information about finding wildlife?	19
When will the roads be sealed?	14
Will there be more guided tours or presence of guides in the future?	7
How is wildlife/environment maintained with large visitor numbers?	5
Why was Flinders Chase selected as a National park, history/geography of park	5

When asked to rate the amount of information about FCNP, 32.5% of post-visit respondents indicated there was not enough information, while 65.6% felt there was about the right amount of information, and 1.9% said there was too much.

4.4.4 Satisfaction with wildlife experiences

Visitors were asked to rate their satisfaction specifically with their wildlife experience. Overall satisfaction scored a mean of 7.9 on a scale of 0 (not at all satisfied) to 10 (very satisfied). While 72% gave a score of 5 or above, as Figure 4.9 shows, the bulk of responses fell around the score of 8.

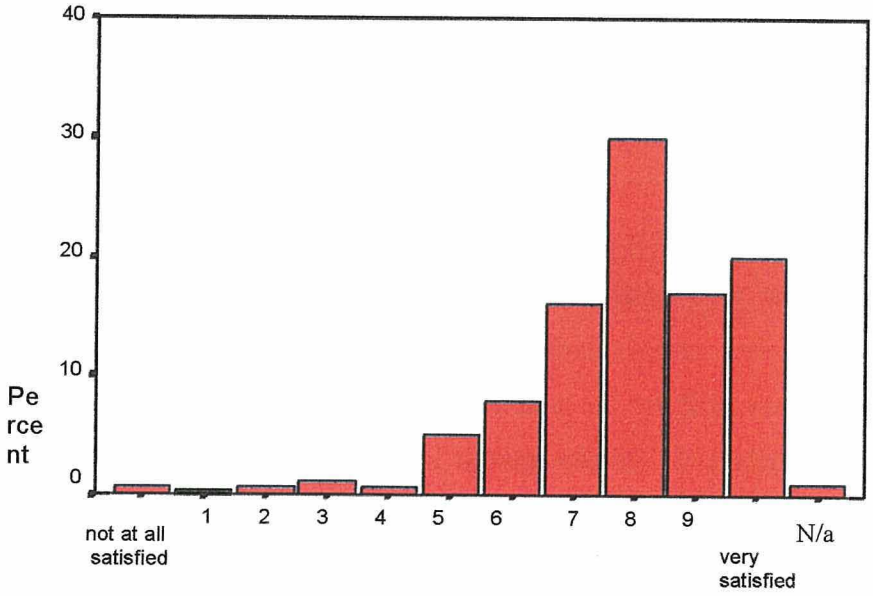


Figure 4.7. Overall satisfaction with the FCNP wildlife experience

Table 4.18 shows the satisfaction ratings for specific aspects of the wildlife experience at FCNP. While all mean ratings were above 3 out of a possible 4, visitors were most satisfied with the condition of the natural environment and how close they could get to the animals. They were slightly less satisfied with the number and variety of animals seen, and the ease with which they could see them.

Table 4.18

Satisfaction with Wildlife Experiences

Features	**Not at all satisfied**	**Not very satisfied**	**Somewhat satisfied**	**Very satisfied**	***Mean***
The number of wildlife I saw	2.4	11.2	45.6	40.8	*3.32*
How close I was able to get to wildlife	2.4	5.4	36.6	55.6	*3.52*
The variety of wildlife I saw	1.5	14.0	43.5	41.0	*3.31*

How easy the wildlife were to see	2.4	11.8	39.3	46.5	*3.37*
The condition of the natural environment	0.6	1.8	33.6	64.0	*3.68*

*Scale was from 1 (not at all satisfied) to 4 (very satisfied)

There were no significant differences for overall satisfaction based on gender, age or place of residence, however there were some differences for ratings of specific elements of the experience. Table 4.19 shows that visitors who reside overseas were significantly less satisfied with the number of wildlife seen, closeness to wildlife, variety of wildlife and ease of seeing wildlife. Differences were tested using One-way ANOVA.

Table 4.19

Satisfaction with Elements of the Wildlife Experience by Residence

Satisfaction Elements	**Local South Aust. Mean score**	**Inter-state mean score**	**Over-seas mean score**	**F**	**Sig.**
Ease of seeing wildlife	3.41	3.57	3.06	8.89	.000
Number of wildlife seen	3.30	3.54	3.05	8.74	.000
Variety of wildlife	3.37	3.47	3.01	7.25	.001
Closeness to wildlife	3.54	3.67	3.30	5.10	.007

* Rating scale was from 1 (not at all satisfied) to 4 (very satisfied)

* Post-hoc test (Scheffe) indicated significant differences between all groups for these variables.

Differences were also noted for satisfaction with elements of the wildlife experience based on age. Older respondents were significantly less satisfied with the number and variety of wildlife seen, as indicated by One-way ANOVA (Table 4.20). There were no significant differences based on gender.

Table 4.20

Satisfaction with Elements of the Wildlife Experience by Age

Satisfaction Element	15-30 years mean score	31-50 years mean score	51 + years mean score	F	Sig.
Number of wildlife seen	3.54	3.34	3.20	2.51	.022
Variety of wildlife	3.76	3.72	3.62	3.52	.003

* Rating scale was from 1 (not at all satisfied) to 4 (very satisfied)
* Post-hoc test (Scheffe) indicated significant differences between all groups for these variables.

In considering reasons why older and international visitors may be less satisfied with elements of the wildlife viewing experience, Chi-square tests were conducted for differences based on travelling independently or as part of a tour group. It was hypothesised that tour group visitors may have less opportunity to view wildlife because tours are typically conducted during the day when many animals are less active, have a busy itinerary and spend limited time at each attraction. Tables 4.21 and 4.22 show crosstabulation tables for participation in organised tours by age of respondent, and participation in organised tours by place of residence. These indicate that organised tour groups contain more international and older visitors, and suggest that the lower satisfaction ratings given by older and international visitors may be influenced by their higher participation in organised tours. This is further supported by the lower satisfaction scores for wildlife numbers seen, closeness to wildlife and variety of wildlife, given by tour group members compared to independent visitors (Table 4.23).

Table 4.21

Travel with Organised Tour by Age

Age	**Travel with Tour**	**Not travel with tour**	**Total**
15-30 years	49 30.2%	113 69.8%	162 100%
31-50 years	76 29.2%	184 70.8%	260 100%
51+ years	114 49.8%	115 50.2%	229 100%
Total	239 36.7%	412 63.3%	651 100%

*Chi-square value 26.01, sig.=.000

Table 4.22

Travel with Organised Tour by Place of Residence

Residence	Travel with Tour	Not travel with tour	Total
Local South Aust.	22 10.7%	183 89.3%	205 100%
Interstate	142 49.5%	145 50.5%	287 100%
Overseas	88 46.6%	101 53.4%	189 100%
Total	252 37.0%	429 63.0%	681 100%

*Chi-square value 87.26; sig.=.000

Table 4.23

Satisfaction with Wildlife Experiences by Tour Group Membership

Satisfaction variable	**Mean score tour group**	**Mean score independent visitors**	**t**	**Sig.**
Wildlife numbers seen	3.17	3.40	2.29	.023
Closeness to wildlife	3.39	3.59	1.98	.048
Variety of wildlife	3.14	3.41	2.66	.008

*Satisfaction scale from 1 (not at all satisfied) to 4 (very satisfied)

Discriminant Analysis was attempted on the satisfaction variables, in order to investigate which satisfaction variables discriminated between groups of visitors. However, there were difficulties associated with multicollinearity, or high correlation between the satisfaction variables. Bishop and Drew (1999) state that Discriminant Analysis relies on the assumption that the predictor variables are related to the grouping variable and are independent of each other. They suggest that combining or removing variables may resolve this problem. However, in the present analysis almost all satisfaction variables were highly correlated, and therefore application of Discriminant Analysis would not inform the study.

Visitors were asked to indicate the number, and which, species of animals they saw at FCNP. Figure 4.10 shows that 20% of respondents saw 5 species of animals, and that most saw between 3 and 8 species. Relatively few respondents saw either none, or just one or two species. A Pearson Correlation found a significant, but not substantial, relationship between number of species seen and satisfaction (2-tailed sig. 0.000; value=0.263). Similar results were found for the relationship between number of species seen and satisfaction with elements of the wildlife experience. Results of these analyses were 'wildlife numbers seen' (Pearson correlation value =.114; 2-tailed sig. = 0.038); 'variety of wildlife' (Pearson Correlation value = .178, 2-tailed sig. = 0.001); and 'environmental condition' (Pearson Correlation value = -.176, sig. = 0.001).

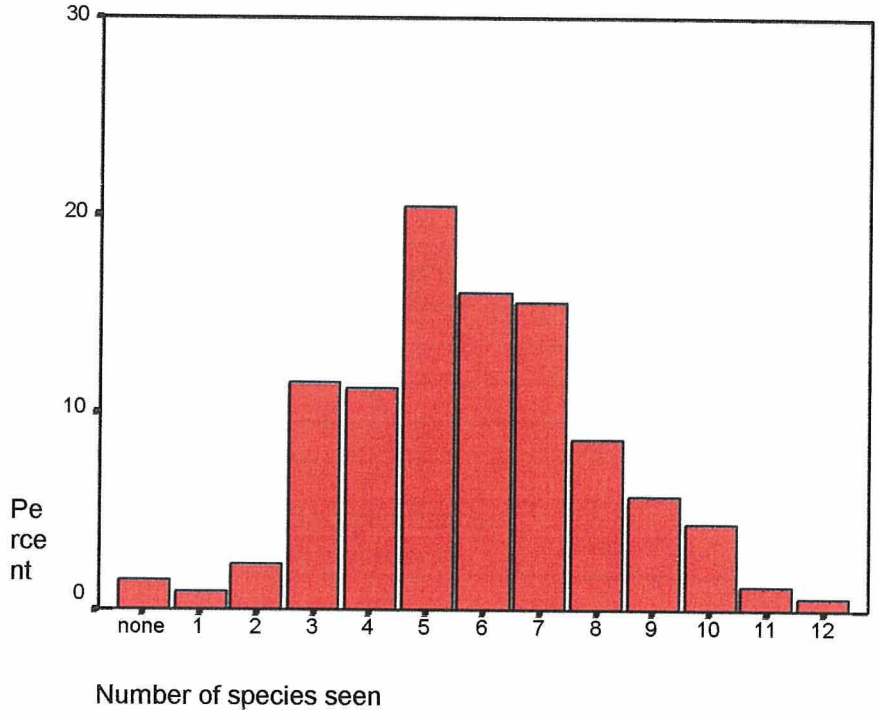


Figure 4.8. Number of wildlife species seen while at FCNP.

In the pre-visit questionnaire, visitors were given the opportunity to list the species they expected to see. In the post-visit questionnaire, visitors were asked to indicate which species they had seen. While 78% of visitors expected to see wildlife in FCNP, only 65% were able to list at least one species they expected to see. Table 4.24 compares the results for animals that were expected and those that were seen while in FCNP. In most cases, the percentage of visitors who reported seeing the species exceeded the percentage of visitors who expected to see them. However, these results must be viewed with caution, as the pre-visit question was open-ended and the post-visit question consisted of a checklist of animals that visitors could have seen.

Table 4.24

Expected Wildlife Sightings Compared to Actual Sightings.

Species	Percentage of respondents expecting to see species	Percentage of respondents seeing species
Fur seals	21.8	86.8
Sea lions	23.3	63.0
Kangaroos	31.8	79.4
Koalas	39.4	64.8
Cape Barren Geese	1.0	77.7
Platypus	3.5	1.7
Whales	0.7	0.3
Birds	7.0	81.9
Echidna	4.9	35.0
Snakes	Not specifically mentioned	19.2
Goannas	0.6	41.3
Saw other species	22.9	18.3

* In the pre-visit sample, 65% of respondents indicated a species they expected to see. Table percentages are percentages of respondents who answered the question. In the post visit sample, 98% of respondents indicated the species of wildlife they saw.

There were no significant differences for the number of species that visitors reported seeing based on age or gender, however there were differences based on place of residence. International visitors reported seeing significantly fewer species than did other visitors. Local South Australians reported seeing a mean of 5.96 species or types of animal, interstate visitors reported seeing a mean of 6.16 species and international visitors reported seeing a mean of 4.76 species. A One-way ANOVA indicated these differences were significant (F=9.1; sig. = .000).

While overall satisfaction was not strongly linked to number of species sighted (Pearson Correlation indicated 2-tailed sig. 0.000; value=.263), visitors who reported seeing specific species, for example Fur Seals, were significantly more satisfied than visitors who did not see them. Table 4.25 shows the mean satisfaction scores for visitors who saw and did not see various species, and the corresponding Independent Samples T-test results. Visitors who reported seeing

Fur Seals, Sea-Lions, Kangaroos, Echidnas and Goannas gave significantly higher overall satisfaction scores than did visitors who did not see these species.

Table 4.25

Overall Satisfaction Based on Sightings of Wildlife Species

Wildlife Species	Mean satisfaction where species not seen	Mean satisfaction where species seen	t	Sig. (2-tailed)
Sea-Lions	7.27	8.35	-5.95	.000
Echidna	7.81	8.25	-2.39	.017
Goannas	7.78	8.21	-2.30	.023
Kangaroos/Wallabys	7.48	8.07	-2.18	.033
Fur seals	7.42	8.13	-2.12	.035
Koalas	7.83	8.03	No significant difference	
Cape Barren Geese	7.74	8.02	No significant difference	
Birds	7.55	8.04	No significant difference	
Snakes	7.88	8.29	No significant difference	

* Satisfaction rating scale was from 1 (not at all satisfied) to 10 (very satisfied).

In addition to overall satisfaction, differences were also noted for ratings of satisfaction elements based on sightings of wildlife. Satisfaction scores for numbers of wildlife seen, variety of wildlife, closeness to wildlife and ease of seeing wildlife were consistently higher where visitors reported seeing various species. Table 4.26 shows the mean satisfaction ratings and T-test results for variables where a significant difference was found.

Table 4.26

Satisfaction with Elements of the Wildlife Experience Based on Wildlife Species Sightings

Satisfaction Element	Mean satisfaction where species not seen	Mean satisfaction where species seen	t	Sig. (2-tailed)
Fur Seals				
Ease of seeing wildlife	3.08	3.29	-2.46	.017
Environmental cond.	3.08	3.35	-2.14	.032
Sea-Lions				
Wildlife numbers seen	2.94	3.44	-6.35	.000
Closeness to wildlife	3.26	3.59	-4.28	.000
Variety of wildlife	2.89	3.45	-7.08	.000
Ease of seeing wildlife	3.07	3.45	-4.53	.000
Kangaroos				
Wildlife numbers seen	2.92	3.35	-4.29	.000
Closeness to wildlife	3.20	3.54	-3.57	.000
Variety of wildlife	2.90	3.34	-4.36	.000
Ease of seeing wildlife	3.00	3.39	-3.77	.000
Koalas				
Variety of wildlife	3.13	3.32	-2.14	.033
Cape Barren Geese				
Variety of wildlife	3.01	3.32	-3.10	.002
Wildlife numbers seen	3.10	3.31	-2.09	.037
Birds				
Wildlife numbers seen	2.94	3.33	-2.89	.005
Closeness to wildlife	3.20	3.53	-2.44	.018
Variety of wildlife	2.90	3.32	-3.91	.000
Ease of seeing wildlife	3.06	3.37	-2.35	.022
Echidna				
Wildlife numbers seen	3.15	3.48	-4.04	.000
Closeness to wildlife	3.40	3.61	-2.94	.003
Variety of wildlife	3.09	3.57	-5.97	.000
Ease of seeing wildlife	3.25	3.44	-2.16	.032
Snakes				
Wildlife numbers seen	3.14	3.46	-4.06	.000
Closeness to wildlife	2.95	3.37	-2.95	.000
Variety of wildlife	2.90	3.30	-4.21	.000
Goannas				
Wildlife numbers seen	3.16	3.41	-3.36	.001
Closeness to wildlife	3.39	3.59	-2.81	.005
Variety of wildlife	3.13	3.43	-3.79	.000
Ease of seeing wildlife	3.22	3.44	-2.66	.008

* Rating scale was from 1 (not at all satisfied) to 4 (very satisfied).

When asked their favourite species, respondents indicated that Sea-Lions were the most popular, followed by Koalas and Fur Seals. Table 4.27 shows the percentage of respondents listing each species as their favourite. The best features of respondents' wildlife experiences (an open-ended question) at FCNP was being able to see wildlife in its natural habitat, seeing fur seals, and being able to observe wildlife close-up. The main suggestions for improvement were to provide more information on seeing wildlife, to upgrade the information and the visitor centre, and to seal the roads. Table 4.28 shows the most frequently mentioned best features and suggestions for improvement. There were no significant differences for favourite species, best features or suggestions for improvement based on the demographic variables age, gender or residence.

Table 4.27

Favourite Animals at FCNP

Species	**Percentage of respondents listing as favourite**
Sealions	36.9
Koalas	13.7
Fur seals	12.7
Echidna	8.0
Kangaroos	7.3
Goannas	4.5
Other	4.5
Cape Barren geese	2.5
Birds	2.2

Table 4.28

Best Features and Suggestions for Improvement

Best Feature	**Percentage of respondents**	**Suggested improvements**	**Percentage of respondents**
Wildlife in natural environment	16	To see more wildlife/ info on where to find wildlife	12
Sea-lions	16	Visitor centre – upgrade, provide more information	10
Able to observe wildlife close up	11	Seal roads with bitumen	10
Numbers and/or variety of wildlife	10	Better signage	8
Natural beauty of animals	7	Allow animal feeding	6
Admiral's Arch & fur seals	6	See more kangaroos encourage interaction	4
Everything	4	To be able to see platypus	4
Koalas	3	More guided tours/ presence of guides	4
67% respondents answered question		48% of respondents answered question	

4.4.5 Summary of results from total sample

Table 4.29 is a summary table that shows which variables were analysed in the preceding Results section, and on which variables significant differences were identified. The following description explains the nature of the differences found.

Table 4.29

Summary of Analyses from Total Sample

Variables	Pre/ Post visit	Age	Gender	Residence
Age	No	N/A	No	Yes
Gender	No	No	N/A	No
Residence	No	Yes	No	N/A
Motives	N/A	Yes	Yes	Yes
Features	No	Yes	Yes	Yes
Interpretive topics	No	Yes	Yes	Yes
Overall satisfaction	N/A	No	No	No
Satisfaction with elements of wildlife experience	N/A	Yes	No	Yes
Number of species seen	N/A	No	No	Yes
Favourite species	N/A	No	No	No
Best features of experience	N/A	No	No	No
Suggestions for improvement	N/A	No	No	No

Key Results:

Features, motives, interpretation and satisfaction

- Of all features attracting visitors to FCNP, wildlife and nature related features were dominant. Looking specifically at features relating to wildlife settings, visitors were particularly interested in seeing wildlife in the natural environment, seeing wildlife behave naturally, and seeing unique and unusual wildlife. Visitors indicated lower and less consistent interest in feeding/touching wildlife.
- Wildlife related topics generated the highest levels of interest as interpretive topics.

- Overall, satisfaction with the wildlife experience was moderate, scoring a mean of 7.9 on a scale of 0 (not at all satisfied) to 10 (very satisfied). Visitors were most satisfied with the condition of the natural environment, and slightly less satisfied with the number/variety of wildlife, based on mean rating scores. Despite the lower satisfaction scores for number/variety of wildlife seen, the majority of visitors (72%) saw 5 or more species of wildlife.
- The best features of the wildlife experience at FCNP were seeing wildlife in its natural habitat, and seeing wildlife close-up. The main suggestions for improvement were to provide more information on how to see wildlife, upgrade the information/visitor centre, and seal the roads. The favourite animals were the Australian Fur Seals, Koalas and New Zealand Sea Lions.

Demographic differences

Gender

- Females consistently rated all motives for visiting Kangaroo Island higher than did males, and the differences were significant for motives relating to wildlife, nature, wilderness, learning and scenic and historic sites. Females also consistently rated all features of wildlife experiences as more important than males, and the differences were significant for almost all features. Females were also consistently more interested in all interpretive topics, and the differences were significant for over half of the topics listed. Topics where significant differences were found included all wildlife and nature based topics.

Age

- Younger respondents (15-30 age group) were significantly more motivated by spending time with family and friends, and getting away from others, and were relatively more interested in touching and feeding wildlife (although mean scores were still low relative to the other features). Overall, they were less interested in most interpretive topics, and had the highest satisfaction with number and variety of wildlife seen. They were more likely to be from Overseas.
- Respondents in the middle age group (30-50years) were more motivated by experiencing wilderness and getting away from others. Having interesting

information about wildlife was important to this group, and their satisfaction scores were moderate. They were more likely to be from South Australia.

- Respondents in the oldest group (51+ years) were motivated to visit Kangaroo Island by historic sites, scenery and learning. They rated knowledgeable guides and ease of seeing wildlife as significantly more important than did the other groups, and were generally more interested in all interpretive topics, particularly impact minimisation, plants of FCNP, and the management of weeds, feral animals and fire. They were significantly less satisfied with the number and variety of wildlife seen, although there was no significant difference in the number of species they reported seeing compared to the other groups. This group was more likely to be part of an organised tour, and more likely to be from interstate.

Residence

- Local residents were significantly more attracted by spending time with family and friends, rest and relaxation, being active and getting away from others. They rated all features of wildlife experiences as relatively less important, with the exception of the items 'pleasant environment' and 'little evidence of human impact'. They were moderately interested in interpretive topics compared to the other groups, and indicated relatively high satisfaction with features of wildlife experiences. They were more likely to be in the 30-50 year age group, and to be travelling independently.
- Interstate residents were significantly more attracted by historic sites, scenic sites and learning. They were the group most interested in wildlife being easy to see, and having knowledgeable guides. They were generally more interested in most interpretive topics than other age groups, reported seeing the most species of wildlife and had the highest satisfaction scores for features of the wildlife experience. Interstate residents were most likely to be travelling with an organised tour, and were likely to be in the 51+ age group.
- International visitors were the group most attracted by wildlife and getting close to nature. In terms of features of the wildlife experience, they rated unique/unusual wildlife, getting close to wildlife, information about wildlife, and seeing wildlife in the natural environment as significantly more important than other resident groups. They were more interested in Aboriginal history than other

groups, had the lowest satisfaction ratings for numbers, variety , closeness and ease of seeing wildlife, and reported seeing less wildlife species than other groups. They were more likely to be in the younger (15-30 years) age group, and more likely to be travelling as part of an organised tour.

4.5 Results Based on Levels of Interest in Viewing Wildlife

Results from both the Exploratory study and Rainforest Habitat indicated that there were identifiable levels of specialisation in wildlife viewing within groups visiting wildlife attractions. This section of results compares responses from FCNP visitors who had varying levels of interest in viewing wildlife. Table 4.30 shows the proportion of FCNP visitors who reported having the indicated levels of interest in wildlife. Compared to the samples from the Exploratory study and Rainforest Habitat, the FCNP sample had higher levels of interest in wildlife. Over 80% either include wildlife as part of their travel decisions or considered wildlife one of the most important factors in their travel decisions.

Table 4.30

Interest in Viewing Wildlife

Interest Level	**Exploratory study**	**Rainforest Habitat**	**FCNP**
The opportunity to view wildlife is one of the most important factors in my travel decisions	7.1%	16.0%	35.5%
The opportunity to view wildlife is included as part of my travel decisions	32.1%	46.2%	44.8%
Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	56.5%	37.0%	17.4%
I am not interested in viewing wildlife while on holiday	3.4%	0.5%	1.4%
I prefer to avoid wildlife while on holiday	0.8%	0.3%	0.9%

The respondents who indicated they were not interested in wildlife or preferred to avoid wildlife were excluded from further analyses due to the small number. The remaining groups continue to be described as:

Enthusiasts: The opportunity to view wildlife is one of the most important factors in my travel decisions.

Interested: The opportunity to view wildlife is included as part of my travel decisions.

General: Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things.

4.5.1: Frequency of participation in wildlife viewing

A one-way ANOVA was conducted to establish whether people who were more interested in wildlife also travel more frequently to wildlife venues. Respondents were asked to specify how many times in the last 12 months they visited captive venues, went to places to view wildlife, or went on specific wildlife trips. Results indicate there was a significant difference ($F=3.9$; sig. = 0.038) in participation in wildlife tourism based on interest in wildlife. Table 4.31 shows the mean number of times each interest group had travelled to wildlife venues in the previous 12 months. As expected, the higher the interest in wildlife, the more visitors had participated in wildlife tourism.

Table 4.31

Overall Participation in Wildlife Viewing by Interest Group

Interest in Wildlife	Mean number of times visited wildlife venues
Enthusiast	10.1 times
Interested	7.3 times
General	2.5 times

A post-hoc test (Scheffe) indicated the General group was significantly different from the other groups ($p<0.05$). The differences between the Interested and Enthusiast groups were not significant at $p<0.05$.

In addition to participating in wildlife tourism more frequently overall, there was also a significant difference in frequency of travel to various types of wildlife

experiences. A one-way ANOVA indicated significant differences between the interest groups in travel to captive environments (F=4.9; sig. = 0.008) and on specialised wildlife tours (F=3.1, sig. = 0.045). The mean number of times these venues were visited in the last 12 months by interest group is shown in Table 4.32. A post-hoc test (Scheffe) indicated the significant difference was between the Enthusiast group and the General group. While travel to other types of wildlife venues also increased as interest in wildlife increased, the differences were not significant at $p<0.05$ for other types of wildlife venues. This was a different result for the Rainforest Habitat study where the Enthusiast group was distinguished by their participation in specialised tours and visits to places where wildlife is often seen, but not in travel to captive environments. In the FCNP study, Enthusiast visitors had significantly higher participation in travel to both captive environments and specialised tours.

Table 4.32

Participation in Different Wildlife Experiences by Interest Group

Type of wildlife experience	**General group mean times visited**	**Interested group mean times visited**	**Enthusiast group mean times visited**	**F**	**Sig.**
Trip to zoo/aquarium	.85	1.70	2.82	4.9	.008
Land based wildlife specific tour	.29	1.26	2.17	3.1	.045
Land based trips to where wildlife often seen	.82	2.42	3.52	No significant difference	
Water based wildlife specific tour	.22	.84	.53	No significant difference	
Water based trips to where wildlife often seen	.32	1.04	1.05	No significant difference	

4.5.2 Demographic differences

Chi-square tests indicated no significant differences existed between the interest groups for gender of respondents. One-way ANOVA indicated that there was a significant difference (F=4.3; sig. = .024) between the mean ages of the groups. The mean age of the General group was 39.7 years, while the Interested and Enthusiast groups were older, at 45.2 years and 44.2 years respectively. Significant differences were also found for place of residence. A chi-square test indicated a significant difference (value 21.6, $p<0.01$) between the groups based on place of residence. Table 4.33 is a crosstabulation table that shows the place of residence for the three groups, and shows that the General group contains more local South Australians and less International visitors, while the Enthusiast group contains more International visitors and less South Australians.

Table 4.33

Place of Residence by Interest Group

	General group	**Interested group**	**Enthusiast group**	**Total**
International	15 8.3%	89 49.2%	77 42.5%	181 100%
Domestic (Except SA)	52 18.2%	125 43.9%	108 37.9%	285 100%
Local (South Australia)	50 25.8%	87 44.8%	57 29.4%	194 100%
Total	117 17.7%	301 45.6%	242 36.7%	660 100%

4.5.3 Features of the wildlife tourism setting

The importance of various features of the setting for visitors with different interest levels was considered by asking what features attracted them to visit FCNP. Table 4.34 indicates the results of One-way ANOVAs for a list of motives for visiting FCNP. Significant differences between the groups were evident for all wildlife,

nature, wilderness and learning features, but not for social, relaxation and sightseeing features. Where a significant difference was found, the means indicated that the importance of the features increased as the respondents' interest in wildlife increased.

Table 4.34

Motives for Visiting FCNP by Interest Group

Feature	**Mean score General group**	**Mean score Interested Group**	**Mean score Enthusiast Group**	**F score**	**Sig.**
Opportunities to see wildlife	3.17	3.65	3.87	65.65	.000
Chance to get close to nature	3.13	3.59	3.71	35.72	.000
Place to spend time with family/friends	3.01	2.74	2.87	No significant difference	
Opportunity to experience wilderness	3.22	3.46	3.61	12.04	.000
Opportunity to visit historic site	2.71	2.77	2.83	No significant difference	
To visit famous scenic sites	3.11	3.23	3.24	No significant difference	
Opportunity for rest and relaxation	2.98	2.80	2.71	No significant difference	
Opportunity to be active	2.46	2.53	2.61	No significant difference	
Chance to get away from others	2.47	2.33	2.55	No significant difference	
Other person wanted to come	2.08	2.03	2.08	No significant difference	
Important part of Kangaroo Island experience	3.23	3.34	3.46	3.61	.028
Learning or educational experience	2.61	3.08	3.27	24.95	.000

* Rating scale was from 1 (not at all important) to 4 (very important).

A post-hoc test (Scheffe) indicated that all groups were significantly different from each other for all motives where a significant difference was found. The only exception was for the motive "important part of the Kangaroo Island experience", where the difference was between the General and the Enthusiast groups only.

When asked what features of the wildlife setting were important to respondents, significant differences were found for a number of features. Table 4.35 shows the results of One-way ANOVA, which indicated significant differences for 11 of the 15 features. Mean scores show the consistent trend that importance of features of the wildlife setting increase as interest in wildlife increases. Results with the largest differences in mean score and the largest F scores were for features relating to seeing large numbers of unique wildlife, ability to get close, information on wildlife and natural aspects of the experience. This result was not consistent with that of the Rainforest Habitat study, where no significant difference was identified between the interest groups on the importance of features.

Table 4.35

Features of the Wildlife Tourism Setting by Interest Group

Feature	**Mean score General group**	**Mean score Interested Group**	**Mean score Enthusiast Group**	**F score**	**Sig.**
Interesting information about the wildlife	2.87	3.27	3.53	41.18	.000
Seeing wildlife behave naturally	3.33	3.68	3.82	34.39	.000
Large numbers of wildlife	2.73	3.06	3.39	34.10	.000
Seeing wildlife in their natural environment	3.41	3.71	3.83	27.25	.000
Ability to get close to wildlife	3.00	3.38	3.56	26.90	.000
Unique/unusual wildlife	3.17	3.49	3.65	24.44	.000
Large variety of wildlife	2.96	3.22	3.40	15.54	.000

Seeing rare/endangered wildlife	3.09	3.35	3.49	12.69	.000
Wildlife easy to see	2.98	3.18	3.29	6.45	.002
Limited visitor numbers	2.80	2.97	3.13	6.56	.002
Knowledgeable guides/staff	3.09	3.28	3.32	3.67	.026
Pleasant environment	3.18	3.23	3.35	No significant difference	
Feeling safe	3.00	3.09	3.13	No significant difference	
Little evidence of human impact	3.23	3.28	3.37	No significant difference	
Ability to touch/feed wildlife	2.11	2.29	2.28	No significant difference	

* Rating scale was from 1 (not at all important) to 4 (very important)

Post-hoc test (Scheffe) indicated the differences were between all groups, except for the features "knowledgeable staff/guides", "wildlife easy to see" and "limited visitor numbers" where the differences were between the General and the Enthusiast groups.

4.5.4 Interpretation

When asked to rate how interested they were in learning more about various topics, a number of significant differences were noted between the General, Interested and Enthusiast visitors, which included (but was not limited to) every topic related to wildlife. Table 4.36 shows results from One-way ANOVAs for interest in each interpretive topic, and shows that in all cases, the mean score for interest in the interpretive topic increased as interest in wildlife increased. This indicates that higher levels of interest in wildlife is linked to greater interest in interpretation and learning, and that interest in learning extends to other nature based topics as well as those specifically concerning wildlife.

Table 4.36

Interest in Interpretive Topics by Interest Group

Topic	Mean score General group	Mean score Interested Group	Mean score Enthusiast Group	F score	Sig.
Understanding of biodiversity	2.67	3.03	3.24	21.58	.000
Wildlife in Flinders Chase	3.37	3.65	3.77	19.37	.000
Understanding of ecosystems	2.79	3.15	3.27	16.99	.000
Plants of Flinders Chase National park	2.89	3.20	3.34	14.33	.000
How fire is managed	2.69	2.88	3.11	10.34	.000
Aboriginal history with KI	2.62	2.99	3.06	9.46	.000
Hints for viewing wildlife	3.21	3.43	3.55	9.32	.000
Ancient giant animals of Flinders Chase	3.03	3.22	3.33	6.42	.002
How weeds are managed	2.70	2.84	3.04	6.75	.001
Wildlife impact minimisation	3.23	3.37	3.48	5.50	.004
How feral animals are managed	2.96	3.09	3.24	4.77	.009
Environmental impact minimisation	3.27	3.39	3.49	4.19	.016
Shipwrecks	3.10	3.14	3.01	No significant difference	
Lighthouses	2.91	3.03	2.92	No significant difference	
Pastoral land use	2.60	2.63	2.55	No significant difference	
Places of geographical interest	3.39	3.55	3.50	No significant difference	

* Rating scale from 1 (not at all interesting) to 4 (very interesting).

There were no significant differences between the groups on the types of questions they would most like to ask either before or after a visit to FCNP. The results for the sample were covered in Section 4.4.2.

4.5.5 Satisfaction with the wildlife experience

Given the importance placed on wildlife viewing particularly by the Enthusiast and Interested groups, a One-way ANOVA was calculated to indicate any differences between the groups in the number of species seen while at FCNP. No significant difference was found (F=1.92; sig=0.147) between the groups on the number of species or types of animals they reported seeing. It is possible that there were differences in the overall quantity of animals seen, however the survey question asked which species were seen, not how many of each species.

Table 4.37 shows the percentage of visitors in each group that reported seeing the listed animal. The table shows that although the differences were not significant, in most cases a larger proportion of the Enthusiast group saw the listed species than the General group (for example koala). In many cases, the proportion of visitors who saw animals increased as interest in wildlife increases (for example sea lions). However, there was little consistency in these results, and the overall conclusion was that Enthusiast visitors were not substantially more successful in viewing wildlife than other visitors.

Table 4.37

Types of Animals Seen by Wildlife Interest Group

Animal	General group (%)	Interested group (%)	Enthusiast group (%)
Fur seals	82.8	91.7	85.1
Sea lions	51.7	60.5	70.2
Kangaroos	77.6	79.0	81.0
Koala	62.1	65.0	66.9
Geese	75.9	76.6	79.9
Platypus	1.7	1.9	1.7
Whales	.0	.6	.0
Birds	84.5	79.6	82.6
Echidna	12.1	19.1	22.3
Snakes	12.1	19.1	22.3
Goannas	38.8	42.0	43.1

*Percentages represent the percentage in each wildlife interest group that saw the listed animal

When asked how satisfied they were overall, there were no significant differences amongst the groups. One-way ANOVA indicated there were no significant differences in mean satisfaction for the other features of the wildlife experience at FCNP. The features listed were:

- Number of wildlife I saw
- How close I was able to get to the wildlife
- The variety of wildlife I saw
- How easy the wildlife was to see
- The condition of the natural environment

There were no significant differences on the rating of the amount of information available between the wildlife interest groups. There was no significant difference in the categories of responses for best feature of wildlife experience, nor were there for suggested improvements.

4.5.6 Summary of results based on levels of interest in wildlife

Table 4.38 is a summary table that shows the variables where a significant difference was identified between the Enthusiast, Interested and General groups. The following discussion explains the nature of the differences identified.

Table 4.38

Summary of Results Based on Levels of Interest in Wildlife

Variables	Significant differences between interest groups?	Nature of difference
Participation in wildlife tourism overall	Yes	Participation increased as interest in wildlife increased
Number of times visited captive environments	Yes	Participation increased as interest in wildlife increased
Number of times visited non-captive places where wildlife often seen	No	-
Number of times went on specialised wildlife tours	Yes	Participation increased as interest in wildlife increased
Number of times visited water based places where wildlife often seen	No	-
Number of times went on water based wildlife specific tours	No	-
Gender	No	-
Age	Yes	Interested and Enthusiast respondents older
Residence	Yes	General group more local residents, Enthusiast group more international residents
Motives	Yes	Importance of wildlife, nature and learning increased as interest increased
Features	Yes	Importance increased as interest in wildlife increased
Interpretation	Yes	Interest in nature topics increased as interest in wildlife increased
Number of species seen	No	-

Overall satisfaction	No	-
Satisfaction with specific elements of the wildlife experience	No	-
Amount of information available	No	-
Best features	No	-
Suggestions for improvement	No	-

Key Findings:

- The FCNP sample had the largest proportion of Enthusiast wildlife tourists, with 35.5% indicating that wildlife was one of the most important factors in their travel decisions. This compares to 16% in the Rainforest Habitat sample and 7.1% in the Exploratory study. There was a significant relationship between interest in viewing wildlife and participation in wildlife tourism, with more interested respondents participating more frequently. In addition to participating more frequently overall, Enthusiast group members participated significantly more frequently in travel to captive wildlife environments, and on specialised wildlife tours.
- There were no significant relationships between interest in wildlife and gender. Interested and Enthusiast group members were significantly more likely to be older, and from overseas. General group members were significantly more likely to be local South Australians.
- In the reasons for visiting Kangaroo Island, Enthusiast and Interested group members placed significantly more importance on all wildlife, nature, wilderness and learning motives. There was no significant difference between the groups on social, relaxation and sightseeing motives.
- For the features of the wildlife tourism setting, the FCNP results were in direct contrast to those of Rainforest Habitat. In the FCNP study, significant differences were found between the groups for most of the features of the wildlife tourism setting. The importance of all features consistently increased as interest in wildlife viewing increased.
- For interpretive topics, a consistent pattern was evident where interest in interpretive topics significantly increased as interest in wildlife viewing increased. These results included (but were not limited to) all wildlife related topics.

- There were no significant differences between the groups for satisfaction with the wildlife tourism experience, the best features of the experience, or suggested improvements. There was no significant difference on the number of wildlife species seen.

4.6 Results Based on Cluster Analysis of Respondents

4.6.1 Introduction and rationale

Results from the previous sections relating to the importance of features of the wildlife experience indicated the following:

- Wildlife and wilderness experiences were the dominant reasons for visitors to select FCNP as a place to visit.
- Overall, 78% of visitors expected to see wildlife, which was the highest proportion for all suggested activities.
- When comparing between the General, Interested and Enthusiast groups, significant differences were noted for all wildlife, nature, wilderness and learning features, with these features increasing in importance as interest in wildlife increased.
- Females rated all features as more important than did males, and the differences were significant for 12 of the 15 features. There was a general trend that older respondents also rated features more highly than younger respondents, however this was only significant for 4 of the 15 features. Some differences in importance of features was also noted for respondents in different residential groups.

Examination of differences based on levels of interest in wildlife provided a useful explanation of differences between the responses of visitors. A cluster analysis procedure was conducted to further assist the identification of homogenous groups of respondents within the sample, and to provide a comparison to the Rainforest Habitat sample.

4.6.2 Cluster analysis

The cluster analysis procedure used in the Rainforest Habitat study was repeated in the present study. The K-Means Cluster Analysis procedure was selected as the most appropriate method, because of the large size of the data set, and the ability of K-means to reallocate entities into the most appropriate cluster in subsequent runs

through the data (SPSS Applications Guide, 1999; Everitt, 1980). In the first instance a hierarchical cluster procedure was conducted using Ward's method of clustering to determine an appropriate number of clusters. The dataset was split into two portions, and the procedure run on both portions in order to validate the solution through replication. The variables under consideration were the set of 15 features of the experience, which were initially identified in the Exploratory study and also used in the Rainforest Habitat sample. Several analyses were conducted to determine the most appropriate number of clusters. A three-cluster solution provided the clearest interpretation of the groups and the most stable solution. Table 4.39 shows the number of respondents classified into each cluster, and Table 4.40 shows the mean importance scores for each feature of the experience, by the cluster groups.

Table 4.39

The Three-Cluster Solution

Cluster number	Number in cluster	Percent of sample
1	214	30.1
2	242	34.0
3	121	17.0

Table 4.40

Mean Scores for Features of the Wildlife Experience by Cluster Group

Feature of the experience	Cluster number	Mean score
Large numbers of wildlife seen	1	3.13
	2	2.76
	3	3.74
Unique/unusual wildlife	1	3.57
	2	3.22
	3	3.90
Ability to get close to wildlife	1	3.37
	2	3.05
	3	3.97
Interesting information about the wildlife	1	3.34
	2	2.92
	3	3.79

Seeing wildlife in natural environments	1	3.84
	2	3.38
	3	3.98
Seeing wildlife behave naturally	1	3.83
	2	3.33
	3	3.96
Large variety of wildlife	1	3.29
	2	2.82
	3	3.93
Knowledgeable guides/staff	1	3.46
	2	2.78
	3	3.76
Wildlife easy to see	1	3.40
	2	2.67
	3	3.79
Pleasant environment	1	3.53
	2	2.79
	3	3.69
Feeling safe	1	3.41
	2	2.50
	3	3.58
Little evidence of human impact	1	3.57
	2	2.88
	3	3.60
Ability to touch/feed wildlife	1	2.21
	2	1.93
	3	3.21
Limited visitor numbers	1	3.08
	2	2.62
	3	3.60
Seeing rare/endangered wildlife	1	3.53
	2	2.93
	3	3.83

As was the case with the Rainforest Habitat sample, the clusters have consistent patterns of responses. Respondents in Cluster 2 tended to have the lowest importance scores for all features, while respondents in Cluster 3 tended to have the highest importance scores. Factor Analysis and Discriminant Analysis were used to identify the variables most useful in discriminating between the cluster groups.

4.6.3 Factor Analysis

Factor analysis was conducted in order to summarise the features of the wildlife experiences. A correlation matrix indicated that there were a considerable number of variables with correlations exceeding 0.3, and the matrix was suitable for factoring (Coakes & Steed, 1999). Factor analysis was used both to summarise the essential information contained in the variables, and to reduce problems of multicollinearity prior to application of discriminant analysis. The initial eigenvalues of the factor analysis indicated that three components had eigenvalues greater than one, and this explained 56.47% of the variance. The scree plot confirmed that a three-factor solution was reasonable. Table 4.41 shows the rotated component matrix which summarised the variables as follows:

Factor 1: Features of the Animals

- Large numbers of wildlife seen
- Unique/unusual wildlife
- Ability to get close to wildlife
- Large variety of wildlife

Factor 2: Wilderness & Education Features

- Seeing wildlife behave naturally
- Seeing wildlife in natural environments
- Little evidence of human impact
- Interesting information about the wildlife
- Limited visitor numbers

Factor 3: Visitor Friendly features

- Feeling safe
- Wildlife easy to see
- Pleasant environment
- Ability to touch/feed wildlife

The features "seeing rare/endangered wildlife" and "knowledgeable guides/staff" were complex variables and loaded equivalently on more than one factor. They were removed for further analysis. The Cronbach Alpha for the three factors was .7304, and this reduced if any factors were deleted.

Table 4.41

Rotated Factor Matrix

	Component		
	1	2	3
Large numbers of wildlife seen	.754		
Unique/unusual wildlife	.743		
Ability to get close to wildlife	.727		
Large variety of wildlife	.639		.310
Seeing rare/endangered wildlife	.412	.405	.309
Seeing wildlife behave naturally		.755	
Seeing wildlife in the natural environment	.458	.746	
Little evidence of human impact		.628	
Interesting information about the wildlife		.563	
Limited visitor numbers		.549	
Knowledgeable guides/staff	.320	.400	.326
Feeling safe			.747
Pleasant environment			.696
Wildlife easy to see	.439		.636
Ability to touch/feed wildlife			.622

Extraction method: Principal Components Analysis
Rotation Method: Varimax with Kaiser Normalisation
Rotation converged in 14 iterations

4.6.4 Discriminant Analysis

Using the three-cluster solution as the grouping variable, and the new factor-based variables, discriminant analysis was used to determine which variables were most important in characterising the groups. Tables 4.42 and 4.43 show that Function 1 had the highest eigenvalue, explained 95.6% of the variance, and had the highest

Chi-square statistic. Although function 2 also showed a significant result in Table 4.42, the result was not substantive.

Table 4.42

Eigenvalues of Discriminant Analysis

Function	Eigenvalue	% of variance	Cumulative %	Canonical correlation
1	1.605a	95.6	95.6	.785
2	.075	4.4	100.0	.264

a. first 2 canonical discriminant functions were use in the analysis.

Table 4.43

Chi-square Values for Discriminant Analysis

Test of functions	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.357	588.930	10	.000
2	.931	41.181	4	.000

Table 4.44 shows the structure for each of the functions in the discriminant analysis. The classification indicated that 79.4% of cases were correctly classified. Because each of the three factor-based variables load highly in Function 1, the interpretation of the functions is unclear. This indicates that there are no defining factors that distinguish between the groups, and so no factor should be emphasised when describing the cluster groups.

Table 4.44

Structure Matrix

	Function 1	Function2
FACTOR3 (Visitor Friendly)	.712*	-.187
FACTOR2 (Wilderness and Education)	.585*	-.147
Knowledgeable guides/staff	.466*	-.079
Seeing rare/endang wildlife	.463*	-.028
FACTOR1 (Features of Animals)	.542	-.820*

Pooled within-groups correlations between discriminating variables and standardised canonical discriminant functions
Variables ordered by absolute size of correlation within function
*Largest absolute correlation between each variable and any discriminant function

4.6.5 Cluster group descriptions based on important features of the wildlife experience

While the discriminant analysis procedure failed to identify any factors or variables that clearly differentiated between the cluster groups, the factor analysis was useful in reducing the number of variables to three main factors and two complex variables. These will be used in the following description of the cluster groups.

High Importance Group (cluster 3, n=121)

This group placed the highest importance on all of the features of the wildlife experience, compared to the other groups. This was the only group to indicate that touching/feeding wildlife was important to their experience (although less important than other features). Within their scores, they gave the highest scores to the variables 'seeing animals in their natural environment', 'seeing wildlife behaving naturally' and 'able to get close to animals'. They gave relatively low importance scores to the variables 'limited visitor numbers', 'touch/feed wildlife' and 'little evidence of human impact.

Moderate Group (cluster 1, n=214)

This group had moderate ratings for most variables. The items most important to this group's wildlife experience were 'unique/unusual wildlife', 'wildlife in natural environments' and 'wildlife behaving naturally'. They generally rated wilderness

features as most important to their experience. Less important were the features that related to seeing a large number or variety of wildlife, or being able to touch or feed the wildlife.

Low Importance Group (cluster 2, n=242)

This group generally scored all variables lower than any other group. In relative terms, they were more interested in wilderness features such as 'seeing animals in the natural environment', 'seeing wildlife behaving naturally', 'interesting information about the animals' and 'little evidence of human impact'. They were least interested in large numbers/variety of wildlife, animals easy to see, and touching/feeding wildlife.

4.6.6 Interest in wildlife by cluster group

Table 4.45 is a crosstabulation table that shows that there is a significant difference between the cluster groups on interest in wildlife. The High Importance group had a larger proportion of Enthusiasts visitors and less General visitors. The Low Importance group contained more General visitors, and fewer Enthusiasts. While there was no significant difference between the cluster groups on frequency of travel to wildlife venues, the High Importance group visited a mean of 8.4 places in the last 12 months, while the Moderate group visited 8.2 and the Low Importance group visited 6.2 times.

Table 4.45

Interest in Wildlife by Cluster Group

	Moderate Group	Low Importance Group	High Importance Group	Total
General Group	33 31.7%	62 59.6%	9 8.7%	104 100%
Interested Group	97 38.2%	106 41.7%	51 20.1%	254 100%
Enthusiast Group	79 39.1%	64 31.7%	59 29.2%	202 100%
Total	209 37.3%	232 41.4%	119 21.3%	560 100%

*Chi-square value 27.98; sig=.000

4.6.7 Demographic differences by cluster group

There were no significant differences between the cluster groups for age or place of residence. Chi-square test indicated there was a significant difference in the gender of respondents in the cluster groups. Table 4.46 provides the crosstabulation table. The results indicate that males tended to be in the Low Importance cluster, while females tended to be in the High Importance and Moderate cluster groups.

Table 4.46

Gender of Respondent by Cluster group

	Moderate Group	Low Importance Group	High Importance Group	Total
Male	85 32.0%	142 53.4%	39 14.7%	266 100%
Female	116 41.3%	90 32.0%	75 26.7%	281 100%
Total	201 36.7%	232 42.4%	114 20.8%	547 100%

Pearson Chi-square value 27.414, sig. = .000

4.6.8 Interest in interpretation by cluster groups

ANOVAs indicated that there were significant differences between the cluster groups for their interest in all interpretation topics. Table 4.47 shows the mean scores for interest in the listed topic on a scale of 1 (not at all interested) to 5 (very interested). The results show that the High Importance Group consistently rated each topic highest of the groups, while the Low Importance Group scored each topic lowest. For many topics, the difference between the mean scores of the Moderate Group and the High Importance Group were not large. This is reflected in post-hoc tests (Scheffe) which indicated the significant differences were between the Low Importance Group and the other two groups for all topics except "ancient giant animals of FCNP" where the differences were between all groups.

Table 4.47

Interest in Interpretation by Cluster Group

Topic	Moderate Group	Low Importance Group	High Importance Group	F Score	Sig.
Hints for viewing wildlife	3.64	3.17	3.72	42.64	.000
How fire is managed	3.11	2.58	3.29	38.96	.000
Environmental impact minimisation	3.57	3.13	3.63	34.51	.000
Wildlife impact minimisation	3.55	3.11	3.57	31.31	.000
How feral animals are managed	3.25	2.82	3.42	27.50	.000
How weeds are managed	2.98	2.56	3.22	26.48	.000
Plants of Flinders Chase	3.26	2.90	3.44	24.34	.000
Wildlife in Flinders Chase	3.70	3.45	3.86	19.91	.000
Ancient giant animals of Flinders Chase	3.27	3.02	3.53	18.85	.000
Pastoral land use	2.60	2.35	2.90	15.64	.000

Understanding of biodiversity	3.11	2.85	3.28	14.01	.000
Understanding of ecosystems	3.20	2.94	3.35	13.53	.000
Places of geographical interest (Remarkable Rocks)	3.60	3.35	3.64	11.54	.000
Aboriginal history	3.05	2.73	3.09	9.39	.000
Lighthouses	3.07	2.79	3.13	9.37	.000
Shipwrecks	3.21	2.93	3.21	8.59	.000

4.6.9 Satisfaction with the wildlife experience by cluster group

There was no significant difference in satisfaction between the cluster groups. Mean scores on all wildlife satisfaction variables exceeded 3 on a scale of 1 (not at all satisfied) to 4 (very satisfied).

4.6.10 The cluster groups defined

High Importance Group (cluster 3, n=121)

This group placed the highest importance on all of the features of the wildlife experience, compared to the other groups. This was the only group to indicate that touching/feeding wildlife was important to their experience (although less important than other features). Within their scores, they gave the highest scores to the variables 'seeing animals in their natural environment', 'seeing wildlife behaving naturally' and 'able to get close to animals'. They gave relatively low importance scores to the variables 'limited visitor numbers', 'touch/feed wildlife' and 'little evidence of human impact. This group had more visitors who were Enthusiast, for whom wildlife was one of the most important factors in their travel decisions. The High Interest group contained a higher proportion of females, and were more interested in all interpretation topics than the other groups.

Moderate Group (cluster 1, n=214)

This group had moderate ratings for most variables. The items most important to this group's wildlife experience were unique/unusual wildlife, wildlife in natural environments and wildlife behaving naturally. They generally rated wilderness features as most important to their experience. Less important were the features that related to seeing a large number or variety of wildlife, or being able to touch or feed the wildlife. This group contained a higher proportion of females than males, and a lower proportion of General visitors who do not specifically plan to view wildlife on holidays. They were highly interested in all interpretation topics and were very similar to the High Importance group on interest in interpretation.

Low Importance Group (cluster 2, n=242)

This group generally scored all variables lower than any other group. In relative terms, they were more interested in wilderness features such as seeing animals in the natural environment, seeing wildlife behaving naturally, interesting information about the animals and little evidence of human impact. They were least interested in large numbers/variety of wildlife, animals easy to see, and touching/feeding wildlife. This group contained a higher proportion of males, and was significantly less interested in all interpretation topics than the other groups. This group also had more General visitors, who do not specifically plan to view wildlife while on holidays.

4.7: Discussion

4.7.1 Features of the wildlife tourism setting and motives for visiting FCNP

The survey results from FCNP confirm that wildlife and nature based experiences were of primary importance to most visitors. These were the reasons why visitors travelled to FCNP, they were the most important features of the experience, and they were considered the most interesting topic for interpretation. Specifically, opportunities to see wildlife, chance to get close to nature, and opportunities to experience wilderness were the features which were most important in attracting visitors to FCNP, above other attractions such as historic and scenic sites. Wildlife viewing was also the activity that 78% of visitors expected to participate in, which was the highest proportion from all activities suggested (including scenic driving, scenic sites, walks, relaxation and social activities).

It appears that most visitors to FCNP not only want to view wildlife, they also have a particular orientation toward the activity that favours natural settings and unique wildlife. When asked to rate the importance of different features of the wildlife setting, the highest scoring features were seeing wildlife in their natural environments, seeing wildlife behaving naturally, and seeing unique/unusual wildlife. This emphasis on the natural suggests a more specialised orientation to wildlife viewing (Bryan, 1979; Shackley, 1996). Interestingly, the issue of feeding and touching wildlife again appears to be a contentious one, with visitor responses spread along the response scale from 'not at all important' to 'very important'. This is a similar result to the same question asked of visitors to Rainforest Habitat. It was an interesting result for Rainforest Habitat because it was asked in the context of a captive environment, where visitors may typically expect to have close contact with captive animals. It is also an interesting result for FCNP because when asked which features of the wildlife experience were important, visitors emphasised the importance of animals behaving naturally (96% rated this as somewhat or very important). Yet almost 40% of the sample consider it somewhat or very important to be able to touch and/or feed the wildlife, and 89% consider it somewhat or very important to get close to the animals.

As discussed in Chapter Three, there are a number of issues concerning wildlife feeding that are relevant to this study. Some authors suggest that humans are particularly attracted to touching and feeding animals (More, 1979), and this may be motivated by an underlying desire for interaction (Kreger & Mench, 1995; Burger, 1997). Managing the feeding and touching of wildlife is a common issue for National Parks in Australia (Burger, 1997). FCNP has had its own problems with wildlife feeding (personal communication. Chief Ranger, FCNP). At one time, feeding was encouraged and the sale of kangaroo food was a valuable revenue-raiser at the National Parks shop. The food drew large numbers of wildlife, particularly kangaroos and Cape Barren geese, to the campground and shop area at Rocky River Campsite. Along with the wildlife, feeding also brought a number of problems, including overpopulation, habitat damage, and particularly aggression, injury and property damage from kangaroos. Since the 'no feeding' policy was introduced in 1997 it has been a difficult road to follow. There was a need to educate the visitors who not only wanted to feed the wildlife, but may have been permitted and encouraged to on previous visits (approximately 23% of respondents were repeat visitors in this study). Over time the populations of kangaroos at the campsite have reduced as the 'no feeding' message has been received by both visitors and animals. This has brought a new set of pressures from some tour companies, who complain that there is not enough wildlife for their customers to see in the National Park. This is to some extent confirmed in the results, as older respondents and international respondents gave significantly lower satisfaction scores for numbers, variety and (for overseas visitors) ease of seeing wildlife and getting close to wildlife. Both older respondents and those from overseas were more likely to be travelling with a tour group. However, the no feeding policy has remained not only for the safety of visitors, but also because current National Parks' management hold the opinion that wildlife in National Parks should be kept wild.

In contrast to the Rainforest Habitat study, significant differences were noted between the General, Interested and Enthusiast groups for both the features that attracted them specifically to FCNP, and the features important to them in wildlife

tourism settings. In particular, wildlife, nature and learning features were consistently rated as significantly more important as interest in wildlife increased. For the features that attracted visitors to FCNP, opportunities to see wildlife, chances to get close to nature, wilderness experiences, and learning and education were significantly more important for Enthusiast and Interested group respondents. Post-hoc tests found that the differences existed between all groups – the Enthusiast group rated these motives higher than the Interested group, which in turn rated the motives higher than the General group. Other motives, such as scenery, historic sites, and social and relaxation motives were of similar importance to all groups. It appears that interest in wildlife tourism is consistent with an increased interest in viewing wildlife in the natural environment, and with learning.

In terms of features of the wildlife experience, the results indicated that overall, visitors to FCNP were interested in a wildlife experience that featured natural environments and unique wildlife. This finding is magnified when comparing groups based on levels of interest in wildlife tourism. Significant differences were found between all groups for many of these wildlife-related features. Consideration of mean scores indicated that in all cases, the importance placed on the feature increased as interest in wildlife tourism increased. Enthusiast group respondents were significantly more interested in seeing large numbers of wildlife; unique/unusual wildlife; being able to get close to wildlife; seeing wildlife in the natural environment; seeing wildlife behave naturally; large variety of wildlife; wildlife easy to see; limited visitor numbers; and seeing rare/endangered wildlife. All of these differences are consistent with what has been reported from previous studies of specialist wildlife based tourists (Martin, 1997; Cole & Scott, 1999; Shackley, 1996; Buckley & Panell, 1990). These results can be summarised by saying that wildlife Enthusiasts have a strong desire to see unique or special wildlife, close up, and behaving naturally in their natural environment. It appears that the importance of getting close to wildlife may be in order to study them closely (Martin, 1997) or photograph them (Russel & Ankenman, 1996), rather than to touch or feed them. Visitors were much less interested in touching or

feeding wildlife in the FCNP sample than other wildlife related activities and features.

The results for the FCNP sample were not consistent with those from the Rainforest Habitat study, where there were few significant differences found for the importance of various setting features based on interest in wildlife. The results in the FCNP sample were much more consistent with expectations based on previous studies in the literature review on specialisation.

In terms of the cluster analysis of FCNP visitors, the same pattern of differences were evident as was the case with Rainforest Habitat. There was a High Importance Group, a Low Importance Group, and a Moderate group. These groups rated all of the features consistently within their groups not only for the features important to the experience, but also for other variables in the questionnaire. For example, the High Importance group generally rated motives for visiting Kangaroo Island, features of the wildlife experience, and interest in interpretive topics higher than did the other groups. The High Importance group also contained more Enthusiast group visitors, and females than the other groups. It appears that in both the Rainforest Habitat and the FCNP samples, the use of cluster analysis identified three main groups, which varied consistently in the ratings of interest, importance of features and motives, and (in Rainforest Habitat), satisfaction. When comparing the usefulness of the cluster analysis solution in the case of FCNP visitors, the level of interest in wildlife viewing provided a more understandable explanation of differences between the groups than did the cluster solution.

4.7.2 Interpretation

Given the importance placed on wildlife and nature-based features of the FCNP experience, it is not surprising to see that the highest scoring topics for interpretation were 'information about wildlife' and 'tips for viewing wildlife'. Other high scoring topics were 'places of geographical interest (e.g. Remarkable Rocks)' 'an understanding of ecosystems', 'plants of FCNP', 'tips for minimising impact on wildlife', 'tips for minimising impact on the environment' and 'ancient

animals of FCNP". These results echo the results for important features and reasons for visiting FCNP, as the emphasis on wildlife and the natural environment is consistent.

Consistent and expected results were found for respondents' interest in interpretation, based on their levels of interest in wildlife. As was the case for Rainforest Habitat, interest in wildlife and nature-based interpretation topics increased as interest in wildlife tourism increased. Enthusiast group respondents were highly interested in biodiversity, ecosystems, plants, ancient animals, modern wildlife, wildlife impact minimisation, environmental impact minimisation, hints for viewing wildlife and the management of fire and weeds. This finding appears to consistently apply to tourists who are interested in wildlife and nature – they also consider learning and education to be important (Knudson, Cable & Beck, 1995; Shackley, 1996; QTTC, 1998; Moscardo, 1999). It makes intuitive sense that visitors more interested in wildlife tourism would also be more interested in learning about wildlife. The topics of interest provide further support for the idea that wildlife tourists are also interested in nature and the environment in general.

4.7.3 Satisfaction with the FCNP wildlife experience

Visitors were asked to specifically evaluate their wildlife experiences at FCNP. Results suggested that visitors were generally quite happy with their experience, but the results were not as high as the satisfaction scores evident in the Rainforest Habitat study. The mean score for overall satisfaction was 7.9 out of a possible score of 10. There was also a substantial proportion (28%) that indicated general dissatisfaction with a score less than 5. According to Noe, (1999), a high level of satisfaction exists if the number of respondents in the top satisfaction categories add to above 85%. Average satisfaction ranks from 70% - 80%, while anything below 60% is considered low. In the present study, adding the percentage of visitors who scored either 8, 9 or 10 out of a possible 10 for overall satisfaction gave a score of 68%. From the interpretation described above, this is equivalent to an average-low satisfaction score. However, analysis of scores given for different aspects of the wildlife experience do not provide any definitive reasons behind the

moderate, rather than high, satisfaction. The mean scores for different aspects of the wildlife experience were all above 3 out of a possible score of 4. There was slightly higher satisfaction with the 'state of the natural environment', and lower satisfaction was indicated for the 'number of wildlife seen' and 'variety of wildlife seen'. This was particularly the case for international visitors, and to a lesser extent, to older visitors. International visitors and older visitors were more likely to be part of an organised tour, and so may have had a busy itinerary that did not allow as time for leisurely wildlife viewing, or for seeking out wildlife that were not viewed on the main itinerary route. A significant, but not strong, relationship was found between number of wildlife species seen and satisfaction. The more wildlife species seen, the higher the satisfaction tended to be. However, respondents who reported seeing various species of wildlife did have significantly higher satisfaction scores than those who did not see the species. This was the case for almost every species listed, with the exception of platypus and whales which had a very small number of visitors who reported seeing them. However, the survey did not measure every aspect of the experience that could have had an impact on satisfaction. A number of other factors, for example weather, excitement, fatigue, social groups or previous experiences may have influenced overall satisfaction.

Nearly 95% of visitors saw 3 or more species of wildlife while at FCNP. This is not surprising, as Kangaroo Island is unique for having almost guaranteed sightings of wildlife. The Australian Sea-Lions, for example, are always present at Seal Bay, all year and every day. This is reflected in the high proportion (87%) of visitors who saw them. During the survey period, Australian Sea Lions were also present with the Fur Seals at Cape du Coedic. Many visitors (36%) saw six or more species. This is quite high for wildlife in natural environments, because in many other areas (e.g. Rainforests), wildlife (particularly mammals and marsupials) are difficult to see during the day. In all cases except platypus and whales, the percentage of respondents seeing the animals exceeded the percentage of respondents expecting to see them. This result is, in part, a result of the open-ended nature of the pre-visit question. Response rates in the open-ended questions were not as high as the closed response post-visit question, with only 65% of pre-visit

respondents listing a species they expected to see. By comparison, nearly 98% of post-visit respondents selected the species they had seen. This may have been because some respondents had less firm expectations about which species they would be able to see. However, with these issues considered, experience of wildlife species seen appears to exceed expectations. Given the general success of visitors in viewing wildlife, it is curious that overall satisfaction with the wildlife experience is moderate rather than high. This may be, in part, influenced by promotional material for Kangaroo Island, which places emphasis on the opportunities to see wildlife. Wildlife is certainly present on the island, but not all species advertised can be viewed predictably (for example the Glossy Black Cockatoo, Southern Right Whale, and platypus), and the island is large and thus requires many kilometres of travel to see various species. This may also be a factor in the significantly lower satisfaction scores given by international visitors, which were dominated by visitors from the United Kingdom and Europe, and may be accustomed to travelling shorter distances. This may particularly be the case for the 46.6% of international visitors who participated in day tours. Day tours to Kangaroo Island typically leave Adelaide and drive 110kms to Cape Jervis, then travel 16km (approx. 45mins) by ferry to Kangaroo Island, drive approximately 300km (based on a direct trip to FCNP via Seal Bay, more kilometres if other attractions are included) and then repeat the ferry trip and drive back to Adelaide. To such visitors, a day trip of over 550 km may seem like a long way to go to see a mean of 4.76 species of wildlife.

The favourite species- fur seals, koalas and sealions – were also the species that were seen by the highest proportion of visitors. Interestingly, although kangaroos were seen by 79.4% of visitors, they were only listed as favourite by 7.3%. If the kangaroos were seen at some of the more populated areas such as Rocky River campground or Cape Borda, visitors may have been approached for food, or had their belongings tampered with by curious kangaroos. Despite the non-feeding policy, many kangaroos are still highly habituated and able to be handled and fed (Figures 4.9 and 4.10). In the campground, kangaroos search through campers' belongings for things to eat. The tendency for kangaroos to become pests in

campgrounds and picnic areas may explain why they have relatively low numbers of visitors listing them as favourites.

Figure 4.9. Some kangaroos are habituated to human presence

Figure 4.10: Kangaroo seeking food at Cape Borda

The best features of the wildlife experience in FCNP, asked in an open-ended question, were 'seeing wildlife in the natural environment', 'the fur seals', 'the close up view of wildlife and 'the number/variety of wildlife'. These best features reflect the scores given to important features of the experience and provide more evidence that visitors to FCNP were primarily seeking unique wildlife experiences in natural environments. Suggestions for improvement centered on seeing more wildlife, sealing the roads, having more information on where to find wildlife and upgrading the visitor centre.

There were no significant differences in satisfaction based on levels of interest in wildlife, or based on the cluster analysis groups. There was also no significant difference in the number of species seen between the groups, although the percentage of Enthusiast Group visitors seeing each individual wildlife species was mostly greater than the percentage of General group visitors. However, because the results were not significant it must be concluded that Enthusiast group members

were not substantially more successful in viewing wildlife than other visitors. It was expected that Enthusiast group visitors would clearly be more successful in viewing wildlife, because of their increased interest in wildlife, and the increased importance they placed on viewing wildlife generally. However, the survey only asked which species were seen, and not the number of animals or the quality of viewing. These results are therefore inconclusive.

There were no significant differences between the Enthusiast, Interested and General groups for satisfaction with individual components of the wildlife experience, nor was there for ratings of the amount of information available. Overall, results failed to find any significant differences in ratings of any satisfaction measure amongst the groups. The literature suggests that for wildlife specialists, satisfaction may be linked to the achievement of certain goals, such as sightings of particular species (Vaske et.al, 1982). If this is the case, then Kangaroo Island is a unique destination because of the predictable nature of sightings for many species (sealions, seals, penguins, kangaroos, koalas, geese), and the relative abundance of other species which make sightings likely (echidnas, goannas, bird species). From the number of species sighted, and the percentage of respondents seeing each species, it is clear that the large majority of visitors were successful in viewing a number of wildlife species. As a result, satisfaction ratings were moderate and there were no significant differences amongst the groups. However, it is unclear why the satisfaction scores were not high. Other factors may influence satisfaction, such as the lack of interpretation about wildlife at many sites, or expectations of viewing greater numbers of wildlife. There was nothing in the results to indicate exactly why satisfaction scores for wildlife related items were moderate rather than high.

4.7.4 Differences based on levels of interest in viewing wildlife

Visitors to FCNP indicated that they had higher levels of interest in wildlife than both the Rainforest Habitat and Open-ended studies. Wildlife was included in the travel plans of 80% of visitors, and it was considered one of the most important factors by 35.5% of visitors. As expected, there was a significant difference

between levels of interest in wildlife and frequency of participation in wildlife tourism. Visitors with higher levels of interest also visited wildlife venues more frequently. These results were similar for the Enthusiast and Interested groups, and these were significantly different from the General group. In addition to participating in overall wildlife tourism more frequently, wildlife enthusiasts also travelled more frequently on specialised wildlife tours and to captive wildlife attractions. This result is similar to the Rainforest Habitat study, where Enthusiasts participated significantly more frequently in all types of wildlife experience, including captive environments such as zoos and aquariums. In the Exploratory study, visitors with higher levels of interest in wildlife viewing also participated significantly more frequently in visits to zoos and aquariums, as well as wildlife specific trips and trips to places where wildlife is often seen. The FCNP sample indicates that although these Enthusiast group respondents were surveyed in a natural, non-captive wildlife environment, they also had visited captive environments significantly more frequently than other groups.

Thus in analysing participation across the interest groups over the three studies, a general trend remained true: visitors with higher levels of interest in wildlife participated in all kinds of wildlife tourism more frequently than did visitors with lower levels of interest. These results do not support Duffus & Dearden's (1990) suggestion that as visitors participate more in wildlife tourism, they will engage in more specialised tours and move away from captive environments. Results suggest that rather than moving away from captive environments, a more accurate description is that participation *expands* to include more specialised wildlife tours and trips to places where wildlife are often seen.

There is however, an important qualification to this conclusion. In the Exploratory, Rainforest Habitat and FCNP studies, visitors were asked how many times they had visited zoos, wildlife sanctuaries and aquariums as a single question. It may be the case that visitors with higher levels of interest in wildlife viewing visit sanctuaries more frequently, but not zoos, and this is hidden by the manner in which the question was asked. Therefore, while it is true to conclude that Enthusiasts visit captive settings overall significantly more than do other visitors,

this may or may not be true of zoos, sanctuaries or aquariums individually. Future studies should separate the categories of captive experience in order to investigate this possibility. However, the distinction may be academic only, because the difference between what is considered a 'zoo' or a 'sanctuary' may be difficult to define. Some 'sanctuaries' house animals in small, traditional cages, while some 'zoos' (for example Western Plains Zoo in Dubbo, Australia) house animals in open, free-ranging exhibits.

The finding that respondents in the Enthusiast group reported that they still visit captive environments should not be surprising, because zoos are places where exotic animals can be seen without the investment required to see the animals in their natural environments. Changes in captive wildlife management mean that many enclosures are presented as naturally as possible, and the experience of viewing is often supported by interpretation and education (Woods, 1998). This access to information about the animals in captive environments may also be attractive to wildlife Enthusiasts, because they also indicate a higher interest in interpretation than other groups.

Enthusiast and Interested group respondents were found to be significantly older than General group respondents, with mean ages of 44.2 years and 45.2 years respectively, compared to 39.7 years for the General group. Results from other studies have not been consistent in findings of demographic differences, although some have found the more specialist wildlife viewers to be older (e.g. Martin, 1997). If increasing specialisation is characterised by items such as more time travelling, increased frequency of participation, more money spent and ownership of specialised equipment, (Martin, 1997; McFarlane, 1994; Cole & Scott, 1999) then older people may have more capacity (particularly economic) to pursue their interest. Thus it is not an intuitively inconsistent to find that Enthusiast group respondents are older. However, it may be argued that because the question in this study relates to how *interested* visitors are in viewing wildlife, then interest itself should be independent of financial and other restraints that may restrict younger respondents. Such constraints should impact more on participation than interest. However, in the Open-ended study, the Rainforest Habitat study and the present

FCNP study, interest levels have been strongly linked to participation. Interest and participation may not be entirely separate constructs – interest influences participation, participation encourages interest, and interest may be evaluated with the likelihood of participation in mind.

Significant differences were also found for the place of residence for the Enthusiast, Interested and General groups. The General group consisted of more local South Australian residents, while the Enthusiast group contained more International residents. This result was opposite to that found at Rainforest Habitat, where the Enthusiast group were more likely to live locally or within Queensland, and the General group respondents were more likely to come from interstate or overseas. The reason for these contradictory findings may lie in the fundamentally different natures of the study sites as tourism destinations. Rainforest Habitat is a captive wildlife attraction set in the context of an extremely popular domestic and international tourism destination. Rainforest Habitat is one of the attractions within that destination. Thus General group visitors who visited Cairns and Port Douglas primarily for other reasons, may have visited Rainforest Habitat because it is promoted as a major attraction in the region. On the other hand, Specialist group visitors who lived in the local North Queensland region (mainly Cairns) are likely to visit Port Douglas mainly because they wanted to go to Rainforest Habitat and satisfy their more specialised interest in wildlife. In the case of Kangaroo Island, wildlife is one of the major features of the island and the destination is marketed as a wildlife-viewers paradise. Travel to Kangaroo Island to see wildlife (survey responses indicate this was the main reason for most visitors) requires investment of both time and resources. Respondents living further away are required to make greater investments of time and finances, so it is likely that they have higher interest in wildlife. This is consistent with previous studies on wildlife specialisation which indicates that specialised wildlife tourists travel for longer periods and spend more money pursuing their interest (Martin, 1997; McFarlane, 1994; Cole & Scott, 1999).

4.7.5 Differences based on cluster analysis

The cluster solution shared some features in common with that of Rainforest Habitat. In both cases, a three-cluster solution was most appropriate, and this consisted of a group which rated features as highly important, a group which rated them as low in importance, and a moderate group. However, the Rainforest Habitat sample gave very consistent responses – the High Importance Group had a strong positive skew on every variable, and this caused concern that the cluster analysis solution identified groups with different responses rather than genuine differences in preferences for wildlife tourism. It was particularly concerning that the cluster groups did not differ on interest in wildlife viewing, as that was a key external variable used to assess the appropriateness and interpretability of the cluster groups (Aldenderfer & Blashfield, 1984). In the FCNP sample, the cluster groups were significantly related to interest in wildlife. The High Importance Group contained more respondents who were Enthusiasts, and who rated wildlife viewing as one of the most important factors in their travel plans. The High Importance Group travelled more frequently to wildlife viewing attractions, rated all wildlife features as high in importance, were more interested in all interpretation topics, and contained more females. These results indicate that this group is generally enthusiastic and interested in wildlife. On the other hand, the Low Importance Group tended to be from the General group, which indicated they did not specifically plan to view wildlife on holidays. This group placed less importance on all features of the wildlife experience, were less interested in all interpretation topics, were generally less interested in wildlife, and contained more males. However, there was no significant difference in satisfaction between these groups. In the case of FCNP, the cluster analysis provided a useful distinction between respondents. However, considering the results of both Rainforest Habitat and FCNP, distinguishing between visitors based on their levels of interest in wildlife viewing appears to be the most useful approach overall.

4.8 Conclusions and Directions for Further Study

4.8.1 Features and Motives. Visitors to FCNP were particularly interested in viewing wildlife. Among the reasons why visitors travelled to FCNP, experiencing wildlife and nature were of predominant importance. Over three-quarters of visitors expected to view wildlife, and wildlife related activities were rated as more important than any other activity. Visitors were particularly attracted to seeing unique wildlife behaving naturally in the natural environment. As well as a strong interest in wildlife viewing, visitors to FCNP were also interested in nature and wilderness. Visitors were generally less interested in feeding and touching animals, although this was still rated as important to 38.4% of visitors. As interest in wildlife increased, features relating to wildlife, wilderness, nature and learning were rated as significantly more important.

4.8.2 Interpretation. Topics concerning wildlife were considered the most interesting, followed by information on ecosystems, places of geographical interest (Remarkable Rocks), and ways to minimise impact on wildlife and environments. The majority of visitors felt there was an adequate amount of information about FCNP, while one third felt there was not enough. From the open-ended questions, visitors would like more information on the wildlife itself, and on where/how to see wildlife. Interest in all interpretation topics increased as interest in wildlife increased, which supports the idea that interest in learning is a feature of visitors with high levels of interest in nature and wildlife.

4.8.3 Satisfaction Visitors were moderately satisfied with their wildlife experience at FCNP. Results indicated that viewing wildlife contributed to satisfaction. Almost all visitors saw at least three different species of wildlife. The most commonly seen species were fur seals, sea lions, birds, kangaroos and koalas. The most popular species were fur seals, koalas and sea lions. Satisfaction with wildlife experiences was moderately high, and no significant differences were found based on levels of interest in wildlife or between the cluster groups. There was little information available in the data regarding the reason for the moderate rather than high satisfaction, particularly since most visitors saw a number of

species of wildlife, and wildlife viewing was a dominant reason why visitors went to FCNP. The high expectations of seeing wildlife, long distances to travel on unsealed roads, general lack of interpretation available at many sites, and busy tour group itineraries may have contributed towards lowering satisfaction scores, however these were not measured.

4.8.4 Levels of interest. Visitors were usefully distinguished by asking them how important viewing wildlife was to their travel plans, as an indicator of interest in wildlife viewing. A number of important differences were revealed based on this "level of interest' variable. Enthusiast wildlife viewers:

- Participated in wildlife tourism, including visits to captive environments, more than other groups.
- Tended to be older than respondents in the General group.
- Tended to live overseas.
- Were significantly more interested in opportunities to see wildlife, chance to get close to nature, wilderness experiences and learning/education than respondents in the other groups.
- Were significantly more interested in seeing unique wildlife at close range and behaving naturally in natural environments than respondents in the other groups.
- Were significantly more interested in all interpretation topics concerning nature and wildlife.
- Tended to be in the High Importance cluster group, which is characterised by generally positive responses to all aspects of the experience covered in the survey.

4.8.5 Cluster groups: Similarly to the Rainforest Habitat study, three main cluster groups were identified. Unlike the Rainforest Habitat study, these groups were significantly related to the respondents' level of interest in wildlife, which was a key external variable used to verify and interpret the cluster groups. The cluster groups contained a High Importance group, which rated all features of the wildlife experience as important, had generally positive responses to all survey questions, and had a higher proportion of Enthusiast visitors. The Low Importance group had lower importance scores for all features, had generally lower ratings for most survey questions and contained more visitors who do not usually plan to see

wildlife while on holidays. The moderate group gave moderate scores for importance of wildlife tourism features but had higher interest in seeing wildlife in the natural environment and on interest in all interpretation topics.

4.8.6 Directions for further study

At this point, before considering directions for further study, it is useful to review some of the results revealed by the Exploratory, Rainforest Habitat and FCNP studies. Table 4.48 provides a review of major findings from the studies. For the purposes of further simplification, these results are summarised in the context of the model of research questions initially outlined in Figure 1.1 of Chapter One. Figure 4.12 replicates the model, and replaces the questions with results from the three studies. A description of general findings from each area of study depicted in the model follows.

Table 4.48

Summary of Results from Literature Review, Exploratory Study, Rainforest Habitat Study and FCNP Study

LITERATURE REVEW	EXPLORATORY STUDY	RAINFOREST HABITAT	FLINDERS CHASE N.P	CONCLUSIONS
FEATURES OF THE TOURISTS				
Contact with nature is desired by humans, and is beneficial (Ulrich, 1993; Kellert, 1993; Roth & Merz, 1997). This may be linked to the importance of domestic pets (Arluke & Sanders, 1996)	Only 3.4% of respondents indicated they were not interested in viewing wildlife, and 0.8% prefer to avoid them. The natural environment was strong in descriptions of best experiences	Only 0.8% said they were either not interested or preferred to avoid seeing wildlife while on holidays. The natural environment was rated as very important to wildlife experiences.	Only 1.4% of respondents said they were not interested in viewing wildlife, and 0.9% prefer to avoid them. The natural environment was very important to all respondents.	It appears that most people have a generally positive interest in wildlife, which may flow from an innate attraction to nature.
Studies of birdwatchers and other nature and wildlife tourists indicate that there are differences between them based on varying levels of specialisation (Bryan, 1979; Cole & Scott, 1999; McFarlane, 1994). Some factors which can assist in the identification of generalists/ specialists include frequency of participation, ownership or equipment, and importance of wildlife to travel decisions.	Visitors were asked to specify the importance of wildlife viewing to their travel decisions. Those with higher levels of interest travelled more frequently to wildlife venues overall, and this was true for both captive and non-captive settings. These differences in stated interest in wildlife viewing and actual participation was the first step in identifying differences based on specialisation theory	As for the exploratory study, visitors with higher levels of interest in wildlife viewing participated significantly more frequently in wildlife tourism than did other visitors. Enthusiasts participated significantly more frequently in captive wildlife viewing as well as wildlife specific tours and visits to places where wildlife is often seen.	Visitors with higher levels of interest in wildlife participated in wildlife viewing significantly more frequently overall, and particularly in captive environments and specialist wildlife tours.	These studies confirm that higher levels of interest in wildlife is associated with higher levels of participation in wildlife viewing activities. This includes participation in captive settings as well as natural settings. Specialisation theory is potentially useful for explaining differences between visitors.
Specialised nature tourists are		Satisfaction with Rainforest	The satisfaction ratings for	In the settings represented

less easily satisfied than other tourists (Shackley, 1996; Buckley & Pannell, 1990)		Habitat increased as interest in wildlife viewing increased. This was a consistent pattern, however differences were only significant for 5 of the 18 satisfaction items.	visitors with higher levels of interest in viewing wildlife were not significantly different to those of other visitors.	by Rainforest Habitat and FCNP, results do not support the suggestion that specialised tourists are less easily satisfied than other visitors.
Specialised nature tourists may have specific preferences regarding the setting of wildlife tourism. This includes preference for wilderness (Shackley, 96, Buckley & Pannel, 1990), & viewing specific species (Cole & Scott, 1999).	Enthusiasts were significantly more likely to describe the natural environment in descriptions of best experiences, while General group visitors tended to mention built facilities, service features, and learning. Enthusiasts had more best-experiences with wild animals, while Generalists had more best experiences with captive animals.	Enthusiasts were more attracted to Rainforest Habitat by the natural environment, environmental experience, and learning. However, there were not as many differences in preference for features as was expected.	Contrary to the Rainforest Habitat sample, there were consistent significant differences in preferences for features between the groups. In particular, Enthusiasts were more attracted by, and interested in wildlife, wilderness and learning based variables.	These studies indicate that visitors with higher levels of interest in wildlife do have significantly stronger preferences for wildlife, wilderness, natural experiences with an educational component. However, these features were also rated as important to visitors with lower levels of interest in viewing wildlife.
Visitors with higher levels of specialisation are more likely to view wildlife in natural environments, and move away from captive settings (Duffus & Dearden, 1990)	Enthusiasts tended to describe best experiences in natural settings, and General group visitors tended to describe experiences in captive settings. However, Enthusiasts participated overall more frequently in wildlife tourism, and this included participation in captive settings.	Respondents with higher levels of interest in viewing wildlife participated significantly more frequently in wildlife tourism. This included captive as well as natural settings.	The proportion of Enthusiast visitors was higher at FCNP (35.5%) than it was at Rainforest Habitat (16.0%) or in the general sample (7.1%). This supports the idea that specialists tend toward viewing animals in natural environments. However, this sample indicated that they also visit captive wildlife environments significantly more frequently than other visitors.	It appears that there is overlap in participation in wildlife viewing activities. Generalists will be dominant in captive environments, yet they will also participate in specific wildlife tours. Enthusiasts will tend towards specialised tours and natural environments, however they will still visit captive settings.

Learning and education is important to nature tourists (Knudson, Cable & Beck, 1995; Moscardo, 1999) and wildlife tourists (Shackley, 1996; Howard, 1999)	Learning things was the 3rd most frequently mentioned aspect of best experiences. It was referred to by 31% of respondents. Learning things was dominant in captive environments, where it accounted for 18.1% of responses compared to 5.5% in wild environments and 6.7% in non-captive environments with habituated animals.	The items 'interesting information' and 'knowledgeable staff' received some of the highest importance ratings. Learning was significantly more attractive to visitors with higher levels of interest in wildlife.	The items 'interesting information' and 'knowledgeable staff' were rated as important overall, as was the attractiveness of a learning or educational experience. These features were significantly more important to visitors with higher levels of interest in viewing wildlife. Overall, importance ratings for these features were not as high as for Rainforest Habitat.	Learning and interpretation is clearly important to wildlife tourists, and importance significantly increases as interest in wildlife increases. Learning appears to be more emphasised and more of an expectation in captive environments
Demographic differences	No substantial differences based on demographic variables	Features of wildlife experiences, satisfaction and interest in interpretive topics rated as more important by females and older respondents.	Features of wildlife experiences, motives for visiting FCNP, and interpretive topics rated as more important by females. Respondents in different age groups had different motives for visiting FCNP, and different travel patterns. Older respondents more interested in interpretive topics.	Demographic differences between respondents were inconsistent between studies. However, it appears that females tend to give higher ratings on features of wildlife experiences, interpretation and satisfaction. Older respondents also tend to give higher ratings.
FEATURES OF THE EXPERIENCE				

Satisfaction with wildlife tourism is related to sightings of wildlife (Applegate & Clark, 1987, Hammitt, Dulin & Wells, 1993)	Link between satisfaction and sightings not specifically examined, although 13% of respondents described their worst wildlife experiences as not seeing any wildlife.	Not examined. There is high visibility of many species at Rainforest Habitat.	72% of visitors reported seeing 5 or more species of wildlife at FCNP. There was a significant, but not strong, relationship between numbers of species seen and satisfaction. However, visitors who reported seeing individually listed wildlife species were sig. more satisfied than those who didn't.	Results are consistent with the idea that satisfaction is linked to wildlife sightings, but the results are neither specific nor strong enough to confirm.
Interacting with, or opportunities to have contact with animals appeals to a broad range of visitors (Rosenfeld, 1981; Kellert & Dunlap, 1989; Shackley, 1996; Kreger & Mench, 1995).	Enjoyment of interactions with animals/close proximity to animals was the most frequently mentioned aspect of best experiences. An aspect relating to this category was mentioned by 74% of respondents in their descriptions of best experiences.	Feeding and touching wildlife had the lowest mean scores for importance out of all listed features. Around 50% of respondents indicated these were not important to their experience. However, in open-ended questions, feeding and touching animals was listed as the 3rd most frequently mentioned reason why visitors liked specific species of animal at Rainforest Habitat.	Results were similar to those of Rainforest Habitat. Again, feeding/touching wildlife had the lowest mean score for importance to wildlife experience. More importance was given to natural/wilderness environments where animals behave naturally.	Interaction is something that is memorable to visitors. However, it is clear that definitions of interaction vary, and vary depending on the setting. Interaction may be holding the gaze of a wild wolf, or it may be cuddling a koala at a zoo. Interaction in terms of feeding and touching wildlife is not necessarily the type of interaction that all visitors seek.
Viewing animals in natural environments is appealing to a broad range of visitors. (Shackley, 1996; Schanzel	Seeing animals in the natural environment was the second most frequently mentioned aspect of best experiences,	Visitors were asked to rate how important the natural environment was to their experience. Results indicate	Results strongly support the idea that viewing animals in the natural environment is	Natural surroundings are a central and critical component of wildlife experiences. The

& McIntosh, 2000; Pearce & Wilson, 1995).	and was mentioned by 49% of respondents. In addition, the most frequently mentioned feature of worst experiences was poor care of captive animals, and most of these descriptions were critical of the unnatural conditions in which animals were kept. Conversely, features of best captive experiences included the naturalness of enclosures.	that the natural environment was one of the highest scored features, almost every respondent indicated that it was important to their experience. The natural environment was significantly more important to females. Visitors with higher levels of interest in wildlife were significantly more attracted to Rainforest Habitat by the natural rainforest surroundings.	important. This was the most highly rated feature in terms of overall mean importance, and was significantly more important as interest in wildlife increased. It was also the most frequently mentioned best feature of FCNP	importance of nature and wilderness increases as interest in wildlife increases. This emphasis on natural surroundings extends to captive environments, as evident from the Rainforest Habitat results. Focus on natural surroundings in captive environments may be linked with concepts of animal welfare.
Wildlife feeding is attractive to visitors, and is difficult to stop/control in both natural and captive environments (Burger, 1997; Rosenfeld, 1981; Kreger & Mench, 1995)	Feeding animals was mentioned by 3.1% of respondents in their descriptions of best experiences. While interactions with wildlife was the largest category of features of best experiences, feeding wildlife was not particularly dominant within this category.	The ability to touch/feed animals was the 3rd most frequently mentioned reason why visitors liked specific animals, and this was mentioned more frequently by international visitors. However, when specifically asked to rate how important touching and feeding was to their wildlife experience, it received the lowest overall rating and substantial proportions of visitors indicated lack of interest.	The majority of visitors indicated they were not interested in feeding/ touching wildlife. Feeding/touching wildlife had lowest overall ratings of any feature. However, 16% of the sample indicated it was very important to their experience.	The issue of feeding wildlife is inconclusive. The majority of visitors in both Rainforest Habitat and FCNP indicate lack of interest in feeding wildlife, and there is no relationship to interest in viewing wildlife. Interactions desired by visitors may vary depending on both the individual and the setting. Interaction in terms of feeding and touching wildlife is not necessarily the type of interaction that all visitors seek.
Getting close to animals is	Enjoyment of interactions	Getting close to wildlife was	Getting close to wildlife	These studies confirm

appealing to a broad range of visitors (Schanzel & McIntosh, 2000; Pearce & Wilson, 1995)	with animals/close proximity to animals was the most frequently mentioned aspect of best experiences. An aspect relating to this category was mentioned by 74% of respondents in their descriptions of best experiences.	rated as an important feature of wildlife tourism settings. It was rated more important in captive than non captive environments. The ability to get close was also listed as one of the most frequently mentioned reasons why visitors liked specific animals at Rainforest Habitat.	was one of the most important features to visitors overall. The ability to observe wildlife close-up was one of the most frequently mentioned best features of FCNP. Getting close was significantly more important to visitors with higher levels of interest in wildlife.	that getting close to wildlife is very important to wildlife experiences. In the FCNP sample, closeness to wildlife was significantly more important to visitors with higher levels of interest in viewing wildlife.
Movement/activity of animals is a feature that appeals to visitors (Gray, 1993; Robinson, 1994; Johnston, 1998)	Movement was only specifically mentioned in 1% of responses	Not specifically studied. Many of the animals at Rainforest Habitat are moving (e.g. birds)	Not specifically studied, although 'seeing animals behaving naturally' was one of the most highly rated features in terms of importance to the experience.	Results are not sufficient or detailed enough to form conclusions.

FEATURES OF THE ANIMALS				
There is a hierarchy of preference for wildlife and animals. Large, human-like, mammalian, intelligent and tame animals are favoured. (Shackley, 1996; Deans et.al. 1987; Barstow, 1986; Hammitt, Dulin & Wells, 1993; Arluke & Sanders, 1996, Serpell, 1986). Invertebrates are almost universally disliked, as are those considered ugly, dangerous and disease spreading (Kellert, 1993).	Mammals, domestic animals and large charismatic species were the most popular animals. Most frequently given reasons were beauty, intelligence, size, and cuteness. Animals least liked were snakes, invertebrates and reptiles. Reasons given were that they were ugly, they cause harm to humans, are dangerous, dirty an deadly. The contradictory species which appear on both the best and worst lists were domestic cats, crocodiles and snakes.	The most liked animals at Rainforest Habitat were birds, kangaroos and koalas, mainly because visitors had not seen them before, they were unique and were cute. Crocodiles were the 3rd favourite animal at Rainforest Habitat. No other reptile, amphibian or insect was mentioned, despite their presence in the sanctuary.	Large, mammalian, cute animals were preferred. Seals, sea lions and koalas were the favourite animals. Goannas were also a favourite, although no invertebrates or other reptiles or insects were frequently mentioned.	These studies confirm that larger, mammalian animals that are easy to anthropomorphise are likely to be given preference in most environments. However, this is not always consistent. Reasons for liking animals also centre on their uniqueness, or that visitors have never seen them before. This may override typical reasons for preference, and explain why crocodiles and goannas appear on favourite lists. Mindfulness theory may also be useful in explaining attraction to various species.

FEATURES OF THE INTERPRETATION				
Interpretation leads to greater enjoyment (Moscardo, Verbeek & Woods, 1998; Orams, 1996; Foxlee, 1999)	Learning things was included in 31.2% of visitors' descriptions of their best wildlife experiences. The majority of these experiences which involved learning occurred in captive environments.	Not assessed, as all visitors are expected to go on a guided tour at Rainforest Habitat. Entry is included in admission price, and the tour is the only form of interpretation available. Satisfaction results were very high at Rainforest Habitat, and this was consistent across all groups of visitors.	Not specifically examined, since there was variable and limited access to interpretation in FCNP. However the sealions were listed as the favourite animal, and also the best feature of Kangaroo Island. The sealion colony is the only place where every visitor attended an interpretive tour by a guide.	Study results support the idea that interpretation can lead to greater enjoyment. However, more specific and detailed study needed for this to be a firm conclusion.
There is little information available regarding the content of interpretation that visitors find appealing. A study of ape displays found that ape intelligence, extinction, similarities to humans and social behaviour was most interesting (Gold & Benveniste, 1995). For other species similarities to humans, individual information about the animal, relationship to other animals and care and needs	Not studied	Most interesting topics overall were 'peculiar and strange characteristics', 'importance in the ecosystem', 'social habits, relationships within groups', 'where to find in the wild' and 'relationships with other species'. Least interesting was 'similarities to humans' and 'individual information about the animals on display'. Every topic was rated as significantly more interesting by visitors with higher levels of interest in	This study considered wildlife related interpretive topics in the context of other topics. FCNP visitors were most interested in finding out more about wildlife, where to find them in the wild, and impact minimisation. Most topics, including all wildlife topics, were rated as significantly more interesting as interest in wildlife increased.	Topics of interest may vary between species, however characteristics of the animal that are peculiar or noteworthy; social relationships; where to find them in the wild; and ecosystem/ environmental topics appear to have widespread appeal. All topics are more interesting to visitors with a greater level of interest in wildlife.

is appealing (Tunnicliffe, 1993).		wildlife, and females were more interested than males.		
Guides are said to have widespread appeal to visitors, (e.g. Gold & Benveniste, 1995) however there is considerable debate regarding the usefulness and applicability of interpretive signs. As a passive interpretive form, there is concern that visitors don't read the signs, or that the information covered is not interesting to all visitors (e.g. Kanel & Tamir, 1991; McManus, 1989).	Not studied	Guides were the most favoured form of interpretation, followed by signs. Computerised interpretation was the least preferred.	Not specifically studied, although there was generally low enthusiasm for the introduction of guided tours.	It appears that signs and guides are the most accepted forms of interpretation. However, the applicability of each depends on the setting. It is possible that guides are successful in captive places and smaller places (e.g. Rainforest Habitat), while signs may be better in settings with dispersed geography and fewer or more sporadic visitation. (e.g. FCNP).

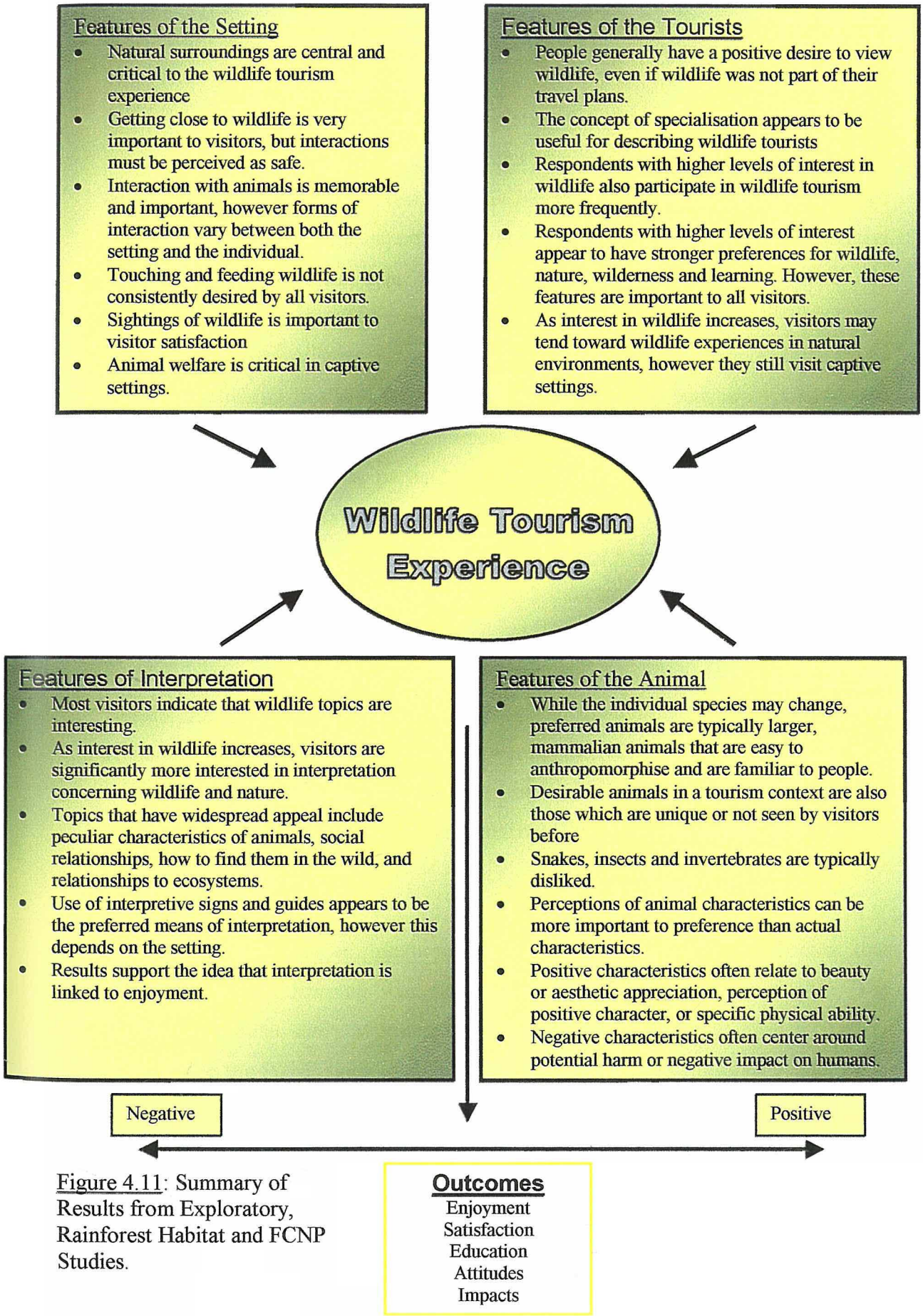


Figure 4.11: Summary of Results from Exploratory, Rainforest Habitat and FCNP Studies.

Review of key findings: explanation of Figure 4.11

In terms of features of the setting, the Exploratory study identified key features that were most frequently mentioned as important to respondent's best and worst wildlife experiences. The Rainforest Habitat and FCNP studies confirmed the importance of these features to wildlife experiences. The key features identified as important across all studies are listed in Figure 4.11. As was indicated in Chapter 1, the features of best experiences were consistent with Mindfulness theory.

When considering features of the visitors, differences between visitors were identified based on their level of interest in viewing wildlife whilst on holidays. Many of these differences, particularly rates of participation in wildlife tourism, were consistent with expectations from Specialisation theory. Particularly in the FCNP study, many of the differences between groups suggested that the 'interest in wildlife viewing' variable may be a useful indicator of specialisation amongst wildlife tourists.

Results for features of the animals revealed the animals most preferred by respondents, and the reasons why they were preferred. An important finding was that the respondent's *perceptions* of the animals' features were critical to preference. The same species of animal could be liked or disliked for different reason.

Finally, for features of interpretation, the exploratory study indicated that interpretation and learning was an important feature of best experiences. The Rainforest Habitat study indicated which wildlife topics were of most interest to visitors, and the FCNP study established the high interest in wildlife related topics in the context of other interpretive topics. The main findings are included in Figure 4.11.

Direction for further study

From the four main areas identified for study in this thesis, questions concerning features of the experience, and features of the animals have been substantially answered by the studies. For features of the setting, the studies aimed to identify respondent-generated features that are commonly desired by visitors, to look for differences in preference for features between groups of visitors, to establish the relative importance of features, and to examine the applicability of Mindfulness theory for explaining attraction to features. Results from the three studies satisfied these aims, and have provided useful insights into the identity and importance of these features. In terms of features of the animals, the results have also substantially satisfied the aims of identifying a respondent-generated list of preferred animals, and reasons for these preferences.

The two main areas for further study are those of the features of interpretation and features of the visitors. For features of the interpretation, the studies provided useful results for the importance of interpretation and learning, visitor preferences of wildlife interpretation topics and visitor preferences for methods of delivery. While these results largely satisfied the aims set out in Chapter One, it is recognised that knowledge on wildlife interpretation is far from complete. The studies results provided some useful information on visitor preferences in the settings featured in the studies. However, the success of interpretation is highly dependent on both the setting and the design and quality of the interpretation. The effectiveness of interpretation in terms of visitor knowledge and enjoyment would require research using an experimental design, whereby the content, design and delivery of interpretation was manipulated in different wildlife settings. This was considered to be beyond the scope of this thesis in terms of time, budget and logistical constraints. Furthermore, the Mindfulness model has been extensively applied to interpretation in museum settings (Moscardo, 1992), and found to be applicable to interpretation in a variety of other settings (Moscardo, 1999). Application of Mindfulness principles to wildlife interpretation would be expected to be consistent with these previous findings.

The direction chosen for further study is to examine differences between visitors based on Specialisation theory. Across the three studies, use of the 'interest in viewing wildlife' variable to distinguish between visitors revealed some important differences that were consistent with Specialisation theory. Examples include participation (all studies), interest in interpretation and learning (Rainforest Habitat and FCNP studies), and preferences for features of the wildlife tourism setting (FCNP study). Because there are few studies into specialisation amongst wildlife viewers, and a particular lack of research into the broad spectrum of wildlife viewers, further research into this topic would be useful. Specific foci for research should include patterns of participation (particularly participation in captive environments); characteristics of specialised and non-specialised tourists, preferences for wildlife experiences, participation in interpretation, and participation in other wildlife related activities.

CHAPTER FIVE

Specialisation Amongst Wildlife Viewers

5.1 Introduction

The results from the previously reported studies in this thesis have suggested that wildlife tourists may differ in their characteristics and preferences for wildlife experiences based on their level of interest in wildlife viewing. This 'level of interest' variable was considered to be a general indicator of the importance that wildlife played in the travel decisions of tourists, and may possibly be connected to the concept of specialisation. However, use of the term 'specialisation' has been avoided in the previous studies in this thesis, because there are a number of other dimensions that have been suggested as important to this concept. The distinction between respondents according to their response to the question "How interested are you in viewing wildlife while on holidays" gave rise to the following categories:

> **Enthusiasts:** The opportunity to view wildlife is one of the most important factors in my travel decisions
> **Interested:** The opportunity to view wildlife is included as part of my travel decisions
> **General:** Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things.

In each study there were so few respondents who indicated they either were not interested in viewing wildlife while on holidays, or preferred to avoid wildlife, that these respondents were excluded from further analyses.

Some of the differences found between these groups were consistent with characteristics that have been linked to the concept of specialisation. The first area of

consistency was related to types of experiences described. In the Exploratory Study, results indicated that Enthusiasts were significantly more likely to describe natural environments, and have experiences with wild animals, in their descriptions of best wildlife experiences. General group respondents were more likely to report best experiences as occurring in captive environments. This was consistent with the idea that as specialisation increases, visitors will participate more in non-captive wildlife tourism settings (Duffus & Dearden, 1990).

The second area of consistency was that of participation in wildlife viewing. According to specialisation theory, more specialised visitors will seek to view wildlife more frequently than less specialised visitors (Duffus & Dearden, 1990; Cole & Scott, 1999; McFarlane, 1994). The Exploratory study revealed that respondents with higher stated levels of interest in wildlife participated in wildlife viewing significantly more frequently than did respondents with lower levels of interest. This pattern was also true when looking at specific settings for wildlife viewing. For each of the settings listed, respondents with higher levels of interest visited them more frequently than did other visitors. The settings included captive environments, places where wildlife is often seen (water based and land based), specific wildlife tours (water based and land based).

These patterns of participation were consistent in the Rainforest Habitat and Flinders Chase National Park (FCNP) studies. In the Rainforest Habitat study, not only did respondents participate in wildlife viewing significantly more frequently overall; they also participated significantly more frequently in all types of wildlife settings. In the FCNP study, respondents with higher levels of interest in wildlife again participated more frequently overall than did other respondents, and also participated significantly more frequently in visits to captive environments and on specialised land based wildlife tours. However, there was no significant difference between the groups on trips to places where wildlife is often seen, and on water based wildlife tours.

Overall, these results confirmed that a general pattern existed, whereby people with higher stated levels of interest in wildlife tourism also engaged in wildlife viewing significantly more frequently than did those with a lower interest. This was a key finding supporting the distinction among visitors based on interest in wildlife viewing, and argues for this variable being a useful indicator of specialisation levels. These results did not, however, support the prediction from the specialisation literature (Duffus & Dearden, 1990) that as interest in wildlife viewing increases, visitors will move away from viewing wildlife in captive environments and engage in wildlife viewing in natural habitats. These results indicate that rather than shift towards natural environments and away from captive settings, participation expands to include natural environments. Thus, visitors with higher levels of interest in wildlife viewing may still attend captive environments more than lower interest visitors, but they may expand their participation to include environments that are more natural.

This progression towards natural environments, but without abandoning captive environments, is supported by the study results. Table 5.1 shows that the proportion of respondents in the Enthusiast category increased from 7.1% in the general tourist/resident sample of the Exploratory study, to 16% in the captive environment (Rainforest Habitat) study, to 35.5% in the natural habitat (FCNP) study. Thus proportionately more 'specialised' respondents were present in the natural habitat sample than the captive environment sample. Conversely, proportions of General group respondents dropped from the majority (56.5%) in the Exploratory study, to 37.0% in the Rainforest Habitat study, to 17.4% in the FCNP study.

Table 5.1

Levels of Interest in Wildlife from Exploratory, Rainforest Habitat and FCNP Studies

Interest Level	Exploratory Study	Rainforest Habitat	Flinders Chase National Park
Enthusiast	7.1%	16.0%	35.5%
Interested	32.1%	46.2%	44.8%
General	56.5%	37.0%	17.4%

However, there is an important qualification with regards to these participation results. In the previous surveys, respondents were asked about their participation levels in captive environments overall, with zoos, sanctuaries and aquariums grouped together. It is possible that more specialised wildlife viewers attend sanctuaries more frequently than less specialised viewers, but not zoos, and this has been hidden by the manner in which the question was asked. It is therefore important to separate these captive experiences in future questions on participation.

A third area of consistency relates to interest in interpretation and learning. One finding that applies to visitors interested in wildlife and nature is that they consider learning and education to be an important feature of their experience (Knudson, Cable & Beck, 1995; Moscardo, 1999). Specialised wildlife tourists also may be more interested in interpretive topics and more likely to seek interpretive information (Martin, 1997; Manfredo & Larson, 1993). It is intuitively sensible that people with a specialised interest may be more favourably disposed to learning more about their topic of interest. In both the Rainforest Habitat study and the FCNP study, respondents with higher levels of interest in wildlife consistently rated interpretation as more important to their experience. In the FCNP study, interest in interpretive topics significantly increased as interest in wildlife increased. This was true for all wildlife related topics, but was also the case for other nature and environment based topics.

The fourth area of consistency between the study results and specialisation theory came under the broad heading of preferences for features of the wildlife setting. However, the consistency in this case is not as clear as with participation in wildlife-related activities and interest in interpretation. The Rainforest Habitat study indicated that visitors with higher levels of interest in wildlife were more attracted to Rainforest Habitat by the opportunity for environmental or ecotourism experiences, natural surroundings, and learning about the rainforest. These are all consistent with preferences that were expected to be held by more specialised wildlife tourists (Duffus & Dearden, 1990; Ewert & Hollenhorst, 1994; Bryan, 1989; Virden & Schreyer, 1988). However, when asked to indicate the importance of other features of the wildlife setting, no significant differences were found between the groups. This result was not expected, and the Discussion at the end of Chapter Three raised three possible reasons for this outcome. Firstly, the context of Rainforest Habitat may have influenced responses for importance of features. Secondly, the survey instrument may not have succeeded in drawing out differences amongst visitors. And thirdly, despite different levels of interest in wildlife, all visitors may seek similar features in their wildlife tourism experiences.

However, when the same questions regarding the importance of features of the wildlife experience were asked of the FCNP sample, clear and consistent differences emerged. Visitors with higher levels of interest in wildlife viewing were significantly more interested in opportunities to see wildlife, chance to get close to nature, wilderness experiences and learning/education than other groups. They were significantly more interested in viewing wildlife close up, in natural environments where the wildlife were behaving naturally. These differences were all consistent with what has been reported from previous studies of specialist wildlife and nature based tourists (e.g. Buckley & Panell, 1990; Martin, 1999; Cole & Scott, 1999; Shackley, 1996; Duffus & Dearden, 1990; Ewert & Hollenhorst, 1994; Bryan, 1989; Virden & Schreyer, 1988). While the Rainforest Habitat results were not all consistent with expectations based on specialisation theory, the FCNP study results were. Taken

together, the Rainforest Habitat and FCNP study results indicated that the concept of specialisation amongst wildlife viewers warranted further research attention.

The purpose of this final study was to examine the 'interest in wildlife' variable as an indicator of specialisation. If this variable was considered to behave in a similar way to the specialization construct, it then could be used to examine the usefulness of the specialisation concept for explaining visitor responses to different wildlife settings and experiences. The aims of this Study were to:

a) Interest in wildlife viewing: Investigate the usefulness of this variable as an indicator of specialisation by examining the relationship between interest in wildlife and other variables that have been used as indicators in the specialisation literature.

If the 'interest in wildlife' variable was considered to be a suitable indicator of specialisation, then to:

b) Examine the relationship between the interest in wildlife viewing variable and preferences for features of the wildlife experience, participation in interpretation, recreation preferences and demographic variables.

The chapter is organised as follows:

As was the case in the previous chapters, an abbreviated version of crosstabulation tables will be used with Chi-square results in this chapter. The explanation and justification for use of the abbreviated presentation format has previously been provided in Section 2.2.4 of Chapter Two. Also as outlined in Section 2.2.4 of Chapter Two, analyses have been conducted on the data to ensure that the assumptions of the relevant statistical tests have not been violated.

5.2 Methodology

5.2.1 Survey Procedure

Surveying of respondents was conducted from March to June 2001. Because the focus of the survey was on overall preferences for wildlife viewing, sites were chosen that were thought to be relatively neutral in terms of wildlife experience. Wildlife settings that could be viewed as existing on extreme ends of the captive (e.g. zoos) to non-captive (e.g. specialised wildlife tours) continuum were avoided, to prevent such settings influencing visitor responses on the survey. The sites were chosen on the basis of being nature-based areas that were expected to attract a general mix of visitors. This was important as the goals of the study depended on obtaining responses from visitors with varying levels of interest in wildlife viewing. Therefore, the main consideration in site selection was the potential for these sites to gain access to a broad range of visitors, and large enough numbers of visitors to enable meaningful statistical analyses across groups.

A brief description of the sites selected for surveying are as follows:

Kuranda Rainforest Village: Kuranda is located in the coastal ranges, 25km from Cairns in North Queensland. Set amongst World Heritage listed rainforest, Kuranda is marketed for nature based attractions such as the rainforest, the Barron River, native birds and butterflies. Access is via a 25km drive through rainforest, a scenic train trip along the Kuranda Railway, or via the Skyrail Rainforest Cableway. Both the Skyrail and the Kuranda Railway are major tourist attractions within the region, and are included in the itineraries of many tour companies. There are numerous nature based attractions in Kuranda, including butterfly and bird sanctuaries, guided tours, nocturnal animal displays, as well as the famous Kuranda markets and shops, and Aboriginal culture. Approximately 700,000 international and domestic tourists visit Kuranda each year, both for the attraction of the village itself, and because it is the

end-of-line station for both the train and the cableway (Kuranda Promotions Bureau, 2001). The distribution of visitors by place of residence was expected to be approximately 20% from Queensland, 35% from other Australian states, and 45% from international countries (Moscardo & Pearce, 2001). Surveying was conducted in Kuranda on the 19th and 31st March 2001. Permission to survey respondents was gained from the local council, as well as management of the Skyrail Rainforest Cableway and Kuranda Scenic Railway.

Lake Eacham National Park: Lake Eacham is an extinct volcanic Crater Lake, surrounded by tropical rainforest, in the Atherton Tablelands. It is approximately a 2-hour drive from Cairns. The cool, tranquil environment of Lake Eacham has long made Lake Eacham a popular picnic setting for both locals and visitors. The lake is 60 metres deep, with a pontoon and children's pool available, and is ideal for swimming. There is a variety of walking trails and scenic drives in the area. The National Parks Headquarters, located near the lake, houses an information centre with interpretive material covering crater lake history, rainforest ecology, and information on the wildlife of the area. The Atherton Tablelands has a number of nature based attractions including waterfalls, rainforest, and crater lakes, with nature based activities such as bushwalking, birdwatching, wildlife viewing and nature tours available. The area also has more general tourist attractions such as shopping, markets, and picnic sites (Chambers Rainforest Lodge, 2001). According to the Far North Queensland Travel Patterns Study (Moscardo & Pearce, 2001), visitors to Lake Eacham were expected to consist of approximately 30% Queensland residents, 40% from other Australian states, and 30% from international countries. Surveying was conducted on a long weekend, during the 9th, 10th, 11th June 2001. Permission to survey respondents was gained from the Queensland Parks and Wildlife Service and the Ranger-in-Charge of Crater Lakes National Park.

Alligator Creek Campsite: Alligator Creek Campsite is set within the Bowling Green Bay National Park, and is approximately 30 minutes drive from Townsville, North

Queensland. This site is essentially a local National Park picnic site and campground. One of the major attractions of this site is the almost continuous presence of many native animals and birds, such as Agile and Unadorned Rock Wallabies, Lace Monitors, Common Brushtail Possums, Scrub Turkeys and a large and varied population of birds (Queensland National Parks and Wildlife Service Visitor Information). There is also an extensive boardwalk down to Alligator Creek, where visitors can view Northern Snake-necked and Saw-Shelled Tortoises Eels and various fish species. There are plentiful BBQ's and picnic sites. Surveying was conducted during a long weekend on the 9th, 10th and 11th June 2001. Permission to survey visitors was gained from the Queensland Parks and Wildlife Service and the Ranger-in-Charge of the Bowling Green Bay National Park.

Together, these sites were expected to gain access to a broad range of visitors, from those with a general level of interest in wildlife, to those with a stronger interest. All three sites were deliberately selected for their nature-based orientation, in order to get enough visitors with higher levels of interest in wildlife viewing to allow for statistical analyses.

Research staff members, who were trained in survey techniques, distributed all of the self-completion questionnaires. The study consisted of a single questionnaire. The method of sampling used was a non-probability convenience approach (Shaugnessy & Zechnmeister, 1997), which involved selecting respondents primarily on the basis of their availability and willingness to respond. Due to the dispersed nature of the sites, it was not possible to employ specified objective measures in the sampling process (such as approaching every 5th person to walk through an entry or exit). Surveyors were instructed to approach as many visitors to the sites as was possible, and approach all individuals in the vicinity as they walked around the sites. Response rates were 82.5% at Lake Eacham, 88.5% at Alligator Creek, and 68.7% at Kuranda. While the potential for non-response bias exists wherever the response rate is lower than 100%, response rates above 70% are considered typical of survey research (Shaughnessy &

Zechmeister, 1997). Poor weather, and a setting that was less conducive to surveying, influenced the lower response rates in Kuranda. Respondents surveyed at Lake Eacham and Alligator Creek were mostly approached whilst camping or having a picnic, where respondents surveyed at Kuranda were approached at the train and cableway platforms, or on the main street. These visitors were frequently on their way to visit an attraction or catch the train/cablecar, and thus the most common reason for not participating (72% of all refusals) was time pressure. Overall, the response rates were considered adequate for the purposes of the study.

5.2.2 Participants

The total number of respondents completing surveys was 403. Table 5.2 shows the number of respondents surveyed at each of the three sites. The largest proportion of respondents (43.1%) was surveyed at Kuranda.

Table 5.2
Sample Sizes from Survey Sites

Survey Site	Number	Percentage of Total
Kuranda	176	43.1%
Alligator Creek	86	21.3%
Lake Eacham	141	35.0%
Total	403	100%

The mean age of the total sample was 40.8 years, and the breakdown of age groups is given in Table 5.3. This breakdown of age groups will be used in all demographic comparisons throughout the chapter. There was no significant difference in mean age (using ANOVA) or age groupings (using Chi-Square) between samples from the three survey sites.

Table 5.3

Age of Respondents in Total Sample

Age in Years	Percentage of Respondents
15 – 30	32.3
31-50	38.7
51 and over	29.1

The gender distribution of respondents was 49.1% male and 50.9% female. Again, there were no significant differences in gender distribution between samples from the three study sites. Of the total sample, the largest proportion of respondents resided in either the local North Queensland region, or overseas (Table 5.4).

Table 5.4

Usual Place of Residence

Residence	Percent of Sample
Local North Queensland	40.9
Other Queensland	7.7
Interstate	10.8
Overseas	40.6

There were significant differences for the usual place of residence between samples from the three study sites. The crosstabulation table (Table 5.5) shows that significantly more respondents in Kuranda were from overseas, while Alligator Creek had proportionately more local residents and less from overseas. Lake Eacham had less overseas respondents, and more from the local area, other Queensland areas and interstate. Although visitor statistics are unavailable for all sites, these differences are consistent with expected visitor distributions at the sites, based on information from the Ranger-in-Charge (Lake Eacham and Alligator Creek), and data from the Far North Queensland Travel Patterns Study (Moscardo & Pearce, 2001).

Table 5.5

Usual Place of Residence by Study Site

	Kuranda	Alligator Creek	Lake Eacham	Total
Local NQ	24 15.1%	63 39.6%	72 45.3%	159 100%
Other QLD	10 33.3%	5 16.7%	15 50.0%	30 100%
Interstate	17 40.5%	7 16.7%	18 42.9%	42 100%
Overseas	119 75.3%	10 6.3%	29 18.4%	158 100%
Total	170 43.7%	85 21.9%	134 34.4%	389 100%

* Chi-square value 128.3, sig. = 0.000

Significant differences were also found for whether respondents were travelling with children at each of the study sites. Table 5.6 shows that respondents were more likely to be travelling with children at Alligator Creek, and less likely at Kuranda.

Table 5.6

Travelling with Children by Study Site

	Kuranda	Alligator Creek	Lake Eacham	Total
Not travel with children	143 50.7%	44 15.6%	95 33.7%	282 100%
Travel with children	33 28.0%	40 33.9%	45 38.1%	118 100%
Total	176 44.0%	84 21.0%	140 35.0%	400 100%

* Chi-square value 23.51, sig.=.000

Of the respondents who resided overseas, the greatest proportion was from the United Kingdom and Ireland, followed by the United States and Canada. Table 5.7 shows the countries of origin for international respondents.

Table 5.7

Country of Residence for International Respondents

Country of Residence	Percentage of International Respondents
United Kingdom/Ireland	51.0%
United States/ Canada	19.2%
Europe	11.9%
New Zealand	9.3%
Asia	8.6%
Total	100%

There was no significant relationship between age of respondents and gender, or between residence and gender. However, respondents from local North Queensland were more likely to be in the 31-50 year age group, and less likely to be in the 51+ age group. Respondents from overseas were more likely to be in the 51+ age group. Table 5.8 depicts a crosstabulation table of these results.

Table 5.8

Place of Residence by Age Group

Age	Local NQ	Other QLD	Interstate	Overseas	Total
15 – 30 years	52 43.0%	10 8.3%	9 7.4%	50 41.3%	121 100%
31-50 years	74 51.4%	5 3.5%	15 10.45	50 34.75	144 100%
51+ years	27 25.7%	12 11.4%	16 15.2%	50 47.6%	105 100%
Total	153 41.4%	27 7.3%	40 10.8%	150 40.5%	370 100%

* Chi-square value 21.0, sig. = 0.002.

Table 5.9 indicates the highest level of education of respondents. The majority of respondents indicated they had completed post-high school education, in a technical college or university.

Table 5.9

Highest Level of Formal Education of Sample

Education level	**Percent of sample**
Primary school	2.0%
Junior high school	7.8%
Senior high school	21.4%
Technical college/business college	23.4%
University – Bachelors degree	31.7%
University – Masters degree or higher	13.8%

There were no significant differences found for education level based on the other demographic variables of age, gender, residence, or travelling with children.

Table 5.10 provides a summary of analyses and significant differences found between the demographic variables. Significant differences were only found between the following variables:

- age and residence (internationals more likely to be in 51+ age group, while locals more likely to be in 31-50 age group); and
- residence and study sites (respondents surveyed in Kuranda more likely to be from overseas, respondents surveyed at Alligator Creek more likely to be locals, and respondents surveyed at Lake Eacham more likely to be from interstate or the local area).
- Travelling with children and study sites (respondents were more likely to be travelling with children at Alligator Creek, and less likely at Kuranda).

Table 5.10

Summary of Analyses for Demographic Variables

	Study sites	Age	Gender	Residence	Education
Age	NSD	-	NSD	Yes	NSD
Gender	NSD	NSD	-	NSD	NSD
Residence	Yes	Yes	NSD	-	NSD
Education	NSD	NSD	NSD	NSD	NSD
Travel with children	Yes	NSD	NSD	NSD	NSD

* NSD = no significant difference

Overall, the three study sites combined successfully obtained respondents in a variety of age groups, a balanced gender distribution, and of international as well as domestic residences. For the remainder of Chapter Five, the samples from each of the study sites will be combined for analysis and discussion.

5.2.3 Instruments

The survey consisted of a single questionnaire, which was administered to all respondents. A copy of the survey can be found in Appendix O. The main purpose of the questionnaire was to investigate the preferences and activities of visitors, and examine the relationship of these variables to the concept of specialisation.

Sections 1.6.1 and 1.11.3 of the literature review contain a review of specialisation studies that relate to wildlife viewing, and a theoretical discussion of the broader concept of specialisation in outdoor recreation. These reviews discussed approaches toward, and variables used, in studies of specialisation. The first point to make about previous specialisation research is that there were no comparable studies of specialisation amongst the broad range of wildlife tourists that could be used as a basis for the present study. Variables used for examining specialisation were therefore drawn from studies of specialisation amongst birdwatchers and other leisure activities.

The second main point about previous specialisation research is the lack of consistency in the indicators that have been used to define specialisation. Table 5.11 summarises some of the more common variables that have been used as indicators and dependent variables from selected specialisation studies. However, some variables listed as indicators have also been used as dependent variables in other studies, and some variables listed as dependent variables have been used as indicators. Table 5.11 attempts to summarise some of the more consistent uses of the listed variables.

Table 5.11

Indicator and Dependent Variables used in Specialisation Studies

	Variables	**Examples of studies**
Indicator Variables	**Previous use history/experience.** Almost always used as an indicator of specialisation, and believed to be a major dimension (Schreyer & Beaulieu, 1986). However there is little consistency in the way previous use history has been examined (Watson & Niccolucci, 1992). Examples include number of times engaged in activity in previous 12 months, number of times at particular site, number of times at other sites, number of years involvement, participation in bird counts etc	Martin (1997); Choi, Loomis & Ditton (1994); Moscardo (2001); McFarlane & Boxall (1996); Merril & Graefe (1997); Ewert & Hollenhorst (1994); McIntyre & Pigram (1992); Donnelly, Vaske & Graefe (1986); Williams & Huffman (1985); Kuentzel & Heberlein (1992); Chipman & Helfrich (1988); Kuentzel & McDonald (1992); Wellman, Roggenbuck & Smith (1982); Watson, Roggenbuck & Williams (1991); Ditton, Loomis & Choi (1992); Schreyer & Beaulieu (1986)
	Skill or knowledge level. Usually self-reported assessment of skill. Other measures include difficulty rating of climbing routes, and number of birds able to identify.	Kellert (1985); Donnelly, Vaske & Graefe (1986); McFarlane & Boxall (1996); Merril & Graefe (1997); Kuentzel & Heberlein (1992); Kuentzel & McDonald (1992); Wellman, Roggenbuck & Smith (1982); Hollenhorst (1990).

	Ownership of books/ subscription to magazines, reading of articles	Donnelly, Vaske & Graefe (1986); McFarlane & Boxall (1996); Williams & Huffman (1985); Kuentzel & Heberlein (1992); Chipman & Helfrich (1988); Wellman, Roggenbuck & Smith (1982); Ditton, Loomis & Choi (1992)
	Membership of groups	Cole & Scott (1999); Donnelly, Vaske & Graefe (1986); Williams & Huffman (1985); Kuentzel & Heberlein (1992); Chipman & Helfrich (1988); Kuentzel & McDonald (1992); Wellman, Roggenbuck & Smith (1982); Ditton, Loomis & Choi (1992)
	Ownership of equipment/ economic investment	McFarlane & Boxall (1996); Martin (1997); Kellert (1985); Donnelly, Vaske & Graefe (1986); Williams & Huffman (1985); Kuentzel & Heberlein (1992); Chipman & Helfrich (1988); Kuentzel & McDonald (1992); Wellman, Roggenbuck & Smith (1982)
	Centrality to lifestyle: Like previous use history, there has been a variety of ways this has been measured. Examples include activity importance relative to lifestyle, enjoyment, number of friends sharing the interest, and importance the activity plays in travel or leisure plans. Surrogate behavioural indicators such as club membership or equipment ownership have also been used as expressions of centrality to lifestyle (McIntryre & Pigram, 1992).	McIntyre & Pigram (1992); McFarlane & Boxall (1996); Merril & Graefe (1997). Kuentzel & Heberlein (1992); Chipman & Helfrich (1988); Kuentzel & McDonald (1992); Wellman, Roggenbuck & Smith (1982); Schreyer & Beaulieu (1986)
Dependent Variables	**Attitudes toward depreciative behaviours**	Wellman, Roggenbuck & Smith (1982)
	Motives	Kuentzel & McDonald (1992); Ditton, Loomis & Choi (1992)
	Attitudes toward animals	Kellert (1985)
	Travel behaviour	Martin (1997); Moscardo, (2001); Williams & Huffman (1985)
	Preferences for wildlife	Martin (1997); Manfredo & Larson (1993)
	Types of information preferred or used	Martin (1997); Manfredo & Larson (1993); Cole & Scott (1999)
	Substitution of recreation experiences	Choi, Loomis & Ditton (1994)

	Destination choice factors	Moscardo (2001); Kuentzel & Heberlein (1992)
	Satisfaction with tourism experiences	Moscardo (2001)
	Conservation activities: volunteering, donations to organisations, habitat improvement, membership of groups	McFarlane & Boxall (1996)
	Attitudes toward management	McIntyre & Pigram (1992); Wellman et.al. (1982)
	Setting preferences: included availability of interpretation, other activities, amenities, remoteness, limits to visitation, competing uses, birdwatching opportunities, other flora and fauna,evidence of man, lakes, wildlife, terrain, scenery, cleanliness, access crowding etc.	Cole & Scott (1999) Merril & Graefe (1997); Kuentzel & Heberlein (1992); Wellman, Roggenbuck & Smith (1982); Hollenhorst (1990), Wellman et.al. (1982)
	Demographic variables: Not widely examined in specialisation literature. Some suggestion that specialisation is linked with higher education levels, higher income levels and age. However, results are not consistent.	Kellert (1985); McFarlane (1996); Pearce & Wilson (1995); Cole & Scott (1999); Hollenhorst (1990); Williams & Huffman (1985)

There have been other articles that have used different approaches to the above straightforward indicator/ dependent variable concept. These include Manfredo & Larson's (1993) study of wildlife tourists, which used cluster analysis on a recreation preference scale to develop four clusters. These clusters were then compared on their participation in wildlife viewing and other activities, preferences for information, constraints and involvement with management. Suggestions of specialisation levels were then based on the characteristics of the clusters. Alternatively, Ewert & Hollenhorst (1994) developed multi-item scales for each of the attributes they expected to be related to specialisation, such as experience use history, skill levels, locus of control, naturalness of setting, social orientation, equipment used and risk taking. They then looked for correlations between all of the selected attributes.

The approach taken in this study was to initially consider the 'interest in viewing wildlife' variable, and investigate whether it was associated with other indicators of specialisation. The wording of this variable asked respondents "how interested are you

in viewing wildlife while on holidays", and the options available for selection reflected varying levels of importance that wildlife played in travel decisions. In terms of the indicator variables from previous specialisation studies, this is similar to 'centrality to lifestyle' variables (Virden & Schreyer, 1988). However, for the sake of consistency with terminology used in the previously reported studies in this thesis, this variable will continue to be called the 'interest in viewing wildlife variable'.

Other indicator variables tested for relationship with the 'interest in wildlife viewing' variable were selected from those used in previous studies, and included participation in wildlife tourism, ownership of wildlife and bird books, subscription to wildlife and nature magazines, and membership of environmental organisations. The other possible indicators of skill levels, ownership of specialised equipment and economic investment/money spent on wildlife viewing were not examined, as they were difficult to apply to the broad spectrum of wildlife tourists. It was considered to be beyond the scope of this thesis to attempt to develop a valid and reliable method of assessing skill or knowledge levels for a diversity of wildlife tourists in a broad range of settings. Ownership of specialised equipment was excluded because there are no specialised equipment items directly relevant to wildlife viewing (cameras and binoculars could be used for other activities besides wildlife viewing). Furthermore, ownership of equipment and money spent on activities may lead to erroneous conclusions regarding specialisation, as these items may "*reflect conspicuous consumption, aspirational overbuying, socioeconomic background, or lifestyle rather than commitment to or involvement in an activity*" (McIntyre & Pigram, 1992, p4).

The dependent variables selected for examination included preferences for features of the wildlife experience, participation in interpretation, participation in other wildlife-related activities and recreation preferences. These variables were selected from previous studies of specialisation. They were also selected because they were relevant to a tourism context and could guide decisions on the provision of facilities and services for different groups of tourists. Comparisons were also made on demographic

variables for descriptive purposes and in order to investigate whether any differences between groups were influenced by demographic variables. A more detailed justification of selected variables is as follows:

Indicator Variables

a) **Interest in wildlife viewing:** The same question that was common to the Exploratory Study, the Rainforest Habitat study and the FCNP study was again used in this present study. This question reflects the importance of wildlife in travel decisions, and is most similar to the concept of 'centrality to lifestyle' in the specialisation literature.

b) **Participation in wildlife tourism:** A similar question as was used in the other studies was repeated in this present study, regarding participation in different types of wildlife experience. However, in this study respondents were asked to indicate the number of times they had visited a zoo, a wildlife sanctuary/wildlife park, or an aquarium separately. In the other surveys, these were grouped together. Because it is possible that there may be differences in participation patterns in each type of captive experience, these have been separated in the present questionnaire.

c) **Equipment and membership:** Ownership of books and field guides about birds and wildlife, and subscription to or regular purchase of nature/wildlife magazines, was thought to be a possible indicator of interest in wildlife (McFarlane, 1994, 1996; Kellert, 1985). Respondents were therefore asked to indicate their level of ownership or subscription to these items.

Dependent Variables

d) **Preferences for features of the wildlife experience.** There are two components of the survey related to this topic. Firstly, respondents were asked to indicate the

most important features from a list of 14 features. These features originated from the Exploratory Study, where they were derived from open-ended descriptions of best and worst wildlife experiences. Respondents in the Rainforest Habitat and FCNP studies were then asked to indicate how important these features were to their wildlife experiences. These results were used to shorten the original set of features to the 14 features used in this questionnaire, to avoid repetition and use the features that best discriminated between respondents. However, due to the strong positive skew on importance ratings evident from the Rainforest Habitat and FCNP studies, respondents in this present study were asked to indicate the three most important features.

The second method used to examine preferences for wildlife experiences was through use of descriptive scenarios. Use of scenarios was employed because it allowed for the inclusion of many features of wildlife tourism experiences. The scenarios provided for more realistic comparisons, as real-life wildlife experiences come as a total 'package' of features, rather than a list of individual features. It may be more difficult for respondents to rate preference for different features individually, as they may gain or lose importance depending on the setting. Overall, scenarios were used because they most closely represent the choices respondents would make when selecting actual wildlife experiences to participate in (Choi, Loomis & Ditton, 1994). Respondents were asked to read the descriptions of wildlife viewing experiences, and indicate how much they would like to participate in that kind of experience. Penguins were deliberately selected as the focal wildlife species for the scenarios because they are not typically found in North Queensland, and are not found in the survey sites for this study. This may help respondents to accurately identify underlying preferences, and reduce the likelihood of the environment influencing the responses on the questionnaire. The types of experiences were modelled on actual penguin viewing experiences in Australia. They ranged from viewing wild penguins in a natural, remote area; to viewing wild penguins in an area close to human habituation; to viewing wild

penguins in a large scale tourist facility; and finally to viewing penguins in a zoo (the scenarios are included in Appendix O and will also be described in the Results section). All experiences were presented as positive experiences. Respondents were asked to indicate how interested they were in participating in each kind of experience, and then to select the experience they were most interested in. They were also asked to indicate whether they had previously participated in these kinds of penguin viewing experience, to examine whether prior participation had an influence on the results.

e) **Interpretation:** Results from the Rainforest Habitat and FCNP studies indicated that respondents with higher levels of interest in wildlife viewing were also more interested in interpretive topics and learning. This questionnaire asked respondents to indicate how frequently they participated in six different interpretation related activities, when they are available, during their wildlife tourism experiences. These were seeking information about the wildlife prior to visiting, reading signs, participating in guided tours, purchasing guide books, reading information pamphlets and going into interpretive centres.

f) **Other wildlife related activities:** This section asked respondents to indicate how frequently they engaged in other wildlife related activities. These were derived from variables examined in other specialisation studies (e.g. Cole & Scott, 1999; McFarlane, 1994, 1996) and modified to be relevant to general wildlife viewers. However, many of the variables used in studies of birdwatchers (such as participation in bird counts, keeping species lists, attending birding presentations) were not applicable to general wildlife viewers. The items included in this questionnaire were watching wildlife documentaries, giving donations to wildlife charities, reading books about wildlife, participating in land/habitat care programs, seeking to view wildlife in the neighbourhood, and using bird attracting shrubs, bird feeders and bird baths.

g) **Demographics:** There have been some suggestions that specialisation is linked with higher education levels, higher income levels and age (e.g. Pearce & Wilson, 1995; Cole & Scott, 1999). However, with the exception of education levels, there appears to be little consistency between studies on the demographic characteristics of specialists. This questionnaire asked respondents to indicate their age, gender, residence and education levels, primarily for descriptive purposes and to check whether there were any other significant differences that may influence interpretation of the results.

h) A modified version of the Recreation Experience Preference Scale (Driver, Brown & Peterson, 1991) was included in the questionnaire, primarily in order to cooperate with other studies conducted by researchers connected to the Cooperative Research Centre that provided funding for this thesis (Question 15, Appendix O). This scale has proven to be reliable and valid, and useful in examining motives for recreation (Schafer, Inglis, Johnson & Marshall, 1998). Analysis was conducted on these variables, however there were no significant differences found between the groups based on levels of interest in viewing wildlife. Therefore no further reporting of these variables will be undertaken in this Chapter.

Self-completion questionnaires were used, and interviewers were available to answer any comprehension questions the respondent may have had, but did not otherwise assist the respondent with the completion of the questionnaire. The justification for use of self-completion questionnaires has been previously discussed in Section 2.2.3 of Chapter Two.

5.3 Results

The first section of the results will examine responses to the 'interest in wildlife viewing' variable. The groups of respondents defined by this variable will then be compared on the other indicator variables of participation in wildlife tourism, ownership of wildlife/bird books, subscription to wildlife and nature magazines, and membership of wildlife and environmental organisations. The results are organised as follows:

Indicator Variables:

5.3.1 Interest in viewing wildlife

5.3.2 Frequency of participation in wildlife tourism

5.3.3 Ownership of wildlife books, subscriptions to wildlife magazines, and membership of wildlife and nature organisations

5.3.4 Wildlife specialisation and indicator variables

Dependent Variables

5.3.5 Features of the wildlife tourism experience

5.3.6 Participation in interpretive activities

5.3.7 Participation in other wildlife related activities

5.3.8 Demographic differences

5.3.1 Interest in viewing wildlife

In terms of levels of interest in wildlife viewing, respondents in the present study had similar proportions of respondents in each category as did the Rainforest Habitat Study sample. A total of 16.2% (n=65) were in the Enthusiast category, 45.3% (n=182) were in the Interested category, 36.8% (n=148) were in the General category and the remaining 1.7% (n=7) were not interested or preferred to avoid wildlife. Table 5.12 shows these results, and compares them to the distributions of visitors in the Exploratory, Rainforest Habitat and FCNP studies. As was the case with the other studies, the small number of respondents indicating that they either were not interested in viewing wildlife, or prefer to avoid wildlife, will be excluded from further analyses.

Table 5.12

Interest in Viewing Wildlife

Interest Level	Exploratory Study	Rainforest Habitat	FCNP	Specialisation Study
Enthusiast: The opportunity to view wildlife is one of the most important factors in my travel decisions	7.1%	16.0%	35.5%	16.2%
Interested: The opportunity to view wildlife is included as part of my travel decisions	32.1%	46.2%	44.8%	45.3%
General: Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	56.5%	37.0%	17.4%	36.8%
Not interested in viewing wildlife	3.4%	0.5%	1.4%	1.2%
Prefer to avoid wildlife	0.8%	0.3%	0.9%	0.5%
Total	100%	100%	100%	100%

5.3.2 Frequency of participation in wildlife viewing

One of the key variables in examining specialisation amongst wildlife viewers is whether higher levels of interest in wildlife viewing is linked with greater levels of participation in wildlife viewing. In the Exploratory, Rainforest Habitat and FCNP studies these variables were found to be significantly related. In the present study, visitors were again asked to indicate how many times they had visited captive venues, visited places where wildlife is often seen, or attended specific wildlife viewing tours. The responses in these categories were summed to give an overall score, and analysed using One-way ANOVA. Results indicate there was a significant difference ($F= 22.14$; sig. = 0.000) in participation in wildlife tourism based on interest in wildlife. Table 5.13 shows the mean number of times each interest group had travelled to wildlife venues in the previous 12 months. As was expected, the higher the interest in wildlife, the more visitors had participated in wildlife tourism.

Table 5.13
Overall Participation in Wildlife Viewing by Interest Group

Interest in Wildlife Viewing	Mean Number of Times Visited Wildlife Venues in past 12 months
Enthusiast	22.7 times
Interested	13.6 times
General	7.3 times

One issue raised in the Discussion section of Chapter Four was the manner in which respondents were asked about their participation in captive wildlife viewing. In the previous studies, respondents were asked to indicate how many times they had visited a zoo/sanctuary/aquarium, worded as one question. This raised the possibility that while respondents with higher levels of interest did visit captive places more than did

other visitors, they may not visit all types of captive venues more. For example, attendance at wildlife sanctuaries might have been related to higher levels of interest in wildlife, but not attendance at zoos, and this was concealed by the way the question was asked on the survey. In the present survey, visitors were asked about their visitation levels to zoos, wildlife sanctuaries or wildlife parks, and aquariums as separate questions. Table 5.14 shows that this potential problem was not supported by the results. Visitors with higher levels of interest in wildlife viewing do visit all kinds of captive wildlife venue more than do other visitors, and this includes zoos.

Table 5.14

Participation in Different Wildlife Experiences by Interest Group

Type of wildlife experience	**General group: mean times visited**	**Interested group: mean times visited**	**Enthusiast group: mean times visited**	**F**	**Sig.**
Trips to zoos	.31	.62	1.37	17.1	.000
Trips to wildlife sanctuaries or wildlife parks	.91	2.23	2.63	9.9	.000
Trips to aquariums	.39	.96	2.00	14.3	.000
Land based tours specifically to view wildlife	.53	1.58	4.29	23.9	.000
Land based trips to places where wildlife often seen	2.79	4.13	6.02	5.1	.006
Water based tours or cruises specifically to view wildlife	.74	1.90	2.68	6.2	.002
Water based trips to places where wildlife often seen	1.62	2.14	3.75	3.8	.022

While it is clear that visitors with higher levels of interest in wildlife viewing continue to visit captive environments, the participation rates for each interest group show that

all groups, and particularly Enthusiasts, participate relatively more frequently in non-captive environments. For example, looking at participation rates for Enthusiasts down the column in Table 5.14, it can be seen that they participated 1.37 times in zoo experiences, 4.29 times on land based tours specifically to view wildlife, and 6.02 times on land based trips to places where wildlife is often seen.

Post-hoc tests (Scheffe) on these results showed no consistent patterns of participation between the groups, they varied from setting to setting. There were significant differences between all groups for trips to aquariums and land-based tours. Enthusiasts participated significantly more frequently than the other groups for trips to zoos. General group respondents participated significantly less frequently than the other groups in trips to wildlife sanctuaries and water based tours. For trips to land-based and water-based places where wildlife is often seen, the differences were between the Enthusiast group and the General group only.

There were no significant differences in participation in wildlife viewing for the demographic variables age, gender, residence or education. However, respondents travelling with children were significantly more likely to visit zoos and wildlife sanctuaries. They participated less frequently in other types of settings, although the differences were not statistically significant. Table 5.15 shows the mean participation rates in different wildlife settings, and the results of One-way ANOVA for participation by respondents travelling with children.

Table 5.15

Participation in Different Wildlife Experiences by Travel with Children

Type of wildlife experience	**Not travel with children (mean visits in last 12 months)**	**Travel with children (mean visits in last 12 months)**	**F**	**Sig.**
Trips to zoos	.45	.90	4.62	.012
Trips to wildlife sanctuaries or wildlife parks	1.51	2.09	6.37	.003
Trips to aquariums	.89	.94	No sig. difference	
Land based tours specifically to view wildlife	1.74	1.57	No sig. difference	
Land based trips to places where wildlife often seen	4.09	3.97	No sig. difference	
Water based tours or cruises specifically to view wildlife	1.66	1.55	No sig. difference	
Water based trips to places where wildlife often seen	2.27	2.18	No sig. difference	
Overall participation	12.61	13.20	No sig. difference	

5.3.3 Ownership of wildlife books, subscriptions to wildlife magazines, and membership of wildlife and nature organisations

Studies of specialisation amongst birdwatchers have found higher levels of specialisation to be related to ownership of equipment and books, and to membership of birding organisations (e.g. Cole & Scott, 1999; McFarlane, 1994, 1996). In the case of wildlife tourists, it is more difficult to specify equipment and memberships that are directly related to the activity. Ownership of bird and wildlife books was thought to be general enough to apply to wildlife tourists, as was subscription to wildlife and nature-related magazines and membership of wildlife or environmental organisations.

Overall, 36.1% of the total sample indicated that they did not own any books or field guides about birds, 46.3% indicated that they owned one or two, and 17.7% indicated that they owned several. There was a significant difference in bird book/field guide ownership between the interest groups. Table 5.16 shows that Enthusiasts were proportionately more likely to own several books, while respondents in the General group were more likely to say they did not own any.

Table 5.16

Ownership of Bird Books/ Field Guides by Interest Group

	Do not own any bird books/guides	**Own one or two**	**Own several**	**Total**
Enthusiast group	13 20.0%	21 49.2%	20 30.8%	65 100%
Interested group	54 29.7%	88 48.4%	40 22.0%	182 100%
General group	73 49.7%	64 43.5%	10 6.8%	147 100%
Total	140 35.5%	184 46.7%	70 17.8%	394 100%

* Chi-square value 32.89; sig.=0.000

There were no significant differences in bird book or field guide ownership based on age, gender, residence, education or travel with children.

A similar result was found for ownership of books or field guides about wildlife. Overall, 30% of the sample indicated they did not own any books or guides about wildlife, 44.9% indicated they owned one or two, and 25.1% indicated they owned several. Table 5.17 shows that respondents in the Enthusiast group were more likely to indicate they owned several books or guides, while respondents in the General group were more likely to say they did not own any.

Table 5.17

Ownership of Wildlife Books/ Field Guides by Interest Group

	Do not own any wildlife books/guides	Own one or two	Own several	Total
Enthusiast group	12 18.5%	21 32.3%	32 49.2%	65 100%
Interested group	40 22.0%	93 51.1%	49 26.9%	182 100%
General group	64 43.2%	65 43.9%	19 12.8%	148 100%
Total	116 29.4%	179 45.3%	100 25.3%	395 100%

* Chi-square value 43.53, sig. =0.000

There were no significant differences in wildlife book or field guide ownership based on age, gender, residence, education or travel with children.

To analyse the level of overall subscription to wildlife and nature magazines, a computed variable was created which summed all of the magazines listed on the survey. Overall, 61% of the sample did not subscribe to any magazines, while 39% did. The magazines included as acceptable 'other' magazines in addition to those listed were Audubon, German Geographic Magazine, Geographic Africa & Europe, WWF Magazine, RSPB Birds, Grassroots, Greening Australia, GEO, and Wildlife Fact Files. Significant differences were found for magazine subscriptions between the interest groups. As was the case for wildlife and bird books, Enthusiasts were more likely to subscribe to such magazines, while respondents in the General group were less likely to subscribe (Table 5.18).

Table 5.18

Subscription to Wildlife and Nature Magazines by Interest Group

	Do not subscribe	Do subscribe	Total
Enthusiast group	21 32.3%	44 67.7%	65 100%
Interested group	113 62.1%	69 37.9%	182 100%
General group	107 72.3%	41 27.7%	148 100%
Total	241 61.0%	154 39.0%	395 100%

* Chi-square value 30.53, sig. =0.000

There were no significant differences in subscriptions to wildlife or nature magazines based on age, gender, residence, education or travel with children.

From the total sample, 83.8% were not members of any wildlife or environmental organisations or groups, while 16.2% were. Significant differences were again found between the interest groups, with Enthusiasts being more likely to be members of such organisations, while respondents in the General group less likely to be (Table 5.19). Respondents mentioned a total of 35 different wildlife organisations, many of them being local conservation or wildlife groups. The most frequently mentioned groups were World Wildlife Fund, Greenpeace, Naturesearch, Friends of the Earth and Coastcare.

Table 5.19

Membership of Wildlife or Environmental Organisations by Interest Group

	Not a member	Member	Total
Enthusiast group	44 67.7%	21 32.3%	65 100%
Interested group	144 81.4%	33 18.6%	177 100%
General group	135 93.1%	10 6.9%	145 100%
Total	323 83.5%	64 16.5%	387 100%

* Chi-square value 30.53, sig. =0.000

There were no significant differences in wildlife/nature organisation membership based on age, gender, residence, education or travel with children.

5.3.4 Wildlife specialisation and indicator variables

These results have indicated that participation in wildlife tourism, ownership of bird/wildlife books, subscription to wildlife magazines and membership of organisations are all connected to levels of interest in viewing wildlife. This supports the use of the 'interest in viewing wildlife' variable is an indicator of specialisation levels.

In the specialisation literature, both the variables selected as indicator variables, and the treatment of these variables, has lacked consistency. Many studies combine a number of indicator variables to form a specialisation index. The respondent's scores or responses to these indicator variables are then summed or combined, and the overall index score is used to allocate them into a specialisation group. Other studies have used only one variable to allocate respondents into specialisation groups. Table 5.20 summarises some of the ways that indicator variables and indexes have been treated to define specialisation in previous literature.

Table 5.20

Previous Methods used to Define Specialisation Levels

Reference	Index/variables used	Defining specialisation levels
Wellman, Roggenbuck & Smith (1982)	Developed index using 10 questions covering canoeing investment, past experience, and centrality to lifestyle. Variables standardised and summed	Defined low specialists as the lowest quartile of respondents on the specialisation scale, and high specialists as the highest quartile
Kellert (1985)	One variable used – self rated ability to identify bird species	Based on the number of species respondents could identify, 3% were classed as committed birdwatchers, and 25% casual birdwatchers.
Donnelly, Vaske & Graefe (1986)	Index constructed using 4 dimensions: participation, equipment, skill and boating related behaviour. Each dimension was measured by 2 variables. Responses were assigned a level of specialisation (low, medium, high), with associated scores (1, 2, 3). The scores were summed to create a specialisation index ranging from 4 to 12.	The specialisation index scale (ranging from 4 to 12) was used as a dependent variable for comparison between 3 types of boaters.
Schreyer & Beaulieu (1986)	Two separate measures: a composite index based on participation and past experience; and a composite index based on commitment	Both indexes were divided into three equal categories from low to high.
Chipman & Helfrich (1988)	Used 18 questions covering 4 dimensions: resource use, experience, investment, and centrality to lifestyle. The scores for each item were standardised and summed to develop specialisation index.	Six specialisation types were identified by cluster analysis based on the 4 dimensions. Experience was the most descriminating indicator of specialisation.
Hollenhorst (1990)	Used expertise as a measure of specialisation. Found expertise to be correlated with social contexts, participation, and site density.	Expertise of climbers assessed using the difficulty ratings assigned to climbing routes.
Merril & Graefe (1997)	Developed index using 6 indicators to measure skill level, prior experience and commitment. Standardised scales using Z-scores and	High specialists were defined as the upper quartile (25%) and low specialists as the lowest quartile.

	added them together to form a specialisation index.	
McIntyre & Pigram (1992)	Used a list of 16 statements related to enduring involvement in the activity. Factor analysis identified 3 factors – attraction, self-expression and centrality. Regression factor scores were calculated for each factor for every respondent. These factors, plus an index for camping experience and an index for familiarity with the area were then standardised using Z scores and used in cluster analysis.	Cluster analysis of respondents based on familiarity index, experience index and the three factors of attraction, self-expression and centrality. Four clusters were identified. Cluster 2 was the most experienced and familiar.
Choi, Loomis & Ditton (1994) Ditton, Loomis & Choi (1992)	One variable used - Number of days fished in previous 12 months	Collapsed total days fishing into 4 ordinal categories, each category consisting of 25% of respondents.
Manfredo & Larson (1993)	Cluster analysed responses to recreation preferences	Cluster groups compared on wildlife participation, types of wildlife preferred, information preferences, constraints and involvement with management
McFarlane & Boxall (1996)	Developed index using 9 variables representing past experience, centrality to lifestyle and economic commitment. Scores were standardised using Z scores, then factor analysed to identify 3 dimensions.	Respondents grouped using cluster analysis. Four subgroups of birders were identified, and were ordered from low to high specialisation and labelled casual, novice, intermediate and advanced.
Tarrant, Cordell & Kibler, (1997)	Index based on summing the Z-scores for 3 variables: no. of times participated in previous 5 years, perceived paddling skill, and whether a private or commercial boater	Defined three specialisation categories (low, moderate and high). Highest 33% were classed as high specialisation, and the lowest 33% classed as low specialisation. Middle 33% were moderate.
Martin (1997)	Used 4 items for specialisation: Took 10 or more trips; studied or made notes about wildlife; used specialised equipment; participated in organised wildlife count	Specialised respondents were those who met the criteria on 2 or more items. Intermediate respondents met criteria on one of four, and non-specialists were those who did not meet any criteria.
Williams & Huffman (1985)	Used a 21 item checklist that included questions on participation, membership of organisations, subscriptions, book & equipment ownership, and political activity in	Examined correlation between specialisation index and other variables

	conservation. Factor analysed to retain 10 variables, then created an index by standardising and summing the scores for these variables.	
Cole & Scott (1999)	One variable was used – membership of groups. Comparisons made between members of a birdwatching association and holders of passes to state parks	Birdwatching association members were defined as specialists, while pass holders were defined as casual wildlife watchers

As can be seen from the selection of studies in Table 5.20, there are three main ways that specialisation has been defined. These are combining indicator variables to form an index of specialisation (e.g. Donnelly, Vaske & Graefe, 1986); using preference statements and specialisation indicator variables to cluster-analyse respondents (e.g. McIntyre & Pigram, 1992); and the relatively simple procedure of using one variable to define specialisation (e.g. Cole & Scott, 1999).

The practice of combining variables to form an index has received criticism (Watson & Niccolucci, 1992; Kuentzel & Heberlein, 1992; Kuentzel & McDonald, 1992). This method hides variations in the components that make up the index and this is problematic for a construct that is likely to be multi-dimensional in nature (McIntyre & Pigram, 1992). Kuentzel & Heberlein (1992) argue that dimensions of specialisation are distinct and should be analysed for their differential effects. Combining multiple measures into a single specialisation index "presents conceptual problems and does not offer a better understanding of the specialisation construct" (p. 223). Watson & Niccolucci (1992) provide a review and criticism of the methods by which measures of past use history have been combined in leisure research. They argue that by combining variables measuring previous experience into a single nominal scale, the ability to identify which aspect of past experience accounts for differences between visitors is lost. Further criticisms of methods includes the failure to standardise unlike measures, and the tendency for researchers to make decisions about how to combine past experience measures that are unsupported either empirically or theoretically. While the article by Watson & Niccolucci (1992) focuses specifically on defining past

experience dimensions, the same criticisms are relevant to the methods by which other variables are combined to develop specialisation indexes.

The 'interest in wildlife' variable has been shown to be useful in describing differences between visitors in the previous studies in this thesis, and has been shown to be consistent with other indicators of specialisation in the present study. This indicates that interest in wildlife viewing is a useful variable that behaves in a similar way to measures of specialisation. There does not appear to be any great advantage to be gained from developing a 'specialisation' index based on the indicator variables used in this study. Firstly, the indicator variables have already been shown to be consistent with interest in wildlife viewing. Enthusiasts participated significantly more frequently in wildlife viewing, they owned significantly more wildlife/bird books, were significantly more likely to subscribe to wildlife and nature magazines, and were significantly more likely to belong to environmental organisations. While it is possible to standardise the indicator variables and combine them into an index, there is no firm theoretical basis for doing so. A variety of methods for defining specialisation have been used in the literature, with some researchers firmly in favour of indexes and others firmly against their use. On this basis there is no compelling evidence or rationale in favour of developing an index over using a single variable for the purpose of this study.

Overall, it was considered preferable to examine differences between wildlife viewers based on the 'interest in viewing wildlife' variable. The advantage of this approach is that it is based on the respondent's self-assessment of the importance that wildlife plays in their travel plans, and not on a researcher-defined category. In addition, the meaning of the measure is very clear and easy to interpret rather than being confused by multiple contributions from discreet sources.

5.3.5 Features of the wildlife tourism experience

One of the methods by which preferences for wildlife tourism experiences was examined in this study was through the use of wildlife experience scenarios. The scenarios described penguin-viewing experiences that ranged from viewing wild penguins in a remote natural setting to viewing penguins in a zoo. Respondents could select from the following options when indicating their preference for each scenario:

- Actively avoid
- Not interested
- Happy to go along
- Very interested
- Would love to participate

The scenarios were described as follows:

Scenario 1: "Remote-Wild"
The cliff-line was rugged, windswept and remote. Our small group travelled 30 minutes along a dirt road, then walked for 15 minutes down a track to the shore. A cold wind, laden with sea-spray, blow off the deep ocean, and gull cries could be heard on the wind. The crisp air smelt of salt as the sun dipped below the horizon. Sitting on clumps of grass, we watched the penguins come ashore, illuminated by the red glow of filtered torches. Young penguins, left on shore while their parents were fishing, called noisily until reunited. We watched and listened for an hour, then clambered back up the track by torchlight, and back to our vehicle.

Scenario 2: "Easy Access-Wild"
Penguins nested all along the wharf and the foreshore, just minutes from the main street of the town. Once away from the traffic and restaurants on the main road, we sat quietly and listened for the baby penguins. They came out of their burrows, and called to the parents returning from their day fishing. Illuminated by street lights and red filtered torches, they seemed unconcerned about the people watching them from metres away. The parents appeared out of the dark, cold ocean, looking wet and sleek, and returned to their burrows where they were reunited with their young.

Scenario 3: "Developed-Wild"
We arrived by coach to the large penguin centre, which housed information displays, gift and coffee shops. We strolled along the wide boardwalk, where at dusk some early returning penguins were already seeking their burrows. We sat on some large concrete steps, and watched the beach which was illuminated by spotlights. Groups of penguins could be seen waiting in the shallows, preparing for their dash across the beach. One penguin would make the dash, and up to 10 penguins follow. Their black and white waddles elicited cheers, smiles and laughter from the crowd. We were able to get a close view of the penguins as they waddled under the boardwalk. Afterwards we returned to the complex for some hot chocolate, then back to our coach for the return trip to our hotel.

Scenario 4: "Captive"
The penguins' enclosure was set in the middle of the spacious zoo, amongst broad walkways and shady trees. The penguins walked and swam in a large enclosure, which also had a series of imitation rock burrows around the outside. Some of the burrows had glass viewing windows for visitors to watch the penguins. The penguins seemed to enjoy a slide set into the rocks, which they used to slide into the water. Visitors watching from above could clearly see the penguins swimming and maneuvering underwater, and then hopping back on the shore with surprising agility. Visitors could also go down to the underwater viewing platform, where they could see the underwater antics even more clearly.

Overall, the 'Remote-Wild Scenario' was clearly the most preferred option for respondents. A total of 70.8% (n=276) respondents indicated that The 'Remote-Wild Scenario' represented the wildlife experience they would most like to participate in. The 'Easy Access-Wild Scenario' was the second most preferred option, with 15.9% (n=62) of respondents indicating they would most like to experience this scenario, followed by the 'Developed-Wild Scenario', with 7.4% (n=29), and the 'Captive Scenario' with 5.9% (n=23). This pattern was also evident by considering the breakdown of responses for each scenario. The majority of responses for the 'Remote-Wild Scenario' indicate higher levels of preference, while the majority of responses for the remaining scenarios are clustered around the 'happy to go along' response. Table 5.21 illustrates these results, and percentages in Table 5.21 indicate the percentage of the total sample indicating the corresponding preference level. There appears to be a progressive decline in preference as the scenarios describe experiences with increasing levels of structure and human influence. There was no significant difference between the interest groups for the most preferred scenario. For all levels of interest in wildlife, the large majority of respondents preferred the 'Remote-Wild Scenario'.

Table 5.21

Overall Preferences for Wildlife Experience Scenarios

	'Remote-Wild Scenario'	**'Easy Access-wild Scenario'**	**'Developed-Wild Scenario'**	**'Captive Scenario'**
Actively avoid	1.8%	1.5%	9.2%	9.2%
Not interested	5.1%	14.4%	28.7%	23.6%
Happy to go along	33.6%	43.8%	42.9%	49.8%
Very interested	25.5%	22.2%	10.5%	11.9%
Would love to participate	34.1%	18.1%	8.7%	5.5%
Total	100%	100%	100%	100%

After selecting the scenario they would most like to participate in, respondents were asked in an open-ended question what features of the scenario were appealing to them. Across all scenarios, the most frequent response was the appeal of the natural environment or natural habitat. Table 5.22 shows the 10 overall most frequently mentioned features that respondents listed as appealing to them. This table reflects the overall frequency of reasons, and is effected by which scenario respondents selected as their most preferred. The dominance of the natural environment as the most frequently mentioned feature is influenced by the majority of respondents (70.8%) selecting the 'Remote-Wild Scenario' as their most preferred.

Table 5.22

Overall Reasons for Most Preferred Scenarios

Reason	**Percentage of Responses**
Natural environment/natural habitat	51.9
Not too many people	9.6
Less impact/interference with wildlife	6.1
Rugged/wilderness	5.5
Requires exercise/walk/effort	5.3
Easier to access/less effort	5.3
Animals behave naturally	2.7
Less touristy/artificial setting	2.4
Would be enjoyable/good experience	1.8
Authentic/real experience	1.6

Table 5.23 shows the features listed as appealing based on which scenario was preferred by respondents. For the 'Remote-Wild Scenario', the natural environment, less impact on wildlife and the ruggedness of the experience were the most appealing reasons why respondents rated this scenario as their most preferred. For the 'Easy Access-Wild Scenario', reasons centered on ease of access combined with viewing penguins in their natural environment. In the 'Developed-Wild Scenario' ease of access, presence of facilities and ability to see penguins closely were most important. For the 'Captive Scenario', ease of access, facilities and information for visitors, and

the ability to see penguins closely were the dominant reasons why respondents selected this scenario as their most preferred.

Table 5.23

Reasons for Preferred Scenarios by Scenario Selected

'Remote-Wild Scenario'	**'Easy Access-wild Scenario'**
Natural habitat/environment (44.6%; 182) Less impact on wildlife (11.8%; 48) Rugged/wilderness (7.1%; 29) Not too many people (6.1%; 25) Less touristy/artificial (5.4%; 22) Animals behave naturally (5.1%; 21) Requires walk/effort (4.9%; 20) Authentic/real (3.2%; 3.2)	Easy to access (37.3%; 26) Natural habitat/environment (31.3%; 26) Less impact on wildlife (9.6%; 8) See penguins closely (3.6%; 3) Not too many people (3.6; 3)
Total responses =408	Total responses = 83
'Developed-Wild Scenario'	**'Captive Scenario'**
Easy to access (27.6%; 8) Would be good experience (17.2%; 5) Natural habitat/environment (13.8%; 4) Facilities/ information available for visitors (13.8%; 4) See penguins closely (10.4; 3)	Easy to access (36.7; 11) See penguins closely (16.7; 5) Facilities/information available for visitors (13.3%; 4) Travelling with children (13.3%, 4) Interesting (10.3; 3)
Total responses =29	Total responses =30

* Figures in brackets are (% of responses; count of responses)

Table 5.24 shows the mean ratings given to each scenario by each interest group. Mean ratings for the scenarios generally decline as the setting becomes more structured, and the Enthusiast Group give the highest mean ratings for all scenarios except the 'Captive Scenario', where the Interested Group give an equally high

setting. Interestingly, the General Group indicated higher interest in participating in the 'Remote-Wild', ' Easy Access-Wild' and 'Developed-Wild' scenarios than did the Interested Group.

Table 5.24

Mean Ratings for Scenarios by Interest Group

	Enthusiast Group	**Interested Group**	**General Group**
Remote-Wild Scenario	4.02	3.65	4.03
Easy Access-Wild Scenario	3.45	3.32	3.54
Developed-Wild Scenario	2.92	2.76	2.84
Captive Scenario	2.83	2.83	2.80

* Rating scale from 1 (actively avoid) to 5 (would love to participate)

While there was no significant difference between the interest groups for the scenario they selected as their overall most preferred scenario, there were differences on the ratings given to individual scenarios. Chi-square indicated significant differences existed between the interest groups for preferences for the 'Remote-Wild Scenario', the 'Developed-Wild Scenario' and the 'Captive Scenario'. Table 5.25 shows the crosstabulation table for the 'Remote-Wild Scenario'. Proportionately more respondents in the Enthusiast and General groups indicated they would 'love to participate' in this kind of experience, while respondents in the Interested group were more likely to indicate that they were 'very interested'. Overall, the majority of respondents in each specialisation group were 'happy to go along' to the 'Remote-Wild Scenario'.

However, these results should be viewed with caution, because four cells, or 26.7% of cells, had an expected count of less than 5. Tables with above 20% of cells with an expected count of less than 5 should treated cautiously, as the Chi-square result may be less reliable (Norusis, 1999). Because of this, the data was also analysed using One-way ANOVA, with the categories coded as a scale from 1 ('actively avoid') to 5

('would love to participate'). Results indicated a significant difference existed (F = 6.95; sig. = 0.001), with the mean score for the Enthusiast group at 4.02, the mean score for Interested group at 3.65, and the mean score for the General group at 4.03. Taken together, these results tend to indicate that the results are significant, but they should still be interpreted cautiously. No significant differences existed between the interest groups for the 'Easy Access-wild Scenario'.

Table 5.25

Preference for the 'Remote-Wild' Scenario by Interest Group

	Enthusiast Group	**Interested Group**	**General Group**	**Total**
Actively avoid		6 85.7%	1 14.3%	7 100%
Not interested	4 16.3%	10 42.6%	5 21.1%	19 100%
Happy to go along	17 13.1%	68 52.3%	45 34.6%	130 100%
Very interested	14 13.9%	55 54.5%	32 31.7%	101 100%
Love to participate	28 21.2%	43 32.6%	61 46.2%	132 100%
Total	64 16.5%	182 46.8%	143 36.8	389 100%

* Chi-square value 21.94; Sig. = 0.005.

For the 'Developed-Wild Scenario', the crosstabulation table reported in Table 5.26 indicated that proportionately more respondents in the Enthusiast Group either indicated that they would 'actively avoid' this experience, or would be 'very interested'. Respondents in the Interested group had similar results, indicating they were proportionately more likely to be either 'not interested', or 'very interested' in this experience. It appears that preference for participation in the penguin viewing experience described in the 'Developed-Wild Scenario' resulted in a split in preference for respondents with higher levels of interst. However, the overall majority

of respondents in both cases indicated they would be 'happy to go along' to that experience.

Table 5.26

Preference for the 'Developed-Wild Scenario' by Interest Group

	Enthusiast Group	Interested Group	General Group	Total
Actively avoid	10 27.8%	17 47.2%	9 25.0%	36 100%
Not interested	10 8.9%	60 53.6%	42 37.5%	112 100%
Happy to go along	27 16.0%	68 40.2%	74 43.8%	169 100%
Very interested	11 26.2%	22 52.4%	9 21.4%	42 100%
Love to participate	7 20.0%	14 40.0%	14 40.0%	35 100%
Total	65 16.5%	181 45.9%	148 37.6%	394 100%

* Chi-square value 18.85; sig. = 0.016.

For the 'Captive Scenario', Table 5.27 shows that proportionately more respondents in the Enthusiast group indicated that they were either 'very interested' in that kind of experience, or would 'actively avoid' it. Respondents in the Interested group were proportionately more likely to indicate they were 'not interested' in that experience, as were respondents in the General group. However, as was the case for the other scenarios, the majority of respondents in each interest group indicated they were 'happy to go along' to such an experience.

Table 5.27

Preference for the 'Captive Scenario' by Interest Group

	Enthusiast Group	Interested Group	General Group	Total
Actively avoid	10 27.8%	9 25.0%	17 47.2%	36 100%
Not interested	12 13.0%	50 54.3%	30 32.6%	92 100%
Happy to go along	26 13.2%	96 48.7%	75 38.1%	197 100%
Very interested	13 27.1%	17 35.4%	18 37.5%	48 100%
Love to participate	4 18.2%	10 45.5%	8 36.4%	22 100%
Total	65 16.5%	182 46.1%	148 37.5%	395 100%

* Chi-square value 15.9; Sig. = 0.044.

There were no significant differences for preferences for individual scenarios based on the demographic variables age, residence or education. However, there was a significant difference in preference for the 'Remote-Wild Scenario' (but not for the other scenarios) based on gender. A One-way ANOVA indicated a significant difference (F=5.65; sig.=0.018) between the indicated levels of preference for males (mean score 3.73) and females (mean score 3.97), on a scale of 1 (actively avoid) to 5 (would love to participate). There was also a significant difference based on whether the respondent usually travels with children for the 'Developed-Wild Scenario' (F=5.25, sig.=0.022) and the 'Captive Scenario' (F=4.54, sig. =0.034). For the 'Developed-Wild Scenario', respondents travelling without children had a mean preference score of 2.73, while the mean preference score for those travelling with children was 2.99. For The 'Captive Scenario', the mean preference score for those travelling without children was 2.74, and 2.97 for those travelling with children. Despite the presence of significant differences, it must be noted that these average preference scores are still comparatively low.

In terms of overall most preferred scenario, there were no significant differences based on gender, residence, education, or travelling with children. However, Table 5.28 shows that older respondents were more likely to select the 'Easy Access-Wild Scenario', the 'Developed-Wild Scenario', and the 'Captive Scenario' as their most preferred, while younger respondents were less likely to select these.

Table 5.28

Most Preferred Scenario by Age

	15-30 years	31-50 years	51+ years	Total
'Remote-Wild Scenario'	95 36.8%	110 42.6%	53 20.5	258 100%
'Easy Access-wild Scenario'	16 27.6%	12 20.7%	30 51.7%	58 100%
'Developed-Wild Scenario'	7 25.0%	11 39.3%	10 35.7%	28 100%
'Captive Scenario'	3 13.5%	10 43.5%	10 43.5%	23 100%
Total	121 33.0%	143 39.0%	103 28.1%	367 100%

*Chi-square value 30.27, sig.=0.000

Some differences were noted in the reasons why respondents selected different scenarios based on age. There are no appropriate statistical tests to analyse differences between the groups, because the results are based on multiple responses, and the responses from each individual may be counted more than once. Table 5.29 shows the five most frequently mentioned reasons for each age group. Responses were similar for all groups, however respondents in the 51+ age group mentioned ease of access more frequently than other groups. The issue of accessibility therefore appears to be a factor involved in the selection of preferred wildlife scenario particularly for older respondents. When considering the results of Table 5.29 it must be noted that the most

frequently mentioned reasons are heavily influenced by the majority of each age group selecting The 'Remote-Wild Scenario' (natural, remote setting) as their most preferred scenario.

Table 5.29

Reasons for Preferred Scenario by Age

15-30 years	**31-50 years**	**51+ years**
Natural habitat/environment (54.8%; 170)	Natural habitat/environment (54.3%; 188)	Natural habitat/environment (43.8%; 103)
Not too many people (8.7%; 27)	Not too many people (7.2%; 25)	Not too many people (14.5%; 34)
Less impact on wildlife (8.1%; 25)	Less impact on wildlife (6.1%; 23)	**Easy to access** (13.2%; 31)
Requires effort/walk (5.8%; 18)	Rugged/ wilderness (6.1%; 21)	Requires effort/walk (4.7%; 11)
Animals behave naturally (4.2; 13)	Requires effort/walk (5.2%; 18)	Rugged/wilderness (4.7%; 11)
Total responses = 310	Total responses = 346	Total responses = 235

* Figures in brackets are (% of responses; count of responses)

There were no significant differences between the interest groups for previous participation in the penguin viewing experiences described in scenarios 1 to 4. Although overall participation in wildlife tourism significantly increased as interest in wildlife increased (see previous Table 5.13), this was not the case for penguin viewing experiences in this study. It is unclear why this result was found, beyond the assertion that general research results or trends are not always directly applicable to specific types of experiences or samples. Analysis of demographic variables did not assist in explaining this finding, as there were no significant differences in previous participation based on age or residence that may have had an impact on access to penguin viewing experiences.

However, previous participation in the penguin viewing experiences was significantly related to preference for the 'Remote-Wild Scenario' and the 'Developed-Wild

Scenario'. In both cases, previous participation in that kind of experience was related to significantly higher scores given for preference (where the responses were coded from 1=actively avoid, to 5=would love to participate). Table 5.30 depicts the t-test results for all scenarios.

Table 5.30

Preference for Scenarios by Previous Participation

	% of sample with previous participation	Mean score where no previous participation	Mean score where previously participated in this kind of penguin viewing experience	t	Sig. (2-tailed)
'Remote-Wild Scenario'	23.1%	3.77	4.13	3.01	.003
'Easy Access-wild Scenario'	19.4%	3.90	3.90	No significant difference	
'Developed-Wild Scenario'	18.6%	2.68	3.37	5.20	.000
'Captive Scenario'	41.9%	2.76	2.86	No significant difference	

* Rating scale from 1 (actively avoid experience) to 5 (would love to participate in experience).

As an alternative way of examining preferences for features of the wildlife experience, respondents were also asked to indicate which three features were most important to their wildlife experiences. Table 5.31 shows the overall ranking of importance of the features.

Table 5.31

Overall Ranking of Importance of Features of the Wildlife Tourism Experience

Feature	Percentage indicating feature as one of most important to their wildlife experience	Percentage indicating feature not important to their wildlife experience
Seeing wildlife in their natural environment	67.2%	32.8%
An untouched natural environment	37.7%	62.3%
Rare, unique or unusual wildlife	37.0%	63.0%
Large variety of wildlife	31.8%	68.2%
Seeing wildlife behaving naturally	30.5%	69.5%
Being able to get close to wildlife	19.9%	80.1%
Interesting information about the wildlife	15.6%	84.4%
Availability of knowledgeable guides/ staff	11.7%	88.3%
Large number of wildlife to see	10.2%	89.8%
Feeling safe	8.9%	91.1%
Wildlife is easy to see	8.7%	91.3%
Being able to touch or handle wildlife	8.2%	91.8%
Pleasant environment	8.2%	91.8%

Table 5.32 shows the percentage of respondents in each interest group that indicated the feature was one of the most important to their experience. This table confirms that 'seeing wildlife in their natural environment' is the most frequently selected feature for each specialisation group, and was selected by relatively more Enthusiasts than other visitors. Interested group respondents selected 'an untouched natural environment', and 'large variety of wildlife' more frequently than other groups. The

General group selected 'pleasant environment', 'wildlife easy to see' and 'feeling safe' more than the other groups.

Table 5.32

Percentage of Respondents Indicating that Feature is Important by Interest Group

Feature	Percentage of General group indicating feature as one of most important to their wildlife experience	Percentage of Interested Group indicating feature as one of most important to their wildlife experience	Percentage of Enthusiast group indicating feature as one of most important to their wildlife experience
Seeing wildlife in their natural environment	62.8	68.7	78.5
An untouched natural environment	31.8	43.4	36.9
Rare, unique or unusual wildlife	37.2	36.8	38.5
Large variety of wildlife	29.1	36.8	26.2
Seeing wildlife behaving naturally	25.8	33.2	32.3
Being able to get close to wildlife	20.9	19.2	18.5
Interesting information about the wildlife	16.2	17.0	12.3
Availability of knowledgeable guides/ staff	10.8	12.1	13.8
Large number of wildlife to see	12.8	12.0	15.4
Feeling safe	13.5	5.5	6.2
Wildlife is easy to see	11.5	7.1	4.6
Being able to touch or handle wildlife	9.5	4.9	10.8
Pleasant environment	12.8	4.6	1.5

There were few significant differences between the interest groups for the features they indicated as important to their experience. The only significant differences were for the features 'feeling safe' and 'a pleasant environment'. Tables 5.33 and 5.34 show that for these features, respondents in the Enthusiast group were less likely to indicate that the features were important to their experience. Overall, however, these features were not rated as important by many of the respondents in the sample.

Table 5.33

Importance of Feeling Safe by Interest Group

	Not indicated as important	Indicated as important	Total
Enthusiast group	61 93.8%	4 6.2%	65 100%
Interested group	172 94.5%	10 5.5%	182 100%
General group	128 86.5%	20 13.5%	148 100%
Total	361 91.4%	34 8.6%	395 100%

* Chi-square value 7.3; sig. = .026

Table 5.34

Importance of Pleasant Environment by Interest Group

	Not indicated as important	Indicated as important	Total
Enthusiast group	64 98.5%	1 1.5%	65 100%
Interested group	170 93.4%	12 6.6%	182 100%
General group	129 87.2%	19 12.8%	148 100%
Total	363 91.9%	32 8.1%	395 100%

*Chi-square value 9.2, sig. = .018

There were no significant differences on features indicated as important based on age, residence, education or travel with children. There was a significant difference based on gender, but only for one of the features, namely 'feeling safe'. Table 5.35 shows that females were more likely to indicate that feeling safe was important than were males.

Table 5.35

Importance of Feeling Safe by Gender

	Male	**Female**	**Total**
Feeling safe not indicated as important	182 50.7%	177 49.3%	359 100%
Feeling safe indicated as important	11 32.4%	23 67.6%	34 100%
Total	193 49.1%	200 50.9%	393 100%

* Chi-square value 4.2, Sig. (2-sided) = 0.048; computed for 2x2 table.

5.3.6 Participation in interpretive activities

Results reported in the literature review, and results from the Rainforest Habitat and FCNP studies indicated that visitors with higher levels of interest in wildlife viewing were also more interested in interpretation and learning. Respondents in the present study were asked to indicate how frequently they participated in six interpretation and learning activities when visiting wildlife attractions (where these were available). These activities were: seek information about the wildlife prior to visiting; read educational signs at the site; go into an on-site education/interpretive centre and look at displays; purchase guidebooks about the wildlife; participate in a guided tour or ranger talk; and take and read information pamphlets about wildlife.

Overall, respondents were more likely to read educational signs at the site, take and read information pamphlets about the wildlife, and go into an interpretive centre. They were least likely to purchase guidebooks or seek information about the wildlife prior to visiting the site. Table 5.36 shows how often respondents participated in each type of interpretive activity when visiting wildlife attractions. Percentages depict the percentage of the entire sample that indicated the corresponding response.

Table 5.36

Overall Participation in Interpretive Activities

	Frequently	**Sometimes**	**Rarely**	**Never**	**Mean**
Seek information about the wildlife prior to visiting	15.5%	38.6%	28.5%	17.4%	2.48
Read educational signs at the site	67.2%	27.0%	4.8%	1.0%	1.40
Go into an on-site interpretive centre and look at displays	44.4%	41.3%	10.3%	3.9%	1.74
Purchase guidebooks about the wildlife	13.2%	30.6%	37.4%	18.7%	2.62
Participate in a guided tour or ranger talk	27.2%	47.2%	19.0%	6.7%	2.05
Take and read information pamphlets about the wildlife	45.7%	42.3%	9.4%	2.6%	1.69

* Scale used for calculation of mean scores was 1(frequently) to 4 (never)

Table 5.37 shows that participation in many interpretive activities increased as interest in wildlife increased, particularly between the Enthusiast group and the Interested/General groups, but these differences were not significant. This result was contrary to expectations based on specialisation literature and the Rainforest Habitat and FCNP study results reported in Chapters Three and Four, and this will be reviewed in the Discussion section. However, the scores given particularly for the items 'read educational signs' and 'take and read information pamphlets' are high,

which makes it more difficult to identify significance and may mean that the scale is not effective at differentiating between groups.

Table 5.37

Participation in Interpretive Activities by Interest Group

Activity	**Mean Score Enthusiast Group**	**Mean Score Interested Group**	**Mean Score General Group**
Seek information about the wildlife prior to visiting	2.35	2.47	2.69
Read educational signs at the site	1.35	1.42	1.42
Go into an on-site interpretive centre and look at displays	1.70	1.72	1.75
Purchase guidebooks about the wildlife	2.54	2.63	2.67
Participate in a guided tour or ranger talk	1.98	2.08	2.10
Take and read information pamphlets about the wildlife	1.66	1.69	1.72

* Scale from 1 (frequently participate) to 4 (never participate)

For the demographic variables, there were no significant differences in participation in interpretation based on residence, education or travel with children, however there were differences based on gender and age. Table 5.38 reports results of One-way ANOVA and shows that females were significantly more likely to go into interpretive centres, purchase guidebooks, and participate in ranger talks/guided tours than were males.

Table 5.38

Participation in Interpretive Activities by Gender

Activity	Mean Score Male	Mean Score Female	F	Sig.
Seek information about the wildlife prior to visiting	2.51	2.45	No significant difference	
Read educational signs at the site	1.41	1.38	No significant difference	
Go into an on-site education or interpretive centre and look at displays	1.81	1.65	4.3	.045
Purchase guidebooks about the wildlife	2.72	2.51	5.0	.025
Participate in a guided tour or ranger talk	2.17	1.93	7.7	.006
Take and read information pamphlets about the wildlife	1.74	1.63	No significant difference	

* Scale from 1 (frequently participate) to 4 (never participate)

Significant differences were found for participation in all interpretive activities based on age. Table 5.39 reports results for One-way ANOVA, which show that older respondents were more likely to participate in interpretive activities.

Table 5.39

Participation in Interpretive Activities by Age

	15-30 year group	31-50 year group	51+ year group	F	Sig.
Purchase guidebooks about the wildlife	2.85	2.69	2.23	13.3	.000
Take and read information pamphlets about the wildlife	1.89	1.70	1.41	12.8	.000
Go into an on-site interpretive centre and look at displays	1.92	1.73	1.52	7.2	.001
Participate in a guided	2.23	2.09	1.83	6.2	.002

tour or ranger talk					
Seek information about the wildlife prior to visiting	2.65	2.48	2.24	5.2	.006
Read educational signs at the site	1.52	1.38	1.28	4.0	.019

* Scale from 1 (frequently participate) to 4 (never participate)
* Post-hoc tests indicated significant differences between all groups

5.3.7 Participation in other wildlife related activities

Respondents were asked about their participation in other wildlife related activities, to examine whether higher levels of interest in wildlife were related to higher participation in such activities. Overall, respondents were more likely to watch documentaries about wildlife and seek to view wildlife in their local area. They were least likely to give donations to wildlife charities and participate in land care/habitat protection. Table 5.40 shows how frequently respondents indicated they participated in wildlife-related activities. Percentages depict the percentage of the entire sample that indicated the corresponding response.

Table 5.40

Overall Participation in Other Wildlife-Related Activities

	Frequently	**Sometimes**	**Rarely**	**Never**	**Mean**
Seek to view wildlife in your local area	28.6%	36.2%	25.0%	10.2%	2.17
Plant bird-attracting shrubs	25.5%	25.0%	22.1%	27.3%	1.40
Put out bird seed/bird baths	29.0%	25.7%	16.7%	28.5%	2.45
Watch documentaries about wildlife	53.2%	38.0%	5.8%	2.8%	1.59
Give donations to wildlife charities	12.3%	40.2%	28.6%	18.9%	2.54
Read books about wildlife	18.2%	39.4%	32.0%	10.5%	2.35
Participate in land care/ habitat protection in your local area	9.0%	22.7%	34.3%	34.0%	2.93

* Scale used for calculation of mean scores was 1(frequently) to 4 (never)

Although mean scores indicated an increase in participation in some wildlife-related activities as interest in wildlife increased (Table 5.41), the differences were not significant. As was the case for the lack of differences found for participation in wildlife interpretation, this was an unexpected result. It was expected that respondents with higher levels of interest in wildlife would have greater participation in other activities consistent with their interest in wildlife viewing.

Table 5.41

Participation in Other Wildlife-Related Activities by Interest Group

Activity	**Mean Score Enthusiast Group**	**Mean Score Interested Group**	**Mean Score General Group**
Seek to view wildlife in your local area	2.12	2.20	2.19
Plant bird-attracting shrubs	2.43	2.55	2.58
Put out bird seed/bird baths	2.44	2.45	2.48
Watch documentaries about wildlife	1.49	1.62	1.69
Give donations to wildlife charities	2.47	2.61	2.53
Read books about wildlife	2.30	2.38	2.37
Participate in land care/ habitat protection in your local area	2.86	2.97	3.00

* Scale was from 1(frequently participate) to 4 (never participate)
* Post-hoc tests (Scheffe) indicate significant differences between the Enthusiast and General groups.

There were no significant differences found based on gender, residence, education or travel with children, however there were differences based on age. Table 5.42 shows

that older respondents were more likely to participate in these activities than were younger respondents.

Table 5.42

Participation in Wildlife Related Activities by Age

	15-30 year group	31-50 year group	51+ year group	F	Sig.
Plant bird-attracting shrubs	3.09	2.41	1.88	37.6	.000
Put out bird seed/ bird baths	2.84	2.56	1.75	29.6	.000
Seek to view wildlife in your local area	2.48	2.22	1.70	20.9	.000
Watch documentaries about the wildlife	1.70	1.68	1.33	9.3	.000
Give donations to wildlife charities	2.78	2.52	2.30	7.5	.001
Read books about wildlife	2.48	2.37	2.11	4.9	.008
Participate in land care/ habitat protection in your local area	3.09	2.91	2.69	4.9	.008

* Scale from 1 (frequently participate) to 4 (never participate)
* Post-hoc tests (Scheffe) indicate that in most cases, only the 51+ age group were significantly different.

5.3.8 Demographic differences

There were no significant differences found between the interest groups for level of education, gender, age or residence. There was a significant difference found for travelling with children by interest group. Respondents in the Enthusiast and Interested groups were less likely to be travelling with children, while respondents in the General group were more likely to be travelling with children. Table 5.43 shows a crosstabulation table of these results.

Table 5.43

Travel with Children by Interest Group

	Don't Usually Travel with Children	Usually Travel with Children	Total
Enthusiast	49 75.4%	16 24.6%	65 100%
Interested	134 74.0%	47 26.0%	181 100%
General	91 62.3%	55 37.7%	146 100.0%
Total	274 69.9%	118 30.1%	392 100.0%

*Chi-square value 6.38; sig.=0.041.

5.3.9 Summary of results

Table 5.44 is a summary table of analyses conducted on all variables in the survey based on interest in wildlife. In this table, the nature of the difference is summarised alongside the variables where a significant difference was found. Table 5.44 is divided into 'indicator variables' and 'dependent variables'. Indicator variables are variables that have been identified in previous studies of specialisation as those useful for identifying or defining specialist recreationers, and were used in the present study.

Table 5.44

Summary of Analyses Based on Specialisation Level

Variables	Significant differences between specialisation groups?	Nature of difference
Indicator Variables		
Participation overall	Yes	Participation increased as interest increased
Number of times visited zoos	Yes	Participation increased as interest increased
Number of times visited wildlife sanctuaries or wildlife parks	Yes	Participation increased as interest increased
Number of times visited aquariums	Yes	Participation increased as interest increased
Number of times went on land based wildlife tours	Yes	Participation increased as interest increased
Number of times took trips to places where wildlife often seen	Yes	Participation increased as interest increased
Number of times went on water based wildlife tours	Yes	Participation increased as interest increased
Number of times took trips to places where wildlife often seen	Yes	Participation increased as interest increased
Ownership of bird books or guides	Yes	Enthusiasts more likely to own several bird books
Ownership of wildlife books or guides	Yes	Enthusiasts more likely to own several wildlife books
Subscription to wildlife or nature magazines	Yes	Enthusiasts more likely to subscribe
Membership of wildlife or nature organisations	Yes	Enthusiasts more likely to be members
Dependent Variables		
Travel with children	Yes	Enthusiasts and Interested group respondents were less likely to travel with children
Education	No	-

Gender	No	-
Age	No	-
Residence	No	-
Scenario selected as overall most preferred	No	-
Preference for 'Remote-Wild Scenario'	Yes	Respondents in Enthusiast and General groups more likely to select as most preferred
Preference for 'Easy Access-wild Scenario'	No	-
Preference for 'Developed-Wild Scenario'	Yes	Enthusiasts more likely to either say they would 'actively avoid' or were 'very interested'
Preference for 'Captive Scenario'	Yes	Enthusiasts more likely to either say they would 'actively avoid' or were 'very interested'
Previous participation in scenarios	No	-
Listings of 3 most important features	Yes	No differences for most features. Enthusiasts less likely to indicate that 'feeling safe' and 'pleasant environment' was important to their experience
Participation in interpretive activities	No	-
Participation in other wildlife related activities	No	-
Recreation preferences	No	-

Key results explained

Indicator Variables

- Higher levels of interest were clearly linked to increased participation in wildlife viewing activities in the previous 12 months. This result is consistent with that found in the Exploratory study, the Rainforest Habitat study and the FCNP study. In addition to greater levels of participation overall, respondents with higher levels

of interest also had higher participation levels in all kinds of wildlife settings. This includes captive settings such as zoos, wildlife sanctuaries and aquariums.

- Respondents in the Enthusiast group were significantly more likely to own several bird and wildlife books, to subscribe to wildlife and nature magazines, and to be members of wildlife or environmental organisations.

Dependent Variables

- Overall, the large majority of respondents would most like to participate in the wildlife viewing experience described in the 'Remote-Wild Scenario'. The main reasons why this was the preferred scenario was because of the natural environment, the lesser impact on the wildlife, the smaller numbers of people, wildlife behaving naturally, and the ruggedness of the setting. There were no differences between the interest groups on most preferred scenario. When rating preference for scenarios individually, Enthusiasts and General group respondents rated the 'Remote-Wild Scenario' higher than did Interested group respondents. Preferences for the 'Developed-Wild Scenario' and 'Captive Scenario' revealed a split within the Enthusiast group. While overall the majority indicated they were 'happy to go along' to these settings, crosstabulation tables indicated that this group were more likely to say they would 'actively avoid' or were 'very interested' in this kind of experience. This may indicate that even within interest groups, preferences for experiences may vary.
- There were no differences between the interest groups for participation in interpretive activities or other wildlife-related activities. This lack of difference was an unexpected finding.
- No differences were found between the interest groups on the demographic variables of age, gender, education or residence. The only difference between the groups on demographic-related variables was that visitors in the Enthusiast and Interested groups were less likely to be travelling with children.

Table 5.45 is a summary table and shows which demographic variables were analysed in the previous Results section, and indicates where significant differences were identified. The following description explains the nature of the differences found. The abbreviation 'NSD' indicates that no significant differences were found.

Table 5.45

Summary of Analyses of Demographic Variables

Variables	**Age**	**Gender**	**Residence**	**Education**	**Travel with children**
Indicator Variables					
Interest in viewing wildlife	NSD	NSD	NSD	NSD	Yes
Participation in wildlife viewing	NSD	NSD	NSD	NSD	Yes
Ownership of bird books or guides	NSD	NSD	NSD	NSD	NSD
Ownership of wildlife books or guides	NSD	NSD	NSD	NSD	NSD
Subscription to wildlife or nature magazines	NSD	NSD	NSD	NSD	NSD
Membership of wildlife or environmental organisations	NSD	NSD	NSD	NSD	NSD
Dependent Variables					
Scenario selected as most preferred	Yes	NSD	NSD	NSD	NSD
Preference for 'Remote-Wild Scenario'	NSD	Yes	NSD	NSD	NSD
Preference for 'Easy Access-wild Scenario'	NSD	NSD	NSD	NSD	NSD
Preference for 'Developed-Wild Scenario'	NSD	NSD	NSD	NSD	Yes
Preference for 'Captive Scenario'	NSD	NSD	NSD	NSD	Yes
Previous participation in	NSD	NSD	NSD	NSD	NSD

scenarios					
Listing of 3 most important features	NSD	Yes	NSD	NSD	NSD
Participation in interpretive activities	Yes	Yes	NSD	NSD	NSD
Participation in other wildlife related activities	Yes	NSD	NSD	NSD	NSD
Recreation preferences	Yes	NSD	Yes	NSD	NSD

Key results explained

Indicator Variables

- No differences based on interest in wildlife viewing except that respondents in the Enthusiast and Interested groups were less likely to be travelling with children.
- No significant differences on the indicator variables 'ownership of bird/wildlife books', 'subscription to wildlife and nature magazines', or 'membership of wildlife or environmental organisations'.
- No significant differences in participation based on age, gender, residence or income. However, respondents with children participated significantly more frequently in zoos and sanctuary settings.

Dependent Variables

- Preferences for Scenarios by Age: Respondents in the 51+ age group were more likely to select Scenarios 2,3 and 4 as their most preferred scenario. From the reasons why they selected this scenario, it appears that ease of access may be an important consideration.
- Preference for the 'Remote-Wild Scenario' by gender: Females indicated higher ratings for preference for this scenario than did males.
- Preference for Scenario 3 by travel with children. Respondents who usually travel with children indicated higher ratings for preference for this scenario than did other respondents.

- Preference for the 'Captive Scenario' by travel with children. Respondents who usually travel with children indicated higher ratings for preference for this scenario than did other respondents.
- Listings of 3 most important features of wildlife experience by gender: Females were more likely to say that 'feeling safe' was important to their experience.
- Participation in interpretive activities by age: Older respondents, particularly those in the 51+ year group, were more likely to participate in all interpretive activities than were younger respondents. There was a consistent trend whereby participation increased with age.
- Participation in interpretive activities by gender: Females were more likely to participate in three of the six listed interpretive activities than males. These were 'go into an on-site education or interpretive centre and look at displays', 'purchase guidebooks about the wildlife', and 'participate in a guided tour or ranger talk'.
- Participation in other wildlife related activities by age: Older respondents, particularly those in the 51+ year old group, were more likely to participate in all listed wildlife-related activities than younger respondents were. There was a consistent trend whereby participation increased with age.
- Recreation preference by age. Older respondents rated the factor variable 'Social and Adventure' as less important than younger respondents. Respondents in the 31-50 year group rated the Relaxation and Solitude factor variable more highly than other groups.
- Recreation preference by residence. Interstate visitors rated the 'Social and Adventure', and 'Relaxation and Solitude' factor variables more highly than other groups. Local residents rated the 'Exercise and Family' variable as more important.

5.4 Discussion

5.4.1 'Interest in wildlife viewing' as an indicator of specialisation

The emphasis in this study has been on examining the usefulness of the variable 'how interested are you in viewing wildlife while on holidays' as an indicator of possible specialisation levels amongst wildlife viewers. In the first instance, this variable was used to separate respondents into three groups, and the groups compared on the other indicator variables in the study.

At the most basic level, the 'interest in wildlife' variable did separate visitors in the studies. All visitors did not select the same category of response, and the distribution of responses in each category across the study sites was consistent with the concept of specialisation. Duffus & Dearden (1990) suggested that as wildlife viewers become more specialised, they are likely to prefer natural environments, and move away from captive wildlife settings. Other studies support the idea that the more specialised the individual, the greater the preference for more natural and remote settings (Bryan, 1979; Virden & Schreyer, 1988; Ewert & Hollenhorst, 1994). It was therefore expected that there would be proportionately more Enthusiast group respondents in the FCNP study (a natural setting) than in the Rainforest Habitat study (a captive setting). The results were consistent with this expectation, with the percentage of Enthusiasts at 7.1% of the Exploratory study (a general tourist/resident sample), 16.0% of the Rainforest Habitat study (a captive setting), and 35.5% of the FCNP study (a natural setting). The proportion of Enthusiast respondents in the present study, which was undertaken at nature based tourist/picnic sites, was similar to that in the Rainforest Habitat study. Thus, at the most basic level, the interest in wildlife variable showed promise for further analysis.

One of the difficulties in studying specialisation amongst wildlife viewers has been in defining what constitutes a specialist. As discussed previously in this chapter, there are

few studies of specialisation amongst wildlife viewers, and most of the studies that exist are of birdwatchers. There are no known studies of specialisation amongst Australian wildlife viewers. Further difficulties are apparent in the lack of consistency or agreement regarding definitions of specialists, and methodological difficulties associated with the development and use of specialisation indexes.

While previous studies suggest that specialisation may be a useful method to distinguish between visitors, the variables used are not always applicable to wildlife viewing in general. This is mainly due to the broad context and lack of specialisation of the activity of wildlife viewing itself. For example, a wildlife tourist may or may not have a particular species interest, they do not need to belong to any clubs or organisations, they do not usually need passes to enter National Parks to view wildlife, they do not particularly require specialised equipment, and may not need to spend much money to view wildlife. Wildlife viewing occurs in many different settings, from unstructured wilderness to developed tourist settings, and many factors (such as the species being viewed, or wildlife viewing opportunities available) may influence preference for settings. The wildlife viewing activity may occur in a commercialised tourist setting while on holidays, or it may occur while going for a stroll along a local beach or in a local National Park. Many wildlife-viewing opportunities occur in residential settings. Overall, the variables used in previous studies on specialisation provide some guidance for variables that may be useful in distinguishing specialist wildlife viewers, however they do not provide any clear rules or precedents.

The only exception to this difficulty is with the variable of participation in wildlife viewing. Although definitions of participation and past experience vary between studies (Watson & Niccolucci, 1992) studies of specialisation consistently find that higher levels of specialisation are associated with greater frequency of past participation (e.g. Cole & Scott, 1999; Pearce & Wilson, 1995; Watson & Niccolucci, 1992; Schreyer, Lime & Williams, 1984; Bryan, 1977; Wellman, Roggenbuck & Smith, 1982; Hammitt & McDonald, 1983). Indeed, the majority of studies into

specialisation use frequency of participation as a primary indicator of specialisation (see Table 5.11). The first real test of the usefulness of the 'interest in wildlife' variable in this thesis was therefore whether it was related to participation in wildlife viewing. The results across all four studies have shown the strong and consistent finding that respondents with higher levels of interest in wildlife viewing also participate in wildlife viewing activity more frequently than do respondents with lower levels of interest.

In addition to participation, the other variables selected as indicator variables in this study were ownership of bird and wildlife books, subscription to wildlife and nature magazines, and membership of wildlife and environmental organisations. These variables were considered to be surrogate behavioural indicators of the importance or centrality of wildlife in the respondent's lifestyle, (McIntyre & Pigram, 1992) and have been used in a number of previous studies (e.g. Donnelly, Vaske & Graefe, 1986; McFarlane & Boxall, 1996; Williams & Huffman, 1985; Kuentzel & Heberlein, 1992; Chipman & Helfrich, 1988; Wellman, Roggenbuck & Smith, 1982; Ditton, Loomis & Choi 1992). As was the case with participation in wildlife, results showed a clear link between interest in wildlife viewing, and these other indicator variables. Respondents with higher levels of interest in wildlife viewing were significantly more likely to own several bird books, significantly more likely to own several wildlife books, significantly more likely to subscribe to or regularly purchase wildlife and nature magazines, and significantly more likely to be members of wildlife and environmental organisations.

As discussed in the Results section, there are three main ways that specialisation has been defined. These have been:

- Selecting and combining indicator variables to form an index with values from low to high specialisation (e.g. Merril & Graefe,1997),
- using preference statements and specialisation indicator variables as a basis for cluster analysis of respondents (e.g. McIntyre & Pigram, 1992), and

- using one central variable to define specialisation (e.g. Cole & Scott, 1999).

The practice of combining variables to form an index has received criticism primarily because it hides variations in the components that make up the index, and specialisation is multi-dimensional by nature (McIntyre & Pigram, 1992). Such composite indexes miss much of the explanatory detail that would be available from a separated analysis of multiple underlying constructs (Kuentzel & McDonald (1992). The selection and combination of variables in indexes of past experience has also been criticised on mathematical grounds by Watson & Niccolucci (1992). In addition to arguing that combining variables negates the ability to identify which aspect of past experience accounts for differences between visitors, these authors criticise the failure to standardise unlike measures. They also express concern about the tendency for researchers to make decisions about how to combine past experience measures that are unsupported either empirically or theoretically.

Because the 'interest in wildlife' variable was strongly and consistently related to other variables used as indicators of specialisation, it was considered to be useful surrogate indicator of specialisation levels amongst wildlife viewers. There did not appear to be any further advantage to be gained from combining variables into a specialisation index. Firstly, the other indicator variables had already been shown to be consistent with interest in wildlife viewing. Secondly, as previously mentioned, combining variables into a linear index hides possible variations in responses for those variables. Thirdly, and most importantly, the allocation of respondents into specialisation groups based on the resulting index is an arbitrary process. Other studies have defined specialists as belonging in the upper 25% (Merril & Graefe, 1997; Wellman, Roggenbuck & Smith, 1982), or the upper 33% (Tarrant, Cordell & Kibler, 1997; Schreyer & Beaulieu, 1986) of values on the resulting index scale. However, the reasoning behind this categorisation is unclear. Studies of specialists have varied considerably in the percentage of the sample considered to be of the highest specialisation level. Examples include specialists comprising 7% (McFarlane &

Boxall, 1996), 22% (Manfredo & Larson, 199), 11% (Martin, 1997), 7% (Moscardo, 2001), and 3% (Kellert, 1985) of the sample. Even in the studies reported in this thesis, the proportion of Enthusiasts ranged from 16% in the Rainforest Habitat study, to 36% in the FCNP study, and 16% in the present study. Overall, it was considered preferable use the 'interest in viewing wildlife' variable, not as a complete definition of specialisation, but as an indicator variable. The advantage of this approach is that it is based on the respondent's self-assessment of the importance that wildlife plays in their travel plans, and not on a researcher-defined category. In addition, the meaning of the measure is clear and easy to interpret.

The other variables that were considered to be indicator variables will be discussed separately in the following sections. The treatment of these as dependent variables, as well as confirming their relationship to the 'interest in wildlife' variable, resulted in some important findings regarding levels of interest in wildlife viewing.

5.4.2 Participation in wildlife viewing

The most consistent finding across the four studies in this thesis has been that respondents with higher levels of interest in wildlife also participate in wildlife viewing more frequently than do visitors with a lower level of interest. This was true of overall participation, with scores obtained by summing the frequency of participation in wildlife viewing in all types of setting, and comparing these across the interest groups. This was an expected result, and one that supported the usefulness of segregating visitors based on their levels of interest in viewing wildlife.

In addition to overall participation in wildlife viewing, another area of interest in the present study was the nature of participation in different wildlife tourism settings. Based on Duffus & Dearden's (1990) suggestion that the development of specialisation amongst wildlife viewers starts with visits to captive settings and progresses to viewing wildlife in natural settings, it was expected that Enthusiasts

would have greater frequency of participation in natural settings, and that General group respondents would have greater frequency of participation in captive settings. This was further supported by other recreation specialisation studies which found that more specialised respondents preferred more natural and remote settings (Bryan, 1979; Virden & Schreyer, 1988; Ewert & Hollenhorst, 1994). The results across the four studies were consistent, and did not completely support this expectation. Respondents with higher levels of interest in wildlife viewing did engage in wildlife viewing more frequently than did respondents with lower levels of interest, however they had higher participation in all settings, including captive settings.

This pattern of participation was in contradiction to Duffus & Dearden's (1990) suggestion that as specialisation increases, participation moves away from captive environments. The results indicate that a more accurate description is that participation *expands* to include more specialised wildlife tours and trips to places where wildlife is often seen. In the Rainforest Habitat study and the FCNP study, the question regarding participation in captive environments contained the settings of zoos, wildlife sanctuaries and aquariums in the same question. This gave rise to the concern that visitors with higher specialisation levels could be participating more frequently in one type of captive setting (e.g. sanctuaries), but not in others (e.g. zoos), and the difference could be concealed by the way the question was asked. In the present study, these settings were separated into different questions to avoid this possible problem. However, the results remained consistent: visitors with higher levels of interest in wildlife viewing participated significantly more frequently in all types of wildlife setting, and this included zoos, wildlife sanctuaries and aquariums. A study by Moscardo (2001) of visitors to North Queensland found that captive settings were popular with all respondents, including those with the highest level of interest in wildlife viewing. , for whom wildlife was a 'very important' factor in their destination choice. An examination of attendance at captive settings found that within this category greater importance of wildlife in travel decisions was associated with higher

attendance at more specialised attractions (based on those which had a greater focus on wildlife and which required greater commitment of time and money).

Patterns of participation in wildlife tourism appear to follow a trend of increasing tendency toward natural environments as interest in wildlife increases, but without avoiding captive settings. In easily accessible, captive environments such as zoos, the visitor mix is likely to be dominated by Generalists, primarily due to their larger numbers in the broad population of wildlife tourists (Kellert, 1985; Manfredo & Larson, 1993; McFarlane, 1994). However, there will be Enthusiasts present in these captive settings, and the Enthusiasts are more likely to visit these settings more frequently. As the experience becomes more specialised, the visitor mix will contain proportionately more Enthusiasts. This conceptualisation of participation is illustrated in Figure 5.1. The model shows that as the experience becomes more specialised, the proportion of Enthusiasts in the visitor mix increases, but the overall number of visitors decreases. The model also suggests some of the features that may make the experience more specialised (Donnelly, Vaske & Graefe, 1986; Ewert & Hollenhurst, 1994; Schreyer & Beaulieu, 1986).

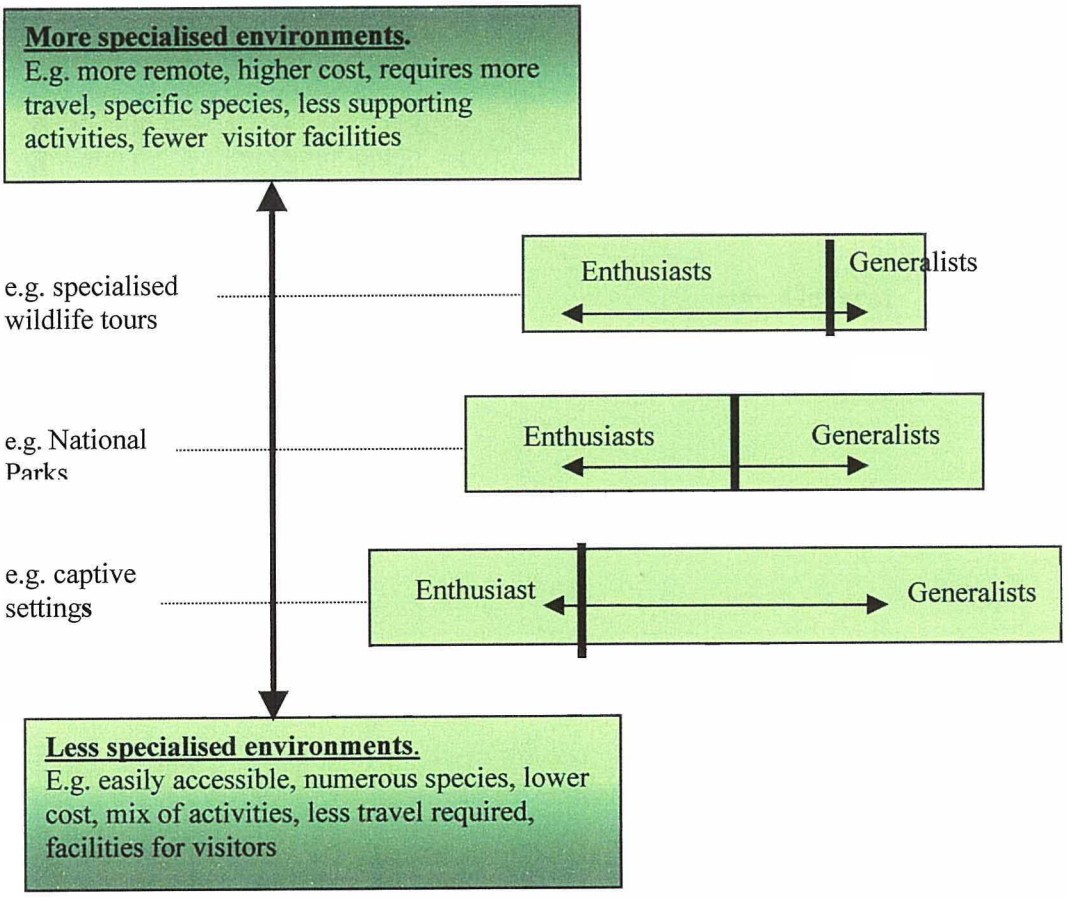


Figure 5.1: Visitation patterns based on levels of interest in wildlife

Figure 5.2 presents another way of representing the participation patterns of wildlife tourists. This graph shows actual rates of participation in different types of settings based on the Exploratory, Rainforest Habitat, FCNP, and the Specialisation study results. Figures for participation in each study were averaged to give the figures represented in the diagram as the average number of times the groups participated in wildlife viewing in each type of setting. There is a clear increase in participation as

interest in wildlife increases. There is also a clear increase in participation in wildlife tourism in natural areas compared to captive settings for all groups.

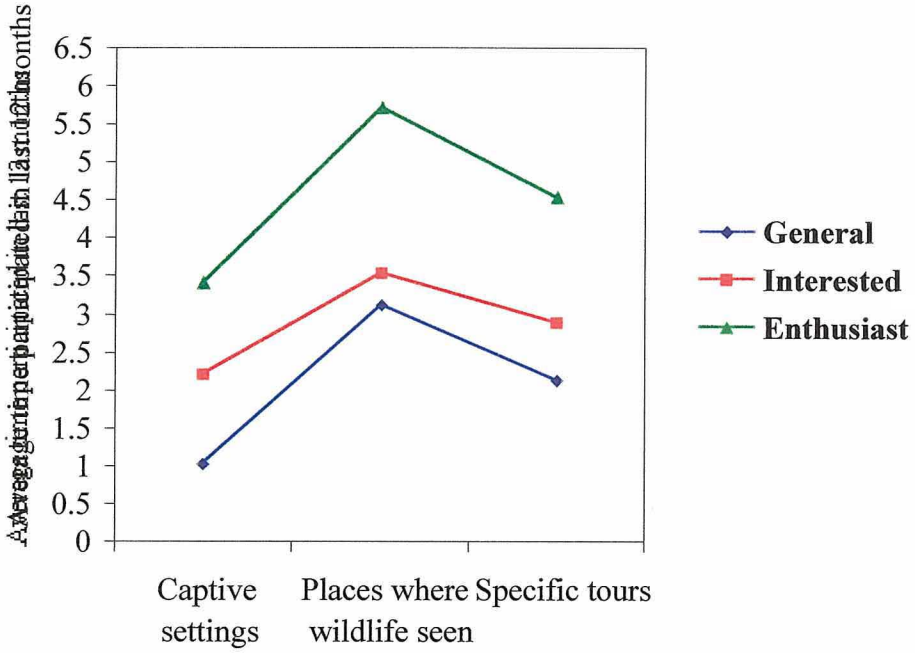


Figure 5.2: Average Actual Participation in Wildlife Viewing by Interest Groups

Use of activity participation in defining specialisation amongst wildlife tourists is therefore consistent with other specialisation studies. Consistently across the four studies, specialist wildlife tourists are those who say wildlife is one of the most important factors in their travel decisions, and who participate significantly more frequently in wildlife viewing in all kinds of wildlife settings. Logically, (although not necessarily), higher participation is likely to lead to other differences between groups, which have been reported in other studies, though not examined in the present study. For example, it is likely to mean that this group spend more money on wildlife viewing than other groups (even simply on the basis of admission to captive wildlife settings), and spend more of their overall time engaging in wildlife viewing. Time

spent engaging in the activity and money spent have also been linked to specialisation in other studies (e.g Cole & Scott, 1999; McFarlane, 1994; McIntyre & Pigram, 1992).

5.4.3 Ownership of wildlife books, subscriptions to wildlife magazines, and membership of wildlife and nature organisations

The inclusion of the variables 'ownership of bird books', 'ownership of wildlife books', subscriptions to wildlife magazines' and 'membership of wildlife and nature organisations' as an indicator variables was again based on previous studies of birdwatchers (e.g. Kellert, 1985; Cole & Scott, 1999; McFarlane, 1994). In this case, results were consistent with previous studies, and found significant differences between the groups. Respondents with higher levels of interest in viewing wildlife were found to own significantly more bird and wildlife books, were significantly more likely to subscribe to wildlife and nature magazines, and were significantly more likely to be members of wildlife and nature organisations. There were no significant differences for these variables based on demographic variables to confound these results. It appears that ownership of books, subscriptions to magazines and membership of organisations may be useful indicators of specialisation amongst wildlife tourists.

5.4.4 Features of the wildlife tourism experience

The use of descriptive scenarios was adopted in this survey, because this method allowed for the inclusion of many features of the wildlife tourism experience, presented in a real-life setting. It was thought that this method more closely matched the choices that respondents would make regarding the types of experience they would prefer (Choi, Loomis & Ditton, 1994). Results showed that the 'Remote-Wild Scenario' was clearly the wildlife experience that respondents would most like to participate in, followed by the 'Easy Access-Wild Scenario', the 'Developed-Wild Scenario', and the 'Captive Scenario' respectively. This was consistent across all

interest groups and demographic comparisons: regardless of which way the data was split, all groups gave the highest preference ratings for the 'Remote-Wild Scenario'. There was a progressive decline in preference as the scenarios describe experiences with increasing levels of structure and human influence. Indeed, the five most frequently given reasons why respondents preferred the 'Remote-Wild Scenario' was because of the natural environment, less impact on wildlife, the rugged wilderness setting, not too many people, and the less touristy/artificial nature of the setting.

This attraction to the most natural wildlife option is consistent with the biophillia hypothesis (Wilson, 1984) and the idea that humans have an innate attraction to nature and wildlife (Kellert, 1986). It seems that people's preferences are generally more favourably disposed toward viewing wildlife in natural settings. Only 6.9% of respondents were either not interested or would actively avoid the 'Remote-Wild Scenario' while 37.9% were not interested/actively avoid the 'Developed-Wild Scenario', and 32.8% were not interested/actively avoid the 'Captive Scenario'. The results do not support previous findings in the specialisation literature which predict that more specialised individuals will have greater preferences for more natural and remote settings. All groups of respondents in this study had greater preference for the more natural and remote setting.

While the results were consistently favourable for the 'Remote-Wild Scenario', they were less consistent for the other scenarios, particularly the 'Developed-Wild Scenario' and the 'Captive Scenario'. For these scenarios, significant differences were found for preferences based on interest levels. For the 'Developed-Wild Scenario', respondents in the Enthusiast group were significantly more likely to indicate they were either very interested in the experience, or would actively avoid it. Similarly, respondents in the Interested group were significantly more likely to indicate they were either very interested in the experience, or not interested. Again, in the 'Captive Scenario', respondents in the Enthusiast group were significantly more likely to indicate they would be very interested in the experience, or would actively avoid it.

While the majority of respondents in each specialisation group indicated they would be happy to go along to such experiences, the apparent contradiction in preference within the specialisation groups suggests that care should be taken when assuming that all respondents in a given group will share similar preferences. Wildlife specialists, although they share a commonly high interest in viewing wildlife, may not necessarily have the same preferences regarding settings.

When asked to indicate the three most important features of wildlife tourism experiences, nature based features were the most frequently selected features. The features 'seeing wildlife in their natural habitat', and 'an untouched natural environment' were the two most frequently selected features, with 67.2% and 37.7% of the sample selecting these features as important. There were few significant differences between the interest groups for features selected, except that respondents in the Enthusiast group were less likely to indicate that 'feeling safe' and 'a pleasant environment' were important to their experience. Females were more likely to indicate that 'feeling safe' was important to their experience than males. These results, and the general lack of any significant differences between interest groups, support the idea that all wildlife viewers prefer to see wildlife in their natural environment.

It is important to note that other specialisation studies, though not focussed on wildlife tourists, have found the link between specialisation and setting preferences to be weak (e.g Kuentzel & Heberlein (1992); Williams and Huffman, (1985)). When suggesting reasons why specialisation was of limited use in explaining backcountry trail choice, Williams and Huffman (1985) suggested that the concept may not be appropriate for analysing broad categories such as backpackers. They argue that "*activity definitions of recreation engagements alone are vague and ambiguous, it is often difficult to draw boundaries between one activity and another....for example, not all backpackers may be participating in the same activity. Some may be climbers, others photographers, and still others, anglers*" (p. 343). A similar argument applies to wildlife tourists.

Some may be more interested in photography than wildlife, others may be primarily concerned with hiking, or solitude, or a day out with the family.

One of the factors influencing differences in preference may be the issue of constraints on participation, such as age, mobility, presence of children, time or money. Respondents who were older were significantly more likely to select scenarios other than the 'Remote-Wild Scenario' as their most preferred experience. When looking at the reasons why respondents selected certain scenarios as their most preferred, the issue of easier access was listed as an important reason for the 51+ age group. Similarly, respondents who usually travel with children gave higher preference ratings for the 'Developed-Wild Scenario' and the 'Captive Scenario', possibly due to the availability of facilities suitable for children in these settings. Respondents travelling with children also indicated significantly higher participation in zoo and sanctuary settings. Therefore, it is possible that constraints may be influencing preferences for certain features of the setting in wildlife tourism situations. This may be a reason why the dominant visitors to zoos are those travelling in family groups with young children (Andereck & Caldwell, 1994; Holzer et.al., 1998; Wineman, Piper & Maple, 1996; Wolf & Tymitz, 1981). It also may explain why, although a broad range of visitors, and particularly those with a higher specialisation levels, seem to prefer viewing wildlife in natural settings, they still participate in wildlife viewing in captive settings. Kuentzel & Heberlein (1992) make a similar observation with respect to specialisation levels of hunters. They suggest that "*although people at different levels of specialisation differ in some of their attitudes and preferences, the attitude-behaviour link may be weak..,* (and this may be due to*) social constraints such as role identity, resource availability, and institutional structures that affect behaviour.*" (p213-214).

5.4.5 Participation in interpretive activities

Results from the Rainforest Habitat and FCNP studies indicated that respondents with higher levels of specialisation were also significantly more interested in interpretive topics and learning more about wildlife and nature. A study by Martin (1997) also found that specialists showed more interest in information on wildlife habits, natural history and management practices. Manfredo & Larson (1993) also found that more specialised respondents were more likely to seek information such as field guides, guided tours, wildlife information broadcasts and videos. These results led to the expectation that in the present study, respondents with higher levels of interest in wildlife would also participate in interpretive activities more frequently than would other respondents. While results showed a slight trend in this direction, there were no significant differences between the interest groups for participation in interpretive activities. For the entire sample, respondents were most likely to read educational signs at the sites, take and read information pamphlets about the wildlife, or go into an interpretive centre. Reading on-site signs was the most frequent activity, with 67.2% of respondents indicating that they engage in this activity frequently.

The lack of significant difference between the interest groups for participation in interpretive activities was unexpected. However, although the studies by Manfredo & Larson (1993) and Martin (1997) show that specialists are more *interested* in information, there have also been some suggestions in the specialisation literature that specialists have less *requirement* for interpretation (Duffus & Dearden, 1990; Bryan, 1979). It may be the case that respondents with higher levels of specialisation are more interested in interpretation and learning about wildlife, but are less dependent on the information being provided to them on-site. In this study, Enthusiasts were significantly more likely to own several bird books/guides, more likely to own several wildlife books/guides, more likely to subscribe to wildlife and nature magazines, and more likely to be members of wildlife or environmental organisations. This may indicate that Enthusiasts are more independent in their sources of information about

wildlife, and learn through books, magazines and organisations rather than through on-site interpretive activities. This is supported in a study by Cole & Scott (1999), which found that more specialised birders were more likely to use a variety of information sources, including birding or nature magazines, and information from birding and wildlife conservation organisations. In addition, Enthusiasts are more likely to be repeat or more frequent visitors to wildlife tourism settings, and may have seen the interpretation themes or exhibits before. As a result of this familiarity, they may not participate as much as visitors with less frequent visitation to wildlife tourism settings.

The different results from the Rainforest Habitat/FCNP study and the present study regarding interpretation is consistent with the distinction between interest in information, and participation in on-site interpretation. In the Rainforest Habitat and FCNP studies, respondents were asked to indicate *how interested* they were in learning and interpretive topics, while in the present study, respondents were asked *how often they participated* in interpretive activities. Interest may not necessarily lead to participation, perhaps because more specialised respondents are less dependent on interpretation, or perhaps due to constraints such as time (Kuentzel & Heberlein, 1992). Indeed, older respondents were significantly more likely to engage in all interpretive activities more frequently than younger respondents, and the highest participation rates were for the 51+ age group. This result may be because older respondents have more time, or because older respondents in this study were more likely to be from overseas, and may be enthusiastic about learning about Australian wildlife.

It is important to note, however, that although there were no significant differences between the interest groups, the large majority of all respondents still indicated that they sometimes or frequently read educational signs, went into interpretive centres, and read information pamphlets about wildlife. Importantly, the levels of interpretation involvement are high. Interpretation therefore remains important to the wildlife experience for all groups of visitors.

A consistent result in this thesis has been that females have indicated higher interest and participation in interpretation than males. Females consistently indicated higher participation in interpretive activities, and this was significant for going into interpretive centres, purchasing guidebooks and participating in guided tours. Females also indicated higher interest in interpretive topics in the Rainforest Habitat and FCNP studies. In the previous studies, females also gave more positive responses on a number of different variables, so it was unclear whether the higher interest scores were due to females being more interested in interpretation, or because females answered the survey in a more positive manner. In the present study, there were few differences based on gender, therefore it may be the case that females are generally more interested in interpretation. There are no known reported studies in the literature that have specifically investigated gender differences in interest or participation in interpretation.

5.4.6 Participation in other wildlife related activities

As was the case for participation in interpretive activities, it was expected that respondents with higher levels of specialisation would also have participated in other wildlife-related activities more frequently than other respondents. This was based on a study by Cole & Scott (1999) which found specialisation amongst birdwatchers to be related to birdwatching behaviours close to the home (viewing birds and providing bird feeders), and on a study by McFarlane & Boxall (1996), which found that more specialised birdwatchers more likely to engage in conservation related behaviours (such as donating money and participating in habitat conservation). In this study no statistically significant differences were found amongst the specialisation groups.

The lack of substantial consistency between results from the literature and results in this study make an important point about the difficulty in extrapolating study results from a specialised group such as birdwatchers to wildlife viewers in general. As stated

previously, findings from such studies can provide guidance, but do not provide concrete precedents or rules. Boxall & McFarlane (1993, p391) argue this point by saying *"the extrapolation of results from a special event or site-specific sample to a larger constituency may be inaccurate."*

A second point to make about these findings is that they do not mean that Enthusiasts in the study do not participate in any of these activities, merely that there were no differences between groups. As was the case for participation in interpretive activities, participation levels for the sample are still quite high. For all wildlife related activities except participation in land care/habitat protection in the local area, over half of the sample indicated that they sometimes or frequently participated in the activity.

On demographic comparisons, results for participation in other wildlife related activities were similar to those found for participation in interpretive activities. No significant differences were found on demographic variables except for age, where older respondents were significantly more likely to participate in all activities than younger respondents. Participation rates were highest for the 51+ year age group. Again, this may be associated with this group having more time available to participate in these activities.

5.4.7 Demographic differences

With the exception of higher income and education levels, there has been little consistency across studies regarding demographic differences amongst specialists. In many studies, demographic analyses have not been reported, possibly because they have not typically been considered to be indicators of specialisation. Some studies have found that few significant differences existed between groups on demographic variables (McFarlane & Boxall, 1996; Moscardo, 2001). Others have found that birdwatching specialists tend to be older, with higher levels of education and income (Cole & Scott, 1999; Kellert, 1985); that wildlife viewers were younger and more

active, with higher education and income levels (Pearce & Wilson, 1995); and that committed nature tourists had higher levels of education and income (Tourism Queensland, 1999).

Across the previous studies in this thesis, no consistent demographic differences were found between the groups. In the Exploratory study there were no differences on age or gender, however respondents with higher interest levels were more likely to reside overseas. In the Rainforest Habitat study, there were no differences on age or gender, but Enthusiasts were more likely to reside locally. In the FCNP study, there was no difference based on gender, however respondents in the Enthusiast group were more likely to be older and reside overseas.

The absence of consistent analyses of demographic variables in previous studies makes it difficult to assess the importance of such variables to specialisation. However, the finding that specialists are more likely to be older and have higher education and income levels may be related to them having fewer family constraints, more time and possibly more money to pursue and become involved in their activity of interest. In the present study, no significant differences were found to be linked to interest levels, except that Enthusiast and Interested group respondents were less likely to be travelling with children.

This finding raises the possibility of constraints to participation as a factor influencing specialisation. Most of the studies reported in the literature base definitions of specialisation on some element of participation, and often participation is linked to particular activities or settings. This implicitly assumes that actual participation is a reflection of deliberate intent to participate, and that participation reflects the respondent's underlying interest in the activity. However, research into constraints on leisure behaviour suggests that actual behaviour may not be so directly related to underlying interests or motivations, but be affected by interpersonal, intrapersonal and structural constraints (Gilbert & Hudson, 2000; Waitt, 1997).

This body of literature suggests that constraints such as time, money, family commitments, work commitments, lack of awareness, physical disibility, shyness, crowding and travel party may influence the type and frequency of participation (Jackson, 1988). For example, Williams & Dossa (1995) found that the most frequent reason for non-participation amongst Canadian skiers was a combination of having children that were too young to ski, and financial barriers. Participants in leisure activities can also be constrained, not totally, but from participating as often as they desire (Wright & Goodale, 1991). Constraints may influence preferences and interest in activities. If the constraints are such that participation is perceived as extremely difficult, the individual may lose interest in the activity, (at least until the constraints are resolved or removed) (Crawford, Jackson & Godbey, 1991).

In the context of wildlife tourism, Manfredo and Larson (1993) found that constraints on wildlife viewing included lack of knowledge, money, distance and crowding. There were differences based on specialisation levels, with the most specialised groups being more constrained by onsite crowding, and the least specialised group being more constrained by lack of information. Further, this study found that while 90% of respondents indicated interest in taking a trip to view wildlife, only 60% currently participate. Constraints may also influence the willingness of wildlife tourists to substitute other activities for wildlife viewing. Choi, Loomis & Ditton (1994) suggest that for participation in substitute activities, specialist individuals without family obligations would be less open to participating in alternative activities, and that social group circumstances may modify willingness to participate in substitute experiences. This is particularly relevant to wildlife tourism, as captive wildlife settings in particular have been suggested to be representative of substitute experiences (Shackley, 1996). Constraints such as time, money and accessibility may encourage continued participation in captive environments, even though the scenarios in this study indicate that visitors prefer to view animals in natural environments. In the present study, respondents with children participated significantly more frequently in

zoo and wildlife sanctuary settings, and indicated higher preferences for scenarios with more facilities and structure. Older respondents also indicated higher preference for scenarios with more facilities and reasons for preference included ease of access. This further supports the idea that constraint factors may influence preferences and participation in wildlife tourism.

Some specialisation studies have found inconsistencies between specialisation and expected participation. Ewert & Hollenhorst (1994) found that for adventure recreationers, some of the most specialised groups actually became less involved over time. They suggested that these findings may be due to factors such as a lifestyle change that places restrictions on participation (for example having young children), or the demands of the activity becoming too great for the older participant. This was a similar result to that found by Keuntzel & McDonald (1992), where the three components of specialisation – past experience, commitment and lifestyle – did not increase in concert with increasing experience. These authors concluded that "*behavioural choice appeared to be more a function of structural constraint than attitudinal preference*' (p211).

Overall, these findings suggest that participation may not be the straightforward and simple indicator that it has been assumed to be, and that research into both preferences for, and participation in, wildlife tourism may be substantially informed by constraints theory.

5.4.8 Interest in wildlife as an explanation of differences amongst wildlife tourists.

Results from this study indicate that it is possible to identify differences between wildlife viewers based on their levels of interest in viewing wildlife. This variable was found to be consistent with other variables that have been associated with

specialisation, such as ownership of bird/wildlife books, subscription to wildlife magazines, and membership of environmental organisations.

The characteristics of what may be considered more 'specialised' respondents in this study were as follows:

- they considered wildlife viewing to be an important factor in their travel decisions,
- they participated more frequently in wildlife tourism,
- they owned more bird and wildlife books,
- they were more likely to subscribe to wildlife magazines, and
- they were more likely to be members of wildlife and environmental organisations.

Although the results of analyses on indicator variables were consistent with expectations based on specialisation theory, there were fewer significant differences than expected on the dependent variables. Although respondents with higher levels of interest in wildlife tended to have higher preferences for natural environments, few of these differences were statistically significant. This suggests that although specialisation may exist amongst wildlife viewers, it was not a strong explanatory variable in understanding differences in setting preferences amongst wildlife tourists. In terms of preferences for wildlife tourism experiences, respondents in this study were relatively homogenous, with a large majority indicating that they would most prefer to view wildlife in natural settings. Preference for scenarios dropped dramatically as the scenarios described increasing levels of structure and human influence.

5.5 Conclusions

The results confirm that the 'interest in wildlife viewing' variable was useful as a surrogate measure of specialisation. In particular, the variable was consistently related to the other indicator variables of participation in wildlife tourism, ownership of wildlife/bird books, subscription to wildlife and nature magazines, and membership of wildlife organisations.

Although the results of analyses on indicator variables were consistent with specialisation theory, there were fewer significant differences than expected on the dependent variables. This suggests that specialisation levels are not a strong explanatory variable for understanding differences in preferences for wildlife tourism settings.

The combination of preference for natural environments, and the almost negligible number of respondents who indicated that they were not interested/would actively avoid wildlife, supports the biophilia hypothesis (Wilson, 1984; Ulrich, 1993; Kellert, 1996). It appears that all respondents, regardless of specialisation or interest levels, have a preference to view wildlife in the natural environment, and the natural environment is critical to the wildlife experience. Constraint theory provides a promising direction for understanding differences in preferences for specific elements of the wildlife tourism experience, and for understanding patterns of participation for different types of experiences.

CHAPTER SIX

Thesis Summary and Conclusions

6.1 Introduction

The topic of wildlife tourism is one that is diverse, multidisciplinary and spans a broad range of venues. When reviewing the literature on wildlife tourism, this diversity is reflected in the nature and contexts of the research undertaken. Although there is a substantial volume of research into wildlife tourism, only a limited range of topics have been explored in depth. Because each wildlife tourism venue or setting has characteristics or features that may distinguish it from others, it is difficult and unwise to generalise findings from specific studies to the broader sphere of wildlife tourism. There are few studies that have attempted to generate findings that may be applicable across a variety of settings, perhaps due in part to the difficulties associated with such a diverse and broad topic of study.

The literature review identified three main areas where knowledge was lacking, and it was these areas which guided the overall approach taken in the thesis. Firstly, very few studies are grounded in theory. Many are undertaken in response to specific needs or problems, and while these are valid reasons for research, such studies do not always generate results that are applicable to other wildlife tourism contexts. Secondly, there are few studies undertaken in an Australian context. Much of the existing knowledge is based on studies conducted in the United States, which may not be applicable or consistent with the experiences and preferences of Australian wildlife tourism settings and visitors. Finally, very few studies have approached the research from an emic, visitor-centred perspective. A large proportion of what is written about wildlife tourists is based on 'expert' opinion, general knowledge from within the industry, and researcher-defined perspectives of what wildlife visitors are seeking from their experiences. As a consequence of these broad areas for research, this thesis was conducted in Australian settings, applied relevant theories to the research, and initially used a more qualitative

approach. Within this context, some particular gaps in research knowledge were identified, which were used to generate specific research questions, and these were depicted in a model of research questions for the project. This model is reviewed in Figure 6.1. The research questions outlined in Figure 6.1 formed the aims for the research. Conclusions for the thesis will be presented for each of the aims of the research, which were initially outlined at the end of Chapter One. The Chapter will conclude with advances to theory, implications of this present work, and future research directions for wildlife tourism.

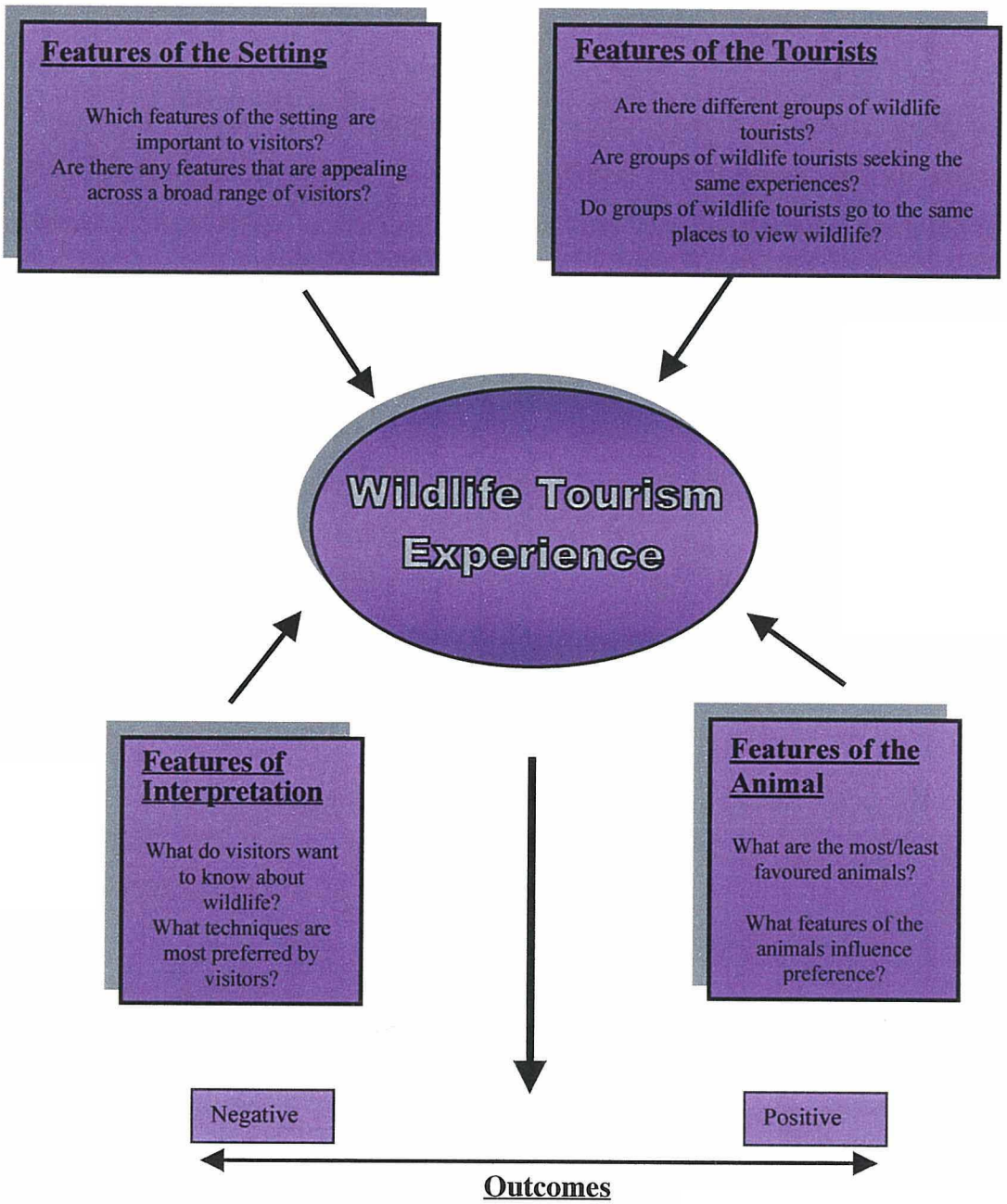


Figure 6.1: Model of research questions reviewed

6.2 Review of study aims and conclusions

The literature review outlined a number of aspects of wildlife tourism and wildlife tourists that are not well understood or researched. As is the case with any research study, it is not possible to focus on all areas where information in lacking. The four broad areas selected for study in this thesis were features of the setting, features of the animals, features of the visitors and features of the interpretation. Within these broad areas, specific research questions were identified, and these were used to generate the aims of the thesis. The following section presents results and conclusions that pertain to each of the thesis aims.

6.2.1 Features of the setting.

(Aim 1.12.1): To identify respondent-generated features of wildlife settings that are commonly desired by a broad range of wildlife tourists.

The main features that were revealed as most important across the studies were those of the natural environment, interaction with wildlife, animal welfare and learning and interpretation.

The importance of the natural environment was a feature of wildlife experiences that was consistently desired or appreciated by a broad range of respondents. From the exploratory study, aspects of the natural environment was the second most frequently mentioned feature of best experiences overall, and the most frequently mentioned feature of experiences in non-captive settings with wild animals. The Rainforest Habitat and FCNP studies confirmed the importance of the natural environment to wildlife experiences. In both these studies, seeing wildlife in the natural environment was the most highly rated feature of wildlife tourism settings. Finally, in the Specialisation study, the wildlife scenario most preferred by all respondents was the 'Remote-Wild Scenario' which featured a wilderness setting. Across all studies, the natural environment was a dominant and consistent feature of importance.

A second feature that was important to wildlife tourism was that of animal welfare concerns. The most frequently mentioned aspect of worst wildlife experiences was the poor management of captive animals. Animals that appeared unhappy, neglected or in inappropriate enclosures were common elements of worst experiences. In the Rainforest Habitat study, visitors unanimously rated animal welfare concerns as highly important to their experience. It appears that visitors are particularly sensitive to situations where animals may be kept in poor conditions.

Interactions with wildlife comprised another feature that was important to visitors. In this thesis, interactions with wildlife included getting close to the wildlife. In the Exploratory study, interactions with wildlife were the most frequently mentioned feature of best experiences, and were mentioned by almost three-quarters of the respondents. However, it appears that the appropriateness and preference for different types of interaction varies depending on the setting and on the respondent. In the Rainforest Habitat and FCNP studies, visitors indicated that getting close to wildlife was important to their experience. However, being able to touch and/or feed the wildlife were consistently rated as much less important overall, with substantial proportions of respondents indicating these activities were not important to their experience. This lack of interest was particularly the case for wildlife feeding. It appears that the importance of feeding wildlife varies among respondents and type of setting. Some respondents rated this feature as very important, and some of the open-ended responses in the Exploratory, Rainforest Habitat and FCNP studies indicate that feeding and touching wildlife is one of the best facets of the experience for some visitors. Overall, interacting with wildlife is important, however further research is required to identify what constitutes interaction for different respondents, and how important different types of interaction are to their experiences.

Learning and interpretation was listed as an important feature of best experiences in the Exploratory study. The importance of having interesting information about the wildlife was also rated as one of the more important features in both the Rainforest Habitat and FCNP studies. Results suggest that participation in interpretation may be linked to enjoyment of the experience. In the FCNP study, the most enjoyable aspect of the trip reported by respondents was to view the Australian Sea Lions, and this was the only place where all visitors participated in a guided interpretive tour. Similarly, in the Rainforest Habitat study, visitors gave very high satisfaction ratings for the experience, and at Rainforest Habitat all visitors participate in guided interpretive tours. Results across the studies indicate that interpretation is an important aspect of wildlife experiences for visitors, and participation may impact on overall enjoyment of the experience.

There were many other features that visitors indicated were generally appealing. These included clean and pleasant environments, large numbers and/or variety of wildlife, wildlife being easy to see, and unique or unusual wildlife. Other features, such as safety, visitor facilities and weather, may not be thought of as important until the visitor encounters a situation where these are lacking. These items were not rated as highly important in the Rainforest Habitat and FCNP studies, but they were frequently mentioned as features of worst experiences. Overall, the features discussed in detail were those which had the strongest and most consistent results across the studies.

(Aim 1.12.2): To examine whether there are differences and/or similarities between visitors regarding the features they desire in their experiences.

Differences between groups of visitors were approached in two main ways in this thesis. Firstly, responses to questions were compared on the demographic variables age, gender and place of residence. Secondly, responses were compared based on the respondent's level of interest in wildlife.

For demographic differences, the Rainforest Habitat and FCNP studies revealed that females and older respondents consistently rated almost all features as more important than did males and younger respondents. In the Rainforest Habitat study, the features that were scored significantly higher by females were those relating to facilities and organisation of the site, a pleasant and safe environment, wildlife being easy to see and seeing animals in the natural environment. In the FCNP study, there were significant differences for almost all of the features. In the Specialisation study, females were more likely to select the 'Remote-Wild Scenario' (natural, wilderness setting) as their most preferred wildlife experience, and to include 'feeling safe' as one of the most important factors in their experience.

In the Rainforest Habitat study, older respondents rated features associated with facilities, access and being able to get close to wildlife as significantly more important than did younger respondents. In the FCNP study, older respondents also rated features associated with facilities, staff, availability of information, wildlife being easy to see and being able to touch/feed wildlife as significantly more important. In the Specialisation study, older respondents were more likely to select scenarios other than the remote, natural environment option, and issues concerning access were a factor in this selection.

In each study, there were differences between groups based on place of residence. However, there were no substantial consistencies across results. In the FCNP study, results indicated that local visitors were more interested in social and leisure based motives, while international and interstate residents were more interested in wildlife, nature and learning.

The second main method by which differences amongst visitors were considered was in terms of their level of interest in viewing wildlife. In the Rainforest Habitat study, there were few differences among the groups for

ratings of features of the setting, except that respondents with higher levels of interest in wildlife viewing rated the features 'easy to find way around', 'animals easy to see', and 'facilities for visitors' as significantly less important. However, when asked what attracted them to visit Rainforest Habitat, visitors with higher levels of interest were significantly more interested in environmental and ecotourism experiences, natural rainforest surroundings, learning, getting close to wildlife and photo opportunities.

In the FCNP study, respondents with higher levels of interest in wildlife rated almost all features of the wildlife setting as significantly more important (except 'pleasant environment', 'feeling safe', 'able to touch/feed wildlife', and 'little evidence of human impact'). When asked to indicate the importance of various reasons for visiting FCNP, visitors with higher levels of interest were also significantly more interested in wildlife, nature and learning motives, but not more general social, holiday and sightseeing motives.

In the Specialisation study, respondents with higher levels of interest indicated a higher preference for the 'Remote-Wild Scenario'. For the 'Developed-Wild Scenario' and the 'Captive Scenario', the results indicated a split in preferences within the Enthusiast group. Respondents in this group were more likely to indicate they would either be not interested in this experience, or be very interested. This result indicates that even within the group with the highest level of interest in wildlife viewing, differences in preference for wildlife experiences may exist. However, the differences between interest groups in terms of preferences for features of the wildlife setting were not strong.

(Aim 1.12.3): To evaluate the relative importance of features of the setting.

In the Exploratory study, the most frequently mentioned features of best experiences were interactions with/close proximity to wildlife, aspects of the natural environment, learning opportunities, and large number/variety

of animals. The most frequently mentioned aspects of worst experiences were the poor management of captive wildlife, wildlife that was aggressive/attacked visitors, and poor service or facilities at the site.

The Rainforest Habitat study confirmed the relative importance of features that were identified from the Exploratory study. Mean importance scores indicated that the most important features were: animal welfare, clean environment, seeing animals in the natural environment, knowledgeable and friendly staff, animals being easy to see, and being able to get close to animals.

In the FCNP study, the features rated as most important were seeing wildlife in their natural environment, seeing wildlife behaving naturally, unique/unusual wildlife, ability to get close to wildlife, seeing rare/endangered wildlife and interesting information about the wildlife. Actual sighting of wildlife was also linked to visitor satisfaction.

In the Specialisation study, it was clear that the majority of visitors would prefer the wildlife experience that was described in The 'Remote-Wild Scenario', which featured a remote, natural setting with wild penguins. The main reason respondents selected this scenario was because of the natural setting. In terms of specific features of the experience, respondents were asked to select the three most important features from a list that was similar to the list provided in the Rainforest Habitat and FCNP studies. Clearly the most important feature was 'seeing wildlife in their natural environment', followed by 'an untouched natural environment'. Other important features were rare, unique and a large variety of wildlife, wildlife behaving naturally, being able to get close to wildlife and the availability of interesting information about the wildlife.

Overall, although the relative importance of features may vary slightly depending on the setting, there was general consistency across the studies. At a basic level, it is of fundamental importance that visitors actually see

some wildlife. Wildlife sightings were linked to satisfaction in the FCNP study, and the lack of sightings was a feature of worst experiences in the Exploratory study. Natural surroundings are central and critical to the wildlife tourism setting. In captive settings, animal welfare is the most important feature. Interaction with wildlife is memorable and important to wildlife tourism situations, however the forms of interactions desired are dependent on both the setting and the individual. Getting close to wildlife has widespread appeal, however touching and feeding wildlife were not consistently desired by all respondents. Finally, interpretation and learning were also generally important across different settings.

(Aim 1.12.4): To examine the applicability of Mindfulness Theory in explaining the attraction to various features of the wildlife tourism setting.

Mindfulness Theory provided a useful theoretical platform for explaining why various features of the wildlife experience were appealing to visitors. Although the open-ended descriptions of best experiences were coded conservatively, the large majority (83.9%) of descriptions contained at least one feature that was consistent with Mindfulness Theory. The most frequently mentioned aspects of Mindfulness that were described in best experiences were extreme stimuli (large colourful, loud, dangerous etc animals), authentic natural environments, new experiences, unexpected/surprising things, variety, and interaction with animals. Mindfulness Theory was not useful for understanding features of worst experiences.

6.2.2 Features of the animals

(Aim 1.12.5): To identify a respondent-generated list of most preferred animals.

In the Exploratory study, respondents were asked to list their most and least favourite animals. Results confirmed the expectation that large, mammalian animals that are familiar to humans, easy to anthropomorphise and aesthetically attractive are most preferred. Listings of the favourite animals in both the Rainforest Habitat and FCNP studies confirmed this finding. Australian iconic animals such as koalas and kangaroos were also popular, as were large zoo animals (elephants, giraffes) and animals that have received favourable media and conservation attention (whales, pandas, primates). The results also confirmed that insects and reptiles were least preferred animals. However, some animals such as cats and crocodiles were contradictory species, because they appeared high on the lists of both favourite and least favourite animals. There was little difference between Australian and overseas residents regarding the lists of favourite animals. It may be the case that the context influences preference for favourite individual species.

(Aim 1.12.6): To examine why respondents prefer these animals

Results show that animals that are considered aesthetically attractive, intelligent, of large size and/or with positive perceived character traits (such as being friendly, faithful or serene) are preferred. For domestic animals, the importance of interaction with these animals was an important feature. In a tourism context, the results from Rainforest Habitat and FCNP show that animals that are considered unique, or that visitors have never seen before, are considered favourites. Overall, the results provided support for the idea that preference is based on a hierarchical ladder of worth, with animals most like humans at the top of the ladder. This may appear contradictory from the lists of most preferred animal species, as animals

such as dolphins and fish have little structural or other similarities to humans. However, analysis of the words used to describe these animals reveals anthropomorphic and human-like qualities that are admired in these animals, such as friendship, playfulness, serenity and aesthetic qualities such as beauty. Thus it is not necessarily the actual features of the animals that influences preference so much as it is the *perception* of their features that is important.

6.2.3 Features of the tourists

(Aim 1.12.7): To apply the concept of specialisation to a diversity of wildlife tourists in an Australian setting.

Results from the Exploratory, Rainforest Habitat and FCNP studies indicated that Specialisation theory might assist in explaining differences among wildlife tourists. A detailed analysis of the literature pertaining to specialisation revealed that there was a lack of studies conducted with wildlife tourists, and a lack of consistency by which specialisation was defined in the broader recreation literature. However, based on previous studies, a number of variables were selected as likely indicators of specialisation amongst wildlife tourists. These were compared to the 'interest in viewing wildlife' variable.

The results from the Specialisation study confirmed that the 'interest in viewing wildlife' variable was useful as a surrogate measure of specialisation. As interest in wildlife increased, respondents were significantly more likely to participate more frequently in wildlife tourism, own bird/wildlife books, subscribe to wildlife and nature magazines, and be members of environmental organisations. It was concluded that the 'interest in wildlife' viewing variable was useful as an indicator of specialisation amongst wildlife tourists.

(Aim 1.12.8): To examine differences between wildlife tourists with varying levels of interest in wildlife in terms of their demographic characteristics, travel preferences, and preferences for different features of the wildlife tourism setting.

Although it was possible to define levels of interest in wildlife viewing amongst wildlife tourists, this was not a strong explanatory variable for differences in preference for wildlife tourism settings. The results indicated that although respondents with higher interest levels tended to have preferences for wildlife tourism consistent with the patterns predicted from the specialisation literature, few of the differences were statistically significant. It appears that regardless of interest level, the majority of respondents have generally similar preferences for wildlife experiences. In particular, the majority of respondents throughout the studies in this thesis indicated that the natural environment was a central and critical feature of wildlife tourism settings. The results suggest that Constraint theory may be a more useful approach for understanding differences in preference and participation in wildlife tourism.

6.2.4 Features of the interpretation

(Aim 1.12.9): To examine the importance of interpretation in the context of other features of the wildlife tourism experience.

Learning opportunities were the third most frequently mentioned feature of best experiences in the Exploratory study. When asked to rate the importance of 'interesting information about the wildlife' to their wildlife experiences, almost all respondents in the Rainforest Habitat study indicated that this feature was at least somewhat important to their experience, and half of the respondents rated it as very important. In the context of other features of the experience, the mean importance rating for this feature was 10th out of 23 features.

When asked to rate the importance of features in attracting visitors to Rainforest Habitat, 'learning about the rainforest' was the third most highly rated motive, after the 'natural rainforest surroundings' and 'getting close to the animals'. The results for the FCNP study were similar to those of Rainforest Habitat. In the context of other features of the experience, 'interesting information about the wildlife' was ranked as 7th of 15 features. The mean importance rating for this feature was lower than in the Rainforest Habitat study. The lower importance ratings in the FCNP study may be influenced by the settings in which these studies were conducted. Captive settings are more typically associated with the availability of interpretation, while access to interpretation in natural settings is highly variable in Australia, and generally limited. These results may therefore reflect expectations of visitors regarding availability of interpretation.

In the Specialisation study respondents were asked about their participation in interpretation. Participation in interpretive activities was found to be high across all interest levels. Almost all respondents indicated that they would read interpretive signs and pamphlets (at least 'sometimes'), over 80% would go into an interpretive centre, and the majority would participate in a guided tour. Older respondents participated in all interpretive activities significantly more frequently than younger respondents. The results across the studies also indicate that learning and interpretation is more important to certain groups. For example females, older respondents and respondents with higher specialisation rated 'interesting information about the wildlife' as significantly more important to their experiences. Overall, the provision of interesting information about the wildlife was rated as an important feature of wildlife tourism settings, and the majority of people will participate in interpretation where it is provided.

(Aim 1.12.10): To investigate whether preferences for interpretation varies based on the level of interest in wildlife viewing.

In the Rainforest Habitat study, respondents with higher levels of interest in wildlife were significantly more interested in every wildlife interpretation topic. Learning about the rainforest was also significantly more attractive to them as a reason for visiting Rainforest Habitat. In the FCNP study, learning or educational experiences were rated as significantly more important by respondents with higher levels of interest in wildlife as a motive for visiting FCNP. The importance of 'interesting information about the wildlife' was also significantly more important to their wildlife experiences. In terms of topics for interpretation, respondents with higher levels of interest in wildlife were significantly more interested in all nature and wildlife related topics. The results from the Rainforest Habitat and FCNP studies were both strong and consistent: visitors with higher levels of interest in wildlife indicated that interpretation was more important to them, and they were more interested in interpretive topics.

In the Specialisation study there were no statistically significant differences between the groups. However, this study indicated that all types of visitors tend to participate in interpretation where it is available, particularly in terms of reading interpretive signs and brochures, and looking at displays in interpretive centres. The lack of difference between groups may be because respondents with higher levels of interest in wildlife participate more frequently and therefore have a higher level of knowledge about the wildlife before the experience. It is also possible that they are more independent in their knowledge sources. The Specialisation study found that Enthusiasts owned significantly more guidebooks on birds and wildlife than other visitors, and the Rainforest Habitat study found that Enthusiasts rated all interpretive methods (except documentaries and guidebooks) as less important than did other visitors.

The combination of more frequent participation in wildlife tourism, possible higher knowledge about wildlife, and being more independent in their sources of information may have produced the outcome that, although Enthusiasts are significantly more interested in learning and wildlife/nature topics, they do not participate in on-site interpretation significantly more than other visitors.

(Aim 1.12.11): To examine visitor preferences for wildlife interpretation topics and methods of delivery.

In the FCNP study, wildlife related topics were rated as the most interesting. A total of 67% of respondents were very interested in the topic 'wildlife in FCNP', and 30% were somewhat interested. Overall, wildlife and nature topics were rated as more interesting than other topics, such as shipwrecks, lighthouses and Aboriginal history. Females were significantly more interested in many topics than males, older respondents were significantly more interested in park management topics, visitors with higher levels of interest in wildlife were significantly more interested in all wildlife and nature topics, and there were also differences based on place of residence.

The Rainforest Habitat study asked respondents to rate their level of interest in 11 wildlife topics. The five most highly rated topics were 'peculiar and strange characteristics of animals', 'importance in the ecosystem', 'social habits, relationships within groups', 'where to find them in the wild', and 'relationships with other species'. Females and respondents with higher levels of interest in wildlife were consistently and significantly more interested in the wildlife topics. The most preferred methods of learning were guides, followed by interpretive signs, just watching the animals, and interpretive brochures. Technological methods such as video loops and interactive computers were the least preferred.

6.3 Limitations of the Studies

As is the case with any research, there are a number of limitations that must be recognised when interpreting the findings. These limitations exist on two levels. Firstly, there are a number of generic limitations that are applicable to all studies of this kind. These limitations relate to sampling methodology, survey instruments, and statistics applied to the data (Shaughnessy & Zechmeister, 1997). The studies in this thesis are subject to all such generic limitations. However, a number of measures were employed to minimise the impact these limitations may have on the accuracy of results. These measures were discussed in the Methodology section of each chapter, and included pre-testing of questionnaires, training and supervision of researchers, careful selection of study sites and sampling frame, obtaining adequate sample sizes, examining inter-coder reliability, checking accuracy of data coding, and ensuring the assumptions for statistical tests were met.

The second level of limitations apply to the specific studies in question. In each chapter of this thesis, recognition of possible limiting factors relating to specific questions or methodology employed were discussed in detail. Overall, there are some limitations that are relevant to all chapters. Firstly, all studies were conducted in English, and thus the results apply only to English speaking wildlife tourists. No attempt was made to analyse possible cultural differences amongst wildlife tourist of different nationalities. Secondly, the studies were conducted in Australia at a certain point in time, and so caution must be employed when extrapolating results to other wildlife tourism settings. The results are most accurate for the samples on which the studies were conducted, at the time they were conducted, and in the place where they were conducted.

6.4 Theoretical advances

One of the criticisms of the existing body of knowledge on wildlife tourism is the lack of conceptual basis or attempts at theory development (Manfredo, Vaske & Decker, 1995). This has also been highlighted as a problem in tourism research generally (Cohen, 1979; Dann, Nash & Pearce, 1988). Despite the increasing

quantity of studies related to wildlife tourism, there are few that are relevant to a broad range of settings and wildlife visitors. Throughout this thesis, an attempt has been made to draw from theoretical platforms, in order to identify results that can be generalised. The two most dominant theories, which have proven to be relevant and useful in the study of wildlife tourism, are Mindfulness theory and Specialisation theory. Other theories discussed in Chapter One were potentially useful, however Mindfulness theory and Specialisation were considered the most useful.

As reviewed in Chapter One, Mindfulness theory relates to how people process information in a variety of settings. Certain environmental cues or situations encourage people to actively pay attention and process information in a way that is thoughtful and which results in new evaluations and categories. Moscardo (1992, 1999b) applied this theory to interpretation, and found that interpretation and visitor factors that encourage mindfulness are likely to result in greater learning, understanding, and enjoyment.

In terms of wildlife tourism, it was hypothesised that the Mindfulness principles outlined for interpretive settings by Moscardo (1996) could be applicable to wildlife settings. If being mindful resulted in greater learning and enjoyment in interpretive settings, then during wildlife experiences that were memorable and enjoyable (i.e. best experiences), visitors were likely to have been mindful. The principles for Mindfulness developed by Moscardo (1996) were translated into Mindfulness principles for wildlife tourism settings (Table 6.1).

Table 6.1

Review of Precursors and Conditions for Mindfulness in Wildlife Tourism Settings

Precursors – Attracting Attention	Conditions – Sustaining Attention	Visitor Factors
• Extreme stimuli – large, colourful, loud, smelly dangerous, large numbers, close proximity • Movement/ activity of animals • Use of contrast, patterns • Unexpected, surprising things • Other living things generally (infant animals) • Excitement or emotion	• Variety, diversity • Multisensory experiences • Interacting with animals, visitor control • Things personally connected to the respondent • Good physical orientation • Unique, rare things • Authentic, natural environments or habitats • New experiences, new animals seen	• High interest in content • Low levels of fatigue • Low levels of distractions • Visitors described specific learning

* Adapted from Moscardo (1992, 1999)

The open-ended descriptions of best experiences were then examined for consistency with these principles. Results found that 84% of best experience descriptions contained at least one Mindfulness principle. The most frequently mentioned principles were extreme stimuli (large, colourful, loud, dangerous etc. animals), authentic natural environments, new experiences, unexpected/ surprising things, variety, and interacting with animals.

These results indicated that Mindfulness principles were relevant to all facets of the wildlife tourism experience, including features of the setting, features of the tourists, features of the animals and features of the interpretation. The proposed extension to Mindfulness theory resulting from the findings in this thesis is depicted in Figure 6.2. In this model, the principles listed in Figure 6.2 have been reallocated into the four main areas of study in the thesis. These items have been shown to be applicable through analysis of best experience descriptions. The items listed under 'features of the visitor' were also taken from the model for

communicating with visitors proposed by Moscardo (1996). The high interest in wildlife viewing has links to Specialisation theory. The items listed under 'features of the interpretation' were taken directly from Moscardo's (1996) model, and these have been shown to lead to effective interpretation in a variety of settings (1999b). The items listed in the model depicted in Figure 6.2 are expected to lead to greater Mindfulness in experiences, which in turn leads to greater enjoyment, satisfaction and learning.

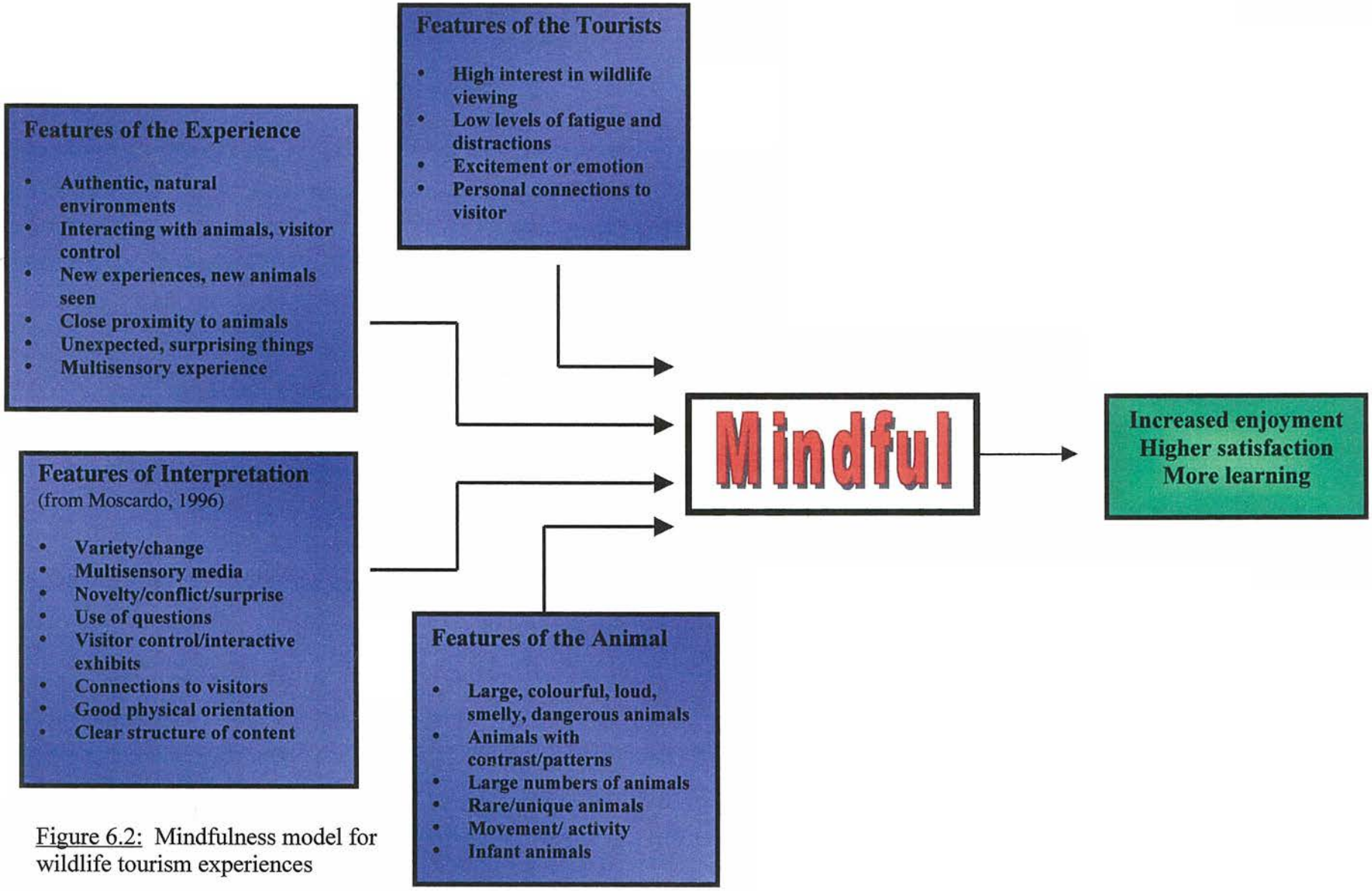


Figure 6.2: Mindfulness model for wildlife tourism experiences

The second main theory that has formed a basis for this thesis is Specialisation theory. The studies in this thesis have shown that increased levels of interest in viewing wildlife is linked with increased levels of actual past participation in wildlife viewing. This increased participation has occurred in both captive and non-captive settings. There are two aspects of participation to be considered. The first aspect is the *participation rate* of different groups of visitors, e.g. specialists and non-specialists, in different wildlife settings. The second aspect relates to the *numeric participation,* or the proportions of visitors of different Specialisation levels that are likely to be found in different wildlife settings. In terms of participation rates, the studies in this thesis show that as interest in wildlife increases, so too does the rate of participation in all forms of wildlife tourism. However, all studies of Specialisation (e.g. McFarlane, 1994, 1996) have shown that there are smaller proportions of specialists in the population than there are non-specialists. This means that although Enthusiasts may participate more *frequently* in captive settings, in terms of visitor numbers they are *numerically* likely to be in the minority of visitors. Because there are numerically more Generalists, they will dominate in captive settings even though they do not, as individuals, visit these settings as often as do Enthusiast individuals. A diagram of the likely numeric visitor mix in different wildlife settings is depicted in Figure 6.3. In easily accessible, captive environments the visitor mix is likely to be dominated by more General wildlife tourists. As the experience becomes more specialised and focussed on wildlife, the visitor mix will contain proportionately more Enthusiasts. Thus in all wildlife experiences there is likely to be a mix of General, Interested and Enthusiast visitors, but the proportions will differ depending on the level of specialisation of the experience. This is supported by the study results. The easily accessible, comfortable, captive venue of Rainforest Habitat contained a larger proportion (37%) of General visitors (but still 16% Enthusiasts), while the more remote, higher cost, natural environment of FCNP attracted a larger proportion (36%) of Enthusiast visitors (but still 17% General visitors). The model of Participation Patterns based on Specialisation, initially introduced in the discussion section of Chapter 5, is depicted in Figure 6.3.

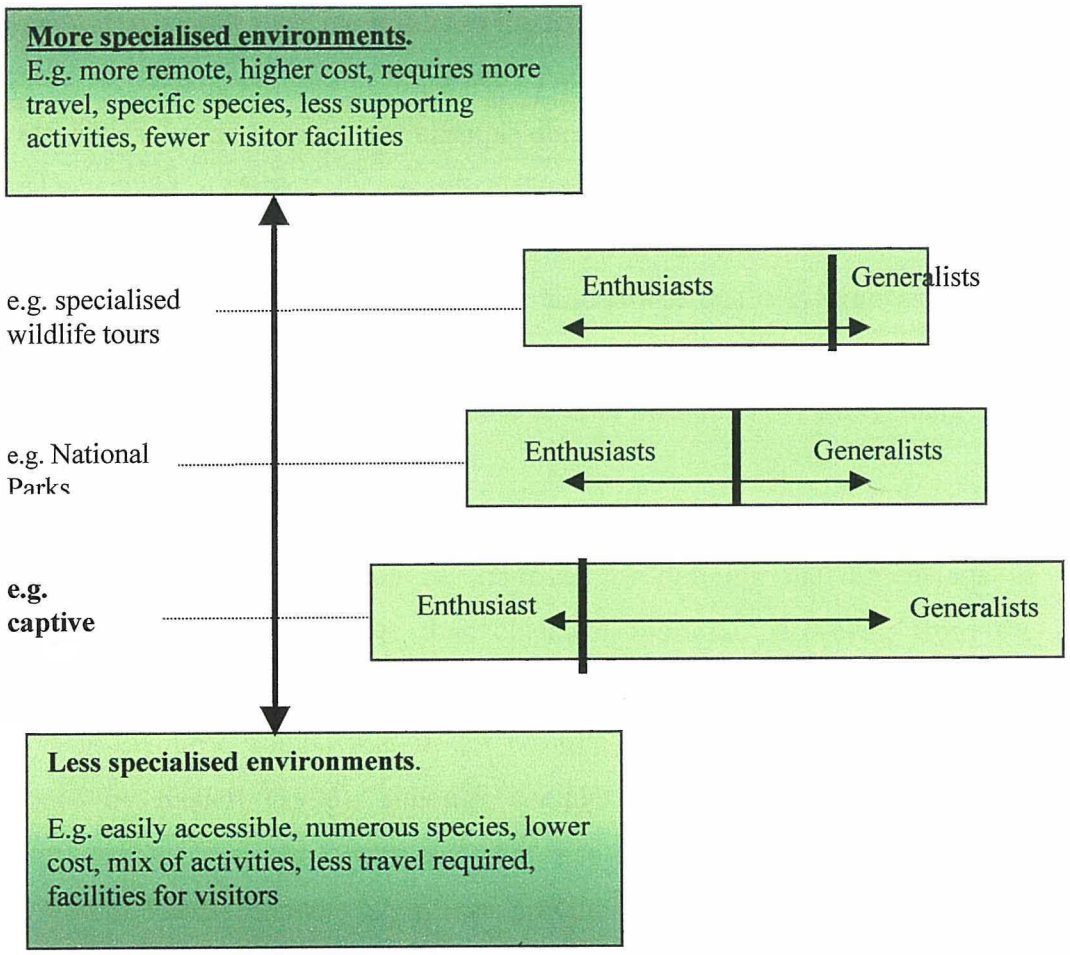
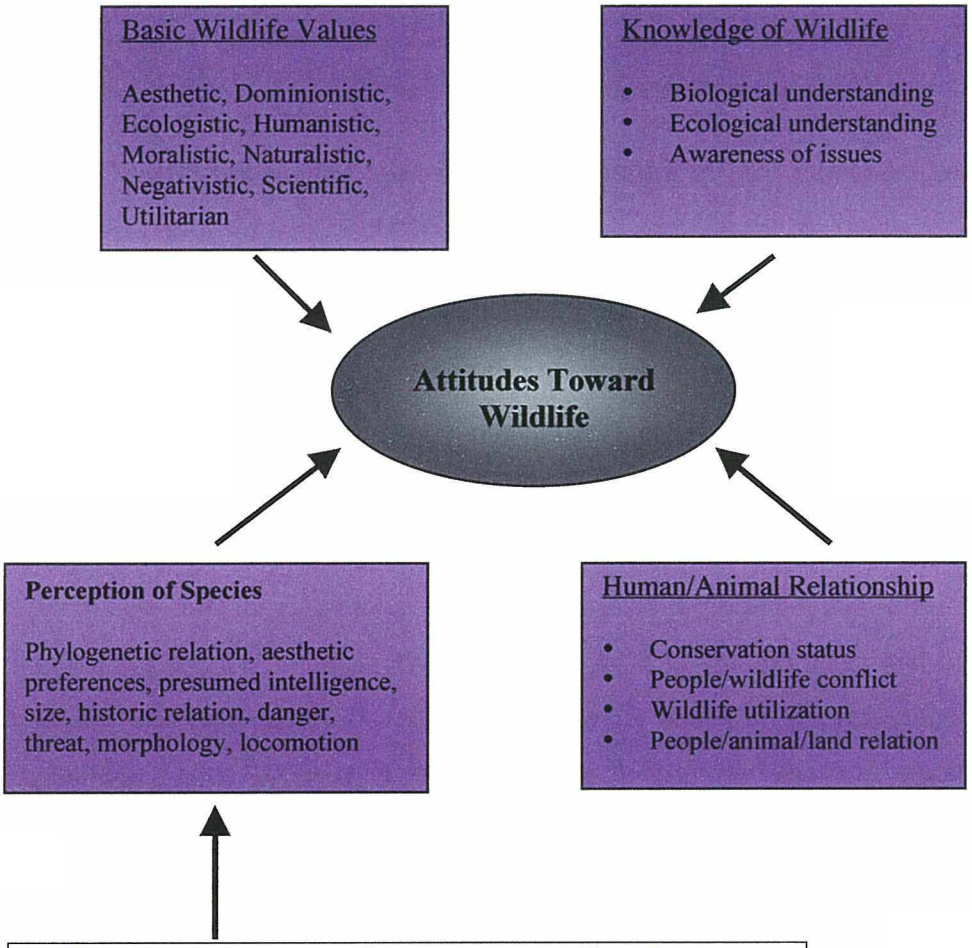


Figure 6.3: Participation patterns based on Specialisation

The final approaches to be extended by the results in this thesis are Ryan's (1988) matrix for classifying animals and Kellert's (1996) factors for shaping attitudes toward wildlife species. When Ryan's (1988) matrix was reviewed in the Literature Review, it was suggested that the matrix may be difficult to apply in practice, because of lack of clarity in the human-unhuman scale. It is difficult from a researcher's perspective to decide whether the features and characteristics of a given animal are human or not. For example, dolphins do not share many structural or behavioural similarities to humans, and do not typically have close associations with humans in the way that domestic animals do, yet they are rated as one of the most favourite animals. According to Ryan's matrix, they should be considered safe and human like.

However, it was clear from the results of the Exploratory study that the *perceptions* of these animals were more important than an objective appraisal of their characteristics. In many cases (for example domestic cats and crocodiles) the same animal was liked or disliked for entirely different reasons. Even if the animal is not human oriented and is dangerous, (for example lions, tigers), the reasons why these animals are listed as favourites centre on human-like qualities such as beauty, power and intelligence. Conversely, the least favourite animals are perceived as having dangerous and/or unhuman qualities such as being creepy, slimy, dangerous or unhygienic.

Thus Ryan's (1988) matrix can be improved by defining the dimensions as dependent on perceptions rather than objective appraisal. However, from the results in the Exploratory study, there are many other reasons why respondents liked their favourite animal that is not covered by Ryan's matrix. The model suggested by Kellert (1996), although complex, provides a better and more complete overview of the factors that influence preference for wildlife species. Results from the Exploratory study can provide more detail and clarity to one aspect of this model, namely the 'perception of species". This is based on a list of factors that influence preference suggested by Kellert (1986), and uses results from the exploratory study to provide more detail to these factors. This extension is depicted in Figure 6.4.



1. ***Size: larger species are preferred over very small species.***
2. ***Aesthetics: animals considered 'attractive' are more preferred. Aesthetic attraction can be based on shape (e.g. sleek), texture (e.g. fluffy, cuddly), colour (e.g. bright or contrasting) or movement (e.g. fast, athletic).***
3. ***Intelligence: animals considered to have capacity for reason, feeling and emotion are preferred.***
4. ***Danger to humans: Animals that pose a perceived threat or danger to humans, through injury or poor hygiene, are generally disliked.***
5. ***Likelihood of inflicting property damage: animals that have a detrimental impact on property are disliked.***
6. ***Predatory tendencies: unclear factor. Predators were on both the favourite and least-favourite animal lists.***
7. ***Phylogenetic relatedness to humans: Animals that are perceived to have structural, behavioral or 'character' similarities to humans are liked.***
8. ***Cultural and historical relationships to humans: Animals that play an important role in the history or culture of a geographic area are likely to be favourites in that area.***
9. ***Relationship to human society: Animals that are pets, or useful to humans are likely to be considered favourably, while pest or feral animals are likely to be considered unfavourably.***
10. ***Texture: Bodily appearance and structure: The more familiar to humans, the more preferred.***

11. ***Geographic variations: Variations amongst species considered favourite or least-favourite are likely to occur across geographic regions, depending on particular species found in those areas.***
12. ***Perceptions of characteristics can influence preference more than the actual characteristics of the animal.***

Figure 6.4: Factors influencing attitudes toward wildlife species – extended model

6.5 Future research directions

In terms of consistency with previous studies of specialisation, the segmentation of respondents based on levels of interest in viewing wildlife had mixed results. For the variables used as indicators of specialisation, results were clear and consistent with expectations. For the dependent variables, such as preferences for recreation experiences and participation in interpretation, the results were less clear, and some were contrary to expectations. However, expectations based on previous studies may be flawed. There has been a lack of research into specialisation amongst wildlife viewers, and this applies particularly for research applied to the broad range of wildlife tourists. In effect, the expectations on which this study was based were taken from the only available previous research, which in many ways was fundamentally different to the present study. This study was more investigative in nature than one that built on existing knowledge.

However, the finding of few significant differences on the dependent variables in this study does not mean that these results have little value. The study has served to illustrate that specialisation amongst wildlife viewers is not well understood. Throughout the specialisation literature, there has been a lack of consistency in the way specialisation has been defined, and varied results regarding the characteristics of specialists. Overall, segmenting visitors based on their levels of interest in viewing wildlife while on holidays provided some gains to understanding wildlife tourists in this study. Inclusion of this variable in future studies of wildlife tourists is recommended. A useful extension of this present work would be to consider more wildlife scenarios with different animals in different settings. This would

provide a check on the present results and extend knowledge on preferences for wildlife settings.

The results of the studies in this thesis have generated further avenues for research into understanding wildlife tourism. Three of the main areas for further research are interpretation, constraints to participation, and interaction with wildlife.

a) Interpretation

The studies in this thesis established that wildlife is considered an interesting topic for interpretation generally, and also indicated specific topics within wildlife tourism that are most interesting to visitors. Interpretation has been shown to be important to wildlife tourism experiences and most visitors participate in some interpretation (particularly in reading signs) where it is available in wildlife tourism. What is not well understood in the literature, and has not been studied in this thesis, is the actual impact of interpretation on the outcomes of enjoyment, satisfaction and learning in wildlife tourism situations. Previous studies (Moscardo, 1996, 1999) have indicated that application of Mindfulness principles to interpretation improves these outcomes in museum settings. It would be informative for the design and application of interpretation to understand which techniques and methods were most effective in communicating with wildlife tourists. This could be undertaken by selecting a topic for interpretation and a standard instrument for measuring enjoyment, satisfaction and learning, and then using an experimental design to vary the extent to which Mindfulness principles are employed. This could be conducted in a number of different wildlife tourism settings, for example in a zoo setting, a national park, and on a guided tour. Longer-term learning could also be potentially examined, by use of postal surveys administered to willing respondents at a later date.

b) Constraints to participation

The second potential avenue for investigation is that of constraints to participation. It appears that all people generally desire to view animals in their natural

environment, although some people have a stronger interest and participation in doing so. In much of the Specialisation literature it has been assumed that participation in a particular activity is a reflection of the level of interest in, and importance of, the activity to the individual. However, some respondents indicate high interest, but have low participation. The reasons why such respondents participate less is not known in the context of wildlife tourism, however there is a body of research pertaining to leisure constraints which has strong potential for application to wildlife tourism. The topic of constraints is also linked to the concept of substitute experiences, and the extent to which visitors consider experiences such as zoos as substitute to the 'authentic' experience of viewing the animals in their natural habitat. While experiences such as those in captive environments have been suggested as being substitute experiences, it is not known whether visitors view them in such a manner, or whether participation in these experiences is influenced by constraints to participation in natural settings.

c) Interactions with wildlife

A third avenue for further research is that of interactions with wildlife. In the exploratory study, it was revealed that interacting with wildlife was the most frequently mentioned feature of best experiences. This was a broad category, and included feeding wildlife, touching wildlife, watching wildlife and getting close to wildlife. In the other studies, importance ratings for various features of the experience indicated that seeing wildlife close up was important to visitors, however touching and feeding wildlife had mixed results. Touching and feeding wildlife was rated as much less important than other features in terms of mean importance scores, although some respondents still indicated that it was very important to their experience. There was no particular group of respondents, based on demographic variables or interest in wildlife, that were more interested in feeding or touching wildlife than others. Overall, an understanding of the nature of wildlife interactions is lacking. It is not known what visitors define as 'interacting' with wildlife, how important it is to their enjoyment of wildlife experiences, and how the desire to, or action of, interacting with wildlife is influenced by the setting. It may be the case that interaction is not considered as an important feature prior to

wildlife experiences, but if people experience interaction it is considered memorable and enjoyable. Investigation into this topic should initially be conducted using a qualitative approach to assist in defining what constitutes interaction, and should be undertaken in a variety of wildlife tourism settings.

6.6 Contribution of these Studies to Knowledge in Wildlife Tourism

After reviewing the available literature on wildlife tourism, a number of deficiencies were noted. The body of knowledge concerning wildlife tourists lacked information on a broad, integrated level. There were numerous site-specific case studies of wildlife tourism, but few with theoretical bases that could be applied across a variety of settings. Much of the commentary on what visitors were seeking from their experiences was lacking empirical evidence, and few studies were approached from a qualitative basis. There was also a relative lack of studies conducted in the Australian context. The studies contained in this thesis have attempted to address these deficiencies and in doing so have contributed to the body of knowledge in the following ways:

- Provided information on wildlife tourism in an Australian context.
- Provided open-ended descriptions of enjoyable and not-enjoyable wildlife experiences in captive and non-captive settings.
- Provided empirical information on the features of wildlife tourism experiences that are important to visitors in a variety of settings. These were initially generated by respondents, and then confirmed across three subsequent studies.
- Demonstrated the usefulness of Mindfulness theory for explaining why certain features of wildlife tourism experiences are enjoyable and memorable for tourists.
- Proposed an extension to Mindfulness theory for specific application to wildlife tourism experiences.
- Confirmed which types and features of animals are likely to be preferred for viewing in tourism settings.
- Identified wildlife interpretation topics that visitors are most interested in, and the most favoured methods for delivering this information.

- Examined the applicability of the concept of Specialisation to wildlife tourists and concluded that this theory provides only limited explanation for differences amongst wildlife tourists.
- Provided case studies of visitor responses to wildlife tourism in a commercial captive setting and in a National Park setting.

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LIST OF APPENDICES

Appendix A: Guidelines for Interpreting Captive Wildlife

(Source: Woods (1998))

1) ACCURATELY REPRESENTING NATURE

a) **Being natural:** Zoos should present landscapes as realistically as possible. Concept of "immersion": enclosures should transport visitors into the animals' natural habitat. Bacon & Hallett (1981); Wineman & Choi (1991); Shettel-Neuber (1988); Coe (1985); Bitgood (1990); Finlay, James & Maple (1988). Tait (1995) found that immersion exhibits can result in greater empathy with the animals and concern for their conservation.

b) **Being accurate:** Zoos should accurately represent the habitats and groupings of animals. Vegetation and landscapes not just natural, but consistent with what is found in animals native habitat. Wineman & Choi (1991); Ackley (1936)

c) **Encouraging natural behaviour:** Use natural environments and behavioural enrichment techniques to encourage natural, species-typical behaviour of animals. Robinson (1994); Shackley (1996); Dengate (1993); Markowitz (1979); Shettel-Neuber (1988); Ogden & Lindburg (1991). However, there is controversy over feeding of live prey (Ings, Waran & Young, 1997)

d) **Using the sounds of nature**: Use of ecologically-relevant sounds can enhance the experience of visitors and add to a natural and accurate portrayal of the animals. Ogden, Lindburg & Maple (1993)

2) HOW TO ATTRACT VISITOR ATTENTION

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a) **Size:** Larger animals size results in longer viewing times.

b) **Motion**: Moving animals attract attention.

c) **Aesthetic factors**: Shapes, colours, patterns attract attention.

d) **Novelty /rarity/ danger**: Visitors attracted to novel/rare/ dangerous animals.

a) **Multisensory**: Multisensory exhibits attract visitors.

b) **Visitor participation/ interaction**: Greater attention/recall where visitors participate/interact with animals and keepers.

c) **Object satiation and fatigue**: Repetition of enclosure style related to decreased attention.

d) **Special interests**: Visitors pay more attention to animals they are interested in. Baby animals widely appealing.

e) **Visibility of Exhibits**: Barrers to visibility reduce viewing times

f) **Proximity of Exhibit**: Visitors stay longer if they can get close to animals

g) **Sensory Competition**: Exhibit stimuli compete for visitor attention

Bitgood, Benefield, Patterson & Nabors (1986); Bacon & Hallett (1981); Moscardo (1996); Bitgood, Patterson & Benefield (1988); Shaw & Copper (1989 in Shackley, 1996); Coe (1985); Martin & O'Reilly (1988), Toedter & Zeremba (1993).

3) AVOIDING INCORRECT PERCEPTIONS

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a) **Anthropomorphism**: Transferring human characteristics and motives to animals can create incorrect perceptions. Zoos should avoid encouraging these perceptions. Coe (1985); Ford (1995); Wolf & Tymitz (1981). Anthrop. used widely to explain behaviour. Tait, (1995), Friedler, Zohar & Tamir (1993)

b) **Wild or tame?** Anthropomorphism, handling animals and captivity can create the incorrect impression that zoo animals are tame. Zoos should reinforce that zoo animals are not pets. Ford (1995); Finlay, James & Maple (1988).

c) **Issues of rank:** Possible rank connotations inferred by visitors looking down on animals in exhibits. Effect on learning & attitudes? Coe (1985); Hancocks (1971). Some visitors feel that looking down on animals presents them as inferior (Birney & Matamoros, 1995)

d) **Captive Behaviours:** Visitors/children learn incorrect animal stereotypes from animals engaging in captive behaviour (pacing, swaying etc). Use of natural exhibits, behavioural enrichment techniques and explanatory signs assists this problem. Sommer (1972); Hutchins et al (1984); Van den Brink (1981); Shettel-Neuber (1985,1988); Markowitz (1979, 1982).

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4) FACILITATING ENJOYMENT

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a) **Knowing what visitors don't like.** Visitors don't like crowds, small/unclean/inappropriate enclosures; unhappy animals; feeding of animals; unable to see animals. Exhibit design is important to visitor satisfaction. Wolf & Tymitz (1981); Shackley (1996).

b) **Dealing with animal inactivity:** Visitors find inactive animals boring. Use of interpretation, audio-visual equipment, movement in the exhibit such as water features can assist. Bacon & Hallett (1981); Wolf & Tymitz (1981); Bitgood, Patterson & Benefield (1988); Bitgood *et al.* (1986).

c) **Dealing with animals that are difficult to see**: Frustrating for visitors, especially when animals are camouflaged. This a problem in naturalistic enclosures. Use signs to explain camouflage. Churchman (1985); Polakowski (1987)

d) **Meeting the needs of children:** Parents often plan their zoo visit for children, thus children's enjoyment is important. Use age appropriate experiences such as manipulative materials, pictures, small intimate experiences, tactile stimulation and places to let off steam. Interactives, contact with animals and keepers; and signs aimed at small children are also useful. (Rosenfeld, 1982; Wineman, Piper & Maple, 1996; Ollason, 1981; Martin & O'Reilly, 1988; Deans *et al.*, 1987).

e) **Providing opportunities to get close and nurture:** Children and adults attracted to oppourtunity to nurture. Nurseries and animal hospitals are popular, and 'open window' exhibits where visitors can watch keepers work. (Bacon & Hallett, 1981; Bruning, 1981.

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5) USING INTERPRETIVE TECHNIQUES

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a) **Signs**: Signs and labels are integral to the exhibit as a whole. They are essential in assisting visitors to interpret what they see. (Blakely, 1981). Much has been written on design principles for making signs more effective. See Woods (1997, 1998) for a summary.

b) **Live interpreters:** Live interpretation such as keeper talks are popular because they combine many of the features that attract the attention of visitors. They allow for questions, are particularly good for children and allow visitors to get the information that they are interested in. (Morgan & Gramann, 1988; Wolf & Tymitz, 1979; Wineman *et al.* 1996). Keeper talks the most preferred means of interpretation for visitors (Gold & Benveniste, 1995; Broad, 1996).

c) **Shows:** Animal shows that encourage animals to illustrate species-typical behaviour can be educational as well as entertaining. Care should be taken to avoid anthropomorphism or turning the show into pure entertainment. Wineman *et al.* 1996; Yerke & Burns, 1991). Shows and other contact opportunities may enhance or detract from education and conservation (Kreger & Mench, 1995).

Appendix B: Exploratory Survey (First Version)

Wildlife Survey

This project seeks to find out about people's experiences with wildlife when they are on holidays. It is part of a broader study focussing on wildlife tourism by researchers at James Cook University. The results of the survey will be used to manage wildlife tourism and will help in improving the quality of the experience for visitors. The survey will take about 10 minutes to complete and your answers are confidential.

1. In the last 12 months, how many times have you had a holiday away from home that was longer than 4 nights and for a reason other than work

Within 5 hours drive of your home? _____ times
More than 5 hours drive of your home? _____ times
Overseas? _____ times

2. Do you usually travel with children?

1O no

2O yes.....what are the ages of the children? _____

3. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response.

1O The opportunity to view wildlife is one of the most important factors in my travel decisions

2O The opportunity to view wildlife is included as part of my travel decisions

3O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

4O I am not interested in viewing wildlife while on holidays

5O I prefer to avoid viewing wildlife while on holidays

4. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos _____ times.
Trips to wildlife sanctuaries or wildlife parks _____ times.
Trips to aquariums _____ times.
Land based trips specifically to view animals _____ times.
Land based trips to places where wildlife is often seen _____ times.
Water based trips or cruises specifically to view animals _____ times.
Water based trips to places where wildlife is often seen _____ times.

5. Please tell us about your best holiday experience involving wildlife (experiences at zoos, sanctuaries and aquariums can be included)

Where was it? _____

What kinds of animals? _____

Please describe what happened? _____

_____

_____

What features made this your best wildlife experience?_____

_____

_____

_____

_____

6. Please tell us about your worst holiday experience involving wildlife (experiences at zoos, sanctuaries and aquariums can be included)

Where was it? _____

What kinds of animals? _____

Please describe what happened? _____

_____

_____

_____

What features made this your worst wildlife experience?_____

_____

_____

7. **Please list in order of preference your 5 most favourite animals**
   1. _____ (most preferred)
   2. _____
   3. _____
   4. _____
   5. _____

8. **For your favourite animal, what features of the animal make it attractive to you?**

_____

_____

_____

9. **Please list in order of preference your 5 least favourite animals**
   1. _____ (least preferred)
   2. _____
   3. _____
   4. _____
   5. _____

10. **For your favourite animal, what features of the animal make it attractive to you?**

_____

_____

_____

11. **Please tell us your age:**_____ years.....**and gender** omale ofemale

12. **Where is your usual place of residence?**

OWithin Australia: which town?_____

Which state?_____

OOverseas: which country? _____

Appendix C: Exploratory Survey (Modified Version)

Wildlife Survey 2

This project seeks to find out about people's experiences with wildlife when they are on holidays. It is part of a broader study focussing on wildlife tourism by researchers at James Cook University. The results of the survey will be used to manage wildlife tourism and will help in improving the quality of the experience for visitors. The survey will take about 10 minutes to complete and your answers are completely confidential.

1. In the last 12 months, how many times have you had a holiday away from home that was longer than 4 nights and for a reason other than work

Within 5 hours drive of your home? _____ times
More than 5 hours drive of your home? _____ times
Overseas? _____ times

2. Do you usually travel with children?

1O no

2O yes.....what are the ages of the children? _____

3. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response.

1O The opportunity to view wildlife is one of the most important factors in my travel decisions

2O The opportunity to view wildlife is included as part of my travel decisions

3O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

4O I am not interested in viewing wildlife while on holidays

5O I prefer to avoid viewing wildlife while on holidays

4. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos _____ times.
Trips to wildlife sanctuaries or wildlife parks _____ times.
Trips to aquariums _____ times.
Land based trips specifically to view animals _____ times.
Land based trips to places where wildlife is often seen _____ times.
Water based trips or cruises specifically to view animals _____ times.
Water based trips to places where wildlife is often seen _____ times.

5. Please tell us about your <u>best</u> holiday experience involving wildlife (include visits to zoos or aquariums)

- **Where was it?** 1O Australia....which state? _____
  2O Overseas....which country? _____
- **What kind/s of animals?** _____
- **Were the animals....** 1O captive (in a zoo/sanctuary etc)
  5O non-captive but accustomed to human presence
  4O Non-captive but tame (able to touch)
  6O Wild
- **What type of environment?** Please tick the most accurate option:

08O zoo 19	O wildlife sanctuary	12O aquarium	06O coral reef
16O island	04O ocean/coast	09Omountains	03O rainforest
05O river/creek	15O suburban park	07O residential area	18O farm/station
17O desert	22O snow fields/alpine	02O grasslands	01O bush/forest
23Ocampground/picnic area		88O other _____	

- **Please describe why this was your best experience** _____
  _____
  _____
  _____
  _____

6. Please tell us about your <u>worst</u> holiday experience involving wildlife (include visits to zoos or aquariums)

- **Where was it?** 1O Australia....which state? _____
  2O Overseas....which country? _____
- **What kind/s of animals?** _____
- **Were the animals....** 1O captive (in a zoo/sanctuary etc)
  5O non-captive but used to human presence
  4O Non-captive but tame
  6O Wild

- **What type of environment?**

08O zoo 19	O wildlife sanctuary	12O aquarium	06O coral reef
16O island	04O ocean/coast	09Omountains	03O rainforest
05O river/creek	15O suburban park	07O residential area	18O farm/station
17O desert	22O snow fields/alpine	02O grasslands	01O bush/forest
23Ocampground/picnic area		88O other _____	

Please describe why this was your worst experience _____

_____

_____

_____

_____

_____

7. Please list in order of preference your 5 most favourite animals ...and why they are your favourite

	why?
1._____ (most favourite)	_____
2._____	_____
3._____	_____
4._____	_____
5._____	_____

7. Please list in order of preference your 3 least favourite animals ...and why you dislike them.

	why?
1._____ (least favourite)	_____
2._____	_____
3._____	_____

8. Please tell us your age:_____ years.....and gender Omale Ofemale

9. Where is your usual place of residence?

OWithin Australia: which town?_____

Which state?_____

OOverseas: which country? _____

Thankyou very much for your assistance!

Appendix D: Best Experience Features

Feature	Percentage of responses	Total percentage
Enjoyment of interactions/close proximity with animals		
close to wildlife	8.2	
Touch	4.2	
Be amongst	3.6	
Feed	3.1	
Swam with	2.3	
Easy to see	2.5	
First time see animal	2.7	
Well managed interaction	.1	
See in real life	.5	
Safely interact	.8	**28%**
Appreciation of aspects of natural environment		
Natural environment	5.5	
Beauty/scenery	4.8	
Pleasant	2.5	
Animals in natural habitat	1.7	
Wild/natural	1.4	
Relax in natural environment	.3	
Wildlife free	1.2	
Untouched	.4	
Peaceful	.6	
Sounds of wildlife	.1	
Colour of environment	.1	
Clear water	.1	
Weather	.1	**18.8%**
Learning things, or good opportunities to learn		
Learned new things	2.3	
Fascinating/interesting	3.2	
Signs	1.0	
Guides	2.0	
Different experience	2.5	
Good touch tank	.2	
Shows/demonstrations	.5	
Learn about man's impacts	.1	**11.8**
Large number or variety of animals		
Many animals	3.0	
Variety of animals	5.0	
Rare animals	2.9	**10.9**
A memorable or emotional experience		
Memorable	1.1	
Amazing	.9	
Dangerous	.9	

Emotional	.4	
Exciting	3.3	
Enjoyable	.7	
Awesome	.2	
Good company	.1	
Unique	.9	
Backstage experience	.1	
Photos were great	.4	
Family time	.3	
Children enjoy	.3	**9.6**
Appreciation of the animal itself		
Size	.8	
Colour	1.6	
Cute	.5	
Beautiful	1.9	
Exotic	.6	
Infant	.3	
Strength	.2	
Movement/action	1.0	
Family interaction	.5	
Hibernating	.1	
Natural behaviour	.3	
Sound/noise	.1	
Friendly	.1	
Playful	.3	
Hunting ability	.1	
Intelligent	.2	
Gentle	.3	
Human-like	.2	
Personality	.1	**6.4**
Well designed	2.4	
Good orientation	1.0	
Good facilities	.7	
Not crowded	.4	
Value for money	.5	
See animals without travel	.2	
Huge zoo	.5	
Historic	.1	
Good accommodation	.1	
Friendly staff	.5	**6.4**
Good care of animals/condition of enclosures		
Animals well cared for	1.4	
Nice enclosures	1.5	
Freedom in enclosures	1.1	
Animals happy	.2	

Space for animals	.9	
Animals trained	.3	**5.4**
Grand total		**100.0**

Appendix E: Worst Experience Factors

Feature	Percentage of Responses	Total percentage
Poor management of captive animals		
Small cages	8.8	
Run down	2.9	
Animals unhappy	2.3	
Prison-like	3.5	
Cages filthy	4.5	
Few trees	.2	
Dirty environment	1.2	
Cages unkempt	.9	
Animals unhappy	2.3	
Cages smelly	2.5	
Rats in enclosure pool	.1	
Animals pacing/bored	3.0	
Cruel/unnatural cages	1.5	
Animals pathetic	.5	
Cages not reflect natural habitat	1.1	
Exhibits closed	.5	
No breeding program	.1	**33.5**
What the Animal Did		
Bite	3.1	
Pester/beg	2.9	
Swooped	1.2	
Attacked	3.7	
Defecated on person	.6	
Animals annoyed visitors	.3	
Aggressive	3.0	
Just slept	.7	
Nuisance	.4	
Sucked blood	.2	
Chased	.3	
Ate respondent's food	.7	
Noisy	.1	
Destroyed environment	.1	**17.5**
General service/management features		
Boring	5.3	
Poor facilities	.2	
Cost	1.6	
Unfriendly staff	.8	

Not live up to recommendations	2.0	
Crowded	1.0	
People break rules	.1	
Trawlers allowed	.3	
Lack of interpretation	1.0	
Disappointed with management	.5	
Inexperienced guide	.2	
Too educational	.1	
Irresponsible people	.2	
Staff unenthusiastic	.2	
Too commercial	.3	
Uninteresting	1.0	
Not entertaining	.1	
Poor accommodation	.1	
Low visibility	.3	
Too long a trip	.1	**15.5**
Illness/Weather/Unusual experience		
Forest fire	.7	
Swept out to sea	.4	
Tired/sick	1.2	
Fell into water	.1	
Scared	3.0	
Hurt	1.4	
Embarrassed	.4	
Bad company	.1	
Don't like animals	.1	
Fell into bearcage	.1	
Not interested in animals	.1	
Didn't know how to handle situation	.1	
Sad	.1	
Weather bad	2.2	
Wrong time of year	.4	
Disagree with captivity	1.1	**11.5**
Poor management of human/wildlife interactions		
No thrill	.1	
Can't get close	3.4	
Too closely managed	.8	
Contrived experience	.6	
Animal cant control contact	.1	
Saw no animals	5.6	
Wild animals depend on humans feeding them	.4	

Tourism destroy interaction	.2	
No shows	.1	
Sterile interaction	.1	**10.2**
Poor treatment of non-zoo animals		
Exploited	2.6	
Badly treated	4.2	
Eaten	.2	
Sick	1.1	
Live animal fed to crocodile	.3	
Animal dying	.2	**8.6**
Perceived nature of animal		
Noisy	.2	
Disgusting	.3	
Small size	.1	
Dirty	.3	
Scary	1.6	
Lazy	.7	
Vicious	.1	**3.2**
Grand total		**100.0**

Appendix F: Best Experience Transcripts

Key: * denotes new respondent, followed by age of respondent, sex of respondent and level of interest in wildlife viewing

- General level: Respondent does not specifically plan to view wildlife while on holidays, but enjoys seeing wildlife while doing other things.
- Interested level: Opportunities to view wildlife is included as part of the respondent's travel decisions.
- Enthusiast level: The opportunity to view wildlife is one of the most important factors in the respondent's travel decisions.

Descriptions include where experience occurred, what animals were mentioned, and the full open-ended response provided by the respondent. The following is a random sample of approximately 150 of the 790 best experience responses.

*A497, 46 year old female, general.
Miles, Queensland. Native-birds, kangaroos. "We spent time in the bush, housed in refurbished storage
bunkers from W.War 2. We spent a lot of time walking in the bush and observing nature. Not too remote.
Very peaceful. Some home comforts."
*A423, 17 year old female, general.
San Diego Zoo, America. Basically most land animals. " I got to see many animals I had never seen before. A whole day in the zoo, guided tour. Seeing animals never seen before. Open area for animals common and unusual."
*A311, 34 year old male, general.
Christchurch Zoo, N.Z. Land. "Very interesting as the zoo was very different to others by way of openness."
*A496, 17 year old male, general.
In Cairns. I'm not sure of some names but one was "Wild World." Crocodiles, snakes, kangaroos, birds,
butterflies, etc. "We visited a few parks and attractions and saw different kinds of animals ranging from
snakes and crocodiles to birds and butterflies. Different animal, open environment. I saw a lot of things
that maybe I would not have seen otherwise."
*A313, 26 year old male, interested.
Botswana. Antelopes, lions, elephants, buffalo. "It was a peaceful and relieving experience to be among
wild animals away from the noise of civilisation. The land bulkiness."
*A284, 43 year old female, general.
Barrier Reef. Fish. "A very relaxing and informative day. The weather was perfect-sea was calm, visibility
under water was excellent. We were well looked after on the boat."
*A283, 48 year old male, enthusiast.
Sepuldk, Sabah, Borneo. Orangutangs. "Intimate meeting. Closeness, lack of other tourists."
*A281, 57 year old male, general.
Sailing from Sydney to Melbourne. Porpoises. "The porpoises kept shooting across the bow of the yacht..
..... the luminescence in the water that night was incredible."
*A420, 23 year old female, general.
Magnetic Island. Wild animals-birds, possums. "A few friends and I were staying at Mag. Is. And we

often went on walks (walking tracks). The weather was col but not cold and the animals could be seen
among the trees. It was a pleasant atmosphere and wildlife could be viewed in it's natural habitat."
*A425, 33 year old male, general.
Taronga Park. All. "Good. Seeing animals I had never seen before except on TV"
*A427, 20 year old female, interested.
San Diego Zoo. All kinds of animals from all over the world from koalas to elephants to polar bears and
panda bears. "It was a massive zoo that featured animals from all over the world. It took a long time to
see everything and some animals were hard to see. The skyrail and bus tour made things a little easier. It
was the first time in my adult life that I had seen animals such as the elephant, lion and giraffe. It was
good to see animals from another country, something that is not native to Australia."
*A429, 35 year old female, general.
Mackay (Illawong Park). Kangaroos, ducks, koala. "It was fun to feed the animals as they walk around
free not in cages. Holding the baby koalas."
*A401, 46 year old female.
Cleveland Bay. Dolphins. "Sailing - dolphins playing around the boat-leaping, diving, calling - seemed to
want to play-trying to communicate. Natural beauty-unexpected. An unpredictable delightful experience-
like a blessing. Felt a deep connection with them."
*A409, 21 year old male, interested.
Utah, USA. Snakes, scorpions, fish, deer. "I visited the major national parks in Utah including Capital
Reef, Zion, Canyonlands, Needles, Lake Powell, The Maze and Arches National Monument. The solitude
and peaceful nature of a barren landscape. The few animals we did see seemed much more powerful and
well adapted to their habitat."
*A457, 18 year old female, general.
Jumping Crocodile Cruise (2hrs away from Kakadu). Crocodiles and some birds. "I was able to see the
crocodiles in the wild, learn about their environment and see how they survive. Watching them jump out
of the water. It was great as you were right beside them and got to see them clearly."
*A461, 19 year old female, general.
Dubbo, NSW. All types, specifically from Africa i.e. rhinos, zebras etc. "1996-driving inland down to
Sydney-always stop at Dubbo to view wildlife sanctuary as animals are very rare. Vast areas, rent bikes or
drive car around enclosures. The fact that I'd never seen these animals before in (close) to their natural
habitat. They each have an acre or more to live in. Each have their own watering hole-trees etc."
*A422, 37 year old female, interested.
San Diego Zoo. Native animals from all over the world. "A whole day with features like the sky rail,
double-decker bus tours and glass window enclosures to observe the worlds animals. Seeing animals
such as giraffes and elephants with their young was quite an eye opening experience for me."
*A469, 17 year old female, general.
Taronga Zoo. White tiger. "It was so cute and fluffy. It was unbelievable."
*A467, 46 year old female, general.

Kathryn Gorge. Emus, crocodiles, peacocks, bird life. "Camping grounds/guide tour by rangers up river.
Bird life very approachable in grounds moved around mongst campers. No captivity. No exploitation.
Ranger controlled. Limited impact on the natural environment."
*A459, 20 year old female, general.
Fauna Sanctuary in Victoria's hinterland. Koala, wombats, dingos, kangaroos. "Great! Held the wombat, patted koala. The open setting of the park."
*A337, 44 year old male, interested.
Sailing off Nth. Qld coast between Townsville and Orpheous Is. Dolphins and fish of many different species. "Dolphins joined the yacht and swam with it for a while, playing as they went. Very high water
visibility and numerous fish of many different varieties. Water clarity, coral, fish, sailing, variety of weather experienced and mostly, that it was an adventure shared with overseas visitors."
*A187, 45 year old female, general.
Crawford Lookout, Palmerston Highway. Cassowary. "Whilst holidaying on the Tablelands, parked at
lookout and a cassowary crossed the road in front of us - about 20m from us. It was just wonderful seeing
the cassowary so close and the fact that it was so unexpected. I was thrilled to have seen it. Magnificent
creature."
*A477, 42 year old female, general.
New Zealand. Sea Lions. "Walking along beach, sea lions were coming ashore within 5m of me. A number of sea lions were sunning themselves on the beach. I was able to walk within 2m of these wonderful creatures. To see them riding the waves into the beach and then walking up along the beach,
watching them roll around in sand and play was just amazing."
*A516, 19 year old male, general.
Western Plains Zoo, Dubbo. Cheetahs, elephants, tigers, wolves, monkeys etc. "Great experience! Good
to see animals without cages or any real restrictions. You get an idea of behavioural pattems in their natural habitat. The fact that you can drive around and can walk up to the animals and they are usually
active, unlike animals in cages."
*A494, 46 year old male, general.
Kakadu National Park. Crocs, birds, wild pigs and kangaroos. "It was great to see the crocs and birds in
their natural environment. Natural surrounding and tours especially a boat trip down the Yellow River."
*A821, 32 year old female, interested.
Fitzroy Is.-West side. Marine animals, fish and invertebrates. "Viewing by snorkelling at a location close to the shore. The coral bombes were close to the shore and the animals were present in abundant
quantities-there was a great diversity in the animals present."
*A184, 40 year old female, general.
New Zealand (Whataroa). White heron. "We travelled by jet boat to view the heron in their natural habitat. Viewing many species of wildlife along the way. Remote location. Unique form of travel. Interaction with wildlife."
*A282, 18 year old female, general.
Singapore Night Safari. All different, rhinos, elephants, horses, birds, cats, snakes, fish. "It was very exciting when we got off out train and went for a walk we heard the lions roar really loud. It was very
scary. Seeing all the animals that I don't normally see. I think the animals I enjoyed seeing were the animals from Africa."
*A304, 21 year old female, enthusiast.

Finch Halton Gorge, near Mackay, Euengella National Park. Platypus, kingfishers, goannas, turtles. "walked to a viewing pool in a small pristine stream and saw two platypuses feeding. I've never seen a
platypus before, except for in the zoo, and seeing one in the wild was amazing."
*A309, 19 year old male, interested.
Zambia. Zebra, giraffe, lions, tigers, elephants etc. "Colourful and adventurous. The fact that a lion tried
to attack a deer but could not eat it."
*A308, 20 year old male, interested.
Galapogas Islands in Ecuador. All kinds of marine as well as giant tortoise, iguana, salamander, sea lions. "I went on a 6 day tour of the 9 islands, each island had a specific animal. Eg. Sea lion island, Flamengo Island, iguana (also other animals could be found on the island). The tour guide was a nice
and funny person. Full of knowledge and knew so much about animals. Also I got to go swimming with
sea cows and lions."
*A303, 26 year old male, interested.
Finch Hatton Gorge, Pioneer Valley, Qld. Platypus, Azure Kingfisher, turtles, goannas. "Fantastic! Camped in rainforest, next to platypus creek how life should be. The surroundings, the wildlife, watching kingfishers diving and platypus feeding and no people."
*A466, 18 year old male, general.
Billabong Sanctuary. Koala, snakes, turtles, bats etc. "Very educational. Environment."
*A307, 35 year old male, enthusiast
Yongala. Millions of fish. "Diving the 'Yongala', beautiful surroundings, coral. Close contact with large
wild creatures in their natural environment."
*A419, 17 year old female, general.
Monkey Temples-Bali. Monkeys. "It was great because you could feed the monkeys. The monkeys were
cute. I love monkeys now. I loved taking photos of the monkeys. Because I got to make contact with
the animals and the monkeys look happy and free - they were not caged."
*A331, 18 year old male, general.
Taronga Zoo. Orangutangs, monkeys etc. "It was a long time ago and I don't remember a lot of the details- I can just remember being amazed at how human-like the orangatangs were-their gestures, movements, expressions etc captivated me."
*A332, 17 year old male, general.
Northern Territory. Native animals and native Australian nocturnal animals. "It was a well guide tour
with lots of up to date information and well kept facilities for the animals. The quality of the wildlife park and the range of animals."
*A486, 69 year old male, general.
Crocodile Farm, Innisfail, Qld. Crocodiles, kangaroos, emus, cassowaries. "It was quite educational to
learn all about the lifestyle of the various animals. The farm was clean and well run and all the animals were well cared for."
*325, 18 year old female, general.
Hook Island. Sea creatures eg. Fish, sharks etc. "It was breathtaking. The water was clear and smooth.
Visibility was exceptional. There were hundreds of different kinds of animals swimming and lying around. The perfect weather and clear water. The unspoilt features. The wonderful species of animals
and marine life. The amount of time able to be spent observing."
*A502, 26 year old male, interested/general.
12 month working holiday in Solomon Islands diving at least 3 times a week. Marine. "Variety, every

dive was different. Got into the culture as I was there for 12 months and learnt the language and habits'
of the locals."
*A501, 28 year old male, general.
Great Barrier Reef dive trip. Aquatic life, reef sharks, clown fish, cucumbers, brain corals. "It was a relaxing experience involving lots of diving. The environment."
*A500, 20 year old female, interested.
Gold Coast, the Currumbin Sanctuary and Great Barrier Reef Aquarium. Birds, natives, fish. "It was
pleasant, calming and exciting. Very entertaining. The aquarium is my favourite as I have an interest
in fish and find it a relaxing experience. Both were relaxed atmospheres and pleasant to visit."
*A499, 17 year old female, general.
Taronga Zoo in Sydney. Elephants, chimpanzees, orangutangs, white tigers, bears. "Exciting, different, new. I've never seen most (95%) of these animals in real life before."
*A498, 25 year old male, Not interested.
Kelso Reef. Aquatic life eg. Fish, coral etc. "Very relaxing. I was in awe of the varied life around me.
Very natural. Varied animals, fun, good day out."
*A495, 17 year old female, general.
Taronga Zoo (Sydney). All kinds. "It was pretty amazing seeing all the animals, some I'd only really
seen on television before. The variety of animals-especially the giraffes."
*A493, 35 year old female, general.
Central Park, New Year. Seals, polar bears. "Cold winter day and animals were in their prime appearing
to have the time of their life basking in the sun."
*A492, 30 year old male, general.
Weipa. Fish. "Extremely exciting fishing trip."
*A523, 30 year old male, interested.
Bunya Mountains-Kingaroy. Mostly bird life, marsupials. "Seeing the native wildlife in natural habitat
was very good. Interacting and feeding bird life was also very interesting. Being able to watch and interact with large predatory animals (fish-sharks) in their own environment."
*A522, 37 year old male, general.
Kakadu, NT Bird life. "watching bird life at sunrise. All of the different bird life with the sunrise as a
backdrop."
*A520, 65 year old male, interested.
Tasmania. Tasmanian devils, forester kangaroos, fairy penguins and other bird life. "Good. None of the
above are in Nth Qld and the Tasmanian country and climate were different to home."
*A514, 19 year old male, general.
Fraser Island, Qld. Dingos, wild horses and numerous bird and fish life. "Every day an animal in it's
natural surroundings was evident whilst travelling around the island. The fact that I was able to enjoy
my holiday with the wildlife in their natural environment."
*A524, 54 year old female, general.
Darwin. Australian wildlife. "Interesting long walks along dirt roads viewing wildlife (buffalos etc) in paddocks on either side. Motorised vehicle towing canopied seats passing to pick up tired tourists every 20 mins a big advantage."
*A334, 42 year old male, interested.
Bathurst Bay. Fish, crabs, crocodiles, kangaroos, birds. "Seeing crocodiles in the wild that were not afraid of humans. Remoteness of the area and undisturbed."
*A330, 18 year old male, general.

Bali. Went to a Monkey Forest Zoo and experienced seeing wildlife in it's natural habitat. Monitors, snakes, (all reptiles), birds, few fish. "Interesting seeing different animals in another part of the world
(Bali), even though in the zoo I had already seen a majority of animals (Australian). I previously had never seen any exotic birds such as a macau before."
*A329, 17 year old male, general.
Underwater World, Qld. Fish, seals etc. "Just a day trip, well enjoyed, very interesting, fascinating. The
huge aquarium where they kept sharks, cods etc."
*A328, 20 year old male, Not interested.
Taronga Zoo, Sydney. Elephants, birds, snakes. "Plenty to see and do. All wildlife were generally well
kept. Good overall experience. Plenty of wildlife varieties, activities."
*A333, 41 year old female, general.
Great Barrier Reef. Fish, different species, whales and dolphins. "An enjoyable trip where I experienced
a variety of reef fish as well as other sea creatures such as whales, dolphins and starfish. The variety and
natural state of environment and not overpopulated and unpolluted."
*A346, ? year old female, general.
Billabong Sanctuary. Kangaroos, koalas, dingos, crocodiles. "Interesting. The kangaroos eating out of
the palm of my hand."
*A347, 33 year old male, interested.
Phuket, Bangkok (Thailand), Kuala Lumpar, Andaman Sea Island (India), Jakarta (Indonesia), Great Barrier Reef Aquarium (Townsville, Australia). Sea turtle, Napoleon fish, coral fish, sharks and sea snakes. "t was exciting to see the swimming behaviours, food-habitat behaviours, different colours. Napoleon fish-it is not easy to find- sea water, but people can keep-aquarium. Shark-could see closely in aquarium."
*A348, ? Year old female, general.
Kelso Reef, Great Barrier Reef. Fish, coral, dolphins etc. "An experience of the great mystery of creation.
A deep sense of being one with all living creatures in the vastness of the open sea, blue sky, high wind.
Being first time to see so much of the reef. Sharing the experience with a friend. Good, obliging, easy-
going guides."
*A349, 16.5 year old female, general.
Seaworld. Dolphins. "An entertaining, funny and enjoyable performance was put on by the dolphins and
their instructors. The fact that dolphins were involved and that it was entertaining."
*A350, Not stated. Not interested.
Billabong Sanctuary. All kinds of animals from crocs to chickens. "Wouldn't do it again if I got free
passes. The fact that I was used to boredom by then."
*A351, 18 year old female, general.
Currumbin Sanctuary, Brisbane. Koalas, kangaroos, possums, parrots, galahs. "Very enlightening and
exciting due to the fact that I was only 12 years old at the time. It was great, open spaces, visually appealing layout of the sanctuary. Very natural surroundings. Being able to interact with/hold koalas
and have reasonable close encounters/contact with the animals."
*A352, 17 year old ?, general.
Scuba diving in the reefs of PNG. Various fish, molluscs, whales, sharks. "being so close to them, amazing creatures. The sheer beauty of the ocean and it's inhabitants."
*A353, ? year old female, general.

Townsville. Fish. "Thrilling. Saw some fish that had not seen before."
*A354, 30 year old female, interested.
Port Douglas Wildlife Habitat. Birds, koalas, kangaroos, crocs etc. "It was the first time we had breakfast with the birds and it really mazed me seeing different kinds of birds. That was the first time I took my baby (2 years old) to see different kinds of animals and you should have seen his face. Mixture of surprise, fright and excitement."
*A355, 22 year old female, interested.
Australia (Whitsunday's). Fish. "Diving, snorkelling. Great Barrier Reef."
*A356, 18 year old female, general.
Merimbula, NSW. Kangaroos mainly and birds. "I lived in a cabin where kangaroos and other wildlife just roamed around. It was beautiful as you could see whole groups of them, or one or two baby wallabies around your cabin. Being able to feed the little wallabies around the cabin, basically seeing kangaroos close up and not caged up, the area was in the middle of trees/bush."
*A357, 18 year old female, interested.
Gold Coast - Seaworld. Dolphins. "It was great to sit on a pier and watch the dolphins with their instructors, talking to them and doing fascinating moves. They were friendly and active. The dolphins, atmosphere, blue water (clean)."
*A338, 19 year old female, general.
Townsville Aquarium. Sharks, turtles, fish etc. "It was interesting to see different kinds of fish, turtles etc. It was something new to me because I don't live in a tropical country. Different, big."
*A339, 25 year old male, enthusiast.
Red Sea, Egypt. Marine fauna and flora. "Exuberant colours, incredible diversity, easy access, cheap diving, good company, great food. The reef and it's accessibility."
*A340, 20 year old male, general.
Seaworld, Brisbane. Dolphins, whales. "Informative, exciting. Like dolphins, got to hear all about marine environment."
*A341, 18 year old female, interested.
Taronga Zoo. Animals from all over the world. Hippos, giraffes, African apes etc. "It was a wonderful experience, especially educational with informative billboards near the animals' habitat. Feeding the different animals that the zoo keepers allowed us to feed and watching different animal shows."
*A342, 39 year old female, general.
Kakadu. Crocodiles, buffalos. "Camping and living in the outback. Knowing that wildlife was out there. 'Getting back to nature.'"
*A343, 19 year old female, general.
Zoo in Aukland, NZ. Lions and tigers roaming and roaring around. "Since it was my very first time on a trip to the zoo, I would say it happened to be the best as also my first time to see lions and tigers in real life. The setting of the zoo was set out wonderfully. Tigers and lions standing there roaring at the people, so as the giraffes moving around."
*A344, 19 year old, ?, interested/general.
Gold Coast at Dreamworld. All types especially birds, marsupials like platypus, kangaroos, koalas and others like the Tasmanian devil, wombats, lizards and more. Also tigers. " was at Dreamworld looking at the wildlife sanctuary. Looked at the animals, took lots of photos, fed the kangaroos and read information

on them. With the tigers I saw the tiger shows, took lots of photos and enjoyed looking at them. The fact
that I got to see such a diverse range of animals all in the one place. I got to see common animals such as
a cockatoo and less common animals like emus, Tasmanian devils and Bengal tigers. It was also a relaxed
environment."
*A345, 36 year old female, interested.
Billabong Sanctuary. Koalas, snakes and crocodiles and kangaroos. "A marvellous experience - first time
to actually touch and feel these animals and learn about their lifestyle and habitat. Touching and feeling
experience was different than what I perceived it to be from just looking at the animals - normally one
would say 'Oh, Yuk!' before they touch the animals."
*A310, 19 year old male, interested.
Within Australia. Kangaroos, koalas. "Gave them food. I like kangaroos."
*A487, 13 year old male, Not interested.
Crocodile Farm. Crocodiles, kangaroos, cassowaries. "I enjoyed watching the crocodiles feed. Seeing
crocodiles in real life."
*A484. 17 year old, male, general.
Currumbin Sanctuary, Gold Coast. Birds, reptiles, mammals etc. "It was fairly enjoyable. The best aspect was the diversity of the wildlife. Mix with animals freely. Feeding the parrots by hand, as well
as kangaroos and wallabies. Large rainforest enclosure containing birds."
*A483, 70 year old ?, interested.
Melbourne Zoo. All kinds. "Very interesting and educational. Animals mostly in natural habitat."
*A482, 17 year old female, general.
Taronga Park Zoo. All kinds. "It was interesting to watch the animals playfully live in their home. The animals were what we expected and the place was well catered."
*A481, 30 year old male, general.
Melbourne Zoo. Apes. "Exciting. The volume of animals."
*A491, 45 year old female, general.
Kakadu. Crocodiles, birds, wild boars. "Eye opening - amazing realisation of destruction of natural habitat. Natural surroundings - seeing the real animals in their own habitat.."
*A490, 18 year old ?, general.
Kelso Reef (Pure Pleasure Cruises). Bright, colourful and different fish. "It was great being able to swim
with the fish and feed them. Being able to swim with the fish. Touch of the fish in their environment."
*A489, 46 year old female, general.
Currumbin Bird Sanctuary. Birds, kangaroos, koalas and other Australian wildlife. "It was a very pleasant experience. Being able to walk around, the animals and the birds coming in to feed."
*A488, 47 year old male, general.
Currumbin Birds Sanctuary. Birds, kangaroos and wallabies, Tasmanian devils and others. " I like to see
animals in a fairly natural state and I enjoyed seeing my childrens' reactions. Being able to interact with
the animals (eg. Feed and touch). Particularly feeding the Blue Mountain Parrots."
*A335, 36 year old male, general.
Brisbane Expo '88. Parakeets, crocodiles, cassowaries, mainly birds. "On a tour experience, sent to different wildlife parks to see birds in their natural habitat. Chance to see and feed the birds."
*A336, 17 year old female, general.
Townsville Aquarium at the Great Barrier Reef Wonderland. Marine life. "The fish and stuff swam above you in the tank-it's like we were the ones locked up."

*A327, 18 year old ?, interested.
Crocodile Farm just outside Caboulture. Crocodiles, pythons, spiders, hawks (and other varieties of bird species), several species of insects and bugs. "I loved watching the crocodile shows. I also thought the snakes and spiders were great. Watching them work with the crocodiles, and learning exactly how a croc attacks. Also, they let a 6m python be held and patted by children in the audience."
*A073, 18 year old male, general.
Dubbo Zoo. African wildlife. "It was spread out and well designed for both the animals and people."
*A074, 24 year old male, general.
Phillip Island. Fairy penguins. "It was amazing to see the size of these creatures, returning to the beach and watching them play. The atmosphere of the island. You seemed miles away from anything resembling human life."
*A075, 52 year old male, general.
Great Barrier Reef. Fish. "Great viewing of fish and clams. Colours, closeness to fish."
*A076, 27 year old male, enthusiast.
Egypt. Camels. "Hot, dry, but the ancient sites were great. The opportunity to ride a camel."
*A077, 16 year old male, general.
Japan. Hippos, monkeys, gorillas, giraffes, birds, turtles. "Sad. The animals were confined to an extremely small play area. The diversity of the animals was amazing."
*A078, 51 year old female, general.
Kimberley, WA. Snakes, goannas, fish, frogs. "We drove into the Great Sandy Desert with a group of Aboriginal people. They showed us many animals of the region. How to find wildlife in the desert."
*A079, 19 year old female, general.
Billabong Sanctuary. Crocodiles, snakes, bats, kangaroos, possums, koalas, emus, birds. "We took some relatives to Billabong Sanctuary to see the animals. We spent all day there and had a great time playing, watching and feeding the animals. The fact that some of the animals are allowed to walk around the grounds and the feeding times were really interesting as well. The facilities for picnic lunches were great as well."
*A080, 19 year old female, general.
Egypt, Cairo. Camels, donkeys. "We went on a camel ride to see the pyramids of Geiza. While the surroundings were spectacular, the camel ride made it all more memorable. Even though they are not that comfortable to sit on. The surroundings, the fact that I had never been this close to a camel and to see that they had different personalities and that they had heaps of space to roam around."
*081, 19 year old female, general.
Habitat. Crocodiles, birds, kangaroos, bats, butterflies, snakes. "We arrived at Habitat and looked at different birds inside a bog enclosure. We also went into the butterfly enclosure where they flew all around you. Fed the kangaroos and emus. Watched the crocodiles feeding. When a Fijian pigeon landed on my arm and also when a bat landed on my dad's back and wouldn't let go. We took photos of these events. I was so surprised."
*A082, 47 year old female, general.
Kuranda and Port Douglas. Butterflies, birds, wildlife. "Uplifting and enlightening experience to see these at close range. Learning about the breeding cycle and the different varieties. The butterflies were beautiful, colourful and numerous around us. A very uplifting experience."

*A083, 16 year old male, Not interested.
Billabong Sanctuary. Crocs, Australian native animals. "Feeding the crocs awesome. They are so fast
and could kill someone really easily. So close to the action. Danger."
*A084, 39 year old male, general.
Cairns. Snakes and crocodiles. "Very wary of snakes and crocodiles. Excellent condition of the animals
and the reptiles' environment."
*A296, 19 year old female, general.
Taronga Zoo. Giraffe, polar bear, elephant, gorilla, tigers, seals, lions. "Pretty amazing because it was
the first time I had seen some of these animals. I never did it before."
*A297, 43 year old male, interested.
South Africa. Lion, elephant, giraffe, rhinoceros. "Very enjoyable. Being so close to the animals."
*A298, 35 year old female, general.
Rainforest up north where friends live. Butterflies, birds. "It was so peaceful and relaxing. The animals
were so beautiful. The rainforest was so green. The colourful butterflies."
*A299, 18 year old male, general.
Melbourne Zoo. Elephants, seals, tigers, wombats, lions. "Seals were performing for the crowd, wombats
were walking around inside their enclosure, lions were sleeping. The experience was breath-taking. The
animals."
*A176, 50 year old male, general.
Singapore, Jurong Park. Birds. "Plenty of area for captive birds. The serenity, the birds, the general atmosphere is/was in conjunction with other scenic attractions."
*A177, 40 year old female, general.
Mt. Elliott. Kangaroos. "It was a great walk and to see what animals were out and about. Seeing the animals in the natural environment."
*A178, 17 year old male, Not interested.
Billabong Sanctuary. Kangaroos, emus, crocodiles. "It was good, although since I have been so many
times it is starting to get boring. It is my only wildlife experience (apart from the Aquarium)."
*A179, 40+ year old female, general.
Hamilton Island. Fish. "Snorkelling in the beach area. The natural beauty and fascination of seeing fish and coral in it's natural state."
*A186, 40 year old female, general.
Lake Taupo, N.Z. Trout. "Feeding the trout who jump onto a strategically placed mirror so you can see the colours on their bellies. The fact we saw family we hadn't seen for 5 years and the location was
beautiful."
*A188, 48 year old male, interested.
Kruger National Park. Elephants, hippos, lions, baboons, zebra, wildebeest, springbok, warthogs etc. "Awesome. The volume of wild animals in their own environment."
*A190, 27 year old male, general.
Lake Tahoe, USA. Racoon, bear, squirrel. "Fairly exciting as I hadn't seen such animals for real in their
natural state. The fact they were not in cages etc (eg. Zoo)."
*A191, 46 year old male, general.
Dubbo Wildlife Park. All kinds. "Pleasant full day watching animals 'in their natural environment'. The
set up of the park, animals appeared to be wandering at large without fences. Able to walk or drive through park."
*A192, 42 year old female, general.

Dubbo Wildlife Zoo. All countries were represented. "The layout of the zoo made viewing the animals
seem a very natural experience."
*A181, 51 year old male, general.
New Zealand. Kiwis and penguins. "Viewing nocturnal animals and birds. Interesting, well presented, not seen in everyday life."
*A185, 17 year old male, Not interested.
Taronga Park Zoo. Elephants, giraffe, koalas, wombats, gorillas, monkeys. "Walked around the entire
zoo. Was amazed by the size and by the huge amount of different animals that were present all around
the zoo. First time to a zoo, also I was a little child at the time and it was just something I had never experienced before."
*A183, 14 year old female, general.
Perth Zoo. All sorts - wildlife, tiger, penguins. " I saw all the animals, they were gorgeous. I even saw
the white tiger who was visiting the Perth Zoo at the time. All the animals."
*A182, 15 year old female, general.
Hinchinbrook Island. Birds, dolphins. "Outdoor education camp. We walked over the island viewing
many different types of birds. Then boarded sailing ship where 2 to 3 dolphins were swimming. To be
able to see dolphins that were wild, so close up."
*A472, 18 year old female, general.
Bali, Indonesia - like a small village with markets. Monkeys. "Breathtaking, fun, a bit worried at times as there are no boundaries/fences. The monkeys being open to the public, letting you touch them if game."
*A471, 17 year old female, interested.
Indonesia. Orangutangs. "A hike up through a rainforest to a viewing area with a platform in front of us between the trees for feeding. They were in their natural environment. The natural experience of it. No noise, pollution etc. Isolate, tranquillity."
*A436, 18 year old female, general.
Airlie Beach - Eden Park Wildlife Sanctuary. Emus, kangaroos, koalas, snakes, crocodiles, birds, fish,
dingoes. "Very close to the animals especially the crocodiles (surprisingly), got to read about all types of
one species of animal - great learning experience. Could go at your own pace, while also having specified
feeing times for some animals. Also a waterslide there with animals watching."
*A434, 42 year old female, general.
Great Barrier Reef Aquarium. All sea creatures - fish, stingrays, sharks, sea anemones. "Nice to see sharks etc/dangerous animals without swimming in dangerous zones. Educational, colourful, pleasant atmosphere."
*A433, 36 year old female, interested.
Taronga Park Zoo, Daintree, Cooktown. Panda bears, tigers, platypus, elephants, giraffes, birds, crocodiles. "Seeing the panda bears at Taronga Zoo was the best but I prefer to see animals out in the wild. The fact that I had never seen pandas before and had never been to a zoo that large."
*A432, 40 year old male, general.
Scuba diving on the reef at Daydream Island. Fish - slugs, sea life. "It was great swimming with fish
and coral in a natural setting. The fish were used to people and not scared to be amongst us."
*A431, 25 year old male, enthusiast.
Airlie Beach Wildlife Park. Crocodiles, snakes. "Feeding a crocodile, it was very good. I've never been so close to a crocodile."
*A430, 18 year old female, general.
Beijing, China. Pandas, bears, elephants, giraffe, lions, tigers, monkeys, hippopotamus. "Good -

fantastic. Seeing exotic animals that I don't normally see."
*085, 58 year old female, general.
Billabong Sanctuary. Australian native animals - crocodiles. "It was an extremely hot humid day and it was interesting to experience the animals in their natural habitat and see the joy on everyone's' faces, especially the children as they fed the birds and animals. The family and social atmosphere of the sanctuary and watching the crocodiles being fed."
*A086, 18 year old female, general.
Pure Pleasure Cruises. Fish. "Great. It was really exciting to swim with all different kinds of fish and to see the coral. The swimming and with fish and coral, and all the different colours of fish and coral."
*A089, 21 year old male, general.
Daydream Island. Fish. "Scuba diving with fish was an interesting experience. The bright colours and
unusual patterns on the fish."
*A090, 14 year old female, general.
Paluma. Platypus, native birds and basically any rainforest animals. "I went to Paluma with my school for 3 days and stayed in the dormitories. We did activities like bushwalking/hiking, bird watching and other activities. They were animals I hadn't seen before and you could view them in their natural surroundings."
*A091, 38 year old female, general.
Canadian Rockies. Salmon, bears, moose. "Saw salmon jumping up waterfalls, a bear on the side of the
road feeding and moose on the main street of Jasper. Most of the sightings were of animals we don't see
here in Australia. The bear sighting was by chance - seen in the wild from the safety of a car."
*A092, 32 year old female, general.
Currumbin Bird Sanctuary. Birds and native Australian wildlife. "My daughter was little and there were interactive experiences for her not just viewing the animals. She fed birds, petted animals and fed
them and walked amongst the wildlife. The interactive nature of the visit."
*A093, 21 year old female, general.
Kelso Reef. Fish and reef animals such as seastars, sea urchins etc. "It was just wonderful. Something
different and very fascinating. Hope to do it again soon. That I had never seen it before and I was a visitor in a marine environment where the fish didn't care as long as you didn't try to touch and disturb."
*A095, 19 year old female, general.
Albatross Colony New Zealand. Albatross. "Was very interesting. Being able to see the impact on the
wildlife, through museum, videos, displays."
*A096, 17 year old male, general.
Daydream Island. Reef animals. "I had never had a trip to such an awesome setting where the wonders
of the Great Barrier Reef blew my mind. Such features as the snorkelling and diving which made me feel at one with the animals."
*A097, 30 year old female, general.
Airlie Beach Wildlife Park. Land animals and crocs. "It was a diverse experience that displayed a great
variety of animals. The variety and the walking tracks that made it easy to view all the animals."
*A098, 17 year old female, general.
Hook Island. Fish, coral, birds. "It was a fantastic experience that allowed you to get up close with the
beautiful varieties of coral and to feed the fish was an exciting experience. On the way there we saw dolphins. The place was very laid back, relaxing which allowed you to enjoy these activities at a leisurely pace. The fish were spectacular displaying very tropical colours. Also very informative (tour guide)."

*A099, 45 year old male, general.
Cape York. Various Australian native animals. "I saw a number of animals in the wild I had not seen
in the wild before - wedge tail eagles (pair), tree kangaroo, dingo, crocodile. Seeing these animals in their
native habitats."
*A100, 22 year old female, general.
Australia. Goanna, kangaroo. "I enjoyed seeing these animals as we don't have them in Ireland. The
fact that I have never seen these animals before."
*A101, 16 year old female, general.
Great Barrier Reef. Fish, sea creatures etc. "I travelled to the reef in a boat, we were allocated snorkelling equipment and were able to swim in a designated area. We were also able to go on glass bottom boat to view the reef. Because I was able to have fun swimming and snorkelling, while looking at the wildlife. The environment in which I saw them made it a good experience."
*A102, 14 year old male, general.
Taronga Park Zoo. Numerous animals. "I walked past cages and enclosures with animals in them. It
was the only one I could think of."
*A103, 36 year old female, interested.
Finally seeing cassowaries in Mission Beach. Birds. "Driving along, we saw a mum and baby cassowary.
Also, seeing a turtle in Whitehaven Beach, Airlie Beach area and seeing a pack of dingoes at the Townsville Town Common."
*A110, 48 year old female, interested.
Seaworld. Dolphins, seals. "Excellent experience. Good show. The dolphins. "
*A115, 18 year old male, general.
Indonesia. Bengal Tigers. "We went and saw the tigers and held them (cubs). Also watching the bigger
tigers 'playing'. Getting to hold the tigers was the best bit because normally you think of tigers as a viscous animal."
*A118, 17 year old female, interested.
Tablelands. Mammals-birds, wallabies, turtles, fish, cassowary. "I love animals and always have. I can't describe my experience, I'm excited when I see something that not everyone can see eg. cassowary. Seeing a cassowary."
*A120, 45 year old male, general.
Dreamworld. Tigers. "The sight of a tiger in a natural environment was great. The interaction between
the wild animals and humans was amazing. The low cost and easy going nature of the tour."
*A121, 35 year old male, general.
Etoshia National/Wildlife Park, Naniba. Lions, elephants, many species of deer family, rhinos, giraffes,
waterhog, zebra etc. "At night there was a waterhole where all the animals came out in their natural habitat. It was natural."
*A122, 42 year old female, general.
Fraser Island. Dingoes, birds. "Touring over the island in a bus and seeing the animals and rainforests
up close. Being able to walk in the rainforest and listen to all the birds."
*A123, 61 year old male, interested.
Alaska. Dahl sheep, black bear, caribou, salmon run, eagles. "The terrain was vast with mountains to
over 6000m. Vast glacial tracks of silt. Magnificent field of falling glaciers. At the Fairbanks Uni Museum there were many 'stuffed' animals depicted in their wild environment. This viewing gave a better impression when you saw them in their open and live state."
*A124, 31 year old male, general.
Japan. Bears. "Saw wild bears from the cable car while skiing. They were wild and I was in a very

natural place."
*A125, 33 year old female.
Tablelands and Kuranda (Rainforest station). Ulysis butterflies, koalas, , snakes, wallabies, crocodiles.
"I took a sky rail from Caravonica to Kuranda and went to Butterfly Sanctuary, Rainforest Station. It was a wonderful view. Especially at the Rainforest station I could see many animals. Every place I
went to had a good guide who explained about the animals well and I really enjoyed it. I learnt a lot of
things about them."
*A126, 25 year old male, enthusiast.
Wanabool. Penguins. "I heard a rumour about a penguin colony. At first I didn't expect to find them.
When I found penguins I was so excited and took a lot of pictures."
*A127, 19 year old female, interested.
Australia, Gold Coast. Koala. "When I first went to Gold Coast (Dreamworld) I could hold a koala. It
was a great memory in my mind. I could touch kangaroos/feeding was good. Between human and animal, communication was good."
*A131, 50 year old male, general.
Princess Charlotte Bay. Magpie, geese, wild foul and crocodiles. "Exhilarating. Because they were free."
*A133, 45 year old female, general.
Dreamworld and Taronga Zoo. Tigers (white and orange) and dolphins. "Wonderful. Rapt to see dolphins. Interesting to see different animals never seen before. Dolphins and tigers and the elephants
that farted - it was amazing how loud it was! (and amusing)."
*A136, 26 year old male, general.
Taronga Zoo. Reptiles and monkeys (favourites). Variety of animals. "Enjoyable. Had never been to an
international zoo before. Chimpanzee enclosure. Amazing to see how human-like they are. Also really
enjoyed reptile enclosure. Easy access to view all enclosures."
*A137, 64 year old female, general.
Kakadu. Birds, crocodiles, water buffalo, native Australian animals (kangaroos etc). "Sunset views over
water. Most animals at dusk. Interesting to watch animals interaction (croc). Well organised tour. Boat
ride (sunset when all animals most active), animals in natural habitat."
*A138, 41 year old female, interested.
Taronga Park Zoo. Variety native and imported animals. "Interesting and exciting to see variety of animals in natural-like habitats. Background scenery of Sydney Harbour. Animals kept in natural habitats. Various species also from overseas. Diverse variety, easy access to zoo. Kept clean and easy to
walk around."
*A379, 51 year old female, general.
Indianapolis Zoo. All kinds, elephants, tiger, bear, birds, giraffes, dolphins etc. "Self tour, visited all aspects of zoo, saw elephant bath - very interesting. Wide variety of animals, nice layout of zoo, elephant
bath."
*A374, 28 year old female, general.
Billabong Sanctuary. Alligators, kangaroos, koalas. "Saw alligators in action - had opportunity to feed
kangaroos and koalas. Being able to view kangaroos up close."

Appendix G: Worst Experience Transcripts

Key: * denotes new respondent, followed by age of respondent, sex of respondent and level of interest in wildlife viewing

- General level: Respondent does not specifically plan to view wildlife while on holidays, but enjoys seeing wildlife while doing other things.
- Interested level: Opportunities to view wildlife is included as part of the respondent's travel decisions.
- Enthusiast level: The opportunity to view wildlife is one of the most important factors in the respondent's travel decisions.

Descriptions include where experience occurred, what animals were mentioned, and the full open-ended response provided by the respondent. The following is a random selection of approximately 150 of the 513 worst experience descriptions provided.

*A497, 46 year old female, general.
In Wildlife Park-Townsville. Mostly native. "Some animals are allowed to roam free + are fed by visitors-
however can be aggressive-our small grandson was hit in the face by an angry wallaby. *Some of the enclosed animals & birds are not adequately housed-eg. A pair of huge eagles caged in a wire enclosure
causing them to sit all day long. Unable to fly at all."
*A424, 56 year old female, interested.
*A423, 17 year old female, general.
Beijing, China. Pandas, bears, tigers, monkeys, basically all land animals, few water. "A day trip Beijing
Zoo. Animal cruelty, caged in pandas, skinny unhealthy animals."
*A311, 34 year old male, general.
Townsville Reef Aquarium. Fish. "Very small - informative but boring. Boring."
*A312, 22 year old male, interested.
*A 496, 17 year old male, general.
Alma Park Zoo. Zoo animals, eg. Bears, monkeys. " The animals were all kept in cages and most of them
looked pretty shocking and unhappy. They needed to be in a larger, more open environment. Cages, it
was also fairly dirty and a sort of unpleasant environment."
*313, 26 year old male, interested.
To a zoo. I don't like to see animals in captivity. Tigers. "I just didn't like to see animals in captivity."
*A284, 43 year old female, general.
Bali, Indonesia. Monkeys. "They kept trying to attack us - jumped all around us in groups- looking for
food or us. I don't like to be harassed and grabbed by animals- these monkeys could have rabies or other
diseases."
*A283, 48 year old male, specialist.
Cameroon, Africa. Chimpanzees. "Caged, dirty, sad animals with no room to move-right behind hotel.
Sadness, inability of animals to move outside 8m (cubed)."
*A280, 17 year old female, general.
Undersea World Townsville. Sea life, fish etc. "Boring, not enough things happening. The lack of

enthusiasm that the people that worked there showed."
*A279, 21 year old female, general.
In Mackay. Birds, native wildlife. "I got chased by a cassowary and bitten by a cockatoo. I was scared."
*A276, 19 year old female, general.
Zoo. All sorts. "The snake pit. The snakes."
*A421, 16 year old male, general.
Town Common. Birds. "Boring. It was so hot."
*A420, 23 year old female, general.
Great Barrier Reef Aquarium. Fish, sharks, coral, starfish etc. "It was peaceful. Not very exciting-pretty
boring. I looked at the marine animals, they all looked the same after a while. I prefer the outdoors, perhaps watching the fish in the actual ocean (scuba diving) would be better."
*A426, 21 year old male, not interested.
At work (Billabong Sanctuary), magpie. "It pecked me in the eye region. My eye hurt."
*A427, 20 year old female, interested.
Baysville Zoo. All kinds of animals from all over the world-zebras, monkeys etc... "When I was very
young we visited the zoo, and I was walking around with a bag of peanuts. A nearby monkey took a liking to my peanuts and grabbed my jacket pulling me up against the cage. It banged me up against the
cage a few times trying to pull me through the bars. Eventually it grabbed my peanuts and let go of me.
Well I guess I was shocked and scared at having been handled by this monkey, but I think it was worse for my mother."
*A429, 35 year old female, general.
Mission Beach. Cassowary. "It chased me, then when I was in the car it put its head through the window."
*A401, 46 year old female.
Cape Bowling Green National Park. Kangaroo. "Large male roo attacked male member or our party-has
since been put down (Roo!). Fear/danger of real threat-strength of the attacker-lack of knowledge about
the best way to handle the situation."
*A409, 21 year old male, interested.
Every zoo I've been to has been depressing in one aspect or another. A huge variety from insects to mega fauna. All were in captivity and apart from their natural habitat. "I walked on paved walkways and
observed hundreds of animals staring at all the tourists from behind bars, wondering where they are and
why the hell all these weird creatures kept pointing and staring at them. Watching a polar bear in a 12ft
by 15ft enclosure in 30 degrees C weather."
*A470, 45 year old male, general.
Billabong Sanctuary. Australian wildlife. "Too congested. Facility way more like a big yard than a wildlife park. Poorly designed and few amenities. More like a farm yard. Animals not really featured
in their natural settings."
*A457, 18 year old female, general.
Santosa (in Malaysia). Monkeys. "The monkeys kept on chasing me and although everyone else thought
it was funny, I was quite young and scared as no one would help due to laughter."
*A461, 19 year old female, general.
Green Island, Cairns. Crocodiles, turtles and reef life. "Green Is. Was once a quiet, beautiful island. Recently a lot of construction has been destroying the natural beauty of the island. There are now too

many tourists, locals rarely visit any more. Loss of natural beauty, too many buildings, too many tourists."
*A469, 17 year old female, general.
Seaworld. Dolphins. "The dolphin bit me when I was trying to pat it. My fingers were sore and everyone laughed at me including the ranger."
*A467, 46 year old female, general.
Taronga Park. All. "This visit occurred before the current changes were made to the zoo. Large animals caged mainly in concrete relatively small separate areas. Captivity, isolation of animals- no interaction with humans."
*A337, 44 year old male, interested.
Hamilton Is. Dolphins. "Their pool seemed too small - they weren't very active until enticed to perform tricks. Pool seemed too small for them to adequately enjoy life."
*A187, 45 year old female, general.
Wildworld, Cairns. Kangaroos. "Whilst visiting Wildworld with family and friends that were visiting
from interstate, we were walking through the grounds, when we got close to some kangaroos, one kangaroo attacked my daughter (quite unprovoked). It was very aggressive. The kangaroo attacking my daughter. Annoyed that they had what appeared to be a dangerous animal close to where people walked."
*A477, 42 year old female, general.
"Haven't had one. Seeing people ill treat animals is really upsetting. These people don't deserve to have
animals or care for animals."
*A494, 46 year old male, general.
Kakadu National Park. Wild pigs. "It was terrible to see the pigs destroying the river banks and wetlands."
*A821, 32 year old female, interested.
Reef Wonderland (Great Barrier Reef). Marine. "Viewed animals through "glass windows" in marine
environment reproduced by man. Apparently there were a few problems within the synthetic environment - dead coral, clams and algae bloom. Tragic loss of protected species."
*A184, 40 year old female, general.
Whitsunday Islands. Emu. "The emu approached me from behind startling me and stealing my sandwich
from my hands and generally making a nuisance of itself. Personal safety was in jeopardy. Fear humiliation."
*A282, 18 year old female, general.
Bali (Monkey Forest). Monkeys. "The monkeys kept jumping up on us and scratching us and chasing
us. Very, very scary. The monkeys attacked us and tried to steal things out of our pockets."
*A304, 21 year old female, specialist.
Melbourne Zoo. Large cats (tigers, lions, pumas). "The cages were quite small and the cats were pacing
up and down, it seemed cruel. The cage environment was so small and confined compared to their natural
environment."
*A309, 19 year old male, interested.
Kenya. Snakes, mosquitos and hyenas. "All the animals ate our food and the mozzies kept us awake all
night."
*A306, 27 year old male, interested.
Kangaroo Is. S.A. Platypus. "I found one very sick and the next morning it was dead."
*A303, 26 year old male, interested.
Seal Rocks, Phillip Is, VIC. Penguins. "Too many tourists disobeying simple rules like no flash photos. A beautiful place ruined by tourism. The tourists."
*A466, 18 year old male, general.

Hiking trip in national Park. None. "We were promised to see wildlife, but saw none. Also long, hot, inconvenient. No wildlife at all."
*A307, 35 year old male, specialist.
Bali. Live feeding of Komodo dragons and crocodile show-Spanish bullfight. "Throwing duckling to komodo pit, degrading crocodile handling for show, no rapport or explanations of animal behaviour (19th Century style-circus like). Bullfight-outright cruel and sadistic. Human cruelty, sense of superiority, insensitivity."
*A419, 17 year old female, general.
Magnetic Island. Koalas. "It was a hot day, I was getting sunburnt and I walked for miles to see koalas and we saw only one koala. It was very disappointing. Lack of koalas."
*A492, 30 year old male, general.
Magnetic Island. Kangaroos and koalas. "Animals looked sick."
*A523, 30 year old male, interested.
Morton Island - Moreton Bay. Dolphins. "Due to the regimented and forced feeing practices, interaction was very sterile and for me not at all enjoyable. The sterility and regimented way the guests were treated made the event unattractive."
*A522, 37 year old male, general.
Monarto Wildlife Park. Zebra, giraffe, horses. " Park only in infancy and not a lot of variety."
*A520, 65 year old male, interested.
Victoria. Did not see any as decided to return home. "Bushfires were widespread. Heat and smoke and drought conditions."
*A333, 41 year old female, general.
Cape York. Wild pigs. "Pigs had destroyed natural environment."
*A347, 33 year old male, interested.
Barrier Reef Aquarium in Townsville, I found out that the aquarium was too much suspension floating.
"I got too much influenced by advertisements. It says that it has various fishes or different marine invertebrates. It was not the fact. Anyhow, it was nice for any relaxation. I did not see many coral fishes or various marine invertebrate animals."
*A338, 19 year old female, general.
Forrest, Poland. Okiki. "I was chased y the okiki while I was picking mushrooms. It was dangerous because the pig had small babies."
*A342, 39 year old female, general.
Crocodile Farm. Crocodiles. "Supervising a group of 9 year old children on a 'school holiday camp excursion'. Inquisitive, excited children and large crocodiles were a very stressful combination. Children that were not all mine and therefore were unpredictable. Also those 'cunning' watching crocodiles that looked very hungry and seemed to be circling in anticipation that one child might 'break free'."
*A310, 19 year old male, interested.
Within Australia. Koala. "They poo on me. I hate koalas".
*A481, 30 year old male, general"
Dubbo Zoo. General. "Hot and miserable. Everything."
*A488, 47 year old male, general.
Small circus. Various - Australian and overseas animals. "I don't like to see animals perform trained
tasks and confined to hobbles or small enclosures. Even though the animals are well cared for, I felt sorry for them having to perform and be confined."
*A336, 17 year old female, general.
Crocodile Reptile Park. Crocodiles. "They fed live mice to a snake in front of little kids like me."
*A074, 24 year old male, general.
Currumbin Bird Sanctuary. Birds. "Seeing a flock of birds come in to feed, the whole experience just seemed pathetic. We all expected more, the whole wildlife at the sanctuary was limited."
*A076, 27 year old male, specialist.
Philips Creek. Prawns, fish, crocodiles, crabs, bats, cows. "Went fishing, cooked a meal and drank with
friends. The endless swarm of mosquitos. There was no shower, toilet, TV."

*077, 16 year old male, general.
Hippos, monkeys, gorillas, giraffes, birds, turtles. "Sad. The animals were confined to an extremely small play area. But the diversity of the animals was amazing."
*A078, 51 year old female, general.
Mission Beach. Cassowaries. "Being chased by a group of cassowaries. Fear for my children."
*A079, 19 year old female, general.
Great Barrier Reef. Fish and clams. "I went with some people from the US. The day was overcast and it started to rain and the ferry was swaying from side to side. We didn't see any fish and I got sick on the way back to town. The weather and the disappointment of not seeing any fish."
*A080, 19 year old female, general.
Perth Zoo. All. "I went with my family to visit the zoo. We looked at all the animals and had lunch and then went home. All of the animals being caged in looked sad. They didn't have enough space."
*A082, 47 year old female, general.
Pure Pleasure Cruise to the reef. Coral and reef fish. "Very rough weather. This caused very unsettling feeling of sea-sickness. Couldn't wait to get home. Bad weather. Cold. Lot of people being sick."
*A298, 35 year old female, general.
Adelaide. Native Australian animals. "It was very boring and dull. The animals were either sleeping or hiding."
*A176, 50 year old male, general.
Penang, Malaysia. Monkeys. "Theft by monkeys but also stupidity by humans tormenting a very intelligent oranghutang called 'Inpu'. Human stupidity."
*A179, 40+ year old female, general.
New Zealand. Kiwis. "The viewing of these nocturnal animals was too dark and I didn't see one."
*A186, 40 year old female, general.
Hartley' Creek, Cairns. Crocs, kangaroos etc. "It was raining and there were not enough facilities for viewing the animals undercover. The weather."
*A190, 27 year old male, general.
Taronga Zoo, Sydney. All sorts. "It was under renovation - a lot of the displays were empty. A lot of walking for nothing or very little."
*A191, 46 year old male, general.
Cooloongatta on Gold Coast many years ago (Zoo). All kinds. "Dirty conditions, small cages. Not interesting, lack of diversity. Dirty small cages."
*A185, 17 year old male, Not interested.
Deer Sanctuary, Brisbane. Deer. "The aggressive deers took over the car and were trying to get up onto the car as well as damage the sides of the car with their antlers. A bit of a nightmare. The fact that the deer had managed to get up onto the bonnet of the car and myself and my family couldn't do anything about it."
*A471, 17 year old female, interested.
Barrier Reef Wonderland. Sea creatures, sharks, fish etc. "OK, but too short and they have different viewing areas for all the same tank. And no attractions eg. Feeding time etc. Animals were boring. No attractions. The animals just swam around and not a very large/different variety of animals."
*A458, 27 year old female, general.
Koala Sanctuary (Woodburn NSW). Koalas. "Walked around trying to spot koalas but didn't see any (in the trees) at all! Couldn't spot the koalas which was the reason we went there in the first place."
*A433, 36 year old female, interested.
Kelso Reef, off Townsville. Marine life. "Everything was great except I was violently sea sick. The

ocean, it was a rough day."
*A432, 40 year old male, general.
Camping at Chrystal Creek, bites and stings from insects. Ants, bugs, wasps. "It was hard to eat or drink
with some getting in to what we were dining on, or flying into eyes, nose, ears etc. They don't taste nice."
*A431, 25 year old male, specialist.
Balgal Beach. Marine animals. "I was sick on the boat. It was very rough out in the ocean."
*A085, 58 year old female, general.
Taronga Park Zoo. Bears. "Our nephew got his head caught between the bars of the bear enclosure and
for a while he couldn't move and he panicked. We all worried we wouldn't get him out and the bear would climb up and get him."
*A086, 18 year old female, general.
Mt. Elliott. Possums, kangaroos, scrub turkeys, fish. "The grounds were not kept clean and neither were
the amenities. The water wasn't running in the creek so we couldn't swim. The creek was low, there was
not much room."
*A089, 21 year old male, general.
Billabong Sanctuary. Farm animals, snakes, crocodiles etc. "A lack of interest as such as crocodiles and
snakes are not a part of wildlife I enjoy viewing. The fact that I don't like these animals."
*A091, 38 year old female, general.
Sweden - Stockholm. Bears. "The bears were in bear pits that were made of cement - not at all a natural
type of environment. The barren pit they were kept in."
*A092, 32 year old female, general.
Rockhampton Zoo? Monkeys, kangaroos, peacocks, water fowl. "Walking around and observing most
animals in penned off areas. The monkeys, when they were fed they went berserk and tried to attack the
people tipping the food into the cage. It looked bad. Like the monkeys were just trying to hurt their captors."
*A093, 21 year old female, general.
Dreamworld. Tigers. "I thought I was going to get closer to the tigers and that they would have a larger
park. I had bigger expectations. Thought we were going to get closer to the tigers."
*A094, 17 year old female, general.
South Africa (zoo). Zoo animals. "Animals in small cages. Animals in small cages and dirty."
*A096, 17 year old male, general.
Alma Park Zoo. Land animals from all around the world. "While in Brisbane, my sister and I decided
we'd take a trip to the zoo, the animals were excellent but the people who worked there put us off.
Mainly the rudeness of staff and tour guides."
*A097, 30 year old female, general.
Hervey Bay. Whales. "Disappointing, boring. Whales were guaranteed but never seen."
*A098, 17 year old female, general.
Eungella National Park. Platypus, kangaroos, birds, eels. "There were no sightings of a platypus as advertised, only animal in sight was a bush turkey that annoyed us through lunch. There was not tour guide to inform you on behavioural aspects of the animal. The animals were not contactable, they would
hide/run away."
*A099, 45 year old male, general.
Europe. Various. "The zoo was not well maintained and the animals appeared unhealthy."
*A100, 22 year old female, general.

Australia. Ghekko and bats. "I don't like the sight of them."
*A103, 36 year old female, interested.
London Zoo. Any zoo. Ones that should be in their own countries roaming free. "Very depressing and
dreadful. I totally hate seeing animals caged up."
*A104, 17 year old female, general.
Taronga Park Zoo. Monkeys, giraffes, seals, kangaroos, birds, lizards etc. "Spent one rainy day walking
around zoo looking at exhibits etc. I didn't like seeing the animals locked up in a 'human habitat' with
hundreds of people walking around. It was also raining and obviously there was not a lot of shelter."
*A106, 20 year old male, general.
Great Barrier Reef Aquarium. Marine. "I walked around the tanks and viewed the fish, sharks etc. It
was an un-airconditioned building, lots of information about the reef was provided. It was not very exciting."
*A108, 20 year old female, general.
Croc Farm. Crocs, kangaroo. "Very Japanese orientated. For young children. Too many tourists."
*A110, 48 year old female, interested.
Taronga Zoo - about 25 years ago. Polar Bears. "The caged area was small and the water stagnant and
overcrowded. Felt that such a noble creature could have been better looked after. Have noted that in recent years the caged areas have improved."
*A114, 45 year old female, general.
Phillip Island. Penguins. "We went to Phillip Island to look at the fairy penguins but we didn't see any
because it was raining. Because it was such a miserable day in terms of weather, the added fact that we
went to specifically see the penguins and didn't, made it the worst."
*A115, 18 year old male, general.
Hartley's Creek. Crocodiles. "Walked around and looked at crocodiles. Very predictable and boring."
*A117, 44 year old male, general.
Dubbo. All types including white rhino. "Because of the extreme heat it was very difficult to see many
of the animals. Heat."
*A118, 17 year old female, interested.
Townsville Aquarium. Fish - sea creatures. "Too many tourists. Overseas tourists more important than
other Australians from up north. Not enough interaction except touch and feel tank. Very expensive these days."
*A119, 17 year old female, general.
Great Barrier Reef Wonderland. Sea animals. "Bored out of my brain! Slow moving starfish and shellfish. It was boring, dull, uninteresting."
*A121, 35 year old male, general.
Masi Mara, Kenya. Lions, wildebeest, hippos, elephants, giraffe. "The vehicle we hired for three days
had a damaged radiator and kept on overheating causing us to miss the first day of our safari. We didn't
see as many animals as other groups. It was recommended as the best place to see leopard and cheetah
and didn't see any."
*A123, 61 year old male, interested.
Alaska. Salmon. "Although it is a natural occurrence for salmon to return to the headwaters to spawn, to
see this massive number of salmon swimming, dying and decaying in the shallow streams is moving.

Naturally struggling and dying salmon in the shallow streams."
*A124, 31 year old male, general.
Melbourne. Zoo. "Made me sick. Animals should be free. The suffering of the animals."
*A126, 25 year old male, specialist.
New Zealand. Dolphins. "It was raining that time. I was very sick because of the rough ocean. Furthermore, we couldn't find any dolphins."
*A127, 19 year old female, interested.
Taronga Zoo. All kinds. "We couldn't see the animals very much. The animals were far from us."]
*A130, 18 year old male, avoid.
Magnetic Island. Koalas. "We walked around the island looking at koalas. Koalas are lazy bastards. All they do is sleep all day and I'm jealous!"
*A136, 26 year old male, general.
Koala Park Magnetic Island. Common native Australian (kangaroos, koalas, birds etc). "Attacked by a
large male red kangaroo although koala viewing was interesting. Attacked by kangaroo."
*A137, 64 year old female, general.
Billabong Sanctuary. Australian animals. "Over priced for what animals were viewed at wildlife park.
Spend extra money on animal food; limited animals; expensive entry fee."
*A138, 41 year old female, interested.
Yungaburra, Atherton Tablelands. Platypus. "Disappointing having not seen platypus. Big sign advertising sightings but just a dirty old creek. Muddy path leading to creek. Not sighting platypus. Had higher expectations."
*A379, 51 year old female, general.
Indianapolis Zoo. All types. "It was a very hot, muggy day - about midmorning, animals were either not
visible or sleeping. Animals not visible or sleepy. Hot weather."
*A376, 20 year old female, interested.
Vancouver. One osprey from really far away. "White water rafting in 40 °F weather. Didn't see any of
the promised wildlife-maybe they were on strike! No visible wildlife."
*A378, 20 year old female, general.
Yellowstone National Park (when I was younger). Bears/buffalo. "We saw plenty of buffalo, but none
of the legendary bears. Plus, the scenery was scarce because of the recent forest fire. This could possibly
be why bears were not found. Scarce wildlife, particularly bears. Scarce foliage from forest fire."
*A372, 25 year old male, general.
On the road to Sydney. Bugs. "I was driving and they kept on killing themselves on the front parts of the
car. Scraping the bugs off the car."
*A371, 21 year old female, general.
Country Fair, USA. Goats, lambs, chickens, geese. "Too many animals caged in a petting area. Too many people in the area. Animals hovered in corners. People buying pellets to feed animals. Too many
animals in a small area; too many people; 'droppings' on the ground; bad smells; too hot."
*A370, 33 year old male, general.
Tasmanian Wildlife Sanctuary (10 years ago). Tasmanian devils. "Of 4 Tasmanian devils, 2 with severe
cuts and bite marks. Other 2 with severe arthritis in back legs - dragging back half of body. 4 animals in
enclosure about 4m x 4m. Injured animals. Proprietors advertised these animals as a main attraction,
animals obviously in pain and not doing well in captivity."
*A369, 30 year old male, general.

Dubbo Zoo. All types. "Very disappointing. The animals were caged, I don't agree with captivity. The
animals looked forlorn."
*A399, 45 year old male, general.
Antarctic World, Christchurch, N.Z. None. "Expected to see penguins etc. No animals at all."
*A404, 19 year old male, general.
Billabong Sanctuary. Koalas and crocodiles. "Dull and uneventful. The animals looked as though they
really hated the place. The place had only just opened and the lack of variety of animals made for a long
boring couple of hours."
*A396, 18 year old female, general.
Ayres Rock. Dingoes. "They got into our food at night and wouldn't stop howling."
*A388, 23 year old female, interested.
Taronga Park Zoo. Tigers, birds etc. "The zoo was boring and most of the cages were being cleaned or
upgraded. There wasn't a great array of animals and it was expensive."
*A513, 18 year old male, general.
Billabong Sanctuary. Crocodiles, dingoes, emus, snakes. "Good range of native animals but yet there still
seemed to be not enough. A lot of empty cages. Empty cages, quiet crocodiles."
*A507, 19 year old female, interested.
Singapore. Peacock. "It suddenly ran out from under a grove. No fence/no gate between animals and
visitors. It makes me feel unsafe!"
*A509, 21 year old male, general.
Cairns. Koala. "More artificially designed than natural looking. The environmental management made
it look like a farm more than a zoo."
*A512, 17 year old male, interested.
Serembin Park. Birds. "I was on my way home where I pass through this park. I went in for a walk and there was a strange smell. I looked in the cage and saw irritating and dirty birds pooing everywhere.
The disease which can be transmitted to animals just because of dirtiness."
*A504, 25 year old female, interested.
Shark Museum, Hervey Bay. Sharks. "Commercial and glorified killing and exhibition of animals (noticeably sharks)."
*A506, 27 year old female, general.
Whitehaven Beach. Goannas. "Eating lunch and they would come up and try and steal food. The goannas were viscous, fighting each other. Also very large and weren't scared away."
*A205, 20 year old female, general.
Circus at Vermont, US. Elephants, monkeys, lions and tigers. "The animals were not shown in a favourable light. They were also treated poorly and looked like they needed more tender loving care."
*A206, 43 year old female, general.
New Orleans, Aquariums. Sharks, jellyfish, fish. "I was disappointed after coming from Cairns (home
to the Great Barrier Reef) because the variety of species was very poor. Because it didn't appear to be
very well maintained and my young daughter expected a bigger variety of fish and sea life."
*A207, 21 year old female, interested.
Lawn Hill (near Escot). Emus, snakes, black cockatoos, galahs, frilled neck lizards, magpies, hawks, eels. "Well I was walking with my brother's friend and my brother and the emu started chasing us. We
ran for miles. Once we turned around the emu hit us and then ran away. Also, hawks dived down towards our heads. The fact that the poor emu got out of it's enclosure area, therefore went wild to

tourists at the caravan park. It was dry and barren."
*A208, 20 year old male, general.
Wildworld, Cairns. Mostly land animals like koalas, snakes, kangaroos, lizards. "The zoo was a bit run
down and some animals looked sad. I hate seeing animals locked in cages so I don't often go to zoos.
The sad animals in cages and the overall experience of the zoo."
*A211, 23 year old female, interested.
Daintree River. Crocodiles. "I was really horrified that a fibreglass crocodile with a microchip in it's
neck had to be put on the bank of the river because all of the native crocodiles had been scared off. The
tour operator lied and said it was real but it wasn't. This was not long after the council had ordered the
removal of all eggs, nests and crocodiles from the rivers in Cairns except the Barron and Daintree."
*A213, 45 year old female, general.
Samatra Monkey Forrest. Gibbon.. "It chased me. I was scared of it."
*A324, 17 year old male, general.
Kangaroo sanctuary near Yarraman. Kangaroos and other native marsupials. "I was feeding an adolescent kangaroo which was rather tame and it passed a motion on my left leg. It smelt bad and was
hard to wash off."
*A314, 17 year old female, general.
Melbourne Zoo. All different animals. "There was a heat wave on at the time and all the animals were
hiding in the shade or in bushes and you couldn't see anything. I couldn't see the animals because they were hiding from the hot sun."
*A315, 24 year old female, general.
Magnetic Island. Peacocks. "We were having lunch at an outside restaurant and the peacocks were jumping on the back of people's chairs. Because I was petrified that the peacocks were going to jump
on me."
*A317, 18 year old female, general.
Melbourne Zoo. Many animals. "This was not a fun experience as Melbourne was having a heatwave
when we went to the zoo and all the animals stayed away in their cool shelters. Not being bale to see the
animals, wasting your time looking around for tours not to see anything."
*A318, 47 year old female, general.
Off the Sunshine Coast. Fish. "We went out in a small boat to go fishing and the sea was very rough that
day. I got sick on the way out there and couldn't enjoy the trip after that."
*A320, 19 year old male, general.
Vick Hislop's Shark Show, Cairns. Sharks. "Ordinary. Lots of photos of dead sharks. A couple of live
ones, nothing special. Lack of material displayed for visual stimulus, dull/crap tour guide."
*A321, 17 year old male, general.
Haughton River. Eagles and other birds. "I was cooking a fish on the barbecue and an eagle hit me in the
head while trying to get the fish. The eagle hit me in the head."
*A322, 17 year old male, interested.
Mt Isa. Magpies. "They attacked. It hurts when they peck you."
*A194, 35 year old male, general.
Taronga Park Zoo. Most types. "Spent the afternoon walking around. No activity other than viewing.

Long way to go the see it and all activities were in the morning (feeding etc). Many displays only were
available in the mornings."
*A197, 46 year old male, general.
San Diego marine World. Whales, sea lions etc. "Too many people. Too commercial. Just trained animals."
*A202, 22 year old male, general.
Taronga Zoo (bats, nocturnal animals), Cairns Circus (camels). Camels, bats. "I found the bats to be quite boring, the fact that they just hung upside down in the dark. The camels - I felt sorry for them because they looked unhealthy and not cared for (just travel and tied up for amusement). Before I got
there the image I got was basically the outcome."
*A285, 24 year old male, interested.
Forster. Possums. "Bitten on finger while hand feeding possum. Injury due to my own stupidity."
*A286, 64 year old female, interested.
Fraser Island. Dingoes. "The dingoes got into our food, tore our tent and were a general nuisance. The
dingoes waking us up in the night trying to get at our food."
*A287, 70 year old male, general.
Lake St Claire, Tasmania. Possums. "Lots of possums in the park scrounging for food. Had to keep tents and everything locked to keep things safe. I don't like to see native animals dependent on humans, prefer them in their natural state."
*A288,, 25 year old male interested.
Cairns. Sharks. "Boring because the sharks were too well fed."
*A291, 26 year old female, general.
Taronga Park Zoo (about 10 years ago). Typical zoo variety. "It was terrible. The whole time I just felt
sorry for the animals and ashamed. They were in tiny cages with bare cement floors and metal bars -
it was awful."
*A293, 20 year old male, general.
Finch Hatton Gorge. Platypus. "It rained and we didn't see any. I got really we and caught a cold, dammit!"
*A294, 19 year old female, Not interested.
Taronga Zoo. Pandas. "I went there on a school trip and thought I would get to see my favourite animals, pandas, or even a few lions would have been nice, but unfortunately they were having a face-lift at the time an there were hardly any animals to be seen. The disappointment of it and that it didn't meet my expectations."
*A295, 24 year old male, interested.
Taronga Zoo. Many species. "Dull and uneventful 3 hrs. None of the exhibits were open and of the ones
that were, animals were in small cages."
*A046, 26 year old female, general.
Kolmarden Zoo, Sweden. Bears, ice bears, hippopotamus. "The animals didn't have too much space to
move around in and they looked bored. I thought it would be more lively, but it looked rather dull. Also,
at that time I wasn't feeling very well so it wasn't too much fun walking around."
*A047, 19 year old female, general.
Billabong Sanctuary. Rats, snakes. "Someone gave the snake to me when I didn't want it and it wrapped
around my neck. Rats jumping into the pool while we were swimming. Rats in the pool and holding the
snake."
*A048, 21 year old female, interested.
Crocodile Farm - Nth Qld. Crocodiles. "Viewed burly ranger with very 'Aussie' accent feeding

crocodiles in their pen. Crocodile tried to bite off my foot."
*A049, 40 year old female general.
Watching the animals in although pleasant surroundings, not their natural environments. Elephants, lions, monkeys. "Although happy for the opportunity of viewing these beautiful creatures, disheartened at the fact that zoos still operate. A natural park/reserve habitat would be more in line with appropriate and more human settings, as opposed to the present situation of zoos. Seeing these animals in the small cages."
*A050, 11 year old male, interested.
Alligator Creek. Snakes. "Walking to go swimming and saw a brown snake. The snake bit my foot and I was rushed to hospital."
*A051, 46 year old female, general.
Hervey Bay. Whales. "Travelled by bus to location of entire family (3.5 hrs). Got on boat to experience
rough weather, rain. Bad weather, rough seas which made trip unenjoyable. Everyone got seasick so couldn't even eat lunch. Didn't see any whales so very disappointed."
*A053, 17 year old male, general.
Tinaroo Dam. Birds. "They kept swooping and tried to peck us. We almost got pecked."
*A054, 18 year old female, general.
Hervey Bay. Whales watching. "We saw only two whales all day, from a distance. It was extremely
choppy and everyone on the boat was seasick. After travelling from Noosa just to sea whales, instead
getting sea sick."
*A055, 17 year old female, general.
Cape Hillsborough (near Mackay). Possums, snakes, scrub turkeys, peacocks. "There were way too many
snakes around. Once I went to the toilet and I saw a snake wrapped around the pole and it moved closer
to me."
*A056, 18 year old female, general.
Western Australia. Jellyfish, fish, dogs, birds. "While swimming between the flags was stung by a nest of
jellyfish which made me think twice about getting back in the water. Didn't catch any fish when fishing.
Disappointed by own misfortune."
*A057, 18 year old female, interested/general.
Open Range Zoo, Werribee Park, VIC. All kinds, mainly African. "Advertised that there was lots to do,
but when we got there all there was, was a safari tour of animals and little walks we did ourselves to see
animals, but most of the time you couldn't see them. What was advertised wasn't there. Expectations
were disappointed. Weren't any trees which made the place ugly."
*A058, 17 year old female, general.
Animal Park at Mole Creek. Usual - nothing special except Tasmanian devil. "Small, pokey park. Nothing extremely special or fun. Park not that nice, therefore boring."
*A059, 18 year old female, general.
Sugarworld (10 years ago). Kangaroo. " I tried feeding the kangaroo and it attacked me - bit and clawed me. I got hurt."
*A060, 17 year old female, general.
Green Island. Sharks and other sea creatures. "I fell off the jetty and was really scared and having trouble swimming. The fear of being eaten by a shark."
*A063, 17 year old female, interested.
Cairns/Port Douglas. Crocodiles. "It was basically boring. We were promised live feeds and the interaction with the young, but it didn't happen. The animals seemed sleepy and lethargic. The place

was run down and our expectations were not met."
*A064, 48 year old female, general.
Kurrima Beach. Marine animals. "Walking on a beach and coming across hundreds and thousands of
dead fish and other marine animals. Having no control over the fishing trawlers that drag/trawl close to
the beaches."
*A065, 38 year old male, interested.
Aquarium of the 'Laboratoire d'Arago, Banyulsuk Mer , France. Fish of all kind looking damaged in dreadful tanks. "The animals in the tanks looked quite ill, in a bad condition. Diving outside the aquarium (on own initiative) there was a pile of fish under the drains of the aquarium. The notice that
the aquarium 'refreshed' it's display regularly and did not show any signs of care for their 'exhibit stars'.
Eg. a turtle grown too big for the tank could only turn on it's own axis."
*A066, 20 year old male, general.
Quetico Provincial Park, Canada. Mosquitos. "I was taking a canoe trip for ten days with some friends,
which was actually a lot of fun while we were paddling, but at portaye trails the mosquitos were awful.
Since I was usually carrying the canoe, I didn't have a free hand to swat them, so I just had to watch them
feed off me while I carried the canoe as fast as I could to the next lake. Having my blood sucked and not
being able to do anything about it."
*A067, 17 year old male, specialist.
Renmark Wildlife/Reptile Park. Reptiles, marsupials, dingoes. "Self tour of small yard where animals
were kept in poor conditions. The distressed condition of animals."
*A238, 19 year old female, interested.
Taronga Zoo. Rare white tiger. "We were desperately trying to catch a glimpse of the animal, but it was
lying behind a rock, we could only see a tiny bit of her. She looked sad, sick, unenthusiastic to come out
and her pen was too small and she was lonely. She died not long after that, I was very sad."
*A239, 17 year old female, general.
Manila Zoo. An assortment of mainly monkeys, birds. "The zoo was not at all large. Our intentions of
spending the day there were cut down to 1 hr. The cages did not look very clean and the animals were
quite dirty. The lack of variety of animals/wildlife and the small enclosures for each."
*A241, 17 year old female, Not interested.
Taronga Zoo. Many different species, non-native. "Appalled at levels of boredom that the grizzly bears
and other animals of that size suffered from and lack of facilities for young family. Paced up and down
the small area, cages very dirty. Seeing the huge animals locked up in small cages and the lack of stop-off
points and seats for crying children and elderly grandparents."
*A242, 17 year old female, general.
Wildlworld. Various - crocodiles, toads, birds, snakes. "It was all tourist orientated. The staff didn't care about the locals - only the tourists. The staff, tiny cages (messy)."
*A243, 20 year old female, interested.
Sugar World - Edmonton. Horses/camels. "The animals looked unhealthy (wanted to run free). In small
yard. Animals in small yard, fence up high. Did not look like they were cared for."

*A245, 26 year old female, general.
Woolshed, Cairns. Sheep. "Despite what they tell you, the sheep seem to be badly treated/hurt during
shearing/herding process. Would be better to observe on an actual farm. Introducing different sheep breeds, demonstrating shearing, herding with cattle dogs."
*A226, 48 year old female, Not interested.
Taronga Zoo. From all around the world. "Very depressing to see so many animals enclosed in such small spaces with nothing to do.. Enclosures too small."
*A272, 62 year old male, interested.
Townsville Aquarium. Fish, sea creatures. "It was my second time after a couple of years and I found
it was basically the same as the first time so it was very boring. It wasn't very interesting and I had already been."
*A249, 17 year old male, interested.
Napier, New Zealand. Granit birds. "3 hr tour where we drove in a safari type vehicle to view a nesting
site for the granit bird. One step out of the vehicle at the nesting sight and the intense rotten smell from
the birds made me vomit."
*A250, 17 year old male, general.
Underwater World, Sunshine Coast. Penguins. "There was quite a small outdoor area, it was raining and
the penguins looked sick and unhappy. It was not what I expected. The unpleasant environment and sick
penguins."
*A251, 20 year old female, interested.
Monkey Forest, Bali. Monkeys. "The monkeys were so aggressive and greedy that I was afraid to walk
through the forest. They would jump on you and scratch at you for food and were probably trained to
steal. The aggressive monkeys and the fact that there was no where to go to escape them. I constantly
had to show them that I had no food in my hands."
*A255, 24 year old female, interested.
Chitwan National Park. Elephants, crocodiles, water buffalo. "Weren't actually taken into the park as
promised, saw no wildlife on elephant ride, crocs very small, disappointment, unorganised, too many other tourists and noise. Very expensive, small crocodiles, promised of seeing other animals, rude guide,
no English spoken, poor treatment of animals."
*A260, ? year old female, interested.
California. Bears, bison. "After paying to enter you drove around in your car to view the animals. Was
a fairly small area and not a lot of animals. Highlight was a bison who put his head in the car and attempted to lick my face whilst I was occupied taking a photo. They 'proudly' advertised inside the park they had trained bears for movies etc 'Grizzly Adam's' etc. and I found it cruel that a lot of the animals were locked in quite small cages. We had expected the animals to be in a freer environment."

Appendix H: Rainforest Habitat Promotional Material

Opening Hours and Admission

Open daily: 8.00am to 5.30pm (last entry 4.30pm)
Adults: $16.00 Children: $8.00

Breakfast with the Birds

Available daily: 8.00am to 11.00am

You will be tempted with:

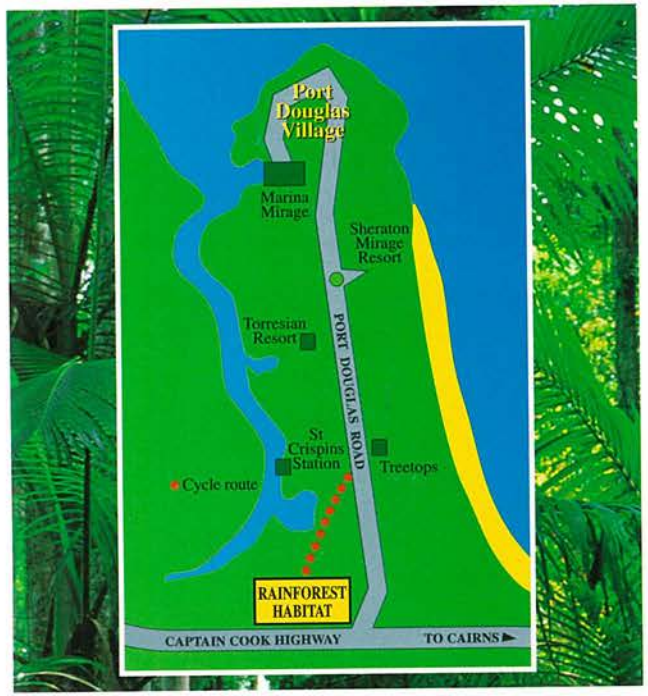
- Complimentary champagne and juices
- A buffet of tropical and exotic fruits, pastries, cereals, cheeses and locally baked breads
- Eggs, bacon and hot foods from the BBQ
- Bottomless cups of tea and coffee

Adults: $30.00 Children: $15.00

(Includes entry into all areas of The Rainforest Habitat.)

Access

The Rainforest Habitat is at the entrance to Port Douglas, 50 minutes north of Cairns along the scenic Cook Highway coastline. Catch the local bus or taxi service to our front door.



An event to remember

The Rainforest Habitat is a unique venue for private functions

- Breakfast, lunch, dinner and cocktail reception options available
- Wildlife display, commentary or koala photographic opportunities available
- Sumptuous buffet style menus
- Affordable beverage packages
- Large Groups catered for
- Exclusive use available
- A unique way to make your function an event to remember

Breakfast with the Birds

Sumptuous buffet

Cocktails in the rainforest

The RAINFOREST Habitat WILDLIFE SANCTUARY

The Rainforest Habitat
Port Douglas Road,
Port Douglas, Qld.
4871. Australia.
Phone: (07) 4099 3235
Fax: (07) 4099 3100
Email: habitat@internetnorth.com.au

Design & Print Bolton Inprint. Ph 353 833

The RAINFOREST Habitat WILDLIFE SANCTUARY

ECO ADVANCED ACCREDITATION TOURISM





Queensland Triple Winner Tourism Awards

Port Douglas Australia

WET TROPICS INFORMATION CENTRE

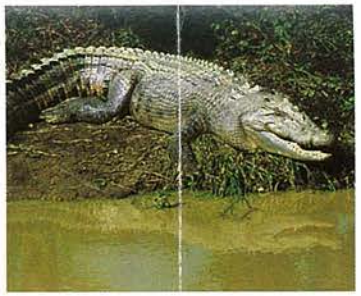
The Koala Spot

Sessions:
10.00am to 11.00am & 3.00pm to 4.00pm.

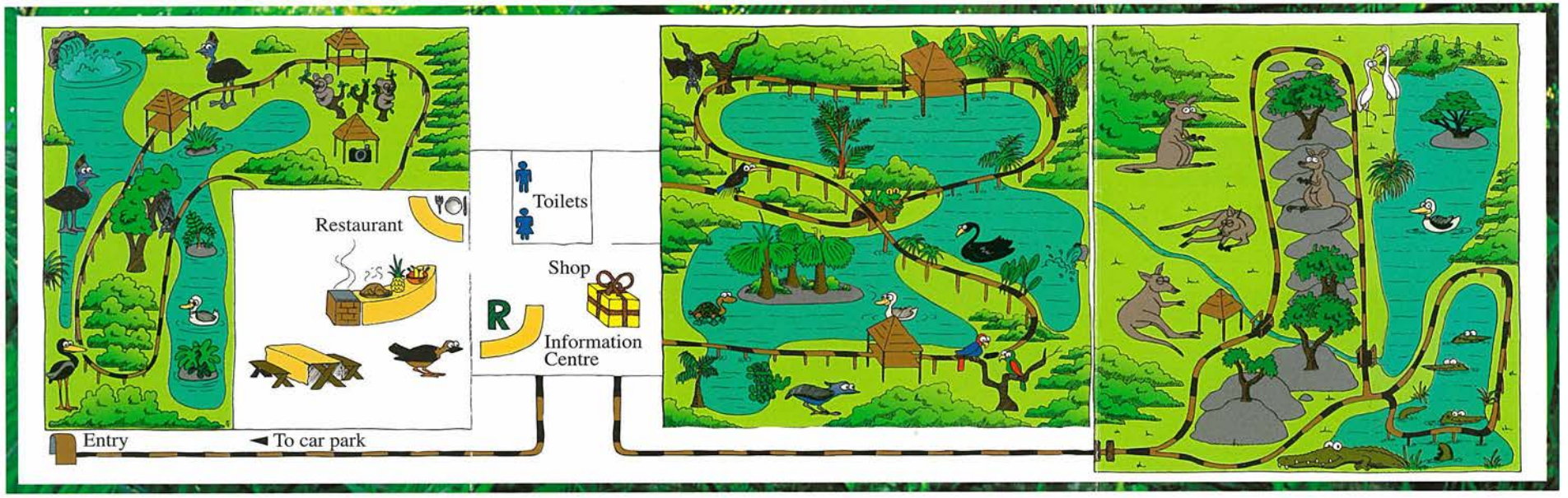
For your souvenir of The Rainforest Habitat, have your photo taken with one of our resident Koalas.

140 Species, 1000 Animals

Experience this unique rainforest Eco-System



The Rainforest Habitat is proud to be a partner with the Wet Tropics Management Authority in the goal of rainforest conservation and education. We are also pleased to be the sponsor, in the world-wide Rare Bird Club, of the endangered Southern Cassowary, found in local North Queensland rainforest.



The Koala and Wetlands Walk

Experience up close the endangered Cassowary, Koalas, Waterbirds and even a Fruit Bat colony. The undercover restaurant features our famous "Breakfast with the Birds", also a licensed bar, snacks and ice creams.

The Rainforest Aviary

This amazing aviary houses over 70 species of birds and animals. A boardwalk takes you through different levels of the rainforest to view the unique Victoria's Riflebird, the amazingly coloured Eclectus Parrots and many more.

Habitat and Wet Tropics signage aid the visitor and informative guided tours are available throughout the day.

The Wallaby Walk & Crocodile Area

Hand feed many species of Kangaroo and Wallaby.

Crocodiles, both Salt-water and Freshwater, are displayed in a natural environment. The lake is home for many species of Waterbird.

Appendix I: Rainforest Habitat Pre-Visit Survey

Welcome to Rainforest Habitat! We hope you enjoy your visit today. By taking part in this survey, you will help us to better understand our visitors. This project is being conducted together with James Cook University's Tourism Program, as part of a broader study on wildlife tourism. It aims to discover what you expect from your visit, and your attitudes toward wildlife. The survey will take about 8 minutes to complete, and your answers are anonymous and confidential.

1. **Have you been to Rainforest Habitat before?**

   O no

   O yes ……..which year? _____

2. **Who are you travelling with today?**

   O Spouse/partner O Friends O Alone

   O Children under 10 O Children over 10

   O Business associates O Other relatives

3. **How many people are in your travel party?** _____

4. **In which town did you stay last night?** _____

5. **How did you travel to Rainforest Habitat today?**

   O Hire car O Private vehicle O Other

   O Bus O Part of coach tour

6. **How did you find out about Rainforest Habitat?**

   O Brochure O Travel agent O Guide book

   O TV O Radio O Tour desk in accommodation

   O Friend or relative O Signage O Internet

   O Other? _____

7. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos	_____ times.
Trips to wildlife sanctuaries or wildlife parks	_____ times.
Trips to aquariums	_____ times.
Land based trips specifically to view animals	_____ times.
Land based trips to places where wildlife is often seen	_____ times.
Water based trips or cruises specifically to view animals	_____ times.
Water based trips to places where wildlife is often seen	_____ times

8. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response.

1O The opportunity to view wildlife is one of the most important factors in my travel decisions

2O The opportunity to view wildlife is included as part of my travel decisions

3O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

4O I am not interested in viewing wildlife while on holidays

5O I prefer to avoid viewing wildlife while on holidays

9. **How important were the following features in attracting you to Rainforest Habitat?**

	Does not Interest me	**interests me**	**strongly interests me**
An environmental experience	❑	❑	❑
Natural rainforest surroundings	❑	❑	❑
See animal shows	❑	❑	❑
Be entertained	❑	❑	❑
Learn about the rainforest	❑	❑	❑
Get close to the animals	❑	❑	❑
Photo opportunities with animals	❑	❑	❑
Good recommendation from others	❑	❑	❑
An ecotourism experience	❑	❑	❑

Was there anything else that attracted you to Rainforest Habitat?

_____

10. How long do you expect to spend at Rainforest Habitat today? _____Hours

11. Here are descriptions of several attitudes toward wildlife. Please indicate how closely each one of them describes your own feelings and beliefs.

	Strongly Disagree	Disagree	Neutral	agree	Strongly agree
I don't have any particular interest in animals	1	2	3	4	5
Animals provide meaning and interest to my outdoor recreation activities.	1	2	3	4	5
I enjoy learning about how species are dependant on each other and the natural environment.	1	2	3	4	5
I believe animals have thoughts and emotions like humans	1	2	3	4	5
I think it is wrong to inflict pain or suffering on animals for human gain without justification	1	2	3	4	5
I am attracted to the beauty, movement and artistic form of animals.	1	2	3	4	5
I generally dislike, fear or avoid animals.	1	2	3	4	5
Animals can be challenging opponents that provide opportunities for humans to show skill, strength and intelligence (for example rodeo riding or hunting).	1	2	3	4	5
I like animals that have practical or material value.	1	2	3	4	5

I enjoy learning about the biological and physical details of particular animal species.	1	2	3	4	5
I am concerned about ways in which I can minimise my personal impact on the wildlife and environment where I live.	1	2	3	4	5

12. We are interested in knowing how you would like to learn about the animals at Rainforest Habitat. Please rank from 1-8 your preferred methods (1=your most preferred option)

Information signs _____ Knowledgeable guides _____

Brochure with information _____ animal shows/demonstrations_____

Guidebook _____ Just watching animals _____

TV documentaries _____ Interactive computers/CD ROM_____

Any other methods not listed _____

13. Which of the following topics interest you most about animals?

	Not interest		interested		very Interested
The daily activities of animals	1	2	3	4	5
Breeding/rearing young	1	2	3	4	5
Where to find them in the wild	1	2	3	4	5
What they eat	1	2	3	4	5
Features that are similar to humans	1	2	3	4	5
Their importance to the ecosystem	1	2	3	4	5
Peculiar and strange characteristics	1	2	3	4	5
Relationships with other species	1	2	3	4	5
Their numbers an distribution	1	2	3	4	5
Social habits, relationships within groups	1	2	3	4	5
Details about the individual animals on Display at Rainforest Habitat (name, Birthday, history, particular characteristics)	1	2	3	4	5

Any other topics not listed? _____

14. **Please tell us your age** _____ years, **and sex** ❑ male ❑ female

15. **Where is your usual place of residence**?

❑ Local North QLD … postcode? _____ ❑ Other QLD… postcode? _____

❑ Other Australia … postcode? _____ ❑ Overseas … Where? _____

Thankyou for your time. We hope you enjoy your visit with us today!

Appendix J: Rainforest Habitat Post-visit Survey

Welcome to Rainforest Habitat! We hope you enjoy your visit today. By taking part in this survey, you will help us to better understand our visitors. This project is being conducted together with James Cook University's Tourism Program, as part of a broader study on wildlife tourism. It aims to discover what you expect from your visit, and your attitudes toward wildlife. The survey will take about 8 minutes to complete, and your answers are anonymous and confidential.

7. Have you been to Rainforest Habitat before?

O no

O yes ……..which year? _____

8. Who are you travelling with today?

O Spouse/partner O Friends O Alone

O Children under 10 O Children over 10

O Business associates O Other relatives

9. **How many people are in your travel party?** _____

10. **In which town did you stay last night?** _____

11. How did you travel to Rainforest Habitat today?

O Hire car O Private vehicle O Other

O Bus O Part of coach tour

12. How did you find out about Rainforest Habitat?

O Brochure O Travel agent O Guide book

O TV O Radio O Tour desk in accommodation

O Friend or relative O Signage O Internet

O Other? _____

7. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos	_____ times.
Trips to wildlife sanctuaries or wildlife parks	_____ times.
Trips to aquariums	_____ times.
Land based trips specifically to view animals	_____ times.
Land based trips to places where wildlife is often seen	_____ times.
Water based trips or cruises specifically to view animals	_____ times.
Water based trips to places where wildlife is often seen	_____ times

8. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response.

1O The opportunity to view wildlife is one of the most important factors in my travel decisions

2O The opportunity to view wildlife is included as part of my travel decisions

3O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

4O I am not interested in viewing wildlife while on holidays

5O I prefer to avoid viewing wildlife while on holidays

9. Thinking about captive environments such as zoos, sanctuaries and aquariums, how important are the following things to you?

	Not at all Important	Not very Important	Somewhat Important	Very important
Animals appear content				
Being able to get close to the animals				
Animals appear well cared for				
Being able to touch animals				
Animals have lots of space to live				
Fences and barriers are disguised or hidden from view				
Easy to find your way around				

10. Thinking about both captive and non-captive experiences, how important are the following features to you?

	Not at all Important	Not very Important	Somewhat Important	Very important
Large number of animals to see				
Rare, unique or exotic animals				
Being able to get close to animals				
Interesting information about animals				
Seeing animals in natural environments				
Being able to feed animals				
Large variety of animals				
Staff are friendly				
Staff are knowledgeable				
Clean environment				
Animals are easy to see				
Pleasant environment				
Suitable facilities for visitors				
Shelter provided from rain/sun				
Feeling safe				
Rare/endangered animals				

11. We are interested in knowing how you would like to learn about the animals at Rainforest Habitat. Please rank from 1-8 your preferred methods (1=your most preferred option)

Information signs _____ Knowledgeable guides _____
Brochure with information _____ animal shows/demonstration_____
Guidebook _____ Just watching animals _____
Tv documentaries _____ Interactive computers/CD ROM_____

Any other methods not listed? _____

12. Which 2 animals were your favourites at Rainforest Habitat today?

a) Animal _____ Why? _____
b) Animal _____ Why? _____

13. Here are descriptions of several attitudes toward wildlife. Please indicate how closely each one of them describes your own feelings and beliefs.

	Strongly Disagree	Disagree	Neutral	agree	Strongly agree
I don't have any particular interest in animals	1	2	3	4	5
Animals provide meaning and interest to my outdoor recreation activities.	1	2	3	4	5
I enjoy learning about how species are dependant on each other and the natural environment.	1	2	3	4	5
I believe animals have thoughts and emotions like humans	1	2	3	4	5
I think it is wrong to inflict pain or suffering on animals for human gain without justification	1	2	3	4	5
I am attracted to the beauty, movement and artistic form of animals.	1	2	3	4	5
I generally dislike, fear or avoid animals.	1	2	3	4	5
Animals can be challenging opponents that provide opportunities for humans to show skill, strength and intelligence (for example rodeo riding or hunting).	1	2	3	4	5
I like animals that have practical or material value.	1	2	3	4	5
I enjoy learning about the biological and physical details of particular animal species.	1	2	3	4	5
I am concerned about ways in which I can minimise my personal impact on the wildlife and environment where I live.	1	2	3	4	5

14. Which of the following topics interest you most about animals?

	Not interested		**interested**		**very Interested**
The daily activities of animals	1	2	3	4	5
Breeding/rearing young	1	2	3	4	5
Where to find them in the wild	1	2	3	4	5
What they eat	1	2	3	4	5
Features that are similar to humans	1	2	3	4	5
Their importance to the ecosystem	1	2	3	4	5
Peculiar and strange characteristics	1	2	3	4	5
Relationships with other species	1	2	3	4	5

Their numbers an distribution 1_____2_____3_____4_____5

Social habits, relationships within groups 1_____2_____3_____4_____5

Details about the individual animals on Display at Rainforest Habitat (name, Birthday, history, particular characteristics) 1_____2_____3_____4_____5

Any other topics not listed? _____

15. What did you like the most at Rainforest Habitat? _____

_____

16. **Do you have any suggestions for improvements at Rainforest Habitat?**

_____

_____

17. How long did you spend at Rainforest Habitat today? _____ **Hours**

18. Please tell us how satisfied you were with the following features of Rainforest Habitat?

	Not at all Satisfied					**very satisfied**
Number of animals seen	0	1	2	3	4	5
Space available for animals	0	1	2	3	4	5
Ability to see animals	0	1	2	3	4	5
Ability to get close to animals	0	1	2	3	4	5
Friendliness of staff	0	1	2	3	4	5
Shelter from sun/rain	0	1	2	3	4	5
Interesting information	0	1	2	3	4	5
Knowledgeable staff	0	1	2	3	4	5
Easy to find way around	0	1	2	3	4	5
Opportunities to learn	0	1	2	3	4	5
Ability to touch animals	0	1	2	3	4	5
Animals well cared for	0	1	2	3	4	5
Pleasant environment	0	1	2	3	4	5
Animals in natural environments	0	1	2	3	4	5
Feel safe	0	1	2	3	4	5

19. Would you recommend Rainforest Habitat to others?

❑ Yes, definitely ❑ Possibly ❑ No ❑ don't know

20. Would you visit Rainforest Habitat again?

❑ Yes, definitely ❑ Yes, if I return to region ❑ Maybe ❑ no

21. Please tell us your age _____ years, and sex ❑ Male ❑ female

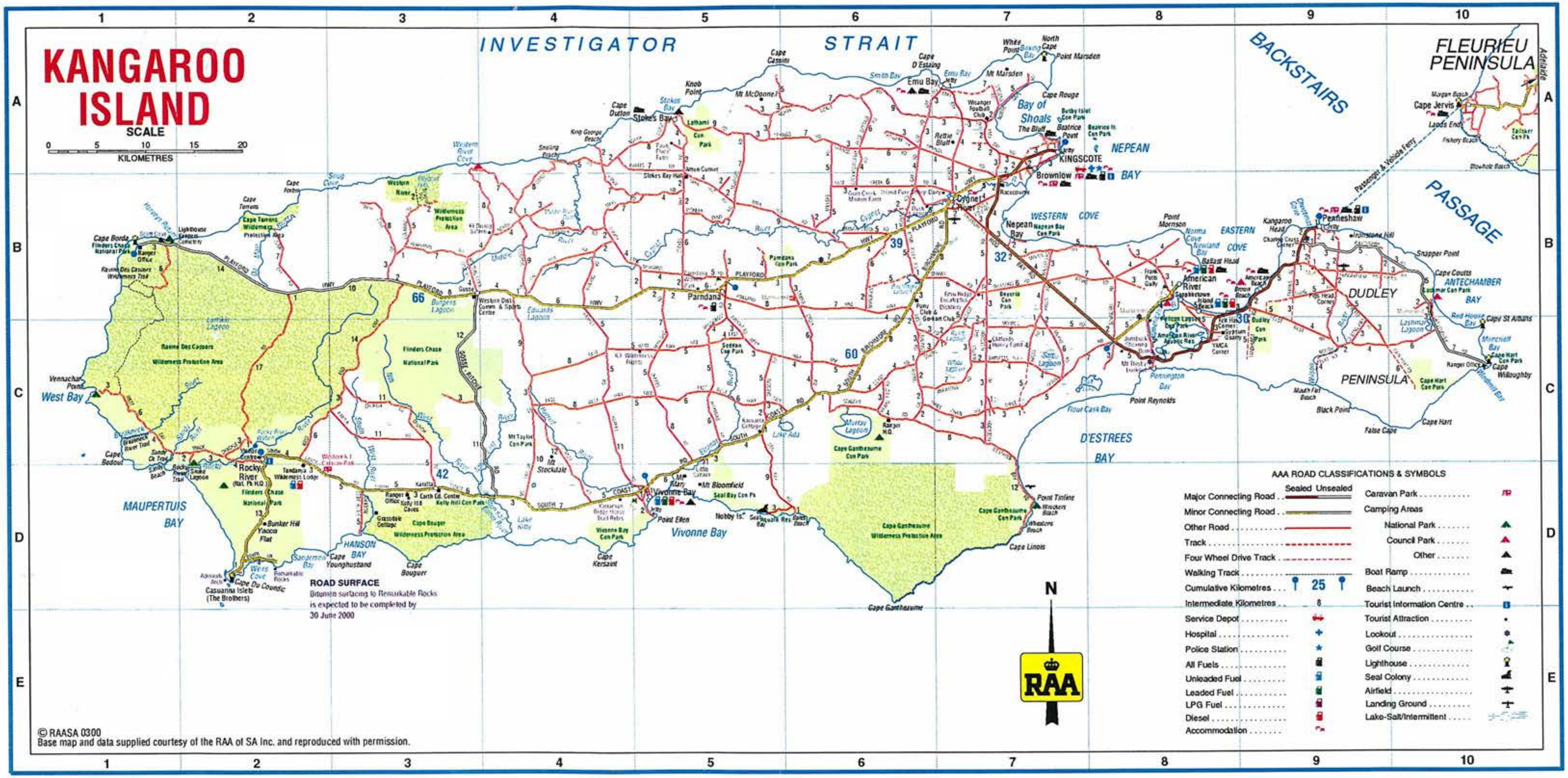
22. Where is your usual place of residence?

❑ Local North QLD … postcode? _____ ❑ Other QLD… postcode? _____

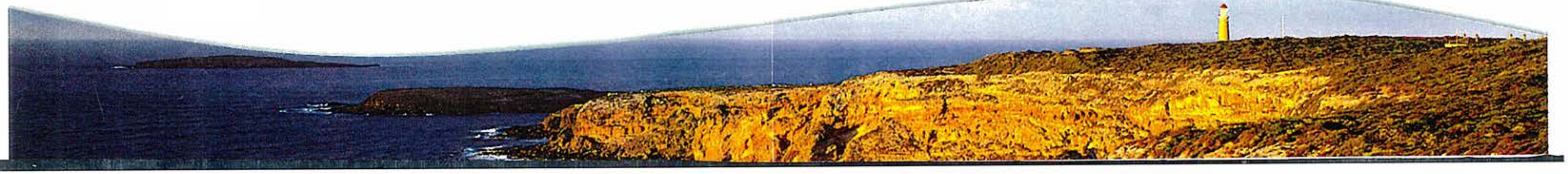
❑ Other Australia … postcode? _____ ❑ Overseas … Where? _____

Thankyou for your time. We hope you enjoyed your visit with us today!

Appendix K: Kangaroo Island Promotional Material and Map

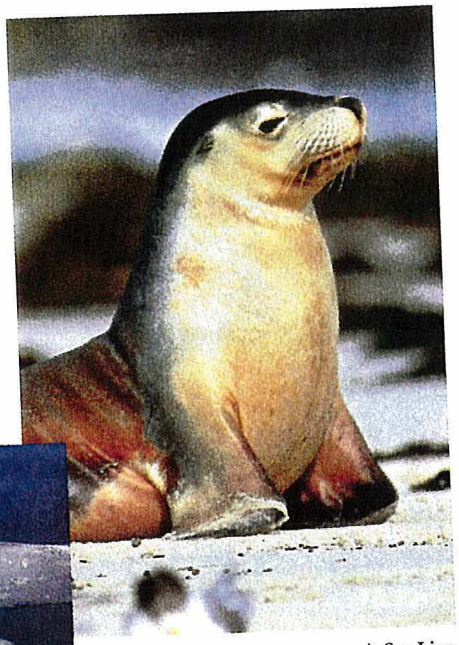


Map: Courtesy of RAA



Rare & Unique Species

▲ Southern Right Whales

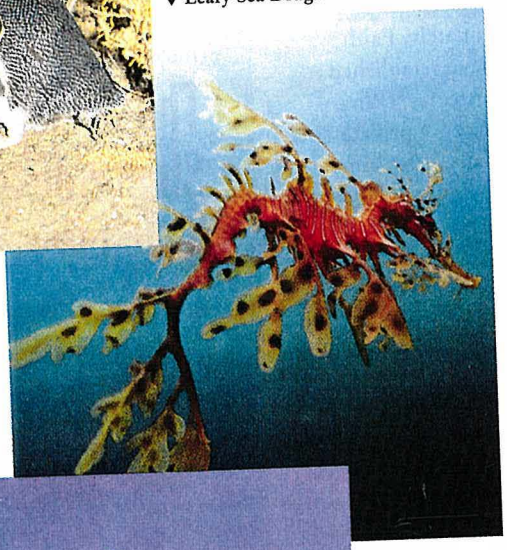


▲ Sea Lion

▲ Dolphins

▲ Little Penguins

▼ Leafy Sea Dragon



▲ Glossy Black Cockato

▲ Osprey

▼ Echidna

Echidna

Superb Fairy Wren

Wildlife

Keep Wildlife Wild! Please do not feed the animals.

There are several reasons why Kangaroo Island has become well known as a place to see wildlife in its natural habitat. More than half the Island has never been cleared of vegetation, with about one third conserved in National and Conservation Parks, including five significant Wilderness Protection Areas. The remaining uncleared areas form bush corridors between larger areas of vegetation.

In addition, the absence of foxes and rabbits ensures the integrity of this uncleared bushland. Many of the roadsides exemplify a dense understorey of intact, thick eucalypt scrub and smaller herbaceous plants.

It is therefore not surprising that there is abundant wildlife, much of which is uncommon or extinct on mainland Australia. Even the casual visitor will see many wildlife species throughout the Island, particularly if two points are remembered: most of our mammals are nocturnal; wild animals also frighten easily and are most successfully observed (and least stressed) from a distance, so as not to interrupt their natural behaviour.

The Kangaroo Island Kangaroo, Tammar Wallaby, Brushtail Possum, Short Beaked Echidna, Southern Brown Bandicoot, Western and Little Pygmy Possum, endemic Sooty Dunnart, Bush and Swamp Rat, six bat species, six frog species, Rosenberg's Sand Goanna, Black Tiger Snake, Pygmy Copperhead, Australian Sea Lion, New Zealand Fur Seal and Australian Fur Seals are all native to Kangaroo Island. The Koala, Platypus and Ring Tail Possum were introduced and still survive here.

The Kangaroo Island Kangaroo, a sub-species of the Western Grey Kangaroo is smaller, darker and has longer fur than the mainland species. It shelters in the bush during the day, coming out to graze as dusk approaches. Areas where bush and pasture adjoin make ideal places to observe them. At Flinders Chase National Park, a few extremely docile kangaroos can usually be seen around the Headquarters area, even though feeding is no longer allowed.

The Tammar Wallaby, with smaller and finer features than the Kangaroo, are abundant on the Island. By comparison, mainland populations are extinct in South-eastern Australia with a small remnant population in Western Australia. Wallabies are frequently seen at night along the roads, where they are easily confused by vehicle lights. Only cautious and attentive driving will prevent damage to the wildlife and vehicles.

Rosenberg's Sand Goanna, a reptile up to one metre in length, is a predator of smaller reptiles, young birds and eggs. It is often seen on warm days scavenging on dead animals along the roads.

The Echidna (Spiny Anteater) is an unusual egg-laying mammal. Sightings are unpredictable, but if seen watch quietly and you might see it searching and digging for ants and termites, or even licking up ants with its sticky tongue.

Many marine mammals are found along the Island's 450km of largely undeveloped coastline. The Australian Sea Lion spends as much time on land as at sea. They can be seen, by guided tour, at the sandy beach at Seal Bay.

About 6000 New Zealand Fur Seals live and breed around Cape du Couedic. They breed in summer and can be seen energetically interacting in and around Admiral's Arch in the Flinders Chase National Park.

While the introduced Platypus is only seen in Flinders Chase by the patient and dedicated, Koalas are now widespread. They number around 5000 and are found wherever their favoured food trees - the big gums of the river systems - are located. Not native to Kangaroo Island, Koalas are now devastating, through overeating, these eucalypts. Their entire diet consists of the mildly toxic eucalypt leaves. The lengthy digestive process and the low nutrients gained from this diet means the Koala has little energy and needs to sleep for about nineteen hours a day.

Birds

Kangaroo Island is a paradise for birdwatchers, with a diverse range of habitats to explore. From the wild coastline of cliffs, beaches and estuaries, through coastal heath and mallee, to river and creek systems, wetlands and lagoons, many of the Island's 251 recorded birds can be seen.

Among the most spectacular is the Superb Fairy-wren. The bright blue male is often seen with a family group. Also brilliant are the members of the cockatoo and parrot families.

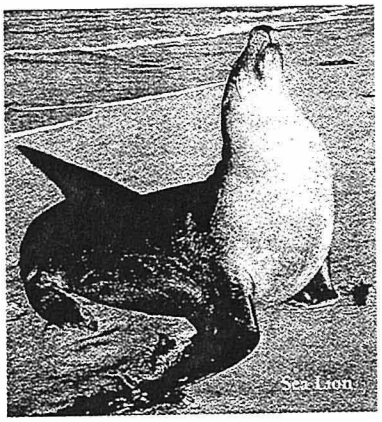
Noisy Rainbow and Purple-crowned Lorikeets are locally nomadic, moving to where eucalypts are flowering, to lick the nectar from the flowers with their brush tongues.

Little Penguins are found around the coastline, living and breeding in burrows under shrubs, rocks and other sheltered places. On shore at night they call noisily. Guided tours are conducted each evening at Kingscote and Penneshaw.

Kangaroo Island was part of the mainland until around 9500 years ago. Since then our plants, animals and birds have survived in isolation with some evolving differently from mainland species. For example, the Crimson Rosella and some Honeyeater species show a colour variation.


Kangaroo Island Kangaroo

As with the Island's fauna, and for the same reasons, many species that are uncommon or threatened on the mainland are still abundant here. The Bush (Southern) Stone-curlew, Southern Emu-wren, Beautiful Firetail, Bassian Thrush, Western Whipbird, White bellied Sea-eagle, Osprey and Hooded Plover are surviving well here. In addition, the only South Australian population of the Glossy Black Cockatoo - a large black cockatoo with striking red tail panels - is found here. The population, when surveyed in October 1998, numbered 246. This is an increase of 58 on the 1996 census, due to the dedicated protection of natural and artificial nesting sites. Lucky birdwatchers can sometimes see the cockatoos at American River and Western River, where they feed on the seeds of the Sheoak tree.


Sea Lion

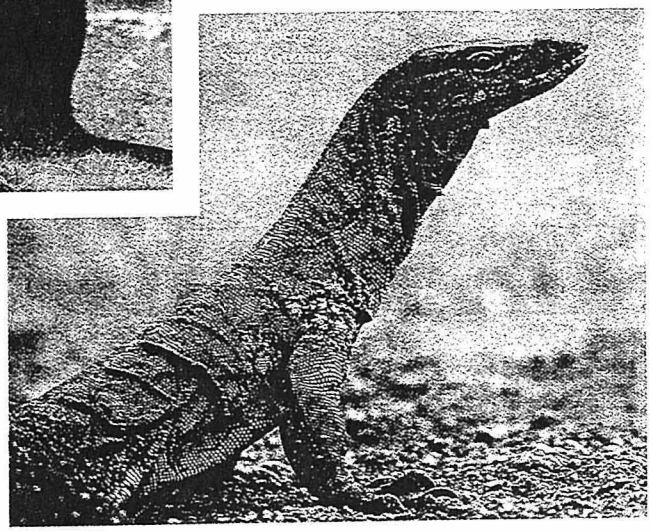
Wildlife Viewer's and Photographer's Code

This code has been established for individuals and groups interested in observing wildlife in their natural surroundings. People should see themselves as part of the collective impact in the natural world and follow the best possible practice to minimise their own impact.

- Take particular care to keep pets under control at all times. With the abundant wildlife, they may be best left at home.
- Do not feed the wildlife - it irreparably alters natural behaviour and incorrect foods adversely affect some species.
- Before heading off into the bush enquire with National Parks and Wildlife staff about breeding seasons and other sensitivities.
- The rarer the species, the greater the care needed. Avoid approaching rare species like the Glossy Black Cockatoo.
- Never handle wildlife like echidnas or birds, they can suffer from capture myopathy, a form of shock from which they may not recover.
- You are too close to wild animals or birds, if they show any sign of behaviour change.
- Avoid trampling plants and vegetation, and breaking vegetation to improve your view.
- Respect trespass laws - obtain permission to enter private property.
- Wildlife Watch - report any unethical or illegal behaviour by others.
- Avoid the use of flash photography on nocturnal species such as penguins and wallabies.
- The old adage, take only photographs and leave only footprints should be followed.

Wildflowers

There are over 850 native plants recorded for Kangaroo Island and 250 more are introduced species, such as garden plants, grasses and fodder plants for domestic animals.



Over 400 of the plants are found in Flinders Chase National Park, making it the most representative area of original flora. Mallee scrub dominates much of the uncleared areas. In the East, Kangaroo Island Narrow-Leafed Mallee is the main multi-trunked mallee, and it is from this tree that eucalyptus oil is extracted.

To the West, the small endemic Whip-Stick Mallee becomes dominant. The much taller single trunk eucalypts such as Sugar Gum, Blue Gum, Cup Gum, Swamp Gum and River Red Gum generally grow along rivers and creek banks. The two stringy barks are found in the centre to the North-west of the Island. The number and variety of wattles match the diversity of the eucalypts.

Other small trees or large shrubs include the She-oak, Bulloak, Slaty oak, two Banksias, Dryland Tea-Tree, Broombush, Bottlebrush, several Hakea and the slow growing Tate's Grass Tree or Yacca.

Due to isolation from the mainland there are about 40 endemic species found on Kangaroo Island; these are plants that are native to, and restricted to, a particular geographical region.

Some of these, like the two Tetrathecas, are very beautiful; others like the prickly Petrophilia, are more remarkable for their uniqueness than their beauty.

Having separated from the mainland approximately nine thousand years ago, Kangaroo Island has retained many plants and animals no longer found elsewhere. To conserve this abundant, unique flora and fauna, plus the undisturbed beauty of the rivers and coastlines, much of the Island has been reserved in National and Conservation Parks and Wilderness Protection Areas.

Escape to the Wild

APPRECIATE WILDLIFE IN THE WILD

- Take a guided walk along the beach at Seal Bay amongst a colony of wild Australian sea lions, or observe them at your own pace and spend time on the Boardwalk.
- Spend time in Flinders Chase National Park. In addition to kangaroos and koalas, everyone gets to see the delightful New Zealand fur seals and after dusk Tammar wallabies and brushtail possums. There is also a good possibility of seeing an echidna or, if patient, maybe even a platypus. The abundance and variety of bird life will take your breath away.
- Discover Little Penguins.
- Bring the binoculars. Murray Lagoon offers a great opportunity to go birdwatching.

IMMERSE YOURSELF IN THE TURBULENT HISTORY OF KANGAROO ISLAND'S WILD PAST

- Step back in time. Take a guided tour at Cape Borda Lighthouse and museum. Nearby are the historic lightkeepers cemetery and the original landing site for stores at Harveys Return - Firings of the historic cannon are conducted daily.
- Join an Interpretive Officer in the climb to the top of Cape Willoughby Lighthouse, South Australia's first lighthouse.
- Witness the amazing geometric shapes being sculptured by the wild forces of nature, explore Remarkable Rocks and Admirals Arch in Flinders Chase National Park.

DELIGHT IN THE UNEXPECTED MAGIC OF THE UNDERGROUND WORLD

- Join a guided tour of Kelly Hill Caves. Once you have seen the splendour of the caves, the more adventurous won't be able to resist organising an adventure caving experience.

REVITALISE YOUR SPIRIT AND SENSES IN THE WILD

- Go walking. There are excellent walks, hikes and trek trails in Flinders Chase National Park and Kelly Hill Conservation Park. Collect a copy of The Walking Trails in Kangaroo Island Parks brochure. If you are planning an overnight walk within a Park, you should discuss your route with a Ranger and complete a Trips Intention Form.
- Stay awhile in a Lightkeepers cottage, Mays Homestead, Postman's Cottage or at a Parks camping site.

DETAILED INFORMATION IS AVAILABLE FROM PARK OFFICES AND VISITOR INFORMATION CENTRES ON THE ISLAND. ASK FOR:

Parks of Kangaroo Island brochure
Tour & Entry Times visitor information sheet
Entry Fees & Charges visitor information sheet
Walking Trails brochure
Heritage Accommodation brochure

National Parks and Wildlife manage nineteen National and Conservation Parks and five Wilderness Protection Areas on Kangaroo Island.

Listed here are the facilities in the major parks. If you wish to spend time in the other parks, please contact Ranger staff.

PARK FACILITIES

LEGEND
B = book E = entrance fee
C = check L = lunch
D = drinks

	Water	Toilets	Disabled toilet	Shower	Picnic shelter	Gas BBQ	Camping permitted	Caravan access	Cottages for rent	Walks and hikes	Refreshments	Guided Tours fees	Information Site Office
Cape Willoughby Lightstation	■	■							■			■	■
Cape Gantheaume Conservation Park													
D'Estrees Bay							■	■					
Murray Lagoon	■						C			■			
Seal Bay Conservation Park													
Seal Bay Visitor Centre	■	■	■								D	■	■
Bales Cottage Picnic Area	■	■	■		■	■							
Kelly Hill Caves	■	■	■		■	■				■	D	■ -	■
Flinders Chase National Park													
Rocky River Headquarters	■	■	■	■	■	■	■	■	■	■	L	E	■
Cape du Couedic Lighthouse									■				
Snake Lagoon		■					B			■			
Sandy Creek										■			
Breakneck River										■			
West Bay		■					B						
Cape Borda Lightstation	■	■			■				■	■	L	■	■
Ravine des Casoars										■			
Harveys Return		■					B			■			

Tread Lightly

- Leave your pets at home (or at Kangaroo Island Kennels - bookings necessary).
- Don't feed the wildlife - incorrect foods can adversely affect some species.
- Take all your rubbish out of the Park.
- Observe fire bans at all times. All wood fires are prohibited in Parks from 1 November to 30 April. Gas fires are permitted, except on days of total fire bans.
- Outside the fire restriction season, wood fires are permitted in designated areas only. Firewood must be purchased from Park headquarters, not collected in or brought into the Park.
- Do not disturb, collect or damage any animals, plants, geological features or heritage sites.
- Keep to designated vehicle tracks, walking tracks and camping areas.

General Park Enquiries

Regional Office - Government Office Building
37 Dauncey Street, Kingscote, 5223
Phone: (08) 8553 2381 Fax: (08) 8553 2531

KI West District Office - Rocky River Headquarters,
Flinders Chase National Park.
Phone: (08) 8559 7235 Fax: (08) 8559 7268

Bookings for Accommodation

Flinders Chase National Park
Phone (08) 8559 7235 Fax: (08) 8559 7268
Email: kiparksaccom@dehaa.sa.gov.au

Appendix L: Kangaroo Island Pre-Visit Survey

This survey is being conducted by James Cook University in cooperation with National Parks and Wildlife, South Australia. The aim is to understand visitor needs and responses to the experiences available at Flinders Chase National Park. The results of the survey will be used to improve the planning for, and management of, visitors in Flinders Chase.
You can help us to improve the Flinders Chase experience for visitors by spending 10-15 minutes of your time completing this questionnaire. All of your answers will be confidential and although your participation is voluntary your help would be greatly appreciated.

1. Where do you usually live?
   - O In Australia — Please give us your post code _____
   - O Outside Australia — Please tell us the country _____

2. Are you travelling with an organised tour company? O Yes O No

3. What sort of vehicle are you travelling in today?
   (Please circle the best description)
   - O Private vehicle — 2wd/4wd/minibus
   - O Rental vehicle — 2wd/4wd/minibus/coach
   - O Tour company vehicle — 2wd/4wd/minibus/coach
   - O Other (please specify)

_____

4. Have you ever been to Kangaroo Island before?
   - O No this is my first visit
   - O Yes I have been ____ times and my last visit was in 19_____.

5. Have you ever been to Flinders Chase before?
   - O No this will be my first visit
   - O Yes I have been ____ times and my last visit was in 19_____.

6. How long did you stay, or are you planning to stay on Kangaroo Island?

_____

7. How long did you plan to stay at Flinders Chase?_____

8. How important were the following factors in your decision to visit Flinders Chase?

Factor	Not at all important	Not very important	Somewhat important	Very important
Opportunities to see wildlife				
A chance to get close to nature				
A place to spend time with family/friends				
An opportunity to experience a wilderness area				
An opportunity to visit an historic site				
To visit famous scenic sites				
An opportunity for rest and relaxation				
Opportunities to be physically active				
A chance to get away from other people				
Someone else in my travel party wanted to come				
It is an important part of the Kangaroo Island experience				
A chance to have a learning or educational experience				

9. Are there any other factors that were important in your decision to visit Flinders Chase?

_____

10. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response

O The opportunity to view wildlife is one of the most important factors in my travel decisions

O The opportunity to view wildlife is included as part of my travel decisions

O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

O I am not interested in viewing wildlife while on holidays

O I prefer to avoid wildlife while on holidays

11. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos/aquariums/wildlife parks _____times
Land based trips specifically to view wildlife _____times
Land based trips to places where wildlife is often seen _____times
Water based trips or cruises specifically to view wildlife _____times
Water based trips to where wildlife is often seen _____times

13. Thinking about wildlife experiences in general how important are the following features to you?

	Not at all important	**Not very important**	**Somewhat important**	**Very important**
Large numbers of wildlife to see				
Unique or unusual wildlife				
Being able to get close to the wildlife				
Interesting information about the wildlife				
Seeing wildlife in a natural environment				
Seeing wildlife behaving naturally				
Large variety of wildlife				
Knowledgable guides/staff are available				
Wildlife are easy to see				
Pleasant environment				
Feeling safe				
A natural environment with little evidence of humans				
Being able to touch or feed the wildlife				
Visitor numbers are limited				
Seeing rare/endangered wildlife				

(Note: When we say wildlife we mean land and marine animals, birds, and insects and wild rather than domestic animals).

13. After your experience of Flinders Chase what two questions would you most like to ask about the National Park?

1. _____

_____

2. _____

_____

14. A new Visitor Centre is to be built in Flinders Chase National Park and we are interested in understanding what information visitors would like to have included in the centre. Please rate how interesting the following topics are to you.

Topic	Not at all interested	Not very interested	Somewhat interested	Very interested
Aboriginal occupation and connections with Kangaroo Island.				
Shipwrecks				
Lighthouses				
Pastoral land use				
Features of geographical interest (eg., Remarkable Rocks)				
An understanding of biodiversity				
An understanding of ecosystems				
Plants of Flinders Chase National Park				
The giant animals that once roamed this area				
Wildlife in Flinders Chase National Park				
How visitors can minimise their impacts on the wildlife in Flinders Chase				
Hints to help visitors see wildlife				
How visitors can minimise their impacts on the environment in Flinders Chase				
How managers deal with fire				
How managers deal with feral animals				
How managers deal with weeds				

16. Did you go on any of the following walking trails? Please tick those that you did.

O Black Swamp (next to platypus pools) O Breakneck River O Sandy Creek

O Ravine des Casoars O Rocky River Mouth (at Snake Lagoon)

17. We would also like to know about your wildlife encounters in Flinders Chase.

A. How many animals did you see while visiting Flinders Chase National Park today?

B.

O None, please go to Question 18.

O I saw O fur seals O Cape Barren geese O echidna

O sea lions O platypus O snakes

O kangaroos O whales O goannas

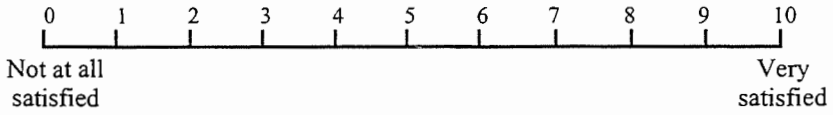
O koalas O birds

O Other animals (please list) _____

B. Which species was your favourite?_____

C. Why was it your favourite? _____

D. Overall how satisfied were you with your wildlife experiences at Flinders Chase?



E. How satisfied were you with the following features of the wildlife experience available at Flinders Chase?

	Not at all satisfied	Not very satisfied	Somewhat satisfied	Very satisfied
The number of wildlife I saw				
How close I was able to get to the wildlife				
The variety of wildlife I saw				
How easy the wildlife were to see				
The condition of the natural environment				

F. What was the best feature of your wildlife experiences at Flinders Chase?

_____

_____

G. What one thing could be improved about the wildlife experiences at Flinders Chase?

_____

_____

18. How satisfied were you with these other features of your visit to Flinders Chase?

Feature	Not applicable*	Not at all satisfied	Not very satisfied	Satisfied	Very Satisfied
Contact with NPWSA staff					
Walking trails					
Lookouts					
Boardwalks					
Directional signs/maps					
Information signs					
The quality of the information available about the park					
The Visitor Centre					
The range of things to buy at the visitor centre					
Toilets					
Picnic areas					

Camping facilities					
Shelter provided from the sun/rain					
Guided nocturnal walks					
Ranger slide shows					

*Please use this column if you didn't use, see or visit a feature that is listed.

19. How would you rate the amount of information available about Flinders Chase National Park?

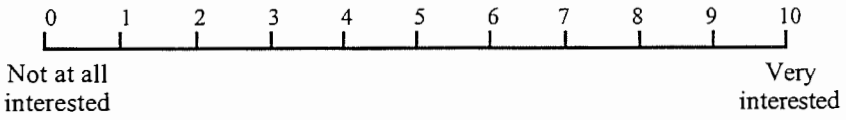
O Not enough O About the right amount O Too much

20. Could you please list any other facilities that you think should be available in Flinders Chase National Park?

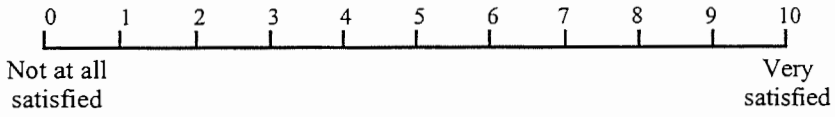
_____

_____

21. How interested are you in participating in guided activities such as walks or talks?



22. Overall how satisfied were you with your experience at Flinders Chase today?



23. Would you recommend a visit to Flinders Chase to others?

O Yes, definitely O possibly O no O don't know

24. Would you like to visit Flinders Chase again?

O Yes, definitely O Yes, if return to region O maybe O no

25. What was the best feature of your visit to Flinders Chase today?

_____

_____

26. What two things about Flinders Chase could be changed or improved?

_____

_____

27. Who are you travelling with on this trip? Please tick as many as apply.

O	I'm alone	O	Spouse or partner
O	Child(ren)	O	Other family/relatives
O	Friends	O	Tour or organised group
O	Other (please specify) _____		

28. In your travel party there are _____adults (over 16 years), _____children 12 to 16 and _____ children less than 12.

29. In what year were you born? 19_____

30. Are you ___male or ____female?

Thankyou very much for your help.

Appendix M: Kangaroo Island Post-Visit Survey

This survey is being conducted by James Cook University in cooperation with National Parks and Wildlife, South Australia. The aim is to understand visitor needs and responses to the experiences available at Flinders Chase National Park. The results of the survey will be used to improve the planning for, and management of, visitors in Flinders Chase.
You can help us to improve the Flinders Chase experience for visitors by spending 10-15 minutes of your time completing this questionnaire. All of your answers will be confidential and although your participation is voluntary your help would be greatly appreciated.

1. Where do you usually live?
   - O In Australia — Please give us your post code_____
   - O Outside Australia — Please tell us the country_____

2. Are you travelling with an organised tour company? OYes O No

3. What sort of vehicle are you travelling in today?
   (Please circle the best description)
   - O Private vehicle — 2wd/4wd/minibus
   - O Rental vehicle — 2wd/4wd/minibus/coach
   - O Tour company vehicle — 2wd/4wd/minibus/coach
   - O Other (please specify) _____

4. Have you ever been to Kangaroo Island before?
   - O No this is my first visit
   - O Yes I have been ____ times and my last visit was in 19_____.

5. Have you ever been to Flinders Chase before?
   - O No this will be my first visit
   - O Yes I have been ____ times and my last visit was in 19_____.

6. How long did you stay, or are you planning to stay on Kangaroo Island? _____

7. How long did you plan to stay at Flinders Chase?_____

8. How important were the following factors in your decision to visit Flinders Chase?

Factor	Not at all important	Not very important	Somewhat important	Very important
Opportunities to see wildlife				
A chance to get close to nature				
A place to spend time with family/friends				
An opportunity to experience a wilderness area				
An opportunity to visit an historic site				
To visit famous scenic sites				
An opportunity for rest and relaxation				
Opportunities to be physically active				
A chance to get away from other people				
Someone else in my travel party wanted to come				
It is an important part of the Kangaroo Island experience				
A chance to have a learning or educational experience				

9. Are there any other factors that were important in your decision to visit Flinders Chase?

_____

10. In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response

O The opportunity to view wildlife is one of the most important factors in my travel decisions

O The opportunity to view wildlife is included as part of my travel decisions

O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things

O I am not interested in viewing wildlife while on holidays

O I prefer to avoid wildlife while on holidays

11. In the last 12 months, how many times have you taken a trip where wildlife was a central feature of the experience?

Trips to zoos/aquariums/wildlife parks _____times
Land based trips specifically to view wildlife _____times
Land based trips to places where wildlife is often seen _____times
Water based trips or cruises specifically to view wildlife _____times
Water based trips to where wildlife is often seen _____times

12. Thinking about wildlife experiences in general how important are the following features to you?

	Not at all important	Not very important	Somewhat important	Very important
Large numbers of wildlife to see				
Unique or unusual wildlife				
Being able to get close to the wildlife				
Interesting information about the wildlife				
Seeing wildlife in a natural environment				
Seeing wildlife behaving naturally				
Large variety of wildlife				
Knowledgable guides/staff are available				
Wildlife are easy to see				
Pleasant environment				
Feeling safe				
A natural environment with little evidence of humans				
Being able to touch or feed the wildlife				
Visitor numbers are limited				
Seeing rare/endangered wildlife				

(Note: When we say wildlife we mean land and marine animals, birds, and insects and wild rather than domestic animals).

13. After your experience of Flinders Chase what two questions would you most like to ask about the National Park?

1. _____

_____

2. _____

_____

14. A new Visitor Centre is to be built in Flinders Chase National Park and we are interested in understanding what information visitors would like to have included in the centre. Please rate how interesting the following topics are to you.

Topic	Not at all interested	Not very interested	Somewhat interested	Very interested
Aboriginal occupation and connections with Kangaroo Island.				
Shipwrecks				
Lighthouses				
Pastoral land use				
Features of geographical interest (eg., Remarkable Rocks)				
An understanding of biodiversity				
An understanding of ecosystems				
Plants of Flinders Chase National Park				

The giant animals that once roamed this area				
Wildlife in Flinders Chase National Park				
How visitors can minimise their impacts on the wildlife in Flinders Chase				
Hints to help visitors see wildlife				
How visitors can minimise their impacts on the environment in Flinders Chase				
How managers deal with fire				
How managers deal with feral animals				
How managers deal with weeds				

17. We would like to know about your wildlife encounters in Flinders Chase.

A. How many animals did you see while visiting Flinders Chase National Park today?

O None, please go to Question 18.

O I saw

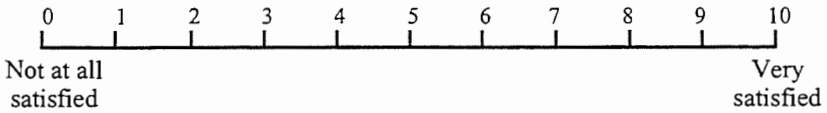
O fur seals	O Cape Barren geese	O echidna
O sea lions	O platypus	O snakes
O kangaroos	O whales	O goannas
O koalas	O birds	

O Other animals (please list) _____

B. Which species was your favourite?_____

C. Why was it your favourite? _____

D. Overall how satisfied were you with your wildlife experiences at Flinders Chase?



E. How satisfied were you with the following features of the wildlife experience available at Flinders Chase?

	Not at all satisfied	**Not very satisfied**	**Somewhat satisfied**	**Very satisfied**
The number of wildlife I saw				
How close I was able to get to the wildlife				
The variety of wildlife I saw				
How easy the wildlife were to see				
The condition of the natural environment				

F. What was the best feature of your wildlife experiences at Flinders Chase?

_____

_____

G. What one thing could be improved about the wildlife experiences at Flinders Chase?

_____

_____

18. How satisfied were you with these other features of your visit to Flinders Chase?

Feature	**Not applicable***	**Not at all satisfied**	**Not very satisfied**	**Satisfied**	**Very Satisfied**
Contact with NPWSA staff					
Walking trails					
Lookouts					
Boardwalks					
Directional signs/maps					
Information signs					
The quality of the information available about the park					
The Visitor Centre					
The range of things to buy at the visitor centre					
Toilets					
Picnic areas					
Camping facilities					
Shelter provided from the sun/rain					
Guided nocturnal walks					
Ranger slide shows					

*Please use this column if you didn't use, see or visit a feature that is listed.

19. How would you rate the amount of information available about Flinders Chase National Park?

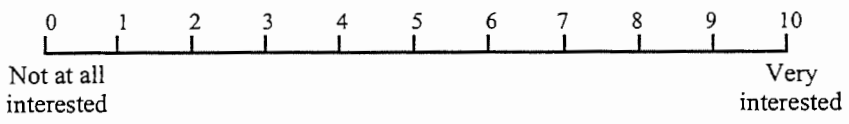
O Not enough O About the right amount OToo much

20. Could you please list any other facilities that you think should be available in Flinders Chase National Park?

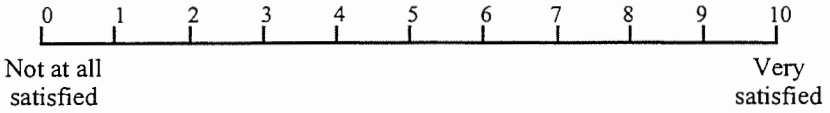
_____

_____

21. How interested are you in participating in guided activities such as walks or talks?



22. Overall how satisfied were you with your experience at Flinders Chase today?



23. Would you recommend a visit to Flinders Chase to others?

O Yes, definitely O possibly O no O don't know

24. Would you like to visit Flinders Chase again?

O Yes, definitely O Yes, if return to region O maybe O no

25. What was the best feature of your visit to Flinders Chase today?

_____

_____

26. What two things about Flinders Chase could be changed or improved?

_____

_____

27. Who are you travelling with on this trip? Please tick as many as apply.

O I'm alone
O Spouse or partner
O Child(ren)
O Other family/relatives
O Friends
O Tour or organised group
O Other (please specify) _____

28. In your travel party there are _____adults (over 16 years), _____children 12 to 16 and _____ children less than 12.

29. In what year were you born? 19_____

30. Are you ___male or ____female?

Thankyou very much for your help.

Appendix N: Mindfulness Model for Wildlife Tourism Experiences

Precursors and Conditions for Mindfulness in Wildlife Tourism Settings

Precursors – Attracting Attention	Conditions – Sustaining Attention	Visitor Factors
• Extreme stimuli – large, colourful, loud, smelly dangerous, large numbers, close proximity • Movement/ activity of animals • Use of contrast, patterns • Unexpected, surprising things • Other living things generally (infant animals) • Excitement or emotion	• Variety, diversity • Multisensory experiences • Interacting with animals, visitor control • Things personally connected to the respondent • Good physical orientation • Unique, rare things • Authentic, natural environments or habitats • New experiences, new animals seen	• High interest in content • Low levels of fatigue • Low levels of distractions • Visitors described specific learning

* Adapted from Moscardo (1992, 1999)

Precursors for Mindfulness – Attracting Attention

- Extreme stimuli: This was adapted from the work of Berlyne (1960, 1966, 1967 in Moscardo, 1992) and includes mention of animals being large, colourful, loud, smelly, dangerous, or where the respondent said they were close to the animal. Mentions of large numbers or volume of animals was also included in this category. Examples include *"the bright colours of the reef fish in the reflected sun was amazing", "unbelievable being in such close proximity to such*

huge creatures (whale sharks), and *"it freaked me out being near an animal that I knew could kill me easily"* (crocodile).

- Movement/ activity of animals: This factor is based on work by Moscardo (1992) which summarises studies that found moving exhibits to attract more attention than static exhibits. Movement is also a feature that is highlighted as encouraging visitor attention and satisfaction in zoo settings (Patterson & Bitgood, 1988). Examples include *"I loved the way the seals moved and swam underwater"*, and *" the agility and speed of the monkeys swinging through the trees was astounding"*.
- Patterns/contrast: Taken from work in museums that found that contrast and patterns attract attention (Moscardo, 1999; Wolf & Smith, 1993). An example from the data is *"the colours and unusual patterns of the fish"*.
- Unexpected, surprising things: This is found in the work of Moscardo (1999) in interpretive and museum settings which found that visitors take notice of the unexpected, such as provocative signs (Kanel & Tamir, 1991; Rand, 1985) and animal silhouettes on a nature trail (Bitgood, Benefield, Patterson & Litwak, 1990). Examples from the data included *"I was walking along a path and a few squirrels came running down from a tree. It was a wonderfully memorable experience because...I wasn't expecting to see them"; and "we were sailing – there were dolphins playing around the boat. Natural beauty – unexpected. An unpredictable, delightful experience – like a blessing."*
- Infant animals: In the list of factors that encourage Mindfulness in interpretive settings, Moscardo (1999) includes live animals as a factor that attracts

attention. In the present study, this factor was excluded because all descriptions in the data were of experiences with live animals. However, the presence of infant animals was included as a factor which attracts the attention of visitors. The attraction of infant animals, which elicit care-giving responses from humans, is discussed by Newby (1999). Infant animals are also highly social, approaching others with curiosity and openness.

- Excitement or emotion: Excitement or emotion related to the experience indicates that visitors are at least temporarily paying attention to the experience. Examples from the data include: *"it was the most wicked and exciting thing to be in a tiny kayak and have a huge Orca swim just underneath you. Really got the adrenalin pumping!"* and *"I was emotionally moved by the sheer size and gentleness of this animal (Humpback Whale). I could have watched them for days".*

Conditions for Mindfulness – Sustaining Attention

- Variety and diversity: this factor was directly modified from the Mindfulness model for interpretive settings (Moscardo, 1999). Examples include: *"the huge variety of animals in the zoo*", and *"the marine diversity was amazing".*
- Multisensory experiences: this factor was directly modified from Moscardo's (1999) Mindfulness model. Examples include *"I didn't expect the wombat's fur to be so stiff. They look cuddly, but when you touch them they are solid. They have a curious smell too."*

- Interacting with animals, visitor control: This factor was adapted directly from Moscardo's (1999) Mindfulness model. Examples in the present data include: *" I got to hold the koala, and feed it some food from a syringe – it was wonderful", and " It was an interactive experience, not just viewing the animals. We fed birds, petted wildlife, and fed them and walked amongst the animals."*
- Things personally connected to the visitor: This factor is taken directly from Moscardo's (1999) Mindfulness model. It includes things that are personally connected to the visitor's life or experience, or things they have special attachment to. Examples from the data include: *"I love seeing Moose in the wild. Seeing them reminds me of the many lovely holidays I had with my family as a child"*, and *"my uncle works at the zoo, and it was great to have a personal tour by someone I know so well"*.
- Good physical orientation: This was another factor directly adapted from Moscardo's (1999) Mindfulness model. Examples from the data include: "*the layout of the zoo was great for people and animals. It was easy to find my way around and I didn't feel like I was missing exhibits."*
- Rare or unique animals: This is related to the idea that new experiences encourage visitors to be mindful (Moscardo, 1999). Examples from the literature include: *"Komodo dragons are such unique animals. Rare!" and "to actually see a white tiger in real life was just amazing."*
- Authentic, natural environments or habitats: Authenticity of experiences is a factor that encourages visitors to be mindful. In the context of wildlife tourism,

the sighting of wildlife in their genuine environment is consistent with the concept of authenticity. Examples from the data include: *"the most wonderful experience. To see the vast array of African wildlife in the wild, in their true environment and habitat"* and *"we saw Elk and Moose in the Rocky Mountains. They were in their environment, in the wild.."*

- New experiences, new animals seen *" first time to actually touch and feel these animals"; "it was an excellent life time experience in a new and totally foreign environment"* and *"the animals I saw were new to me. I had never seen them before in my country"*.
- High visitor interest in animals/habitats: This factor is adapted directly from Moscardo's (1999) Mindfulness model, which predicts that visitors are more likely to be mindful if they have a personal interest in the content or topic. In the case of wildlife experience, personal interest in the animal being viewed or the habitat is consistent with this factor. Examples from the data include: *"I am really interested in marine mammals (I graduated in marine biology), so seeing these wonderful mammals was particularly special to me";* and *"I saw some special species of birds that I had been chasing for many years, but hadn't yet seen in the wild"*.
- Visitor described specific learning. According to Moscardo's (1999) Mindfulness model, if visitors are mindful, they should learn more from interpretive settings. Evidence of visitors leaning about specific things was included under this category. If visitors simply stated that their experience was 'educational', it was excluded because they may have acknowledged the

educational content available in the experience, but not paid any attention to it. Examples of specific learning from the data include: *"It was interesting and amazing. For example, the python has to squeeze its prey alive and then eat it whole. I didn't know that"* and *"it was educational, I learned how to help protect marine creatures and protect their environment, by being careful what we put down our sinks"*.

The factors that were present in Moscardo's (1999) Mindfulness model, but excluded from wildlife experiences were those which related specifically to the content and techniques of interpretation. These items were 'use of questions', 'clear structure of content', and 'content understandable to visitors/matched to what visitors know'. These were excluded because they were too specific for the broad context of wildlife experiences.

Appendix O: Specialisation Survey

SURVEY NO.

0	O	O	O	O
1	O	O	O	O
2	O	O	O	O
3	O	O	O	O
4	O	O	O	O
5	O	O	O	O
6	O	O	O	O
7	O	O	O	O
8	O	O	O	O
9	O	O	O	O

JAMES COOK UNIVERSITY

Thankyou for taking the time to complete this survey. This project is part of a wildlife tourism project at James Cook University. By completing this survey you will help us to better understand what visitors are seeking in their wildlife tourism experiences. The survey is completely voluntary, and no information is recorded that can trace survey answers to individuals. The survey will take around 10 minutes of your time. If you would like further information about the project, or are interested in the results, please ask the interviewer for an information card. Thankyou.

1. **In the last 12 months, how many times have you taken a trip to the following places, with the main purpose being to view wildlife?**

Trips to zoos	_____	times.
Trips to wildlife sanctuaries or wildlife parks	_____	times.
Trips to aquariums	_____	times.
Land based trips specifically to view wildlife	_____	times.
Land based trips to places where wildlife is often seen	_____	times.
Water based trips or cruises specifically to view wildlife	_____	times.
Water based trips to places where wildlife is often seen	_____	times.

2. **In general, how interested are you in viewing wildlife while on holidays? Please tick the most appropriate response.**

- O The opportunity to view wildlife is one of the most important factors in my travel decisions
- O The opportunity to view wildlife is included as part of my travel decisions
- O Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things
- O I am not interested in viewing wildlife while on holidays
- O I prefer to avoid viewing wildlife while on holidays

3. **The following is a list of features that people can look for in a wildlife tourism experience. Please mark the THREE that you would say are the MOST important things you look for in a wildlife experience.**

- O Large number of wildlife to see
- O Large variety of wildlife
- O Rare, unique or unusual wildlife
- O Seeing wildlife in their natural environment
- O Seeing wildlife behaving naturally
- O Being able to get close to wildlife
- O Being able to touch or handle wildlife
- O Wildlife is easy to see
- O Feeling safe
- O An untouched natural environment
- O Pleasant environment
- O Interesting information about the wildlife
- O Availability of knowledgeable guides/staff

4. **The following descriptions are examples of types of wildlife experiences. Please read the descriptions and tell us how much you would like to participate in the type of experience described in each scenario.**

SCENARIO 1

The cliff-line was rugged, windswept and remote. Our small group travelled 30 minutes along a dirt road, then walked for 15 minutes down a track to the shore. A cold wind, laden with sea-spray, blew off the deep ocean, and gull cries could be heard on the wind. The crisp air smelt of salt as the sun dipped below the horizon. Sitting on clumps of grass, we watched the penguins come ashore, illuminated by the red glow of filtered torches. Young penguins, left on shore while their parents were fishing, called noisily until reunited. We watched and listened for an hour, then clambered back up the track by torchlight, and back to our vehicle.

4 a) How much would you like to participate in this kind of wildlife experience?

Actively avoid	Not interested	Happy to go along	Very interested	Would love to Participate
O	O	O	O	O

4 b) Have you ever participated in this type of penguin-viewing experience?

O Yes
O No

SCENARIO 2

Penguins nested all along the wharf and the foreshore, just minutes from the main street of the town. Once away from the traffic and restaurants on the main road, we sat quietly and listened for the baby penguins. They came out of their burrows, and called to the parents returning from their night fishing. Illuminated by street lights and red filtered torches, they seemed unconcerned about the people watching them from metres away. The parents appeared out of the dark, cold ocean, looking wet and sleek, and returned to their burrows where they were reunited with their young.

4 c) How much would you like to participate in this kind of wildlife experience?

Actively avoid	Not interested	Happy to go along	Very interested	Would love to Participate
O	O	O	O	O

4 d) Have you ever participated in this type of penguin-viewing experience?

O Yes
O No

SCENARIO 3

We arrived by coach to the large penguin centre, which housed information displays, gift and coffee shops. We strolled along the wide boardwalk, where at dusk some early returning penguins were already seeking their burrows. We sat on some large concrete steps, and watched the beach which was illuminated by spotlights. Groups of penguins could be seen waiting in the shallows, preparing for their dash across the beach. One penguin would make the dash, and up to 10 penguins follow. Their black and white waddles elicited cheers, smiles and laughter from the crowd. We were able to get a close view of the penguins as they waddled under the boardwalk. Afterwards we returned to the complex for some hot chocolate, then back to our coach for the return trip to our hotel.

4 e) How much would you like to participate in this kind of wildlife experience?

Actively avoid	Not interested	Happy to go along	Very interested	Would love to Participate
O	O	O	O	O

4 f) Have you ever participated in this type of penguin-viewing experience?

O Yes
O No

SCENARIO 4

The penguins' enclosure was set in the middle of the spacious zoo, amongst broad walkways and shady trees. The penguins walked and swam in a large enclosure, which also had a series of imitation rock burrows around the outside. Some of the burrows had glass viewing windows for visitors to watch the penguins. The penguins seemed to enjoy a slide set into the rocks, which they used to slide into the water. Visitors watching from above could clearly see the penguins swimming and manoeuvring underwater, and then hopping back on the shore with surprising agility. Visitors could also go down to the underwater viewing platform, where you could see the underwater antics even more clearly.

4 g) How much would you like to participate in this kind of wildlife experience?

Actively avoid	Not interested	Happy to go along	Very interested	Would love to Participate
O	O	O	O	O

4 h) Have you ever participated in this type of penguin-viewing experience?

O Yes
O No

5. **Which wildlife scenario would you MOST like to experience?**
(please mark one only)

- O SCENARIO 1
- O SCENARIO 2
- O SCENARIO 3
- O SCENARIO 4

6. **Why is the scenario (selected above) appealing to you?**

_____

_____

_____

_____

7. **When visiting wildlife attractions where these options are available, do you:**
(please mark the most appropriate response)

	Frequently	Sometimes	Rarely	Never
Seek information about the wildlife prior to visiting? (Eg. On the internet)	O	O	O	O
Read educational signs at the site	O	O	O	O
Go into an on-site education/ interpretive centre and look at displays	O	O	O	O
Purchase guidebooks about the wildlife	O	O	O	O
Participate in a guided tour or ranger talk	O	O	O	O
Take and read information pamphlets about the wildlife	O	O	O	O

8. **Do you engage in any of the following activities?**

	Frequently	Sometimes	Rarely	Never
Seek to view wildlife in your neighbourhood or local area	O	O	O	O
Plant bird–attracting shrubs	O	O	O	O
Put out bird seed/bird baths	O	O	O	O
Watch documentaries about wildlife	O	O	O	O
Give donations to wildlife charities	O	O	O	O
Read books about wildlife	O	O	O	O
Participate in land care/habitat protection in your local area	O	O	O	O

9. **Do you own any books or field guides about birds?**

- O no
- O own one or two
- O own several

10. **Do you own any books or field guides about other wildlife?**

- O no
- O own one or two
- O own several

11. **Do you subscribe to or regularly purchase any of the following magazines?**

- O Wild magazine
- O Habitat
- O Eco
- O Australian Geographic
- O National Geographic
- O BBC Wildlife
- O Nature
- O other _____

12. **Are you a member of any wildlife or environmental organisations or groups?**

- O no
- O yes, which one/s? _____

13. **Please indicate your highest level of formal education**

- O Primary School
- O Junior High School
- O Senior High School
- O Technical college/Business college
- O University – Bachelors degree
- O University – Masters degree or higher

14. **Do you usually travel with children?**

- O no
- O yes.... If yes, please indicate ages:
  - O under 5
  - O 5 – 10 years
  - O 10-15 years
  - O over 15

15. **How important to you are the following reasons for participating in wildlife tourism? Please tick the box that best describes how important each statement is to you.**

	Not at all				Very
To be close to friends and family	O	O	O	O	O
To get some exercise	O	O	O	O	O
To experience the beauty of nature	O	O	O	O	O
To meet new people	O	O	O	O	O
To have some excitement	O	O	O	O	O
To experience an undeveloped environment	O	O	O	O	O
To rest and relax	O	O	O	O	O
To learn more about nature	O	O	O	O	O
To experience some solitude	O	O	O	O	O
To be with others who enjoy things I enjoy	O	O	O	O	O
To develop skills	O	O	O	O	O
To escape normal routine	O	O	O	O	O
To be in a natural place	O	O	O	O	O
To experience something new and different	O	O	O	O	O
To experience adventure	O	O	O	O	O
Learn about wildlife	O	O	O	O	O
To be physically active	O	O	O	O	O
To take great photographs of wildlife	O	O	O	O	O

16. **Please tell us which year you were born** _____,

and gender O Male
O Female

17. Where is your usual place of residence?

O Local North QLD → postcode? _____
O Other QLD... → postcode? _____
O Other Australia → postcode? _____
O Overseas ... → Where? _____

SURVEY NO.

0	O	O	O	O
1	O	O	O	O
2	O	O	O	O
3	O	O	O	O
4	O	O	O	O
5	O	O	O	O
6	O	O	O	O
7	O	O	O	O
8	O	O	O	O
9	O	O	O	O

Thankyou for your time. Our interviewers will give you a free postcard as a token of our appreciation.