Fathoming the Reef:
A History of European Perspectives on the Great Barrier Reef
from Cook to GBRMPA

Thesis submitted by
Rohan James Lloyd BEd/BA (Hons)
James Cook University
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Abstract

The contest between economic development and the preservation of the natural world has had important implications for the way the Great Barrier Reef has been treated, both physically and imaginative, by European Australians. Most recently well circulated imagery of coral from the Reef's north, bleached as a result of higher than normal ocean temperatures caused by climate change, provided a vivid sense of the conflict between industrial development and the maintenance of global environments. In Australia the bleaching event has invited a frank ultimatum from Reef scientists who research the collage of life it sustains: you can have coal mining or the Reef, not both. Embedded in the choice is an understanding that Australians have a complicated appreciation of the Reef. While most Australians appreciate the Reef's natural beauty and romantic appeal, they hold conflicting valuations of coal mining and the jobs it provides. This thesis explores the tension between exploitation of the Reef and its preservation throughout the history of European and European Australian engagement with it. Specifically, it examines the history of perceptions of the Reef by considering how explorers, scientists, politicians, tourist company operators, nature and travel writers, and conservationists discussed the Reef, and how imaginations of its economic and natural attributes fuelled their valuations. This history begins with Captain Cook's encounter with the Reef in 1770 and ends with the establishment of the Great Barrier Reef Marine Park Authority (GBRMPA) in 1975.

Use and management of the Reef today is premised on the notion that it is exposed to a range of competing values and uses. GBRMPA was introduced to ensure that these values and uses, while seemingly contradictory, could co-exist alongside the Reef environment. Importantly, appreciation of the natural values of the Reef, while encouraging a sympathetic view of the environment, has not always restrained the urge to appraise its potential for exploitation. Rather, valuations of the Reef's social, cultural and economic virtues have been complicated by the interaction of both perspectives leading to the creation of a composite attitude towards the Reef.

Consequently, the Reef has been simultaneously perceived, often by the same people, and by those historically characterised as its custodians, as valuable for economic reasons and the natural beauty with which it abounds. This thesis argues that European
perceptions of the Reef have been informed by an entanglement of its imagined economic and natural values since Cook's arrival in 1770. While the Reef's variety has inspired diverse reactions, this thesis concludes that appreciation of its exploitable and natural qualities have interacted to produce a range of complex perceptions of its value to European Australia.
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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.

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Date
Acknowledgements

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Abbreviations and Acronyms

AAS  Australian Academy of Science
ACF  Australian Conservation Foundation
ALP  Australian Labor Party
APEA  Australia Petroleum Exploration Association
ATC  Australian Tourist Commission
CSIRO  Commonwealth Scientific Industrial Research Organisation
GBRC  Great Barrier Reef Committee
GBRMPA  Great Barrier Reef Marine Park Authority
GBRMPA  Great Barrier Reef Marine Park Area
GBRRAC  Great Barrier Reef Resource Advisory Committee
GBRWHA  Great Barrier Reef World Heritage Area
JCU  James Cook University
NAA  National Archives of Australia
NLA  National Library of Australia
NPAQ  National Parks Association of Queensland
QGITB  Queensland Government Intelligence and Tourist Bureau
QGTB  Queensland Government Tourist Bureau
QLS  Queensland Littoral Society
QSA  Queensland State Archive
QTDB  Queensland Tourist Development Board
STRC  Save the Reef Committee
UQ  University of Queensland
WPS  Wildlife Preservation Society
WPSQ  Wildlife Preservation Society of Queensland
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Introduction

The Great Barrier Reef, that vast collage of life and wonder, holds a barely-understood human narrative. European perceptions of the Reef have been shaped, since Cook's calamitous collision in 1770, by its imagined potential for exploitation and astonishment at its natural phenomena.¹ This thesis explores the history of European perceptions of the Reef. Specifically, it considers how appreciations of both its economic and natural attributes have shaped discourses and conceptions of its value. While the Reef's ecological variety has inspired diverse reactions, this thesis argues that appreciations of the Reef's exploitable and natural attributes have fostered a composite perception of the Reef's value. The temporal scope of this thesis ranges from 1770 to 1975, the latter being the year in which the Commonwealth passed the Great Barrier Reef Marine Park Act. That Act formalised, though not explicitly, these historic perceptions of the Reef by legislating its management and maintenance, establishing a legal benchmark to inform its multiple and competing uses into the future.

My decision to focus a Reef history on two strands of discourse which could be characterised as exploitative and preservationist was driven by contemporary Reef issues. With some exceptions, recent accounts of the Reef's history have not shifted the debate on the Reef's use. That debate tends to be dominated by dichotomies of exploiter and conservationist. Narratives about European engagement with the Reef still mostly conform to a generic, and somewhat outdated, environmental history structure; they are stories of progress from a phase of unrestricted exploitation through to the acceptance of conservationist attitudes. In this narrative, episodes of the Reef's history resembling today's ecological assumptions are highlighted as signposts in a progressive march towards ecological consciousness. Human engagements with environments, however, are usually more complex than this narrative implies. This thesis explores the entanglement of the perceived economic and natural values of the Reef. It gives context to contemporary principles of Reef management, and subverts the narrative of 'good' and 'bad' valuations of the Reef. It places European Australians as actors in the Reef's history, not only as agents of its degradation, and demonstrates that the Reef was perceived as a valued environment well before today's environmentalist concerns came to the fore.

¹ For brevity's sake the Great Barrier Reef will often be referred to simply as the 'Reef'. The term 'reef' will be employed to refer to reefs in general.
Throughout the thesis the terms 'economic' and 'natural' are utilised to characterise two broad categories of perceived Reef attributes. While I acknowledge the multiplicity of meanings of these terms, my use of them conforms to discourses and evaluations of the Reef in the historic and contemporary period. 'Economic' refers to the actual and imagined attributes of the Reef which were identified as having commercial, demographic or mercantile importance. 'Natural', on the other hand, refers to the scientific, aesthetic, and cultural qualities which became attached to the Reef.

The economic and natural imaginings of the Reef were entangled from the outset. For instance, in the early nineteenth century, natural historians and explorers were amazed by the Reef's size and the geological forces and biological agents which toiled together to construct the unique wonder. Simultaneously, the Reef's vastness was considered to be of immense value to the prospects of maritime trade. Its islands and coral reefs protected ships bound for foreign markets, and the northern coast of what was then New South Wales, from the battering waves of the Pacific Ocean. Explorers discussed the Reef's great size and its ensuing, envisaged usefulness simultaneously; the economic and natural values of the Reef were inked into the pages of their journals. It was a trend which characterised discussions of the Reef throughout diverse European engagements with it.

Consequently, this thesis considers how science has endorsed the Reef's exploitation while simultaneously asserting its natural values. Science has helped explain the Reef's existence, dynamics and imagined futures since Cook arrived; prevailing scientific discourses have underpinned perceptions of the Reef. Scientists, ranging from nineteenth-century natural historians to twenty-first-century biologists and geologists, have helped foster an understanding of the Reef as a curious, aesthetically pleasing, and ecologically important environment. Scientists have advocated protection of the Reef and stressed the importance of developing more sustainable relationships with its ecosystems. The Reef's potential to produce profitable industries, however, formed a consistent point of emphasis from the scientific community. Scientific organisations expected and promised to uncover the Reef's economic potential. They linked their own significance and esteem, and the Reef's, with their capacity to locate and direct governments to profitable Reef industries. Scientific studies of the Reef wove together economic and natural evaluations and reinforced their entanglement in governmental, bureaucratic and other domains.
Distinguishing between the Reef's natural and economic values became particularly difficult as tourism emerged as a profitable enterprise. Tourism was not only a useful rationale for the Reef's protection; it was also an explicit avenue towards commercial development. In the case of many Reef islands the most obvious form of profitable use, apart from small-scale agricultural pursuits, was tourism. Eventually campaigns emerged to protect the Reef's most spectacular features, for example birds and turtles, for visitors to enjoy. These campaigns, however, were accompanied by those from natural historians, ornithologists and scientists who called for the protection of Reef fauna for the sake of science and, in some cases, to prevent animal cruelty. Moreover, tourism is an equivocal saviour. On the Reef, tourists came to be blamed for the destruction of some of the Reef's most commonly frequented sections. Visitors were blamed for plundering inter-tidal reefs of shells and coral and Chapter Six discusses the contention that the removal of Triton shells from the Reef by tourists had caused the ecological imbalance leading to the arrival of the Crown of Thorns starfish. Nonetheless, in the post-war era, Reef tourism was broadly considered to be the most sustainable form of enterprise that the Reef offered. When the Commonwealth and Queensland governments contemplated the possibility of allowing mineral and oil production on the Reef, conservationists, scientists and much of the Australian public protested against the notion. Most critics of geological exploitation of the Reef suggested that the true economic value of the Reef lay in the further development of tourism. In this sense, the economic viability of Reef tourism helped ensure the implementation of a regime, GRBMPA, which would allow for the long-term protection of the Reef.

This thesis traces the history of the complex and competing values of the Reef. Chapter one locates this thesis within the field of environmental history. It discusses the relevant literature, including histories of the environment, environmentalism, and science. It considers how the politics of environmentalism subvert or enhance the practice of environmental history, and the role of science, especially in the Australian context, as an instrument of nation-building and resource use.

Chapter two discusses the period from 1770 to 1859. It demonstrates that the Reef explorers considered the Reef's inner passage as a vital, safe and secure maritime highway abundant in resources and natural wonders. Chapter three explores the remaining decades of the nineteenth century when Queensland settlement began along
the Reef coast and nebulous ideas about the Reef's value took firmer shape, explicitly defined by its natural and economic attributes.

Chapter four demonstrates that evaluations of the Reef became more complex in the initial decades of the twentieth century. It explores the earliest reactions to the intrusion of exploitative approaches into the Reef's perceived natural values. Chapter five traces the Reef's history from 1945 to 1966. It argues that a 'discourse of concern' emerged in the post-war years as greater awareness of human-induced damage to the Reef arose. As widespread development of Reef industries became increasingly likely, this alertness gathered momentum. Anxieties over the Reef's future climaxed in the early to mid-1960s with the first outbreak of Crown of Thorns starfish. That event brought into sharp clarity the fragility of a coral reef.

In 1967 concern became activism. The final three chapters of this thesis examine the 'Save the Reef' campaign. Chapter six details the most public and contested periods of the campaign from 1967 to 1969. Beginning with an objection to mine Ellison Reef for limestone, the campaign soon escalated into a national movement to protect the entire Reef from oil exploration. That period has attracted attention, perhaps more than any other period of Reef history, and this chapter utilises sources not hitherto considered alongside more commonly utilised texts.

Chapter seven discusses the first six months of 1970. In early January 1970 a trade union black ban was announced on ships and rigs employed to drill or explore the Reef for oil. The intervention of unions provided the necessary impetus for the Commonwealth to push for the appointment of a Royal Commission into petroleum drilling on the Reef. Chapter seven considers the black ban, its role within the 'Save the Reef' campaign, and the manoeuvrings of the Commonwealth and Queensland governments and the conservationists during the lead up to the Royal Commission.

Chapter eight analyses the transcripts and evidence presented to the Royal Commission. It shows that the Commission hearings were predicated on the legitimacy and prevalence of the entanglement of the economic and natural values of the Reef. The 'Save the Reef' campaign is often considered a referendum on how the Reef was to be managed and preserved. The Commission allowed the articulation of the principles which eventually informed that formal management entity – the Great Barrier Reef Marine Park.

What actually constitutes the Reef has been contingent on historical and political circumstances. Historically, the Reef's eastern barrier has been easily
distinguished; its outer edge, signalled by the breaking waves of the Pacific, corresponds with the edge of the continental shelf. The Reef's length, however, has had varied dimensions. Cook's Labyrinth began just north of Cape Tribulation and only extended to just north of Booby Isle (see Map 1); a diminutive structure compared to Flinders' outline of the Barrier Reef's fewer than four decades later (see Map 2). Cook's Reef included only the sections which caused him grief. Flinders, however, was relatively untroubled by the Reef's maze, and made the geographical connection between the southern, less dense section of the Reef and Cook's Labyrinth. He outlined the Reef's southern and northern extremities at Break Sea Spit (the northern passage around Fraser Island) and in the Torres Strait reaching towards New Guinea, respectively. Additionally, historic records, and some histories of the Reef, conflate the Reef with the Torres Strait and the Coral Sea. Indeed, the importance of the Reef as a maritime avenue leading to the Torres Strait led some to assert that Break Sea Spit was an entrance to the Torres Strait. While 'inner-route' and 'inner-passage' were the most common nomenclature of the Reef's internal lagoon in the nineteenth century, variations such as 'Torres Strait Passage' were also used. Furthermore, fear of the Reef was often a response to maritime disasters in the Torres Strait caused by vessels being wrecked when attempting to enter the Strait or the Reef's inner lagoon from the Coral Sea. Meanwhile, ships which wrecked on unconnected reefs within the Coral Sea itself have become included in narratives of Reef-wrecks. Flinders' wreck on Wreck Reef in the Coral Sea, for example, often becomes interwoven with narratives of Barrier Reef shipwrecks although this was not the case in Flinders' own times. His wreck on a reef demonstrated their inherent dangers to maritime traffic, not the danger of the Reef itself. Maritime navigation aside, the industries active in the Torres Strait – dugong hunting and turtle, bêche-de-mer, pearl-shell and trochus fisheries – were also active along the Reef.\(^2\) Profitable Torres Strait industries were included within evaluations of the Reef's economic value.

While Cook's, Flinders' and various other historic definitions of the Reef have been confined by geographic awareness or defined by industry's reach, twenty-first century conceptions have been shaped by the politics of conservation. The two most popularly used definitions of the Reef are the Great Barrier Reef Marine Park Area

\(^2\) Pearl-shelling is perhaps the industry least well represented along the Reef. The 1899 disaster at Princess Charlotte Bay, however, in which a cyclone swept through schooner fleets anchored there killing 307 men and devastating the Torres Strait pearling fleet shows that these fleets sought out grounds in the Reef.
(GBRMPA) and the Great Barrier Reef World Heritage Area (GBRWHA) – the latter of which was announced in 1981. The Great Barrier Reef Marine Park Authority (also GBRMPA), a Commonwealth agency, oversees the areas of the Reef which conform to Commonwealth management jurisdiction. Consequently, GBRMPA manages approximately 99.25% of the GBRWHA; the remaining 0.75% is comprised of islands (most of which are Queensland National Parks) and waterways and small exclusion areas around major ports and urban centres which come under state and local government jurisdiction.\(^3\) Issues arising from the boundaries of GBRMPA and GBRWHA have made the Reef's management problematic.\(^4\) Additionally, contemporary issues surrounding the Reef's health, particularly issues arising from poor water quality, have forced the inclusion of the Reef's catchment area – approximately 424,000km\(^2\) of Queensland's mainland – in contemporary charts. Finally, twenty-first century Reef maps also include the perimeters of what is known as the Great Barrier Reef Province (GBRP), an area defined by the geologist W.G.H Maxwell in his *Atlas of the Great Barrier Reef* (see Map 8). The GBRP extends northward to the southern coast of Papua New Guinea and just south of Lady Elliot Island (north-east of Bundaberg).\(^5\) The variable dimensions of the Reef in many ways reflect its diverse biology and geology along with the varied approaches to it throughout European engagement.

This thesis will adopt a set of parameters based on composite historic conceptions of the Reef. Throughout the thesis the Reef's northern and southern extremities will be the southern coast of Papua New Guinea and Break Sea Spit respectively. The islands and reefs, which act as a natural blockade to the Torres Strait, formed an important part of the discourse on the Reef in the period under analysis. Additionally, Break Sea Spit, identified as the southern entrance of the Reef's inner-passage, held importance for navigation purposes. Fraser Island, which has been included in other histories of the Reef, will not be considered in this thesis. The eastern parameters will conform to the edge of the continental shelf. While the rest of the Coral Sea will be considered, where necessary, it will be discussed as a region distinct from the Reef.\(^6\) The western extremity largely conforms to Queensland's coastline, although

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\(^4\) Ibid.
\(^6\) The Reef actually lies within the Coral Sea, which itself lies within the Pacific Ocean. The distinctions drawn between these bodies are human artefacts and not the result of natural phenomena. Nonetheless, this thesis conforms to those distinctions.
both the economic and natural values of the Reef coast will be considered. The north-western boundary in the Torres Strait will conform to the GBRP boundary. Additionally, this thesis will consider the Reef as including all its cays, islands, waterways, flora, fauna, reefs, subsoil minerals, and climate.

The Reef's ecological diversity has been reflected in the varied conceptions of it. For the purposes of this thesis, however, only European and European Australian – or, more broadly, non-Indigenous – perceptions will be considered. The dominance of European perspectives in this thesis reflects the prevailing voice in the historic record. The lack of Indigenous perspectives in the record and within this thesis, however, is not a reflection of their absence from the Reef. The Reef is traditional country for more than seventy Aboriginal and Torres Strait Islander Traditional Owner groups. Their presence along and utilisation of the Reef has been evident since Cook's passage in 1770. The first contacts between European and Indigenous peoples on the Reef could vary from banal and benevolent to hostile and confrontational; all interactions reminded explorers that the Reef was already a utilised and valued environment. Aboriginal and Torres Strait Islander peoples often guided Europeans to sources worthy of commercial pursuit or acted as a valued labour asset in Reef industries. Additionally, Indigenous people's interactions with the Reef inspired some Europeans to develop and promote a more sympathetic relationship with it. Indigenous perspectives, however, were not included, or at least not explicitly considered, in the campaign which led to the establishment of GBRMPA. Despite being predominantly concerned with European perceptions of the Reef, this thesis is not blind to the role of Aboriginal and Torres Strait Islander peoples within that story. The history of Indigenous perspectives on the Reef, while intersecting at times with this narrative, has its own distinct trajectory. Consequently, the primary concern of this thesis is to consider how European Australians, who as a group form a major ecological agent in Australia's recent environmental history, perceived the Reef.
Chapter One – Environmental History

In 2014 the coral reef scientist Terry Hughes lamented the 'poor' condition of the Reef's health. His criticism was principally directed at the Reef's management, and included this statement on GBRMPA:

The 1975 Marine Park Act states that the overarching objective of the Commonwealth is to protect and conserve the Great Barrier Reef Region. Today, the focus is less on protection and more on management of multiple uses, including plans for some of the world's largest coal ports.¹

This statement embodies a modern scientific discourse about the Reef which is underpinned by a sincere concern for the Reef's present and future.² Hughes' remark, however, is also indicative of a pervasive, though erroneous, belief about the principles which underpinned GBRMPA's genesis. The statement sustains the notion that GBRMPA's philosophical underpinnings have been corrupted from the virtuous ideals of environmentalism which constituted its original rationale. Hughes, along with other coral reef scientists, have criticised the way governments, industry and GBRMPA have sidelined

the voices of the scientific community, been slow to implement effective management policies, or in the case of the coal ports, disregarded advice completely. ³

Hughes is not alone. The celebrated coral reef scientist, Charlie Veron, declared at the beginning of his book A Reef in Time: the Great Barrier Reef From Beginning to End, that had he written it in the 1970s he would have only devoted one or two pages to conservation issues and would have ended it with this 'heartwarming bromide: "And now we can rest assured that future generations will treasure this great wilderness area for all time"'. ⁴ The Reef, Veron claimed, 'seemed more than big enough to look after itself, and what few issues there were seemed to fall easily within the scope of the newly constituted marine park authority'. ⁵ Both Hughes and Veron, along with many other commentators, both scientific and lay, express an a-historical memorialisation of the Reef's past and the role of science within it.

Undoubtedly GBRMPA was established to protect and conserve the Reef. GBRMPA, however, was intended to ensure that the Reef would be maintained alongside the multiple uses, including those involving economic exploitation, which informed the Reef's broader social value. Both Hughes and Veron's accounts reflect a mythologised interpretation of the 1970s environmental movement enhanced by histories of the Reef in which scientists have been presented as the Reef's custodians and conservationists as its most ardent defenders. Together, within this myth, those two groups helped to protect a precious, fragile environment from rampant economic development. As a result, the Reef's importance to the communities and peoples who have lived alongside it has been marginalised. This marginalisation has led to assumptions about how people conceived and engaged with the Reef in the past and contributed to simplistic categorisations of popular approaches to the Reef as only exploitative or conservationist. Correspondingly, histories of the Reef portray ecological consciousness, or a sympathetic regard for the Reef, as the

⁵ Ibid.
preserve of a few against a benighted mass of exploiting 'others'. The complexities of human relationships with the Reef have been lost.

Reef histories in that mould do not reflect the dynamism of Australian environmental history. The following is an overview of the range of ideas and arguments found within the secondary literature, which will both inform and shape my history of the Reef. That overview describes the rise of environmental history within the context of the broader historical discipline, as well as highlighting the major themes of the Australian environmental history tradition. Additionally, it explores, both independently and in relation to environmental history, literature relevant to histories of environmentalism, science and tourism. Recognition of the broader historical debates surrounding these subjects will give greater context to the issues which will come to light throughout my scrutiny of historical perspectives on the Great Barrier Reef.

**Environmental History**

Environmental history, at its most basic, is the study of the ways humans have passively and deliberately interacted with their environments and how environments have shaped human thought and action. While the environment has always played a role in human activity, historians have only recently explicitly addressed this relationship in a sustained and systematic fashion. Alfred Crosby argued that prior to World War Two, historians had no interest in 'the story of humanity as an often passive or distracted participant in local, regional, and world-wide ecosystems'. The natural and human worlds, their histories and pasts, were considered distinct. History, as R.G. Collingwood declared, was not concerned with non-historical processes, or more precisely, 'natural processes'. 'The processes of events which constitute the world of nature', he concluded, 'are altogether different in kind from the processes of thought which constitute the world of history'.

The events of World War Two (especially the bombings of Hiroshima and Nagasaki), the Cold War, and images of the Earth like *The Blue Marble* provided the greatest example of the Earth's finiteness and the actual and potential impacts humans have upon it. This acute environmental awareness brought with it a sharpened form of

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environmental politics which tipped over into activism throughout the Western world.\(^8\) Simultaneously, awareness was brought to bear on history's role in understanding the modern ecological predicament. Histories of environmental change, either naturally occurring or as a consequence of rapid human development, had formed part of discourses of non-history disciplines for nearly a century. Indeed, geographers, palaeobotanists and archaeologists had been scrutinising environmental change and the role of humans in it for decades prior to the American historical profession's awakening.\(^9\) But it was post-war events which forced historians to acknowledge that 'humans had over the ages radically influenced the environment'.\(^10\) As David Lowenthal argued, 'future anxiety called for historical inquiry'.\(^11\) Humanity's past required ecological contexts.

In the United States, environmental history tended to be written by and for those engaged in the environmental movement. Environmental history's emergence was driven by 'the environmentalist movement of the 1960s and after'.\(^12\) The appearance of environmental history occurred as history became divided into specialised sub-fields and histories of marginalised groups such as women and black people arose. As Peter Novick suggested, black and feminist historians within the American profession maintained loyalties to their broader social movements and advocated and acted out a 'thoroughgoing transformation of historical consciousness'.\(^13\) Environmental histories were similarly 'mission-bent' and were often 'cast in a rhetoric of blame' against past societies' hubris, greed and brutality.\(^14\) Alternatively, pre-human and then pre-colonial and pre-agricultural environments and indigenous peoples were positioned as virtuous examples of 'humanity attuned to nature's supposed harmony'.\(^15\) The moral purpose of environmental history and

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8 Crosby, 'The Past and Present of Environmental History,' 1178.
10 Crosby, 'The Past and Present of Environmental History,' 1185.
12 Crosby, 'The Past and Present of Environmental History,' 1186.
14 Lowenthal, 'Genesis to Apocalypse,' 40.
15 Ibid.
the links with ecological politics were not just a characteristic of the craft but formed part of an origin story.\textsuperscript{16}

As Tom Griffiths argued, however, environmentalism and environmental history may be bedfellows but their relationship is not always easy. The two are distinct phenomena; one is social activism which seeks to categorise as distinct nature and culture while the other (history) is 'so eager to enmesh' the two.\textsuperscript{17} Additionally, as Drew Hutton and Libby Connors (and other historians of conservation) have asserted, environmentalism, 'lacking a sense of its own history', suffers from 'historical amnesia' and tends to view itself as new and radical.\textsuperscript{18} These conflicts notwithstanding, few could deny the threads of environmentalism entangled within the narratives of environmental history.

The strong links between the political and 'moral purpose' of environmental history were precisely the issues which attracted criticism.\textsuperscript{19} Environmentalism's shaping of environmental history - much like the politics within feminist, black and other specialised histories – threw the broader discipline's objectivity into question. The objectivity question had plagued history since its emergence as a professional discipline in the late nineteenth and early twentieth century. Historians departed from literary styles of history and sought a level of 'scientific' accuracy and objectivity, along with professionalism, which would be achieved through adoption of a rigorous 'scientific method' of research. History's value, it was reasoned, was presenting the past as it 'actually occurred'.\textsuperscript{20} The professionalisation of history, Peter Novick claimed, enforced a consensus on methodology and gave legitimacy to the idea of history as a science along with its objectivity.\textsuperscript{21} Disputes regarding the scientific or artistic merit of history abounded in the early twentieth century. It was, however, social scientists' use – or misuse – of Einstein's theory of relativity which dramatically shifted the criticism of history and its aspirations for objectivity. History,

\textsuperscript{17} Ibid., 377.
\textsuperscript{19} The notion of a moral purpose comes from Donald Worster, 'Appendix: Doing Environmental History,' in \textit{The Ends of the Earth: Perspectives on Modern Environmental History}, ed. Donald Worster (Cambridge: Cambridge University Press, 1988), 290.
\textsuperscript{21} Novick, \textit{That Noble Dream}, 51-3.
Richard Evans suggested, was perceived, and accepted, to be written either consciously or unconsciously from the contemporary perspective of the historian.\textsuperscript{22} It was within this intellectual climate that Collingwood asserted 'that the historian must re-enact the past in his own mind'.\textsuperscript{23} For Collingwood, and others, the declaration that history dealt with thought, as opposed to the natural sciences which studied 'a given or objective world distinct from the act of thinking it' only further widened the gap between history and the environment.\textsuperscript{24} 'Of everything other than thought, there can be no history' he declared.\textsuperscript{25} What saved history from unfathomable grounding, according to Collingwood, was its universality.\textsuperscript{26} The pursuit, however, of feminist, black, and environmental history – fuelled by the politics of each – disrupted the 'universalism' which had made 'up the norm of historical objectivity'.\textsuperscript{27}

In the wake of the particularisation of history, which encompassed environmental history's emergence, came the postmodern critique of the relevance of history and the historiographical tradition. Postmodernists argued historians relied upon textually positioned evidence, language limited their ability to interpret the past, and their own narratives were subjective realities formed through their political and social biases. Keith Jenkins proclaimed histories were 'metahistorical constructions' providing theories of how the past 'should be appropriated'.\textsuperscript{28} Facts were presented within narratives to suit pre-conceived political agendas. While some historians, perhaps most, found within 'the phenomenon of historical overproduction' a broadening of intellectual horizons and deepened and transformed understandings of the past, the postmodernists found despondency.\textsuperscript{29} Tom Griffiths' celebratory declaration that the Australian summer 'long ago failed to be sufficient to read out local environmental histories', was emblematic of nearly all fields of history towards the end of the twentieth century.\textsuperscript{30} An historian could not

\begin{itemize}
\item\textsuperscript{22} R.J. Evans, \textit{In Defence of History} (London: Granta Publications, 2000), 30.
\item\textsuperscript{23} Collingwood, \textit{The Idea of History}, 282.
\item\textsuperscript{24} Ibid., 305.
\item\textsuperscript{25} Ibid., 304.
\item\textsuperscript{26} Ibid., 303.
\item\textsuperscript{27} Novick, \textit{That Noble Dream}, 469.
\item\textsuperscript{29} Perez Zagorin, 'Historiography and Postmodernism: Reconsiderations,' \textit{History and Theory} 29, no. 3 (1990): 267.
\item\textsuperscript{30} Griffiths, "Seeing the Forest and the Trees," 255.
\end{itemize}
possibly review the entirety of publications related to a particular field of history. To the postmodernists this was evidence of a mass of interpretation. 'We no longer have any texts', the Dutch philosopher and political historian Frank Ankersmit declared, 'just interpretations of them'.

William Cronon provided the most well-known defence of environmental history against post-modernism. Other historians had defended or rejected post-modernist criticisms of history, but Cronon articulated not only a 'place for stories' but the importance of environmental stories within history. His defence of environmental history conceded that histories, in this case those of the Great Plains drought of the 1930s, could be shaped to present a progressive or 'declensionist' structure. 'Whatever its overt purpose', Cronon conceded, 'it [narrative] cannot avoid a covert exercise of power: it inevitably sanctions some voices while silencing others'. Whatever the politics of the historian, they would be bound up in the narrative. Cronon, however, did not offer a retreat but embraced the importance of narratives. He argued that while narratives are undoubtedly guided by the political, social and economic bias of the historian, those stories were still immensely valuable. Narrative and stories are fundamental to the way humans organise and present knowledge. Without stories we lose track of our understanding; narratives make us care about our histories, strengthening the links between our past, present and future. Cronon argued that environmental historians aspired for objectivity by meeting their scientific counterparts in understanding the 'mechanisms of nature' while maintaining the narrative form which was fundamental to history.

The narrative of environmental histories, however, is inevitably bounded by truths embedded within the environments being studied. In Cronon's case, neither narrative of the Great Plains could avoid the fact that a drought occurred, and both sought to place human history within these natural processes. Cronon offered a reminder to postmodernists that environmental history in particular, but history generally, made claims about an external world that offered different evidence and distinct interpretations than texts. In 1995, Alfred Crosby suggested that environmental historians were more 'interested in dirt than in

33 Ibid., 1350.
34 Ibid. P. 1349
perceptions, per se, of dirt', a disposition which, he argued, freed them from the suffering of 'epistemological malaise' brought on by post-modernism.\(^35\) The vastness of environmental history, however, suggests that the discipline's vision has widened considerably – including an interest in perceptions of the environment – and embraced the epistemological pitfalls which that entails.

Environmental history has diminished the gap between culture and nature and brought about a closer relationship between history, science and other disciplines orientated towards the natural world. Modern industrial practices may highlight our present impacts upon the environment, but, as David Lowenthal demonstrated, scientists and archaeologists have exposed the longevity of the links between human action and 'natural agency'.\(^36\) Increasingly, the interest taken by humanities scholars in the natural world has made the temporal scope elastic; elongating historical perspective. Likewise scientists have taken earnest steps towards producing long, global, even universal, stories of the evolution of our species.\(^37\) In response, Big History, a notion established by historian David Christian but heavily informed by the French Annales historians' notion of the longue durée, has reinserted history's role into these global species-focussed narratives.\(^38\) Even the future, typically dangerous ground for historians, has become increasingly of concern with the crisis of global change.\(^39\) The emergence of a discourse surrounding our entrance into an Anthropocene, a geological epoch distinguished by human impacts on global geology and ecology, has provided historians, not just environmental historians, entry into discussions of the importance of our earthly world and our common existence in the past and into the future.\(^40\) While an important divide remains between history and science – history's explicit pursuit and embrace of morals and values is still largely at odds with the scientific

\(^{35}\) Crosby, 'The Past and Present of Environmental History,' 1188-89.
\(^{36}\) Lowenthal, 'Genesis to Apocalypse,' 41. An example of the kind of works fundamental to this understanding was John Mulvaney's Prehistory of Australia originally published in 1969. See: D. J. Mulvaney, Prehistory of Australia, ed. Johan Kamminga (Washington, D.C: Smithsonian Institution Press, 1999).
enterprise – the gap in scope is becoming smaller and, more importantly, less schismatic. Additionally, the political edge, which formed such an important role in driving the emergence of environmental history, still plays a significant role in informing the craft. Accordingly, environmental historians, or even environmental humanists, are positioning themselves and their craft as crucial agents and partners within a global change crisis.

**Australian Environmental History**

Australia, as Tom Griffiths has eloquently shown, has its own environmental history style. It is an approach which reflects Australia's unique history of human occupation and engagement with its ancient ecology. As Griffiths asserted:

> Indeed, we can argue that Australia's unusual history and natural history have shaped an innovative environmental enquiry, one that has a peculiarly intimate relationship to deep time, is required to learn a very different ecology, and needs to comprehend the last ice age as a human experience. History has emerged as a tool in helping Australians understand their land, and in enabling them to reimagine their continental nation as also a jigsaw of bioregional countries, which was for so long its state.

Australian environmental histories have fundamentally shifted the foundational narratives of Australia's human history. They have exploded the scale of Australia's history by bringing into consideration its existence in deep-time, and provided vivid illustrations of Australia's pre-human ecology. They have highlighted the ecological impact of Indigenous peoples, along with the importance of place and belonging and the associated trauma of their dispossession. They have incorporated ecology and biology into

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43 Tom Griffiths, 'Environmental History, Australian Style,' ibid.46, no. 2 (2015).
44 Ibid., 167-8.
narratives of settlement, seamlessly blending nature's histories, shifts in Australia's climatic patterns, and the discourses of science within a broader narrative of Australia's human past.  

Importantly, narrative and associated political inclinations have informed these histories. There have been emphatic political tomes. Angry denunciations have assailed European Australia's inability to understand the fragility of the continent's ecology and persistence with damaging forms of development, often at European Australia's own peril. An early example was A.J Marshall's *The Great Extermination: A guide to Anglo-Australian Cupidity, Wickedness and Waste*, which claimed that: 'The bush, to our great-grandfathers, was the enemy: it brooded sombrely outside their brave and often pathetic little attempts at civilisation; it crowded in on them in times of drought and flood'. The idea of 'war' explicitly places the natural world as a key agent in an on-going battle of post-colonial settlement. It is a theme explicitly dealt with in some recent histories. In *Taming the Great South Land: A History of the Conquest of Nature in Australia* William Lines suggested that Australia's colonisation was informed by a 'shared conviction that science, technology and economic growth' were capable of resolving all issues of life, thought and human worth. Within this ideological framework, Lines claimed, the natural world was perceived either positively for its utilitarian purposes, or negatively as a barrier against greater progress. It is an apocalyptic narrative, filled with despair and anger for Australia's lost ecologies.

Emphatic political narratives, however, are rare contributions to Australian environmental history. Development, land use, and ecological degradation are inescapable themes of European histories of Australia, as are narratives of dispossession. Notwithstanding, acknowledging these themes does not necessitate such intensely polemic

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51 Ibid.
narratives. In the beginning of *Taming the Great South Land*, Lines launched a criticism of the Enlightenment project, in particular the advances in science. He asserted, 'the founders of modern science constructed a mechanistic model of nature which yielded context-free, value-free knowledge of the external world'.\(^{52}\) Nature and people, in this framework, became manageable or, more sinisterly, the natural world was able to be coolly dissected and enslaved for human purposes.\(^{53}\) This argument, however, neglects to consider the simultaneously inspired eco-centric or sentimental perspectives of the natural world which emerged as a result of the Enlightenment and its successor cultures of transcendentalism and romanticism. For instance, few would doubt the sentimentalism with which Gilbert White in the late eighteenth century detailed the flora and fauna of his small Hampshire village.\(^{54}\) As Griffiths states, the 'affectionate empathy, the sense of place, and the human associations' prevalent throughout *Natural History of Selbourne* took longer to manifest in Australia where Europeans found themselves in an alien land, without a familiar tradition nor a sense of intimacy.\(^{55}\) Yet those associations with Australia's environment did emerge in the nineteenth century. An affectionate or romanticised appreciation of Australia's natural world pushed European Australians out into the natural world for holidays, day-trips and picnics or encouraged a culture of bushwalking.\(^{56}\) It provided the philosophical underpinnings for popular natural history pursuits like ornithology.\(^{57}\) And it inspired environmental visions to be captured in art.\(^{58}\)

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\(^{52}\) Ibid., 17.


A history of European Australia's value-laden visions of the environment is captured in Griffiths' *Hunters and Collectors: The Antiquarian Imagination in Australia*. It recounts a history of popular engagements with the environment in the late nineteenth and early twentieth centuries through the organisations and individuals who ventured out and piece by piece – by digging, shooting, collecting, observing and writing – put together the Australian historical and environmental jigsaw puzzle. Griffiths captured the history of historians 'who influenced popular attitudes to nature and the past in the late nineteenth and early twentieth centuries…who tried to confront and overturn the melancholic strain of the local environmental and historical imagination'. These narratives, while dealing explicitly with ecological shifts and change both human-induced and naturally-occurring, position the post-settlement human story of Australia as a consistent reconciliation of our place on this continent. With the elongated perspective of deep-time, narratives of European settlement in Australia and the associated ecological shifts become but a single episode in a series of human engagements and accompanying change.

Within this framework the antagonists within the ecological 'war' change, as Geoffrey Bolton laid out in *Spoil and Spoilers: A History of Australians Shaping Their Environment*:

One way of looking at the environmental history of Australia is to see it as a conflict between those who exploited the country to serve preconceived economic goals and imported attitudes of mind, and those on the other hand who sought to create civilisation where human use of resources was compatible with a sense of identity with land.

Recently, historians and humanists have begun to scrutinise this schism by considering the histories of ecological consciousness within Australia. Their enterprise has provided twenty-first century environmentalists with an inherited legacy, along with criticisms of their sustained mythologising of their own novelty. Richard Grove, taking a global

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60 Ibid., 5.
perspective, demonstrated the antecedents of environmental concern and exposed the roots of a "discourse of environmental concern" in the colonial period as European powers expanded into and were exposed to tropical and arid environments. His history emphasised the importance of environments at the periphery, rather than intellectual shifts in the metropole, for providing the impetus for tangible environmental action. Subsequently, Tim Bonyhady argued that the settlement of Australia began with an environmental sentiment alive to the necessity of environmental protection and planning. More recent foundational histories of Australia have made apparent the importance of the environment in the visions, planning, and limits of settler ventures.

In the Australian context the history of environmentalism and ecological consciousness has two landmark texts. Drew Hutton and Libby Connors' *The History of the Australian Environment Movement*, provided a survey of environmentalism as a social movement, similar in legacy and importance to the labour and women's movements. They considered its presence in Australia as a constant and important feature in the Australian social fabric. The movement, broken into two waves defined by time and aspirations, opened up debates on environmental management and was critical of the destructive tendencies of industries and instrumental in securing parcels of land for government protection. The other book, Libby Robin's *Defending the Little Desert: The Rise of Ecological Consciousness in Australia*, traces a national consciousness through the lens of the conservation campaigns waged to protect the Little Desert region in north-western Victoria. At the heart of both books is an attempt to draw together the complexities, and sometimes competing agendas, of environmental approaches which have formed the direction of European Australia's interaction with nature. As Robin argued, and Stephen Dovers advocated with regard to environmental histories, there are many forms of

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conservation, continuities and discontinuities, all informed by political, social economic and ecological contexts and agendas.68

Australian environmental history is fuelled, in part, by the competing and dynamic human approaches to nature and the associated ecological transformations. Both issues come under sharp and illuminating review in Ecology and Empire: Environmental History of Settler Societies, a collection of essays edited by Tom Griffiths and Libby Robin.69 The book borrowed, criticised and built upon Alfred Crosby's Ecological Imperialism, and gave further insight into the impact of empire and imperialism upon 'settler' ecologies. It highlighted the dual perspectives which were formed by settlers experiencing their new environments. It shattered understandings of ecological change in the colonies as passive events of human accident, representing that change as a composite of deliberate human action and the agency of flora and fauna. It considered both the accidental and purposeful consequences of empire upon ecologies. Without detracting from the agency of the environment and its independent role within human histories, the book makes clear that 'human responsibility remains a central and inescapable issue'.70

In Ecology and Empire, 'ecology', while referred to as the connections in and between communities of flora and fauna, was also considered as a lens through which landscapes were interpreted. Robin traced the development of the science of ecology in Australia in an 'explicitly political context'.71 'An Australian window on environmental history', Robin declared, 'can again alert us to a more general phenomenon: that "ecology", in its guises as a self-conscious, twentieth-century science, was partly an artefact of empire.'72 Science justified exploration and the discovery of resources which validated the 'great imperial venture'.73 The spread of empire was complicit with a civilising mission both towards Australia's natural world and its human inhabitants. Eurocentrism, along with the emerging theory of evolution, shaped a belief that Aboriginal people and native fauna and flora would subside in the face of strong, superior, European counterparts. Science

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69 Griffiths and Robin, Ecology and Empire.
70 Tom Griffiths, "Introduction" in ibid., 3.
72 Ibid., 64.
73 Ibid., 63-4
became implicated with 'settling' and increasingly became attached to national development and its economic value, especially after the establishment of the Commonwealth Scientific Industrial Research Organisation (CSIRO) in 1926. As Ian Inkster and Jan Todd suggested, greater governmental responsibility given to the colonies changed the political agenda of Australian science. No longer merely a tool of empire, science became responsive to the national mission even if the mother country continued to be a source of funding.

Robin's work builds upon a history of science which contextualised its growth in the colonies and Australia within broader discussions of the periphery and the metropole, 'applied' and 'pure', and professional and popular. Of these, George Bassalla's framework for the diffusion of Western science remains a consistent model of reference. Bassalla presented the diffusion of science to the colonies, and its development within them, as a three-phased linear process moving from dependence to independence. In phase one, European scientists visited the newly discovered lands or cultures and surveyed and collected flora and fauna and studied the physical aspects of the land. Phase two, also referred to as 'colonial science', is epitomised by the growing numbers of scientists within the colony itself. Science in the colony remained dependent upon the dominant European centre for support and intellectual sustenance. Colonial science reached independence in phase three.

Bassalla's framework, however, has come under critical scrutiny. Both Roy Macleod and Ian Inkster provided criticisms and alternative models of the development of science in Australia. As mentioned, Inkster considered that in Australia, the changing nature of both the 'support structure' and the 'intellectual-psychological orientation of the

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74 Ibid., 65. Originally called the Council for Scientific and Industrial Research (CSIR)
76 George Basalla, 'The Spread of Western Science,' Science 156, no. 3775 (1967).
77 R MacLeod, 'On Visiting the 'Moving Metropolis': Reflections on the Architecture of Imperial Science,' Historical Records of Australian Science 5, no. 3 (1980); Inkster, 'Scientific Enterprise and the Colonial 'Model': Observations on Australian Experience in Historical Context.'
scientific community' was dictated by changing local economic imperatives. For Inkster, there was some pattern in the development of science 'in areas of recent settlement', but refuted the notion of a generalised pattern. 'The history of Canadian science', he argued, 'is not precisely that of Australian science'. Macleod argued that Bassalla's work failed to consider the complexities of contexts across the reaches of 'Western Science'. His alternative schema divided the development of science in Australia into periods, with scientific practice in each period distinguished by its institutional ethos, social and political characteristics, and its economic and technological functions; science was driven by political winds and whims of empire and then of the nation. Macleod made explicit the idea that science could not be viewed as 'benevolent, apolitical and value-neutral' nor 'value-free aid to material progress and civilisation'. In MacLeod's view science is a means of control, through organising, labelling and classifying the world which unescapably privileges some while marginalising others.

The idea of science as a means of 'controlling' the natural world is developed in histories of oceanography. The study of the world's oceans – their depth, tides, currents, winds, and biota – during the eighteenth and nineteenth century was controlled and driven by governments as part of a broader agenda to control the seas. Margaret Deacon's foundational narrative on the history of marine science demonstrated that the enterprise prospered when governments, who were eager to gain greater knowledge of both the geography and resources of the oceans, were inclined to offer both finances and security for its pursuit. Accordingly, scientists became agents for imperial progress. In conjunction with the imperial mission these grand voyages improved the esteem of science and scientists, broadened the fields of investigation and led to the generation of new theories.
and the development of new technologies. In the Australian context, Ian and Joyce Jones suggested research in Australian waters was done as part of the broader agenda of the British Empire. More recent studies of early colonial encounters have sought to link the practice of exploring and categorising with visions of Australia's environment.

At the heart of the scientific enterprise is a pursuit of objective explanations of the material world. Scientific 'facts', juxtaposed with historical 'facts' for instance, are considered epistemologically superior. Science, however, like history, is subject to change, driven by agendas often beyond the practising community. Societies and the natural world itself, both shifting and changing constantly, unearth new pursuits while burying others. Historians are perhaps better equipped than scientists to understand and explain these shifts and points where the natural and human worlds interact along temporal trajectories. In the case of the Great Barrier Reef, there is certainly a need to do so.

National Parks, 'Worthless Lands' and Tourism

Before discussing more specific works regarding the Reef it is pertinent to consider the histories of national parks, the 'worthless lands' thesis and the burgeoning international scholarship surrounding preservation, exploitation and tourism. Alfred Runte's National Parks: The American Experience broke open the debate about the origins and purpose of national parks by setting out his 'Worthless Lands' thesis. Runte argued that Congress allowed the declaration of Yellowstone National Park largely because it deemed the land to be 'worthless'. Runte adopted the term from the Congressional debates where it was used to refer 'only to the absence of natural resources of known commercial value, not to scenery, watersheds, or wildlife with obvious inspirational or biological—if not direct monetary—

84 Jones, Oceanography in the Days of Sail.
Essentially, Runte sustained, Congress's designation of prospective national parks as being composed of 'worthless lands', was 'to assure prospective miners, loggers, farmers, and ranchers that national parks to be carved from the public domain were unsuitable for sustaining the traditional economic pursuits of the American frontier'. Runte's theory was a significant affront to accepted notions of the 'meaning' of national parks as the symbols of national altruism, sympathy and conservation.

Runte's 'worthless lands' thesis significantly broadened the opportunity for scholarship in the history and meaning of national parks and prompted substantial debate. Richard Sellars and Peter Cox each published criticisms of Runte's central argument. Sellars' main criticism was that Runte's definitions of national parks, and 'worthless lands' were far too narrow. In the case of 'worthless lands', Runte, Sellars claimed, failed to account for the value of land as either real estate or as the potential foundation of tourist trade. Cox reiterated Sellar's claims and contended that many parks in the United States had been gazetted despite long struggles against 'those who feared a "locking up" of resources'. In turn, Runte responded to criticisms that he had failed to account for the diversity of values attached to land and had failed to recognise competing economic interests. In the case of tourism Runte claimed the development of mass tourism associated with national parks:

> Does not contradict the 'worthless lands' hypothesis—it supports it. In the chess game of scenic preservation, ecology was the pawn—only economics could checkmate economics. Through its evolution into an industry, tourism overcame the 'limits of altruism', so to speak, by providing the national park system with a practical defense.

Runte has since claimed that Congress's definition of 'worthless' varied with both the time and place, particularly after the turn of the century, when the 'See America First' campaign provided the national parks with a unique commercial foundation of their own through tourism. The emergence of mass tourism, Runte argued, only underscored 'the persuasiveness of economic arguments in determining precisely which scenery the nation felt it could afford to protect in

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87 Ibid., xii.
88 Ibid., xiii.
91 Alfred Runte, 'Reply to Sellars,' *Journal of Forest History* 27 no. 3 (1983): 141.
perpetuity'. He further claimed that his hypothesis did not 'deny achievements of preservation'. Rather, it questioned why the United States weighed 'economic issues more seriously than ecological issues' and pondered a future in which national parks would be established without 'even asking about its other potential uses'. The great value of the Runte's 'worthless lands' thesis is that it has stimulated debate about the historic relationship between parks, preservation and tourism. Debates around the 'meanings' of national parks have become, as Robert Utley suggested, an exploration of national parks as compromises 'between altruism and materialism that best captures the public interest'.

Runte's hypothesis has fuelled debate over National Parks outside of the United States. Warwick Frost, for instance, tested the 'worthless lands' hypothesis against the origins of national parks in Queensland. Frost argued that the 'worthless lands' hypothesis failed to explain the origins of Lamington National Park, or the parks in rainforested areas of North Queensland. Frost also argued that while the 'worthless lands' thesis usefully critiqued the acceptance of idealism as the sole impetus for the creation of national parks it was not one which could be applied globally to all national parks. Indeed, with regards to national park development, Warwick Frost and C. Michael Hall claimed that the most appropriate term to describe the Australian experience was the 'Australian Anomaly', principally because of Australia's federal system and the massive variations in size, purpose and governance of its parks. Queensland, they claimed, represented an 'ultra-anomaly'.

Despite the preponderance of governments committed, at times stridently, to economic development, by 1948 Queensland had 225 national parks, over half the total number of national parks in the world at that time. This thesis does not intend to test the 'worthless lands' hypothesis against the emergence of GBRMPA. Nonetheless, the hypothesis raised

\[\text{Ibid.}\]
\[\text{Runte, 'Reply to Sellars', 141.}\]
\[\text{Ibid.}\]
\[\text{Warwick Frost and C. Michael Hall, 'American Invention to International Concept: The Spread and Evolution of National Parks' in Frost and Hall Tourism and National Parks, 35.}\]
\[\text{Ibid., 37.}\]
interesting questions about the clear cases of preservationists calling for the establishment of national parks on Reef islands which held little potential for primary industries. These, however, were almost always accompanied by declarations of an island's value as a tourist destination. In the case of GBRMPA, its establishment followed one of the most contested and prolonged environmental campaigns in Australian history precisely because of its perceived worth in minerals and oil.

The scholarship surrounding the role of tourism in national parks and its fraught relationship with preservation is also worthy of brief discussion. Richard Butler and Stephen Boyd assert that for some regions national parks form the most important pillars of a tourist industry.101 Furthermore, while national parks are important in providing domestic travellers with a shared environmental heritage the links between national parks and international tourism are important in reaffirming a nation's identity.102 What follows from this collision of tourism and environmental significance are important and difficult problems for sustaining both the park's ecology and the economic viability of the tourism industry it supports.103 Obvious issues resulting from increased visitors in national parks are the associated damage to the environment through reckless, accidental or even deliberate human acts. In some instances, the need for national park management to cater for the tastes of tourists has resulted in the preservation, addition, or removal of elements of the environment. Furthermore, the internationalisation of the national parks, and indeed animals, has caused complex ecological issues. As Jane Carruthers has argued large international pressure groups (including the International Fund for Animal Welfare) have had significant successes towards the protection of elephants in southern Africa, but:

Most members of this kind of organization are based outside Africa and thus do not have to live with the practical consequences of an overpopulation of elephants or the loss of potential income that ivory and hides would generate. South Africans are affected directly by these ideas, and tension is mounting as southern African countries try to negotiate their way around the fact that they need access to funding and would like to be seen as worthy members of international conservation conventions and organizations.104

103 Both the Butler and Boyd, *Tourism and National Parks* and Frost and Hall, *Tourism and National Parks* provide globally orientated studies of this issue.
Robert Lilieholm and Lisa Romney argued that damage to wild-life and flora, and the
difficulties in managing nature tourism sites are most acute in poor and remote regions of
the globe. These issues demonstrate the complexities of local and international
conservation policies that must find a balance between 'rural development and poverty
alleviation on the one hand and the gratification of aesthetic enjoyment of wealthy foreign
tourists on the other'. Nonetheless, the development of tourism in national parks has, and
continues to, pose important issues for national parks worldwide. Additionally, the
importance of the Reef to the identity of Australians, its increasing symbolic importance in
global environmental politics, its place within Australia's tourism industry and the
associated pressures upon its ecology and the politics of its preservation pose ongoing
issues for GBRMPA and the Australian and Queensland government. This thesis will
explore the history of that relationship in further detail.

Great Barrier Reef Histories
Hughes' remarks at the beginning of this chapter reflect an absence from histories of the
Reef of the complex pasts which have formed part of Australia's environmental history.
Geoffrey Bolton who opened *A Thousand Miles Away* with a passage on the Reef, rarely
again considered it within his North Queensland history. Bolton, whose history finishes
in 1920, first published his book in 1963 and while the environment figures within *A
Thousand Miles Away*, the focus is largely on the terrestrial industries of mining,
pastoralism, and sugar. Bolton, despite republishing the book a number of times in the
1970s, did not subsequently include any mention of historic mining of the Reef although by

105 Robert J Lilieholm and Lisa R. Romney, 'Tourism, National Parks and Wildlife', in Butler and Boyd,
*Tourism and National Parks*, 149.
106 Carruthers, 'Tracking in Game Trails', 816.
107 See for instance: Jeremy Goldberg et al., 'Climate Change, the Great Barrier Reef and the Response of
Australians,' *Palgrave Communications* 2 (2016): 3-6. And Leanne White and Brian King, 'The Great Barrier
Reef Marine Park: Natural wonder and World Heritage Area', in Frost and Hall, *Tourism and National Parks*,
114-127.
National University Press, 1975). The Reef is only explicitly considered twice in *A Thousand Miles Away* and
that is in the first chapter in which Bolton discusses Queensland's history of exploration. In other sections of
the book the Reef's existence, if it is being considered at all, is merely implied. For instance, in the final
chapter Bolton remarks that Port Douglas's future 'seemed limited to its tourist potential, which was
considerable but (some would say mercifully) undeveloped'. Ibid., 325.
109 Lyndon Megarrity, 'Geoffrey Bolton's 'a Thousand Miles Away': Origins, Influence and Impact,' *History
Australia* 12, no. 3 (2015): 15.
1967 threats of future mining had emerged as a strong conservation issue. Since the 'Save the Reef' campaign, however, the Reef's history has become intimately tied to histories of environmentalism and science. In broader histories of Australia and North Queensland – of their environments or environmental movements – the Reef receives little mention until their narratives reach the late 1960s and early 1970s when the 'Save the Reef' campaign erupted. At that point the Reef suddenly comes into view. This is itself reflective of a silence about the sea in Australian environmental history. The Reef, despite its ecological importance, has been afforded little analysis by historians. While a history of exploitation, and a history of science's contestation of exploitation exists, a sense builds within these narratives that Reef conservation, or even a sentimental regard for the Reef, have no histories. In these histories it seems that in the 1960s people awoke, abruptly, to the Reef's value as the likelihood of its destruction through development and pollution arose.

There are histories, however, which challenge this trope. They have brought attention to the value of the Reef and have framed its exploitation and conservation as manifestations of both an economic and sentimental appreciation for its formations and its biota. Leanne White and Brian King provided a brief analysis of the role tourism played providing an economic rationale for preservation before and after GBRMPA and the challenges increased tourism has meant for the Reef's ecology. Regional histories of Reef tourism such as Todd Barr's *No Swank Here?: The Development of the Whitsundays as a Tourist Destination to the early 1970s* and Alana Jarvis' unpublished honours thesis, 'Green Island and the Evolution of Ecotourism', demonstrate the longevity of Reef tourism

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110 Ibid., 7. Megarrity asserts that in the copy he consults – the 1972 edition – only 'a few minor amendments/corrections' were made to the 1963 text. I have consulted the 1975 edition and no recognisable additions concerning the Reef were made.


112 Libby Robin and Mike Smith, 'Australian Environmental History: Ten Years On,' *Environment and History* 14, no. 2 (2008): 139.


and the importance of Reef islands, cays and coral reefs to regional communities in the early twentieth century as sites for resources, recreation and identity. In a regional history, a team of historians from the Central Queensland University in Rockhampton traced the geological forces which formed Keppel Bay and the human histories which shaped its cultures, politics, economies and ecologies. Writing about the construction of the Scenic Road (renamed Scenic Highway in the late 1960s) between the two seaside towns of Yeppoon and Emu Park, Steve Mullins and Betty Cosgrove asserted that stories, especially those within environmental history, have a power in that they build and demonstrate the relationship between people and place. For Mullins and Cosgrove, the construction of the Scenic Road led to the destruction of nature and was driven by capitalist agendas – principally to attract more tourists to the two towns – but it also led to the preservation of natural places, programs of re-vegetation and beautification along the route. 'It may have produced a net good' they asserted 'fostering, by the attractive display of land and seascapes, intergenerational attitudes that valued local natural spaces and encouraged a sense of responsibility for country.' In these histories the line between exploitation of the Reef and the fostering of a sense of the Reef's natural and sentimental value become less distinct.

Celmara Pocock has produced a number of works highlighting the evolution of travellers' sensual experiences of the Reef. Pocock incorporated the aesthetic values of the Reef to address the ambiguous GBRMPA and GBRWHA criteria of 'social value' and

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115 Todd Barr, *No Swank Here?: The Development of the Whitsundays as a Tourist Destination to the Early 1970s* (Townsville: Department of History and Politics in conjunction with Department of Tourism, James Cook University, 1990); Alana Jarvis, *Green Island and the Evolution of Ecotourism* (Hons., James Cook University, 2012).

116 Mike Danaher Steve Mullins, Barbara Webster, ed. *Community, Environment & History: Keppel Bay Case Study* (Rockhampton: Central Queensland University, 2006).

117 Steve Mullins and Betty Cosgrove, 'Inscription of Historical Seascapes: Aesthetics, Politics, and the 1936 Decision to Construct the Capricorn Coast's Scenic Highway,' in *Community, Environment and History: Keppel Bay Case Studies*, ed. Steve Mullins, Mike Danaher, and Barbara Webster (Rockhampton: Central Queensland University Press, 2006), 46.

118 Ibid., 63.

'social significance'. Sensual experiences, she argued, do not just inform our environmental consciousness, but determine how our environments are physically altered in order to equal our preconceived perceptions. The Reef, Pocock suggested, has been shaped firstly as an idea and then physically to match that perception. She stated:

The beauty of the Reef is presumed to be intrinsic in the 'natural' qualities of the region. This visual appreciation is not ameliorated by the smell of death and decay, a slimy touch, excess of heat, insect bites or danger. Hyper-reality transforms the underwater Reef into the everyday and renders the unknown and other dangers benign. It also creates a commodity in which the interference of humans is rendered invisible. And most significantly this allows the Reef to be known as 'natural' and synonymous with Nature.120

The entire Reef, mapped and given parameters by explorers, geologists, ecologists, conservationists and holiday makers, became manageable and exploitable in both the real and hyper-real.

Reef resource use, especially the pearl-shell, bêche-de-mer and trochus fisheries, have also come under scrutiny from historians. In this sense, they form part of a global scholarship which seeks to recognise the histories of fisheries as distinct from the histories of pastoral and agricultural development.121 Histories of the pearl-shell fishery of the Torres Strait are often considered at the nexus of resource use and labour restrictions, and attribute the fishery's eventual decline in the 1960s to both factors.122 Regina Ganter's *The Pearl-Shellers of Torres Strait* emphasised the industry's failure to innovate, to develop sustainable practices, and to react to shifting political and economic systems, instead maintaining a consistent strategy of 'resource-raiding'.123 More recently, Steve Mullins has demonstrated the entrepreneurial capacities of some key pearlers. In solidarity with Ganter, Mullins conceded that a failure to adequately advertise, coupled with the realities of the market, put constraints on the longevity of the industry. He placed greater emphasis than

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120 'Romancing the Reef: History, Heritage and the Hyper-Real,' 259.
123 *The Pearl-Shellers of Torres Strait: Resource Use, Development and Decline, 1860s-1960s*. 
Ganter, however, on the schisms within the industry along Australian nationalistic notions of enterprise and the individual.\textsuperscript{124} The pearl-shell, bêche-de-mer and trochus fisheries will be discussed in this thesis, but detailed scrutiny of the issues pertaining to race and labour are beyond its scope.

Ben Daley recently published a broad history of the Reef's exploitation based on his PhD thesis.\textsuperscript{125} His account aspired to provide contemporary scientists with a helpful, historic baseline for the Reef's environment. In his own words, Daley sought to produce a history of the 'specific changes in the coral reefs and associated habitats of the ecosystem'.\textsuperscript{126} Daley's thesis attempts to counteract what Mullins described as a 'shifting baseline syndrome'. An historical baseline, according to Mullins, is 'the thing that most environmental scientists know they need', but since it offers 'few satisfying intellectual challenges', and demands 'lower order research skills...is often left to non-historians'.\textsuperscript{127} While Daley could only signal the potential of his work 'to identify ecological baselines', he succeeded in demonstrating the longevity of the Reef's exploitation and highlighted the Reef's abundant resources which were promoted, valued and sold in global markets.\textsuperscript{128} He showed that a persistent theme of exploiting the Reef has been curtailed or inhibited by shifting demands of the market, social values and government agendas. This thesis gives greater consideration to the forces and sentiments which both caused and curbed the Reef's exploitation throughout European engagement.

Juxtaposed with these histories of Reef exploitation are relatively few histories of its protection. Indeed, two books which give exclusive consideration to the Reef's conservation are accounts of the 'Save the Reef' Campaign. Judith Wright's \textit{The Coral Battleground}, while not necessarily a history, provided the only extended discussion of the

\textsuperscript{124} See: Steve Mullins, 'Heathen Polynee' and 'Nigger Teachers' Torres Strait and the Pacific Islander Ascendancy,' \textit{Aboriginal History} 14, no. 1-2 (1990); 'Queensland's Quest for Torres Strait: The Delusion of Inevitability,' \textit{The Journal of Pacific History} 27, no. 2 (1992); 'From Ti to Dobo: The 1905 Departure of the Torres Strait Pearl-Shelling Fleets to Aru, Netherlands East Indies,' \textit{The Great Circle} 19, no. 1 (1997); 'To Break the Trinity' or 'Wipe out the Smaller Fry': The Australian Pearl Shell Convention of 1913,' \textit{Journal for Maritime Research} 7, no. 1 (2005); 'Company Boats, Sailing Dinghies and Passenger Fish: Fathoming Torres Strait Islander Participation in the Maritime Economy,' \textit{Labour History}, no. 103 (2012).

\textsuperscript{125} Ben Daley, 'Changes in the Great Barrier Reef since European Settlement: Implications for Contemporary Management' (James Cook University, 2005); \textit{The Great Barrier Reef: An Environmental History} (Abingdon: Earthscan from Routledge, 2014).

\textsuperscript{126} \textit{The Great Barrier Reef: An Environmental History}, 7.

\textsuperscript{127} Mullins in Brown et al., 'Can Environmental History Save the World?,' 03.6-03.7.

\textsuperscript{128} Daley, \textit{The Great Barrier Reef: An Environmental History}, 227.
campaign from its beginnings in 1967 through to its completion in 1975. The importance of that book as a record of those events is evidenced by republications and the reliance of historians upon it. In addition to Wright's book, Patricia Clare, a journalist, produced an account of the campaign called The Struggle for the Great Barrier Reef. While Wright was an active participant in the campaign, and Clare a contemporary observer, both books share common traits. They reveal to various extents the tensions between conservationists and scientists, between both parties and governments, and tensions among the conservationists themselves. While these tensions have been considered in some histories, generally the campaign has been mythologised as a 'David vs Goliath' battle between a coterie of passionate, ecologically minded outcasts against an anti-environment, pro-development Queensland government and the collective might of the oil industry. This mythologising, caught up in the equally consistent memorialisation of the ruthlessly pro-development Bjelke-Petersen government, has led to a consistent linking of GRBMPA's origins with apolitical aspirations of science and virtuous agendas of modern Reef conservation.

Two recently published books have sought to identify the interweaving developments of science, tourism, reef exploitation, conservation and popular attitudes towards the Reef throughout European engagement. The first of these, James and Margarita Bowen's The Great Barrier Reef: history, science, heritage, outlined the early period of Reef exploration, the 'resource raiding' of the colonial period, Reef conservationism, the development of tourism, and the eventual formation of a scientific community based upon Reef research. The Great Barrier Reef provided a full and important account of the

major developments which have occurred along the Reef and included valuable discussions on the scientific controversies surrounding reef formation theory in the late nineteenth and early twentieth centuries. The book, however, overlooked aspects which complicate the relationships between exploitation and conservation by focusing almost exclusively on the pro-conservation role of science in the Reef's history. The Bowens discussed the debates within the coral reef scientific community – along with the calls for a marine research station, and its advocacy for Reef conservation – without considering in detail the role scientists played in advocating and revealing the Reef's exploitable potential. Indeed, when geologists were drilling the Reef in pursuit of credible evidence on reef formation, the Bowens framed their endeavours as triumphs of the scientific community. By contrast, when oil companies, with the assistance of Reef geologists, began to drill the Reef in search of oil deposits, the role of science was left unmentioned. The Bowens told a story about the 'impact of Western discovery and settlement on the Great Barrier Reef, and equally, the response of Western science to that encounter'. What emerges is a narrative of the Reef in which the scientific elite have provided both its protectors and mouthpieces. Science has made many contributions to perceptions of the Reef. The role of science in evaluation of the exploitable potential of the Reef, however, is an essential, but little considered, component of the Reef's history.

More recently, Iain McCalman's *The Reef: A Passionate History* provided an avowedly polemical account of the Reef's history from Captain Cook to Climate Change. McCalman declared at the beginning of the book, and reiterated at the end, that the Reef is a country – one roughly the size of Great Britain. He argued more poignantly that the Reef is a 'country of the heart' and a 'country of the mind'. For McCalman, the Reef's dynamic ecology has been matched by the lively and complicated imaginings of the Reef by the people who have encountered it. McCalman's book, partly a reflection of the shifting literary parameters of environmental history, comprised twelve chapters, each a biography of individuals for whom the Reef played an important role in their lives. In this sense, his book provides an account of popular engagements with the Reef, and underplays the machinations of politics, science and economics. Driving the book, however, is an

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134 Ibid., 1.
unabashedly political message.\textsuperscript{136} The Reef needs protection and McCalman's book is an invitation to cast our collective gaze to the past for inspiration. As Charlie Veron warns in McCalman's book, the Reef will end as a result of human neglect. Unlike the Bowens, however, McCalman does not accept science's 'response' to the Reef's history. Consequently, McCalman ultimately came to loggerheads with this apocalyptic assertion, and opted to look to the Reef's past for hope for its future. The genesis of his optimistic spirit, he claimed, were 'the peoples of the Reef'.\textsuperscript{137}

'Peoples of the Reef' is a broad term. In McCalman's book it includes: Captain Cook; a shipwrecked French boy; John Curtis who, from McCalman's account, never saw the Reef but wrote an elaborate fiction of Eliza Fraser's shipwreck on the now eponymously named island; and Judith Wright (whose actual time on the Reef can be counted in weeks). More recently, Celmara Pocock shifted her analysis from tourist experiences to those who have lived along the Reef and whose lives became entangled with the tourist industry. Her analysis of the writings of Henry Lamond, who became a lease-holder of the Molle Group in the Whitsunday Islands during the 1930s, presented an 'alternative way of knowing and understanding' the Whitsunday region. Lamond's writings were, she argued, 'not touristic or scientific, but lived and nostalgic'.\textsuperscript{138} Each of these episodes, and writers, exemplify the varied perceptions of the Reef throughout European engagement with it.

This thesis takes up that pursuit and gives context and history to the current management regime. Principally it addresses the philosophical underpinnings of GBRMPA and identifies them as a legacy of the history of European perceptions of the Reef. It explores popular imaginings of the Reef and explains how its natural attributes and economic possibilities were woven together in its many and varied evaluations. It pursues this understanding by interrogating the popular and personal perceptions of those whose lives became entangled with the Reef: explorers, scientists, tourists and tourist company operators, conservationists and politicians. It gives voice to those who lived alongside the Reef and for whom the Reef was an everyday existence. It maintains that while the Reef is

\textsuperscript{137} McCalman, \textit{The Reef}, 334.
\textsuperscript{138} Pocock, 'Nostalgia and Belonging: Henry George Lamond Writing the Whitsunday Islands,' 60.
under complex ecological pressures, the Reef's history of European conservation and exploitation provides a crucial understanding of the contemporary crisis.
Map 1: Cook's Labyrinth

Chapter Two – An Extraordinary Barrier

The nineteenth-century characterisation of the Reef as a feared environment is more than a narrative trope. As a consequence of accurate and sensationalised accounts of shipwrecks along Australia's north-eastern coastline, the Reef in the early nineteenth century was considered a realm littered with maritime obstacles adjacent to a coastline where hostile Aborigines awaited. Anxieties about the Reef were widespread. The 'fear' narrative, however, has marginalised other aspects of the way Europeans perceived the Reef in the early nineteenth century. For instance, while the Reef was a 'bugbear' for maritime activity, explorers and merchants continued to thread through its waters. Their journals explained the dangers but simultaneously extolled the virtues of the Reef's lagoon. Driven by winds of empire, maritime prospecting, and prevailing south-easterlies, explorers and merchants rendered the Reef amenable and revealed its prospects as a maritime highway. Analogous to the imagining of the Reef as a tumultuous, dangerous environment, a narrative of the inner Reef as a protected, safe and efficient route through to the Torres Strait emerged.

Likewise, a fascination with the Reef's resources and natural virtues was evident within the journals of exploration and newspaper reports of the early nineteenth century. Explorers, duty bound to consider the appropriateness of new lands for settlement, routinely speculated that future industries, ports and settlements were possible along the Reef coast. Its bays, islands and waterways, they imagined, would sustain populations for whom the Reef would not be a menace but a provider and protector.

Similarly, a fascination with the beauty and flora and fauna of Reef environments emerged. Coral reefs themselves – their origins, potential for danger, and beauty – attracted the fascination of explorers. Reef animals, apart from being scrutinised for economic qualities, were both novel and curious aspects of the environment. The Reef's climate and scenery, the former of which was occasionally a source of intolerable frustration, were also aspects which added to the perceived beauty and natural value of the Reef. Additionally, the Reef began to take on a form of heritage. Sites such as Lizard Island and Endeavour River became important locations for maritime explorers. Explorers would revisit the sites and reflect upon their significance within the brief history of European engagement with the Reef. By 1859,
when Queensland separated from New South Wales, settlers of the colony were prepared to look to the Reef for economic and spiritual sustenance.

**From Labyrinth to Reef**

There are several reasons why the *Endeavour*'s collision with its eponymously named reef looms prominently in the histories of Australia and the Reef. Among other reasons, the close encounter with death, Jonathan Monkhouse's imaginative fothering solution, and the anxiety experienced before and after the departure from Endeavour River have made the *Endeavour*'s encounter with the Reef 'an explorer's classic'.¹ Perceptions of Cook's account of the *Endeavour*'s journey, however, were not shaped by the navigator himself. Instead, John Hawkesworth, an Admiralty appointed editor, constructed an account of the voyage which combined the papers of both Cook and Joseph Banks. Hawkesworth took liberties in imagination and increased the drama of the events, often supplanting Cook's own, more explanatory prose. His version, rather than the actual journals of Cook or Banks, was the only publicly accessible account of the voyage until 1893. As the Bowens asserted, however, Hawkesworth's lavish retellings, actually embellished Cook's account, which gave the Reef and Cook's achievements, 'a more deserved prominence'.²

Cook's anxieties about the Reef only began to emerge once the *Endeavour* reached the region of Trinity Bay (near Cairns). In his actual journal, Cook simply wrote, upon reaching Cape Tribulation, 'here begun all our troubles'.³ In Hawkesworth's, Cook explained that 'hitherto we had safely navigated this dangerous coast…more than one thousand three hundred miles; and therefore hitherto none of the names which distinguish the several parts of the country that we saw, are memorials of distress'.⁴ Days later the *Endeavour* ran onto a coral reef. In Hawkesworth's recounting of the actual crash on Endeavour Reef the sense of despondency is profound:

> We well knew that our boats were not capable of carrying us all on shore, and that when the dreadful crisis should arrive, as all command and subordination would be at an end, contest for preference would probably ensue, that would

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⁴ John Hawkesworth, *An Account of the Voyages Undertaken by the Order of His Present Majesty, for Making Discoveries in the Southern Hemisphere, and Successively Performed by Commodore Byron, Captain Wallis, Captain Carteret, and Captain Cook, in the Dolphin, the Swallow, and the Endeavour: : Drawn up from the Journals Which Were Kept by the Several Commanders and from the Papers of Joseph Banks, Esq.* (London: W. Strahan and T. Cadell, 1773), 544.
increase the horrors even of shipwreck, and terminate in the destruction of us all by the hands of each other; yet we knew that if any should be left on board to perish in the waves, they would probably suffer less upon the whole than those who should get on shore, without any lasting or effectual defence against the natives, in a country, where even nets and fire arms would scarcely furnish them with food; and where, if they should find the means of subsidence, they must be condemned to languish out the remainder of life in a desolate wilderness, without the possession, or even hope, of any domestic comfort, and cut from all commerce with mankind, except the naked savages who prowled the desert, and who perhaps were some of the most rude and uncivilised upon the earth. To those only who have waited in a state of such suspense, death has approached in all his terrors; and as the dreadful moment that was to determine our fate came on, every one saw his own sensations pictured in the countenances of his companions.5

The dramatic prose of the collision was mirrored throughout Hawkesworth's version. The Reef was positioned as a hazardous environment in a hostile, unsettled world; Cook became the genius, brave explorer bringing European guile and civility to its waterways.

However dramatic Cook's crash and tangle with the Reef were, so too was the episode following his exit into the Coral Sea. On 13 August, 1770, after ascertaining the existence of a channel through the Reef from atop the peak of Lizard Island, Cook threaded the *Endeavour* out of the Reef and into the unfathomable Pacific Ocean. Hawkesworth's prose tried to capture the feeling of relief felt among the crew who 'in open sea, with deep water…enjoyed a flow of spirits which was equally owing to our late dangers and our present security'.6 After sailing alongside the outer edge of the Reef for only two days, however, the *Endeavour* and its crew once again found themselves in danger; the surf of the Pacific threatened to drive the ship towards the outer coral wall. Unable to anchor and secure the ship, Cook elected to try to re-enter the Reef. With minimal wind and fighting the tide, Cook employed his crew to tow the *Endeavour* away from the Reef while other boats were employed to search for suitable nearby openings. After several anxious hours, and with extra wind, the *Endeavour* threaded back through the Reef at Providential Channel (60km west of Lockhart River). With the *Endeavour* anchored within the Reef, Cook, according to Hawkesworth, imagined: 'And now, such is the vicissitude of life, we thought ourselves happy in having regained a situation, which but two days before it was the utmost object of our hope to quit.'7 Cook continued to sail the *Endeavour* northwards within the Reef,
keeping 'the main land on board…whatever the consequence might be', in order to ascertain whether the newly encountered country joined with New Guinea.\(^8\) While Cook's collision undoubtedly positioned the Reef as a dangerous seascpe, his re-entry offered an important juxtaposition; that of a tranquil and secure sea-route.

Both conceptions of the Reef as a maritime passage proved important motivating factors for exploration in the decades following Australian settlement. Vessels intending to use the Torres Straits passage were compelled to either sail along the coastline within the Reef and enter the Torres Strait, as Cook had done, rounding Cape York, or attempt to pass through after sailing along the outer edge. Both scenarios, in a time when Reef charting was in its infancy, were dangerous. The acclaimed accounts of Cook and Flinders demonstrated that even the most able navigators could be confounded by the reefs of the inner-route. More dangerous, however, was the re-entering of the Reef or seeking a passage through the Torres Strait from the Coral Sea. Flinders, following his own shipwreck experience on Wreck Reef in the Coral Sea, made his preference clear and advised:

> To a ship desiring access to any part of the coast, south of Endeavour River, I should certainly recommend her to enter the enclosed sea by the way of Breaksea Spit, if able to choose her own route; but the question is, whether a ship driven by stress of weather, or by accident, to seek the coast, might steer for the opening with a fair prospect of passing through in safety?\(^9\)

On the intricacies of making a re-entry into the inner Reef from the Coral Sea, Flinders suggested his own passage (near Cape Upstart south of Townsville), but warned:

> The commander who proposes to make the experiment, must not, however, be one who throws his ship's head round in a hurry, so soon as breakers are announced from aloft; if he do not feel his nerves strong enough to thread the needle, as it is called, amongst the reefs, whilst he directs the steerage from the mast head, I would strongly recommend him not to approach this part of New South Wales.\(^10\)

Despite the conception of the Reef as a hazardous maritime highway, it was evidently preferred to the outer-route as a sea lane, and Flinders suggested that the inner route,

\(^8\) Ibid., 607.


\(^10\) Ibid., 104.
protected from the deep waves of the ocean, was 'particularly well adapted to the purposes of a coasting trade'.

Flinders' description of the Reef has often been incorporated into the 'fear' narrative of nineteenth-century Reef history. The Bowens asserted Flinders was offering a directive to vessels to stay away from the Reef entirely. McCalman takes a more considered approach to Flinders' assessment. He concluded that Flinders believed the dangers of the Reef were more likely to be encountered if vessels attempted to re-enter from the Coral Sea. Yet Flinders, McCalman explained, 'derived an appreciation of the geographical character and significance of what we today call the Barrier Reef lagoon'. Later in his book, however, McCalman reinset red Flinders' experiences into the 'fear' narrative by claiming both Cook and Flinders considered 'the Reef solely as a terrible obstacle to navigation'. He added, the Reef was 'something that prevented access to the shore or escape to the open sea'. Nonetheless, the value and importance of the barrier reefs was made explicit in Flinders' charts. The 'extensive Barrier Reefs', he wrote, 'mostly dry at low water: on the outside high breakers, but within side smooth and secure navigation' (See Figure 2). Flinders certainly considered the Reef an obstacle for navigators wishing to approach from the Coral Sea. Flinders' naming of the Great Barrier Reef, however, and removal of the more fearful label 'labyrinth', highlighted the importance and value, in his view, of the sea-lane for the colonies' emerging trade interests and, perhaps, future northern settlement.

The charting of the Reef subsequently became entangled within the broader project of Australian exploration in the early nineteenth century. In 1817, Philip Parker King was selected 'to examine the hitherto unexplored Coasts of New South Wales' and to remain 'on this service' until he had 'examined all parts of the coast' not laid down previously. King made three voyages through the Reef between 1819 and 1821. His journal offered a resounding endorsement of the 'in-shore route' of the Reef and King became its biggest advocate. After reaching Booby Island, following his second voyage through the Reef, King took the opportunity to compare his trip with that of the Sea-

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11 Ibid., 103.
14 Ibid.
15 Ibid., 99.
Flower, whose passage through to Booby Island had been detailed on a board set up on the island's summit. King concluded that his trip, if the time taken for excursions was deducted, took two less days than the Sea-Flower's voyage via the outer route. King added:

But it is not only superior to the passage without the reefs, from its being shorter, there are also other advantages: the principal of which are that the weather is more generally fine; the sea is always perfect smooth; and wood or water may be procured upon various parts of the coast: with only common attention there is no risk; and however laboriously the day may be spent the night is passed without disturbing the crew; for safe and good anchorage may be taken up every night under the lee of an islet or a reef, which in the event of bad weather may be retained as long as is requisite or convenient. No time is lost by the delay, for the anchor may be dropped in the ship's immediate track; and if the cargo consists of live animals such as horses, cattle, or sheep, grass may be obtained for them from the islands near the anchorage.\(^{17}\)

The outer route, he claimed, was 'strewed with numerous reefs', dangerous to navigate at night-time, and when the re-entry into the reefs was to be attempted it would likely be attempted 'in the greatest uncertainty'.\(^{18}\)

King was an early advocate of the inner-route's benefits for both navigation and Empire. In his detailed description of the 'coast between Breaksea Spit and Cape York', King again emphasised its superior qualities and asserted that with 'strict attention to these directions and confidence in the chart, with a cautious lookout…all the dangers' that the coast and bad weather produced would be neutralised.\(^{19}\) In 1834, more than a decade after his journal was published, King publicly defended the virtues of the inner route and claimed his passage, if dutifully followed, would ensure 'no accident of a local nature', and added:

In recommending the route, I do it in the full assurance of its being advantageous to navigation; that it releases the commander from a considerable degree of anxiety, and may eventually prove the means of extending our colonial possessions within the tropical regions of this continent, of which we, as yet comparatively, know nothing.\(^{20}\)

The value of the Reef region as an arm of Empire and as a less foreboding sea-lane undoubtedly provided the encouragement for subsequent vessels to attempt the passage with confidence rather than fear.

\(^{17}\) Ibid., 386-7.
\(^{18}\) Ibid., 387.
\(^{19}\) Ibid., 2: 258-9.
\(^{20}\) Philip Parker King, No title, Sydney Herald, 20 January 1834, 1.
Shipwrecks: The Routine and the Sensationalised

Endorsements by Flinders and King of the Reef's inner passage, however, could not mitigate the reality of the dangers vessels exposed themselves to in its scarcely charted waters. In the years between 1788 and 1859 the Torres Straits and Barrier Reefs claimed a number of vessels attempting both the inner and outer routes. The frequency with which vessels wrecked on the Reef, or reefs in the Coral Sea, or on rocks, banks or reefs in the Torres Straits would have plagued the minds of those making the voyage. It would be misleading to suggest, however, that despair was a universal experience of those shipwrecked on the Reefs. Evidently, shipwrecks on the Reef were traumatic, a cause of death and financial loss, but they were experienced frequently enough to become a routine reality of Reef voyages in the early nineteenth century. They were not universally reported with hysteria and many stories of shipwrecks reported in the media assumed a sense of banality.

Prior to 1837, the experiences of vessels which were wrecked attempting passage through the Torres Strait, either via the inner or outer route of the Reef, were varied. Accounts which were published in the newspapers suggest that shipwreck survivors had to be both lucky and resilient. The twenty-four survivors of the Woodlark for example, which wrecked on Saumarez Reef in the Coral Sea in March 1828, managed to find some sanctuary on a nearby islet to repair a spare vessel. Seventeen of the survivors 'confided themselves' into that boat, while seven others were towed on a raft behind it. In the ensuing voyage from the wreck towards Moreton Bay, the raft broke free from the boat, and those seven men were not seen again. The remaining survivors, however, managed to reach Northumberland Islands (south-east of Mackay), where they found fresh water and oysters and then received assistance from Aboriginal people on the southern mainland. From there, they managed to sail further southwards reaching Moreton Bay on 14 May 1828. The wreck of the Woodlark, apart from demonstrating the dangers of the outer-route (when departing the wreckage the captain mistakenly assumed they were already within the Reef), was testament to the resilience of those who made the voyage and, if nothing else, the sanctuary and sustenance which the Reef could offer survivors.

22 Ibid.
23 Ibid.
Other accounts added to this perception. The crews and passengers of the Mermaid (wrecked in 1829 near Cairns), the America (wrecked on the Bunker Group in June 1831) and the Flora (wrecked near Cape Grenville in 1832) all managed to salvage sufficient resources from their wrecked vessels from nearby islands or from the mainland. Eventually all three were able to repair or use spare vessels to push through the Torres Strait to Java or return to Moreton Bay. Alternatively, they were able to be picked up by another vessel making the inner route voyage.24 The crew of the Mermaid, who were wrecked twice, were apt examples of the routine of wrecking on the Reef and finding a path to safety. After wrecking on a reef south of Trinity Bay, the crew was picked up by the Admiral Gifford and then transferred to the Swiftshire. The Swiftshire was itself wrecked forcing both crews to take to the small-boats until they were all rescued by another vessel, the Resource.25 Shipwrecks were clearly not a novel event along the Reef.

Vessels in distress formed part of the Reef-scape in the early nineteenth century. For instance, King encountered a merchant vessel, the San Antonio, in the Northumberland Island group during his third voyage through the Reef. King offered to assist the vessel's master to navigate up the coast but the master asserted that 'having Flinders' charts' he would make the voyage himself.26 Just a week later, near the Frankland Islands, King, already accompanied by the merchant ship Dick, again spotted the San Antonio.27 While the San Antonio was not in immediate danger, the master explained that it had run on a reef near the Palm Islands earlier but had been little damaged. King, perhaps experiencing some schadenfreude, wrote:

Light, however, as he pretended to make of his accident, it was a sufficient lesson for him, and we soon found he had profited by it, for instead of preceding us, he quietly fell into our wake, a station which he never afterwards left, until all danger was over, and we passed through Torres Strait.28

Given the reliance on very few maps of the Barrier Reef's inner passage, stranded crew could perhaps hope for a vessel taking a similar track through the Reef and await their passing as source of salvation.

24 Lance Patterson, Wreck-Oленияs: Ships and Shipwrecks in Queensland Waters, vol. 1 (Caloundra: Lance Patterson, 2003), 8-9, 57-8, 114-5.
25 Ibid., 114.
26 King, Survey of the Intertropical, 2, 9.
27 Ibid., 11.
28 Ibid., 12.
Many vessels ran onto obstacles along the Reef; their wreckage, however, formed more permanent features of the Reef-scape—familiar beacons along an unmarked sea.29 During his voyage, King encountered the wreckage of the Frederick within the Flinders Island Group (off the coast from Cape Melville). The wreck, he wrote, was 'a melancholy scene'. The vessel had been thrown upon rocks, smashed to pieces, 'her timbers, decks, masts and yards were lying in a confused heap'. King, accompanied by his naturalist Alan Cunningham and a surveyor Frederick Bedwell, inspected the wreckage and surmised:

Great hopes were entertained that the crew were enabled, by means of their boats, to escape from this inhospitable coast and effect an arrival at some habitable port…That the crew had been upon the island was certain, for oars and spars were found erected in the fissures of the rocks at the projections of the cape, evidently placed there by the crew to attract the attention of vessels passing. The mizzen mast and main topmast had been cut away, and there were a few marks of the axe upon her mainmast. The natives appeared to have taken notice of the ironwork, for some spike nails were found about their fireplaces.30

King would return to the Frederick twice more during his voyages through the Reef; each time he noticed that more of the ship had been removed, and his crew salvaged spars, iron-work and planks themselves. On the third passing, the crew removed the remaining spars and planks and placed the planks across 'the forecastle bulwark over the cat-heads'. Their placement proved beneficial. King's other surveyor, John Roe, was later knocked from the masthead and fell 'from a height of fifty feet', and landed 'senseless on the deck'.31 Roe's fall, however, 'was, most providentially, broken twice'; first by the spritsail brace and second by the Frederick's planks.32

The scavenging of wrecked Reef vessels was a common occurrence. The wreck of the America, left by its crew in the Bunker Group, was auctioned off to prospective salvagers once the crew arrived back in Sydney. The owner of the winning bid began to outfit his own vessel, the Caledonia, with the intent of salvaging items from the America's wreckage.33 While the Caledonia was being fitted out, a whaling vessel, the Nelson, encountered the America's wreckage and arrived in Sydney with 'every thing of value which could be saved'; included in the Nelson's loot were the America's anchor, anchor.

29 'Sailing direction—Great Barrier Reef', Sydney Morning Herald, 16 March 1844, 2.
30 King, Survey of the Intertropical, 2, 230-1. King later revealed, after arriving in Koepang, that the master and four crew members of the Frederick had arrived in Koepang on a ship that was in the Frederick's company at the time of the accident. What happened to the Frederick's longboat, however, which left the wreck with twenty-three members of the crew, 'never afterwards transpired'.
31 Ibid., 31-33.
32 Ibid.
33 'Supreme Court', Sydney Gazette and New South Wales Advertiser, 24 July 1832, 3.
spars and standing rigging.\textsuperscript{34} Aware of the issues regarding ownership of the \textit{America's} wreck,\textsuperscript{35} the \textit{Nelson's} owner set out once more but died at sea, leaving the \textit{Caledonia's} owner unable to make claims on the salvaged items.\textsuperscript{36} These incidents suggest that while the Reef was hazardous, the experiences of vessels passing through it via the outer or inner route were hardly uniform. Rather, they suggest that experiences of the Reef as a sea-lane were, while sometimes awful and tragic, more often fruitful and prosaic than most historians have acknowledged.

\textbf{Pushing Through the Reef}

These more subdued narratives of shipwrecks were soon eclipsed by the more sensational and widely publicised accounts of the \textit{Charles Eaton} and \textit{Stirling Castle}. Their stories, especially the embellished accounts, fostered a conception of the Reef as dangerous and, as McCalman surmised, fed upon prevailing notions of Aborigines as 'violent, animalistic and sexually predatory'.\textsuperscript{37} The hegemony of those stories would be challenged by the experiences of Barbara Thompson (Giom), James Morrell (Karkynjib Wombil Moony) and Narcisse Pelletier (Anco) who, unbeknownst to each other, all found refuge with Indigenous tribes for many years until they were found by Europeans and began their problematic reassimilation into Western society.\textsuperscript{38} Nonetheless the public, not yet aware of those accounts and shocked and frustrated by the tragedies, mainly of the \textit{Charles Eaton}, called upon governments to proactively prevent shipwrecks along the Reef. The \textit{Sydney Gazette and New South Wales Advertiser}, only days before the \textit{Stirling Castle} wrecked on Swain Reefs, lamented:

\begin{quote}
It is reprehensible as strange (sic), a large naval force being and having long been, constantly employed in the very adjacent seas under the English flag, yet that not a single cruiser should be, or have been during the several past years that we have mentioned, engaged exclusively in surveying, charting, buoying, or in short, doing anything towards augmenting the small sum of knowledge which the nautical world possesses with regard to Torres' Straits, much less effecting any one practical improvement as respects their safe navigation.\textsuperscript{39}
\end{quote}

A contributor's letter, published in the same issue, called for the Government to establish a station 'at some convenient spot in the immediate neighbourhood of the entrance to the Great Barrier Reef'. The station, the author claimed, with reference to

\begin{footnotes}
\item \textsuperscript{34} Ibid. and 'Shipping Intelligence', \textit{Sydney Herald}, 19 December 1831, 4.
\item \textsuperscript{35} \textit{Sydney Gazette and New South Wales Advertiser}, 17 December 1831, 2.
\item \textsuperscript{36} 'Supreme Court'.
\item \textsuperscript{37} McCalman, \textit{The Reef}, 64-90.
\item \textsuperscript{38} Ibid., 117-165.
\item \textsuperscript{39} 'Torres' Straits', \textit{Sydney Gazette and New South Wales Advertiser}, 3 May 1836, 2.
\end{footnotes}
the Charles Eaton, would: 'be a refuge for any of our fellow countrymen who may unfortunately be wrecked hereafter, instead of being, as they now frequently are, murdered by the savages of Timor or New Guinea'.

While reducing the loss of human life was imperative, of equal concern was the loss in mercantile interests. The Reef, and perhaps more importantly the entrance into the Torres Strait, was a crucial path of growing interest for the Empire. Increasingly, the links between the Australian colonies and the markets of South East Asia and beyond depended on a safe and reliable passage through the Strait. In the late 1830s, the winds of empire stirred and the Reef was the subject of intense exploration. Between 1837 and 1861 voyages of exploration by the Beagle (1837-44), Fly (1842-6), Rattlesnake (1846-50), and Herald (1852-61) undertook the task of surveying and charting the Reef's and the Strait's various obstacles.

The Beagle, whose various voyages to Australia were recounted by John Lort Stokes, was never explicitly required to undertake a detailed survey of the Reef. The chief instructions for the Beagle were to make detailed observations and surveys of the north-west coasts, Bass Strait and 'the numerous reefs which block' Torres Strait. The Admiralty, however, explicitly excluded the charting of 'the great field to the eastward' of Sassie Island. Those reefs, and indeed 'the barrier reefs and their ramified openings from the Pacific Ocean' would be the subject of some future survey. The Beagle was, however, required to make its passage through the Reef via the inner-route and assess the safety of the Endeavour Strait. The Beagle passed through the Reef on its third voyage during winter in 1839.

Its passage through the inner route was indeed quick. The ship entered the inner-route via Breaksea Spit on 22 June and reached Booby Island by mid-July. Stokes, however, after passing through the Endeavour Strait, reaffirmed the importance of the Torres Strait referring to it as 'the high road between our growing Eastern and Australian possessions'. Of the inner and outer routes, Stokes, upon arriving at Booby Island, reflected:

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40 Ibid.
42 Ibid., 13.
43 Ibid.
44 Ibid., 369.
The time occupied in making the passage from Sydney by the outer route, varied from fourteen to twenty days, it being certainly shorter than the inner, though attended with much greater risks. One objection made against the latter is the necessity of anchoring every evening, somewhat laborious work to the crews of merchant ships; this might be obviated in some measure by using a light anchor, which could be done with perfect safety in still waters within the reefs. We found two barques at anchor, which had arrived on the preceding day. In accordance with a practice very generally observed, they were giving themselves a short period of repose and relaxation after the anxieties and danger of the outer passage; which short as it is, has doubtless sprinkled grey hairs over many seaman's head. 45

The Beagle's voyage through the Reef would ultimately be defined by Stokes' speculations on the Reef and coral reefs' origins, but his commentary on the virtues of the inner passage further enhanced the appraisal of the Reef as a valued and important sea-lane.

In 1842, while the Beagle continued its exploration of Australia's north-west coastline, the Fly, captained by Francis Blackwood, began its voyage from England to the antipodes. The debate over the outer or inner route had yet to be effectively settled. While King's Route (another name for the inner route) was largely favoured, merchant vessels opted to take the outer-route in order 'to avoid the frequent anchorage necessary in the in-shore passage'. 46 The outer-route, however, while perhaps more expedient than the inner-route, continued to be plagued by the uncharted Coral Sea reefs and the difficulties experienced by vessels attempting to enter the Reef on a 'casual observation of latitude which is often incorrect'. 47 The Admiralty's orders for Blackwood explicitly concerned rendering the outer-passage safe; King had laid a pathway for the inner-route, Blackwood would establish a safe outer-passage. Blackwood was to take charge of the Fly, explore and survey the outer edge of the Reef, thoroughly examine 'all the channels through the Barrier chain' and determine 'which of them will offer the speediest and safest passage for the generality of merchant vessels', and 'devise some practical means of marking them by beacons of wood, or stone, or iron, so placed on their islands or cays, that they may serve to guide those vessels to a certain, and safe landfall'. 48

In 1844, at Raine Island, a 64ft beacon largely made out of locally acquired

47 Ibid., 255.
48 Ibid., 257.
phosphate sandstone and lime, painted with red and black stripes was erected. It was large enough to be visible for 8-13 miles and to store provisions.49

Despite the construction of the Raine Island beacon, the Fly's survey did little to usurp the merits of the inner passage. The journey of the Fly was recounted by geologist Joseph Beete Jukes. In it, Jukes surmised that the inner-route, while 'narrow and intricate', was safe 'because there is good anchorage the whole way, and the reefs themselves are a perfect shelter from the violence of the sea'.50 Blackwood, whose directions via the outer-route were later compiled into a single volume accompanied by King's inner-route directions, was equally confident in the virtues of the inner-route.

While the outer-route, he conceded, was quicker, 'under all circumstances the inner one is generally considered as the safest'.51 Criticisms of the inner passage based on frustrations of 'anchoring during the night' were prosecuted by 'weak-handed merchant vessels'.52 King, who was frustrated by the frequency with which he had 'been induced' 'to press' the virtues of the inner-route, made similar remarks:

These directions were printed in the year 1836, but at that period the prejudice was so great, that the generality of the masters of ships bound through Torres Straits preferred the risks and anxieties of the outer passage to the safer and far more agreeable one within the Barrier Reef; supposing that one or two days in the length of the run might be saved,—thus placing life and property in jeopardy, for the sake of an advantage, which, even at best, is very questionable.53

King believed, in 1847, that the 'tide of prejudice' was slacking, and an increasing number of ships were opting to utilise his route including, he noted 'those carrying passengers, stock, or troops'.54

King was likely correct. By 1845 the Torres Straits was being touted as the 'most direct line of communication' for the Australian colonies and the trading stations of Singapore, China and Hong Kong.55 The Speaker for the New South Wales

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49 F.P. Blackwood in Phillip Parker King, Directions for the Inner and Outer Routes from Sydney to Torres Strait / By ... Phillip Parker King and F.P. Blackwood to Accompany the Surveys Made by Order of the Lords Commissioners of the Admiralty, ed. F. P. Directions for the outer route from Sydney to Torres Strait Blackwood (London: Printed for the Hydrographic Office, Admiralty, 1849), 4.
51 F.P. Blackwood in ibid., 4.
52 F.P. Blackwood in ibid., 4.
53 P.P. King in ibid., 3.
54 P.P. King in ibid., 4.
Legislative Council argued that steam navigation would conquer the Strait which had caused such dilemmas for sailing vessels. The Barrier Reef, and specifically its inner passage, seemed 'placed by nature to interpose a shelter for steam vessels against the prevailing winds and waves'. Additionally, with the establishment of a penal settlement at Port Curtis in 1847, and the likelihood of further settlement north of Moreton Bay, establishing a frequent steam traffic along the northern coast seemed a necessity for the expansion of the colonies and the Empire.

The days of universal steam navigation, however, were not considered to be immediate. Until then the Reef and the Strait had to be rendered safe for sailing vessels. In 1846, Owen Stanley, captain of the Rattlesnake, whose voyages were documented by the naturalist John MacGillivray, was charged with the task of making the 'the approach to the Strait' via the outer-route 'more secure and certain' by providing the choice of an alternative entrance further north than Raine Island. The prevailing winds and currents had caused a number of vessels to overshoot the beacon. Francis Beaufort, the British Navy's hydrographer, issued the additional task of sounding and charting 'either side of the tracks' of the inner-route so that those who chose that passage 'could sometimes continue under sail during the night'. Beaufort, signalling the predictions of an eventual steam-route, added:

However necessary it was, and is, to contribute as much as possible to the safety of those vessels who choose the outer voyage by the Barrier Reefs, it is not the less our duty to facilitate the navigation of the In-shore Passage to all vessels who prefer its tranquillity and security to the risk of the former; and your labours for the accomplishment of this object will prove to be of peculiar importance when steam communication between Singapore and Sydney shall be established.

Three years after the Rattlesnake completed its voyages in the Torres Strait, Henry Denham was commissioned to captain the Herald and to undertake an extensive survey of the Coral Sea, including further charting the outer edge of the Reef. He completed this task, to little fanfare, in 1860. Denham was, however, made aware of the

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56 Ibid.
57 Ibid.
58 John MacGillivray, Narrative of the Voyage of H.M.S. Rattlesnake: Commanded by the Late Captain Owen Stanley During the Years 1846-1850, Including Discoveries and Surveys in New Guinea, the Louisiade Archipelago, Etc., to Which Is Added the Account of Mr. E.B. Kennedy's Expedition for the Exploration of the Cape York Peninsula, vol. 1 (Adelaide: Libraries Board of South Australia, 1967), 2.
59 Ibid., 7.
60 Ibid.
61 Abstracts of his report appeared in various Australian newspapers. Eventually the Council of the Royal Geographical Society published a memoir giving details of the Herald's voyages. Apparently, the Admiralty did not consider Denham's work to be a remarkable enough achievement to warrant further
Admiralty's satisfaction with his efforts: they congratulated him and acknowledged his work:

In continuance of the labours of Flinders, Ashmore, King, Blackwood & Owen Stanley, whereby the passage up to & through Torres Strait have been cleared of imaginary dangers and the limits defined of the Outer and Inner Routes which the Mariner may navigate in safety.62

The inner-route of the Reef, George Henry Richards, the Admiralty Hydrographer, later claimed in 1864, was now 'as easy to navigate as the English Channel'.63

**An Environment Primed for Settlement**

The value of the Reef's inner-route to the broader goals of Empire was never in question. The issues undeniably related to the lack of settlement along its coastline. While shipwreck survivors or explorers in need of further provisions could utilise stashed stores in locales such as Booby Island and later Raine Island, there was clearly a need for permanent settlement further north of Moreton Bay and close to Torres Strait. The wreck of the Charles Eaton, apart from amplifying frustration with the amount of wrecks along the Reef, brought the 'emptiness' of the north into focus. Port Essington was the site to be developed, but the Reef loomed large in the imaginations of explorers who routinely provided commentary on the north's potential to sustain European settlement.

The Reef was hardly an impediment to settlement. Its islands and various reefs provided the coastline, particularly the areas south of Cairns,64 with various sites for safe anchorage and potential harbour development. Cook, in Hawkesworth's version, was well aware of the shelter the islands and reefs he had encountered provided for anchorage. The Whitsunday Passage, he said 'may be considered as one safe harbour'.65 Others, who were perhaps more inclined to give the mainland proper scrutiny, were more forthcoming in their analysis. Flinders, who considered Shoalwater Bay and Thirsty Sound to have few virtues other than a harbour, declared of land between Shoalwater Bay and Broad Sound (near Marlborough) that: 'should it ever be in immediate glory, although he was later promoted to Rear Admiral. See: Andrew David, *The Voyage of Hms Herald: To Australia and the South-West Pacific 1852-1861 under the Command of Captain Henry Mangles Denham* (Melbourne: The Miegunyah Press, 1995), 432-3.

62 Cited in ibid., 432.
64 King had established that anchoring each evening, on north-bound ventures, was only necessary once vessels had passed Cape Grafton.
contemplation to make an establishment in New South Wales within the tropic, in aid of
Port Jackson and the colonies to the southward, this neighbourhood would probably be
chosen'.66 The land, Flinders asserted, would allow, in time, for profitable cultivation of
wheat, maize, sugar, tobacco, cotton, coffee and the grazing of cattle, and the tides
provided suitable advantages for ship building.67 Jukes also affirmed the suitability of
the Broad Sound to Whitsunday regions for settlement and their potential for industry.
Jukes considered the tides and pine forests on the mainland and nearby islands made the
region 'admirably adapted for the construction of docks for building and repairing
ships'. The bays and inlets along the mainland and islands, sheltered by coral reefs,
provided excellent anchorage and the 'fresh perpetual sea breeze' rendered 'the country
healthy'.68 Apart from the virtues of the Reef waters for shipping, the mainland and
islands held diverse virtues for settlement. The features of the Reef coast – land, trees,
and water – were represented positively in the journals of Reef exploration which added
to the environment's perceived value.

Similarly, the Reef's resources were linked with future industries established
along the coast. On the Bunker Group, King commented: 'they abound with turtle and
bêche de mer, the latter of which, if not both, will at some future time become of
considerable importance to the coasting trade of New South Wales'.69 A narrative of
abundant resources was clearly articulated in the journals. Jukes described Lady
Musgrave Island's sea-produce in terms of diversity and fecundity. In its lagoon they
found:

Both sharks and turtle swimming about, and there were upwards of thirty fine
turtle turned this morning, when the boats first landed. The island was well
stocked with birds, of which black noddies and shearwaters were the most
abundant; the next in number being terns, gulls, white herons or egrets, oyster-
catches, and curlews.70

So abundant were turtles, that on one evening while on one of the Capricorn Islands,
one of the Fly's lieutenants 'was actually obliged to place sentries round him to prevent
the turtles from running over his artificial horizon as it lay on the ground'.71

The exploitation of the Reef's resources for markets had been underway for
some time before the Fly sailed through its waters. Whalers, while their exploits in the

67 Ibid.
68 Jukes, *Surveying Voyage of H.M.S. Fly*, 1, 49.
69 King, *Directions for the Inner and Outer Routes*, 352.
70 Jukes, *Surveying Voyage of H.M.S. Fly*, 1, 3.
71 Ibid., 10.
Reef are unable to be quantified, were undoubtedly frequenting the inner and outer passages. Whales, as King described, could be found often within the Reef and wrecks of whaling vessels were encountered along islands and cays by the *Fly*. Both the *Beagle* and the *Rattlesnake* encountered features of a sandalwood trade, or at least the rudiments of one, along the Reef. Stokes commented that at Percy and Northumberland Islands the sandalwood had been taken by a 'Tasmanian vessel to the China market'. The *Rattlesnake* encountered a cutter, *Will O the Wisp*, around Fitzroy Island (near Cairns) and MacGillivray wrote that the vessel had been:

Fitted out by a merchant in Sydney, and sent in a somewhat mysterious way (so as to ensure secrecy) to search for sandalwood (sic) upon the north-east coast of Australia. If found in sufficient quantity, a party was to be left to cut it, while the vessel returned to Moreton Bay with the news, and communicated with the owner, who was to send a larger vessel to pick it up and convey it at once to the China market.

Clearly, those with the means to do so were venturing further and further along the Reef in search of fresh fields of maritime resources.

There were, however, some obstacles to settlement along the Reef coast. Flinders had a number of 'disagreeable' evenings thanks in large part to mosquitoes, sand flies, and ants, which he attested seemed to be in huge numbers anywhere near mangroves. Jukes offered a much more lyrical description. Reflecting on his time somewhere north of Cape Palmerston, Jukes wrote:

Having returned to our camp, and dined about sunset, we made preparations for sleeping quite securely on the beach, as a fine sea breeze was blowing on it, but before ten o'clock this unfortunately died away, and for the remainder of the night we lay sleepless and helpless, but not unrepining (sic), victims to a numerous host of sand-flies and mosquitoes. Compared to these pests, savage men or ferocious beasts are really slight evils, since they may be guarded against or overcome, while these plagues render life miserable, and paralyse all one's energies by continual irritation and long want of sleep, without either dignity or excitement of danger.

The torments of insects, heat, and other aspects of tropical climates would become well-documented tropes of Reef experiences. Jukes, however, was insistent that the discomfort and frustration of mosquitoes, and all the insects which plague the

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72 In King's voyages there are a number of episodes in which he encounters the 'fin-back' whales. See for instance: King, *Directions for the Inner and Outer Routes*, 367.
74 MacGillivray, *Voyage of H.M.S. Rattlesnake*, 1, 97-8.
75 Flinders, *A Voyage to Terra Australis*, 2, 24, 66, 70.
76 Jukes, *Surveying Voyage of H.M.S. Fly*, 1, 41.
77 Pocock, 'Romancing the Reef', 134-140.
'mangrove swamps,' 'could be all avoided in choosing places of residence' 200 or 300 feet above sea-level. Though scattered with obstacles, the Reef offered solutions.

While the resources of the Reef and its potential to sustain settlement were of immediate concern to those exploring the region, the beauty of the Reef itself was a source of immense interest too. At times the reaction to confrontation with the Reef was one of astonishment. The shoals, and rocks, partly concealed along the coast would, Cook described, 'rise abruptly like a pyramid from the bottom'. Flinders, unable to forget Cook's experiences, initially considered the reefs as dangers, providing indifferent descriptions of their appearances focussing on the 'dry, black lumps, called negro heads'. Reefs, he wrote, 'were so much alike as to be of no use in distinguishing one reef from another'. Flinders' first walk upon a dry reef, however, somewhere in the vicinity of the Percy Islands, provided a telling moment where curiosity and astonishment subverted the fear:

In the afternoon, I went upon the reef with a party of gentlemen; and the water being very clear around the edges, a new creation, as it was to use, but imitative of the old, was there presented to our view. We had wheat sheaves, mushrooms, stags horns, cabbage leaves, and a variety of other forms, glowing under water with vivid tints of every shade betwixt green, purple, brown, and white; equaling in beauty and excelling in grandeur the most favourite parterre of the curious florist. These were different species of coral and fungus, growing as it were, out of the solid rock, and each had its peculiar form and shade of colouring; but whilst contemplating the richness of the scene, we could not long forget with what destruction it was pregnant.

The change in attitudes was telling when days later, Flinders described a coral reef which surrounded an island designated as 12 on his charts (off the coast of Mackay), as 'a beautiful piece of marine scenery'. Whether or not Flinders' perception of reefs had undertaken an abrupt change is debatable. The significant contributions and implications for natural history which emerged from Flinders' and Cook's voyages emanated from the collections of terrestrial flora and fauna rather than from the underwater realm. Coral reefs, however, hardly the subject of intense description or natural history interest in Flinders' or Cook's journals, were now more beautiful to behold.

78 Jukes, Surveying Voyage of H.M.S. Fly, 1, 49.
79 Hawkesworth, An Account of the Voyages, 140.
80 Flinders, A Voyage to Terra Australis, 2, 85.
81 Ibid.
82 Ibid., 87-8.
83 Ibid., 94.
84 Bowen, Great Barrier Reef, 44-55 & 65-73.
The beauty or picturesqueness of the Reef subsequently became a feature of the explorers' Reef descriptions. John Lort Stokes wrote of Magnetic Island that its dense tree cover, amidst which 'a few straggling pines reared their lofty and angular shaped heads', gave 'a picturesque appearance to the scene.'\footnote{Stokes, *Discoveries in Australia*, 1, 338.} Accompanying his description was a sketch (see Figure 1) of the *Beagle* passing the north-west slopes of Magnetic Island. Stokes, however, devoted most of his Reef commentary to theories of its geological origins. In the years between King and Stokes' voyages, the geological origins of coral reefs were attracting increasing attention, particularly the presence of marine deposits in elevated inland positions. Stokes had received additional instructions from Francis Beaufort to collect 'every fact which can throw any light on the subject' of coral formation, a subject which was about to receive a considerable boost from Charles Darwin's theory on the matter.\footnote{Beaufort's orders are in *Discoveries in Australia*, 21 & Bowen, *Great Barrier Reef*, 86-7.} Indeed, Darwin personally requested Stokes to investigate: 'Are there masses of coral or beds of shells some yards above high water mark, on the coast fronting the barrier reef?' Stokes encountered a 'small coral-strewed flat' within Cape Upstart and deduced his discovery would 'go far to weaken the arguments brought forward in favour of subsidence of the North-East coast of Australia'. Subsequently, Stokes made the erroneous suggestion that the Barrier Reef had been formed by a process of upheaval.\footnote{Stokes, *Discoveries in Australia*, 1, 348.}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image.jpg}
\caption{The *Beagle* off the North-West Part of Magnetic Island.}
\end{figure}

\textit{Source:} Stokes. *Discoveries in Australia.*

Stokes' commentary would eventually be thrown into relief by Darwin's theory of subsidence which was published during Stokes' voyage on the *Beagle*. The Great Barrier Reef, however, the largest coral reef conglomeration in the world, drew the attention of naturalists and geologists keen to test Darwin's theory. In March 1844, as the *Fly* departed to raise the beacon on Raine Island, the Sydney newspaper the *Australian* declared that they looked 'forward with much anxiety to the accounts which may be published of the proceedings of this Expedition'; in particular, it was expected that Jukes, a man they considered 'competent for his present honourable post', would demonstrate 'whether Mr. Darwin's account be actually consistent with observation'.

Jukes devoted an entire chapter of his journal of exploration to explaining the geological formations along the Reef and their relationship to Darwin's theory. Jukes portrayed the Reef as a great diverse collage of geological formations, formed over centuries, shaped by winds and tides, and colonised by the small coral polyp. Jukes concluded that Darwin had produced an 'objection' against a theory of upheaval 'of much apparent weight…arranged with almost unexampled industry, and reasoned on with equal clearness and sagacity'. If the Reef were drained of its water, Jukes wrote:

> This great Barrier would be found to have a considerable resemblance to a gigantic and irregular fortification, a steep glacis crowned with a broken parapet wall, and carried from one rising ground to another. The tower-like bastions, of projecting and detached reefs, would increase this resemblance.

Fanciful imaginings aside, there was reason within Jukes description. He later rationalised that the entire Reef structure was built upon a submarine structure which was attached to the Australian coastline. He added:

> Now suppose the coast cleared of coral reef, and raised so much that it emerged from the seas just within the line of the present Barrier reef. Then let the reef commence in the shallow water along that shore, and a very slow and gradual depression take place, giving time for the polyps to build up so as to keep near the surface of the water. The result of this action would be the present Barrier with its steep outer slope, and its gradual extensions over the sinking rocks that were once dry land within it. Portions that were once hills on the dry land would now be islands, between the Barrier and the main…Islands that once existed in front of the main land would now be altogether submerged, and their places only marked by detached reefs outside the Barrier.

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90 Ibid., 342-3.
91 Ibid., 332.
92 Ibid., 346.
His endorsement of Darwin's theory, which he claimed rose 'beyond a mere hypothesis into the true theory of coral reefs', thrust Jukes himself into the debate of coral reef origins—a subject covered extensively by the Bowens and McCalman. Jukes' descriptions, however, had an important local effect. His commentary on reef formation, printed in the Australian newspapers, ultimately heightened public interest in the Reef, not as a sea-lane or as a bastion of resources, but as a place and source of immense scientific interest.

Scientific interest and appreciation of the Reef's beauty was a theme of Jukes' prose. Coloured with shades of romanticism, Jukes' descriptions of Reef life and scenery heightened the appeal of the Reef as a picturesque, tranquil and interesting environment: imagery consistent with the perception of the Reef as an important and secure sea-lane. Coral reefs, Jukes wrote, while lacking in variety produced 'considerable beauty' especially 'when viewed from a ship's mast-head at a short distance in clear weather.' He added:

All the sea is perfectly clear from any mixture of sand or mud...It is this perfect clearness of the water which renders navigation among coral reefs at all practicable, as a shoal with even five fathoms water on it can be discerned at a mile distance from a ship's mast-head, in consequence of its greenish hue contrasting with the blue of deep water. In seven fathoms water the bottom can still be discerned on looking over the side of a boat, especially if it have patches of light-coloured sand; but in ten fathoms the depth of colour can scarcely be distinguished from the dark azure of the unfathomable ocean.

The corals themselves were of interest too. Despite the difficulties in viewing the underwater world with clarity, Jukes was able to make a number of observations of it. Consistent with the interest within oceanography in the mid nineteenth-century, Jukes became fascinated with the variety and diversity of life which existed in the submarine world. He described 'the vast variety and abundance of animal life' surrounding and found within a 'block of coral rock' brought up from the bottom with a fish hook during an anchorage. The 'block', Jukes wrote, glaring with 'beauty from the many brightly and variously coloured animals and plants...was a perfect museum'. His descriptions further entangled aesthetics and science:

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94 'Domestic Intelligence', Sydney Morning Herald, 16 December 1847, 2; 'Miscellaneous Extracts – Geology of Torres Straits', Sydney Morning Herald, 22 March 1848, 3 & 'Review', Sydney Morning Herald, 21 December 1850, 2.
95 Jukes, Surveying Voyage of H.M.S. Fly, 1, 10.
96 Ibid.
97 Ibid., 17.
It was a mere worn dead fragment, but its surface was covered with brown, crimson, and yellow nulliporae, many small actiniae, and soft branching corallines, sheets of flustra and eschara, and delicate reteporae, looking like beautiful lacework carved in ivory... What an inconceivable amount of animal life must be here scattered over the bottom of the sea, to say nothing of that moving through its waters, and this through spaces of hundreds of miles. Every corner and crevice, every point occupied by living beings, which, as they become more minute, increase in tenfold abundance.98

The emerging appreciation of corals from scientific and aesthetic perspectives was telling. While anchored in the Frankland Group, 'about one-half' of the Rattlesnake's crew was out collecting shells and coral; they 'reaped a rich harvest of cowries, cones, and spider shells'.99 MacGillivray added, in his opinion, the Reef was 'the greatest assemblage of "pretty" shells' he had ever encountered.100 The broad appreciation of the Reef's beauty was underway.

Along with the resources, the virtues for settlement, the scientific interest and the beauty, the Reef, by 1860 had taken on a form of heritage. Explorers subsequent to Cook could not pass through the Reef without mention of his endeavours. King, who climbed Lizard Island's summit twice, reflected on his second ascension: 'The island, from its connexion with Captain Cook's misfortunes during his perilous navigation within the reefs, will always be an interesting feature in the history of the discovery and examination of this coast, and deserves a more appropriate appellation'.101 Stokes too remarked on the feeling of following 'in the footsteps of the immortal navigator'. He remarked:

There is an inexpressible charm in thus treading in the track of the mighty dead, and my feelings on attaining the summit of the peak, where the foot of the white man, had perhaps but once before rested, will easily be understood. Below to the eastward stretched a vast expanse of water, broken at the distance of about eight miles, by a long narrow line of detached reefs, on which there ran a white crest of foaming breakers, marking the outer edge of the Great Barrier, a name which few seamen could hear with indifference when in its vicinity. If I felt emotions of delight, on first perceiving the extent of a danger so justly dreaded, how much stronger must have been the feelings of Captain Cook, when from the same spot years before, he saw by a gap in the line of broken water, there was a chance of his once more gaining the open sea, after being confined to the eastern shores of the Australian continent, for a distance of 750 miles.102

98 Ibid., 17-8.
99 MacGillivray, *Voyage of H.M.S. Rattlesnake*, 1, 94.
100 Ibid., 109.
102 Stokes, *Discoveries in Australia*, 1, 346-7.
Endeavour River too was considered 'classic ground', and Jukes, while on Lizard Island, reflected: 'How little could he [Cook] have foreseen that in no short time a British empire would be founded on the shores he had first discovered, and that this reef-environed coast, dangerous though it be, should be in the daily track of vessels!'

To characterise late-eighteenth and to mid-nineteenth European perspectives of the Reef as underpinned by 'fear' provides little room for competing visions of the Reef. Clearly, anxieties existed about coral reefs. The Reef itself, an obstacle to the northern New South Wales coast from the Coral Sea, presented problems for those wishing to make what they considered to be a faster route to the Torres Strait. The Reef, however, at least the inner coast passage, was viewed as a bastion: a tranquil lagoon, safe, secure and a well traversed sea-lane. Its value as an arm of Empire expanded with each voyage of exploration along with its prospects for resources and settlement. Its diversity of life was a source of rich scientific interest from geology to biology and romanticised evocations which extolled the virtues of its scenery coexisted alongside the fear narrative. The value of the Reef in terms of its usefulness for settlement and its cultural and natural heritage was by 1860 a conscious force in European perceptions.

103 Jukes, Surveying Voyage of H.M.S. Fly, 1, 94.
104 Ibid., 97.
Map 2: Flinders' Great Barrier Reef. Note the passage describing the internal lagoon's suitability for navigation.

Chapter Three – A Settled Reef

The establishment of Queensland in 1859 opened up the Reef for further exploitation. Ben Daley asserted that the commencement of settlement along Queensland's coast initiated European Australia's destruction of the Reef.\(^1\) His comments exemplify a historiography which considers the latter half of the nineteenth century as a period of unregulated, unrestrained and nearly un-recorded exploitation of Reef resources. Regina Ganter adopted the term 'resource-raiding', a resource extraction strategy defined by 'periods of harvesting, depletion, and prospecting', to characterise the pearl-shell fishery of the Torres Strait.\(^2\) The Bowens reappropriated Ganter's characterisation and suggested it was an approach reflected in all Reef industries. They commented:

For over a century the dominant ethos was that of the open frontier of an unlimited resource potential, simply there for the taking, a process designated as "resource raiding". So, as cabinet collectors became obsolete and natural history evolved into science one major concern became directed towards discovering and exploiting economic products to sustain the increasing numbers of settlers who moved along the Reef coastline...Only when resources were close to extinction was scientific inquiry brought to bear.\(^3\)

There are undeniable truths in the sentiments expressed in these arguments. Exploitation of the Reef commenced with a seemingly unlimited optimism in its economic potential. The introduction, however, of scientific rationalism and a utilitarian ethos into Reef resource-use did little to dampen this spirit of optimism. Scientists promoted the Reef's plethora of economic resources as indicative of its importance to the Queensland economy. Despite scientific inquiry being brought to bear on various Reef industries, by 1900 the Reef's importance to the incoming federation was explicitly tied to its ability to produce huge profits.

However, perceptions of the Reef as a place rich in marine resources did not differ significantly from evaluations of fisheries around the globe. As Callum Roberts asserted, the notion that the 'wealth of the oceans' had barely been tapped persisted into the twentieth century throughout most of the world.\(^4\) Yet, as Roberts claimed, the signs of depletion were there and the 'nascent discipline of fishery science developed around the need to "do something" about fisheries problems'.\(^5\) Despite the evidence of depleted

\(^1\) Daley, *Great Barrier Reef*, 5.
\(^2\) Ganter, *Pearl-Shellers*, 165.
\(^3\) Bowen, *Great Barrier Reef*, 141.
\(^5\) Ibid., 165.
stocks, however, the notion of endless bounties of the sea prevailed. In *The Fisherman's Problem*, Arthur McEvoy surmised that California's 'lush and varied fisheries' had followed a repetitive pattern of boom and bust, 'one typical of fisheries the world over'. 6 The rise of the pearl shell, bêche-de-mer (and later the trochus shell) fisheries followed the general trajectory detailed by McEvoy:

> Usually, after a few pioneers demonstrate a fishery's profitability, capital and labor rush into it, and the harvest increases exponentially for a time. At some point, unable to bear the strain of exploitation indefinitely without sacrificing its ability to replenish itself, the resource begins to yield less and less to economic effort. As depletion erodes its productivity, a fishing industry may even improve its technical ability to find and catch fish, thereby sustaining profits for a time but drawing ever more effort into the harvest and ever more life out of the stock of fish. Ultimately, harvesting so depletes the resource as to cripple it. 7

While the imaginations of Reef exploiters and the expansion of Reef fisheries were not unique when considered within a global context, they did express themselves in novel ways. As McEvoy asserted, 'the interdependence between ecological, economic, and social processes – between environment and society – is inexorable'. 8 In this chapter, and the next, I will roughly trace the dynamics of the pearl-shell, bêche-de-mer and trochus fisheries and their developing association with the Reef's perceived economic wealth.

The Reef, however, was not solely the playground of industry; it played a major role in sustaining the lives of the colonies' newest settlers. Settlers, perched on the edges of the coastline, looked to the Reef for the arrival, and departure, of goods and people. Quite apart from the actual resources the Reef held, it was the only link between many coastal towns and the world at large. The inner-route of the Reef was not only the lifeline of coastal communities, by 1900 the trip was already taking on connotations as a pleasure cruise. Additionally, local communities began to utilise their Reef environments for sustenance and pleasure. Waterways became grounds for local regattas and fishing while littoral zones often attracted bathers and coral rummagers. Islands became utilised for agriculture, pastoralism, picnics and camping, holiday huts, and hunting excursions. Some cays, like Green Island, were large enough to sustain various activities and intertidal reefs were frequented for shell and coral collecting or

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7 Ibid., 6
8 Ibid., 257.
just curious examinations of the various life forms. The everyday reality of living with
the Reef helped to develop regional and sentimental attachments to it.

While settlers were the most common frequenters of the Reef, by 1900 the
qualities of the Reef, both natural and economic, had been broadcast to an international
audience. In 1893 William Saville-Kent, Queensland's Commissioner of Fisheries,
published *The Great Barrier Reef: Its Products and Potentialities*. The book was a
broad survey of the Reef's life and geological formations as well as a commentary on its
potential marine resources. Saville-Kent included in his publication forty-eight
photographs of various coral reef formations and corals, and coloured illustrations of
reef flora and fauna. In this regard Saville-Kent's work both contributed to and reflected
perceptions of the Reef's natural qualities. Yet a focus of the book, the survey of the
Reef's economic possibilities, promoted the idea that the Reef held unlimited resources.
This chapter will examine the development of the rhetoric surrounding the Reef's
natural and economic qualities following the establishment of Queensland. It will utilise
popular texts, alongside newspaper accounts, to give a sense of the valuations being
placed upon the Reef as a site for economic pursuits, recreation and romantic
enjoyment. It concludes with a discussion of Saville-Kent's work as Commissioner of
Fisheries, the controversies surrounding his recommended regulations, and the
importance of his book in a history of European perceptions of the Reef.

**Establishing the Inner Route**

Those concerned with charting the course of Queensland were well aware of the
importance the Reef would hold. The preceding decades of maritime expeditions had
created a sense of optimism in safe and secure shipping along the Reef. Captain
Robinson, of the *Pioneer*, wrote to the Queensland Governor, George Bowen, to relay
the feelings of the then deceased Commodore Burnett that the Reef 'hitherto regarded
by seamen as a bugbear was one of Queensland's greatest blessings…one great and
secure harbour.'\(^9\) Robinson was eager to espouse the safety of the Reef's inner-route,
and criticised claims in the *Australian Sailing Directory* that the outer-route was faster.
He had explained to Bowen that:

> The greater safety of the "inner" over the "outer" route appears to be allowed by
everybody; but it was supposed to have a disadvantage in ships being obliged to

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\(^9\) Captain Robinson to George Bowen, July 2, 1863 in 'The visit of H.M.S.S. Pioneer to Port Albany',
*Brisbane Courier*, September 21, 1863, 2.
anchor five or six times, causing loss of time. But there is in reality no loss of
time, and it is better to have the trouble of anchoring five or six times in secure
waters than to endure the anxieties of the outer route, where, after all, anchoring
has to be resorted to three times, exposed to the ocean-swell, which sets with
much violence against the reef.10

Convinced by the accomplishment of the Rattlesnake which had demonstrated the
efficiency of the inner-route, Robinson concluded, 'the advantages and facilities are
very great for the establishment by a colonial company of a line of steamers to run
fortnightly between Sydney and Singapore, via the "inner route," and Cape York'.11
With a subsequent pattern of coastal settlement, the inner-route of the Reef became a
life-line for the fledgling colony.

The increased traffic, however, required investments in maritime infrastructure
like lighthouses and buoys along with pilotage regulations. Despite the ventures of the
maritime explorers and assertions to the contrary, navigating the Reef's inner-route still
demanded constant alertness. In 1864 directions for safe passage through the inner route
encouraged vessels to enter through the Capricorn Channel – the alternative being the
more circuitous Curtis Channel between Break Sea Spit and Lady Elliot Isle – and then
to proceed northwards to Torres Strait. As a reminder of the anxieties Captain Cook
felt, masters were instructed that the lead, a weight on a rope dropped over the side to
measure depth, could not be 'too implicitly trusted…a keen look-out from the mast-
head, cool judgement, and ready action may, therefore, be urged as a general rule to
ensure successful navigation amongst the reefs'.12 The directions added that a vessel
should never be steered in the glare of the sun 'as the glare makes it impossible to see
different colors of the water indicating dangers to be avoided'.13

The Queensland colonial government formulated the necessary regulations and
infrastructure to aid the passage of vessels through the Reef. The erection of lighthouses
and lights along the coast had begun in 1868 with the construction of the light house at
Bustard Head. By 1892, 207 lights, 494 beacons and 201 buoys had been constructed
and deployed along the waterways of Queensland.14 Legislating Reef pilotage began
with the Queensland Navigation Act of 1876. Specific stipulations, however,

10 George Bowen, 'New Settlement at Cape York, and Survey within Great Barrier Reef,' Proceedings of
the Royal Geographical Society of London 8, no. 4 (1863): 117.
11 Ibid., 118.
13 Ibid., 109.
14 Winifred Davenport, Harbours & Marine: Port & Harbour Development in Queensland from 1824 to
1985, ed. Harbours Queensland. Department of and Marine (Brisbane: Dept. of Harbours & Marine,
concerning Reef pilotage were not introduced until 1884 when ten provisions were implemented as part of the 'Regulation for Pilot Service, Torres Straits' amendment.\textsuperscript{15} These endeavours made a significant difference to navigation safety and security. Descriptions and directions offered on passing through the Reef in the early 1880s contrasted starkly with those proffered in 1864 in both detail and tone.\textsuperscript{16} In 1882, the French geographer, Élisée Reclus commented that while shipwrecks had once been a frequent occurrence 'all the accessible passes are known and vessels freely navigate the inner waters under shelter from the fury of the ocean waves'.\textsuperscript{17} Perhaps exaggerating the completeness of the knowledge of the Reef's waters, Reclus' commentary nonetheless demonstrates how the importance of the Reef as a maritime highway eclipsed fears of shipwrecks.\textsuperscript{18} While the Reef would still be the cause of some significant shipwrecks, the anxieties which had once infected conceptions of the Reef had been largely dissipated. Shipwrecks on the Reef started to take on an aura of history.

**Engaging with the Reef for Fun**

'The Taming of the Reef'\textsuperscript{19} was truly a grand task intimately connected with the ambitions of empire. While coastline settlers were interested in safe navigation, they were also concerned with the benefits the Reef immediately held for them. With the onset of steam navigation, people of the Reef began to appreciate the efficiency of a trip from the northern regions to Brisbane or Sydney. When the Melbourne shipping firm, Howard Smith and Sons, began sending vessels to Townsville, a Charters Towers newspaper informed its readers that with their 'fastest and finest' vessels, the firm could make the run between Brisbane and Townsville in 66 hours, 'quite as long as passengers care to be at sea on such a voyage'.\textsuperscript{20} Travelling along, or within, the Reef was part of the everyday life of early Reef settlers.

Additionally, they revelled in the Reef's natural scenery and utilised its flora and fauna for recreation and sustenance. As early as the 1870s Townsville and Cairns residents were visiting Magnetic and Green Islands, respectively, as holiday retreats. A

\begin{footnotes}
\footnotetext[15]{Queensland Government Gazette, Volume 34, 26 May 1884, 1684.}
\footnotetext[16]{See for instance those listed in Pugh's Queensland Almanac, 1882, 204-252.}
\footnotetext[17]{Élisée Reclus, Australasia, ed. A. H. Keane, Rex Nan Kivell Collection (London: Virtue and Co, 1882), 365.}
\footnotetext[18]{Bowen, Great Barrier Reef, 107-123.}
\footnotetext[20]{'Reuter's Cablegrams', Northern Miner, 19 October 1883, 2.}
\end{footnotes}
correspondent to the *Queenslander* noted 'four picnic parties left Ross Creek for Magnetic Island' on Easter Monday 1879. In 1877 the *Queenslander* included correspondence from a Cairns contributor detailing the activities likely to occur during the festive season and predicted shell collecting, pigeon shooting, and picnics on Green Island. Charles Eden, a public servant and writer who spent time at Cardwell as police magistrate and sub-collector of customs, wrote that he preferred to frequent the neighbouring Family Islands to shoot nutmeg pigeons because it was possible to 'get as many as you pleased' while birds on the mainland, once shot, fell into the thick scrub and became impossible to find. Further south, the Capricorn and Bunker groups were also utilised by the citizens of Rockhampton. An article from the *Capricornian* in December 1884 instructed readers how to enjoy 'turtle catching, fishing, shooting and oystering' during the holiday season. Unsurprisingly, people from the coastal towns were early to engage and explore the possibilities of their neighbouring environments.

Furthermore, descriptions of the Reef began to speak to a culture of 'cruising the Reef' and often evoked the romantic lyricism of Jukes' prose. Reclus described the ease with which the reefs could be navigated 'aided by the clear atmosphere and the extreme limpidity of the water', 'their greenish tints' providing a pleasing contrast 'with the blue of the neighbouring abysses'. Eden described Hinchinbrook Island as 'a scene of beauty unequalled in Australia' and was similarly entranced by the submerged corals. He recalled during a trip from Rockingham Bay (Cardwell) to Bowen that:

> We passed through the Palm Islands—a most beautiful group—anchoring for a short time to collect specimens of the coral, with which the place abounds. It was a most lovely sight; allowing the boat to drift gently along and peering down over the bows at the beds of coral, seeming so close in the clear water that you felt inclined to stretch out your hand and reach it, although in reality two or three fathoms beneath the surface. We had a black boy, who dived, and in a couple of hours, had as much as we wanted.

Extracts of the explorer John Strachan's journey to the Torres Strait in the *Alice Maud* appeared in various Australian newspapers under the title 'A Cruise Along the Great Barrier Reef'. In one extract he described Bird Island (25km north-west of Cape Grenville) from which he operated a guano mining facility as 'one of the loveliest

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21 'Townsville', *Queenslander*, 3 May 1879, 551.
22 'Cairns', *Queenslander*, 29 December 1877, 8.
24 'The Coral Islands on the Coast', *Capricornian*, 13 December, 1884, 7.
tropical islands in these seas. A coral reef, he wrote, 'presents a view of such
magnificence and grandeur as defies description—every colour and hue of the rainbow
is represented there, miniature forests teeming with life, and fairy bowers, where the
mermaids might dwell'. A romantic appreciation of the Reef's natural qualities was
permeating the newspapers and literature of the late-nineteenth century as increasing
numbers of people frequented its water-ways.

Steaming through the Reef increasingly became synonymous with a growing
curiosity and leisurely enjoyment of its natural splendour. The Whitsunday Passage, in
particular, was beginning to earn a reputation for serene vistas and placid waters. A
Brisbane Courier reporter who accompanied the Premier's delegation to North
Queensland in 1885 said that the Whitsunday Passage 'was a pleasure excursion of the
most enjoyable character'. A correspondent for the Sydney Morning Herald was also
charmed:

What is Whitsunday Passage like? It is a quiet sea between walls of verdure on
one side and bold hills on the other, Seaward island after island rises; now a
pretty beach comes white-banded towards you, or a score of channels glide into
one another as if seeking a way into the mighty main again. A solitary hut with
a solitary light flickering from the hillside, a tall palm outlined against the sky, a
rugged spur in its passive menace to the toilers of the sea, a thousand quiet
nooks, numberless surprises of the water and of the land—this is what one
counts when Whitsunday Passage is passed, and yet it is not those things that
impress one; but the general outlines, the general impression, the long contour
of beauty.

In 1895, another ministerial delegation travelled northward and again the cruise through
the Whitsunday Passage received attention. The article lamented that while the Passage
'must rival if not surpass many of the world-famed beauty spots of the
globe…comparatively few of those who have travelled up and down [Queensland's
cost] had the opportunity to enjoy the full beauty of the scene'. Steamers, the article
explained, usually traversed the Passage at night. The Reef's beauty was being poorly
appreciated. By 1900, however, early holiday makers were beginning to take advantage
of the allure of the Reef's islands. In 1900 competing Magnetic Island hotel proprietors
Richard Butler and Robert Hayles advertised in a Charters Towers newspaper their

28 'The Ministerial Tour in the North', Brisbane Courier, 24 June, 1885, 5.
29 'Towards the Sun-Line', Sydney Morning Herald, 6 September, 1889, 3.
30 Ibid.
31 Ibid.
daily services, hotels and the merits of the railway link between Townsville and Charters Towers.32

While romanticised descriptions of the Reef's beauty were becoming increasingly common they were also accompanied by elucidations of its natural history. The origin of the Reef continued to intrigue the scientific community.33 Despite Jukes' extolling of Darwin's theory of subsidence, Darwin's theory found challengers who asserted volcanic upheaval had contributed to reef formation; subsidence, it was argued, was not the universal cause.34 Darwin's theory, however, continued to find supporters. Discussions of the Reef's biology and geology within the newspapers provided some of the first examples of earnest attempts at popular natural histories of the Reef. A long article, written by an author adopting the pseudonym 'Sea Urchin', began with the assertion: 'Most people are familiar with the name of the great Reef without knowing much about it'.35 Writers educated readers on the geological and biological forces which formed the Reef's structure, and about curious marine organisms which lived within it.36 Popular interest in the Reef provoked some to proclaim that it should 'be considered one of the wonders of the world'.37

Resources Explored

While the Reef's natural qualities began to be recognised for their scientific and aesthetic benefits, the Reef's resources were equally valued as a source of sustenance and commerce. The Queensland government was eager to locate and control the potential industries which the Reef provided. For example, Strachan's guano mining operation on Bird Island was among a number of guano operations which gave the initial impetus for the extension of Queensland's maritime boundary.38 The motivation for the boundary extension, as Steve Mullins illustrated, was 'to remove an awkward administrative anomaly' and salve the bruised egos of Queensland ministers who

32 'Townsville Health Resort', Northern Miner, 19 October 1900 and 'Notice to Holiday Makers', Northern Miner, 5 October 1900.
34 Bowen, Great Barrier Reef, 194.
38 Daley does not list Strachan's operation. He does consider there were likely more operations in existence prior to 1873 than the three he lists: one at Raine Island, Lady Elliot Island and Wreck Reef. See: Daley, Great Barrier Reef, 158-60.
considered the existing situation of the New South Wales colonial government having control of the industry along the Queensland coastline as both impractical and embarrassing. The presence of guano and coral reef lime along the Reef coast was an important aid in establishing settlements too. An initial virtue of the site of the settlement of Somerset was the lime on neighbouring Albany Island. Other coastal settlements also utilised their proximity to the abundance of coral-lime. Apart from shooting pigeons, Eden recalled that his visits to the Family Islands also included the collection of 'coral to burn for lime'. He described Cardwell's beach as 'one mass of dead coral', lying loose and easily collected in minutes.

Another Reef resource of early interest to both the colonial government and settlers was dugong. Dugongs had been fished in the Moreton and Wide Bay area by Europeans since 1847. By 1860 it was apparent that while the dugong could be found in the waters off the south-east Queensland coast their numbers were more prolific in the Reef's northern waters. The virtues of dugong were deemed to be its edible and apparent medicinal qualities. The naturalist, George Bennett, suggested fresh dugong flesh resembled beef, and when salted had 'the flavour of excellent bacon' and its oil held various virtues for 'those afflicted with strenuous disease'. The potential of a dugong industry in the north was abundantly clear to Eden, who asserted that a worthwhile opportunity was available 'for a man with the proper coppers, a good boat and crew'. The writer, E. Thorne, considered that 'the flocks of dugong' along the coast of Queensland were more extensive and valuable than all of the Reef's resources. In 1873 a resident of Cardwell gave a sense of the perceived potential of the fishery when he wrote to the *Queenslander* inquiring as to the 'mode of curing dugong hide'. He added:

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40 Bowen, 'New Settlement at Cape York, and Survey within Great Barrier Reef,' 114.
42 The first capture of a dugong in Moreton Bay by European fishermen noted can be found in 'News from the Interior', *Sydney Morning Herald*, August 19 1846, 3.
44 For a discussion of the development of the Queensland dugong fishery in mid-nineteenth century and the subsequent advertisements and promotion of the medicinal qualities of dugong oil see Veronika Folkmanova, 'The oil of the dugong: Towards a history of an Indigenous medicine', *History Australia* 12, no. 3 (2015): 97-112.
45 Bennett, *Gatherings of a Naturalist*, 166.
47 E Thorne, *The Queen of the Colonies or Queensland as I Knew It* (London: Sampson Low, Marston, Searle & Rivington, 1876), 248.
In Rockingham Bay there are swarms of dugong, one man alone having caught with his net one, two, three, and even seven fish at a haul. Attention is being directed to this important fishery at the present time, and it is proposed to convert every part of the fish to some use.48

The letter, juxtaposed with correspondence describing picnic events at Magnetic and Green Island, demonstrates an engagement with the Reef which has not hitherto been acknowledged. Settlers on the Reef coast engaged with the Reef for its economic possibilities and as a recreational playground. Its value exceeded its existence as a maritime-highway; it was a life-line offering immediate sustenance, commercial opportunities and leisurely indulgences.

**Pearl-Shell and Bêche-de-mer**

Guano, lime and dugong had emerged as important resources gleaned from the Reef, although the most valued industries were the pearl-shell and bêche-de-mer fisheries. Bêche-de-mer, or trepang, was initially collected from the tidal shallows but as inshore stocks became depleted they were collected from the Reef floor between 4 and 18 fathoms. Curing stations were erected along the northern regions of the Reef particularly on islands, but also at coastal settlements. There, the animal would be smoked and cured and sent to Chinese markets to be used for culinary purposes. While shore-based curing stations were the initial form of enterprise, eventually schooners became fitted with curing facilities.

While pearl-shell and bêche-de-mer were being exploited prior to the separation of Queensland from New South Wales, the notoriety of the fisheries, stemming from their utilisation and treatment of Indigenous and Islander labour, increased following coastal settlement. Bêche-de-mer was considered 'one of the most curious incidents in commerce' partly because of the animal's bizarre appearance, but also because it was produced almost exclusively for Chinese markets.49 Bêche-de-mer, long before Reef tourism, made commercial connections between the Reef and the Asian marketplace. In his description of the industry, Thorne queried what Englishmen would think 'of large fortunes being made by their countrymen, by procuring snails for the tables of the middle and upper classes of Chinese…It does appear curious that British colonists should gather wealth in this manner, yet such is the case'.50 Thorne's bemusement aside,

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48 'Curing Dugong Hides', *Queenslander*, 30 August 1873, 5.
49 Thorne, *Queen of the Colonies*, 245.
50 Ibid.
bêche-de-mer was considered a source of wealth and the fishery a valued contribution to the colony's economy.

The fishery, however, suffered from resource depletion by the early 1880s. Eden, in his description of the fishery, conceded that while the animal was a valued commodity the search for it was 'precarious' and considered the entire fishery to be one of misery and melancholy. One of the dilemmas associated with the scarcity of the bêche-de-mer was that it required boats to go further and further afield in search of new beds. The consequences of such measures became starkly apparent in 1881 when Mary Watson, the wife of a bêche-de-mer fisherman with whom she lived on Lizard Island, was involved in a conflict with local Aboriginal people. In October 1881, Watson's husband, Captain R.F. Watson, was on a fishing excursion when Watson, her infant son, and two Chinese servants (Ah Leong and Ah Sam) were attacked. Ah Leong was speared to death, Ah Sam, also speared, was wounded and he along with Mary and her infant were forced to leave the island. Crammed into a tank used for boiling bêche-de-mer they set themselves adrift. None survived. Their remains, discovered in January 1882 were accompanied by Watson's diary which captured the tortuous last five days of her life as she searched in vain for water.53

While Mary Watson's death was symptomatic of a larger conflict between white settlers and Aboriginals along the Reef at the time, her husband's absence, it has been alleged, was symptomatic of bêche-de-mer scarcity. While this might be true, these assertions underplay the intensity of the violence between bêche-de-mer fishermen and Queensland coastal Aboriginal peoples during the period and the stories of dispossession which they embody. Nonetheless, a letter to the Cooktown Herald from various fishermen asserted that:

The reefs on the mainland coast have been so long and steadily worked that the fish now require time for natural increase and growth, and it is therefore necessary for us to push northward, and towards the coast of New Guinea and the adjacent islands.

In an early expression of the importance of the maritime trade and settlement in north Queensland, the fishermen asserted that they required both actual and legislative protection from hostile Aboriginals and Torres Strait Islanders, and believed the

51 Eden, My Wife and I, 297-8.
52 Brisbane Courier, 9 November 1881, 2.
53 'Mrs. Watson's Fate', Brisbane Courier, 23 January 1882, 3.
54 See Bowen, Great Barrier Reef, 143.
55 'The Bêche-de-Mer Industry', Brisbane Courier, 31 October 1882, 6.
government's failure to do so infringed upon their freedom to pursue their vocations. They even requested a Royal Commission into the industry and the conduct of its operatives. Legislative action on the bêche-de-mer fishery had already come, in 1881, as part of the *Pearl Shell and Bêche-de-Mer Fishery Act*. Rather than enforcing any protections or preservation measures, however, the Act merely served to regulate the fisheries' operations through licenses and labour provisions.

The bêche-de-mer fishery, while known for some wealth, was largely associated with terror and drudgery. In contrast, the pearl-shell and pearling fishery was described, at times, as comparatively regal and romantic, albeit clouded in mystery. Thorne believed considerable deposits of pearl-shell were found 'on the more unfrequented parts' of the Reef, but he gave little certainty to the claims of great wealth earned. He wrote:

> Many vessels are now engaged in the trade of procuring it, and are said to be doing remarkably well, although nothing can be said with certainty of their actual earnings, as each vessel makes efforts to carry on its business unknown to the rest of the world.56

Indeed, detailed records on the fishery only begin in 1877.57 The lack of earlier records contributed to a continuing memorialisation and romanticisation of the earliest period of the fishery as a golden era for pearlers.

Nonetheless, the prevailing notion was that some, mainly Sydney merchants, were profiteering from resources procured from Queensland waters. Much like the Reef's guano deposits, pearl-shell represented a potential resource yet to be utilised by the new colony. Thorne implored the colonial government to seize the potential of the Reef's resources:

> As yet very few, if any vessels belonging to the colony of Queensland have been engaged in this lucrative trade. That lack of capital and enterprise which has retarded the development of its other resources has also kept its waters, in a great measure, a sealed treasure to Queenslanders. The Sydney merchants have entirely monopolized the trade on the coasts of this colony, as well as in the neighbouring islands. Yet Queensland, with the splendid ports all along it coasts, seems as if intended by nature for the seat of a vast maritime trade.58

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56 Thorne, *Queen of the Colonies*, 246.
58 Thorne, *Queen of the Colonies*, 246.
Thorne's remarks reflected the perceived importance of the Reef as a potential source of wealth for Queensland. They spoke to a belief that the Reef was valuable to Queensland and its resources, awaiting exploitation, needed to be treasured and controlled.

**Regulatory Intrusions**

The Queensland government's intervention into the industry initially resulted in the regulation of the acquisition and treatment of labour as well as licensing provisions. The latter reforms, while not breaking up the Sydney monopoly (by 1880 only two of the fourteen boats operating within the industry were owned by Queenslanders), ensured that the Queensland government could exercise some control and gain revenue from the industry.\(^{59}\) In this regard the move was fortuitous. Both the pearl-shell and the bêche-de-mer fisheries generated considerable revenue in the early to late 1880s. For the decade of 1880 the annual mean revenue generated from the bêche-de-mer fishery was £23,559.8 with a highest and lowest of £31,581 (1883) and £14,529 (1887) respectively.\(^{60}\) For the five year returns between 1884 and 1888, the pearl-shell industry generated annual mean revenue of £70,214. By the end of the 1880s pearl-shell was one of Queensland's ten leading exports.\(^{61}\)

Yet equally apparent, for both fisheries, was a downward trajectory in revenue by the end of the 1880s. Global demand remained high, but shell was harder to find. Typically, the pearl-shell fishery had operated on a shore-based system in which men would free-dive and collect the shell from shallow grounds. As shell became scarce, however, innovations were required. The major changes to the industry were first the adoption of full-dress deep-diving equipment, which allowed divers to collect from deeper grounds and later the introduction of schooner-based fleets or 'floating stations'. These were large fleets of small boats serviced by a single mother ship: the arrangement allowed the fleet to remain on the water for long periods of time, and allowed greater

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59 Letter Resident Magistrate (Thursday Island) to Colonial Secretary, April 21, 1879 printed in 'Pearl Fisheries', *Australian Town and Country Journal*, February 28 1880, 23.

60 William Saville-Kent, 'Bêche-De-Mer and Pearl-Shell Fisheries of Northern Queensland,' in William Saville-Kent, *Fisheries of Queensland, 1889-1905*, (Brisbane: Government Printer, 1889-1905), 4. Saville-Kent's reports did appear in *Queensland Votes and Proceedings*. His reports, however, were also bound within a single collection under the above title. I have used the pagination of reports within this collection.

61 William Saville-Kent, 'Pearl and Pearl-Shell Fisheries of Northern Queensland,' in *Fisheries of Queensland*, 1.
scrutiny of the divers and their collection of pearls. 'Floating stations' were introduced in the Torres Strait in the mid-1880s with the discovery of the Old Ground, but as its beds became depleted the embryotic stations migrated from the Torres Strait to the pearl-shell grounds off the north-west coast in 1886 where they found their ultimate milieu.

It is important to note, however, that the 'floating stations' did not replace the shore-based shellers; they competed against them. In later years, when concerns around resource depletion and the wider employment of Japanese divers became commonplace and contested, the distinction between the shore-based and 'floating station' pearlers presented a problematic fracture within the industry. The fleets returned to the Torres Strait at the beginning of 1890 by which time the Queensland government had appointed an oyster expert, William Saville-Kent, as Commissioner of Fisheries.

**Saville-Kent's Intervention**

Before his appointment in Queensland, English-born, William Saville-Kent had already had some Australian fisheries experience in Tasmania (1884-87) and Victoria (1887-88). His Queensland appointment followed an excursion aboard the HMS *Myrmidon* through the Reef en route to the Cambridge Gulf of Western Australian. It was Saville-Kent's first contact with the Reef and it allowed him to examine varieties of bêche-de-mer and pearl-shell – the economic qualities of which he was distinctly aware of at that time. Saville-Kent's appointment in Queensland is significant for two reasons. First, his work provided the foundations for the earliest form of government-enforced conservation of Reef resources. Yet the industrial reforms which followed from his recommendations were the source of considerable controversy: an unintended, but second, significant consequence of Saville-Kent's appointment.

Saville-Kent raised his concerns for both fisheries within the first year of his appointment. In 1889, he asserted that the pearl-shell fishery was suffering from

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62 In the Torres Strait pearl-shell fishery pearls legally belonged to the owner of the lugger. The pearls, though, were not a principle item of the industry and merely presented a form of supplementary income. Supervising the collection of pearls was problematic: divers would often open the shell below water, remove the pearl, and later claim that the shell was empty. Back on shore the diver could then profit by selling the pearl.

63 Steve Mullins, 'To Break 'the Trinity' or 'Wipe out the Smaller Fry': The Australian Pearl Shell Convention of 1913,' *Journal for Maritime Research* 7, no. 1 (2005): 219-20.

extensive depletion as a consequence of the 'indiscriminate collection of small immature shell' and attributed the decline in size and weight of the pearl-shell 'to the considerable depletion of the most readily accessible fishing grounds'. He suggested that 'the only practical method of dealing with the subject is to establish and enforce regulations against the taking of shell for the market below a certain size'. At Thursday Island he consulted 'members of the trade', whom he described as 'leading boat owners', and who resolved to recommend to the government the need for a minimum size limit for exportation: seven inches from hinge (or butt) of the shell to the edge of the opposite lip. Saville-Kent desired a dual measurement system 'one applicable by the diver to living unopened shell and the other to shell opened and trimmed for the market'. The divers' measurement, made by a diver below the water, would be eight inches. Saville-Kent reasoned that since eight inches 'closely corresponds with the ordinary span of a man's hand' it was a practical gauge. The other measurement would be six inches across the opened or internal nacre, of the shell. This measurement reflected the 'smallest marketable dimensions' viewed during his time at Thursday Island. Within a year, however, Saville-Kent considered the adoption of both measurements to be impractical, largely because of the variability of the outer measurement. The edge of the outer-shell is brittle and he claimed 'it is very rarely obtained entire'. Consequently, Saville-Kent recommended that only the internal measurement of six inches be adopted.

Saville-Kent's second recommendation was the closure of grounds and the appointment of an inspector to ensure the size-limits were adhered to. In particular, he suggested that the government close, and declare a reserve, the Endeavour Strait (the body of water separating Prince of Wales Island and the Queensland mainland) for a period of three years. This ground had previously been 'one of the most productive shelling grounds in the straits', he claimed, but had been over fished to the extent that it

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65 William Saville-Kent, 'Pearl and Pearl-Shell Fisheries of Northern Queensland,' in Fisheries of Queensland, 2, 10.
66 Ibid., 4.
67 Ibid.
68 Ibid.
69 Ibid.
70 Ibid.
71William Saville-Kent, 'Bêche-De-Mer and Pearl-Shell Fisheries of Northern Queensland,' in Fisheries of Queensland, 8.
72 William Saville-Kent, 'Pearl and Pearl-Shell Fisheries of Northern Queensland,' in Fisheries of Queensland, 5.
was, in 1889, 'unremunerative'. Other areas were also identified as suitable sites for reserves, but not for the purpose of regeneration.

Finally, he encouraged the government to support the development of cultivation initiatives. In August 1889, Saville-Kent eagerly reported that he had 'successfully demonstrated that with the adoption of suitable precautions the Pearl-shell can be brought in alive from the outside shelling grounds, and be laid down and grown in the more readily accessible home'. Essentially, Saville-Kent had established that it was possible to transfer live pearl oysters from the deeper fishing grounds to shallow waters, closer to the shore. His report from later in that year illustrated his experiments and confirmed his conclusion that cultivation of the pearl-shell was not only possible and a potentially profitable enterprise, but necessary. It would, he claimed, give impetus to an industry suffering from a depression. He advocated the introduction of concessions for shelling companies and station owners such as the granting of leases over 'a certain extent of the foreshore or water areas' in the vicinity of their stations for the formation of the pearl-shell beds. The other concession was the exemption of divers, employed by those engaged in the cultivation of pearl-shells, from the size limit restrictions. The cultivation would, he asserted, have the added benefit of ensuring that the pearls, which had not hitherto formed a formal part of the industry and were generally seized and traded by the divers, would revert 'to their rightful proprietors' – the boat owners.

On bêche-de-mer, Saville-Kent was far less assertive in his recommendations; largely because he knew less about the animal and fishery. He did not recommend a size limit and the recommendations he did make largely concerned the policing of recruitment and treatment of Aboriginal and Torres Strait Islander labour. The fishery, despite periods of resources scarcity, had also become associated with the supplementary fishery of turtle-shell. Saville-Kent considered that the bêche-de-mer fishery would benefit from wider adoption of supplementary fisheries including

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73 Ibid.
75 William Saville-Kent, 'Pearl and Pearl-Shell Fisheries of Northern Queensland,' in *Fisheries of Queensland*, 5.
76 Ibid., 9.
78 Ibid., 3-8.
utilising turtles for their meat, sharks for various products, exploitation of sponge and
the collection of ornamental corals. 79

It was the pearl-shell fishery, however, which attracted the immediate attention
of the government. Many of Saville-Kent's recommendations were incorporated into an
amendment of the Pearl Shell and Bêche-de-Mer Act in 1891. While similar regulations
had been introduced in Tasmania and were not novel to Australian oyster fisheries, to
those engaged in the Torres Strait pearl-shell fishery they were an abrupt regulatory
intrusion. Almost immediately, complaints emerged from within the industry of its
unworkability under the amendments. Boat owners complained that the sanctions
requiring crew members to be paid quarterly, rather than on the former basis of paying
when the ship returned from its expedition, meant too much time was lost at Thursday
Island where crew members, now paid, got into 'drunken bouts' or a 'drunken carousal
until all the money is spent'. 80 The greatest criticisms of the regulations, however,
concerned those stipulating the size limits and cultivation.

There were various concerns with the six-inch size limit. One boat owner,
George Smith, exclaimed that it was difficult to procure shell which met the limit. His
experience was that one in twenty shells picked up by his divers met the required limit
and consequently he was losing half his take 'to this restriction'. 81 Smith suggested
reducing the limit to five inches which in his opinion 'would be large enough for all
preservation purposes and not cripple us so much'. 82 Smith's concerns were echoed by a
petition signed by a number of pearlers declaring that the size restriction was causing
harm to the industry. 'The catch for the past year has been fully twenty per cent less
than that of the former year notwithstanding the discovery of fresh beds', the petition
proclaimed. 83 Furthermore, the size limits did not prevent the deaths of undersized
shell. Small shells were known to contain the most valuable pearls, and so were opened
when lifted to the boat despite then being discarded to die. 84

79 Ibid., 7.
80 Telegram John Douglas (Government Resident Thursday Island) to Chief Secretary, 8 July 1892 and
Colonial Treasurer, Hansard, Legislative Assembly, 18 July 1893, 235. QSA, SRS 6232 General
Correspondence, ID 951318 Treasury Department general correspondence – Pearl shell and beche-de-
mer fisheries.
81 Extract of letter from George Smith's to E.B. Forrest, 3 April 1892, 2. QSA, SRS 6232, ID 951318.
82 Ibid.
83 Petition from pearlers to the Legislative Assembly of Queensland, January 1893, 3. QSA, SRS 6232,
ID 951318.
84 Ibid.
The provisions caused tension, especially the exclusion of cultivators from the size limits. Initially, only one firm held a cultivation lease. The Pilot Cultivation Company, which had been established by the pearler and pioneer of the 'floating station' James Clark, held its lease between Friday and Prince of Wales Islands. Clark's operation involved the collection of live-shell from an area referred to as the Old Grounds and transferring it to their leased beds. There, it was alleged, the shell was left to mature until it had reached the requisite six inches and sold to market. Smaller operators accused Clark of simply engaging in 'transference'. Rather than assisting stock regeneration, or providing new impetus to the industry, the smaller, shore-based, operators accused Clark of destroying the industry by removing large amounts of shell, placing them on grounds which his company alone held exclusive rights to, and consequently denuding stocks and competition within the industry.

The concerns of the small shellers were expressed in both a petition and at a meeting with the former Premier, Thomas McIlwraith, and the Thursday Island Government Resident, John Douglas, at Thursday Island in November 1893. The Courier republished the petition which stated:

Shell is removed under the pretext of cultivation (collection otherwise being illegal), is cast into leased waters, where, after lying a very short time and growing to the legal size, or dying, it is exported without any cultivation really having taken place at all. The cultivation, if such a word be permissible at all, has taken place on the Old Grounds, where the shell was bred, and when, like fruit plucked unripe to ripen, it is taken and deposited in a sort of safe to become marketable. It is our unanimous opinion that if this wholesale transference of small shell as described is to be continued the Old Ground—the mainstay of the fishery—must soon become denuded to the lasting detriment of the industry; indeed, to such an extent as to deprive 200 divers and 1200 seamen of their present means of livelihood.

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86 The exact dimensions of this area, at least the area referred to in the 1890s, are foggy. During the 1897 Departmental Commission into the industry the Thursday Island sub-collector said the Old Grounds constituted approximately 1600 square miles. In the above referenced petition the area is described as westward of Mabuag, Moa, Badu, Meth Islet, Warral and Ului Island. In 1894, during debates concerning amendments to the Pearl-Shell and Bêche-de-Mer Acts it was described variably as 800, 260 and 130 square miles. However, Ganter claims that in 1897 the area of Old Ground was approximately 1000 square miles. Ganter goes on to explain that the dimensions of the Old Ground shifted and extended considerably over the following half-century. The variability in the dimensions of a region considered the lifeblood of the industry is perhaps evidence of the problems associated with regulating the fishery in the late nineteenth and early twentieth centuries. See: Ganter, *Pearl-Shellers*, 160.
87 'Pearlshell Cultivation Question', *Brisbane Courier*, 27 November 1893, 6.
They added, that while they recognised 'the importance of shell cultivation and conservation', the current legislation allowed operations which 'on the one hand' ruined 'a prosperous industry, and upon the other not to achieve the cultivation and to fail in the conservation'. 88 Alternatively, the protesting owners suggested that new prohibitions be placed on collecting shell from the Old Grounds 'except for exportation'; that the size of shell removed for cultivation be limited to three inches or under, and that an inspector be appointed to supervise the transference of shell. 89 Finally, in a statement which reflected the resentment within the industry at the intrusion of regulations, the petition concluded that the current situation threatened to destroy an industry 'that has grown of itself without any subsidy direct or indirect from the Government'. 90

The debates surrounding the introduction of cultivation were not entirely attached to conservation pursuits. Rather, they were a manifestation of the divisions within an industry dominated by a few financially endowed, large pearlers operating on the floating-station system and many smaller boat owners and shore-based pearlers who were incapable of adapting to the legislative pressures, cyclical decline of beds, and competition with the floating stations. The debates surrounding size-limits and cultivation were an expression of these divisions and the anxieties of the smaller operators towards monopolisation of industry. A contributor to the Courier, 'Pearlshell', laid bare the frustrations of the shore-based shellers. The writer conceded there was wisdom to 'stopping the export of undersized shell': it was, after all, 'a step which tends towards the welfare of the whole community'. 91 'The trouble', 'Pearlshell' exclaimed, 'comes in by allying this wholesome regulation [with] such unfair conditions that the industry is being thrown into new channels with monopoly for the few and ruin for the many'. 92

Small shellers strove to differentiate themselves from Clark and larger company owners within the public debates by giving themselves pseudonyms like 'Pearlshell', or 'Practical Pearlsheller'. They emphasised their experience, daily toil and commitment to the Queensland beds, implying Clark lacked all three. 93 A contingent of shellers wrote to the Courier to assert they had 'prospected all around the vicinity of the Old Ground', but were unable to locate profitable beds which 'exist only in the imagination of those

88 Ibid.
89 Ibid.
90 Ibid.
92 Ibid.
93 The Pearlshell Fishery', Brisbane Courier, 21 December 1893, 6.
interested people who desire to monopolise the shelling trade'. The anti-monopoly language was also adopted in correspondence to the government. Another petition signed by a number of pearlers who described themselves as 'practical divers' asserted the cultivation provisions would 'denude the beds, to their ruin, to our ruin, and to the creation of a huge monopoly which will mean the ruin of all the smaller shellers'.

'Practical Pearlsheller', imagined that without reform the industry would 'drift into the control of a handful of syndicators' and Thursday Island would be reduced 'to a pilot station and a half-a-dozen cultivation areas'.

In response, Clark claimed that he was not a 'Monopolist Capitalist' but rather one of several 'successful Shellers who thoroughly understand their business, and who are always willing to learn more'. The other shellers, Clark asserted, were 'bitterly' opposed to cultivation, and ignorant of its processes. He claimed that shell less than three inches could be killed by the forcible removal from their mooring and if they survived that, transferring them to a lease-hold would not succeed. In an earlier letter to the Courier, Clark defended the value of his enterprise and ridiculed practices adopted prior to the introduction of cultivation legislation which had led to the exhaustion of beds:

> No steps whatever have been taken to transplant or cultivate pearlshell. Beds are discovered, worked out, and no thought or care given to renewing those beds or fishing the enemies of the shell. Instead of every sheller having his own private bed, similar to the oyster beds in Moreton Bay, we find the first condemned without a fair trial.

Clark enjoyed some support, particularly from the Courier. The newspaper enthusiastically endorsed Clark and the entire enterprise of cultivation; it considered to hinder or repeal the legislation facilitating cultivation 'would be to roll back the wheels of progress'.

While the anti-monopoly rhetoric was strong, these criticisms reflected resentment within the industry towards regulation conducted without apt consultation, especially in the perspective of the smaller operators. Many of the smaller pearlers blamed the denudation of pearl beds on the floating stations which had arrived back

94 Letter to the Editor, 'The Pearlshell Industry', *Brisbane Courier*, 9 November 1894, 2.
95 Petition to Hugh M. Nelson, 22 March 1894, QSA, SRS 6232, ID 951318.
96 'The Pearlshell Fishery', 6.
97 James Clark to Colonial Treasurer, 4 December 1893, 6. QSA, SRS 6232, ID 951318.
98 Ibid., 6.
99 Ibid., 5-6.
100 Letter to the Editor, James Clark, 'The Pearlshell Fisheries', *Brisbane Courier*, 17 November 1893, 7.
from Western Australia. Prior to that, they claimed, the practice of paying divers per 100 shells, with a preference for larger and quality products, protected the grounds from denudation. The arrival of the 'North-west Fleet' initiated the destruction which 'was carried on in such a wholesale manner, that the people who had invested their capital in the district became alarmed for the future of the industry'. 'Pearlshell' asserted that the 1891 amendment was 'legislation in the dark'. He continued:

Certainly the Government had obtained advice from Mr. Saville-Kent, but his views represent only the views of one man, and those views were not founded on long-established data, but on investigations carried on privately by himself. "Doctors Differ", so also do scientists, and there is sufficient possibility of Mr. Saville-Kent being wrong in some of his conclusions to warrant caution. The Act in its main features is simply a legalised embodiment of the unsupported scientific views of one man.

Eventually, the smaller operators conceded, to a point. Rather than restricting the shell to three inches or smaller for transference, they insisted that the cultivators rely on shell larger than 5 inches for the purposes of cultivation. Their new demands were presented in another petition delivered to ministers at Thursday Island in April 1894.

The criticisms of the 1891 amendments attracted action from the Queensland government. In 1893 when they repealed the sections which necessitated the quarterly payment of the crew, an opportunity arose to discuss the issue of the size limit and cultivation leases. In late 1894 the member for Cook, John Hamilton, moved to have the legislation amended 'in consequence of a general feeling of dissatisfaction amongst the shellers' that endeavours to cultivate the shell 'are denuding the beds to such an extent that in a very short time the small pearl-shellers will have to leave'. When the time came to debate Hamilton's proposed bill, however, Premier Nelson, who believed the industry was largely 'in favour of encouraging cultivation', refused to give it his approval and the bill was barely discussed.

In 1896, a new bill to alter the limit to a five inch internal and six inch external measurement was proposed – this time by the pearlers themselves. Uncertainty remained, however, as to whether reducing the size limit would quell the industry's

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102 'Pearlshell Cultivation', Brisbane Courier, 12 December 1893, 3.
103 Ibid.
105 'Ministers in the North at Thursday Island: Deputations to the Ministers, Pearlshelling, Administration of Justice, Local Wants', Brisbane Courier, 2 May 1894, 7.
106 John Hamilton, Legislative Assembly, Hansard, 21 September 1894, 639.
107 Hugh Nelson, Legislative Assembly, Hansard, 29 November 1894, 1487.
troubles. A correspondent for the *Courier* asserted that 'persons most interested are certain that the present abuses will continue' and urged the appointment of a commission to inquire into the entire industry.\footnote{109}{The New Pearlshell Bill, *Brisbane Courier*, 27 November 1896, 5.} When the bill was read in December 1896, some members were apprehensive, largely because the contentious bill was introduced so late in the year, and they pushed for the establishment of a commission of inquiry so 'that more light should be thrown on the subject'.\footnote{110}{Henry Turley, Legislative Assembly, *Hansard*, 10 December 1896, 1795.} Prospects of a Royal Commission were nullified by Robert Philp, who introduced the bill as Secretary for Mines, and asserted that the government could not 'be accused of hurried legislation'.\footnote{111}{Robert Philp, Secretary for Mines, Legislative Assembly, *Hansard*, 11 December 1896, 1808.} Philp suggested that while little was known of the cultivation of pearl-shell, he did 'not think the industry of sufficient importance to justify the appointment of a special Royal Commission'.\footnote{112}{Ibid., 1793.} Alternatively, he thought a mining commission could be arranged at a later date, or an inspector or 'a scientific man to be imported very likely from the old country', could be appointed to inquire into the habit of the pearl-shell and the possibilities of cultivation.\footnote{113}{Ibid.}

Importantly, unlike the legislation introduced in 1891 which was informed largely by Saville-Kent's reports, the 1896 amendments were explicitly positioned as originating from the industry. Philp asserted that while there was a difference of opinion within the industry concerning the reduction in the size-limit, 'two-thirds or three-fourths of the shellers wish the limit reduced'.\footnote{114}{John Hamilton, Legislative Assembly, *Hansard*, 10 December 1896, 1794-5.} John Hamilton made a similar case and suggested that, of the 195 pearling boats, 127 had endorsed the reduction in size limit and only forty of the remaining had explicitly opposed it.\footnote{115}{Ibid., 1794.} Hamilton reasoned: 'As there are great differences of opinion, it is generally desirable to consult the opinions of the majority who understand the subject'.\footnote{116}{Ibid., 1794.} The opponents of the bill, who wished to delay its passing before a Commission could report back, were handicapped by the lack of knowledge of the industry and an inability to refute claims made by the bill's proponents. Member of Legislative Council, Felix Clewett, aptly summarised the angst felt by those hesitant to endorse the bill but reluctant to ignore the industry's support of it:

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\footnote{109}{The New Pearlshell Bill, *Brisbane Courier*, 27 November 1896, 5.}  
\footnote{110}{Henry Turley, Legislative Assembly, *Hansard*, 10 December 1896, 1795.}  
\footnote{111}{Robert Philp, Secretary for Mines, Legislative Assembly, *Hansard*, 11 December 1896, 1808.}  
\footnote{112}{Ibid., 1793.}  
\footnote{113}{Ibid.}  
\footnote{114}{Ibid.}  
\footnote{115}{John Hamilton, Legislative Assembly, *Hansard*, 10 December 1896, 1794-5.}  
\footnote{116}{Ibid., 1794.}
We are furnished with no information here, and I have seen no report, but we are told that under existing conditions large quantities of shell are destroyed, and that large quantities are manipulated and taken away without going through the ports. It is asserted that if the minimum is reduced these things to a certain extent will cease. If that is so, it seems to me a sufficient reason for an alteration in the Act, but we have nothing before us to enable us to form an intelligent and satisfactory opinion. If the facts are as represented, I would be willing to support the measure. As it is I do not know that I am justified to opposing it, but I would have liked more time for consideration before deciding whether we are justified in accepting the measure. I am disposed to assist the Government, but I am very reluctant to interfere with existing legislation on the subject in this hurried manner.117

The Legislative Council passed the amendments that day; the size limit was reduced and provisions exempting cultivators were removed. While no scientific evidence was brought to bear on the parliament's decision to reduce the size limit, in 1897 the government established a Commission to inquire into the fishery, including the issue of Japanese, Aboriginal, Torres Strait and South Sea Islander labour, and the conservation of pearl-shell. The Commission concluded that the issue of the size limit was one of practicality; 'the weight of testimony and the lessons of experience' were 'against the possibility of enforcing the 6-inch limit'.118 Even those who advocated the six inch limit considered the reduction was necessary in light of the waste being produced.119 The Commission's report recommended, to assist in the preservation of the shell beds, the appointment of a floating inspector who was cognisant of the industry, equipped with a suitable vessel, empowered to patrol and enforce the provisions of the Act and able to recommend the closing of grounds. Additionally, the report recommended an expert be appointed to experiment with cultivation.120

Anxieties over the depletion of beds, however, did remain. The most outspoken opponent of limit reduction, George Bennett, the Thursday Island Sub-Collector and Queensland's Inspector of Fisheries, told the Commission:

The quantity of shell in the more accessible waters is getting less...My own opinion is strongly against the alteration of the 6-inch limit...The shell was decreasing fast with the 6-inch limit. By reducing the limit to 5-inches it opened up a further supply of young shell, which will be more rapidly exhausted than the 6-inch shell was. And when the supply begins to diminish, which in my

117 Felix Clewett, Legislative Council, Hansard, 17 December 1896, 1857.
119 Ibid., 1339.
120 Ibid., 1311.
Bennett was unequivocal that if nothing was done to prevent the depletion of the shell beds the majority of boats would cease working within five years. Nevertheless, the pearl-shellers who presented evidence before the Commission received Bennett's 'vaticination with equanimous indifference'. The Manager of James Clark's company completely dismissed Bennett and said 'his experience is not great, and I do not suppose he knows much about it'. Another witness was more restrained and simply stated:

Operations have now been carried on for about thirty years, and the beds have not been denuded. In my opinion pearl-shelling will always be carried on here. Some seasons we do not work certain grounds, but on returning a few years afterwards we find the beds have recovered themselves, and we take a respectable number of shells off them.

The distrust amongst the shellers towards intrusive men of science, initiated by Saville-Kent, was evident.

The commission did not stem the flow of concerns around depleting pearl-shell beds, and in his final two reports of the century Bennett raised the necessity of closing grounds, especially the Endeavour Strait, which was in his estimation 'very much impoverished'. It was evident, however, that the government and the industry were unlikely to adopt pessimistic outlooks for an industry which, history had suggested, would 'always be carried on'. Resource-decline, as far as the industry was concerned, was not as crucial as equality of access. The size-limit and cultivation debates had exposed a crucial schism, reflective perhaps of a broader Australian antagonism towards big business, between the smaller pearlers and the larger companies who threatened to monopolise the industry. Issues relating to resource decline were proxies for an anti-monopoly division.

121 Ibid., 1319.
122 Ibid., 1320.
123 Ibid., 1305.
124 Ibid., 1342.
125 Ibid., 1332.
126 Bennett cited in Daley, Great Barrier Reef, 62.
Saville-Kent and *The Great Barrier Reef*

Saville-Kent, in practical terms, contributed very little to the turmoil of the 1890s. He neither assisted in the implementation nor defended the amendments he had recommended. He did, however, contribute further to popular perceptions of the Reef. His recommendations on the pearl-shell and bêche-de-mer fisheries undoubtedly introduced the notion of preservation into both industries. He preached the importance of innovation and scientific investigation and considered that the industries' practices had placed them in serious jeopardy. His reports, however, were laden with a tension, perhaps less obvious at the time, which while expressing an appreciation of the Reef's natural values and the importance of utilitarian approaches in some industries, highlighted the seemingly limitless potential of others. Nowhere were these more apparent than in Saville-Kent's 1893 magnum opus, *The Great Barrier Reef*. The book was a result of the work he had undertaken on the Reef during his time as the Commissioner of Fisheries and much of its content replicated the findings from his reports.

The book illuminated the aesthetic and scientific curiosities of the Reef. In doing so, Saville-Kent appealed to a growing sympathetic approach to the natural world which had already manifested itself on the Reef with the tourist excursions and the brief natural histories published in newspapers and books in previous decades. For instance, the book's first four chapters dealt explicitly with the issue of reef formation theories, the origins of the Reef itself and 'corals and coral critters'. Saville-Kent did not offer any novel interpretations; rather he provided various theories and descriptions presented elsewhere. Where the book proved truly innovative was in its survey of Reef life accompanied by photographs of various reef-flats and coral types and coloured lithographs of Reef flora and fauna (see Figures 2 and 3). While reviewers considered the lithographs to be inaccurate, crude and inartistic, generally they praised the images for emphasising 'the glorious fauna of the coral seas'; and Saville-Kent for doing 'more for those who have never had the good fortune to visit a reef than all the descriptions of former writers'.

The glories of the Reef, however, were multiple. While the first section of the book provided, as Saville-Kent had hoped, a 'more extensive and accurate' account of

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the Reef's features than hitherto, the second section dealt exclusively with the book's secondary purpose which he articulated in the preface:

Another prominent purpose of the work is to direct attention to the harvest-field, rich from both a commercial and a scientific standpoint, that this Queensland possession constitutes, with the hope that it may lead, on both sides, to a more thorough exploration and development of its marvellous resources.129

In the last five chapters, 'Pearl and Pearl-Shell Fisheries', 'Beche-de-Mer Fisheries', 'Oyster and Oyster Fisheries of Queensland', 'Food and Fancy Fishes' and 'Potentialities' Saville-Kent, while detailing the practical knowledge he had acquired during his tenure as Commissioner for Fisheries, prosecuted an argument for the development of the Reef's resources. He had previously made a similar argument for the development of the economic and scientific qualities of the Reef, including advocating the need for a biological research station at Thursday Island.130 Never before, however, had he linked the work of scientists so explicitly with the development of the Reef's economic resources, nor in such depth. Saville-Kent imagined the development of the Reef's resources would be accompanied, hand-in-hand, with the development of Reef science.

Figure 2: Madrepore Islet, Port Denison.


130 Bowen, *Great Barrier Reef*, 158.
Figure 3: Fringing Reef, Port Denison with *Millepora alcicornis*.

Saville-Kent's description of the potential of the Reef's resources, however, could hardly be described as measured. Of the Reef's fish, Saville-Kent remarked 'they present almost unlimited possibilities of profitable development'. The pear and pearl-shell fisheries were 'capable of unlimited development', especially if cultivation methods were adopted. He lamented that 'little or nothing is done' to develop the 'valuable commercial' qualities of turtle-meat and turtle-shell, which he also believed could be utilised through cultivation processes. The dugong, he declared, held some 'and probably as yet more considerable latent value', especially since its exhaustion had been averted following the closing of the southern fisheries, but in the northern waters of the Reef no systematic fishery existed. The potential for the collection and cultivation of commercial sponges garnered his attention. So too did coral for lime and as decorative ornaments for which the Reef possessed 'literally a mine of wealth' and 'an original and practically inexhaustible' supply.

Rather than providing any concern about the depletion of the Reef's resources, Saville-Kent's descriptions were laden with terms which lent themselves to conceptions of the Reef's 'unlimited resource potential'; these inclusions provide awkward contrasts for those who have claimed his scientific reason dampened claims of the Reef's unlimited resource wealth. Undoubtedly, in Saville-Kent's perspective, the value of the Reef was explicitly linked to both its scientific and natural qualities as well as its ability to provide vast economic wealth. While he recognised, sparingly, the tension within this twin-valuing of the Reef, his work did not challenge but endorsed a conception which had become the popularly held perception of the Reef's value. Notions of the Reef's perceived natural and economic attributes had been building since Queensland's separation and in the 1890s, largely thanks to Saville-Kent, an awareness of the pearl-shell and bêche-de-mer fisheries as troubled but significant contributors of Reef wealth

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132 Ibid., 312-13.
133 Ibid., 317.
134 Ibid., 321-2.
135 Ibid., 327.
136 Ibid., 331-2.
137 Ibid., 332-3.
emerged. His book, released as the colonies marched towards Federation, provided an apt coalescing of the developing European perception of the Reef and provided a clear declaration of its value. As a sign of its impact, the Courier's review celebrated the book for confirming the Reef as 'one of Queensland's most valuable assets', rich in 'intrinsic beauty' and of 'considerable direct monetary importance'.

Map 3: The top half of a tourist map of the Reef.

Chapter Four – 'Wealth of the Reef'

In 1936 Theodore Roughley, the Superintendent of New South Wales Fisheries, published *Wonders of the Great Barrier Reef*, a book he hoped would stimulate in the reader:

> A desire to visit this masterpiece of nature's craftsmanship; and if, when he goes there, he is helped to understand and to appreciate the wealth, the interest, and the beauty of the life he sees, then it will have abundantly served the purpose for which it was conceived and written.

Roughley's proclamation marks his interests as remarkably similar to those of Saville-Kent four decades earlier. Between them the two authors present an apt summation of early twentieth-century European perspectives on the Reef. His statement, typical among those of his contemporaries, identified the Reef as a place of not only immense scientific interest and surpassing beauty but also of great commercial opportunity. In the first four decades of Australia's federation the economic and natural values of the Reef became further entangled as natural historians, travel writers, scientists, politicians and holiday makers extolled the Reef's prospects for industry and its aesthetic charms.

While histories of the Reef have characterised the period between 1900 and 1939 as a creative prelude to modern Reef conservationism, insufficient consideration has been given to how perceptions of the Reef were entangled with evaluations of its economic potential. The early twentieth century was an important period in the development and articulation of an ecological perspective on the Reef. During this period, concerns were raised regarding bird and turtle protection, the depletion of pearl-shell, bêche-de-mer and trochus fisheries, and the spoliation of coral reefs as a result of coral mining and coral and shell collecting by tourists. It was hardly a chorus of concern, however, and it failed to undermine a growing tendency to associate the Reef's broader value with its ability to be exploited.

The Bowens asserted that early twentieth-century public conceptions of the Reef, especially those espoused by Edmund Banfield, helped formulate an ecological appreciation that leaned towards preservation. They described the recognition of important global scientific problems concerning coral reefs, the associated benefits for

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3 Bowen, *Great Barrier Reef*, 214-230
Australian marine science and the impetus provided to the emergence of popular natural history and tourism. McCalman endorsed this narrative, and portrayed Ted 'Beachcomber' Banfield and the scientific expedition to Low Isles in 1927–8 as episodes that served to increase popular awareness of the Reef as a site for science and recreation.⁴

In both books Banfield is positioned as an early exponent of Reef conservation, although each addresses aspects of his life that complicate his romanticised image. The Bowens listed behaviours that contradicted his proclaimed ecocentrism and suggested that he failed to acknowledge 'that he too was a predator'.⁵ McCalman commented that since Banfield had authored 'two tourist guides extolling the scenic, climatic and economic attractions of the Reef, he could hardly complain' at the destruction brought on by invading tourists, collectors, sportsmen and fisherman.⁶ The Bowens and McCalman, however, glance only briefly at these complications. This chapter pursues them further, highlighting the entanglement of environmental and economic evaluations not only in Banfield's but in other early twentieth century writings about the Reef. By examining the writings of Banfield, the increases in tourism and scientific research, and a collection of popular texts, this chapter argues that early twentieth-century perceptions of the Reef, held even by its most ardent enthusiasts, were entangled with a utilitarian ethos that leaned toward exploitation.

Edmund Banfield: Classical Reef Conservationism

Edmund Banfield, the Thoreauvian recluse of Dunk Island, is a mighty figure in histories of the Reef. He moved from Townsville – where he had been a journalist for the *Townsville Daily Bulletin* – to Dunk Island in 1897 for health reasons. With assistance from a local Aboriginal man called Tom, he established a secluded and self-sufficient life for himself and his wife Bertha. He continued to write while there and adopted the pseudonym 'The Beachcomber'; he identified as a man without pretentions, free of the shackles of modern life.

His books were informed by a 'sentimental regard for the welfare of bird and plant life' and a curiosity about 'the destructive instinct which prevails in mankind'.⁷ His expressive prose brought life and colour to the Reef in flurries of romantic passion. For

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⁴ McCalman, *The Reef*.
⁷ Edmund Banfield, *Confessions of a Beachcomber* (Sydney: Angus and Robertson, 1968), 92.
example, in *Confessions of a Beachcomber* he described drifting over a coral garden: 'Tiny fish, glowing like jewels, flash and dart among the intricate, interlacing branches, or quaveringly poise about some slender point—humming-birds of the sea, sipping their nectar.' Banfield, however, did not restrict his descriptions of the underwater world to the picturesque. To him coral reefs were battlefields, where beauty lay in the 'perpetual conflict required by' their inhabitants to exist. From his vantage point on Dunk Island his writings spoke to anxieties within Western societies about urban life's degenerative effects. His books reflected a growing trend within nature writing to emphasise observation, environmental knowledge, aesthetics and appreciation of the environment.

An important aspect of Banfield's legacy was his criticism of the killing of Nutmeg Pigeons, which mated and nested on Dunk Island. The Nutmeg Pigeon, Banfield wrote, congregated 'in large numbers on the islands to nest—and only to nest' and offered 'quite charming sport to men with guns. They are the easiest of all shooting. Big and white, and given to grouping themselves on favourable trees'. He lamented that 'a single expedition during the breeding season to one of the islands may cause immense destruction and unprofitable loss of life'. At a time when the underwater world was hardly accessible, the Reef's birds were its most identifiable and spectacular treasures. They emerged early in the twentieth century as a popular 'wonder' of the Reef.

In his love and advocacy for birds, Banfield found solidarity with the newly established Royal Australasian Ornithologists' Union (RAOU). Cairns resident, E.M. Cornwall, congratulated the RAOU on their initiatives to protect the pigeon along the North Queensland coast. Cornwall explained the birds could be shot, with little damage to their population, in the months of September, October and early November because they would not be found in large numbers during those months. Shooting in the latter half of November and through December, however, was 'quite a different matter'.

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8 Ibid., 137.
9 Ibid., 131 & 36..
11 Nutmeg Pigeon is one of a number of common names (White Nutmeg Pigeon, Australian Pied Imperial Pigeon and Torres Strait Pigeon) which refer to the Torresian imperial pigeon or *Ducula spilorrhoa*.
Reporting on his experiences and destruction wrought on nearby islands, Cornwall wrote:

The birds are then breeding in countless thousands on these very limited areas; every bush and tree bear their burden of nests, and many eggs are laid on rocks or even on the bare ground. Then there are hundreds of birds on the islands all day long. Eggs and young birds are destroyed wantonly, and thousands of birds shot which are never used, simply because they go bad before they reach the pot. Some years ago Green Island, which lies a few miles outside Cairns, was a favourite haunt of the Pigeons, but the shooters were too much for them, and now only a few pairs visit it during the season.\(^\text{15}\)

The RAOU announced that they had made suggestions to the Queensland government 'to the advisability of reserving certain islands off the coast of that State, with the view of protecting the Nutmeg or Torres Strait Pigeon from destruction'.\(^\text{16}\) The bird was already protected during its nesting season from 1 November to 30 April, however, shooting continued to take place during the closure. Following reports that birds were arriving earlier than November and became vulnerable to over-shooting in that period, the RAOU desired to extend the closed season by starting it from 1 October.\(^\text{17}\)

Their agitations proved successful. In 1905 the government amended the Native Bird Protection Act to extend the prohibition on shooting Nutmeg Pigeons in various regions along the Reef coast.\(^\text{18}\) Importantly, they listed Dunk, Kumboola, Mound Islet, the Family Islands and Brooke Islands as sanctuaries and listed Banfield as the honorary ranger.\(^\text{19}\) Banfield celebrated the news by announcing in the pages of *Emu*:

> It may interest you to know that since my coming here (seven years ago) this island has been an informal sanctuary for birds; and that this year, on my suggestion, the Government proclaimed it, with two neighbouring groups of islands, a perpetual reserve, shooting being entirely prohibited. I hold the honorary office of ranger.\(^\text{20}\)

Banfield also posted notices, twenty-five of which had been sent to him on his becoming Honorary Ranger, on Dunk and nearby islands to alert visitors to the prevailing law. Banfield and his fellow bird enthusiasts proved an influential lobby group. Bird preservation was one of the earliest forms of government-enforced

\(^\text{15}\) Ibid., 175-6.
\(^\text{16}\) 'Report for 1901-2', *Emu* 2 (1903): 185.
\(^\text{17}\) 'Protection of the Nutmeg-Pigeon', *Emu* 3 (1903): 77-8.
\(^\text{18}\) Queensland Government Gazette, Volume 85, 28 October 1905, 937.
\(^\text{19}\) Queensland Government Gazette, Volume 84, 13 May 1905, 1546.
\(^\text{20}\) Edmund Banfield, 'A Queensland Bird Sanctuary,' *Emu* 5 (1906): 204.
conservation on the Reef, with a large number of its islands proclaimed sanctuaries in the early twentieth century.\footnote{Libby Robin, \textit{The Flight of the Emu: A Hundred Years of Australian Ornithology 1901-2001} (Melbourne: Melbourne University Press, 2001), 80.}

The sanctification of Banfield's legacy to Reef conservation began immediately after his death on 2 June 1923. Nature writers Charles Barrett and Alec Chisholm, both of whom visited Banfield on Dunk Island, reflected on his passion for bird and wildlife protection. Barrett wrote in an obituary that had he 'been a mammal or bird collector, “The Beachcomber” would never have given me freedom of his isle'.\footnote{Charles Barrett, "The Beachcomber" and His Tropic Isle,' \textit{Australian Museum Magazine} 1, no.10 (1923): 304.} Chisholm, who had been in consistent communication with Banfield on the subject of bird and animal protection, paid homage to Banfield's selfless spirit and described him as 'jealous to passion of the rights and welfare of his friends in isolation—men, birds, dugongs, what-not—he would rush to the relief at even a whisper of need'.\footnote{Alec Chisholm, 'Introduction' in \textit{Last Leaves from Dunk Island} (Sydney: Angus and Robertson, 1925), xviii.}

To his contemporaries Banfield's virtues were undoubtedly connected with his zeal for nature protection.

The existing historiography has largely continued this trend. The Bowens suggested that the \textit{Great Barrier Reef Marine Park Act 1975} was the realisation of Banfield's dream of the Reef becoming 'a great insular national park'. According to them, Banfield articulated this vision in a paper submitted to the Royal Geographical Society of Australasia, Queensland Branch, in which he conceptualised:

\begin{quote}
A great insular national park … a park not to be improved by formal walks or set in order to straight lines or lopped and trimmed according to the principles of horticultural art, but just a wilderness – its primitive features preserved; its excesses unrestrained; its waywardness unapologised for. In such a wilderness the generations to come might wander, noting every detail – except in regard to original population – as it was in Cook's day and for centuries before.\footnote{Banfield, quoted in Bowen, \textit{Great Barrier Reef}, 230. Ellipsis in original quotation.}
\end{quote}

The Bowen's use of this quote is misleading and embodies a broader trend which understates those aspects of Banfield's written legacy that complicate his characterisation as a quintessential conservationist. Banfield's conception was not as vast as they suggested. He actually imagined 'a great insular national park, the area of which would embrace Hinchinbrook and all the intermediate isles', adding that: 'At least of Dunk Island it may be said, that as it is too small and too dainty a spot to be devoted
to large practical purposes, its exceptional gift of beauty need not necessarily be fatal.' According to Banfield, Dunk's beauty was useful for people to enjoy and respect; other islands and the broader Reef, however, were better endowed for 'large practical purposes'. The Bowens conceded that Banfield held a 'selective view of nature' but they failed to address how this manifested in his identification of both the beautiful and useful qualities of nature.

Others have noted Banfield's broader politics and his advocacy of North Queensland development and separation yet fail to reconcile this part of his life with his more well-known environmentalist persona. Banfield's promotion of a more complex appreciation of the Reef is worth more consideration than the existing historiography has hitherto provided. By examining his conception of how the Reef fitted within Queensland's social, cultural and economic fabric, we can better understand the links between Banfield's, his contemporaries' and his successors' perceptions of the Reef.

For instance, in Banfield's description of the killing of Nutmeg Pigeons a clear preference for the birds not to be hunted emerged. He qualified these statements, however, by asserting the bird must have time between shooting 'jubilees' to repopulate. Banfield did not seek to exclude humans from nature; rather, he believed that it was incumbent upon people to form a more manageable relationship with it. His aspiration for white Australians to adopt a more steward-like relationship with the environment was most interestingly expressed in his comparison between white 'sportsmen' and Aboriginal hunters. In regards to shooting the pigeons, Banfield upheld Aboriginal Australians as models; they hunted for food, while white sportsmen engaged in reckless destruction. In *My Tropic Isle* Banfield noted of one white sportsman's expedition that:

> On the very island where this bag of 250 was obtained a little black boy, twelve years old, killed four pigeons with a single sweep of a long stick. He did not boast—to his father and mother and himself the four birds represented supper; but in the case of the sportsman it might be asked, how many of the butchered doves went into the all-redeeming pot?

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29 Ibid.
Undoubtedly he expressed a conservationist ethic that emanated from a sympathetic attitude towards the Reef. His spiritual and philosophical tributes to the Reef, however, were intertwined with his economic appreciation.

Banfield’s perceptions of the Reef reflected his experiences and the broader conceptions of the Reef in the nineteenth century. Before Banfield permanently settled on Dunk Island he was intimately involved with the politics of northern Australia: specifically, around questions of decentralisation, development and North Queensland separatism. Banfield’s participation in these matters was usually in a private capacity but on occasion he would play a more active role, principally because of relationships with more vocal proponents, like Robert Philp. Banfield wrote a number of pamphlets that promoted the North, and highlighted the Reef, as a place of vast economic opportunities. The first came in 1885 when he profiled the benefits of the Torres Strait route to London for Burns, Philp & Co, who as an agent for the British-India Steam Navigation Company, was seeking a government subsidy for a new mail route that would make use of the recently opened Suez Canal. Banfield referred to the entire cruise as ‘an extended pleasure trip’, but the pamphlet was essentially a promotional piece for Burns, Philp and northern development.30

This trend continued into the twentieth century. In 1907 he wrote Within the Barrier: ‘Tourists’ Guide to the North Queensland Coast, which frequently referred to the Reef’s exploitable resources and emphasised the islands' usefulness as tourist resorts or for agriculture. After describing the Whitsunday Islands' picturesque qualities, Banfield wrote:

Many of these islands are not alone pleasant to look at—they are useful, and are becoming more and more important to the state. Some of the group are occupied by sheep farmers, and there is splendid timber to be obtained and marble, too.31

Similarly, Banfield celebrated Magnetic Island as a place of both permanent and transient settlement and lauded the beauty of Green Island and its virtues as a recreational park for the locals.32 He increased public awareness of the Reef, promoted

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32 Ibid., 23 55.
a sympathetic attitude and fostered a sense of 'nature conservation' towards it. He also saw the Reef, however, as integral to the Queensland economy.

Figure 4: Birds were an easily identifiable 'wonder' of the Reef in the early twentieth century. Here, birds swarm above Michaelmas Cay off Cairns.


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33 Robin, *Defending the Little Desert*, 32.
Early Twentieth-Century Reef Tourism

As Banfield's pamphlet indicates, along with material in the preceding chapter, contrary to inferences in other works Reef tourism existed well before the 1920s. According to another 1906 booklet written by Banfield, the attractions of Magnetic Island included bathing, boating, fishing, 'scaling the pine-clad headlands', 'hunting wild goats' and deep-sea fishing. The latter, Banfield imagined, would someday constitute one of the great Reef industries, which would have its base at Magnetic Island. The tourist appeal of this island relied on its characterisation as a place with splendid natural attributes useful for both leisure and commercial gain.

At the same time Cairns was coming to terms with Green Island's role as a community asset. Green Island, apart from being a place for day-trips, picnics and shooting expeditions, was a camp and anchoring site for bêche-de-mer and trochus fishermen, and accommodated a coconut plantation. In 1905 a dispute over the island's coconut plantation resulted in the Queensland government ceding control of the island to the Cairns Town Council. The dispute centred on an agreement whereby the government allowed the Yarrabah Mission to manage the island's large and unused coconut plantation. Fear in Cairns that the mission would permanently relocate to the island, however, forced the government to cancel the agreement and cede control of the island to the council. The council stipulated a number of clauses regarding the island's use, which were published in Cairns' Morning Post. Restrictions were introduced to manage camping on the island and prohibitions were placed on coral and shell collecting and on interfering with the coconut trees.

The regulations prompted local debate. The Post published an editorial that categorically rejected the regulations and characterised them as 'stringent and restrictive'. It asserted that the ban on collecting coral and shells would hinder Green Island's future as 'the popular marine resort of the whole district'. Conversely, a letter to the editor endorsed the entire suite of regulations and celebrated the inclusion of a clause protecting the surrounding reef. The letter also suggested an awareness of the Reef as a whole and that the protection of one section, unique and useful to the Cairns public, should be considered. The letter exclaimed:

34 Bowen, Great Barrier Reef; Pocock, 'Romancing the Reef'.
35 Edmund Banfield, Townsville Illustrated (Townsville: Willmett, 1906).
37 'Town Council and Green Island,' Morning Post, 23 March 1906, 4.
38 'From our Point of View,' Morning Post, 27 March 1906, 2.
When it is considered that the Barrier reef is thousands of square miles in extent it is surely a small thing to ask to have a small portion of the reef undisturbed close to Green Island, Cairns' only marine pleasure reserve. Like the newspaper, the letter writer imagined a future in which the island would play an important role in tourism. It could serve as a place where people could go to hear a 'qualified lecturer explaining the lessons and the beauties of the Green Island reef'.

The editorial and the letter writer both acknowledged that the island's unique natural attributes contributed to its holiday appeal. Preserving its natural beauty, however, intruded upon established uses of its resources, rendering its management politically difficult. On Magnetic Island, a larger forest-covered continental island, the conflict between economics and nature were less obvious. Both islands, however, became commodified environments – used by local industries and marketed for tourists.

The Queensland Intelligence and Tourist Bureau (later the Queensland Government Tourist Bureau) was also alive to the possibilities the Reef offered as a tourist destination well before the 1920s. In 1915 the bureau began promoting the virtues of a Whitsunday Passage cruise. In the absence of a completed Queensland coastal rail link before 1927, travel was still largely conducted by ship. Most travellers sailed through the passage en route to other northern destinations, forgoing a 'close study of the idyllic places'. Nonetheless, the bureau maintained that the passage had become well known as Australia's 'grandest cruising ground'. Like Banfield, the bureau's promotion of the Reef linked the intangible beauty of the region with its prospective economic opportunities. The islands, in addition to bathing and camping in what were described as 'delightful tourist resort and beauty' spots, offered opportunities for those interested in pastoral, forestry or agricultural leases, had ample grounds for fishing and bird hunting, and possessed a rich supply of oysters. A 1923 bureau pamphlet linked the environmental and economic allures of the Reef much more explicitly. It summarised a passenger's aesthetic response to seeing 'the wonderful shapes and colours reeled off beneath him' while sailing over a coral garden. It then

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40 Ibid., 3.
43 Ibid., 14.
added that 'the Barrier Reef has other attractions; it is the scene of several important industries which may under good management attain to larger dimensions'.

The bureau's promotion of the Reef as a tourist destination consistently referred to its economic promise, heightening its perceived value as a place for exploitation. Discussions of the Reef cannot be distinguished from the broader political discourse of the time. North Queensland politics in the early twentieth century were driven by a desire for connection to the wider world, and development and population growth were two of its major policy objectives. The Reef became entangled with contemporary politics and was described and perceived as driving the increase in population and industrial development of northern Australia. Consequently, the Reef was publicised as much for its capacity for economic development as its natural beauty.

Figure 5: Packing pearl-shell at Thursday Island for export.

For writers like Roughley the 'wealth of the Reef' was something that needed to be realised and celebrated.


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Figure 6: The manufacture of pearl buttons and fancy goods from pearl-shell.

Pearl-Shell, Bêche-de-Mer and Trochus Fisheries

Few Reef industries were considered as potentially favourable to the prospects of northern Queensland as the pearl-shell, bêche-de-mer and trochus fisheries. The events of the 1890s had exposed the issues of resource depletion and the internal tensions between large and small shellers. Those issues did not dissipate in the early twentieth century. Following the Committee of Inquiry in 1897, the Queensland government introduced legislation in 1898 which prohibited aliens from buying or renting vessels to engage in the industry.46 It was, effectively, a means of 'whitening' the industry and preventing the fishery from passing into the hands of the Japanese, an issue which had aroused interest analogous to concerns surrounding resource depletion. The success of the legislation, however, was subverted by a process called 'dummying', whereby white licensees and boat owners illegally rented or hired vessels out to Japanese syndicates.47

Additionally, in 1900, the Queensland government appointed a new fisheries expert, Scottish marine biologist James Tosh. In 1901, Tosh and G.H. Bennett, still employed as Inspector of the Fisheries, issued an alarming report on the state of the pearl-shelling fishery. Tosh claimed the industry was at 'a critical stage' and claimed 'year by year the shell-bearing area has been pushed further and further from the shore, and year by year the boats have ventured further afield'.48 Both Tosh and Bennett reported on an increase in vessels, but a reduction in take despite agreeable weather for the preceding years. Both also agreed on the necessary response. The grounds needed to be either closed seasonally or, in the case of deep grounds such as those near Darnley Island, closed permanently. The closure of deep grounds, those of 30 to 40 fathoms, would be humane, since it would reduce the number of diver deaths, as well as creating reserves. Other grounds requiring rotating periods of closure were routinely overfished areas or inshore areas 'with shelter handy'.49 Furthermore, Tosh called for the reintroduction of the five-inch limit and the possibility of reducing the number of licenses and boats engaged in the fishery. Without prudent and constant supervision of the fishery, Tosh warned, the pearl-shell industry would never achieve its rightful 'value and importance'.50

46 An Act to Amend the Pearl-shell and Beche-de-Mer Fishery Acts, QSA, SRS 16785 Batch Files, ID315163 Treasury Department batch file – Pearl Shell and Beche-de-Mer Fishery Acts.
47 Ganter, Pearl-Shellers, 130-3.
48 'Report on the Marine Department for the Year 1900-1901', 29. QSA, SRS 16785 Batch Files, ID 315197 Treasury Department batch file – Royal Commission – Pearl-Shell and Beche-de-Mer.
49 Ibid., 29-30.
50 Ibid., 30.
The bêche-de-mer fishery was also facing difficulties. Bennett reported that the industry, comprising 11 licensed vessels, was in the beginnings of a revival. Slugs were making their appearances near Darnley and Murray Islands in the Torres Strait as well as on the Reef. Bennett warned, however, pearling vessels were 'being fitted and licensed as bêche-de-mer gathering' boats. He encouraged government supervision to prevent abuses within the industry, principally regarding those under the Native Labourers Protection Acts, taking place. He added:

As the law stands, no provision is made for regulating the fishery as a fishery – i.e., for preventing depletion by overfishing; and I beg leave to suggest that it would be well to consider what steps can be taken to ensure the permanency of the industry in case of its revival on a large scale.

Again, he considered that the most prudent form of regulation would be 'the periodical closing of areas of the reef from which the slugs are obtained'. Clearly, patrolling the bêche-de-mer and the pearl-fishing industries would be at considerable expense, but without proper patrolling the various conservation recommendations were 'worse than useless'.

Issues concerning resource irregularity, cultivation and the lack of white divers employed in the pearl-shelling industry were continued to attract attention in the first years of Australia's federation. In 1908 John Mackay, the chairman of the Queensland Marine Board, chaired a Royal Commission into the working of the fisheries with specific instructions to investigate these issues. The Commission, of which Bennett was a member, concluded the reasons for the depletion of the pearl-shell grounds were: a 'belief that the supply was inexhaustible', the introduction of floating stations, an excessive number of vessels, the introduction of 'Asiatic divers', the absence of a scheme for periodic closure of grounds, and the reduced size limit for exportable shell. On bêche-de-mer, the Commission concluded that the industry had reached its 'zenith' in 1907 and grounds had been fished bare from New Guinea to Lady Elliot Island. They recommended that the fishery be closed for two years, a restriction which would be enforced through a prohibition on the exportation of bêche-de-mer from all Queensland ports. Ultimately, the Report conformed to Bennett and Tosh's earlier rhetoric and

51 Ibid., 13.
52 Ibid.
53 Ibid.
54 H.A.C. Douglas J. Mackay, G.H. Bennett, Report Together with the Minutes of Proceedings, Minutes of Evidence Taken before the Commission, and Appendices of the Royal Commission Appointed to Inquire into the Working of the Pearl-Shell and Beche-De-Mer Industries, ed. John Mackay (Brisbane: Government Printer, 1908), 73-4.
dismissed contrarian views which sought to explain reductions in average pearl-shell take, the key statistic used to demonstrate resource depletion.

One witness whose evidence contradicted the Commission's report was James Clark. In 1905 Clark, along with a number of other owners of floating stations, removed his fleets from the Torres Strait and relocated to the Aru pearl-shelling grounds after purchasing a concession from the Netherlands East Indies administration. The relocation saw some 115 vessels removed from the Torres Strait fishery.\(^{55}\) The move was largely motivated by issues concerning scarcity of labour, due largely to the Commonwealth's ambitions to make the industry less reliant on alien labour. Other motivating factors for the relocation were increased costs in production, and the low price for shell.\(^{56}\) Clark's enterprise, still an object of disdain, had become the most successful pearl-shelling operation in the Australian industry before his departure.\(^{57}\) His successes, particularly his 'floating station' system, were often considered the reason for the decline in the industry. Additionally, the stations' independence and capacity for self-sufficiency was a point of resentment among shore-based shellers, as Mullins argued:

Shore based shellers resented the schooner men, firstly because they represented increased and formidable competition for what was now, only too apparently, an exhaustible resource, but also because they were largely self-sufficient, importing stores from London, Singapore, Sydney and Brisbane, and keeping their men at sea. As one critic put it, the schooner fleet operators 'in fact, established a floating moveable city of their own' and contributed little to local economies. While this was true, the criticism was self-serving, coming mostly from local merchants who were also pearl-shellers, determined to keep the industry shore-bound on Thursday Island and at Broome.\(^{58}\)

Despite his broader issues, Clark remained optimistic about the beds of the Torres Strait. Clark told the 1908 Commission that a principle reason for the reduction in the yearly take of pearl-shell was the poor weather which made it difficult for new beds to be discovered. 'Weather', Clark asserted, 'provides all the protection that the beds need'.\(^ {59}\) He argued, as he had in the 1890s, that the 'Old Grounds' were 'impossible to deplete' because weather eventually forced boats off the ground.\(^ {60}\) Clark believed,

\(^{55}\) Steve Mullins, ‘From Ti to Dobo: The 1905 Departure of the Torres Strait Pearl-Shelling Fleets to Aru, Netherlands East Indies,’ The Great Circle 19, no. 1 (1997): 30.

\(^{56}\) Clark to the Royal Commission, 30. James Clark in J. Mackay, Royal Commission Report, 30.

\(^{57}\) Steve Mullins, 'To Break the Trinity' or 'Wipe out the Smaller Fry': The Australian Pearl Shell Convention of 1913,’ Journal for Maritime Research 7, no. 1 (2005): 222.

\(^{58}\) Ibid.

\(^{59}\) J. Mackay, Royal Commission Report, 28.

\(^{60}\) Ibid.
however, and quite contradictorily, that the increase in boats on the grounds had contributed to a reduction in the available shell. It is on this issue that Clark presented an enterprising offer to the Commission to consider, which if it had been adopted, might have removed the issues attributed to this 'tragedy of the commons'.\(^{61}\) Clark's arrangement with the Netherlands East Indies administration included the stipulation that no more than 150 boats could be on the Aru Island grounds.\(^{62}\) Before the Commission, Clark maintained that the floating station was the best way to produce shell, and when challenged on whether or not it was 'to the advantage of the beds' Clark returned with an offer to the government to rent the entire Torres Strait fishing ground for £5, 000 a year.\(^{63}\) Clark queried why the industry could not leave 'it to the lessees to work the beds as profitably and as much as they can be safely worked'?\(^{64}\) Ceding control of an entire fishery to a single enterprise, however, irrespective of its viability, was socially and politically untenable.\(^{65}\) Additionally, antagonism towards Clark was so severe that following his departure to Aru in 1905 the Commonwealth and Queensland government introduced legislation which effectively prohibited Clark from returning his fleet to the Torres Strait.\(^{66}\) As Mullins argued, the Mackay Commission, which recommended further legislation prohibiting Clark's re-entry into the Torres Strait, was the 'practical expression' of a pervasive and insistent 'pro-small owner, anti-monopoly theme' in the public discourse about pearl-shelling in the late-nineteenth and early-twentieth centuries.\(^{67}\)

Between the Mackay Commission and World War One industry issues continued to fester, especially issues around profits and the racial mix of the workforce. The latter was the subject of another Royal Commission in 1913. The market price of pearl-shell came under attack from a new product, trochus, the shell of which could be substituted for Torres Strait pearl-shell in button manufacturing and which was considerably cheaper (for images of buttons made from pearl shell see Figure 6).\(^{68}\) The

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\(^{63}\) Ibid., 30.

\(^{64}\) Ibid.

\(^{65}\) Mullins, 'From Ti to Dobo: The 1905 Departure of the Torres Strait Pearl-Shelling Fleets to Aru, Netherlands East Indies,' 36.

\(^{66}\) 'To Break 'the Trinity',' 236.

\(^{67}\) Ibid.

\(^{68}\) Ibid., 226. In Mullins' article the issue of price manipulation by London buyers, and the frustration felt within the industry, particularly by Clarke, is also presented as a serious concern at the time. I have decided not to discuss it here because the consequences of the 'trinity' while important for the fate of the fishery in the Torres Strait, was analogous, rather than central to, the issue of bed depletion.
trochus fishery, despite the lower quality of the shell, expanded rapidly in the inter-war period with grounds along the Reef and into the Torres Strait. Additionally, the trochus fishery, along with the bêche-de-mer and pearl-shelling industry continued to be dominated by Japanese and Chinese labour. The continued prevalence of Japanese divers within the pearl-shelling fishery was a particularly vexing issue for the Commonwealth government which was eager to carry out the mission of bleaching Australia.69 Apart from that, the fact that foreign nationals were pressing ahead with the exploitation of the Reef signalled a neglect of the Reef's value and the potential profits to be gleamed from it.70

Other Reef Science

While the fisheries were attracting political and social interest scientists continued to raise awareness of the Reef's environmental characteristics and explored other opportunities for economic development. Ornithologists continued to be the most ubiquitous scientists on the Reef. Bird enthusiasts completed surveys of islands and sent them to the *Emu*. Cornwall inspected the 'marvellous bird colonies and coral reefs' of Oyster Cay, Upolu Reef and Green Island. He described the birds on Oyster Cay as 'bees about the hive', and was amazed by the resulting rain of guano (see Figure 4).71 New South Welshman Thomas Austin visited the Reef in 1907 and cruised among the islands and cays off Mackay. His account portrayed the islands as a worthy destination for a bird-seeking holiday.72

Interest in the Reef's bird life was so prevalent among Australia's ornithologists that two expeditions in 1910 were organised by the RAOU. The first was a trip of twenty-four members to the islands of the Capricorn Group. Charles Barrett detailed the events of the expedition and described the opportunities for participants to pursue their scientific curiosities and enjoy the leisure activities of Reef travel.73 The second expedition, undertaken at the same time by William MacGillivray and E.H. Dobbyn, was to the northern islands of the Reef. MacGillivray's account gave an impression that

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72 Thomas P. Austin, 'A Visit to the Great Barrier Reef,' *Emu* 7 (1907): 178.
73 Charles Barrett, 'Narrative of the Expedition to the Islands of the Capricorn Group,' *Emu* 10 (1910):186.
the Reef's northern reaches were teeming with birdlife. Nonetheless, as had become the convention among early twentieth century ornithologists, he acknowledged the issues surrounding the killing of birds, particularly the Nutmeg Pigeon. He wrote: 'The birds are good eating, and many are shot for the table all along the coast, but with little appreciable effect on their numbers, so it is said.'\textsuperscript{74} Despite occasional lapses of their preservationist agenda, ornithologists generally maintained their promotion of bird protection. This advocacy formed a principal part of their role in informing the Australian public of the nation's birds.\textsuperscript{75} More importantly, their support and highlighting of the Reef's large bird populations, further entrenched the birds' presence as a sign of the Reef's wonder.

In contrast, other scientific organisations elucidated and celebrated the Reef's exploitable products alongside its scientific mysteries. The Queensland Branch of the Royal Geographical Society of Australasia was particularly active in the promotion of the Reef as a place of immense wealth and beauty. The \textit{Queensland Geographical Journal} published an article written by the politician and journalist Randolph Bedford in which he defined heaven as 'North-east Australia between May and September' and positioned the Reef as its most significant natural feature.\textsuperscript{76} He encouraged southern Australians to make the trip along the coast to behold environments that had 'been stolen direct out of paradise'.\textsuperscript{77} Bedford's essay, however, also framed the Reef's value in economic terms, asserting that on this matter it had been poorly utilised:

\begin{quote}
The Barrier itself is practically unknown; yet its value economically, apart from its value in beauty, makes it one of the great assets of Australia—neglected though it be at this moment. It produces a hundred thousand pounds a year or so to Queensland trade, and it has the potentialities of a million. The area inside the Reef in Queensland waters is 80,000 square miles; it is full of raw wealth: pearl-shell and corals, fish and bêche-de-mer.\textsuperscript{78}
\end{quote}

Bedford's claim reflected principles that would become central to the Geographical Society's relationship with the Reef: revealing the Reef's scientific mysteries and economic potential were paramount. Constrained by the paradigms of early reef science and driven by a desire for commercial and industrial relevancy in the Australian nation, early twentieth century Reef scientists reinforced the notion that the Reef's dormant economic value was enormous.

\textsuperscript{74} William MacGillivray, 'Along the Great Barrier Reef,' \textit{Emu} 10 (1910): 217.
\textsuperscript{75} Robin, \textit{The Flight of the Emu: A Hundred Years of Australian Ornithology 1901-2001}.
\textsuperscript{76} Randolph Bedford, 'Wonders of the Nor'-East,' \textit{Queensland Geographical Journal} 21 (1905–6): 14.
\textsuperscript{77} Ibid., 15.
\textsuperscript{78} Ibid., 17.
The most significant contribution the Society made to the advancement of awareness of the Reef was the establishment of the Great Barrier Reef Committee (GBRC). Until the establishment of GBRMPA the GBRC was Australia's peak Reef research body, consisting of marine biologists and geologists drawn largely from Australian universities. The geologist Henry Caselli Richards, gave an address to the society on 15 April 1922 in which he outlined the necessity for a number of investigations into the Reef. Ambitiously, and echoing the calls of Saville-Kent, he suggested that the Reef be completely recharted every decade, and advocated the establishment of a marine biological station. 79 The final component of Richards's proposal was a 'general survey of the economic resources, especially in respect to trochus, bêche-de-mer, pearl-shell, sponges, and turtle-shell'. 80

Richards' was not a lone voice. Throughout previous decades a sentiment was emerging, especially in local communities along the Reef, that a marine biology research station was required along with better utilisation of the Reef as a scientific wonder and for its economic opportunities. 81 Even Banfield, when ideas were being entertained of a 'marine museum' at Cooktown, championed the prospect 'of an institution designed to demonstrate how best the riches of the Great Barrier Reef might be exploited'. 82 Underpinning those calls was a consistent theme of national and economic imperative which Richards affirmed:

For defence purposes it is obvious that the fullest knowledge of the fearful complex of coral reefs should be available. It happens that these areas are rich in pearl-shell, bêche-de-mer, trochus, sponges, turtle-shell, and other valuable articles of commerce. … Not only are we not using these sources of wealth, but we are allowing others to use them in an unlicensed and uncontrolled manner. 83

Richards concluded his address with an alarmed declaration of the economic opportunities lost to Australia through a lack of scientific initiative and the Society's responsibility to counter this trend:

The exploitation of the economic wealth of the Great Barrier Reef by foreigners has gone on and we stand idly by … Surely this Royal Geographical Society is capable of making some definite move to point out our proper path! 84

80 Ibid., 54.
83 Ibid., 52.
84 Ibid., 54.
On 12 September 1922 the GBRC held its first meeting in Brisbane and elected the Royal Society's president, Sir Matthew Nathan, as their chairman.

Determining the economic productivity of the Reef seemingly became the GBRC's primary goal. In his 1923 address Nathan further emphasised the committee's role in discovering the economic resources of the Reef; he asserted that scientific and economic studies of the Reef's products, their associated industries and markets were imperative and formed an essential agenda of the society. At the second Pan-Pacific Science Congress, held in Melbourne in August 1923, Richards brought attention to the paucity of research hitherto carried out on the Reef and voiced his disappointment that considering the Reef's size 'and its interest both scientific and economic, it is remarkable how little real scientific investigation has been carried out'. He then outlined his ambition for the marine biological station to carry out zoological research, both 'economic' and 'pure'. The pure research would fulfil the survey of the Reef's flora and fauna. The economic research would assist in the identification of Reef life of commercial interest, and methods of managing their populations. In his 1924 address Nathan was hopeful that 'some progress with regard to the study of the value of the reef' would be made. The GBRC helped place the Reef at the forefront of the Queensland scientific agenda. Furthermore, their advocacy for the Reef fed into the appeal that the tourist market had established. Undoubtedly, however, the GBRC was a manifestation of an attitude prevalent within the scientific community that perceived the Reef's value to the nation in both scientific and economic terms.

The Pollock, Embury and Low Isles Expeditions

It is perhaps unsurprising that, at a time when Reef science found its first eponymous committee and Queensland's tourist body was actively promoting the Reef, the most well-documented tourist operations from the period were run ostensibly as scientific expeditions. In 1925 E.F Pollock, an active member of the RAOU and the Royal Zoological Society of New South Wales, launched his first expedition to the Capricorn Group. Pollock's expeditions were advertised as 'Naturalists' Expeditions', where participants could complete their own nature surveys of the islands' wildlife. Although

87 Ibid., 4–5.
88 Matthew Nathan, 'Presidential Address,' Queensland Geographical Journal 39, no.25 (1924), 82.
89 'Naturalists' Expedition to the Capricorn Islands,' Sydney Morning Herald, 20 November 1925, 10.
the earliest of Pollock's expeditions were advertised as sincere naturalist excursions, by 1927 the scientific agenda was accompanied by the promise of 'excitement among big game fishes'.

In 1928 two other Reef expeditions were launched – one for tourists and the other with a specific scientific agenda. The first was Monty Embury's Reef Expeditions. A teacher from New South Wales, Embury had embarked on Pollock's 1927 expedition and was inspired to organise his own, the first of which was to Lindeman Island. In 1929 the expeditions began to utilise the turtle canning facilities on North West Island (75km northeast of Gladstone). In 1932 Embury secured a lease on Hayman Island and established accommodation, dining and recreation-hall facilities. On Hayman, Embury also built research facilities and the expeditions themselves were accompanied by a number of scientists who provided participants with nightly lectures on marine life. Embury's quest to have scientists accompany his tours was aided by the concessions given to scientists on the Queensland Rail service. Like Pollock's, Embury's expeditions were advertised as 'scientific'. The images, anecdotes and articles describing the expeditions suggest, however, that 'science' was a component of what was actually a sophisticated form of Reef recreation.

Participants were encouraged to continue the established recreational traditions of Reef tourism: bathing, fishing and collecting. New forms of entertainment also formed part of Embury's tourist expeditions (see Figure 8). Hilda Marks, who took part in the expedition in 1932–3, detailed the activities open to the tourists:

A clearing at the back of the camp provided a rough golf course, and tennis courts had also been made where the young folk let off some of their surplus energy. With boating, fishing, reefing and picnic parties to the adjoining islands, there was no dearth of amusement and occupation, and it really took some resolution to stick to one's ideal of an idle, restful holiday.

Hayman Island – along with other Whitsunday and Reef islands – had previously been populated with goats to provide food for shipwreck survivors fortunate enough to reach them. Luckily for the goats, few did, and the goats became one of the islands' 'natural'

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92 Ibid., 4.
93 This arrangement is borne out in letters between Embury, the Office of the Commissioner for Railways, and the Chief Secretary's Office between 1930 and 1937. QSA, SRS 1043, Premiers Batch Files, ID 538150, Great Barrier Reef – General, 75, Part 1.
attractions. Advertisements for Embury's tours promoted the goats, as well as Indian antelopes, as part of the island's rich environmental tapestry.\textsuperscript{95} Both Pollock's and Embury's tours continued, and intensified, the notion of the Reef as a tourist destination.\textsuperscript{96} They helped foster a conception in which the Reef's usefulness was linked to its tourist appeal, and the Reef itself had to be managed and altered in order to accommodate tourist expectations. As well, the Embury and Pollock expeditions undoubtedly assisted in highlighting the natural virtues of the Reef. The employment of scientists, along with the establishment of research facilities – the Great Barrier Reef and Whitsunday Passage Biological Station – helped bring attention to the scientific curiosities along the Reef. Additionally, the links between the expeditions and Reef conservation were strengthened by the declaring of the Molle Group Islands, Hayman Island, and Double Cone Island as animal and bird sanctuaries in 1932 with Embury, Pollock and W.D.K. MacGillivray as honorary rangers.\textsuperscript{97}

The second expedition was the research expedition to the Low Isles (25km northeast of Port Douglas). This expedition, jointly funded by the British and Australian governments, scientific societies (primarily in Australia, the GBRC) and businesses, comprised ten British marine biologists along with some permanent and visiting Australian scientists. The agenda of the expedition was to settle a range of problems that dominated the paradigms of reef and marine science in the 1920s.\textsuperscript{98} The entire expedition was an overwhelming success in terms of scientific output: a total of sixty-two reports were written and published as a result of its investigations.

The Queensland and Commonwealth governments invested in the expedition, hopeful that commercial potential of some of the Reef's exploitable products would be realised. The Queensland government provided the funding for Frank Moorhouse to spend time investigating bêche-de-mer, trochus, pearl-shell and sponge to gain better understandings of their potential for exploitation. Prior to the expedition, the economic research component of this expedition was expressly promoted by the Australian media. Charles Maurice Yonge, a marine biologist from the Plymouth Marine Biological

\textsuperscript{95} Advertisement material, Mitchell Library, PXA 642, Embury Scientific and Holiday Expeditions on the Great Barrier Reef: Pictorial Material.

\textsuperscript{96} Todd Barr, \textit{No Swank Here? The Development of the Whitsundays as a Tourist Destination to the Early 1970s} (Townsville: Department of History and Politics/Department of Tourism, James Cook University, 1990), 9.

\textsuperscript{97} 'Whitsunday Islands', \textit{Telegraph}, 1 December 1932, 13.

\textsuperscript{98} C. M. Yonge, \textit{Origin, Organization and Scope of the Expedition}, ed. Museum British and Expedition Great Barrier Reef, Scientific Reports (Great Barrier Reef Expedition (1928-1929)); V. 1, No. 1. (London: British Museum (Natural History), 1930).
Laboratory and the expedition's leader, in an interview with the *Brisbane Courier*, hoped to 'throw light on the many economic problems' and asserted that the Reef was 'a region of great potential wealth'.

In their assessment of the expedition, the Bowens acknowledged that funding came largely in expectation of significant economic discoveries, and that Yonge had made frequent public statements on the economic importance of the Reef. Yet the Bowens then suggested:

> The lingering suspicion remains that there was never any real intention of investigating the economic potential of the Reef – apart from the work of Moorhouse – to honour the original commitment of funds, and that the frequent references to commercial possibilities were little more than genuflectory gestures to the main funding bodies.

Yonge, however, continued to publicise the economic value of the Reef. In his book, published following the expedition, he suggested that the Reef offered 'a continuous supply of wealth'. The promotion of the Reef's economic importance had been an important part of Reef science's agenda since Saville-Kent, and the GBRC was established on this very principle. Reef scientists, especially those endowed with government money, were complicit in the broader pursuit of developing and informing Australia's primary industries. The notion of pursuing 'economic' and 'pure' avenues of research were not considered competing agendas. In discourses of the Reef, both scientific pursuits formed part of highlighting the importance of the environment to the nation. Yonge's promotion of the Reef in economic terms maintained this discourse, and as the leader of a celebrated expedition his input could only reinforce this perspective in the public consciousness.

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100 Bowen, *Great Barrier Reef*, 278.
Figure 7: The original caption under this image said 'Training a turtle for the Barrier Reef Sports Meeting'.


Figure 8: One of Monty Embury's early camps on either Lindeman or Hayman Island c. 1930.

Source: Embury, Monty. 'Embury Scientific and Holiday Expeditions on the Great Barrier Reef: Pictorial Material.' PXA. 642.
Popular literature about the Reef

As a consequence of these expeditions, interest and access to the Reef had grown considerably. A reflection of this growth was the increase in books and articles written about the Reef (including by Embury, Yonge and Roughley) between 1928 and the beginning of World War Two. These writings fused scientific appraisal with romanticism. Sydney Elliot Napier, a journalist who had participated in Pollock’s 1927-28 expedition, marvelled at the coral polyp whose work was 'infinitely greater and more lasting' than the pyramid-builders of Egypt. Roughley described the polyps as tiny architects 'responsible for the construction of these beautiful corals with a sculpture almost infinite in its variety'. Embury placed dramatic importance upon the 'rampart against which the great blue combers of the Pacific beat in vain. Were it not for these reefs this east coast of Australia would be among the most dangerous in the world'.

![Figure 9: C.M. Yonge stands in front of a large chunk of coral which had been broken off, and thrown on top of this reef flat during a cyclone. The reef flat is off North West Isle.](image)

Source: C.M Yonge, *A Year on the Great Barrier Reef*, 208

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Despite the perceived awesomeness of the coral reefs, they were considered vulnerable. Yonge exclaimed:

*Coral reefs are the site of a continuous struggle between the processes of growth and consolidation and those of destruction … The greatest cause of destruction is the sea itself, driven before the steady force of the trade winds or the occasional terrific fury of a cyclonic blow, to whose power the great boulders or 'nigger heads' which line the margins of the reefs bear striking testimony.*  

(See Figure 9)

Other known destroyers of the coral reefs at the time were lowered water temperatures, increased exposure to the sun through tidal activity or rising of the land level, the contamination of water from natural silt, and fresh water. Like Banfield, the writers promoted the underwater organisms and their remarkable ability to survive the forces perpetually arrayed against them.

Yet, despite the presence of coral and guano mining industries in North Queensland at the time, none of the authors made explicit a consideration of the associated damage. Coral mining, however, was becoming an issue of concern for locals along the Reef coast, principally because of the disturbances to birds. In 1922 Cairns man Edward Saunders applied for a series of mining leases on Reef cays and reefs for the purposes of obtaining coral lime for fertiliser. In February he applied for leases on Upolu Reef and Oyster Cay, and in June he applied for a mining lease for Green Island; all three applications faced local objection. Saunders claimed his actions would not interfere with public use of Green Island, largely because, he believed, the island was only used once or twice a year. He suggested that the 'Aquatic and Motor Boat Clubs' did not have suitable boats to reach Green Island, and while he considered Green Island 'a very pretty place', it was not 'one of the beauty spots of Cairns'. The Mining Warden recommended that Saunders' application be refused for Green Island, but endorsed the other two.

The Cairns City Council, however, wrote to the Minister for Mines listing their objections to all three applications and cited the sites' importance for birds and

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105 Yonge, *A Year on the Great Barrier Reef*, 75.
scientists.109 Saunders, frustrated with the Council's adoption of what he called 'back
doar tactics', wrote to the Cairns Post asserting that his operations had the support of
cane farmers and, in relation to the birds, they could 'migrate to another bank and there
are many such banks along the Great Barrier Reef'.110 The Council continued to agitate
against Saunders' application, sending letters to the Royal Geographical Society and the
Society for the Prevention of Cruelty to Animals, the latter of which also recruited the
RAOU.111 The Council, who believed lime could be obtained more cheaply from the
Chillagoe deposits, considered the issue to be clear-cut. One alderman called the
application a 'dastardly proposal'. The paper reported his sentiments:

One of the greatest attractions to those islands was the bird life, and people who
went there had to pick their feet for fear of stepping on eggs. To think that this
scene should be devastated and destroyed because some one wanted to get coral
lime from those islands was dastardly.112

Their protests, however, were to no avail. In November 1923, the Minister
approved Saunders' lease, and he began his work on Green Island in early 1924 placing
'the rich tropical growth of this fine picnic reserve' in jeopardy.113 The amount of
mining Saunders actually accomplished on Green Island, however, is uncertain. He
encountered difficulties in securing a method of transporting the 'grit' from Green Island
to the mainland and applied for exemptions on his lease. The Council seized upon the
opportunity and claimed Saunders' operations were not 'bona fide'.114 Adding to the
complexity of the issue was another application for a lease on Green Island for the
purposes of building a resort.115 The entire episode threw into relief the control the
Council had over Green Island. Consequently, they began to pressure the Queensland
government to both refuse Saunders' application for exemption and to give control of
Green Island and its lease arrangements back to the Council. It was on this matter that
the Council had success.116

While the popular Reef writers seemed oblivious to the issues of coral mining,
they were well aware of the Reef birdlife as an inherent element of the Reef's natural

109 Telegram Cairns Mayor to Queensland Minister for Mines printed in 'Mineral Leases – Cairns Town
Council and Recent Application', Cairns Post, 18 July 1922, 8.
110 Edward Sanders, letter to the editor, 'Correspondence', Cairns Post, 20 July 1922, 2.
111 'Bird Life on the Reef', Cairns Post, 18 October 1922, 5.
112 Ibid.
113 'Cairns City Council', Cairns Post, 20 February 1924, 12.
114 'Green Island Mineral Lease', Cairns Post, 5 February 1925, 4.
115 'Cairns City Council', Cairns Post, 25 March 1925, 10.
116 See: 'Cairns Deputations to Minister for Lands', Cairns Post, 6 June 1925, 5 and 'City Council', Cairns
Post, 11 December 1925, 10.
appeal. Echoing the calls of bird enthusiasts, Embury maintained that the 'sea-birds of the Great Barrier Reef are one of its greatest attractions, and therefore one of our assets. They are one of the wonders of the world of nature, and as such should be afforded the utmost protection'.\textsuperscript{117} He demanded their protection from feral cats and sportsmen. Roughley, reprising Banfield, described the shooting of the Reef birds as abhorrent:

\begin{quote}
The slaughter by the aborigines can be excused; amongst a people who knew not even the rudiments of tilling the soil, whose weapons were for food, for their very sustenance. What be said of the slaying by white people? Perhaps the less the better; but indignation cannot help being felt at the thought of such ruthless, such senseless, slaughter, for much of this wholesale shooting was indulged in out of a perverted sense of 'sport'— or rather, should we say, a primitive lust to kill?\textsuperscript{118}
\end{quote}

Napier's position on bird protection was less dogmatic. Recounting his frustration at being kept awake by mutton-birds while camping on Musgrave Island, he lamented that he was denied the 'small satisfaction' of a shotgun.\textsuperscript{119} Despite Napier's one unpleasant evening, the birds of the Reef were generally regarded, including by Napier, as worthy of admiration and protection. Upolu and Oyster Cay, which continued to be mined for coral lime despite being listed as sanctuaries in 1926, and continued protests over the operations, finally received protection after the revocation of the mining leases in 1934.\textsuperscript{120}

These Reef writers' commentaries on turtles, however, demonstrated a complicated attitude towards their protection. Tourists were exposed to turtles when they visited the canning facilities on North West and Heron Islands, along with the butchering of nesting females. The process of the slaughter was laid out in bare terms in the \textit{Australian Museum Magazine}:

\begin{quote}
Turtle-hunters patrol the beaches of the islet nightly, turning over all the turtles they fine \textit{en route}, and leaving them out of reach of the tide. There they are helpless and lie on their backs, their flippers scooping up the sand with great force, until exhausted. They are often left in this position for a whole day or more, in the heat of the tropical sun, and their plight as they lie with drooping heads, often gasping for breath, is one which cannot fail to excite one's pity...the turtles are killed by decapitation, and later butchered.\textsuperscript{121}
\end{quote}

\textsuperscript{117} Embury, \textit{The Great Barrier Reef}, 83.
\textsuperscript{118} Roughley, \textit{Wonders of the Great Barrier Reef}, 209.
\textsuperscript{119} S.E. Napier, \textit{On the Barrier Reef}, 50.
\textsuperscript{121} Anthony Musgrave and Gilbert P. Whitley, 'From Sea to Soup: An Account of the Turtles of North-West Islet', \textit{Australian Museum Magazine} 2, (1926): 335-6.
Their meat was used to make soup, their flippers dried and sold as culinary products, their fat extracted to be used in cooking and as a lubricant, while their shells, occasionally sold for decorative purposes, were crushed with their bones to make fertiliser.\(^{122}\)

While many writers affirmed the fine taste of turtle flesh and recognised the importance of viable commercial industries on the Reef, they considered the turtle too special to be threatened with extinction and treated so callously. Roughley asked:

> Is it desirable that the turtle be exploited at all? Certainly the products, both soup and meat, are very palatable, but the industry is accompanied by much unavoidable cruelty to the animals. If we must have a turtle industry, however, at least let us so regulate it that the animals are not reduced to the very extinction as has happened to so many creatures man has exploited for his personal gain.\(^{123}\)

Yonge suggested that ‘if some measures were taken to protect the young turtles in this early stage of their existence their numbers, and so the potentialities of the fishery, would be greatly increased’.\(^{124}\) In 1932 the Government issued an amendment to the *Fish and Oyster Act* to 'absolutely prohibit the taking between the first day of October and thirtieth day of November' of Green Turtles and their eggs in the waters south of latitude 17°S.\(^{125}\) The amendment corresponded with recommendations suggested by GBRC scientist, Frank Moorhouse, and represented a significant win for preservationists on the Reef.\(^{126}\)

As concerned as the Reef writers were with the possible extinction of the turtles none raised objection to the sport of turtle riding (see Figure 7). Napier, who lambasted the turtle-canning industry as inhumane, recalled the thrill of riding turtles like 'festive steeds', adding that 'I have not heard from the turtles; but, as they raised no verbal objection, it is to be presumed that they had none.'\(^{127}\) The image branded across the cover of the December 1936 issue of *Walkabout* of a young lady straddled on the back of a turtle, holding ropes which have been wrung around the turtles neck as it paddles in shallow waters provides, to modern sensibilities, an abrupt contrast to the rhetoric of protection. Like birds, turtles were considered part of the rich environmental attributes of the Reef. Yet the turtle held an undeniable usefulness both as an important

\(^{122}\) Ibid., 336.


\(^{124}\) Yonge, *A Year on the Great Barrier Reef*, 205.


commercial product and as a tourist drawcard. Attitudes toward conservation of the
turtle were indicative of broader perspectives which combined commercial and practical
valuations of the Reef.

Of all the industries along the Reef, pearl-shelling, bêche-de-mer and trochus
received the most romanticised appraisals (see Figure 5). The bêche-de-mer and pearl-
shell fisheries received a post-World War One bump, following the forced closure of
the fisheries during the conflict, but by the 1930s clear trends in their vulnerability were
evident once more. The industries continued to attract commentary over resource
depletion and the racial mix of their labour force, but they had taken on a somewhat less
alarming tenor. Writers, such as Vance Palmer, suggested the abuse of Indigenous and
Torres Strait Islander workers had effectively been removed from the industry under
'the watchful eye of authority'. Yonge suggested that since World War One the
pearling industry had settled into 'an orderly collection from the bed of the sea of an
important raw material of commerce'. On the trochus fishery and the adoption of the
company boat scheme, Yonge wrote with particular admiration:

Nothing that I saw elsewhere gave me more respect for the Government of
Queensland than this simple but most successful policy. The 3000 odd
inhabitants of the Torres Strait Islands are enabled contentedly to live their own
lives in their own way, and on islands which are more than ever assuredly their
own, and to work out, with the most tactful of guidance, their own destinies.

Few considered the complex and restricting aspects of the industry upon the private
lives of its labour. Generally, they considered the likelihood of resource depletion to
be of greater concern. Embury believed the industry would revive through artificial
cultivation and asserted 'scientists will lead the way to something of value
commercially'. Roughley, who called pearl-shelling the 'richest treasure' on the Reef,
believed the fishery was heading for 'prosperous days'. He warned that the trochus,
which he ranked just above bêche-de-mer in importance, would face serious depletion
unless restrictions were introduced. Optimism in the future of the industries,
however, remained. Despite conceding that the industry had lost some of the romance and excitement of its 'old-time', a feeling that the industry would produce good yearly harvests prevailed.\footnote{For instance see Yonge, *A Year on the Great Barrier Reef*, 173.}

The perceived value of the industries was, as Palmer asserted, much more 'than their figure-value'.\footnote{Palmer, 'Trochus and Beche-de-Mer', 46.} Their success and development was linked to settlement and explicitly the Reef's broader worth. Broadly Reef writers insisted that it was commercially under-utilised and its value unrealised. They urged governments to do more. In a chapter entitled 'Wealth of the Reef', Roughley expressed particular enthusiasm at the prospect of a shark-fishing industry, and believed the industry's likely commercial success would be compounded by the removal of a 'shy, repulsive, cowardly' animal whose suffering would not induce 'the slightest sympathy'.\footnote{Roughley, *Wonders of the Great Barrier Reef*, 194.} Napier accused governments of wrapping the Reef 'in a napkin' and considered the reason the Reef had yet to be properly exploited was because the 'islands and reefs have no population, and therefore no votes; but surely there are things which, even to a politician, may be greater than votes'.\footnote{Napier, *On the Barrier Reef*, 126–7.}

Tourism, however, proved to be making serious strides in development. An increase in tourism advertisements accompanied the Reef writers' publications. The Australian National Travel Association (ANTA) and the QGTB advertised in popular magazines and ANTA's own organ *Walkabout*.\footnote{Pocock, 'Romancing the Reef', 25.} The Queensland government also decided to distribute copies of Roughley's book to 'tourist publicity offices and public libraries in America and England'.\footnote{Grosvenor Francis to Premier W. Forgan Smith, 7 January 1939, QSA, SRS1043, ID538150.} The increased awareness of and travel to the Reef was felt within local communities. In Cairns the North Queensland Naturalists Club made guided tours of Green Island one of its earliest activities, fearing the destruction crowds of tourists would bring if they were free to trample across the island's fringing reefs.\footnote{North Queensland Naturalists Club, 'Tourist Guides,' *The North Queensland Naturalist* 1 (1932): 2.}

Tourism, however, proved to be making serious strides in development. An increase in tourism advertisements accompanied the Reef writers' publications. The Australian National Travel Association (ANTA) and the QGTB advertised in popular magazines and ANTA's own organ *Walkabout*. The Queensland government also decided to distribute copies of Roughley's book to 'tourist publicity offices and public libraries in America and England'. The increased awareness of and travel to the Reef was felt within local communities. In Cairns the North Queensland Naturalists Club made guided tours of Green Island one of its earliest activities, fearing the destruction crowds of tourists would bring if they were free to trample across the island's fringing reefs. An increase in transportation infrastructure to Green Island had led to its transition away from a place utilised by transient fishermen and toward day-picnics and the like, and the club considered it imperative to provide travellers with informed guidance about its environmental features. In the Townsville monthly magazine
Cummins and Campbell’s articles continued to celebrate the Reef as both a tourist pleasure ground and a commercial drawcard. Praise was offered for the development of hotels, roads, and jetties on Magnetic Island.¹⁴³

By 1939 Reef tourism was increasingly popular but a lack of infrastructure prevented it from becoming widely accessible. Signs that tourists were having a destructive effect, however, were evident. In 1933, the National Parks Association of Queensland was established, and many of its members came from the GBRC. The two organisations became more entwined and began agitating for more islands to become national parks and for management policies concerning resort development, resource stripping and foreign vessel intrusion.¹⁴⁴ The increasing awareness of the issues surrounding tourism was exemplified by a request to the Queensland government to provide travellers to Heron Island with iron hooks in order to protect their hands when they turned coral or picked up animals. The government sought advice from H.C. Richards who told them not to encourage the activity because it would 'expose the marine life, which consequently dies'.¹⁴⁵ In the same year Cummins and Campbell's published a poem which alluded to the loss that tourism to the Reef brought:

Here tourists come from far away;
With clacking tongues and prying eyes
They stare through water-glasses on
The seagods' private paradise.

And on its flanks hang fishermen,
A hardy, dour and weathered band
That dangle hooks in opal lanes
And, chewing, spit in fairyland.¹⁴⁶


¹⁴⁵ Secretary of Queensland Railways Commissioners Office to Chief Secretary's Office, 19 October 1939, 3. QSA, SRS 1043, ID 538150.

¹⁴⁶ The Great Barrier Reef, Cummins and Campbell's, August (1939): 53.
Early twentieth-century perspectives on the Reef were complicated and informed as much by appreciation of its economic values as by its aesthetic and environmental attributes. As World War Two erupted the Reef was perceived as a place of yet unrealised economic potential, and it was becoming increasingly clear that tourism would form the greatest source of commercial wealth extracted from it. This perception of the Reef was produced by popular natural histories and the expansion of Reef science and tourism in the early twentieth century. Nature and travel writers who frequented the Reef's coral pools and islands were as likely to draw the reader's attention to its commercial products as to describe a beautiful or awe-inspiring scene. Travellers to the Reef were encouraged to consider it a recreational park where, in beautiful and unique natural settings, opportunities for industry might be found. Scientists too celebrated the Reef's economic possibilities and considered it their duty to reveal its worth and assist in its exploitation. The Reef was perceived as a crucial part of the Australian environment and an urge to protect its vulnerable and beautiful features was paired with the seemingly incompatible imperative to exploit its commercial prospects.

Despite occasional opposition to the Reef's exploitation and development emerging during the period, there was no sustained Reef conservation movement. Widespread opposition, however, to bird shooting, the slaughter of turtles and concerns surrounding the increasing presence of tourists on Reef islands was indicative of a nascent ecological awareness around the Reef. After World War II, this ecological awareness of the Reef coalesced as the consequences of development became increasingly perceptible.
Map 4: The bottom half of a tourist map of the Reef.

Chapter Five – Discourse of Concern

Post-war perspectives of the Reef slowly began to incorporate a broader discourse of concern for the Reef's future. What distinguished this angst for the Reef from seemingly similar episodes in the inter-war period was the application of preservationist ethics to the entirety of the Reef. Gradually anxiety was expressed for the Reef as a whole rather than about tourist activities and birds and turtles and their immediate habitats. What brought this disquiet to the fore was increasing advocacy for exploitation and actual development of the Reef's resources. In the decades succeeding World War Two both the Commonwealth and Queensland governments sought to improve the Reef's tourism infrastructure, increase their investment in Reef science, and unearth new Reef resources. With the assistance of the scientific community, who continued to praise and celebrate the Reef for its natural and economic values, new resources were identified – this time, geological. In the 1950s the GBRC geologists began to report to oil companies and publicly broadcast the likelihood and virtues of oil being found on the Reef.

This expansion of Reef development was accompanied by a growing anxiety. That anxiety was first expressed by local parties, including tourist operators, scientists, and local nature enthusiasts, witnessing changes in their immediate Reef environments. Some lodged protests with governments and in newspapers about the over-collection of shells and corals from popular tourism regions, the slaughter of turtles, and eventually the destruction of corals by the Crown of Thorns starfish. These concerns eventually converged and coalesced in the 1960s into a broader apprehension about the Reef's future. Unease was fuelled by uncertainty; what might happen to the Reef was unknown but there was broad acknowledgement, especially after the arrival of the Crown of Thorns starfish, that humans were having an impact on the Reef and, with development likely to intensify, the impacts would worsen. By 1967, the year the 'Save the Reef' campaign began, there was an appetite for reform fuelled by an increasing foreboding for the Reef's future.

In the opening of *The Coral Battleground*, Judith Wright implies that in the years leading up to the 'Save the Reef' campaign, governments, and indeed anyone other than distressed conservationists, expressed little care. Since recent Reef histories rely largely on Wright's account, the development of a comprehensive concern for the Reef in the post-war era has been lost. An exception to this is Ben Daley's discussion on the
collection of coral and shells along the Reef and the apprehension which arose in conjunction with the increasing access of tourists to the Reef.\(^1\) Alternatively, the Bowens provided an analysis of the period which highlighted the global shifts towards facilitating the exploitation of off-shore oil reserves along with a burgeoning ecological outlook following the release of Rachel Carson's *Silent Spring*.\(^2\) The global perspective of their chapter, however, along with the more in-depth analysis of the GBRC's continued campaign for a research station, left little room for a more cohesive story of the rise of a discourse of concern for the Reef. This chapter deals explicitly with that issue by tracing the rise of concern, along with the advocacy for the Reef's development, by drawing on government reports, cabinet papers and correspondence, scientific papers and reports, and magazine and newspaper articles. It demonstrates the continuing entanglement of economic and natural values placed on the Reef. Rather than disentangling these values governments, scientists, tourist operators, local leisure groups and those within the emerging conservation movement, increasingly considered that the Reef needed to be better managed to ensure both its natural and economic values were maintained.

**Plundering Tourists**

Despite some tensions before World War Two between tourist activities and maintenance of the Reef, the inter-war period saw the development and advertisement of the Reef's tourism potential. During the war one ostensible benefit of the conflict, at least from the Queensland government's perspective, was the huge contingent of United States military personnel who had been stationed along its coast. The government was eager to keep 'the name of the Barrier Reef...before the American public in view of the prospective trade between America and Australia after the war'.\(^3\) A Queensland company, Campbell Advertising, had offered the government their services to advertise the Reef to an American audience and boasted that they had already begun advertising Day Dream Island to Queenslanders. In April 1944, they boasted, Day Dream Island had 'full bookings up till next July'.\(^4\) The government thought that 'the presence of so many United States servicemen in this country and their correspondence with their

\(^{1}\) Daley, *Great Barrier Reef*, 137-151.
\(^{3}\) Minute for Chief Secretary's Department, 'Barrier Reef Advertising', 10 May 1944, QSA, SRS 1043, ID 538150.
\(^{4}\) A. Campbell to T.G. Hope (Under Secretary Chief Secretary's Department), 24 April 1944, 1. QSA, SRS 1043, ID 538150.
families and friends in the U.S.A. provide a potential tourist traffic for the Barrier Reef which can be stimulated now.5 

The Commonwealth had also bought into this strategy. The Department of Information produced a colour film entitled *The Great Barrier Reef* of which Arthur Calwell stated: 'Everyone who has seen this film has been enchanted by the wonderful colour sequences.'6 The Department had also funded a lecture tour by Theodore Roughley between October 1945 and January 1946 across the United States: 'a total of 27 lectures [were] delivered, the audience aggregating about eight or nine thousand people'.7 Yet, it was not just an American invasion; the Reef was re-welcoming returning interstate and Queensland travelers eager to enjoy the life of fun and frivolity they had at least tasted during the inter-war period.

The Reef publicity which had been so pervasive during the 1920s and 1930s continued post-war. An often depicted activity carried out by Reef tourists was fossicking for and collecting shells and corals. William Dakin, Professor of Zoology at University of Sydney, began his chapter on shells in his book *Great Barrier Reef* by exclaiming:

Now a man who makes a hobby of 'fossicking' or, say, shell collecting, can find lots of interesting specimens on the shores of South Australia or N.S.W., for example. But there is something quite different about a coral reef. Its beauties and its peculiarities advertise themselves for everyone. It's fun to go exploring!8

The *Women's Weekly* carried a story about the commercial shell collectors, Mr and Mrs Andrews from Heron Island, who had struck it rich fashioning their loot into costume jewelry. The article celebrated the plucky couple who had abandoned their beauty salon in Brisbane to live a life of 'plain hard work'.9 Reef tourism found new energy in the post-war era.

The rise of tourism, however, and the specific glamorisation of shell and coral collecting on the Reef brought with it criticism and concern. The National Parks Association of Queensland (NPAQ) believed that the article from *Women's Weekly*, and

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5 Chief Secretary's Department minute, 'Barrier Reef Advertising', 10 May 1944, QSA, SRS 1043, ID 538150. Emphasis in original.
others, did 'untold damage' 'to the coral and shells of the Reef'. Of significant concern to the NPAQ was the idea that tourists were seemingly unaware of the regulations prohibiting, and the ecological consequences of, collecting. It called for immediate protection to ensure the government's objective 'of bringing many tourists to the Reef' would 'result in a continuous flow for generations to come'. The organisation warned that without quick and rigorously enforced protection 'the government's efforts to popularise the Reef will come to naught by the sheer denudation and selfish vandalism at present invited' (see Figure 10). At the very least the NPAQ requested the government enforce a recommendation from the 1947 Queensland Tourist Development Board (QTDB) report, calling for legislation 'prohibiting the removal and/or sale of all corals and shells'. The government felt that enforcement of such a prohibition would be difficult since the Protector appointed under the *Fish and Oyster Act* was 'unable to visit these areas except at long intervals'. It did concede, however, that if tourist island lessees continued to allow visitors to remove shells and corals it would 'not be long before the resorts lose much of their interest'.

The QTDB's report, however, both endorsed a large scale development of tourism along the Reef and encouraged measures to preserve its flora and fauna. The report provided not only a review of existing tourist facilities but a blueprint for further development. It praised the efforts of the tourist proprietors on various Whitsunday islands who faced difficulties in transporting and landing people and goods at the islands as well as shortages of water, isolation and poor business during summer and wet seasons. It identified Reef continental islands such as Fitzroy (off Cairns), Whitsunday, Hook and Hinchinbrook along with various coral cays such as North West and Heron Island as prospects for further development. It recommended that 99 year leases be granted on various Reef islands already under lease, and islands which had no lease arrangements and were considered prospective major destinations were to be organised under 99 year leases. The report concluded that unless land tenure on Barrier Reef islands was changed 'it cannot be expected that operators would make large expenditure or improvements under the present system. If development of the islands is

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10 J.K. Jarrott (Hon Secretary NPAQ) to E.M. Hanlon, 3 October 1947, 1. QSA, SRS 1043, ID 538150.
11 Ibid., 2
12 Ibid.
to proceed on the scale anticipated, secure tenure is essential. It was important that the accommodation be designed to have 'good scenic views of sea and islands', be architecturally beautiful, comfortable and blend with the natural setting, have 'easy access to coral which it should be possible to see by day and night and in all weathers', have good bathing and sport facilities and finally 'adequate night entertainment'.

Despite advocating development, the report was alive to the idea of preserving the Reef from tourism's encroachment on the exploitable natural values of the Reef. The QTDB had gleaned from departmental reports that the existing suite of legislation protecting flora and fauna in National Parks (which many of the Reef islands were), along with the system of honorary protectors, was working. They had received, however, contradictory evidence from elsewhere. In some cases witnesses suggested that 'honorary protectors themselves were often the worst offenders, particularly in the removal of shells and coral'. The report, as the NPAQ had attested, expressed concern about the collection of coral and shells from Reef islands. They concluded:

On several islands we observed that shells and coral were for sale, and in certain shops on the mainland a flourishing business apparently exists in the sale of treated shells and coral as souvenirs. On the other hand, many of the operators, both on the islands and on the mainland, are doing everything possible, both by precept and example, to discourage the despoliation of our heritage. We are not unmindful of the fact that most tourists, particularly those visiting Barrier Reef islands, desire to take away with them some memento of their stay, but we feel that this attitude should be discouraged, otherwise, with an influx of tourists, our islands and reefs will soon lose their natural attractiveness.

Along with legislating the prohibition of the removal or sale of all corals and shells, the report suggested that tourists would 'be reasonable in the matter' if they were better informed 'of the ultimate effects of the plundering of natural resources'.

No notable changes to legislation dealing with the Reef's preservation were made, but development of its tourism industry powered on. By 1950, a Catalina Flying Boat Service linked Brisbane with Heron Island and the islands in the Whitsunday Passage; in the peak periods an extra service to the Whitsundays was provided. There was also a daily plane service between Brisbane and Mackay; later in 1961 Proserpine

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15 Ibid., 62.
16 Ibid., 71.
17 Ibid., 74.
18 Ibid.
19 Ibid.
20 R.B. McAllister (Under Secretary Chief Secretary Department) to Queensland Government Offices London, 14 September 1949, 1. QSA, SRS 1043, ID 538150.
would open its own aerodrome hoping to capitalise on its proximity to the Whitsunday Islands. Airline companies were important components in the post-war Whitsunday tourist industry; the most notable contribution being Reginald Ansett's purchase of Daydream and Hayman Islands, the latter of which became the site of a large luxury hotel. Todd Barr stressed, however, that in the Whitsunday region development of the tourist industry, and the successes of enterprises, did not follow a uniform pattern. Rather its post-war development was characterised by its diversity. Daydream, for instance, did not become the home of a lavish luxury hotel; instead Ansett managed the island in much the same way its previous owners had with 'moderate accommodation at relatively affordable rates'. In 1952, however, Daydream was closed, largely as a result of Ansett's mis-management of the Hayman Island resort, and remained dormant until 1968.

The islands further north also enjoyed post-war tourism development. Magnetic Island, which had been the site of military forts during the war and now hosted permanent settlements in many of its bays, continued to be serviced by regular ferries from Townsville. Dunk Island, the Banfields' former abode, was now frequently serviced by launches departing from the coastline near Tully, as were Goold, Richard, Hinchinbrook and the islands in the Family and Barnard groups. Green Island, the 'last stronghold of romance', continued to hold a significant place in the Reef's tourism industry. In 1954, Green Island's popularity among tourists increased dramatically with the construction and installation of a 25ft long, 7ft high and 8ft wide underwater observatory. In its advertisements the QGTB continued to promote and portray the Reef's visitors fossicking and scavenging the fringing reefs for coral and shells. They did, however, include a disclaimer which noted: 'visitors to the islands are reminded that the removal or damage of flora and fauna, terrestrial and marine, is prohibited by Order-in-Council'. Considering that the issue continued to fester, however, particularly at Green Island, it is doubtful that many tourists paid particular attention to the warnings.

22 Barr, No Swank Here?, 38.  
23 Ibid., 35-41.  
25 Ibid.  
26 The issues of coral collecting during this period are covered in Daley, Great Barrier Reef, 137-40.
The post-war boom in Reef tourist infrastructure did little to alleviate the concerns of the Queensland government about the industry's long term viability. They lamented that Reef tourist facilities were poor and failed to accommodate visitors expecting comfort let alone luxury. In 1955 the Country Party's Member for Mirani, Ernie Evans, complained that the Reef, like other tourist spots in North Queensland, was hindered by a lack of infrastructure such as roads and suitable accommodation. He considered that if tourists were adequately catered for they could fill 'a 400 lb icebox with fish' and catch hundreds of crabs in one trip, as he boasted he had.27 Fellow Country Party politician and Member for Isis, Jack Pizzey, ridiculed the Labor government for failing to adopt recommendations in the 1947 report which would assist in the development of Reef tourism. In particular, Pizzey thought Queensland should adopt a tourist loan scheme similar to the one utilised in Tasmania to assist in the improvement of facilities.28 Both parties, heading into a 1956 election, positioned themselves as capable of opening up the Reef's vast tourist resources.

The National Parks movement, however, was persistent. In January 1956, Honorary Ranger Douglas Jolly wrote to Premier Vince Gair to propose the establishment of a consolidated 'Barrier Reef National Park'. For Jolly the park would extend eastwards to the Reef's outer barrier, northward to Hayman and southwards to include Keyester Island. He considered that since the islands of Whitsunday Passage were 'rapidly becoming renowned as major tourist attractions' the consolidation of many national parks into a single 'Barrier Reef National Park or Whitsunday National Park' would dramatically improve their administration and also bring about further recognition.29 Since the proposed park would encompass 'all islands, reefs and water especially the reefs to protect them from tourists' the National Parks Act would need to be amended. The government believed that the protection of the various islands' fringing reefs, the ones exposed at low water at least, could be dealt with under the Fish and Oyster Act. Under the Fauna Protection Act of 1952 most of the Reef's islands were already listed as sanctuaries, and the more frequented tourist islands were national parks. In each case fauna and flora were protected to the high tide mark. That legislation, however, did not include restrictions on coral and shell collecting. In 1957 the Queensland government prohibited the removal of coral and shell from the Reef.

28 Jack Pizzey in Ibid., 787.
29 Douglas Jolly to Vince Gair, 9 January 1956, QSA, SRS 1043, ID 538150.
unless it was done within a licensed area or by a licensee. They were less amenable to consolidating national parks. Thomas Foley, the Minister for Lands and Irrigation, reasoned that the islands of the Whitsunday's had names which were 'well established in the public mind and to include them under the one name would subjugate their identity and take away from the distinctiveness of each particular island'. If the Reef was going to be protected it would be through existing legislation. Individual islands would serve as distinct National Parks whose names and natural attributes had to be protected in order to facilitate their publicity in Australia and abroad.

The Pursuits of the GBRC

The GBRC entered the post-war era with the same zeal for Reef research exhibited in the inter-war period. In 1950, plans were underway for the establishment of a marine biology research station on Heron Island. In September of 1950 the Deputy Chairman of the GBRC, W.H. Bryan, wrote to Premier Hanlon requesting the government's financial support in the endeavour. As they had in the inter-war period the GBRC believed the research station would allow Australian scientists to make contributions to the growing field of marine biology and the understanding of coral reefs. It would be utilised largely by scientists attached to the University of Queensland (one of the few Australian universities which provided a full course in marine biology at the time) and in doing so provide a training ground for aspiring marine biologists. Additionally they proposed that the station would assist in the revealing of economic benefits of the Reef as well as heightening its tourist appeal.

The government, always eager to broaden the Reef's economic and tourist value, believed the station would be of economic benefit. They surmised:

The Great Barrier Reef is, in its way, unique and is a constant source of interest to scientific workers all over the world. Large numbers of such workers come to Queensland from the south every year to conduct investigations at various locations on the Reef. Apart from any direct benefits to be gained from the study of marine biology, the establishment of the station will, I consider, bring some prestige to this State and must have the effect of increasing public interest in the Reef as a tourist attraction.

30 Foley to Gair, 15 February 1956, QSA, SRS 1043, ID 538150.
31 W.H. Bryan (Deputy Chairman of GBRC) to Premier Hanlon, 21 September 1950, QSA, SRS 6232 General Correspondence, ID 959329 Establishment of marine biological station – Heron Island, Great Barrier Reef.
The GBRC were provided with a 5 acre lease on Heron Island\textsuperscript{33} and half of both its construction (£3,750) and ongoing costs would be carried by the Queensland government.\textsuperscript{34} The GBRC were jubilant and the media celebrated the fact that 'the world's biggest single coral area will have its first permanent marine research station...made of coral brick on the spot'.\textsuperscript{35}

The work to be conducted at Heron was varied. There was an expectation that some work on fisheries would be conducted along with less economic-driven research. There was, however, a hope, especially since a number of the GBRC's prominent members were geologists, that some geological research would also be conducted. In 1947, the GBRC Chairman, E.O. Marks, had already made a request to the Queensland government to approach the Commonwealth on their behalf to request that the GBRC could make use of their 'greatly improved modern techniques of Geophysical Survey' to investigate the problems of the Reef. The GBRC were excited by the preliminary findings emerging from geological surveys conducted at the Bikini Atolls; these tests provided clarity regarding the formations of coral reefs and affirmed Darwin's theory of subsidence.\textsuperscript{36} The Commonwealth, however, was not willing to immediately lend the team and its equipment to the GBRC. Prime Minister Ben Chifley explained to Premier Hanlon that while the Commonwealth's geophysical group 'might well be used to throw some light upon' problems of world-wide significance, like the formation of the Great Barrier Reef:

\begin{quote}
This group has many pressing commitments in connection with the search for coal, oil, metals, radioactive minerals etc., and the more urgent of these will need to be dealt with before geophysicists and suitable instruments could be made available for the more scientific studies.\textsuperscript{37}
\end{quote}

It was perhaps an indication for GBRC geologists interested in the Reef that their future research, no longer driven by the quest to solve the origins of the Reef, would be to determine its geological products.

In the 1950s steps were taken towards ascertaining the geological resources of the Reef. In 1956 the Queensland and GBRC geologist, Dorothy Hill, compiled a report for the mining industrialist Maurice Mawby entitled \textit{The Geology of the Great Barrier Reef}

\begin{itemize}
\item \textsuperscript{33} Secretary Land Administration Board to W.H. Bryan, 8 November 1950, QSA, SRS 6232, ID 959329.
\item \textsuperscript{34} Under Secretary (Chief Secretary's Department) to W.H. Bryan, 15 June 1951, QSA, SRS 6232, ID 959329.
\item \textsuperscript{35} 'Science Centre on Barrier Reef', \textit{Courier Mail}, 14 June 1951.
\item \textsuperscript{36} Bowen, \textit{Great Barrier Reef}, 309.
\item \textsuperscript{37} Prime Minister Chifley to Premier Hanlon, 23 September 1947, QSA, SRS 1043, ID 538150.
\end{itemize}
Reef in Relation to Oil Potential. The report's first half provided a catalogue of all the known aspects relating to the geology of the Queensland-Papuan continental shelf including detailed descriptions of theories relating to the formation of the Reef, origins of its continental islands, coral reefs, and other submerged features. The second half dealt with 'knowledge and theory that might help in deducing what lies under the continental shelf in areas covered by the Authorities to Prospect of the Australian Mining and Smelting Co'.

Hill's report was largely speculative when it came to the presence of oil on the Reef but suggested that the best way to determine its existence was exploratory borings. Hill recommended a number of sites along the Reef for exploratory wells to be dug including: Raine Island, Sandbank No. 5 and No. 8 (two cays, about 50km apart, on the outer barrier north-west from Cape Melville), Sandbank No. 1 (due east of Cape Melville), Harrier Reef (60km north-east of Cooktown), the Broad Sound region (roughly the area between Long Island and Sarina), in the Bunker and Capricorn Island Groups (specifically North West Island), Hixson Cay (one of the Swain Reefs) and Bell Cay (about 155km north-east of Yeppoon).

The Queensland government was eager to locate oil. In 1959, the Commonwealth government introduced a subsidy system to encourage oil exploration. Queensland, along with Western Australia, New South Wales and the Northern Territory, split the subsidy. The subsidy, combined with uncertainty surrounding the access to Middle East oil reserves, provided the impetus for Queensland to explore for oil. In 1959 Premier Nicklin announced that 551,740 square miles of Queensland were held under prospecting titles and a further 200,000 square miles were under consideration. He added:

> These areas incorporate the potential oil-bearing fields—the Great Artesian, the Bowen Gulf, Laura and Maryborough basins and the Great Barrier Reef. Climatic conditions at this time of the year restrict actual geological work but recently underwater gravity surveys were undertaken in the Barrier Reef area. Drilling of deep prospect wells is expected to begin on Wreck Island on the Barrier Reef in March.

The well at Wreck Island (near Rockhampton) was one of three drilled on the Reef between the years 1959 and 1967 (both others were also in the Capricorn region). None of the wells showed signs of oil or gas; all of them were conducted with a

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38 Dorothy Hill, Report for Maurice Mawby, 'The Geology of the Great Barrier Reef in Relation to Oil Potential', i. UQ Fryer Library, UQFL25, Dorothy Hill Collection, 36.
39 Ibid., 127-137.
Commonwealth government subsidy.\textsuperscript{41} Between 1953 and 1967, thirty-seven Authorities to Prospect and Exploration Permits for Petroleum had been granted by the Queensland government. Of those thirty-seven, twenty-three were granted in areas which included the Reef.\textsuperscript{42} The huge initial costs involved in exploration would be, Nicklin stated, 'justified by the wealth it will add to industry and to the national income'.\textsuperscript{43}

Petroleum was not the only geological resource which the Reef offered. Frank McNeill, an Australian marine zoologist with the Australian Museum, explained in 'Wealth in Coral Gravels' that the Reef held a particularly high-grade quality of calcium carbonate. He wrote:

Tests of a number of samples from [the Reef] have proved boundless commercial possibilities and great potential national wealth. The vast deposits awaiting collection are scattered for twelve hundred miles along the north-eastern coast of the continent—the fine gravels as well as sands which are the wastage or debris (detritus) of coral banks. In hundreds of places they comprise the low mounds heaped above or near to the surface by the action of the waves and the wind. Many are tree-decked coral isles, while others carry either little or no vegetation.\textsuperscript{44}

McNeill attested that the 'big discovery of the value of the coral gravels' of the Reef had been the product of work being conducted since 1937 to investigate the quality of dead coral matter from the Reef. For McNeill, the quality of the product was not its only virtue. He wrote: 'the source of supply is limitless, easy of access, economically approachable and needs no selection'.\textsuperscript{45} The product could be used as flux for glaze on metal refrigerators, baths and sinks, in pottery, wall tiles as well as the manufacturing of sugar, gelatine and leather. McNeill pointed to the existence of a milling firm in Moreton Bay which dredged coral material 'from a dead reef', but its final product was 'not nearly the quality of that from the Great Barrier Reef deposits'.\textsuperscript{46} He ended his article by asserting:

The vast accumulations of detritus along the Great Barrier Reef have lain dormant and unnoticed for centuries. They can be processed into highly valuable commodities for half the present cost. It will be interesting to see how

\textsuperscript{41} Department of Mines memorandum, 'Petroleum, offshore, exploration and production', 19 August 1969, QSA, SRS 1043 Premier's Batch Files, ID 538159 Committee of Inquiry into the Possible Effects of Oil Drilling – Great Barrier Reef.
\textsuperscript{42} Statement of A.W. Norrie. NLA, MS 3990, Exhibits of the Great Barrier Reef petroleum drilling Royal Commissions 1964-1972, 2/3(ii), Exhibit 80.
\textsuperscript{43} Premier G.F.R. Nicklin, 'Personally Speaking', Cairns Post, 5 February 1959, 6.
\textsuperscript{44} Frank McNeill, 'Wealth in Coral Gravels', Australian Museum Magazine 10, no. 6 (June 1951): 191.
\textsuperscript{45} Ibid.
\textsuperscript{46} Ibid.
long a time will elapse before this source of national wealth is turned to account.47

The metaphors of scientists came into play once more on the Reef; 'Vast accumulations' of dormant resources 'turned to account'. McNeill's words, like the actual exploitation of the coral debris along the Reef, had a history. Only three decades before McNeill's vision for a future lime industry, the city of Cairns had succeeded in protecting its nearby islands from a coral-prospector. Conceptions of the Reef's economic attributes continued to be promoted by scientists, further enhancing the Reef's perceived value as source of raw economic wealth.

**Rally Around the Turtles**

The scientific community's preservationist agenda focused on the protection of one prominent Reef resource – Green Turtles. In January 1950 a number of Queensland papers publicised the fact that Barrier Reef turtles were being exported to Britain. The *Central Queensland Herald* reported that on the 12 January, 16 turtles were being exported and expected 'another 25 to 30 turtles' to arrive in Brisbane for exportation within the week. They added, until the end of February 'at least two consignments will be sent every week'.48 Later in May, the *Daily Mercury* reported Professor P.D. Murray, from the Australian Museum, was urging controls be introduced to protect the turtle. Murray described a scene at Gladstone harbour, of captured turtles, turned on their backs and 'in a pathetic state, lying in the open under a blazing sun in a temperature of 100 degrees. They were thoroughly exhausted and mucus was streaming from their eyes and nostrils'.49 Water was poured, intermittently, on their bodies which seemed to only add to their distress. 'They reacted by impotently thrashing the decking with their flippers and struggling generally in a forlorn way to escape their tormentors'.50 For Murray, the treatment of the turtles was cruel, and the number of turtles being slaughtered put the population at grave risk. He exclaimed:

> Ill-considered and cruel exploitation of the Green Turtle of the Great Barrier Reef – a practice which will endanger the existence of one of our greatest tourist attractions...In the light of the new and ambitious State tourist development of the Barrier Reef islands there should surely be some rigid control or else complete cessation of the present practice of turtle trading.51

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47 Ibid., 192.
50 Ibid.
51 Ibid.
The exclusive slaughter of females had also, reportedly, had a noticeable impact on turtle populations in the nearby islands of the Capricorn Group.52

The incident was memorialised in an article for the *Australian Museum Magazine* in 1955. Frank McNeill, who claimed he 'was the main instigator of the campaign', recalled that at a GBRC meeting when the turtles were discussed 'a healthy reflection voiced at the meeting was that the tourist trade was likely to outweigh the turtle trade by ten to one'.53 The GBRC settled that, since the turtle industry was demonstrating signs of revitalisation, its development should be 'placed on a reliable and scientific basis before it increased'.54 They recommended 'that an investigation into the ecological and economic status of the green turtle along the Great Barrier Reef should be undertaken, and that pending the investigation, the green turtle' should be protected.55 In September 1950, the Queensland government amended the *Fish and Oyster Act* to 'absolutely prohibit the taking' of Green Turtle, and its eggs, 'in Queensland waters or on or from the foreshores of or lands abutting on such waters'.56

In the 1920s and 1930s the need to protect the turtle was expressed in terms of the cruelty to the animal and the harm over-exploitation would have on the industry. In the 1950s, those views were again promulgated, but there was increasing awareness that the turtle's contribution to the natural values of the Reef was also exploitable by the growing tourist industry. While the GBRC remained open to the notion of a turtle industry, McNeill suggested that the slaughtering of turtles on an industrial scale, even with controls introduced, would bring about the turtle's decimation.57

The total prohibition, however, was short lived. Between 1956 and 1958 Cairns based brothers Snowy and Neil Whittaker lobbied the Queensland government to lift the prohibition in the northern regions of the Reef.58 They argued that the turtles, particularly at Raine Island, were so abundant that nesting turtles were unable to find places to deposit their eggs, creating a situation in which laid eggs were dug out and left

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52 Ibid.
54 Ibid.
55 Ibid.
56 Ibid.
57 Queensland Governmet Gazette, volume 175, 9 September 1950, 1333.
to be eaten by birds.\textsuperscript{59} The Whittakers argued that the population needed thinning out. Oddly, they also argued that they would save more than they would kill by assisting any hatchlings they found to the water and protecting them from the birds.\textsuperscript{60} Despite the awkwardness of their argument, their lobbying was successful. In 1958 the Queensland government rescinded the 1950 Order in Council and stipulated that while the taking of eggs of the Green Turtles continued to be absolutely prohibited along the Queensland coast, the removal of Green Turtles was only prohibited south of latitude 15°S.\textsuperscript{61} A subsequent revival of the industry began in North Queensland, particularly out of Cairns, which again drew protests. The Townsville and District Natural History Society were concerned that the 'slaughtering of North Queensland turtles for their meat' would result in their extinction as far south as Mackay.\textsuperscript{62} Others, however, who were usually inclined to protect native fauna, like the North Queensland Naturalists, considered that the situation was 'very far from alarming'.\textsuperscript{63}

### Kernels of Reef Environmentalism

During the 1960s it became more evident that the Reef's exploitation could not continue unless some significant regulations were introduced to maintain its natural values. In the early 1960s, however, the specific issues and campaigns established in the preceding decades had yet to consolidate into a broader Reef environmentalism. Tourist pamphlets, while no longer including images of patrons riding turtles, still included images of visitors fossicking for shells and corals on various fringing reefs. While the Reef was attracting increasing calls for its conservation and management, it would be erroneous to suggest that an explicit politics of Reef environmentalism had emerged. The kernels of what would become Reef environmentalism, however, were beginning to coalesce.

In 1963, Wright helped establish the Wildlife Preservation Society of Queensland (WPSQ), which expanded successfully into a number of branches across the state. One such branch which would have an important role in future Reef endeavours was established in 1966 at Innisfail, by Bingil Bay artist John Büsst.\textsuperscript{64} Büsst was a former member of the Justus Jorgensen group of artists who organised

\textsuperscript{59} Ibid., 365.
\textsuperscript{60} Ibid., 366.
\textsuperscript{61} Queensland Government Gazette, volume 199, 6 September 1958, 22.
\textsuperscript{62} 'Slaughtering of Turtles', \textit{Cairns Post}, 18 May 1959, 5
\textsuperscript{64} Büsst to Wright, 24 July 1966, JCU, John Büsst Papers (hereafter Büsst Papers), 2/13.
themselves into a colony on the southern outskirts of Melbourne at the chapel known as Monsalvat. In 1941 Büsßt purchased a lease on Bedarra Island, part of the Family Islands National Park of which Dunk Island is the largest, and lived there until 1957 when he moved to the mainland and settled at Bingil Bay—close to the holiday house of his old school friend, Harold Holt. Beginning at Bedarra and continuing at Bingil Bay, Büsßt engaged and became friendly with scientists, particularly the ecologist Len Webb, who would travel to study the rainforests which surrounded Büsßt's home. Büsßt understood the importance of the surrounding rainforests and explained to the journalist Patricia Clare: 'We're battling to preserve them for the botanists. They're unique'. Büsßt grasped ecology and saw the interconnectedness of the Reef with terrestrial environments. Büsßt, Clare reported, said that the rainforests were felled for sugar, cattle and for bananas, and continued:

They cut in July, and they burn it in December. Then down comes the rain of the Wet season – and this is one of the wettest areas in the world – and there's no cover on the ground. I see rich red topsoil every season pouring into the ocean.

In Büsßt the Reef had a unique human advocate, someone passionate about the environment, connected to scientists and politicians, and who lived on the Reef. He was a rare amalgam in the Reef's history of European engagement (for images of Büsßt and Judith Wright see Figures 15 and 16).

The WPSQ and its branches were not the only Reef advocates established in the mid-1960s. During Easter 1965 a group of students from the University of Queensland and members of the Zoology department of CSIRO established the Queensland Littoral Society (QLS). The QLS would focus specifically on the protection and preservation of marine environments. In 1966, the Australian Conservation Foundation (ACF) also held its first meeting. These groups formed part of a 'second wave' of the Australian environmental movement which found itself in opposition to the increasingly obvious impacts of economic growth and technological developments in the post-war period.

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65 For an example of how Büsßt and Webb's relationship manifested in terms of scientific and literary output see: John Büsßt, 'Nesting of Grey Swiftlet on Bedarra Island', *North Queensland Naturalist*, no. 116, (September 1956), 1-3.
66 Patricia Clare, *Struggle for the Great Barrier Reef*, 89.
67 Ibid., 90.
68 Littoral refers to area on the shore of a sea or a lake, or a region lying along a shore. The ambiguity of the name 'Queensland Littoral Society' was criticised by John Büsßt to one of its executive on 22 July 1968. See: Büsßt to Owen Kelly, JCU, Büsßt Papers, 2/11. The organisation has since changed its name to the more identifiable, Australian Marine Conservation Society.
69 Hutton and Connors, *Australian Environmental Movement*, 89.
And on this aspect they felt a level of connectedness. In *Coral Battleground*, Wright remembered a feeling of togetherness and strength brewing from within the conservation movement. She wrote:

> All of us began to feel we were no longer lone operators. We had now met many other people working in our field, we were full of the euphoria that comes to small embattled groups when the idea they are working for begins to break through; in spite of some internal doubts and disagreements, the conservation movement began to feel itself a happy few, a band of brothers and sisters, but with achievements ahead.\(^{70}\)

Importantly, the organisations were a mixture of local, grass-roots institutions like the branches of the WPSQ and larger government funded groups like the ACF. Individuals were likely to be members of several groups. John Büsšt, for instance, was a member of the WPSQ, QLS, ACF and later, from 1968, also a member of the GBRC. Many of the organisations had scientists from various universities and scientific institutions as members, and influential and celebrated Australians such as Wright, Francis Ratcliffe, and Sir Garfield Barwick joined or helped establish groups. Despite characterisations to the contrary, the ranks of the conservationists were not exclusively made up of rag-tag outsiders.\(^{71}\) Indeed, their broad membership, including members of the elite, was a hugely significant factor in the success of the 'Save the Reef' campaign which, unbeknownst to the members, was on the horizon.

While the conservationists would make significant contributions in the future, they had little input into Reef matters prior to 1967. In *Coral Battleground* Wright recalled that in 1963 the WPSQ had been made aware of the damage being done at Green Island by the collection of coral and shells by collectors and tourists. The WPSQ had received correspondence from the underwater photographer Noel Monkman and his wife Kitty Monkman, who lived on Green Island.\(^{72}\) Patricia Clare, whose book captured the broad concerns for the Reef in the late 1960s, described Noel Monkman as 'the northern sentinel of the forces opposed to the exploitation of the Reef'.\(^{73}\) Clare recorded a Monkman sermon on the coral and shell collecting by tourists at Green Island:

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70 Wright, *Coral Battleground*, 5.
71 The theme of a 'David v Goliath' narrative has become an important part of the memorialization of this period and the 'Save the Reef' campaign. For a criticism of this theme and a discussion of the connections and strategies of the conservationists see: Rohan Lloyd, Maxine Newlands and Theresa Petray, 'Coral Battleground? Re-examining the "Save the Reef" campaign in 1960s Australia,' *Environmental Sociology* 3, no. 1 (2017): 54-63.
72 Wright, *Coral Battleground*, 2.
73 Clare, *Struggle for the Great Barrier Reef*, 56.
To preserve anything at all…you have to fight so many people. I've been an honorary fisheries inspector for twenty-five years—I'm also a flora and fauna protector – and I've found that everyone who comes here thinks they're entitled to take something away. 'One little piece of coral' they'll say – over and over again you'll hear it – 'just one little piece. I only want this one little piece to take home and show the family.' I say to them, 'First of all it will be dead long before you get home. You'll only arrive with the skeleton. And also,' I say, 'there are tens of thousands of tourists come to this reef every year. That means tens of thousands of people take one little piece. Just look at the reef that's left. Besides, you're stealing. You're a thief. It doesn't belong to you, it…it doesn't belong to any living person. It doesn't belong to our unborn children. None of us own it. We're only privileged to see it. Not to take it away, not to sell it. We're caretakers, and that's all.'

Monkman's correspondence with the WPSQ prompted them to investigate the 'idea of the Reef's becoming a great underwater park'. Wright claimed, however, that neither state nor federal governments were interested and zoologists and marine biologists believed the introduction of a marine park was unnecessary. Among those who felt the issue was perhaps overblown was the naturalist Vincent Serventy, who had spent time at Green Island in October 1965. He wrote that he felt the island had been largely left unspoiled and that high density of tourists 'need not affect the wild life'. Serventy reasoned that 'the presence of tourists stops the kind of vandalism and illegal killing which still takes place in sanctuaries where there are no wardens'. Alarm bells were not ringing on the Reef, and pragmatic conservationism prevailed.

Figure 10: Some eager collectors reef-walking on exposed coral, Lodestone Reef, near Townsville, 1954.

Source: Townsville City Libraries, Pictures Catalogue.

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74 Noel Monkman in Ibid., 63.
75 Wright, Coral Battleground, 3.
76 Vincent Serventy, 'Tourists and Wild Life at Green Island', North Queensland Naturalist 33, no. 139 (1965), 5-6, 6.
77 Ibid., 5-6, 6.
A Starfish Plague

Before the 'Save the Reef' campaign a natural threat emerged which inspired broad anxieties over the future of the Reef – the Crown of Thorns starfish (*Acanthaster planci*). Before the 1940s, despite awareness of the starfish among Torres Strait Islanders, especially those engaged in the trochus fishery, the European Australian community was largely unaware of it. For the Torres Strait Islanders, the Crown of Thorns was well known for its capacity to sting.\(^7^8\) Details of pre-1960s awareness, as well as the subsequent outbreak, of the Crown of Thorns starfish were ascertained in an oral history project conducted by the James Cook University History Department in the early 1980s. The project interviewed a range of participants who had engaged with the Reef in various forms; principally those whose profession or employment drew them to the Reef on a consistent basis between the 1920s and 1960s. It uncovered that awareness, or at least sightings, of the Crown of Thorns starfish among Europeans between the years 1942 and 1960 increased dramatically largely as a result of the numbers of visitors diving along the Reef rather than an increase in the starfish's population.\(^7^9\) Additionally, prior to the 1960s there seemed to be little knowledge among Europeans or the Islanders that the starfish killed coral.\(^8^0\) In 1960 things changed dramatically. In that year the proprietor of Green Island's Underwater Observatory, Vince Vlasoff, first noticed the arrival of large numbers of the starfish and its destruction of coral.\(^8^1\) When Vlasoff first raised concern over the starfish's destructiveness, however, he was 'advised of the many reasons that coral could die from and none of these included the action of the starfish'.\(^8^2\)

The infestation at Green Island increased and progressed along its reef. Vlasoff recalled that the infestation became so severe that 'we would have to police the reef about the Observatory several times weekly for a distance of 100 yds and even this (sic) we had to destroy many that go to the corals about the Observatory and caused damage'.\(^8^3\) The numbers of starfish encountered during the peak period of infestation (1960-1966) at various reefs varied, and claims were often imprecise, but most


\(^7^9\) Ibid., 19.

\(^8^0\) Ibid., 20.

\(^8^1\) Ibid., 23.

\(^8^2\) Vince Vlasoff to R.A. Armstrong (Member for Mulgrave), 28 August 1969, 1. QSA, SRS 9187 General Correspondence Batches, ID 294333 General Correspondence: Code 22 (G) – Crown of Thorns Starfish, Great Barrier Reef.

\(^8^3\) Ibid.
anecdotal and statistical evidence suggested that at infested reefs thousands of starfish could be sighted.84 By the end of 1965 the reports of the damage caused to the reefs, particularly those around Green Island, had raised sufficient alarm to warrant the Fisheries Branch of the Queensland Department of Primary Industries to send out fisheries biologists to survey the infested reefs. At the same time the Green Island resort management began to employ divers to physically remove starfish from the surrounding reefs. Fisheries biologist, N.M. Haysom, recommended to the Queensland government in 1965 that the plague warranted the investigation of control techniques other than removal by hand and that a research program needed to be instigated.85

As the starfish spread, tourist operators became increasingly anxious and frustrated by the resources they had to devote to the plague. In February 1966, B.L. Hayles, the Managing Director of Hayles Magnetic Island Pty. Ltd., a company which ran launch services between Cairns and Green Island, wrote to the Queensland Treasurer, Gordon Chalk, to raise alarm over the increasing damage caused by the starfish. Hayles expressed serious concern over the 'continued prevalence of this pest and our inability to completely cope with the large numbers with our limited resources'. Hayles wrote:

To date we have removed and destroyed over 20,000 of these specimens. This has been achieved by means of a diver who has been permanently engaged during the past five months on an incentive basis 1/- per specimen, assisted by three members of the crew of our M.V. *Marena* during the daily trip to Green Island.86

He warned that unless immediate action was taken, 'the destruction of one of the foremost tourist attractions in this country' would continue.87

The government, however, had already begun their response. They had been advised, presumably by Haysom, that protective measures to 'preserve the glass bottom boat viewing areas' of Green Island needed to be improved and reorganised immediately. Additionally, a Cabinet submission stated that the 'annihilation of coral in the Green Island area is probable' and that the annihilation of the whole Reef was

86 B.L. Hayles (Managing Director of Hayles Magnetic Island Pty. Ltd.) to Gordon Chalk, 7 February 1966, QSA, SRS 9187, ID 294333.
87 Ibid.
Worryingly the submission conceded that 'very little is known of this starfish. There is little mention in world scientific literature of the fish and its habits and there is no scientific knowledge on which we could base a campaign for eradication'. The government decided to employ Robert Pearson, a research scientist from the University of Queensland, as a fisheries biologist within the Department of Harbours and Marine. Pearson would undertake a two year research project under secondment to the University of Queensland which would appoint a supervisor, the marine zoologist Robert Endean. The project would ascertain a number of aspects concerning the starfish: distribution and abundance, time of spawning and spawning behaviour, growth rate, feeding habits, migration habits, biological or other controls influencing its behaviour and occurrence, and possible means of control.

Two aspects characterised the Crown of Thorns plague from the outset and continued in the following years. Firstly, the language surrounding its appearance was alarmist, and has since been characterised as such. The fact that the starfish was first sighted in devastating numbers around one of the Reef's foremost tourist attractions was likely a contributing factor. The destruction of corals surrounding Green Island and its impact upon the tourism trade seemed to over-ride, at least initially, concerns for the corals themselves. Additionally, the lack of information on the Crown of Thorns was stark. Scientists who could only speculate on the likely limits of possible destruction were prone to exaggeration. The uncertainty allowed for media outlets to construct headlines like 'Starfish dines on the Barrier Reef' or 'Weird Starfish Eating Miles of Barrier Reef'.

Secondly, the Crown of Thorns starfish immediately became a symbol of an ecological imbalance in the Reef. Although the cause of the imbalance was not readily apparent scientists' hypotheses included the removal of an important predator or environmental changes like increases in water temperatures. Its arrival brought with it the realisation of the ephemerality of coral reefs. While many considered its population

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88 Cabinet Minute, Decision 8601, Measure to Combat Star Fish Infestation – Great Barrier Reef, 1 February 1966, 1. QSA.
89 Ibid., 3.
90 Ibid., 2-3.
explosion to be 'self-limiting', the notion that something which had 'taken years to grow can be destroyed overnight' gave a sense of urgency to understand and protect the Reef.\textsuperscript{95} Donald McMichael, who at the time was Curator of Molluses at the Australian Museum, wrote of the Crown of Thorns that:

Most people have regarded the Reef as something completely permanent, of great age and with a future stretching ahead just as long as its past. They would probably agree that nothing we could do would conceivably affect the future of this enormous complex of coral reefs.\textsuperscript{96}

Significantly, Crown of Thorns became a focus for all the concerns which had been developing over the Reef's conservation since the end of World War Two. \textit{Walkabout} called the Crown of Thorns the most urgent 'of all conservation problems that confront Australia'.\textsuperscript{97} The Crown of Thorns, unlike other naturally occurring destroyers of coral reefs, would require a human solution.

The arrival of the Crown of Thorns plague did not diminish the existing concerns surrounding the Reef's conservation. Shell collection, particularly by tourists and commercial collectors, continued to be proclaimed as a major threat to the Reef's future. In 1965, the GBRC's chairman, O.A. Jones, reportedly implored the public to direct their opinion 'against the ruining of one of Australia's big national assets'.\textsuperscript{98} Jones, and the GBRC, wanted the government to do more to protect coral and shells across the Reef. The \textit{Courier Mail} erroneously reported that shells and marine species were only protected at Green and Heron Island. In 1965, however, removal of coral and shells from the Reef was illegal except in distinct locations, which did not include Green and Heron Island, and the collection of coral and shells could only be conducted by those who held a license. The impression Jones and the \textit{Courier Mail} created was that tourists and commercial collectors were robbing the Reef, and that some coral reefs had been 'swept clean'.\textsuperscript{99} What was required, apart from broader protection, was an increased presence of Fisheries rangers. As Jones stated, however, 'you can't have a ranger on every reef'.\textsuperscript{100} The \textit{Courier Mail's} editorial suggested that the Reef would be ruined unless protections were introduced. They called on 'those dependent on the Reef for

\begin{footnotesize}
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\item\textsuperscript{95} Ibid.
\item\textsuperscript{96} Donald F. McMichael, 'The Future of the Reef', \textit{Australian Natural History} 15, no. 8 (December 1966): 269-72, 269-70.
\item\textsuperscript{97} 'Publisher's Column', \textit{Walkabout} 33, no. 7 (July 1967): 11.
\item\textsuperscript{98} 'Protecting the Reef attraction', \textit{Courier Mail}, 28 September 1965, 3.
\item\textsuperscript{99} Ibid.
\item\textsuperscript{100} Ibid.
\end{itemize}
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their livelihood' to be the first to protect it, and demanded the apprehension and
punishment of those who continued to rob the Reef.101

The Queensland government called for 'some perspective'.102 The Treasurer,
Thomas Hiley, reasoned that most of the Reef 'has never been touched by human hand
and probably never would be'.103 The most attractive reefs, those which had 'the greatest
potential as a tourist attraction' and were 'constantly covered with water', were great
angling grounds, and provided opportunities to view the reef on a glass-bottomed
boat.104 Hiley added that the corals and shells, collected by licensed operators, were
spread throughout the world 'quietly advertising the wonders of this unique
attraction'.105 Hiley accepted, however, that foot traffic on coral reefs, particularly at
popular locations, had the potential to cause damage and imagined that 'the time will
come when, in the really dense areas, foot traffic on the reef will have to be prohibited
as live coral is a delicate animal'.106 These were comments indicative of a government,
and a public, struggling to come to terms with the future of an environment as vast,
isolated and as scientifically unknown as the Reef.

An Unspoilt Beauty
Despite this discourse of concern a desire to fully uncover the economic potential of the
Reef, in terms of crude resources, tourism and fisheries continued. The economic
valuing of the Reef had not been eroded by the encroaching reality that exploitation of
the Reef was somewhat at odds with its most valued natural attributes. Queensland
parliamentarians, particularly those from seats adjacent to the Reef, called on the
government to assist in revealing the potentially limitless resources which had been
long promised. Labor Member for Cairns, Ray Jones, said that the 'glorious seemingly
endless Great Barrier Reef' would leave any tourist either from abroad or the south
breathless with 'its simple, unique and unspoilt beauty'. Although earlier Jones had
claimed: 'The harvest of the Great Barrier Reef waters and the Coral Sea, particularly
the yellow-fin tuna, could make the establishment of a fish cannery at Cairns a worth-
while and attractive proposition'.107 The Labor member for Townsville North, Perc

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103 Ibid.
104 Ibid.
105 Ibid.
106 Ibid., 729.
Tucker, lamented the paucity of the Reef's fish being exploited by the Queensland fisheries. Tucker asserted, rather simplistically, that only 30% of the Reef's fishes were being harvested, leaving 70% un-harvested. As if failing to harvest was not worrying enough for Tucker, he exclaimed that the fish 'have been left to Japanese, and now possibly the Russians'.\(^{108}\) Tucker and Jones' arguments for Reef exploitation echoed a familiar theme of optimism in the Reef's ability to offer up profitable quantities of unlimited marine resources.

Tourism, too, continued to be an industry in which governments were eager to invest and the Reef was seen as central to both Queensland's and Australia's future tourism economies. In his 1967 address to the Commonwealth government, Governor-General Richard Casey announced the government's intention to establish an Australian Tourist Commission (ATC), the purpose of which would be to advertise and publicise Australia as a tourist destination.\(^{109}\) The Commission's advocates in the Commonwealth parliament imagined it would make Reef tourism, especially in the coastal cities where sugar and pastoralism were still the dominant industries, the number one 'drawcard from an international point of view'.\(^{110}\) Its critics were concerned that the advertising of tourist attractions overseas might mislead travellers who would inevitably be confronted with lacklustre tourist facilities. The Labor Member for Dawson, Rex Patterson, commented on the scenario this would create for travellers who had been promised paradise but would be faced with a starkly different Reef reality:

> They will go to Mackay, the gateway to the Barrier Reef, from where they will visit the islands along the Barrier Reef. But first they will land at the Brisbane airport. We know what that is like. There they will board planes for Mackay on which they will get good treatment. I have seen in literature overseas Mackay advertised as the gateway to the Barrier Reef. On landing at Mackay, if it is raining there, as it is tonight, they will run like rabbits for about 215 yards, in some instances less. There are no umbrellas at the airport. They then come to two sheds. This is at the gateway to the Barrier Reef! After having been feted on an aircraft from Brisbane passengers might want to use the conveniences, but if it is raining they will need an umbrella as these facilities are across the road.\(^{111}\)

Patterson's assertion, that what was needed was investment in Reef tourism infrastructure to accompany this vast advertising campaign, was shared by many within the Federal Parliament. Liberal member for Mackellar, Bill Wentworth queried: 'I know

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\(^{108}\) Perc Tucker, Legislative Assembly, *Hansard*, 10 November 1966, 1530. It is unclear whether or not Tucker believed every fish in the Reef needed to be harvested for food.


\(^{111}\) Rex Patterson, House of Representatives, *Hansard*, 20 April 1967, 1562.
that we have some outposts on the Barrier Reef but are they sufficiently accessible and sufficiently commodious and do they have the necessary facilities? Fellow Liberal Member for Bradfield, Harry Turner, imagined a future traveller to Australia would report: 'Don't go to that country, the accommodation is atrocious...I wanted to see the Barrier Reef but the way I saw it I don't advise my friends to go and look at it.'

The appetite for petroleum exploration had also moved along since the 1950s. In early 1967 the Commonwealth and state governments finalised the joint offshore petroleum legislation which had been under consideration since 1962. The legalities of offshore oil exploitation had become increasingly relevant in Australia following BHP-Esso's discovery of oil reserves in Bass Strait in 1965. Most of the states had hitherto granted offshore concessions for petroleum leases. Queensland had been granting offshore concessions since 1953. Queensland's Minister for Mines, Ron Camm, in 1965, signaled to the Legislative Assembly that legislation was imminent and offered a reminder that:

Over the past few years there has been considerable activity in off-shore petroleum exploration in Australian waters, and, in particular, adjacent to Queensland's coastline. As Minister for Mines, I have granted a number of off-shore authorities to prospect for petroleum.

By the end of January 1967, the Queensland government considered it a matter of urgency to complete the drafting of the legislation to allow companies to begin further exploration of the Reef's oil deposits.

**The Reef's Future?**

Despite the lack of publicised complaints about expansion of Reef exploitation, there was an awareness that the Reef was about to enter a period of significant development and that some kind of intervention was required. In December 1966 *Australian Natural History* published a special Reef edition. The papers in that edition pointed to the lack of scientific research conducted on the Reef since the Low Isles expedition, as well as identifying issues which were of particular interest and pressing concern in marine biology and geology. The publication perfectly embodied the well-established tradition

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114 Cabinet Minute, Decision 9864, Offshore Petroleum Legislation, 31 January 1967, 1. QSA.
117 Cabinet Minute, Decision 9864, Offshore Petroleum Legislation, 31 January 1967, 2. QSA.
in Reef sciences of celebrating the naturally valuable and interesting aspects of the Reef while signaling its possible economic resources. For instance, articles from J.C Yaldwyn, A.B. Cribb and Howard Choat surveyed various 'striking inhabitants' of the Reef, seaweed and the parrotfish. Articles from Joseph Rosewater, on Giant Clams, and O.A. Jones, on the Reef's geology, both concluded with an assessment of their subjects' possible economic contributions. Rosewater said of Giant Clams that their size and easiness of capture determined that they were a popular food source within south-east Asia and Polynesia. Their most 'commercially important use' however, was 'as curiosities which ornament homes and business places the world over'. Jones highlighted that there had been considerable interest 'taken in the oil possibilities of the reef area and extensive geophysical work' had been carried out. He asserted that the Wreck Island well had created interest among oil companies.

In previous scientific publications about the Reef the tension between the natural and economic values of the Reef was left to be inferred. In this publication, however, the tensions between the Reef's development and exploitation and the maintenance of its natural values were addressed directly. The Crown of Thorns article by John Barnes hinted at the possibility of a human factor in the imbalance of the Reef's ecosystem. McMichael's article, however, 'The Future of the Reef', addressed the on-going damage being done to the Reef from a variety of human causes. McMichael believed that the damage caused by Crown of Thorns starfish brought attention to 'the need for serious thinking about the future of the Great Barrier Reef'. He praised the 'positive steps towards safeguarding the Reef's future' introduced in the preceding decades and considered these to be important experiments in conservation. McMichael was eager, however, to bring attention to greater threats to the Reef caused by 'major alterations to the environment' and he believed that rather than natural threats, the largest alterations were more likely to come from direct or indirect contamination of the marine environment' by humans. He cautioned that pollution from oil (either from exploratory or production wells), agricultural pesticides, and from sewage and industrial waste was going to increase with development and needed to be addressed. He suggested that if the Reef was to be saved for posterity then people would need to

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120 Donald F. McMichael, 'The Future of the Reef', 270.
121 Ibid., 271.
look upon the Reef, not as a dumping ground, but as one of the world's greatest natural assets. Absent from McMichael's outlook was the articulation of a plan for the Reef's on-going protection. At most McMichael hinted at the need for a considerable reconciliation between the economic and natural values of the Reef. He welcomed tourism and industrial development of the Reef and recognised the important contributions to the economy they would bring. Conversely he felt equally compelled to assert 'the point of view of the conservationist' and to bring awareness of the Reef's existence as a 'natural phenomenon of great scientific interest and as a wonderful tourist attraction'. The explicit acknowledgement of these competing perspectives by a single figure was not entirely novel in the history of the Reef; McMichael's acknowledgement of the previous steps to preserve Reef flora and fauna spoke to that past. The consideration of a future of unknown damage, however, expressed a more recent discourse of concern surrounding the Reef.

In *Coral Battleground* Wright created an impression that prior to 1967 there were few signs of any awareness of the need to halt the on-going development of the Reef from either public or governments. This is accurate to a point. By early 1967 the Australian and Queensland governments were moving ahead with plans to not only rapidly expand the Reef's tourism industry in terms of infrastructure and publicity, but also to open up the Reef to possible oil exploration. To some extent these moves were endorsed by a public and by a scientific community eager to enjoy in the economic spoils of the Reef. Yet, by 1967 the anxieties about human encroachment on the Reef had sparked a series of issues resulting in protections for birds, turtles, flora on many of the Reef's islands, industrial regulations in a number of fisheries, and prohibitions relating to the collection of corals and shells. The explosion of Crown of Thorns starfish at Green Island had prompted grave concerns surrounding the Reef and a concern for its future had emerged. While the competing perspectives of the economic and natural values of the Reef had come under scrutiny at various points along the Reef's history, by 1967 there was an overwhelming sense that a greater reconciliation of these contending approaches was required. There was an appetite for conservation, and anxiety over the Reef's future.

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122 Ibid., 272.
123 Ibid.
**Map 5:** Map showing position of Ellison Reef.

Source: Map from Google Maps modified by Coreen Wessels.
Chapter Six - The Oilman Cometh

In the first lines of *Coral Battleground*, Judith Wright avowed:

> I have chosen to tell the story of the Great Barrier Reef from the point of view of those actually involved in the battle to prevent the Reef from oil-drilling and limestone mining. Obviously, I have not had access to a number of sources which could have presented the story from the other side – e.g., the records of the Queensland Mines Department.¹

Wright, who helped lead the campaign, published her account in 1977, two years after GBRMPA was established. *Coral Battleground* was undoubtedly polemical; it is still, however, an informative account of the campaign from the perspective of the conservationists. And, despite the abundance of archival material pertaining to this period, *Coral Battleground* has become a fundamental source for most histories of the 'Save the Reef' campaign. It presents, however, only one view of those events.

This chapter addresses the most vociferous period of the campaign: the period between 1967 and the end of 1969. It utilises archival material from the Queensland government – including the correspondence from the Premiers Office, Treasury, Department of Mines and cabinet minutes; newspaper articles; John Büssel's personal papers; and Commonwealth cabinet minutes – alongside Wright's and other accounts. Rather than considering the campaign strictly from the perspective of the conservationists, this chapter seeks to highlight other voices as well as providing analysis of issues rarely emphasised in histories of the period. Principally, it draws attention to the broad support which the conservationists enjoyed, the dynamics of the Queensland government's attitude towards geological exploitation of the Reef, and the divisions between and among the conservationists and scientific community. Ultimately, this chapter demonstrates how the 'Save the Reef' campaign allowed for the reconciliation of established perceptions of the Reef as an environment valued for its economic and natural attributes with the establishment of a formal conservation approach.

While the 'Save the Reef' campaign was largely concerned with saving the Reef from oil drilling, a core contested issue was the parameters of an eventual Reef conservation area and regulations. The various participants expressed sympathy for the Reef's natural health, but were differentiated by what they considered acceptable forms of exploitation. Pragmatic approaches to Reef conservation were initially in sympathy

with the exploitation of the Reef for geological resources, but stressed the adoption of strict controls. Some groups, however, such as the WPSQ and the QLS, advocated a total ban on oil drilling or, with doubtful sincerity, a ban until sufficient evidence proved no damage to the Reef would eventuate. As the 'Save the Reef' campaign developed, qualified notions of conservation - like 'controlled exploitation' - came to be seen as euphemisms used to obscure the Reef's geological exploitation. With the focus on oil, issues such as the expansion of tourism, illegal fishing by foreign nationals, terrestrial pollution, and the management of shipping became marginal. This redefinition of 'Reef conservation' to exclude all types of exploitation became a source of division among and between conservationists, scientists and the government.

Additionally, the Reef's economic and natural attributes were becoming increasingly linked to its potential for mass tourism. Despite earlier concerns surrounding its development, tourism was considered the major economic pillar of the Reef. Consequently, tourist operators and the public lobbied both the Queensland and Commonwealth government to intervene or abandon plans for oil drilling lest it destroy potential profits from tourism. Yet, while operators lent their voices of protest to the prospect of geological exploitation, they expressed a new position on the Crown of Thorns starfish. Despite raising the initial alarm in the early 1960s, tourist operators began to abandon the idea that the starfish constituted a threat to the Reef, or their businesses. Instead, they criticised the media and governments for allowing scientists to continue to damage the reputation of the Reef and for suggesting its demise. Additionally, 'Save the Reef' conservationists barely engaged with the starfish issue. They claimed that the lack of scientific clarity precluded them promoting the issue, but their personal antagonism towards Robert Endean, the scientist chiefly involved in the problem, was likely the primary motivator. The 'Save the Reef' campaign, typically presented as a parable of conservationism's defeat of development, involved complexities not hitherto revealed.

**Ellison Reef**

On 23 August 1967 a notice appeared in the *Cairns Post*. Cane farmer Donald Forbes had applied for a lease to mine the 'ground known as "The Ellison"' and his application, along with any objections, would be heard on 29 September at the Innisfail Mining
Warden's Court. Ellison Reef, situated about 35km north east of Dunk Island, was to be dredged for lime to be used on the canefields of North Queensland. The rarity with which Forbes' voice appeared in the debate speaks to the opposition his application inspired. Forbes' rationalisation for his endeavours was documented by the journalist Patricia Clare. To her, he argued 'that the lime he wanted to take was not living coral but coral which had been beaten down into sand…that was lying all over the place out there, just waiting to be gathered up'.

Forbes, admittedly, could not understand the principles for objection. He had sought advice from a geologist at a southern university, and when opposition arose he wrote to the WPSQ to explain that his endeavours could produce an important experiment on the viability of mining on the Reef.

A radio broadcast of the notice caught the attention of Alison and John Büsst in Bingil Bay. Five days later John Büsst approached scientists from the University College of Townsville to lodge 'a strong protest' against the application. With the assistance of local solicitors Büsst began preparing a case against the application and 'preparing to treat the matter as a vital test case—the setting of a legal precedent' warning that 'the commercial depredations of the Reef on a large scale could prove disastrous'. Büsst wrote to the ACF, CSIRO and various connections in Canberra seeking a 'full scientific objection to the granting of the lease'. To Wright he stressed the issue of the legal precedent the application would create and suggested: 'any press publicity, including letters to, say, the Courier Mail and The Australian, by yourself as soon as possible, before the case is heard would be invaluable'.

Wright obliged and the case quickly drew the attention of the media. The Courier interviewed Wright and elements of the letter she had sent to the Innisfail Mining Warden on behalf of the WPSQ were reprinted. In the article Wright emphasised the issue of precedent and stressed 'some principle must be laid down to

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4 Ibid.
5 Ibid., 106.
6 Barry Wain, 'Artist and wife near victory to save coral reef', The Australian, 18 December 1967, 2.
7 'Lease of reef to obtain lime', Cairns Post, 28 August 1967.
9 Büsst to Wright, 2 September 1967, JCU, Büsst Papers, 2/13.
10 Ibid.
protect' the Reef.  

The next day the *Courier's* editorial awarded 'full marks to Queensland Wildlife Preservation Society's Innisfail president for his prompt action on a Barrier Reef application'. Signalling their support for the objection, the *Courier* argued that granting the Ellison application would be 'the green light for a complete exploitation of this acknowledged wonder of the world'. They advocated that the government refuse to sanction 'bulk destruction by dredging', warning that the damage caused by the Crown of Thorns would be 'trifling compared with 84 acres of what could only be called shameful vandalism soon to be considered by a mining warden'. This 'fair amount of publicity' was the campaigner's first foray into the media.

Bingil Bay and Mission Beach residents continued to press forward with the campaign and strategically targeted government tourist organisations. G.E. West from Mission Beach wrote to the ATC General Manager seeking a 'strongly worded protest' and publicity on the Ellison case. West stressed 'that any inroad made on our Barrier Reef' would lead to its 'complete despoliation and the wiping off of perhaps our greatest tourist attraction'. Fellow Mission Beach resident and motel proprietor Jack Romano urged the QGTB to consider the situation and wrote: 'If permission is granted for the mining of our reef, it could be the precedent for future operations of this kind, which would certainly be the beginning of the end for our most precious National heritage'. To the QGTB, Büsst asserted that 'the Reef is an important item in the development of Queensland's rich tourist potential'. Initially tourist organisations were, seemingly, favourably inclined towards the conservationists. The QGTB expressed opposition to the destruction of the Reef 'unless for exceptional circumstances'.

Regardless of the potential profits to be gained from coral and limestone mining, if the Reef was despoiled the profits of tourism – which were imagined as being superior to potential oil profits – would be jeopardised. The perceived importance of tourism was central to Büsst's initial letters to John Herbert (Minister for Labour and Tourism) and Ron Camm (Minister for Mines and Main Roads). Büsst explained the
grounds of his objection to both ministers: he feared the creation of a 'dangerous legal precedent for further granting of mineral leases' across the Reef, argued that adequate deposits of lime for agricultural purposes were readily available and accessible in areas of the Queensland mainland, and debunked Forbes' claims of innocuousness stating that, 'there is no such thing as a "dead reef"'. Finally, Büsst declared the Reef's importance to science and tourism necessitated its protection through a marine park and that his objection would be an initial phase of a campaign 'to bring this about'. Objections, he claimed, were being lodged by the University College of Townsville (now James Cook University), Brisbane and Sydney, Johnstone Shire Council and Chamber of Commerce, Queensland Littoral Society, Great Barrier Reef Committee and the Cairns Naturalists Society, and he was awaiting the support of the ACF and the World Wildlife Preservation Fund. Immediately it was clear that the conservationists were going to identify tourism as the largest potential loser in the Reef's geological exploitation, and utilise networks and institutions across the country to place pressure on governments.

Büsst, however, had jumped the gun. He would not receive support from the GBRC. Robert Endean, the Chairman of the GBRC, informed the WPSQ Secretary, Arthur Fenton, of their intention 'not to oppose...the lease on Ellison Reef'. The GBRC's reasons were varied. Endean had consulted with officers of the Department of Harbours and Marine who contended 'there is no living coral in the region over which a lease is sought' and dredging 'dead coral rubble' would have a negligible effect on marine life. The Department of Harbours and Marine, Endean explained, intended to co-operate with the Department of Mines in the hope that Mines would refuse future leases in areas where mining 'could do a lot of damage to the fauna and flora'.

Endean, however, had also consulted with various members of the GBRC. He reminded Fenton that 'conservation of the fauna and flora of the reefs' was one of the principal objectives of the GBRC who advocated 'controlled exploitation of Barrier Reef resources', and since the Reefs is '80, 000 square miles...there should be room for

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20 Büsst to Ron Camm, 11 September 1967, QSA, SRS9187, ID 294293.
21 Ibid.
22 Büsst to the Secretary WPSQ, 12 September 1967, JCU, Büsst Papers, 1/4.
23 Robert Endean (Chairman GBRC) to Arthur Fenton (WPSQ Secretary), 15 September 1967, 1. JCU, Büsst Papers, 1/4.
24 Ibid.
25 Ibid.
manoeuvre'. The GBRC were at the time giving consideration to an overall plan for the Reef's research, development and conservation. The significance of their plan had grown, they believed, because 'several oil companies' were preparing to drill the Reef. Consequently, Endean decided it was unwise for him personally, or the GBRC, to make public statements on the Ellison case which might have prejudiced 'the good relations' between the GBRC and 'interested government departments'. Endean, however, encouraged the WPSQ to proceed with their opposition, since it would help the GBRC 'in subsequent negotiations with the Queensland government'. The GBRC's willingness to compromise on issues of the Reef's geological exploitation for overtly political reasons contrasted with their publicly professed apolitical agenda. Endean's letter, which was widely distributed to conservationists, was the source of a rift between them and the GBRC which damaged the cohesiveness of the 'Save the Reef' campaign.

The conservationists were left to press their case with limited scientific support. Further hindering their case was the refusal by the Mining Warden to accept written submissions. The WPSQ and the QLS had all planned to deliver written submissions and only Büsst, Don McMichael (then director of the ACF), and another local would prosecute the objection in person. A joint decision was made by the WPSQ and the QLS that some of the latter's members would travel north to conduct a survey of Ellison themselves and to present the evidence before the Warden. If they were going to make it to Innisfail, however, they would need considerable assistance. Büsst organised everything. He targeted tourism companies, exploiting their concerns that the Reef, already under attack from Crown of Thorns, might disappear under a cloud of dredge spoil. Avis Rent-A-Car provided complimentary vehicles, Trans Australia Airlines provided complimentary travel, Kodak provided photography equipment, Queensland Skin-Divers Association provided diving equipment, a local citizen provided a plane for aerial surveys, and local cane-farmers, who enjoyed fishing in the area, provided boats and pilotage.

26 Robert Endean (Chairman GBRC) to Arthur Fenton (WPSQ Secretary), 15 September 1967, 1. JCU, Büsst Papers, 1/4. Underlining in original.
27 Ibid., 2.
28 Ibid.
29 Ibid.
30 Ibid.
31 Ibid.
33 Wright, Coral Battleground, 9-10.
The QLS completed two sets of survey trips. On one trip the divers were joined by journalist Barry Wain from The Australian. Wright and Büsst had approached Wain and convinced the young reporter that the Ellison case 'was going to be news, and big news'. As the Queensland correspondent for the national broadsheet, Wain produced six articles on the Ellison case drawing attention to evidence provided by the QLS as well as McMichael's argument that no mining on the Reef should be allowed until a full investigation of its resources was made. The conservationists may not have had the support of the elite scientific community, but they were garnering advocates with a wider, popular audience.

Importantly, the survey constructed an image of Ellison which contrasted sharply with its proposed 'dead' status. It was home to various living hard corals, molluscs, fish and charismatic fauna, such as turtles. Its crevices, sand and rubble (the 'dead' parts) between the reef's exposed crest and its flat were covered with algae and home to a number of small herbivores. Ellison was characterised in the survey as a complex living community, challenging popularly held conceptions of what constituted a 'live' reef. At Ellison the highest density of live corals was found in the areas least exposed at low-tide. Its crest and flat, both exposed to low tides, had little coral but high algal densities. Speaking specifically on these sections the survey argued:

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\text{It can be seen that there are relatively large areas of coral reef which to outward appearances are "dead" because of the relative paucity of live coral growths. However, as noted above, those areas provide essential substrate for the algal growth upon which a high proportion of grazing animals are dependent. Therefore, any large-scale disturbance of these areas will have considerable repercussions in terms of the whole reef.}
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On 8 December, 1967, the Warden declared he would recommend to Camm that the application be refused. While the recommendation did not speak specifically of impacts on tourism, the Warden seemed convinced by the QLS survey. He announced 'the term "dead reef" is a misnomer...the reef is in fact not 'dead' but very much alive...(it is) in

\[33\] Ibid., 13.
\[36\] Ibid., 10.
the public interest and in the interest of the Great Barrier Reef that the application be refused'.

For the conservationists there were lessons to be learned. First, the success of their opposition had largely depended upon the work of the Innisfail branch and principally the Büssts. Second, it was made clear that the conservationists could not rely on the GBRC for support. Third, they formed the opinion that the Department of Harbours and Marine, those 'responsible for prosecuting the defence of the reef', were likely to act in concert with the Department of Mines rather than with those concerned with the Reef's conservation. Last, the WPSQ enthusiastically believed that 'the Australian public does not wish to see the Great Barrier Reef destroyed'. In the immediate period following the Warden's recommendation the conservationists' attitude towards the campaign began to crystallise. As the WPSQ and the QLS focused their energies on the issue of oil drilling, they did so with scepticism towards the government and the GBRC, but with an understanding that protecting the Reef had broad support.

Oil and Foreign Intrusions

By the conclusion of the Ellison hearings the prospect of oil exploration on the Reef had advanced considerably. In late October Camm, along with all other Australian mines ministers, introduced the Petroleum (Submerged Lands) Bill. Opposition and government members immediately expressed concerns for the Reef. Queensland's Labor leader John Houston criticised the introduction of the legislation without cross-party negotiations and voiced concern for the Reef. 'No other State has a natural asset as valuable as is the Great Barrier Reef of Queensland', he said. Houston's objections embodied the mood of the Legislative Assembly. Liberal Member for Chatsworth, Bill Hewitt, said Houston's remarks 'spoke for us all'. Labor Member for Salisbury, Doug Sherrington, demanded that no geological exploitation take place 'until a full appreciation is gained of its value'. Sherrington, acknowledging the diverse interests in the components of the reef, suggested a joint-government venture 'to ascertain just what this reef is and just how much of it must be preserved for posterity'.

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38 Ibid., 4 and *Wildlife*, no. 11 (December 1967), 3.
40 Ibid.
42 Ibid., 951.
43 Ibid., 953.
for Wavell, Alexander Dewar, joined the chorus advocating the Reef's protection and proclaimed: 'no amount of royalty from oil taken from the sea-bed would be worth the risk of having the Barrier Reef wiped out. No matter what steps the government has in mind'. In response Camm asserted that as the Member for Whitsunday he was uniquely positioned to understand the importance of the Reef's natural heritage and declared:

The man who never made a mistake never made anything. There is always the possibility of an accident, but if everyone sat still and said, "I won't do this because there might be an accident," nothing would ever be done. I can assure hon. members that all precautions will be taken.

Camm's remarks, in their starkness, have overshadowed the initial bi-partisan opposition to the Reef's geological exploitation.

There were other issues which emerged during the Ellison inquiry which prompted questions on Reef protection. The most alarming was the encroachment into Reef waters of Chinese fishing vessels in October and November 1967. The issue had brought into clear view the need for the Commonwealth to extend and better police the maritime borders of Australia. In late October 1967, the Commonwealth introduced a Bill to amend to the *Fisheries Act 1952-1966* to extend the Commonwealth's sovereignty over fisheries from three to twelve miles. The Federal Member for Leichardt, William Fulton, however, was unconvinced that the prohibition, especially in the remote areas of the Reef, could be policed, and argued:

I have seen as many as six foreign vessels fishing within the 3-mile limit north of Cairns to Charlotte Bay. But as soon as a boat comes into sight they are off. They have good diesel engines and they get away as quick as lightning.

The Queensland government shared Fulton's views but believed it was incapable of policing its coasts against foreign intrusion. It held that the Commonwealth needed to take a more pragmatic approach. The stand-off inspired the *Courier's* cartoonist to caricature the governments as emus with their heads stuck in the sand, as foreign vessels plundered Reef waters (see Figure 11). The Queensland government was under pressure, and in response to questions during parliament, Gordon Chalk

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44 Ibid., 956.
46 *House of Representatives, Hansard*, 24 October 1967, 2161.
announced that it would 'take punitive action to enforce our rights'. But it was not just the violation of Australia's sovereignty which was of concern. Links were made between the Chinese intrusions and the degradation of the Reef. Fulton even suggested that foreign fishing interests—by plundering clam communities, trampling coral reefs, and destroying birdlife—were doing more harm than the Crown of Thorns.

**Endean's Starfish**

In contrast, tourist operators and others were anxious about the claims being made about the Crown of Thorns starfish. Endean had completed his initial study and concluded that the outbreak had been caused by a disturbance in the predator-prey relationship and was resolute that the primary cause was the removal of the Giant Triton Shell (*Charonia tritonis*). He reasoned that decades of removal by shell collectors and sellers had caused a scarcity in the shell. As a result, souvenir shops rarely sold them and most collectors, Endean claimed, regarded the shell as 'a somewhat rare mollusc in Barrier Reef waters'. While other causes of the outbreak had been considered, particularly increased pesticide loads, Endean believed little evidence supported these suggestions.

Endean's report provoked immediate controversy. The Keppel Bay Shell Club considered the claims entirely baseless. 'The innocent Australian shell collectors', they proclaimed, should not bear the 'onus for this catastrophe'. The QLS dismissed Endean's claims and believed insecticides had caused the imbalance in the ecosystem. Owen Kelly, a member of the QLS, wrote to Büsst and argued that proof of the pesticide theory would strike 'a useful blow for conservation generally' and may 'provoke a few of our legislators into getting off their arses and thinking a little more deeply about the effects of development and unplanned exploitation'. As a bonus, Kelly thought, it would not hurt to make 'Endean feel a little foolish'. Kelly gave voice to a sense of antipathy towards Endean felt among the conservationists. Endean's

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52 Secretary of Keppel Bay Shell Club to John Herbert (Minister for Labour and Tourism), 27 June 1968, QSA, SRS 9187, ID 249333.

53 Kelly to Büsst, 3 April 1968, 2. JCU, Büsst Papers, 2/11.

54 Ibid.
pursuit of the Crown of Thorns issue in the media agitated the conservationists. Kathleen McArthur, co-founder of the WPSQ, quipped in a letter to Büsst that Endean must have had his own public relations agent and she hoped, in jest, that the poisonous 'cone shell gets him'. The *Courier* had, reportedly, conceded to the QLS that they were 'embarrassed at the amount of publicity' they gave Endean but felt he 'always had newsworthy items to throw at them'. The Reef's peril, it seemed, has a history of newsworthiness.

The tourist operators were equally frustrated with Endean's public claims. In particular, they were concerned that 'highly exaggerated' reports of Reef damage would hinder tourism in the region. The Cairns Chamber of Commerce requested that Don Chipp, then the Commonwealth Minister-in-Charge of Tourist Activities, take action to 'counter the effects of the bad publicity which filters through to overseas sources'. They had been particularly agitated by a *Four Corners* program which had, in their estimation, 'not helped the situation'. In 1969, as Endean continued to prosecute his case, the manager of the Cairns office of the QGTB wrote to the Director General expressing concern over the publicity given to remarks 'that something like 80% of the Reef in the vicinity of Green Island' had been destroyed. The manager added:

> Whilst the infestation at Green Island in the last three years has been most noticeable, there has also been unexpected recovery. In fact, the rejuvenated Reef is nearly as good as it ever was and the Glass-bottomed boat trip across the Reef at Green Island is of an exceptionally high standard. It is felt that the adverse publicity of the past few weeks could deter numbers of tourists visiting North Queensland during the coming winter season: therefore, it is suggested that you might care to give some publicity to the fact that the coral inspections in the glass-bottomed boat at Green Island and the visit to the Underwater Observatory still remain the premier attractions in Great Barrier Reef waters and, ostensibly, remain unaffected by the Crown of Thorns Starfish.

The government felt, however, that 'the extent of coral regeneration appeared slight' and refused to make public anything to the contrary.

The same year the proprietor of the Green Island Underwater Observatory, Vince Vlasoff, wrote to the government in frustration asserting it was wrong to present the image that 'all reefs' were '80% destroyed'. For Vlasoff, the rise of the starfish was a

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55 McArthur to Büsst, 2, JCU, Büsst Papers, 2/14.
56 Kelly to Büsst, 28 July 1968, JCU, Büsst Papers, 2/11.
57 Cairns Chamber of Commerce to Don Chipp, 25 October 1967, QSA, SRS 9187, ID 294333.
58 Ibid.
59 QGTB Memorandum, 16 April 1969, QSA, SRS 9187, ID 294333.
60 Ibid.
61 Peel (Director Department of Harbours and Marine) to Muhl (Under Sec Department of Labour and Tourism), 14 May 1969, QSA, SRS 9187, ID 294333.
natural, cyclical event and the claims that the starfish would destroy the Reef were panic-driven. The Cairns Chamber of Commerce suggested to the Minister for Tourism that scientists be urged to 'use more discretion in making public statements'. Of particular concern were the ramifications for potential overseas tourists of estimations that the Reef would be destroyed 'inside two years'. What required publication, they argued, was the 'fact that the reef has been in existence for some two million years and doubtless has withstood many adverse conditions and effects over such period'.

The Queensland government was alarmed, however, by the paucity of knowledge about the causes of the outbreak and appropriate control measures. The government believed that banning the collection of all molluscs on the Reef would ensure the Tritons' protection. They wanted, however, further evidence to support Endean's claim before they implemented a policy which would intrude on a popular tourist activity. They commissioned further research, organised a joint government committee, and co-operated with Japanese and American research teams who arrived in Australia to conduct their own investigations of the starfish. By the end of 1969 little clarity had been reached on the issue, and Endean was continuing to bring attention not only to the plague but also to the need for further government funding. In August, Endean was invited to appear before the joint-government committee on which sat Robert Pearson (Fisheries Biologist with Department of Primary Industries and Endean's research assistant). The committee recommended that Pearson, not Endean, be employed full-time to conduct on-going research on the starfish. They added, dammingly for Endean, that the 'information released to news media has been unnecessarily alarming [and] no irreversible damage is being done to the Reef'. By October, Premier Bjelke-Petersen was asserting that there was no plague on the Reef.

62 Vlasoff to RA Armstrong (Member for Mulgrave), 28 August 1969, QSA, SRS 9187, ID 294333.
63 Cairns Chamber of Commerce to Minister for Labour and Tourism, 15 September 1969, QSA, SRS 9187, ID 294333.
64 Ibid.
65 Cabinet Minute, Decision 12684, Crown of Thorns Starfish, 4 March 1969, QSA.
66 Ibid.
67 See QSA Cabinet Minutes: Decision 13349, Crown of Thorns Starfish, 4 August 1969; Decision 13455, Crown of Thorns Starfish, 1 Sept 1969; Decision 13500, Crown of Thorns Starfish, 8 Sept 1969. Also see QSA, SRS 9187, ID 294333, letter, Chalk to Gorton, 24 March 1969.
69 Cabinet Minute, Decision 13455, 3.
70 Ibid.
Endean continued to campaign on the issue of Crown of Thorns into the 1970s. In 1971 another joint-government committee was appointed to investigate the starfish, concluding that the starfish did 'not constitute a threat'. It considered the plague to be localised between Cairns and Townsville and while devastation had occurred, most reefs had experienced some recovery. Endean's Triton theory, they asserted, was unsubstantiated and any attempt to police their collection was 'unwarranted at the present time'. Finally, they recommended continued monitoring of popular reefs with social and commercial importance and the manual removal of the starfish if required. The perceived neglect of the issue, became sensationalised in two books to which he contributed introductions. Both books criticised the government for failing to recognise the severity of the plague and tourist operators for publicly undermining Endean's attempts to bring attention to its severity (for images of the starfish and the complicated politics surrounding it see Figures 12, 13, 14).

What is most curious about the Crown of Thorns issue, however, especially in the context of the 'Save the Reef' campaign, is that conservationists refused to engage with it. In Coral Battleground Wright claimed that they decided to stay out of the affair until the scientists resolved for themselves the cause of the outbreak, but added: 'If those scientists who pointed to human interference as the probable cause of the starfish plague were right, further interference must surely be perilous'. At the time the two most ubiquitous theories, apart from those claiming that the event was part of a natural cycle, suggested human interference was a root cause. Surely, it would have been in the conservationists' interests to have some strong evidence pointing to the consequences of human interference on the Reef? Furthermore, Endean and the conservationists made similar demands for further research on the Reef's biology and ecology. D.W. Connell, president of the QLS, later wrote that the conservationists were at a 'disadvantage in deciding on an effective course of action...as most of the information' was with the government or Endean. The record suggests, however, that a core reason they refused

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74 Wright, Coral Battleground, 29.
to lend their support was personal. Endean's refusal while Chairman of the GBRC to object in the Ellison case and his preference for mutually-beneficial relationships with the government permanently tarnished his image among the conservationists. Consequently, they refused to lend their energies to his support.

Two Ian Gall cartoons from the *Courier Mail*. The media was an important agent throughout the 'Save the Reef' campaign.

**Figure 11:** Gall's interpretation on the stand-off between the state and federal government on who will police the reef. (1 December 1967).
Figure 12: A US geologist suggested the Reef could be drilled for oil and was subsequently lampooned in the media. (30 April 1969).
Government Conservation Initiatives

It was clear to the Queensland government that the conflict between the Reef's exploitation and conservation needed to be resolved. Independently from the conservationists, the scientific community was advocating that the government implement conservation strategies to allow exploitation 'without serious damage'. On 13 December 1967, Premier Frank Nicklin received a letter from the Australian Academy of Science (AAS) expressing its desire to establish a committee 'to prepare a report on the scientific and other resources of the Reef'. The GBRC made a similar proposition in the same year and provided new Premier, Jack Pizzey, with a report in January 1968 entitled: 'Proposals Relating to the Conservation and Controlled Exploitation of the Great Barrier Reefs'. Importantly, 'controlled exploitation' was seemingly inclusive of geological exploitation. The report, a manifestation of the initiatives Endean had flagged with Fenton, conceded it was 'based on an assumption which some conservationists felt bound to reject': the inevitability of the Reef's exploitation. Indeed, it revealed that the GBRC had held discussions with government geologists and oil companies concerning the Reef's geological exploitation.

The GBRC accepted that 'exploitation on a large scale' was imminent and, within its report, explicitly addressed the conflicting agendas which were competing to use the Reef. They wished to maintain the Reef's value for scientists, tourist proprietors, potential oil companies, fisheries, and as a 'recreation area'. They believed, however, that competing valuations of the Reef were barely understood and advised:

Unless a plan for the controlled exploitation and conservation of the Great Barrier Reefs is formulated in the near future major clashes of interests among the various parties who wish to exploit the Reefs will occur...major clashes of interests will occur between the exploiters on one hand and conservationists and scientific organisations on the other...There is also a need for the establishment of a planning, co-ordinating and advisory body consisting of people with specialised knowledge of the Reefs and their resources. This body would have the task of formulating an overall plan and would make recommendations based on this plan to relevant government departments.

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77 R.J. Walsh (AAS) to Frank Nicklin, 13 December 1967, QSA, SRS 1043, Premier's Batch Files, ID 538154 Great Barrier Reef-Resources Advisory Committee (GBRRAC).
78 Patricia Mather (Hon. Secretary GBRC) to Jack Pizzey, 31 January 1968.
80 Ibid., 9.
81 Ibid., 1.
82 Ibid., 2. Underlined in original.
Here, the GBRC dealt directly with the entangled economic and natural valuations of the Reef. Concessions on the Reef's geological exploitation, however, would become a source of tension among the conservationists.

Nonetheless, the GBRC found a sympathetic ear within the Queensland government, to a point. Pizzey wrote to Treasurer Gordon Chalk asserting the need for controlled exploitation which would 'ensure that the potential of the reef is not reduced and that it is preserved for the future'. Pizzey expressed regret that 'basic knowledge is completely lacking at the present time' to coordinate the breadth of work imagined by the GBRC but agreed that some form of plan was necessary. Pizzey, however, recommended that any plan should be co-ordinated by a sub-committee of the AAS. Committee members would be drawn from various organisations including the GBRC and the Department of Harbours and Marine, and the Department of Mines. It appeared that the GBRC interests in the biological sciences, had attracted scepticism from the government who consequently refused to cede control of the Reef's management to them. Pizzey conceded though that it would be 'virtually impossible to consider planned development' of the Reef 'without substantially improved knowledge of all its resources. Whatever the source of the essential knowledge…exploitation of the resource should be controlled by the Queensland Government'.

The Queensland government was determined to control the Reef's future. After meetings with the AAS, Pizzey advised cabinet to reject the GBRC's proposal and determined that 'the government should accept all the help which we can get in an endeavour to solve the problems associated' with the Reef by accepting the AAS's offer to complete a report of the Reef's scientific and 'other' resources. The report, the AAS proposed, would be completed by a national body which would consist of two AAS members as Chair and Deputy-Chair, and be made up of members drawn from AAS and Commonwealth departments, mostly from within Queensland. The scheme prompted the establishment of a cabinet sub-committee who countered that a Great Barrier Reef Resources Advisory Committee (GBRRAC) be established which would...
be comprised of eleven members, one each from the AAS, the Commonwealth, the Queensland government, the University of Queensland (UQ) and the GBRC, and six others selected by the Queensland government. The majority would be Queenslanders 'selected from men of outstanding commercial experience'. The emphasis here on Queensland members was indicative of the state government's yearning to control the Reef. The government wanted not only to initiate an investigation of the Reef's resources but also to maintain supervision.

While the government's attitude could be considered pro-development it was not blind to the Reef's environmental value. It was cognisant of the need for a program of exploitation which, in its opinion, would not undermine the Reef's natural attributes. A cabinet report argued that the Reef was not 'just another series of reefs', it was 'unique' albeit with great potential in the fields of mining, fishing, tourism and scientific research. Nonetheless, the report urged that 'interference to the Reefs must be approached scientifically and with caution' because:

In general the probability of a change in biological balance following interference to the Reefs is strong. Such a change may prove to be within tolerable limits but in certain circumstances it could prove dangerous to the Reefs and their potential.

The report suggested the completion of surveys of the Reef to determine a plan for its exploitation and the creation of specified zones for various uses, including mining. The government was seemingly making an attempt to ensure that the Reef and the competing values of exploitation and conservation could be maintained. After cabinet endorsed the constitution of the GBRRAC, the state government invited the Commonwealth to participate.

Cabinet discussions surrounding the formation of the GBRRAC demonstrated, if nothing else, a concerted effort from government to come to terms with the Reef's future management. Additionally, it helped the government to sharpen its attitudes towards the Reef's conservation. The process proved beneficial when in May 1968 the NPAQ submitted a proposal to divide the Reef into three separate Marine National
The NPAQ feared the Reef would be destroyed by 'uncontrolled exploitation'.

A northern (Cape Melville to Cairns), central (east of Townsville) and southern (mainly Swains Reef) marine national park would, in the NPAQ's estimation, ensure the Reef's protection and its use by scientists. The government, while endorsing the need for the Reef's protection, believed the NPAQ's proposal was too exclusive and failed to account for 'other uses to which the Reef could be subjected' such as tourism and exploitation 'in other directions'. The government began considering the establishment of a Reef marine park but the process was compromised by the Royal Commission into petroleum drilling on the Reef. Nonetheless, along with the creation of the GBRRAC, the consideration of a marine park was indicative of government interest in dealing with the issue of Reef conservation.

Ladd's Report and 'Controlled Exploitation'

The controversies surrounding the Reef had inspired reflection by the Queensland government. It felt its lack of knowledge of the Reef, specifically its incapacity to determine what constituted 'tolerable interference to the Reefs' had hindered its response to the Reef controversy. In its own words, it had failed 'to silence or satisfy the vociferous objections of the absolute conservationists'. The government not only needed to be well informed on issues of the Reef's exploitation but had to appear 'to be well informed'. One immediate solution would be the employment of an expert to compile a report 'on the exploitation and conservation of the mineral resources' of the Reef. Camm in particular advocated for 'expert advice on the problems of exploitation and conservation, particularly having regard to the problems of mining, petroleum drilling, tourist fishing and tourism generally'. Camm explained that Harry Ladd, a marine geologist and supervisor of the geological studies at Bikini Atoll and

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96 Cabinet Minute, Decision 11864, Marine National Parks, 30 July 1968, 1. QSA.
97 Ibid.
98 Ibid., 2.
99 Ibid.
100 Cabinet Minute, Decision 11409, sub-committee report, 1 April 1968, 2. QSA.
101 Ibid.
102 Ibid.
103 Ibid., 3.
104 Cabinet Minute, Decision 11402, Visit of Eminent Overseas Marine Biologist – The Great Barrier Reefs Special Investigations – Special Consolidated Revenue Allocation, 1 April 1968, 2. QSA.
Marshall Islands, had already been assigned by the United States Geological Survey to carry out the survey required by the government.\textsuperscript{105}

Meanwhile, the government was yet to formally resolve the Ellison issue. Camm had not made a decision following the Warden's recommendation. The conservationists were apprehensive that Camm would approve the lease. The Department of Mines had reportedly given a draft copy of their decision to staff at UQ.\textsuperscript{106} The conservationists felt that Camm would receive the necessary scientific support from the GBRC or UQ staff to approve it: a suspicion which forced some scientists to reassure the conservationists that the GBRC was encouraging the refusal of the lease.\textsuperscript{107}

Again, Endean was perceived as complicit in Camm's potential endorsement of the lease. Media reports suggested that Camm's decision on Ellison was being delayed because a survey was being conducted by Harbours and Marine. Eddie Hegerl, a founding member of the QLS and participant in the Ellison survey, suggested to Büsst that the survey would find anything 'they think they can get away with' in order to create a rationale for the lease's approval. He believed Endean was involved:

> Endean's main motives seem pretty obvious. By saying exactly what the government wants to hear, he will find himself given personal control of the future of the Reef. Lots of power, lots of research money, maybe even more spending money.\textsuperscript{108}

Relationships between some conservationists and Endean were strained. Fenton had reportedly threatened to resign from his position as secretary of the WPSQ 'in a fit of temper at Endean'. Hegerl informed Büsst, who was living in Bingil Bay and was not privy to the day-to-day proceedings in Brisbane, that 'everyone is behaving very very irrationally about the whole thing, as feelings seem to be running rather strongish'.\textsuperscript{109}

Fearing the government would not endorse the Warden's recommendation, the QLS re-emphasised the need for 'a proper large-scale survey' of the Reef before further exploitation.\textsuperscript{110} They were joined by a number of other objectors to the lease's approval. At the 1968 Country Party conference a motion was moved that 'the needs of the Tourist Industry take precedence' over mining and that priority be given 'to the

\textsuperscript{105} Ibid., 2.
\textsuperscript{106} Unknown to Büsst, 24 February 1968, JCU, Büsst Papers, 1/6.
\textsuperscript{107} Jiro Kikkawa to Büsst, 8 March 1968, JCU, Büsst Papers, 1/6.
\textsuperscript{108} Eddie Hegerl to Büsst, 25 March 1968, 1. JCU, Büsst Papers, 2/11.
\textsuperscript{109} ibid., 2
\textsuperscript{110} President of QLS to Department of Labour and Tourism, received 30 April 1968, QSA, SRS 9187, ID 294293.
preservation of all areas of scenic value'. 111 Others also publicly queried what more the Minister for Mines needed to consider. 112 Nonetheless, in May, Camm reached his decision to follow the Warden's recommendation. 113 He added the qualifier, however, that 'if the current objections to the proposal can be proved to be incorrect' he would reverse the decision. 114 The government regarded the Reef as a natural asset which they were eager to protect, but:

At the same time, there are literally millions of tons of coral broken off the Reef and swept in towards the mainland by cyclonic storms and heavy seas. This dead coral could be used for the establishment of industries in North Queensland. The cement industry of south-east Queensland is, of course, based primarily on the support of dead coral from Moreton Bay. 115

Camm concluded that no mining would occur until 'overwhelming evidence is produced to suggest that there could be some limited exploitation' without damaging the Reef. 116

Shortly after Camm's decision Harry Ladd arrived. He conducted a 'rapid survey' between Torres Strait and the Swain Reefs and held meetings with members of the GBRC, the University College of Townsville, AAS and various government departments. 117 Ladd's report endorsed the notion that the Reef's resources could be exploited while protecting it from 'serious and widespread damage'. 118 Importantly, however, Ladd suggested that before the Reef could be exploited, especially for geological resources, there was a need for:

A comprehensive survey that would make it possible to evaluate the dangers in present trends – notably in the rise of tourism and in attempts to exploit natural resources – and to determine what actions may be necessary to protect the reef. 119

Ladd's proposal would take two years, and would form the basis of selection of sites for geological exploitation but stressed that strict and rigid controls would be needed. 120

Immediately following the tabling of Ladd's report, the GBRC called for a moratorium on oil drilling on the Reef until 'a long-range and all-embracing policy on the future of

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111 Department of Mines memorandum, 13 May 1968, QSA, SRS 9187, ID 294293.
112 Letter to the editor, 'Mining threat to Barrier Reef?', Truth, 31 March 1968 and letter to the editor, 'Dead reef very alive', Courier Mail, 21 March 1968.
113 Ron Camm to John Herbert, 2 May 1968, 1. QSA, SRS 9187, ID 294293.
114 Ibid.
115 Ibid.
116 Ibid., see also 'Reef mining bid rejected', Courier Mail, 1 May 1968.
118 Ibid., 42.
119 Ibid., 44.
120 Ibid., 1 and 44.
the Reef was decided.\textsuperscript{121} It appeared, initially at least, that Ladd's report was further endorsement of the increasingly common view that a formal policy of Reef management and exploitation, following a large program of research and consultation, was required.

Ladd's report, however, became a political tool utilised by the government to endorse the Reef's geological exploitation. The rationale of Ladd's visit, initially, was to provide some base knowledge for the government to assist them in making decisions regarding the Reef's management. It was not explicitly stipulated that Ladd's survey would form the basis of future government initiatives. Even Ladd believed his report would simply serve as a brief for the GBRRAC, the construction of which, by 1969, had hardly advanced since Prime Minister Gorton was invited to participate in 1968.\textsuperscript{122} When Ladd's report was released, however, in early September 1968, there had been important political shifts in Queensland, the most significant being Joh Bjelke-Petersen's rise to the Premiership. Camm, who retained his position as Minister for Mines, also became Deputy Premier. Queensland was now under the leadership of two men whose disposition towards the environment was far less nuanced than the previous leadership and for whom geological exploitation of the Reef was far less problematic. Ladd's report provided the government's rationale for oil drilling. The government concluded that Ladd had expressed 'no major problems in connection with oil exploration' and ignored the qualifications throughout the report which diminished the accuracy of that claim.\textsuperscript{123}

The conservationists were immediately critical of Ladd's report, especially its perceived rationale for the Reef's geological exploitation. Fred Grassle, an American marine biologist visiting Australia on a Fulbright Scholarship, publicly criticised the report and questioned Ladd's competence to advise on Reef conservation.\textsuperscript{124} An uncritical interpretation of Ladd's analysis regarding limestone deposits on the Reef, Grassle argued, suggested three quarters of it could be mined.\textsuperscript{125} Less dismissively, Townsville University College's Professor C. Burdon-Jones asserted there was 'no

\begin{flushleft}
\textsuperscript{121} 'Strict control urged in any mining of reef', \textit{Courier Mail}, 4 September 1968, 9.
\textsuperscript{122} Harry S. Ladd to Jack Woods (Chief Government Geologist, Geological Survey of Queensland), 9 January 1969, Smithsonian Institute Archives, RU7396, Harry Stephen Ladd Papers.
\textsuperscript{123} Undated report, 'Notes on Mining and Petroleum Exploration and Possible Future Exploitation on the Great Barrier Reef', QSA, SRS 1043, ID 538154.
\textsuperscript{124} A full account of Grassle's letter to the \textit{Courier Mail}, who published pieces of it, was located in J.F. Grassle to Editor of \textit{Courier Mail}, 7 September 1968, JCU, Büsst Papers, 1/8. For the \textit{Courier Mail} article see: 'Ladd report on reef is challenged', \textit{Courier Mail}, 11 September 1968, 3.
\textsuperscript{125} 'Ladd report on reef is challenged'.
\end{flushleft}
evidence that removal of so-called "dead" coral material could be conducted without harming living corals and called for the establishment of a 'Scientific Advisory Council' to 'secure the continued safety and well-being' of the Reef as well as access to its resources.\textsuperscript{126} To him, however, Ladd's report indicated the 'necessity for a more intensive and functional approach to the assessment' of the Reef's wealth.\textsuperscript{127} Nonetheless, for Büsst, and indeed most of the conservationists, the report was tainted by its association with the Department of Mines. He considered it purely political, and not 'pure scientific' research.\textsuperscript{128} Since the government had adopted Ladd's report as an endorsement of geological exploitation, the notion of 'controlled exploitation', a term popularised by Ladd's report, became for the conservationists a euphemism for oil drilling. Consequently, issues relating to the exploitation of the Reef quickly became centralised around the issue of oil drilling.\textsuperscript{129}

\textsuperscript{126} Cyril Burdon-Jones address to Apex Club at Cairns, c. 14 September 1968, 9-11. QSA, SRS 1043, ID 538150 Great Barrier Reef – General.
\textsuperscript{127} Ibid., 10.
\textsuperscript{128} Büsst to Don McMichael, 15 September 1968. JCU, Büsst Papers, 1/7.
\textsuperscript{129} Wright, \textit{Coral Battleground}, 29.

**Figure 13:** A diver with a Crown of Thorns Starfish.

Source: NAA: A15000, K22442.

**Figure 14:** Crown of Thorns being examined at University of Queensland, 1970.

Source: NAA: A1200, L87800.
A Moratorium and the Campaign

Ladd's report emerged in parallel with a view that a moratorium on oil drilling was necessary. One of the earliest calls for a moratorium came from the People the North Committee, a North Queensland pro-development lobby group. In a letter to Camm, its Chairman wrote:

> My Committee's views are that no further exploitation of our national heritage – in fact a world heritage that it is Australia's responsibility to preserve – should be permitted until extensive research has been carried out on the entire ecology of the Great Barrier Reef...I therefore strongly urge you to impose a complete moratorium on any mining exploitation of our Great Barrier Reef until such time as a full research programme has been implemented.130

The ACF was preparing to put forth a motion to formally call for a moratorium.131 Wright feared a moratorium would necessitate experiments.132 The conservationists evidently understood that research on the Reef was required but were concerned that research would likely lead to exploitation. Despite these reservations about the value of a moratorium, environmentalists had parallel concerns about whether or not the Queensland government would enforce one. The conservationists thus began to consider whether the Commonwealth could enforce a moratorium itself.133

The Commonwealth had been a consistent advocate of preserving the Reef since the Ellison campaign. Büsst famously visited his friend Harold Holt in 1967, who personally assured Büsst 'that the federal government will take over the Barrier Reef.'134 That promise and its implications, that the Commonwealth could take control of the Reef and consequently all decisions concerning its oil exploration, became an obsession for Büsst. While Prime Minister John Gorton maintained the Commonwealth's preservationist stance, federal intervention was hindered by the issue of sovereignty. Any attempt by the Commonwealth to claim exclusive sovereignty of the off-shore petroleum reserves might trespass against the Petroleum (Submerged Lands) Act of 1967 and trigger a High Court challenge from the states.

The conservationists were circulating information on issues of Reef sovereignty and science among themselves and connecting with scientists and politicians in an effort to raise awareness to their cause. Büsst was particularly active. By the end of

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130 Chairman of People the North Committee to Camm in Memorandum Premier's Department, 5 September 1968. QSA, SRS 1043, ID 538150.
133 Francis Ratcliffe to Büsst, 20 September 1968. JCU, Büsst Papers, 1/7.
134 Büsst quoted in Clare, Struggle for the Barrier Reef, 98.
1968 he had met with Gorton at Dunk Island and Gough Whitlam in Cairns.135 He commonly took on the responsibility of briefing both federal leaders on all matters regarding the Reef. He wrote to Gorton demanding that the 'Commonwealth take full control of the area' and institute a moratorium.136 While the lobbying of politicians was vital, equally vital was the continued lobbying of the media.137 Wright and Büsst had already convinced Barry Wain of the importance of the Ellison case. During 1968, Büsst maintained contact with Wain and sent him letters for publication. So close were Büsst and Wain that Büsst signed Wain up to the QLS on his behalf, and it was Wain, in 1971, who wrote Büsst's famed obituary: 'The Bingil Bay Bastard'.138

The QLS adopted equally innovative measures to spread the message. They distributed their Ellison survey widely with the hope of attracting donations. Donations, however, were not arriving at an adequate rate. A decision was reached in early 1968 to make 'Save the Barrier Reef' car stickers, the sale of which would provide funding for the campaign. The idea proved successful. By August 1968 nearly 8,000 stickers had been distributed.139 The stickers had been spread so far that Wright recalled arriving in Perth from an overseas trip and seeing cars brandishing orange 'Save the Barrier Reef' stickers.140 The QLS and the WPSQ maintained close links throughout the campaign and together helped circulate a petition which obtained 10,000 signatures against the Reef's geological exploitation.141 While both groups considered other issues to be of concern and had mentioned in their material anxieties around tourism development, shell collecting and the proper management of islands, it was clear that the major concern for both organisations was mineral exploitation.

The unity between the QLS and the WPSQ was unique. Their position on the Reef's conservation and exploitation diverged from those of the scientific community and at times other conservation bodies. Wright recalled that the GBRC's refusal to object to the mining of Ellison made the conservationists' position 'awkward'. Patricia

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135 See: Büsst to Owen Kelly (QLS), 22 July 1968, 2 and Büsst to Kelly, 2 August 1968, 3. JCU, Büsst Papers, 2/11.
136 Büsst to Gorton, 27 August 1968. JCU, Büsst Papers, 2-16.
137 Connell, 'The Great Barrier Reef Conservation Issue - a Case History.'
138 See: Kelly to Büsst, 28 July 1968, JCU, Büsst Papers, 2/11 and Barry Wain, 'The Bingil Bay Bastard', Nation, 1 May 1971, 14. 'Bingil Bay Bastard' was a name Büsst gave himself prior to the 'Save the Reef' campaign when he fought to preserve a tract of rainforest near his home from military use. Evidently, Büst continued to use the name and would occasionally use it as his signature at the end of a letter. See for instance: Büst to Kelly, 2 August 1968, JCU, Büsst Papers, 2/11.
139 QLS, Newsletter, no. 27, (July-August 1968), 8.
140 Wright, Coral Battleground, 31.
141 QLS, Newsletter, no. 27, 2-8.
Mather, who later became chairperson of the GBRC, reflected in an oral history interview with the National Library of Australia that:

I don't think scientists get on all that well with conservationists except in certain...conservationist will always go further than the scientists are prepared to go in what they say. And scientists always insist on being objective...Judith's lack of objectivity about the Great Barrier Reef was trying. It was hard to work with.142

Iain McCalman considered the 'elusive' nature of scientists provided a useful 'chink of division within the conservationists' cause, for Bjelke-Petersen to exploit'.143 It is worth considering how the divide between the conservationists and scientific community manifested itself and the impact it had on the Reef's conservation and exploitation.

**From Hope to Despair**

Following the Ellison campaign the frustration of Büsst and the QLS's with the GBRC was profound. Büsst directed his criticisms to the staff of UQ who held affiliations with the WPSQ, QLS and the GBRC. Jiro Kikkawa, an ornithologist, tried to rationalise for Büsst the GBRC's position and stressed:

The pressure of the mining groups is a strong one and GBRC is trying to solve the problem more sensibly without agitations. So please hold your horses. I can assure you, in spite of everything, that GBRC is not supporting the mining of the Reef.144

Büsst remained sceptical. His own position on the Reef's geological exploitation was becoming more resolute. In a letter to Sir Garfield Barwick, Büsst argued that 'mining, no matter how expedient, is a wasting asset. The Reef, on the other hand, if preserved intact, is a continually increasing scientific and touristic asset'.145 Büsst's position was increasingly shared by the QLS and the WPSQ, a fact which further enhanced the tensions between those groups and the scientific organisations.

It was not, however, only the GBRC's inaction which frustrated the conservationists. The ACF too were reluctant to object outright to oil drilling on the Reef. Büsst targeted Francis Ratcliffe to encourage the ACF to adopt a formal policy of opposing oil drilling on the Reef and to call upon the Commonwealth to seize sovereignty of the off-shore petroleum reserves. Büsst achieved this in October 1968 when the ACF amended and passed his motion which stipulated that the

144 Kikawwa to Büsst, 8 March 1968, JCU, Büsst Papers, 1/8.
145 Büsst to Barwick, 8 February 1968, JCU, Büsst Papers, 2/12.
Commonwealth should 'lay claim internationally to all those parts of the Reef and the area it occupies which may not now be internationally recognised as under Australian control'. The motion included the strict provision that the Reef should be under 'one control', which, through scientific investigation, would determine:

What if any human interference in the course of industry or commerce could be allowed without harm to any part of the Reef or the area it occupies, and...the Commonwealth and State Governments should ensure that no industrial or commercial activity, other than fishing and tourism, takes place on the Reef or in the area it occupies.\textsuperscript{147}

Wright recalled that she and Büss had been 'delighted and relieved' that the motion passed. Wright felt that finally the ACF and the GBRC, who had also passed a similar declaration in their most recent meetings, were on their side and significant progress had been made. It was also arranged that the ACF would, in May 1969, hold a symposium on the future of the Reef. It was a prospect that Wright was initially enthusiastic about.\textsuperscript{148} She excitedly declared to Büss it was 'all because of you, this book has to be written!'\textsuperscript{149}

In early 1969, however, the ACF dragged its feet on lobbying for their recommendations and instead focussed on arranging the symposium. There were plenty of opportunities for action on the Reef in early 1969. In February, six companies had been granted rights to explore for petroleum in the Reef area. The announcement of these leases emerged at the same time as oil began to leak from a pipe off the coast of Santa Barbara, California. For the conservationists, the Santa Barbara disaster was 'the big break'. Wright wrote 'Santa Barbara's tragedy was the Reef's good fortune. It made the best possible publicity for the possible fate of those coral reefs and beaches'.\textsuperscript{151} The ACF could have made significant and important contributions to the Reef issue but failed to muster any energy in that direction.

In early 1969 Queensland was preparing for an election and the government's plans for 'controlled exploitation' received immediate criticisms. Büss wrote to the Townsville Bulletin to remind the public 'that oil exploration in California is also permitted only under the strictest control' and demanded the government take their

\textsuperscript{146} ACF, \textit{Newsletter}, (October 1968), 2.
\textsuperscript{147} Ibid., 3.
\textsuperscript{148} Wright to Büss, 22 November 1968, JCU, Büss Papers, 2/13.
\textsuperscript{149} Wright to Büss, 4 December 1968, JCU, Büss Papers, 2/13.
\textsuperscript{150} Malcolm Fox, Senate, \textit{Hansard}, 26 February 1969, 83.
\textsuperscript{151} Wright, \textit{Coral Battleground}, 51.
'Hands off the Great Barrier Reef.' Patricia Mather wrote to the Senate Select Committee on Off-shore Petroleum Resources, which had been established following the introduction of the Petroleum (Submerged Lands) Act, and asserted that Santa Barbara made evident the necessity for the establishment of a single authority to govern the Reef's management. Pressure was mounting on the Commonwealth to give assurances that it would refuse to ratify any leases issued by the Queensland government. The Queensland government, however, was resolute that drilling would take place irrespective of the Commonwealth's actions.

The Commonwealth intervened. It decided that any future applications would not receive its approval and began investigating broadening their authority over the Reef for the purposes of controlling and managing fisheries and the resources of the continental shelf. Their decision made the Queensland government's options of issuing new leases legislatively impossible since the Petroleum (Submerged Lands) Act required both governments to approve leases. In March 1969, Camm announced that the Queensland government would defer indefinitely the granting of new applications to prospect for oil and minerals in Reef waters. The pressure of the state elections, the Commonwealth's stance, and the conservationists' activism seemingly forced the Queensland government to announce that it would not issue any further leases for oil drilling on the Reef and it pledged that the Reef would be protected.

Despite a sense of momentum, when the ACF symposium was due to commence Wright recalled having doubts over its value. The symposium had been designed to allow varying views on the Reef to be heard, including those from government and mining companies. Büsst publicly accused the ACF of being apologists for controlled exploitation which prompted Dick Piesse (then ACF Director) to respond: 'I need hardly assure you that this Foundation has organised this Symposium with the main aim of generating light, not heat, on the conservation issues surrounding the Great Barrier Reef and its region.' Organisers of the symposium had arranged for

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153 Patricia Mather to K. Bradshaw (Senate Select Committee), 19 February 1969, QSA, SRS 1043, ID 538156 Oil and Mineral Exploration on the Great Barrier Reef.
154 Rex Patterson, House of Representatives, Hansard, 26 February 1969, 156-7.
156 'Government Pledges to Guard Reef', Courier Mail, 29 April 1969, 3.
157 Wright, Coral Battleground, 60.
158 Piesse to Büsst, 28 March 1969, JCU, Büsst Papers, 1/7.
a discussion on the issue of Reef sovereignty. Additionally, they planned to recommend that the Commonwealth establish a committee to manage the Reef's development.\textsuperscript{159} The symposium would provide the recommendation for the Commonwealth to act and the legal argument to do so. The conservationists, however, considered these manoeuvrings insufficient to marginalise the concessions to exploiters.

For the QLS and WPSQ the symposium was a 'shambles'.\textsuperscript{160} There was little time after presentations for questions and discussion which left some of the 'controversial points raised by geologists and others in favour of the commercial exploitation' of the Reef unchallenged.\textsuperscript{161} Additionally, the conservationists considered that too little time had been given to consider the Reef's biology and ecology. Even the symposium's resolutions, they believed, did not adequately encourage the protection of the Reef.\textsuperscript{162} The QLS and the WPSQ Innisfail Branch lodged protests with the ACF, who responded that the Reef's management was complicated by legislative realities.\textsuperscript{163} In their formal recommendations to the Commonwealth, however, the ACF recommended a moratorium and the establishment of a commission to formulate an overall plan for the Reef's development and consider 'whether oil exploration should be encouraged or permitted in the Reef area'.\textsuperscript{164} Yet despite these eventual concessions, the ACF was no longer considered to be a 'logical platform' through which the other organisations could advocate.\textsuperscript{165}

The damage the symposium caused in the relationship among the conservationists has been noted by some historians. McCalman considered that the symposium demonstrated the naivety of the ACF's leaders, who along with the GBRC, had continued to appease the Queensland government and oil companies. He added, as suggested by Wright, that the symposium demonstrated the divergence of views of the Reef held by geologists and biologists.\textsuperscript{166} Frank Talbot had emphasised this divide at the completion of the Symposium: 'The Reef is a biological-physical complex…It seems very necessary for biologists and geologists to get much closer to each other to

\textsuperscript{159} Wright, \textit{Coral Battleground}, 60.
\textsuperscript{160} Kelly to Büsst, 15 May 1969, JCU, Büsst Papers, 2/11.
\textsuperscript{161} WPSQ Innisfail branch to Barwick (ACF), 19 June 1969, JCU, Büsst Papers, 1/7.
\textsuperscript{162} Wright, \textit{Coral Battleground}, 65.
\textsuperscript{163} Ratcliffe to Desley Connell (Pres. QLS), 5 June 1969, JCU, Büsst Papers, 1/9.
\textsuperscript{164} Copy of letter Barwick to Gorton, n.d., JCU, Büsst Papers, 1/9.
\textsuperscript{165} Wright, \textit{Coral Battleground}, 40.
\textsuperscript{166} McCalman, \textit{The Reef}, 292-3.
understand the processes involved'. Curiously, as noted by Hutton and Connors, James Bowen argued that the symposium 'was a conservation event of great national significance, and one of the most important contributions to conservation of the Reef'. Despite Bowen's seemingly unique assertion, the Symposium was and still is, considered a disappointment by the non-ACF participants. Other issues surrounding the Reef's conservation and exploitation, namely fishing and tourism development were discussed; by 1969, however, the QLS and the WPSQ were not interested in considering them. Only geological exploitation drew their attention and the symposium failed to reach an unequivocal stance on its prohibition.

The symposium, however, did have some merit. Percy Spender's paper concerning the legalities of sovereignty over Australia's continental shelf and the natural resources of its sea bed revealed crucial misunderstandings. Spender concluded that excluding internal waters (for example large bays), Queensland's territorial boundaries expired at the low water mark. All the natural resources of the sea beds bordering Australia belonged to the Commonwealth, not the states. Crucially, Spender claimed under international law, 'dominion over the sea bed and the natural resources of the whole of the Continental Shelf commencing at low water mark, and the right to explore and exploit these, or permit others to do so, is vested exclusively in the Commonwealth'. Spender's argument was supported soon afterwards by the High Court decision in *Bonser v La Macchia* (1969) which affirmed that the states were not sovereign bodies as recognised in international conventions. Spender's case threw into question the constitutional legality of the *Petroleum (Submerged Lands) Act* of 1967 which maintained that the states were sovereign bodies with regard to international conventions on off-shore oil reserves. An optimist would have perceived the Reef's protection from oil drilling as imminent.

Days before the 1969 Queensland election, however, Japex, which had entered into a farm-out agreement with the Australian petroleum company Ampol, signalled its intention to drill a well in Repulse Bay. The lease granted to Ampol in 1964 was pre-

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171 These facts were revealed in Extracts from Mines Department File re Mackay No. 1 (Repulse Bay). NLA, MS 3990 Exhibits of the Great Barrier Reef petroleum drilling Royal Commissions 1964-1972, 5/9 (ii), Exhibit 255.
existing and therefore had not been invalidated by the *Petroleum (Submerged Lands) Act*; consequently, the Commonwealth could not refute it. Additionally, the proposed well-site was in Queensland's internal waters (See figure 6). There was no doubting Queensland's sovereignty. An empowered Camm declared:

This Government will not repudiate any agreement that it has entered into. Repudiation could cause a world-wide loss of confidence in the integrity of the Government of Queensland resulting in a drying-up of capital for investment in the State and a flight of capital from the State. In such a case it seems almost certain that the State would be called upon to pay compensation...We can control drilling so that the risk is remote and it is my intention to do this.\(^ {172}\)

The drilling rig the *Navigator* was due to depart Texas in September and arrive in Australia in early 1970 for the Repulse Bay operations.\(^ {173}\) Protecting the Reef from oil drilling now became an immediate endeavour.

'All this and oil wells, too'?

The Queensland government immediately came under immense public pressure to alter their stance. The conservationists maintained their presence in the media and new organisations emerged: the Save the Reef Committee (STRC) and the 'Housewives Concerning the Protection of the Barrier Reef' among others.\(^ {174}\) The media continued to provide not only an organ through which the conservationists could express their concerns but was a voice for concern and conservation themselves. *The Australian* argued in favour of delaying oil exploration on the Reef until further biological research had been conducted and emphasised the importance of the biology of the Reef to tourism.\(^ {175}\) Prime Minister Gorton stated resolutely that 'anything which in any way would seem to endanger' the Reef, 'not only on the question of drilling for oil, is something which should not, as far as legal possibilities are concerned, take place'.\(^ {176}\)

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\(^{172}\) Ministerial Statement, Ron Camm, 'Ampol-Japex Mackay No.1 Well', 19 August 1969, QSA, SRS 1043, ID 538161 Committee of Inquiry into Possible Effects of Drilling – Great Barrier Reef 75B-1, Part 3. A slightly altered version of this speech was made on the same date to the Legislative Assembly. See *Hansard*, 19 August 1969, 64-5.

\(^{173}\) Extracts from Mines Department File re Mackay No. 1 (Repulse Bay). NLA, MS 3990 Exhibits of the Royal Commission.


The public were outraged too. On 18 September the Premier's Department became inundated with telegrams from members of the public with various single line messages including: 'please save the Barrier Reef', 'No drilling no more promises', 'Don't make our barrier Reef one of the great blunders of the world' and 'No drilling Barrier Reef otherwise no vote'.

A Mrs B.A. Walton from Brisbane wrote to Bjelke-Petersen and queried:

Why should we in Australia take a chance with this priceless gift to satisfy the greed of overseas oil interests or even some of our own who may also have a share in the oil industry…Agreements may be made. Agreements can also be suspended or even broke. There is no dishonour in this if it is to the national interest.

L.J Jones, also of Brisbane, appealed to the government to listen to the conservationists and experts and to stop the 'cowardly' drilling from taking place.

Objections came from interstate too. Ms Campbell from Victoria added her 'strong protest' and urged the establishment of an authority 'to protect this wonderful asset'. Mrs White from New South Wales asked the Premier to 'consider where your greatest obligation lies – to a business contract or to the preservation of the greatest coral reef in the world?'

The Bowen Shire Council, the Humanist Society of Queensland, Zoological Society of Frankfurt and the Townsville and District Tourist Development Association all lodged their objections to the Reef being drilled for oil. The prospect of oil drilling contrasted with the imagined potential of the Reef for exploitation. The economic value of the Reef, in estimations of the majority of the Australian public, did not extend to its potential oil reserves. More importantly, as most objections noted, tourism offered 'renewable' wealth from the Reef. Drilling the Reef placed that economic possibility in jeopardy.

Despite the protests the government maintained its position and proclaimed drilling would go ahead under strict controls. In response the conservationists began to make inquiries with the trade unions. On 5 September, Büssted wrote to Whitlam and

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178 B.A. Walton to Bjelke-Petersen, 27 August 1969, QSA, SRS 1043, ID 538155.
179 L.J. Jones to Bjelke-Petersen, 28 August 1969, QSA, SRS 1043, ID 538155.
180 J. Campbell to Bjelke-Petersen, 1 October 1969, QSA, SRS 1043, ID 538155.
182 See letters: Bowen Shire Council to Premiers Department, 1 September 1969; Humanist Society of Queensland to Bjelke-Petersen, 11 September 1969; Zoological Society of Frankfurt to Bjelke-Petersen, 1 October 1969; Townsville and District Tourist Development Association to Bjelke-Petersen, 8 October 1969. QSA, SRS 1043, ID 538155.
asked if 'the appropriate unions would care to take strike action against Ampol – after all the Reef is the workers' playground!' On the 16 September the Commonwealth Secretary of the Amalgamated Engineering Union wrote to Bjelke-Petersen to inform him:

If Ampol-Japex persists, in the face of public opinion and drills in Repulse Bay, a voluntary Australia-wide boycott on all Ampol-Japex products will be called for, and a similar boycott on any other oil or mining company endangering the future of the Great Barrier Reef.

A month later, Bjelke-Petersen was urged by the Australian Primary Producers Union to make a 'clear statement of policy indicating that a conservation approach' towards the Reef would be adopted 'and that no exploitation would occur'.

Despite the overwhelming antipathy they had attracted, the government refused to shift. On 31 December 1969, in John Büsst's perspective the likelihood of the Reef being drilled for oil was high. He had that month met once more with Gorton, and on 31 December he issued a final plea to intervene. He dictated to the Prime Minister that while Repulse Bay was in internal waters, and the Ampol-Japex lease had been issued under an earlier Act, the current lease was constitutionally invalid. Büsst was desperate. He imagined that drilling on the Reef would begin within the month and then it would be 'very difficult to restrain the oil companies'. He made a request to a Melbourne law firm to examine the Petroleum (Submerged Lands) Act to determine if any flaw existed on the grounds of which he could issue a writ against the Commonwealth and state governments.

From August 1967 through to the final day of 1969 the issue of the Reef's conservation had blown out from a contested application to mine a reef for limestone to the prospect of union-enforced labour bans and constitutional challenges to prevent the Reef being drilled for oil. Ironically, the Crown of Thorns starfish, which had initially directed attention to the possibilities of the Reef's decline, was now considered less of an issue. Throughout the campaign, agitation for the Reef's protection had come from scientists and conservationists. It would be erroneous, however, to neglect the significant support

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185 Garland (Commonwealth Secretary AEU) to Bjelke-Petersen, 16 September 1969, 4. QSA, SRS 1043, ID 538155.
186 DW Goode to Bjelke-Petersen, 17 October 1969. QSA, SRS 1043, ID 538155.
188 Ibid.
189 Büsst to Lindsay Naylor (Arthur Robinson and Co), JCU, Büsst Papers, 2/14.
they enjoyed from the media, public, Commonwealth government and unions. Nor would it be accurate to contend that the Queensland government maintained a consistently pro-development and anti-environment position on the Reef's geological exploitation. Additionally, the tensions between and among the conservationists and scientists embodied the divergent views on the Reef's preservation. While the issue of geological exploitation dominated the discourse of the 'Save the Reef' campaign that discourse served as a proxy for the ultimate issue: how was the Reef to be managed into the future and what principles of conservation should underpin its future use? The 'Save the Reef' campaign was a public acknowledgement of the tensions created by valuing the Reef for both its perceived economic and natural attributes.
**Map 6:** Map showing position of Repulse Bay.

Source: Map from Google Maps modified by Coreen Wessels.
Chapter Seven - Black Ban

On 5 January, Labor Senator George Georges announced that the Transport Workers Union and affiliates would impose a black ban on any ship or rig intending to drill in Repulse Bay.\(^1\) George's announcement proved a crucial blow to the Repulse Bay plans. Reaction to the union's decision was swift. Ampol publicly announced it would postpone operations and called on the state and federal governments to establish a joint inquiry into oil drilling and the Crown of Thorns starfish. After much public posturing the governments decided to launch the Royal Commission which was to investigate the issues of petroleum exploration and production on the Reef. This chapter considers the period immediately following the black ban and illuminates the reactions from the media, public, conservationists, oil companies and governments. It argues that the positive reception of union intervention was an expression of a broader antipathy towards drilling the Reef for oil.

In the months between the black ban and the commencement of the Royal Commission, interested parties firmed their stances on the Reef's conservation and exploitation. The conservationists could only bask briefly in the victory of the black ban before facing the task of securing funding for the proposed Royal Commission. Importantly, faced with a possibly costly and uneven court battle, the conservationist bodies and the GBRC sought to reconcile their previously conflicting positions on the Reef's conservation. They reached a unified and unequivocal position against petroleum drilling. The Commonwealth government, influenced by the legal argument laid out by Percy Spender at the ACF symposium the previous year, decided to test its sovereignty over Australia's off-shore resources. Opposition to drilling the Reef for oil was palpable.

Consequently, the first half of 1970 saw the continued exposure of the fragility of the Bjelke-Petersen government's pro-oil position. The black ban only intensified the media's attention and in the weeks which followed, the Queensland government came under increasing pressure to repudiate its oil leases and reverse its position on the Reef issue. The pressure intensified during the Albert by-election in early 1970 and again in March when a tanker, the *Oceanic Grandeur*, struck a rock in the Torres Strait and

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\(^1\) A black ban is a mass refusal to supply or purchase goods or services. Jack Mundey in 1973 would eventually coin the term 'Green Ban' to distinguish traditional union 'black bans' from those with a distinct environmentalism agenda. Georges referred to the 1970 intervention as a 'black ban'; few, however, could doubt its environmentalist underpinnings.
spilled oil close to the Reef. Yet despite the political unpalatability of the pro-oil position the Queensland government maintained its stance. It argued that rescinding existing agreements for oil exploration along the Reef would result in financial and reputational harm. It asserted both publicly and privately that the Reef would not be damaged, and that assurance was manifested in the Queensland government's manoeuvrings on the composition of the Royal Commission. While the state government had initially proclaimed to the Commonwealth and the public that they favoured an 'open' and unimpeachable Royal Commission, privately it sought to introduce Commissioners, counsel and topics which would be favourable to its interests.

This chapter sheds light on the final six months of the 'Save the Reef' campaign. It utilises government archival material as well as the personal papers of Judith Wright, John Gorton and John Büsst. It demonstrates that the black ban gave greater focus to the issue of oil drilling on the Reef which, while marginalising other issues of Reef conservation, brought under greater scrutiny the perceived value of the Reef. The black ban and the appointment of the Royal Commission demonstrated that while a composite valuation of the Reef's economic and natural attributes informed its perceived importance, geological exploitation of the Reef was seemingly too risky for the public to affirm.

**Responses to the Black Ban**

The black ban was announced and celebrated in the media. *The Australian* published the telegram Georges sent to Japex, Ampol and the owners of the *Navigator* which warned 'I intend to launch a campaign to declare the vessel black and to withhold service of labor and essential goods for its operation'.

George announced 'militant action' was necessitated by the failure of both governments 'to take action to ban drilling'.

Patricia Clare wrote 'people of all political opinions came together to cheer'.

Queensland Labour politician Doug Sherrington also declared in *The Australian*, 'anything that will save the reef will have my whole-hearted support, particularly if it comes from the trade union movement'. In its editorial *The Australian* stated:

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3 Ibid.
4 Clare, *Struggle for the Barrier Reef*, 197.
5 'Senator to lead black ban move on reef oil rig'.
The obdurate refusal of the Queensland and Commonwealth governments to heed public demands for action to stop oil exploration on the Great Barrier Reef now looks like rebounding on them. The black ban proposed by Senator Georges to abort drilling plans will have an unprecedented measure of public support and will probably succeed. It deserves to.6

The editorial levelled heavy criticism against the Queensland government, accusing it of incorrectly prioritising maintaining confidence with foreign investors over maintaining credibility with its constituents. In a letter to Bjelke-Petersen, Judith Wright gave her 'whole hearted support for Senator Georges' call for a black ban' and stressed that the Reef 'must be fully protected from all mining exploitation'.7

The black ban had major consequences. First, it forced Ampol to recommend to Japex that drilling be postponed.8 Ampol also suggested and offered funds to the Commonwealth for the instigation of a 'thorough investigation' by a joint government committee of inquiry to 'allay public concerns over the possible pollution of the Reef by drilling for oil' and a provision to investigate the Crown of Thorns starfish plague.9 Unimpressed by Ampol's decision, Bjelke-Petersen wrote to Prime Minister Gorton emphasising the precautions Queensland had taken to 'ensure that any possible risk of pollution' had been 'reduced to the absolute minimum' by the application of 'the most stringent conditions' to the Repulse Bay operation. He announced: 'I am convinced that the drilling in Repulse Bay should go ahead and I am also convinced that it is quite safe for this to take place'.10 Bjelke-Petersen stressed his government's responsibility to undertake oil drilling to reveal the benefits for science, the economy and the state's self-sufficiency as quickly as possible.

The black ban, however, demonstrated that sufficient political capital existed for the Commonwealth to intervene and to use it as leverage for a general postponement of all oil drilling on the Reef. On 14 January, the day after Ampol's decision to postpone its operations, Gorton issued a press release praising Ampol's decision.11 On 15 January, Gorton sent a telegram to Ampol congratulating them on their initiative and

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6 'Forcing the public to direct action', Australian, 7 January, 1970, 6.
7 Wright to Bjelke-Petersen, 8 January 1970, QSA, SRS1043, ID 538156 Oil and Mineral Exploration on the Great Barrier Reef.
8 Telegram Ampol to Japex, 13 January 1970, NLA, MS 7984, Bib ID42626, Papers of Sir John Gorton, Box 11.
9 Ibid. This inquiry into the Crown of Thorns was the same which was discussed briefly in the previous chapter.
10 Copy of telegram Bjelke-Petersen to Dr D.F. Martyn (Australian Academy of Science), 14 January 1970, QSA, SRS1043, ID 538159 Committee of inquiry into the possible effects of oil drilling – Great Barrier Reef.
expressing hope that they would be able to persuade Japex, who was yet to reply to Ampol's decision, to agree with the postponement of the Repulse Bay operation. Gorton politely refused the offer of funds from Ampol for an inquiry, to avoid the taint of partiality, and reaffirmed the commitment of both governments to settle the Crown of Thorns issue. Gorton confirmed the Commonwealth's desire to have a joint government inquiry, and that it was awaiting the Queensland government's cooperation.

The Commonwealth, however, was yet to formally respond to the invitation to participate in the Great Barrier Reef Resource Advisory Committee (GBRRAC) proposed by Queensland in June 1968. Bjelke-Petersen declined Gorton's suggested inquiry until the Commonwealth responded to the 1968 proposal. Bjelke-Petersen claimed:

The proposals then made and the supporting information given were and still are pertinent to the question of Reef drilling and therefore I see no reason why they should not appropriately provide the basis for any joint Commonwealth/State investigation now.

Gorton finally replied to the notion of a GBRRAC and considered it neither to be a joint inquiry (it only allowed one Commonwealth representative on a committee of eleven), 'nor specifically concerned with drilling for oil on the Reef'. In rejecting the proposal Gorton added:

The proposal before us now is that drilling be suspended on or near the Reef pending a truly joint Commonwealth/State inquiry which will report to both our governments and which will make public its reports. The Commonwealth is prepared to endorse this specific proposal and I should be glad if you will let me know whether the Queensland Government is also prepared to do so.

Whether Bjelke-Petersen or the Queensland government sincerely believed the GBRRAC was still a live issue is hard to determine. The GBRRAC was a holistic approach to the Reef's conservation and exploitation; in the climate of black bans and immediate likelihoods of oil drilling on the Reef, Bjelke-Petersen's claims of Commonwealth inaction on the GBRRAC were perceived then, as they still are, as obstructionist. Nonetheless, a day after Gorton's response the Queensland government

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13 Ibid.
16 Ibid.
17 See: Clare, Struggle for the Great Barrier Reef, 119; Wright, Coral Battleground, 116; and Bowen, Great Barrier Reef, 335.
capitulated and agreed to send a cabinet delegation to Canberra to assist in formulating a joint-government committee of inquiry.  

Bjelke-Petersen's reaction to the black ban incited further public condemnation of his government. Mrs Raynes from Brisbane expressed her disappointment in Bjelke-Petersen and his 'attitude to oil drilling on the Barrier Reef. 'For the first time in my life I voted Labor at the last election on this issue in particular'. Mr Bootle from Sydney criticised Bjelke-Petersen for failing to utilise Ampol's decision as 'an opportunity for the Queensland government to bow out gracefully' from their 'ill-conceived move to drill for oil in an area of unique tourist attraction'. A.R. Timmins from Brisbane enclosed in his letter a copy of *The Australian's* editorial from 7 January and wrote:

> You may see what a responsible national daily newspaper thinks of your actions. Your attitude on this question seems to be to take a chance on any damage to the reef occurring as a result of drilling operations. I can only say that should you be unlucky, you will long be remembered in Australian history as a fool and worse.

In the face of severe public scrutiny, the Queensland government asserted that it was 'fully conscious of its responsibility to judiciously protect and conserve the natural resources of Queensland' as opposed to conservationists who were only concerned with 'knocking oil drilling in coastal waters'. The government received some support. Mr Evans telegrammed that he commended and thoroughly endorsed Bjelke-Petersen's stance on drilling Repulse Bay and drilling the Reef generally. Most correspondence from the public, however, was negative and more closely resonated with the sentiment expressed by Ms Baillieu from Victoria, who wrote: 'We deplore and regard with disgust the obstinate self-interest with which you disregard the care and preservation of the Great Barrier Reef which belongs to all Australians'.

While the Queensland government may not have been responsive to public opinion, Ampol and Japex were. On 21 January, Japex expressed its frustration with Ampol's decision to halt operations. Japex indicated that an anti-drilling public sentiment had been evident for some time, but until the proposed black ban, it was an

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20 Bootle to Bjelke-Petersen, 14 January 1970. 1. QSA, SRS 1043, ID 538156.
21 Timmins to Bjelke-Petersen, 14 January 1970, QSA, SRS 1043, ID 538156.
issue Ampol seemed willing to disregard. The telegram stated: 'We respect and share your concern for the protection of this Australian resource but we are surprised that you have delayed expressing your concern until this time even though we have previously drawn your attention to the potential problems'. Japex were 'happy' for Ampol 'to take whatever action' they considered reasonable regarding accumulated expenditure, and would consider postponement or cancellation of the drilling programme in order to minimise further costs. In other words, Japex was content to postpone if they were adequately compensated for their losses.

The financial consequence of Ampol's decision was a point of angst not only for Japex but also the Queensland government. In preparation for the Canberra meeting, Queensland's State Mining Engineer, A.W. Norrie, issued a memorandum for Bjelke-Petersen. Norrie instructed the government to assert its stance of no repudiation and to express a willingness to co-operate with Ampol and Japex to halt operations. He then prompted the government to draw attention to other forms of possible damage facing the Reef including tourism, defence training and oil tankers and asked:

Why are some people so determined to stop this drilling while allowing other human activities, that may be a greater threat to the Great Barrier Reef, to proceed? Why pick on drilling for oil and refuse to allow the people of Australia to judge whether other things may not be greater hazards?

The experience of the black ban, and its unknown financial consequences, sharpened the Queensland government's attitude towards oil drilling and further alienated them from the mood of the nation. The government was yet to accept that while the Reef was indeed valued for its exploitable attributes, valuations of the Reef's economic potential did not extend to its geological resources. Consequently, it was willing to proceed with drilling in Repulse Bay.

26 Ibid.
27 Draft memorandum A.W. Norrie, 21 January 1970, 1. QSA, SRS 1043, ID 538162
Figure 15: Judith Wright – quote below the image: 'They'll have to shoot me to stop me.'


Figure 16: John and Ali Büsst on the steps of their Bingil Bay home. Their house is now listed on the Queensland Heritage Register and is called Ninney Rise.

John Büsst died before he was able to give evidence before the Royal Commission in April 1971. His papers at JCU still hold the statement he intended to give to the Commission.

Canberra Conference: 29 January 1970

The Canberra conference was the first instance in which both governments discussed the Reef issue directly with one another during the 'Save the Reef' campaign.\textsuperscript{28} Gorton asserted at the outset that while an initial joint government committee of inquiry could be established to consider the oil issue, he envisaged a suite of inter-related committees would eventually provide commentary to a central advisory committee managing the entire Reef.\textsuperscript{29} Bjelke-Petersen agreed to an inquiry, but proposed an alternative which would consider the entire continent, not specifically the Queensland coast.\textsuperscript{30} The Queensland contingent queried why oil drilling on the Reef was an issue of concern and not, for instance, oil exploration in Bass Strait.\textsuperscript{31} But, as Gorton argued, it was Queensland, not the Commonwealth, who had prompted the inquiry when they initiated the GBRRAC. He added:

\begin{quote}
I think that if we found around Australia an area of the size of the Barrier Reef area and with the same world interest and of the same importance we would be just as interested, in conjunction with the State Government, in seeking to preserve that area…We have not received such a communication from any other State, but should any other State make a communication which dealt with an area of significance remotely comparable to the Barrier Reef, then of course we would take it into consideration.\textsuperscript{32}
\end{quote}

Each government's approach to the Reef's geological exploitation and conservation was contingent on its appreciation of the Reef's natural and economic attributes. However, the Queensland government's appreciation of the Reef's value appeared to be at odds with that of the Commonwealth.

While both governments agreed in principle to the formation of an inquiry, Queensland was unwilling to publicly call for the postponement of oil drilling along the Reef. The financial and political ramifications of repudiation weighed heavily upon the Queensland government. Bjelke-Petersen considered the repudiation of leases to be 'distasteful and completely unacceptable' and was determined to remain unaccountable for Ampol's decision, lest it implicate the government in terms of liability.\textsuperscript{33}

\textsuperscript{28} Those present at the Conference: Prime Minister John Gorton; Minister for National Development R.W.C Swartz; Minister for Education and Science, N.H. Bowen; Federal Attorney-General, T.E.F. Hughes; Premier Joh Bjelke-Petersen, Minister for Mines and Main Roads, Ron Camm; Minister for Justice and Attorney-General, P.R. Delamothe.
\textsuperscript{29} Proceedings Conference of Commonwealth and State Ministers, 29 January 1970, 3-4. NLA, MS 7984, Papers of Sir John Gorton, Box 11.
\textsuperscript{30} Ibid., 5.
\textsuperscript{31} Ibid., 9.
\textsuperscript{32} Ibid., 6-9.
\textsuperscript{33} Ibid., 12.
Queensland would only agree to the suspension of drilling, Bjelke-Petersen asserted, if it was instigated by Japex, or the Commonwealth or Ampol were willing to financially compensate Japex. The Commonwealth would not endorse new leases on the Reef, and would co-operate with any company which wished to postpone their operations pending the inquiry. The Queensland government was seemingly unwilling to publicly share the Commonwealth's position lest it be interpreted as a formal request for postponement. Consequently, the Repulse Bay operation would go ahead unless Ampol and Japex came to terms and the remaining oil operations along the Reef remained unresolved.

Ron Camm provided a solution, however, which would force oil companies to show their hands. If the Queensland government imposed new conditions upon the leases, the companies could be discouraged from drilling. Camm suggested:

Why not let us handle other Reef permits by imposing conditions that are unacceptable to people and let them take the initiative and fight us by saying that we have imposed conditions beyond our powers.

Within this plan, however, Japex would be allowed to drill. The Queensland government was satisfied that drilling in Repulse Bay would be safe; Camm's solution was to be applied across other Reef leases. Gorton was 'not unhappy' with that approach and agreed that drilling could essentially be prevented during the inquiry if conditions which 'would make it virtually impossible for people to drill' were imposed. This plan, however, as Camm asserted, would have legal ramifications. 'We cannot', Camm stated, 'make it public that we are prepared to do this because that in effect would be repudiation.' Drilling on the Reef could be postponed by government manoeuvring, providing the space required for the inquiry to take place.

The Queensland government was determined to distance itself from financial liability. The commission, according to Bjelke-Petersen, was only necessary because of public fears over oil drilling in the Reef. He indicated that the inquiry's findings would vindicate his government's attitude towards the Reef that 'you could not destroy it if you tried'. The Queensland government stipulated that, irrespective of the inquiry's findings, it would not repudiate any leases nor ban drilling on the Reef. If the

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34 Ibid., 14.
35 Ibid., 15.
36 Ibid., 16.
37 Ibid.
38 Ibid., 18.
39 Ibid., 57.
40 Ibid., 56.
inquiry necessitated the existing leases along the Reef be rescinded, it would play no role in financially compensating the various oil companies. The Commonwealth did not accept Queensland's assertions of federal liability, but this did not create an impasse and the inquiry could proceed.41 Discussions on issues of compensation and liability, which were fuelled by the Queensland government, consumed half the meeting. Evidently, the Queensland government's greatest anxiety surrounding the Reef was that it would somehow be financially responsible for compensating oil companies. The ecological hazards of drilling the Reef for oil were secondary at best.

Discussion concerning the construction of the inquiry was less adversarial. Both sides agreed the nature of the inquiry would remain open, and deferred the decision of whether it should be a Royal Commission to a later date. Bjelke-Petersen desired to see 'the widest possible inquiry to kill this matter once and for all and to decide what we can do and what we cannot do'.42 Impartiality of the committee was important. He stated:

We would prefer to keep the membership apart from any men in any government departments. We do not want anybody from our departments...If we put in one of our men we would not feel that it was fair either. We would like to be in a position in which nobody could point a finger at us and say: "You have loaded this committee".43

Neither government desired to include conservationists or trade unionists on the committee. The Queensland government was particularly anxious for the inquiry to investigate the probable benefits of an oil industry on the Reef. Bjelke-Petersen considered this to be an oversight in the controversy and added: 'I say: "What if we get a lot of oil?" They say: "That does not matter. You should not drill the Reef"'.44 Queensland Attorney-General Peter Delamothe agreed, and suggested that although there would be dangers inherent in drilling they might be outweighed by the advantages. Gorton, however, refused to ask the potential inquiry to make that judgement.45 Both governments conceded that off-shore oil drilling presented possible dangers to the Reef, but disagreement emerged over how the inquiry should report on its findings. Could an inquiry rule out possible areas for oil drilling; could it, alternatively, recommend areas where drilling could take place, or could it make a

41 Ibid., 59-60.
42 Ibid., 69.
43 Ibid., 72.
44 Ibid., 76
45 Ibid., 77.
comment on the degree to which oil companies could eliminate potential dangers? The latter possibility was considered unpalatable from the Queensland perspective and Camm asked: 'To what extent you can [sic] act to eliminate danger? The only extent is to prohibit drilling'.

The Canberra meeting revealed the various motivations and forces acting upon the Queensland government's attitude towards the Reef. Notably, the government was under enormous political pressure from a number of different directions. It considered itself to be stuck in an almost irreconcilable dilemma between making decisions that appeased its electorate and maintaining confidence with foreign and commercial interests. Public opinion had well and truly turned against it on the Reef issue. When the Canberra meeting came to a close and decisions on what to tell the media needed to be made, the Queensland contingent were eager to avoid any form of controversy or embarrassment. 'I do not want to say anything that will embarrass anybody' Bjelke-Petersen said. 'I have been embarrassed so much I do not think I could be embarrassed any more'. Additionally, the trade unions had rendered plans to drill in Repulse Bay impossible for the time being and the Commonwealth government refused to allow the Queensland government's position on repudiation to dictate the future of the Reef. The Queensland government was not in a position of strength.

Additionally, the Queensland government was determined to position the Reef issue, at least the repudiation of oil leases, as a Commonwealth responsibility. Alternatively, on Repulse Bay it was determined to assert its responsibility and sovereignty. It was a confused position which asserted state rights on the one hand but seemingly surrendered sovereignty on the other. The inquiry, the Queensland government imagined, would ultimately allay public concern and demonstrate that drilling on the Reef could go ahead. It was the Queensland government who eventually suggested that the inquiry take the form of a Royal Commission since it was the only way to assure, Bjelke-Petersen asserted, 'a fairly full inquiry'. It also had the benefit, Camm pointed out, of forcing 'some people to come along and divulge where they obtained their information'. For the Queensland government, the Royal Commission

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46 Ibid., 76.
47 Bjelke-Petersen submission to Conference of Commonwealth and State Ministers, 29 January 1970, 6. NLA, MS 7984, Papers of Sir John Gorton, Box 11.
48 Proceedings Conference of Commonwealth and State Ministers, 29 January 1970, 94. NLA, MS 7984, Papers of Sir John Gorton, Box 11.
49 Ibid., 70.
50 Ibid., 71.
could perhaps broaden the public perception of the Reef's possible economic qualities to include geological exploitation and provide the requisite good-will for the programme of oil exploration to continue.

**Uniting the Conservationists**

The conservationists were initially thrilled with the announced black ban. Freda McLennan from the Save the Reef Committee (STRC) wrote to Büssst: 'Hurray for Senator Georges and the Transport Worker's [sic] Union, and the only black ban I've ever cheered for in my entire life.' Weeks after Georges' announcement Büssst wrote to him to thank him for the intervention and signalled the importance of the black ban in the Reef campaign. Büssst wrote: 'I now feel for the first time since the original Ellison Reef case, that we have a genuine chance of protecting the Barrier Reef from gross and ill-informed exploitation by Ampol-Japex, Exoil and others.' The significance of the union intervention could be read in Büssst's letters to others. He shared his elation with The Australian reporter Adrian Deemer and his amusement at the suppressed cut-throat battle between Ampol and Japex as to who pays how much to whom! Büssst also celebrated the black ban with Wright and declared:

> The submission I wrote some time ago for the A.C.T.U eventually stirred things up, as did my hasty dash to Townsville to see Whitlam, to ask him to put a ban on the rig. It has taken 2 ½ years to bend this weapon – this is it, and the screws can be tightened still further, if the government enquiry is not over and above board, and if we are not permitted to import overseas scientists.

Wright wrote that the black ban was a vindication of all of Büssst's campaigning, that the black ban was the 'breakthrough'.

The good news continued for the conservationists. A by-election for the seat of Albert was held on Valentine's Day. Opposition Leader John Houston was determined to make the Reef a major issue. So too were the conservationists. The Labor and Liberal candidates both publicly opposed drilling the Reef for oil, while the Country Party candidate sought to keep the debates to local issues. In the end the Liberal candidate won. To Büssst, Wright wrote:

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51 McLennan to Büssst, 7 January 1970, 1. JCU, Büssst Papers, 2/12.
52 Büssst to Georges, 27 January 1970. JCU, Büssst Papers, 2/12.
53 Büssst to Deemer, 28 January 1970. JCU, Büssst Papers, 2/12.
54 Büssst to Wright, 4 February 1970. JCU, Büssst Papers, 2/13.
55 Wright, *Coral Battleground*, 105.
56 'Reef drilling a major issue in Albert poll', *Courier Mail*, 17 January 1970.
Petersen is really mad with us over the Albert by-election. What he does not yet realise is that it's better to lose a battle than a whole war; which he would have done at the next election if the Albert one had not given him a chance to save his bacon.57

In *Coral Battleground*, Wright recalled the importance of the Albert by-election as being the moment when the 'trades unions and the conservationists were no longer an "irresponsible minority"'.58

Despite their elation the conservationists were sceptical of the announced inquiry. They were partially concerned that the inquiry would align with a conference of Australia Petroleum Exploration Association (APEA) in March, which would make it easier for that organisation to lure witnesses to their cause. In contrast the conservationists were unable to finance the travel and accommodation costs of supporting witnesses. The WPSQ decided to write to Gorton requesting assistance to bring 'expert witnesses forward'.59 Büsst had already sent a letter to Gorton expressing his dissatisfaction with Bjelke-Petersen's assertion that 'people giving evidence at the enquiry would have to meet their own expenses'.60 Büsst protested and insisted the inquiry would be 'a complete farce and not worthwhile attending, since it will be stacked with Queensland government and oil company nominees'.61 Provocatively, Büsst suggested that the oil companies employed many marine biologists, 'but with the proviso that the companies retain the right to publish their findings. If the findings are unfavourable, they are not published'.62 Finally, Büsst listed a number of scientists whom he believed would add important evidence to the inquiry and requested they should be invited and their attendance paid for; if the funds were not provided, or assurances were not received, Büsst would 'have no option but to conduct a public Australia-wide appeal for funds through the Press, particularly *The Australian*, who have shown themselves to be most sympathetic to conservation matters'.63 Four days later Büsst advised Deemer that the Queensland government intended to draw on 'funds to import overseas geologists and others already in favour of mining the Reef, but conservationists have the funds to import exactly none'.64

58 Wright, *Coral Battleground*, 131.
60 Büsst to Gorton, 2 Feb 1970, JCU, Büsst Papers, 2/16.
61 Ibid.
62 Ibid.
63 Ibid.
64 Büsst to Deemer, 6 Feb 1970. JCU, Büsst Papers, 2/12.
Finances were one concern for the conservationists, the other was a need to form a consistent argument across the various organisations and rouse greater support from the scientific community. At their 2 February meeting the WPSQ sharpened its stance on the Reef issue, and decided to publicly declare its complete opposition to any form of mining or oil drilling. It would no longer seek appeasement through a moratorium. The organisation distanced itself from the notion of 'conservation' and 'controlled exploitation'. Geological exploitation was to be distinct from other forms of Reef use. A statement was tabled which asserted:

Specifically, we believe that there should be absolute protection, sine die, against mining for limestone or other minerals, and against exploration for and extraction of oil, or natural gas...Progressive and controlled development of tourist and fishing industries based on the results of adequate and continuing scientific research to ensure that the type, location and extent of developments do not damage the Reef resources in the long or short term! Our attitude towards the proposed development of a marine oil industry on or near the Great Barrier Reef is therefore unequivocal, and our policy of preservation (as opposed to 'conservation' meaning 'controlled exploitation') would be maintained until it were shown that no alternative sources of oil existed elsewhere.65

The union black ban, Ampol's retreat and the announcement of the inquiry demonstrated that public opinion was significantly in favour of the 'preservationists' position. The WPSQ's intensification of its position sought to utilise the increased attention and sympathy for its position. Additionally, the WPSQ's decision to designate itself 'preservationist', rather than 'conservationist', created a crucial distinction between it, the ACF and the GBRC. As Wright lamented in Coral Battleground she, and the WPSQ, felt frustrated by pragmatic positions on Reef conservation.66

The WPSQ may have firmed its individual stance, but the inquiry would warrant a distinct and unified case from all the conservationist bodies, including the GBRC. Patricia Mather (GBRC secretary) prepared an agreement of the conservation organisations and presented it to a collection of the WPSQ and Save the Reef Committee members. Mather's proposed agreement criticised the inquiry for its limited scope and its lack of statutory authority. She considered that the required interpretation of technical evidence would prove problematic and, above all, believed the entire endeavour unnecessary. Critically, the inquiry would not address whether 'an oil

65 Minutes of Meeting of WPSQ, 3 February 1970, 5. NLA, MS5781 Papers of Judith Wright, 1944-2000, 3/19. The statement had been circulated among the WPSQ senior members from January 22.
66 See: Wright, Coral Battleground, 52.
industry in the Great Barrier Reef waters' was 'essential for Australian development'.

Mather's agreement then criticised the lack of responsibility assumed by either government to conserve the Reef and asserted that the only action which had occurred was the result of the energy and tenacity of 'citizen vigilantes' and scientists.

Much like the WPSQ statement, Mather's provided an unequivocal list of demands on behalf of the GBRC:

They want the conservation of the Great Barrier Reef to become law; they want an appropriate authority whose experience, expertise and resources will ensure that the area is administered under the law; they want the Great Barrier Reef removed from the arena where, for too long, it has been used politically.

Wright's scepticism of the GBRC was entrenched. She commented that Mather's agreement seemed 'sensible enough to us' but, referring to the GBRC's previous reluctance to take a leading role, Wright lamented that 'the vigilantes [WPSQ and QLS] are to be those responsible for calling evidence'. Despite an obvious need to unite before the impending Commission, the divides between the conservationist groups remained unbridgeable, particularly that between Mather and Wright. In a letter to Büsst, Wright described Mather as 'a little like the crocodile...welcoming little fishes in with gently smiling jaws...but this little fish can smile too.' The conservation groups may have all signed an agreement to present a unified message, but in practice wide divisions remained.

Evidently, however, the decision by the GBRC to shift its position on oil drilling and embrace the support of the conservationists was not taken unanimously by its executive. The GBRC had already begun to advocate the management of the Reef by a statute authority which could appoint technical advisory bodies where necessary, but that plan had gathered little momentum.

As the oil issue continued to develop in late 1969 various members of the GBRC executive voiced concerns that the Committee was moving too far towards an anti-drilling stance. At the 1969 AGM meeting, Dorothy Hill expressed anxiety that the committee was about to commit to prohibiting drilling of the

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68 Ibid.
69 Ibid.
72 Great Barrier Reef Committee Meeting No. 114, 27 November 1969, 2. UQFL, UQFL25 Dorothy Hill Collection, Box 24, Great Barrier Reef. Minutes, etc. Publications.
Reef for oil. With no movement from governments towards the GBRC's policy for a single statute authority to administer the Reef's conservation and exploitation, the GBRC's executive took a decisive step. It would advocate a ban on oil drilling pending the establishment of the authority.

The dramatic shift agitated some members of the GBRC. George Orme, a geologist and the GBRC's treasurer, wrote to Mather:

The recent decision of the 'Executive Committee' to oppose oil drilling on the Continental Shelf off the Queensland Coast is a sudden change in the sensible attitude which has so far been maintained and supported by most members of the Committee…I will not support a resolution which advocates a complete ban on drilling the Queensland Continental Shelf, especially if this extends to exploratory holes. On a policy matter as important as this, I sincerely hope that an accurate and complete dossier will be obtained representing the opinions of all members of the Committee, however, short the time might be, and regardless of the pressures exerted by other scientific and lay societies to support their own resolutions. I feel this is particularly important since the Executive Committee is dominated by biologists.

Mather remained resolute. The GBRC, she replied, maintained its stance that the Reef's resources 'should be available to the people of Australia, with the proviso that these resources should be properly husbanded'. The Executive's decision, however, which she conceded was not unanimous, was:

Based on the fact that a delay in the accumulation of geological knowledge may be necessary to ensure that the extant biological system is not harmed by a too-rapid development in the area before the necessary technical expertise and biological information is available.

For the GBRC and the conservationists the black ban and the announced inquiry introduced new complications in their endeavours to reconcile the Reef's perceived value. While the conservationists and the GBRC had maintained that the Reef's value was a composite of its economic and natural attributes, their approaches to the Reef's geological resources was a point of differentiation. In early 1970 both groups hardened their stance against oil-drilling by varying degrees. The GBRC still adopted pragmatism, but it was clearly less willing, or likely less able, to rely on the Queensland government for meaningful Reef policies.

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73 Ibid., 21.
74 Patricia Mather to Members of the GBRC, 2 April 1970, UQFL, UQFL25 Dorothy Hill Collection, Box 24, Reef Matters.
75 Orme to Mather, 20 February 1970, UQFL, UQFL25 Dorothy Hill Collection, Box 24, Reef Matters.
76 Patricia Mather to Members of the GBRC, 2 April 1970, 1. UQFL, UQFL25 Dorothy Hill Collection, Box 24, Reef Matters.
77 Ibid., 2.
The Japex Issue

Meanwhile, the Repulse Bay issue lingered unresolved. Japex expedited the situation by writing to Bjelke-Petersen. Confirming the fears of the Queensland government, Japex had interpreted the announcement of an inquiry as a formal recommendation by the governments to abandon operations in Repulse Bay. Japex explained that it was 'totally sympathetic to the public concern' for the need to protect the Reef, and did not wish to 'debate the justification or otherwise' for this concern in relation to the drilling programme in Repulse Bay. 78 The letter noted, however, that because the 'recommendation' was made so late it was impossible for it to defer drilling without substantial financial loss: a loss which Ampol was not legally liable to share in. Japex thus declared:

This Company has come to Queensland in good faith and confident of your Government's goodwill to the investment of capital in your State. Now we find ourselves highly embarrassed by the position that your Government's recommendation has placed us in. This Company believes it must give the fullest weight to the expressed wishes of your Government and indeed for us to do otherwise is, to us, unthinkable. However, it seems to us to be neither fair nor realistic to expect our Company to abandon such a large financial investment simply to await the outcome of this inquiry which, we read in the Press, is regarded by many people as belated...In all the circumstances, therefore, this Company considers that it is entitled to ask your Government to compensate it for the loss that would be incurred by the deferment of the drilling programme in Repulse Bay. 79

The losses which Japex sought from the Queensland government came to $1 million (approximately $11 million today).

Publicly, and privately, the Queensland government maintained that it would not repudiate any rights it had conferred but would agree to halt drilling at Repulse Bay if requested to by Ampol and Japex. Bjelke-Petersen claimed halting the drilling in Repulse Bay was 'unlawful and unnecessary' but that statements of the damage to the Reef from oil drilling had become 'so wild' that 'the only way to allay public concern' was to hold an inquiry and give Australians a chance to 'judge for themselves the wisdom' of the government's politics. 80 Legal advisors instructed the Queensland government that it had not yet infringed upon the law and was not liable. They were warned, however, against introducing new controls, as had been discussed with the

78 S. Oka (Japex GM) to Bjelke-Petersen, 6 Feb 1970. QSA, SRS 1043, ID 538160 Committee of Inquiry into the Possible Effects of Oil Drilling – Great Barrier Reef.
79 Ibid., 2.
Commonwealth, unless they were 'bona fide directions for the purpose of the protection of natural resources'.\textsuperscript{81} Armed with the necessary legal advice Bjelke-Petersen wrote to Gorton and reminded him that Queensland would not accept financial liability for deferment or suspension of drilling as a consequence of the inquiry. He requested an 'immediate Conference' to determine whether reimbursement was warranted and whether the Commonwealth was prepared to meet such claims.\textsuperscript{82}

That same day, Japex wrote to both leaders informing them that they had decided to terminate the agreement with the company contracted to mobilise preparatory work and provisions for the oil rig \textit{Navigator}.\textsuperscript{83} The decision, Japex claimed, minimised the cost of deferment but also acted in accordance with the wishes expressed by both governments. The letter then went on to make two substantial claims. First, Japex emphasised that its actions should not be interpreted as confirmation that drilling in Repulse Bay would constitute a threat to the Reef. It did accept, however, that this judgement 'should be made by the Australian people'.\textsuperscript{84} Second, it reiterated that it expected reimbursement from the Queensland government.\textsuperscript{85}

The Queensland government were encouraged to 'take a strong stand' against Japex's claims.\textsuperscript{86} It responded to Japex by declaring that the joint government inquiry was being organised but did not constitute a recommendation to any companies concerned with oil drilling on the Reef. Furthermore, Bjelke-Petersen asserted that any steps Japex had taken, and any loss arising from them, were matters between Japex and Ampol.\textsuperscript{87} The government was now confident of its lack of liability but, believing the Commonwealth would be targeted by Japex, continued to press for a conference with them. Gorton, however, seemed unfazed by Japex's claims and reminded Bjelke-Petersen that the requirement to have a conference depended on the inquiry's findings.\textsuperscript{88} Japex again claimed that it would seek compensation for deferment, but that it and Ampol would terminate their immediate drilling agreement and defer it subject to the outcome of the inquiry. They stipulated, however, that if any new conditions were imposed on drilling in areas covered by Ampol's Authorities or Permits as a result of

\textsuperscript{81} Opinion from Arnold Bennett QC Regarding Ampol Exploration (Queensland) Pty. Limited and Japex Australia Pty. Ltd, 12 February 1970, 2. QSA, SRS 1043, ID 538160.
\textsuperscript{82} Bjelke-Petersen to Gorton, 13 February 1970, QSA, SRS 1043, ID 538160.
\textsuperscript{83} Oka to Bjelke-Petersen, 13 February 1970, 2. QSA, SRS 1043, ID 538160.
\textsuperscript{84} Ibid.
\textsuperscript{85} Ibid.
\textsuperscript{86} Memorandum Arnold Bennett, 16 February 1970, 2. QSA, SRS 1043, ID 538160.
\textsuperscript{87} Bjelke-Petersen to Oka, 17 February 1970, 1. QSA, SRS 1043, ID 538160.
\textsuperscript{88} Gorton to Bjelke-Petersen, 25 February 1970, QSA, SRS 1043, ID 538160.
the inquiry then Japex would again seek reimbursement from either government for the costs of termination. The Repulse Bay operation was now suspended and neither government received any further communications from Japex during the five years of the Royal Commission.

**Construction of the Commission**

Following the Canberra conference both governments constructed their lists of preferred candidates for the inquiry. They had agreed in Canberra that the likely committee would be a three-person panel consisting of a judge as chair, a marine biologist and an engineer. The Commonwealth included a judge as chairman (Justice John Nimmo), a marine biologist (Dr Eric Smith) and United States petroleum engineer (Mr. A.D. Acuff). In a Cabinet submission, Bjelke-Petersen raised objections to the inclusions of Nimmo and Acuff. Nimmo, Bjelke-Petersen argued, was 'a Commonwealth judge' and Bjelke-Petersen thought it essential that a judge be found who would be 'sympathetically disposed' to Queensland's position. He asserted that his own 'discreet enquiries' had led him to believe that Sir Gordon Wallace was agreeable to having his name put forth and would be a 'suitable nominee'. Acuff's inclusion was considered unacceptable because of his participation in the inquiry into the Santa Barbara oil-spill and in the 'rewriting' of the United States' off-shore drilling regulations following that incident. 'I feel that in Mr Acuff there is a person who would come to the Committee with at least some pre-determined views which could be detrimental to our position' Bjelke-Petersen told cabinet. As an alternative, Bjelke-Petersen recommended Canadian petroleum engineer, V.J. Moroney, be nominated as the third Commissioner. The Premier had learned that Melbourne-based Queen's Counsel (QC) A.E. Woodward was prepared to have his name put forward as 'Counsel assisting the Inquiry': a position Bjelke-Petersen thought 'every endeavour should be made' to have filled by 'a person who will allow this State's attitude to be fully presented'. Finally, Bjelke-Petersen declared to his cabinet that it was 'essential that

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89 Pavey, Wilson, Cohen and Carter Solicitors (on behalf of Japex) to Bjelke-Petersen, 3 March 1970, 2. QSA, SRS 1043, ID 538160.
90 Gorton to Bjelke-Petersen, 4 February 1970. QSA, SRS 1043, ID 538160.
91 Copy of Cabinet Minute, Committee of Inquiry – Barrier Reef, 10 Feb 1970, 1. QSA, SRS 1043, ID 538162.
92 Ibid., 2.
93 Cabinet Minute, Decision 14082, Committee of Inquiry – Barrier Reef, 10 February 1970, 2. QSA.
94 Ibid., 3.
95 Ibid.
the Mines Department should ensure that the Queensland case is adequately prepared for presentation to the Committee and that the Department be authorised to retain leading Counsel for this purpose’.96

Bjelke-Petersen’s explanation to Gorton for Acuff’s removal, however, did not exactly align with the one provided to Cabinet. He clarified that the government did not deny Acuff's credibility, but believed the position held by the petroleum engineer should be given to an ‘individual with world-wide reputation as an expert on oil-drilling procedures and one who has a complete appreciation of the safety conditions imposed for well-control’.97 Gorton urged Bjelke-Petersen to reconsider his position, and maintained 'it would be better if the Committee were comprised of persons who have had no association with industry’.98 In the same letter Gorton agreed to Queensland's suggestion, made at the Canberra conference, that the 'Committee of Inquiry' become a parallel Commonwealth and Queensland Royal Commission.99

The Queensland government circulated memorandums regarding both Moroney and Acuff following Gorton's response. The Moroney memorandum asserted that for 'the Queensland case' it was 'essential that there be a complete appreciation' of the control and safety measures being applied by the Mines Department. Accordingly, Moroney's long association with the oil industry and experience in oil drilling did not negate his inclusion, in their opinion, but enhanced his suitability.100 Contrastingly, Acuff's involvement in the investigation and follow-up to the Santa Barbara blowout brought into question his independence and impartiality. On that basis it was determined, once more, that his membership was unacceptable.101 To the Commonwealth, however, Bjelke-Petersen argued Acuff's lack of impartiality would be perceptible to the public, hiding his own government's concerns.102

Gorton made one final attempt to secure a petroleum engineer of his choosing on the Committee. He nominated R.K. Dickie who was then working as the Petroleum Inspector of the British Minister of Technology.103 Again Bjelke-Petersen objected and declared that Dickie's qualifications and status did not come within the 'prescribed

96 Ibid.
97 Bjelke-Petersen to Gorton, 12 February 1970, 2. QSA, SRS 1043, ID 538160.
99 Ibid., 2.
100 Undated memorandum regarding Mr V.J. Moroney. QSA, SRS 1043, ID 538160.
101 Undated memorandum regarding Mr A.D. Acuff, QSA, SRS 1043, ID 538160.
category' and his nomination was unacceptable to the Queensland government. Bjelke-Petersen added that Dickie was known to officers within the Queensland Mines Department who were not 'impressed with his knowledge or ability'. Expressing a sense of urgency, Bjelke-Petersen nominated three new candidates and said of the Commission:

> It is now nearly two months since we agreed to its establishment and any further delay will not assist the Committee in its work when it does commence its hearings or, for that matter, our Governments' standing in the eyes of the people.\(^{105}\)

The entire episode made clear that the most pertinent issue to be considered by the Commission, at least from the Queensland government's perspective, was the possibility of an oil leak. A recommendation in favour of Queensland's position would substantially undermine opposition to drilling the Reef.

**Oceanic Grandeur and Commonwealth Sovereignty**

By March, Bjelke-Petersen's eagerness to move forward with the Commission was largely motivated by the *Oceanic Grandeur* episode.\(^{106}\) On 3 March the oil tanker *Oceanic Grandeur* struck an uncharted rock pinnacle east of Wednesday Island in the Torres Strait. The rock ruptured the vessel's hull causing a 55 metre gash from which oil gushed out.\(^{107}\) The chemical dispersants Gamlen and Corexit were used to break-down the spilt oil and the *Oceanic Grandeur's* residual oil was transferred to another vessel, the *Leslie J. Thompson*.\(^{108}\) In the reports which followed it was determined that neither Gamlen nor Corexit effectively dispersed the spilt oil and emphasis was placed on the role of tides, winds and warm tropical water in its dispersal and breakdown. Additionally, the Queensland government's Research Fisheries Biologists concluded that the spill had no impacts on the local marine or bird life.\(^{109}\)

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\(^{104}\) Ibid., 1.
\(^{105}\) Ibid., 3.
\(^{106}\) Ibid., 1.
\(^{108}\) Ibid., 1-5.
\(^{109}\) 'The Grounding of the oil tanker *Oceanic Grandeur* in the Torres Strait'.
The lack of impact, however, while attributed in subsequent reports to good management by the government, was more generally regarded as 'lucky'. Strong east-west tidal currents ensured that the spilt oil remained relatively confined before breaking up and reaching the nearby shores and reefs, while 'unusually calm' weather allowed for the pumping of oil between the two vessels. Despite the sound management of the spill, the Oceanic Grandeur was a stark warning for the Queensland government and this sentiment was expressed in the report by the Research Fisheries Biologist, Noel Haysom, who wrote:

I consider that we were very lucky on this occasion in that the spill was comparatively small, in that we were able to deal effectively with the spill despite the novelty of the situation for most of the officers involved... We may well be involved in the future with an oil spill in a location where the use of detergent may be highly inappropriate, and we have very scanty knowledge of the efficacy of other techniques and the mechanics of their application. I suggest steps be taken to remedy this situation.

For the Queensland government, the Oceanic Grandeur was a reminder of the necessity for the impending Commission to allay concerns for drilling the Reef for oil.

On the same day the Oceanic Grandeur struck rock, the Commonwealth publicly signalled its intention to address an issue close to the heart of the conservationists. The Commonwealth had been considering the issue throughout 1969, but on 21 January cabinet reached a decision to assert 'Commonwealth jurisdiction over off-shore waters from low water mark outwards to the edge of the continental Shelf and over sea areas granted to it by the Convention on the Territorial Sea and Contiguous Zone 1958.' Sparked, in part, by Percy Spender's address at the ACF symposium it was believed that the new legislation would: 'establish clear lines of authority as between the Commonwealth and the States in relation to practical issues which arise, e.g. the preservation of the resources of the Great Barrier Reef.' The legislative agenda was proposed without consultation with the states, who as the Commonwealth expected, opposed the legislation. Gorton's eventual legislation, the Territorial Sea and Continental Shelf Bill, found opposition amongst the states, as did a

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112 The Grounding of the oil tanker Oceanic Grandeur in the Torres Strait', 14.
113 House of Representatives, Hansard (3 March 1970), 11.
115 Ibid., 1 and 6.
number of his policies, which created angst within his own caucus who replaced him as leader with William McMahon on 10 March 1971. Under McMahon the Bill lapsed and the issue of sovereignty remained unresolved until 1975.

The Commission Begins

On 5 May, letters were sent to Sir Gordon Wallace, Dr E.H. Smith and John Moroney requesting each man form part of the Royal Commission. Bjelke-Petersen had his Commission. He had secured his preferred Chairman and even more importantly he had secured his preferred petroleum engineer. The Terms of Reference were also announced for the Commission:

1. Taking into account existing world technology in relation to drilling for petroleum and safety precautions relating thereto, what risk is there of an oil or gas leak in exploratory and production drilling for petroleum in the Area of the Great Barrier Reef?

2. What would be the probable effects of such an oil or gas leak and of the subsequent remedial measures on:
   a) The coral reefs themselves;
   b) The coastline;
   c) The ecological and biological aspects of life in the area?

3. Are there localities within the Area of the Great Barrier Reef and, if so, what are their geographical limits, wherein the effects of an oil or gas leak would cause so little detriment that drilling there for petroleum might be permitted?

4. If exploration or drilling for petroleum in any locality within the Area of the Great Barrier Reef is permitted, are existing safety precautions already prescribed or otherwise laid down for that locality regarded as adequate and, if not, what conditions should be imposed before such exploration or drilling could take place?

5. What are the probable benefits accruing to the State of Queensland and other parts of the Commonwealth from exploration or drilling for petroleum in the Area of the Great Barrier Reef and the extent of those benefits?

Wright recounted the conservationists' interpretation of the terms of reference as 'unsatisfactory', 'narrow' and 'loaded against a negative answer to drilling'.116 Wright found the lack of Australian experts on the Commission disappointing, and noted that Dr Smith's studies of the Torrey Canyon disaster had been sponsored by oil companies. In the views of the conservationists that sponsorship tarnished the credibility of both Smith's studies and his environmental outlook.

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116 Wright, Coral Battleground, 153.
The conservationists, whose concerns about the Commission aligning with the APEA had come to nothing, were still unsure of how they were to finance their case. They had had some good fortune in early April when Brisbane-based legal firm Lippiatt and Co. agreed to represent the five groups: ACF, WPSQ, QLS, GBRC and STRC. The firm organised to rotate various barristers according to their other commitments.\textsuperscript{117} What remained uncertain, however, was how the costs of legal representation would be met. Consequently, the conservationists remained unconvinced that the Commission would be able to come to an impartial judgement. The secretary of the WPS of Australia wrote to both Gorton and Governor-General Paul Hasluck urging the government ‘pay the expenses of all witnesses’ in the interest of impartiality, but did not specifically request payment for the conservationists' legal representation.\textsuperscript{118}

Wright recollected the anxieties surrounding Lippiatt and Co's ability to present the case for the conservationists. Despite the tension between herself and Mather, Wright welcomed the perceived scientific authority the GBRC provided, but was suspicious of the ACF’s tendency to offer alternative views to the other conservation groups.\textsuperscript{119} Wright believed it would be apt for the ACF to have separate representation. Lippiatt and Co., however, approached the Queensland Bar for support and was rewarded with thirty-five volunteers including five QCs.\textsuperscript{120} The amount of support the QCs and members of the Bar were likely able to lend without financial compensation was, however, still unknown.

The opening day of the Royal Commission, 22 May 1970, provided the conservationists an opportunity to express their concerns before the Commission. Arnold Bennett QC, who represented the Minister for Mines for Queensland, stipulated that his interest was to represent 'the Crown in the administration of the Mining Laws of Queensland and in particular the Petroleum (Submerged Lands) Legislation'.\textsuperscript{121} P.D. Connolly QC, who represented the conservationists, drew a clear distinction between the conservationists and the government and the oil companies. Connolly stated: 'The case is immensely complicated and the scientific evidence must be voluminous and

\textsuperscript{117} Wright to Büsst, 3 April 1970. JCU, Büsst Papers, 2/13.
\textsuperscript{118} Meisenhelter to Gorton and Hasluck, 1 May 1970. QSA, SRS 1043, ID 538162. In original, 'all' is underlined.
\textsuperscript{119} Wright, \textit{Coral Battleground}, 154.
\textsuperscript{120} Ibid.
extensive. It calls for continuous application both in its working up and its presentation if the Commission is to be properly assisted. He continued:

However, on a voluntary and gratuitous basis the Bar of this State will do its best to ensure that the conservationist view is presented although obviously it will not be possible for it to be presented as adequately as the view of opposing interests who have the funds for continuous representation.

Connolly's remarks prompted a response from the counsel representing the APEA, P.J. Jeffrey, who stipulated its own conservationist credentials. Jeffrey stated:

In view of a remark which my friend, Mr Connolly, has just made advertiring to opposing interests, perhaps I could be permitted to add that in no sense is the Association seeking representation for the purpose of taking a stand adverse to the conservationists as such. The Association for which I seek leave to appear subscribed completely to the objectives of conservation as the prudent employment of available resources and sees the natural environment, just as petroleum, as a resource. It is of concern to us how exploration and production drilling can be quite compatible with a viable conservation programme for the reef.

Unlike the Queensland government, the APEA entered the Commission explicitly embracing a composite valuation of the Reef's economic and natural attributes and the need to protect both. The conservationists, however, who would indeed need to provide evidence to counter both the Department of Mines and the APEA, were still without financial support. The Royal Commission adjourned until 14 July.

In the meantime the conservationists continued to lobby for financial assistance. Wright campaigned for full-time legal aid in the media. She relayed Connolly's concerns over collating and delivering the immense and technical nature of the evidence, and called upon the Commonwealth to provide the necessary funding. The conservationists also endeavoured to convince Queensland governmental departments and ministers to present evidence before the Commission. David Magnus from the STRC wrote to both the Minister for Primary Industries (John Row) and the Minister for Tourism (John Herbert) urging them to make submissions outlining the importance of the Reef, and the implication of potential damage to it, a responsibility held by their...
respective portfolios. Both ministers, however, declared that they would only make a submission if requested by the Commission to do so.127

Connolly's remarks on the first day of the Commission, however, prompted the Chairman Gordon Wallace to act. Wallace urged both government leaders to provide financial assistance to the conservationists to enable them 'common legal representation before the Commission'.128 The Queensland government considered its position and privately negotiated its response. It concluded that the Commission's finances were entirely the responsibility of the Commonwealth and that it was not Queensland policy to pay the legal expenses of bodies seeking to appear before the Commission, apart, of course, from their own. Additionally, it was felt it could provide an embarrassing precedent, whereby the conservationists could call 'numerous witnesses and run up a tremendous legal bill without any real benefit to the purposes of the Commission'.129 In the end, however, the Queensland government decided, without making it public, that they would agree 'in principle' to the proposal by Wallace. It wished to avoid a situation 'where the Commonwealth could publicly state it had been agreeable to assisting the conservationists' but Queensland had 'refused to do so'.130 Additionally, the government resolved it would 'not look well to reject the Chairman's recommendations in view of his status and our acceptance of his appointment'.131

Lippiat and Co, however, had 'pressed' the Prime Minister for funding and Gorton folded. On 1 July, before Queensland could send its response to Wallace's letter, Gorton sent his decision to Bjelke-Petersen via telegram: 'The Commonwealth believes that it is in the interests of the inquiry that conservationist bodies be effectively represented before the Commission. The Commonwealth will therefore meet their reasonable legal costs, including counsels (sic) fees'.132 Bjelke-Petersen's reply was terse:

Have your telegram advising Commonwealth will meet reasonable costs legal representation of conservationist bodies before Barrier Reef Royal Commission. I accept that this is your prerogative.133

127 Herbert to Magnus, 8 June 1970, QSA, SRS 1043, ID 538162. Row's response is explained in the postscript of Herbert's reply.
128 Premier's Department Memorandum, 22 June 1970, 1. QSA, SRS 1043, ID 538162.
129 Ibid.
130 Ibid., 2.
131 Ibid.
132 Telegram Gorton to Bjelke-Petersen, 1 July 1970, QSA, SRS 1043, ID 538162.
133 Bjelke-Petersen to Gorton, 1 July 1970, QSA, SRS 1043, ID 538162.
Gorton informed the conservationists with a telegram to the WPSQ the next day. The stage was now set for the Royal Commission and the conservationists were adequately financed to prosecute their position.

The black ban, and the positive reaction to it, embodied the limits of the value attached to the Reef's economic attributes. The public and the media overwhelmingly supported the intervention of the unions and the black ban became a symbol of a growing frustration with government inability, at both commonwealth and state level, to take resolute action on the oil issue. Importantly, the prevalence of the anti-drilling position among the Australian public was so visceral that it provided the necessary will for the Commonwealth to push for the establishment of an inquiry and launch legislation to seize sovereignty over off-shore petroleum reserves. It prompted the conservationists, particularly the WPSQ to sharpen their stance on oil drilling while providing impetus for the GBRC to make the establishment of a Reef authority, rather than apolitical stances and pragmatic conservationism, a principal part of their policy.

With the beginning of the Royal Commission the 'Save the Reef' campaign moved out of the public forum and into a court-room. The proponents of the campaign continued to be active, but most of their energies would be directed towards formulating evidence and identifying witnesses. For both governments, but especially Queensland, the Commission provided some relief from the controversy. Undoubtedly, the oil issue had demonstrated the political fragility of the Queensland government on issues to do with the Reef and public pressure had manifested most starkly in the first six months of 1970. While the Queensland government enjoyed a minor victory by having its preferred candidates on the Commission, it must have felt some anxiety when its preferred Chairman began to advocate for the financial support of the conservationists. The Commission would be left to consider the issue of oil drilling on the Reef. The first six months of 1970, however, revealed that the Australian public, who had historically evaluated the Reef for its combined economic and natural attributes, considered the Reef too important to be geologically exploited.

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134 Telegram Gorton to WPSQ (Judith Wright), 2 July 1970. JCU, Büss Papers, 2/16.
Map 7: Map showing areas held under petroleum exploration titles off shore and areas off shore which were under application in 1970.

Source: Appendix D in Statement of A.W. Norrie, NLA, MS 3990, Exhibits of the Royal Commission, 2/3 (ii), Exhibit 80. Modified by Coreen Wessels.
Chapter Eight - From Reef Commission to Marine Park

When the Royal Commission resumed proceedings, both the federal and state governments hoped for a speedy resolution. On the second sitting day, however, counsel assisting the Commission, A.E. Woodward emphasised that the size and scope of the material being presented created 'a most difficult and complex task'. The commissioners, he claimed, would require 'at least sufficient working knowledge' of the disciplines of petroleum chemistry, meteorology, the Reef's hydrology and marine biology before writing a report. Woodward predicted that the Commission would be a lengthy enterprise. Government-held hopes of a speedy resolution were quickly dashed.

It was hoped that the Commission would either allay public fears surrounding oil pollution on the Reef or rule out oil drilling completely. When the Commission released its report, however, it contained no such resolute judgement. The Chairman, Gordon Wallace, stood alone against oil drilling and asserted that too little scientific evidence existed to endow him with sufficient confidence that any area of the Reef was suitable for drilling. The two other Commissioners, however, identified areas appropriate for drilling. What the report did assert unequivocally was that the impacts of oil drilling, both positive and negative, were difficult to assess due to poor knowledge of the Reef's geological and biological characteristics as well as a poor understanding of oil pollution's impact on marine environments. The report preached caution, which provided little satisfaction for the conservationists and Australian Petroleum Exploration Association (APEA) and no clear direction for either government.

1 Gorton to Bjelke-Petersen, 29 May 1970, QSA, SRS 1043, ID 538162.
2 Australia. Royal Commission on Great Barrier Reef Petroleum, 'Royal Commissions on Great Barrier Reef Petroleum Drilling: transcript of proceedings' (Sydney: Commonwealth Reporting Service, 1970-1972), 27-8. Hereafter, the transcripts will be referred to as 'Transcript of proceedings'. Strictly speaking both the state and federal government called Royal Commissions, and in some cases, like the title used in the official documents, the plural format remained in use. In this thesis, however, I will only use the singular form of Royal Commission. Additionally, during this thesis, two collections of the 'Transcript of proceedings' have been consulted: one at the National Library of Australia and the other at the James Cook University Eddie Koiki Mabo Library. The binding conducted by the libraries mean that the collections number 46 and 66 volumes respectively. Thus, rather than referring to the volume number, I will reference the page number, which is common to both. This referencing method was also used in the final reports.
3 Ibid., 28.
4 An undated internal memo likely from September 1970, two months into the Commission's proceedings, asserted a 'conservative estimate' indicated that sittings would last for fifteen weeks, ending in February 1971. With a period allowed for the writing of the report, the memo suggested governments should not expect a report before late 1971. See: Undated memorandum, 'Great Barrier Reef Petroleum Drilling Royal Commissions', QSA, SRS 1043, ID 538162.
However, when the report was released to the public at the end of 1974 the Reef's future was no longer dependent upon the Commission's findings. The Whitlam government claimed Commonwealth sovereignty over the off-shore oil reserves in 1973 and found itself in a High Court challenge against the states. The Commonwealth government had also begun drafting the *Great Barrier Reef Marine Park Act* in 1974.\(^5\) The High Court challenge and GBRMPA's eventual introduction in 1975 overshadowed the Commission's findings both at the time and historically. For instance, James and Margarita Bowen suggested that the report added little to the findings produced by the 1971 Senate Select Committee Report on Off-shore Petroleum Resources.\(^6\) They emphasised the importance of the High Court challenge which rendered the 1967 *Petroleum (Submerged Lands) Act* invalid and ensured Commonwealth control over oil drilling on the Reef. Judith Wright wrote only two paragraphs on the Commission's findings and contended that the report sparked the Commonwealth and Queensland government to each assert control over the Reef.\(^7\) An alternative view was put forth by McCalman who considered the Commission's 'affirmative report' and the High Court's judgement as instrumental in paving the way for 'an eventual settlement'.\(^8\) In the end, oil drilling on the Reef was banned, but few have suggested the Commission unequivocally informed that decision.

A deeper consideration of the Commission's transcripts and exhibits, however, suggest its role in the eventual changes to the Reef's management was more significant than has hitherto been recognised. The Commission was principally concerned with the prospects of an oil industry on the Reef. The proceedings revealed, however, that the anti and pro-oil advocates shared a composite valuation of the Reef's perceived commercial and natural attributes. While proponents of each position maintained adversarial positions on oil-drilling neither sought to disentangle the commercial and natural values of the Reef. This chapter will utilise the transcripts and exhibits from the Commission, associated archival material from both governments and material from the manuscript collections of Judith Wright and John Gorton to examine the Commission as a significant arena in which the Reef's perceived composite natural and economic value was expressed. The Commission allowed the rationale and antecedent for GBRMPA to be articulated; the principal purpose of which was to ensure multiple and competing values would continue to shape the Reef's future.

\(^5\) The legislation was presented to the Royal Commission by Patricia Mather, which recommended its implementation, but the Whitlam government had already moved ahead with their own version of the bill.  
\(^6\) Bowen, *Great Barrier Reef*, 349.  
\(^7\) Wright, *Coral Battleground*, 175.  
\(^8\) McCalman, *The Reef*, 299.
Adversarial Posturing

From the beginning of the Commission it was clear that lawyers representing the Minister for Mines, APEA and conservationists would adopt combative approaches during their cross-examinations. The public campaign had built animosity between anti and pro-drilling proponents. Arnold Bennett, for instance, routinely accused witnesses of bias if they had previously expressed sympathies towards conservationists, or their evidence supported an anti-drilling position. When the Professor of Zoology at the University of California, Joseph Connell, gave evidence on the chemistry of petroleum and remedial measures for oil spills, Bennett's first question to him was: 'Dr Connell, on several public occasions you have declared that in your opinion the oil industry and the Great Barrier Reef cannot co-exist, have you not?'9 Similarly, when an economist argued that drilling the Reef for oil would not have sound economic benefits Bennett suggested his views tended 'toward strong conservationism'.10 If witnesses demonstrated conservationist dispositions, Bennett opted to dismiss their authority entirely. Dick Piesse (Director of the ACF), under Bennett's questioning, conceded that the ACF had not undertaken or sponsored any scientific studies on the effects of oil on corals, or had any geologists, mining or petroleum engineers, or representatives of the oil industry on their council. Bennett posited: 'And yet your foundation and you in this state of lack of advice in regard to certain aspects come up with the demand for a moratorium in order to carry out your research? [sic]'.11 Bennett strove to taint experts whose evidence contradicted the pro-drilling position by suggesting their conservation leanings had biased their findings.

The Queensland government's hostilities conformed to a prevailing expectation that it would be inherently unsympathetic to conservation and its adherents. Consequently, officers of the Department of Mines faced accusations that the Department was an arm of the oil industry. The Chief Government Geologist, J.T. Woods, had published an article in the Queensland Government Mining Journal which questioned the motives and sincerity of conservation campaigns. Conservationists' motives, Woods explained under examination from lawyers representing the Australian Labor Party (ALP), 'could be ones of self-gratification – getting their names into the newspapers is one'.12 Woods had written: 'the

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9 'Transcript of proceedings', 499.
10 Ibid., 9529-30.
11 Ibid., 13456.
12 Ibid., 901.
preservationists [sic] movement...taken in isolation, it casts a blight on progress and is a cancer in the nation's economy'. The ALP counsel announced:

I intend to put these two questions to each Mines Department witness. It was suggested to Dr. Connell that his espousing of the conservationism cause may have introduced some bias into his approach to the question of oil drilling on the barrier reef: would you agree that ownership of shares by Mines Department employees could similarly bias their judgement as to the desirability.

Woods admitted he had and still did hold shares in oil companies but could not say if those companies held interests in the Reef.

Other scientists whose evidence provided support for an oil industry on the Reef were routinely pilloried by the anti-oil proponents. Peter Woodhead, Professor of Marine Biology at the University of Newfoundland, suggested recolonisation following cyclones or Crown of Thorns infestations at Heron and Green Island reefs was 'better' than had been hitherto reported; the findings had implications for how reefs might respond to an oil pollution event. The conservationists' counsel (Connolly) suggested that Woodhead had ignored certain areas of reef 'not favourable to this thesis'. Woodhead, who struggled under Connolly's rapid questions, addressed the Chairman: 'I do feel in a very real sense that Mr Connolly is pushing rather hard and we are perhaps proceeding too rapidly. Certainly I become confused at points and I would prefer a more relaxed approach'. Connolly responded harshly:

But Professor, you are on your own ground, you know, and for my part I do not understand why you should become confused at being asked simple things like, "Can you tell me where you started something and where you finished?" Will you answer the question: what is confusing about where you started and where you finished?

After being urged to move on, Connolly declared: 'The gentleman's credit is in issue as far as I am concerned'.

The adversarial nature was maintained throughout the Commission's proceedings. In their final addresses neither Bennett nor Connolly apologised for their tactics. Bennett defended his aggressive approach to questioning witnesses and announced: 'we submit, beyond controversy that witnesses often put their case on assumptions rather than facts,

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14 Ibid., 902.
15 Ibid., 903.
16 Ibid., 5415-6.
17 Ibid., 5426.
18 Ibid.
19 Ibid.
sometimes extravagantly and sometimes illogically’.\(^{20}\) Connolly made similar accusations of the Queensland government and argued:

I ask the Commission to consider that we have been here for over two years and the only department of state of the State of Queensland which has been represented has been the Mines Department. The Commission would, I think, agree by now that no one of us can say we have a monopoly on the right attitudes and that it is inconceivable that others may have views about the question of drilling the barrier reef for oil which others might not quite rationally disagree with. It is an extraordinary thing that nobody from Queensland has said a word in opposition here.\(^{21}\)

The adversarial posturing was an attempt to distinguish two competing and extreme approaches to the Reef: conservation and exploitation. The positioning of witnesses as biased sought to undermine the reliability of evidence and accordingly, the conservationists or the pro-drilling position. Alternatively, and in contrast to their opponents, the conservationists, APEA and government, sought to align themselves with an apparently more rational approach to the Reef which incorporated composite valuations of the Reef’s natural and economic attributes.

**Rational Approaches Undermined**

While the legal teams representing the conservationists and the APEA had explicitly signalled their 'rational' approaches on the Commission's opening day, the Queensland government missed that opportunity. Before launching into his first cross-examination of the Commission, Bennet took the opportunity to point to the rationality of the state government's own agenda:

Perhaps I could start by making a very brief statement as to the attitude of my client in this Commission. It can be put this way: the attitude of the department is one of responsible concern for the life of the Great Barrier Reef, and also one of responsible concern for the properly controlled exploration for and development of petroleum resources. The Minister and the department will respectfully submit to the Commission that with modern technology there should be no escape of oil whatever, and that with properly applied and supervised skills, and the use of modern equipment, the risk of oil leakage is very remote.\(^{22}\)

From early on the question of 'co-existence' or whether the 'controlled exploitation' of oil and minerals was compatible with rational expectations of the Reef's conservation was a core concern for all parties.

'Co-existence' and 'controlled exploitation' of oil and minerals was indeed possible in the perspective of the government and the APEA. Both bodies frequently questioned

\(^{20}\) Ibid., 14783.
\(^{21}\) Ibid., 18167-8
\(^{22}\) Ibid., 168.
scientists from the GBRC, ACF or the WPS on their individual positions on 'controlled exploitation' and 'co-existence'. On occasion, that scrutiny had the effect of highlighting conformity between the scientific community and the government and APEA. For instance, Frank Talbot, who at the time was Director of the Australian Museum, Deputy-Chairman of the GBRC, and led the One Tree Island research station, endorsed a large tourist industry on the Reef, but advocated control to mitigate its impacts. In response to Bennett's inquiries about his and the GBRC's position on 'controlled exploitation', Talbot explained: 'I would put the key to the whole matter of continuance of this reef without damage [sic]; subject to that, I think controlled exploitation, usage of as many different forms as possible for the benefit of mankind, is essential'. Similarly, Owen Arthur Jones, a geologist and former Chairman of the GBRC, faced a series of questions on the GBRC's perceived anti-oil drilling position. In one instance, the APEA QC suggested the position of Jones and the GBRC's was deliberately obstructionist. The accusation provoked Jones to respond:

I think on behalf of the committee that I can take considerable exception to those remarks. The Great Barrier Reef Committee, I think, has made its position perfectly clear...it is endeavouring to take a completely objective stand on the matter and not take any sides whatever. The committee has unfortunately been lumped together with what are loosely termed the conservationist bodies. The Great Barrier Reef Committee is interested in conservation. Its primary interest is in research and in research which leads to entirely reliable data.

In the government and APEA's perspective 'controlled exploitation' of tourism, or any other Reef resource, was indistinguishable from the 'controlled exploitation' of the Reef's geological resources. Coercing concessions sympathetic to 'controlled exploitation' or 'coexistence' from scientists or conservationists was equated with victory.

Rather than demonstrating divisions within the ranks of the five conservationist groups, however, the tactic highlighted the various perceptions of the Reef's values they held. Throughout the course of the Commission, the conservationists asserted that lack of knowledge of the Reef's biology coupled with the potential impacts of oil pollution necessitated the postponement of oil drilling. The paucity of information on the Reef was, Patricia Mather argued, 'especially apparent' when considering 'the development of the area and the utilization of its resources'. While the Australian Institute of Marine Science had

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23 Talbot’s Statement, 4.
24 Transcript of Proceedings, 1053.
25 Ibid., 1885.
26 Ibid.
27 Statement of Dr Patricia Mather, 18. NLA, MS 3990, Exhibits of the Great Barrier Reef petroleum drilling Royal Commissions 1964-1972, 9/16 (i), Exhibit 447. Hereafter, the exhibits will be referred to as Exhibits of the Royal Commission.
been established in Townsville, Mather stressed, 'no matter how great the magnitude of effort put into the "mission oriented" research directly relevant to utilization of the reef's resources...the field is so enormous that the information and understanding will not be available immediately'.

Mather was not alone in stressing the paucity of research on the Reef. David Stoddart, lecturer in Geography from Churchill College, Cambridge, submitted; 'less is probably known about the [Reef] than about many much smaller and intrinsically less interesting reef systems'. As a consequence, Stoddart asserted, 'not enough is known to document properly arguments for the conservation and management of the Reef at the present time'.

Neither the government nor the APEA, however, considered the lack of knowledge as an impediment to drilling. Queensland's State Mining Engineer, A.W. Norrie, argued:

> It is a general problem, it is often suggested that we should not proceed with anything until we have made adequate studies of it, and I subscribe to this...At the same time, practically, there is usually a limit to this. We cannot put human beings into a refrigerator until we know everything that is likely to result from their activities in it.

When asked if his views were reinforced 'by any recent statement by someone of high repute', Norrie quoted an ACF article on bush-fire control which criticised advocates of 'extreme caution' and 'impractically complex, expensive and long-drawn out' research programs.

When P.G. Jeffrey, the APEA QC, made his final submission to the Commission he suggested that the evidence was sufficient to inform a judgement on the 'probable effects' of oil pollution on coral reefs. Wallace, however, disagreed and returned that the evidence could not substantiate an answer either way on the issue:

> There is a strong case surely for the view to be held that the evidence before us, viewed as a whole in the case - that what we have heard is insufficient to give an answer. The evidence itself, some people might think, shows that it is quite insufficient.

For Wallace, endorsements of notions of 'controlled exploitation' or 'coexistence', as they applied to geological exploitation of the Reef, were reliant upon near-consensus on the deleterious effects of oil pollution on the Reef environment.

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28 Ibid., 23.
29 Statement of Mr D.R. Stoddart, 10. NLA, MS 3990, Exhibits of the Royal Commission, 6/11 (i), Exhibit 284.
30 Ibid., 12.
31 'Transcript of proceedings', 2221-2.
32 Ibid., 2222.
33 Ibid., 17100-1.
Benefits of the Reef

In contrast to the evidence presented on Reef flora and fauna and the effects of oil pollution on it, the amount of evidence presented concerning the workings of the oil industry was comparatively extensive. Largely, the evidence presented by the government and APEA sought to remove concerns around the industry operating on the Reef. Attempts to alleviate anxieties, however, proved deficient. The Commission concluded that if drilling were permitted 'a real but small to very small risk of blowouts' would remain.\(^{34}\) Additionally, the legislation and regulations stipulating operations and remedial procedures, at the time of the Commission, were considered 'totally inadequate'.\(^{35}\) Woodward, in his final address, argued that the existing codes required a 'complete rewriting as a matter of urgency'.\(^{36}\) At the time, the existing safety precautions left no clarity as to legal liability should a spill, blow-out or leak occur and no complete contingency plan existed. The APEA, whose approaches to oil drilling had likely been sharpened by the Santa Barbara and Oceanic Grandeur incidents, asserted they would not drill if a government did not have a contingency plan.\(^{37}\) The attempts to alleviate concerns for oil drilling on the Reef had been severely diminished.

While the evidence of scientists and oil company representatives had failed to remove anxieties over the potential harm to the Reef, it was imagined that the economic value of oil drilling would outweigh the potential losses. The failure to locate oil reserves on the Reef, however, placed significant limitations on economic assessments of the possible benefits of drilling the Reef for oil. Consensus emerged that the discovery of substantial oil deposits on the Reef would lower the price of petroleum for the Australian consumer, add to the national monetary wealth, improve the balance of payments, provide increased royalties and increase self-sufficiency. Some claimed that exploration, even if no oil was discovered, garnered worthwhile benefits to the economy.\(^{38}\) Broader social effects such as decentralisation and improved defence capabilities were also suggested as likely benefits from the oil industry and some suggested that oil rigs 'attracted fish and created better fishing'.\(^{39}\) The benefits for the scientific knowledge of the Reef were also considered to be significant. Drilling would


\(^{35}\) Ibid., 606.

\(^{36}\) Ibid.

\(^{37}\) Ibid., 629.

\(^{38}\) See: Statement of A.W. Norrie, 10. NLA, MS 3990, Exhibits of the Royal Commission, 2/3 (ii), Exhibit 80; R.H. Fields (Under Treasurer) to A.W. Norrie, 18 March 1971, QSA, SRS 6232 General Correspondence, ID958199 Department Mines - Problem of the quantification of economic effects on Great Barrier Reef; and 'Transcript of proceedings', 2213-16.

\(^{39}\) 'Transcript of proceedings', 15029-30.
provide geological information while rigs could collect data on various issues of Reef tides, winds and currents. Nonetheless, the probable benefits, however extensive, were vague.

Conversely, the potential losses, while also vague and extensive, were worrying. A research officer for the Queensland Treasury analysed the economic evidence submitted to the Commission for the government. His report stipulated that an economic analysis did 'nothing to solve the problem at hand – whether the Government should even allow exploration'. The report continued:

Economically the problem should be solved by placing a value on the possible losses to the Reef, placing a value on oil production, and choosing the best alternative. Valuing the loss to the Reef and surrounds would involve losses to tourism and other items which can be measured in money terms, but there would, of course be overriding value judgements on its maintenance as one of the wonders of the world.

The report emphasised that the Reef only had an average probability of holding oil, but a significant and unknown risk existed if exploration were successful. Stuart Cochrane, who submitted an economic analysis of the potential benefits of drilling the Reef for oil, likened drilling the Reef to 'a game of chance' where ecological losses would be an unavoidable reality. While the potential disadvantages of an oil industry were 'incapable of evaluation', witnesses generally agreed that the potential losses were relevant and could not be ignored.

Alternatively, H.C Coombs was willing to discuss the 'non-production effects' of an oil industry on the Reef. Coombs claimed previous economic submissions dealt only with the 'readily measurable' possibilities of drilling the Reef for oil. Conversely, Coombs contended the Reef had to be considered as a form of accumulated natural wealth which provided the basis for goods and services, a reserve against fluctuations or permanent falls in oil production, a variety of possible economic industries and a direct source of enjoyment. None of these attributes were easily measurable but existed as phenomenon which needed consideration. To do this, Coombs argued, the Commission had to expand its temporal focus. He submitted:

The Commission is making a judgement not for a particular person or corporation but for and on behalf of the community as a whole which it seems proper to regard as having 'perpetual succession'…In a sense the Commission, if it were practicable,
should call representatives of the grandchildren of those at present involved and indeed the grandchildren too of those grandchildren.  

Continuing, Coombs argued the Reef offered unknown natural values and importance, which could only be discovered through the maintenance and research of its 'eco-systems'. 'Man needs the wilderness', Coombs declared, for knowledge, as areas of novelty and diversity, as places of refuge and reflection, and to be enjoyed. The Reef, he proclaimed, offered 'all these benefits to mankind in abundance'. For Coombs, 'co-existence' or 'controlled exploitation' on the Reef was possible, to the exclusion of an oil industry. Coombs' arguments resonated with Wright. She promoted the importance of tourism and aesthetics and believed their inclusion in economic surveys of the Reef would ensure 'a long term decision in favour, as far as possible, of keeping such areas as the Great Barrier Reef as untouched as possible'.

Tourism and Co-Existence
As had been the case in the public period of the 'Save the Reef' campaign, the conservationists emphasised the importance of Reef tourism, proclaiming it a superior alternative to oil drilling. Importantly, the two industries could not co-exist on the Reef. The conservationists were not alone in asserting the importance of the Reef's 'natural value' for Australian tourism and its potential as a significant economic contributor for Queensland. The Australian Tourist Commission (ATC) submitted that Reef tourism was based on a variety of activities all of which could be impacted by oil pollution. It estimated that in 1968 spending by people visiting the Reef was $23.5 million. It predicted that by 1975 the Reef, as part of a broader Australian tourist industry, would help attract $300 million in foreign exchange earnings. It stressed, however, that a major disaster, akin to the Santa Barbara oil spill, would have immediate and comparatively worse consequences for Reef tourism. The Reef, it argued, unlike Santa Barbara which enjoyed close proximity to the tourist destination of Los Angeles, was dependent on the sea as a tourist draw card. Damage to the Reef's seascape would compromise its natural and tourist value. Also, it asserted, Santa Barbara's position between Los Angeles and San Francisco on a 'popular and heavily used tourist and commercial corridor' provided security which the Reef, 'thousands of miles' from 'a tourist destination' was not afforded.

46 Ibid., 10.
47 'Transcript of proceedings', 11337-8.
48 Statement – Dr H.C. Coombs, 12. NLA, MS 3990, Exhibits of the Royal Commission, 8/15 (ii), Exhibit 406.
49 'Transcript of proceedings', 7831.
50 Evidence to be presented on behalf of the Australian Tourist Commission, 15. NLA, MS 3990, Exhibits of the Royal Commission, 2/4 (ii), Exhibit 107.
The importance of Reef tourism, as opposed to oil drilling, was further advanced by Olive Ashworth, an artist and publicist. Ashworth submitted that the Reef 'is Queensland's greatest tourist attraction' and greater development of the islands for tourism, along with pollution controls, would allow for continued enjoyment of it.\(^{51}\) Ashworth suggested the Reef's 'harmonious distribution of colours' and 'immense diversity of living creatures' provided 'unlimited inspiration for creative artists and designers'.\(^{52}\) She further claimed: 'An intensive study of the colour and form of reef life could create a new concept of Australian design, applicable to fashion and furnishing textiles, ceramics and interior design.'\(^{53}\) Clearly, anti-oil proponents were not totally averse to the Reef's exploitation, but were opposed to the 'co-existence' of an oil and tourism industry on the Reef.

Conversely, the Queensland government and APEA devalued Reef tourism's importance. 'Tourism in itself', Bennett asserted, 'is not productive of goods, it is more a user of goods'.\(^{54}\) Tourism 'while it contributes to the good life' was subjected to external influences like economic depressions and wars, with the implication that an oil industry was not similarly disadvantaged.\(^{55}\) As far as an oil industry's impact on tourism, Bennett asserted that if oil rigs compromised the aesthetics of the Reef then accommodations could be made in terms of placement and design. He further claimed that in some overseas instances, such as the Gulf of Mexico, that oil rigs 'increased greatly the amount of sports fishing done there' and he envisaged similar benefits on the Reef.\(^{56}\) The APEA posited to the ATC Manager, G.W. Washington, that 'in such areas as Long Beach, California and perhaps the Mississippi mouth, one could find flourishing recreational activities alongside fairly intensive petroleum activities'.\(^{57}\) 'That relationship exists', Washington replied, 'but I do not know whether I would agree that it is a happy relationship in all cases'.\(^{58}\)

Despite attempts to convince the Commission otherwise, the economic value garnered from the Reef's natural and aesthetic qualities proved salient. More importantly, the Commission considered the potential disadvantages of an oil industry to be of particular

\(^{51}\) Statement of Miss Olive Ashworth, 1. NLA, MS 3990, Exhibits of the Royal Commission, 5/9 (ii), Exhibit 251.

\(^{52}\) New statement by Miss O. Ashworth (in lieu of Exhibit 251), 13. NLA, MS 3990, Exhibits of the Royal Commission, 7/13 (ii), Exhibit 325.

\(^{53}\) Ibid.

\(^{54}\) 'Transcript of proceedings', 7728.

\(^{55}\) Ibid., 7729.

\(^{56}\) Ibid., 16458.

\(^{57}\) Ibid., 7699.

\(^{58}\) Ibid., 7699-7700.
concern. In the report the Commission affirmed the evidence of Coombs, Wright, Ashworth and the ATC and concluded:

> It is essential to keep in mind that this unique and remarkable Province of the Great Barrier Reef possesses human values which are quite outstanding. However important to man's monetary and social well-being the discovery and exploitation of oil in commercial quantities within the GBRP may be, the debit side when reckoning probable net benefits must undoubtedly contain an entry to the effect that the beauty of the physical features of the Province and of man's ability to enjoy them in full will be thereby placed at some hazard.\(^{59}\)

The Commission added:

> The possible hazard to the tourist industry in the GBRP as the result of oil exploration and production is another disadvantage...which must be considered when estimating 'net' benefits...The importance of tourism will probably increase during the next decade, as the attractiveness of the GBRP is of outstanding and rare quality and appeals to overseas as well as Australian visitors... The nature of the environment of the GBRP is such that the tourist industry therein will be susceptible to reaction to any reported or publicised oil pollution and oil spills.\(^{60}\)

The very inclusion of a section devoted to the probable disadvantages of an oil industry directly contradicted Bjelke-Petersen's expectations of the Commission's purview.\(^{61}\) The debate about the disadvantages of an oil industry determined that despite the unknown biological effects of oil pollution, oil drilling on the Reef posed significant threats to important features of the Reef's natural and economic value.\(^{62}\)

**Rejecting the Reef's 'Uniqueness'**

The Queensland government was unmoved by admiration for the Reef's beauty or its natural values. It asserted that the Reef was a vast, resilient environment which humans could realistically access only at very specific locations while enjoying limited entrée to its 'natural values'. For instance, during the cross-examination of Ashworth, Bennett suggested the difficulties of getting tourists to the outer-reef highlighted the unlikelihood that an oil industry would infringe on the tourist's experience.\(^{63}\) The Reef was big enough, Bennett claimed, 'to provide room for every reasonable activity properly conducted'.\(^{64}\) The Reef was resilient, stressed Bennett: capable of withstanding a never-ceasing cycle of disturbances.\(^{65}\)

For the government and APEA, the resilience of the Reef was evident in its year to year

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60 Ibid., 984.
63 Transcript of proceedings, 7793-5.
64 Ibid., 5851A.
65 Ibid., 5368.
existence but most pronounced in the ability of corals to recolonize reefs following periods of intense damage, particularly cyclones and attacks from the Crown of Thorns starfish.66

While the Reef's size was evident and its resilience was plausible, the government's criticisms of arguments proclaiming the Reef's natural or environmental uniqueness were less credible. The government interpreted assertions of the Reef's biological uniqueness as a consequence of scientific ignorance. For instance, Bennett asked J.F. Grassle, a marine ecologist from Woods Hole Oceanographic Institute: 'You say, "At present we do not know the details of distribution and abundance of a single reef species." I think you stressed that was literally correct, did you not?'67 Grassle confirmed and Bennett then asked: 'Then how can you say any species in an area of the Great Barrier Reef is unique?'68 Grassle responded:

The only evidence relative to whether a species is unique is whether or not it has been found anywhere else. You can always suppose that at some time in the future it may in fact be found somewhere else. It is conceivable but the only evidence relevant to it is that it is found nowhere else. On that basis I say it is unique.69

Bennett then asked, pointedly: 'Then it is the case, is it not, that you are establishing uniqueness on the basis of your own ignorance?'70

Rejecting the Reef's 'uniqueness' contravened the rationale for the Commission and further demonstrated how isolated the Queensland government was on the Reef issue. Its criticism compelled the Commission to address the question: is the Reef unique? Woodward explained that the label of 'unique' suggested 'a heritage which requires greater care to be taken of it than might be taken of others'. Woodward, with reference to the Reef, later added:

There are two things to take into account. One is the diversity and the other is the length. The very length of the reef and the fact that it exists over a very significant north-south distance does make it of extreme interest to marine biologists, and the fact that it does have such a wide diversity of life on it over most of the length does, I think, justify the use of the term "unique". That is the way I read the evidence.71

The state government's querying of the Reef's 'uniqueness' differentiated it from all other participants within the Commission, as Connolly proclaimed:

The first thing I would like to suggest is that the overwhelming trend of the evidence is to demonstrate that the barrier reef is in truth a unique natural phenomenon of which Australia should regard itself as the trustee of the world. Curiously enough this proposition which many people have thought to be self-evident has been attacked from only one quarter. I cannot remember in the couple of years-odd that the

66 Ibid., 5352-9.
67 Ibid., 6272.
68 Ibid.
69 Ibid.
70 Ibid., 6273.
71 Ibid., 16115.
Commission has been sitting that any interest except the Department of Mines of the State of Queensland, which apparently has a revelation all its own, doubted this.\textsuperscript{72} The Commission affirmed the Reef's 'uniqueness' in its final report.\textsuperscript{73}

The Draft of GBRMPA

The preceding debates indicated the participants, with the sole exception of the Queensland government, held an understanding of the importance of both the economic and natural values of the Reef. Embedded within the debates during the Commission was an understanding that the paucity of scientific understanding of the Reef system precluded proper valuation of the economic and natural attributes of the Reef. Consequently, it was impossible to assess whether or not a Reef oil industry would compromise the Reef's perceived values. The GBRC's proposed management authority began to loom as a positive compromise for both the conservationists and the APEA.

Piesse expressed this sentiment in his submission on behalf of the ACF. When asked to explain how 'wisdom and foresight' could be adopted in a practical sense to deal with competing demands on the Reef if oil was found there, Piesse explained:

Well, it is a very broad question which in parts I could touch on but I think we would view the problem as one of the whole totality of the reef, and the reef viewed not only from an Australian conservation aspect, Australian oil industry aspect, but from the aspect of the reef being one of the principal heritages of man.\textsuperscript{74}

Piesse was then asked to explain if that statement meant the ACF advocated a total ban on oil drilling in the Reef to preserve it for 'man's' heritage. Piesse conceded that 'The Foundation has not advocated the total banning of oil drilling'. He then added:

It advocates first of all that a body be set up by the governments concerned to look at the various competing problems of the reef, to get a scientific understanding of the basis upon which the resources of the reef should be managed, and in the meantime the Foundation is pressing for a moratorium period, in which period we would not wish to see any oil drilling whatsoever.\textsuperscript{75}

Bennett essentially accused Piesse, and the ACF, of holding a 'one-eyed and antipathetic attitude towards the mining industry' since they would not call for a moratorium on Reef tourism. Piesse asserted, however, that the ACF made 'considered judgements'.\textsuperscript{76}

Mather was also questioned on her own perspective on 'controlled exploitation'. When asked to clarify the GBRC's position towards mining and oil drilling, Mather asserted: 'The

\textsuperscript{72} Ibid., 17 834.
\textsuperscript{73} Royal Commission, 'Report', 952-8.
\textsuperscript{74} 'Transcript of proceedings', 13315.
\textsuperscript{75} Ibid.
\textsuperscript{76} Ibid., 13315-6.
Committee is opposed to mining, as an operation designed to remove resources which are not renewable, until such time as it can be shown that mining does not affect the renewable resources of the reefs.\textsuperscript{77} Once invited by the Chairman to metaphorically divorce herself from the Committee and to explain her personal views on the declaration, Mather declared: 'I personally and it is a view shared by very eminent biologists – I must stress it is my personal view – think that drilling for oil on the continental shelf of any continent is unwise, misguided. That is probably enough'.\textsuperscript{78} The Chairman sought clarification and asked: 'In regard to the Great Barrier Reef area?' To which Mather replied: 'In regard to the Great Barrier Reef area, I personally would increase the vehemence of those adjectives.'\textsuperscript{79} Members of the QLS and WPSQ had been critical of the lack of agency and support provided by the GBRC in the Ellison Reef case. At the Commission, Mather provided a clear articulation of the GBRC's and her own position on the Reef question. She did not rule out the possibility of oil drilling on the Reef, but made the strongest statement by a scientist of significance that, with the level of knowledge available, the GBRC did not, and the Commission should not, endorse it.

Equally notable was Mather's recommendation for legislation which reconciled 'conflicting interests' to ensure 'that development proceeds in a manner compatible with the continuing viability of the biological system'.\textsuperscript{80} Mather sought to fill a legislative and management vacuum. Reef management had become stretched across a suite of legislation, managed by various state and Commonwealth departments making the reconciliation of issues, like oil drilling and its existence alongside a tourist industry, nearly impossible.\textsuperscript{81}

\textsuperscript{77} Ibid., 14125/6.
\textsuperscript{78} Ibid., 14124.
\textsuperscript{79} Ibid., 14125/6.
\textsuperscript{80} Statement of Dr Patricia Mather, 2-3. NLA, MS 3990, Exhibits of the Royal Commissions, 9/16 (i), Exhibit 447.
\textsuperscript{81} Ibid., 4-12. The pieces of legislation identified by Mather were: Fauna Conservation Act of 1952 (which stipulated all Queensland Islands as fauna sanctuaries above the high tide mark); Native Plants Protection Act 1930 (listed protected species); Forestry Act of 1959, the Forestry Regulations of 1960 and the Forestry Amendment Act of 1964 (provided for protection of fauna and flora of 'attractive islands (for tourist purposes)' which were within national parks, and stipulated that any area could be excised from a National Park to make it available for other uses); Fisheries Act 1957-1962 (this Act protected coral in all Queensland waters and a subsequent Order-in-Council extended it to cover all marine life, excluding fish caught by hook and line, for the reefs surrounding Green and Heron Island as well as Wistari Reef in July 1963); The Harbours Acts 1955 to 1964 (which prohibited the removal of rock, stone, gravel, sand and other materials from Queensland waters, including beaches below high-water line, without authority; Fisheries and Pearl Oyster Fisheries Acts (which provided jurisdiction to the Commonwealth over Australian and foreign nationals in Australian proclaimed waters); and the Petroleum (Submerged Lands) legislation. Mather asserted that the following Queensland departments had some role in over-seeing the administration of the Reef area: Primary Industries, Forestry, Mines, Native Affairs, Tourism, Harbours and Marine. The relevant Commonwealth departments were: Primary Industry, National Development, Bureau of Mineral Resources, Education and Science and the Bureau of Meteorology.
There were no personnel or facilities within the various departments with specific responsibility for administration of the Reef, there were no provisions for planned development of the area, nor any for a scientific survey which might provide the basis for that development. Mather summarised her criticism of the legislative status quo by stating: 'In view of the national interest and responsibility one would expect some Commonwealth participation and a joint Commonwealth/State body is obviously desirable'.\(^82\) The proposed GBRRAC initiative while it 'would have provided an urgently needed interim arrangement' lacked authoritative control and the ability to administer its own recommendations. Consequently, Mather drew the conclusion that 'the only effective way of providing for the protection and/or development of an area as important and as complex as the Great Barrier Reef will be for the Parliament to legislate setting up a Statutory Authority or Commission'.\(^83\)

Mather's proposal was thorough. The proposed authority would: administer its recommendations independent of the recommendations of other government departments; be composed of Commonwealth and State legislation as an agency of the Crown; draw up and administer its own regulations; recommend the allocation of funds to scientific, developmental or administrative purposes; employ its own staff; be run and administered by experts; and be responsive to pressing scientific problems. Crucially, it would be able to act 'outside existing political pressures and unilateral or conflicting interests'.\(^84\) The Authority would receive its status via a Bill which Mather presented to the Commission in draft form.\(^85\) So thorough was Mather's legislative recommendations and her defence of them that it caused Wallace to state: 'You are pretty good on all this legislation, you know'.\(^86\)

Mather's proposition was in essence a legislative reconciliation of the competing uses and values of the Reef. She signalled this rationale throughout her submission. The draft was 'an attempt to reconcile conflicting pressures regarding resource use' on the Reef. It sought to 'reconcile the multiple uses compatible with the conservation of the living coral reef ecosystem' and 'the maintenance of the geological structures formed by the fossil reefs'.\(^87\) The

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\(^82\) Ibid., 12.
\(^83\) Ibid., 16.
\(^84\) Ibid., 16-18.
\(^85\) As part of her own statement Mather included a copy of 'A Draft of a Bill for an Act Relating to the Great Barrier Reef and the Surrounding Submerged Lands of the Continental Shelf Adjacent to the Australian Coast and Contiguous with the Queensland Coast'.
\(^86\) 'Transcript of proceedings', 14086. The exchange begins with the Chairman asking if Mather has a 'law degree tucked away'. Mather does not, prompting the Chairman's referenced response. Mather replies: 'I have been very involved with this particular area for some years'.
\(^87\) Patricia Mather, 'A Draft of a Bill for an Act relating to the Great Barrier Reef and the Surrounding Submerged Lands of the Continental Shelf Adjacent to the Australian Coast and Contiguous with the
need for such reconciliation was signalled earlier in the proceedings even by the APEA, who during cross-examination of B.W. Halstead from the World Life Research Institute, reasoned:

So perhaps it is not really accurate to speak of a conflict between man on the one hand and environment on the other, rather I suggest to you it is a question of reconciling man's various interests in that environment.88 Halstead replied: 'Yes, our feeling, our very strong feeling, is that this reconciliation must take place and should take place as promptly as possible'.89 Mather's legislation would create a Great Barrier Reef Authority which would be empowered to 'maintain the condition of the area and its living and non-living resources' as well as organise, plan and carry out scientific research of the area. It streamlined the process through which the Reef would be managed, clearly stipulated the responsibilities of each government and gave 'legitimate interests' an opportunity to utilise the Reef based on a review system.

Significantly, the Commission endorsed Mather's proposal. It, and indeed the campaign, had made clear that the Reef's management was hindered by a lack of clear authority held by either the state or Commonwealth governments, as well as a dearth in scientific knowledge. Mather's legislation was a remedy for this. The APEA also proposed a statutory committee which would be comprised of public servants 'and specialist citizens having knowledge of oil'.90 Their committee, however, would solely be concerned with the 'controlled management' of any future oil industry on the Reef. Mather's Authority held a much broader purview. The Commission, after considering both propositions reported: 'It seems sound that conflicting albeit legitimate interests and issues should go for review and decision to one statutory body responsible to the appropriate Parliament or Parliaments. The views of Dr Mather as stated...attract serious governmental consideration'.91 Mather's bill, and the Commission's endorsement of it, were the most authoritative acknowledgement of a composite perception of the Reef's natural and economic values and the need to formally and legislatively reconcile those two elements during the entire 'Save the Reef' campaign.

The Report

The report was provided to both governments on 1 November 1974 and released to the public on 19 December 1974. It stated clearly that if the Reef was to be drilled substantial legislative

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88 'Transcript of proceedings', 7430.
89 Ibid.
90 Royal Commission, 'Report', 960.
91 Ibid., 962.
and bureaucratic controls needed to be introduced, and that greater knowledge of the Reef's biology and the consequences of oil pollution were required before oil drilling commenced. There was disagreement, however, among the commissioners. Commissioners Moroney and Smith concluded that weathered oil (oil which had been spilled and exposed to the elements) would probably be 'depleted of the toxic components originally present in the freshly spilt crude oil to the point where it is virtually non-toxic to marine organisms'.\(^{92}\) They also considered that drilling could take place in the Reef area as long as strict buffer zones were established and the safety precautions (including contingency plans) recommended were adopted.\(^{93}\) Wallace, however, claimed that insufficient evidence on the properties of freshly spilled crude and weathered oil prohibited him from 'defining any locality' for oil drilling. He recommended further experiments be carried out and referred to the Reef's natural value as an important point of consideration. He stated:

> As Dr Coombs indicated, the present generation is in a real sense a trustee of this unique wilderness, and it is undoubtedly the fact that at present there is a complete lack of scientific knowledge of possible damage of an indirect and long-term nature, and which according to the evidence is scientifically possible.\(^{94}\)

Despite unanimous decisions on most of the evidence, the Commission failed to come to a common conclusion on whether or not localities within the Reef could be drilled with little detriment.

The differing conclusions on where drilling could be permitted allowed for conflicting interpretations. The conservationists considered the report disappointing. In *Coral Battleground*, Wright recounted that the 'split in the view', was predictable.\(^{95}\) She lamented that much of the biological and economic evidence provided by the conservationists had not been given the emphasis they had hoped.\(^{96}\) Wright surmised that the Commissioners had ultimately 'too much accepted the view that their terms of reference were to state whether and how the Reef could be drilled—not whether it should be protected from drilling.'\(^{97}\)

The APEA, while slightly more positive in its appraisal of the report, was not completely enamoured with its findings either. Summarising the report in the *APEA Journal*,

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92 Ibid., 32.
93 Ibid., 584-8. Based on Smith and Moroney's recommendations three basins were considered suitable for drilling: the southern end of the Capricorn Channel, an area stretching between Cairns and Townsville called the Halifax Basin, and the Papuan Basin at the northern end of the Reef.
94 Ibid., 588-9.
95 Wright, *Coral Battleground*, 174.
96 Ibid., 175.
97 Ibid.
Bob Foster (a BHP employee) considered it to be 'a good report...easy to read'. The review considered the report's findings, especially Moroney and Smith's sanctioned drilling zones, as 'generally consistent' with the APEA's position and the protection of reefs within drilling areas was a 'sensible and cautious compromise'. The review lamented, however, that 'the dismal discovery record' of oil in Australia had tempered the interests of the exploration industry and rising world oil prices had made other countries more 'financially rewarding exploration targets'. The review also considered that the Commission had taken a 'pessimistic' view towards the likelihood of an oil or gas blow-out or leak, despite having conceded during the Commission, that a risk 'always' remains. Much like the conservationists, the APEA considered the responses by both governments to be the significant factor in the future of the Reef. Despite the four years they had invested in it neither the oil industry nor the conservationists received the Commission's report with great enthusiasm.

The Great Barrier Reef Marine Park Authority

The report did little to calm a strained relationship between the Commonwealth and the Queensland governments over the Reef. The Whitlam government had chosen to assert its sovereignty as a means of protecting the Reef from oil drilling. Rex Connor, in his introduction of the Seas and Submerged Lands Bill, resolved 'to remove any doubt about the exclusive right of the Commonwealth to sovereign control over the resources of the seabed off the coast of Australia and its territories, from the low water mark to the outer limits of the continental shelf'. His comments on the need for 'national' environmental protection measures indicated that the Bill was perhaps intended to resolve issues emanating from the Commission:

There is a greater awareness these days of the need for conservation of our resources and preservation of our environment, and there is much more urgency to find and adopt suitable methods to prevent or control pollution. All these aspects require careful consideration—consideration on a uniform national level. Moreover, some of them may require quick and decisive action, as in the case of a major pollution threat, with little time for lengthy consultation or for passing of special legislation, as has

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99 Ibid., 34-36.
100 Ibid., 34.
101 Ibid., 32.
been necessary in the past, for example in the case of the stranding on a reef in our northern waters of the tanker 'Oceanic Grandeur'.

The opposition, despite their earlier attempt to resolve the sovereignty issue in the Commonwealth's favour in 1970, criticised the Government for not seeking the co-operation of the states. Nonetheless, the Bill became law on 4 December 1973. As expected all of the state governments launched a High Court challenge against the legislation.

In 1974, prior to the Commission releasing its report and despite the High Court challenge, the Whitlam government began implementing its agenda for the Reef's protection as part of its broader environmental policy. The centrepiece of this legislative agenda was the creation of a Barrier Reef Marine Park based on Mather's draft legislation. Any attempt to incorporate the Reef into a single marine park, however, would require the assistance of the Queensland government, principally because it, whatever the outcome of the High Court challenge, still controlled the Reef's islands and their surrounds within three miles of the high-water mark. Furthermore, as the Bowens asserted, any legislation would have to ensure 'that Commonwealth legislation overrode that of Queensland if inconsistencies were to arise'.

On 23 September Whitlam wrote to Bjelke-Petersen declaring his intention 'to introduce legislation... as soon as possible to establish a Great Barrier Reef Marine Park Authority'. Whitlam was in equal parts resolute and conciliatory in his approach. He declared that the Commonwealth would create the marine park 'over those parts of the Reef and surrounding waters' which were Commonwealth responsibility but sought co-operation with Queensland and acknowledged their history of conservation in the Reef area. The Authority would be responsible to the Commonwealth Minister for the Environment and Conservation, be chaired by a full-time chairman and two part-time commissioners (appointed by the Governor-General) and supported by a consultative committee (nominated by both governments).

The Queensland government's response was indicative of the uncertainty surrounding the outcomes of the Commission's findings and the High Court challenge. The Queensland Attorney-General, William Knox, advised the Premier's Department that since neither had

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103 Ibid., 2006.
105 Ibid.
107 Ibid.
been resolved the government should not participate in the establishment of the proposed authority.\footnote{Knox to Maher (Under Sec Premier's Department), 7 October 1974, QSA, SRS 1043, ID538172.} In response to Whitlam, Bjelke-Petersen wrote:

> It seems to me that consideration of the Great Barrier Reef area is not a matter for impulsive action but rather a question where, in addition to the national heritage aspect being granted its due acknowledgment, all other matters should be accorded their just priority.\footnote{Bjelke-Petersen to Whitlam, 25 November 1974, QSA, SRS 1043, ID538172.}

He reminded Whitlam that Commonwealth responsibility for the Reef was contingent on the High Court and declared 'it is not my Government's wish to be associated with an arrangement which might prove to be unconstitutional'.\footnote{Ibid.} He did not wish his response to 'be taken as a matter of unwillingness to co-operate' but as a proposal to postpone the initiative until 'a clear definition of authority' was established.\footnote{Ibid.} Despite Bjelke-Petersen's response, Whitlam wrote back explaining that the legislation would be introduced 'as soon as possible' and Queensland would be given opportunities to participate and make submissions after the High Court decision.\footnote{Whitlam to Bjelke-Petersen, 29 January 1975, QSA, SRS 1043, ID538172.} Bjelke-Petersen ceded to Whitlam's agenda, welcomed the opportunity to make submissions after the High Court decision, and declared that 'nothing will be done to prejudice the preservation of the Reef'.\footnote{Bjelke-Petersen to Whitlam, 24 February 1975, QSA, SRS 1043, ID538172.}

Meanwhile, perhaps unbeknown to the Commonwealth, Queensland was investigating the possible introduction of its own marine park legislation. The Queensland government had begun preparing for the declaration of the reefs surrounding Green Island, Heron Island and Wistari Reefs as Marine Parks in 1973, these being finally declared in February 1974.\footnote{See: copy of Department of Forestry memorandum, Marine National Parks, 8 January 1974 and Cabinet Minute, Decision 21270, Marine National Parks, 7 October 1974, QSA, SRS 1043, ID 538170 Marine National Parks.} Further work was underway in October 1974 for the creation of Marine Park status for the reefs surrounding Peel and Lizard Island.\footnote{Cabinet Minute, Decision 21270, Marine National Parks, 7 October 1974, 2. QSA, SRS 1043, ID 538170.} In a submission to Cabinet the Minister for Lands and Forestry, Wallace Rae, stated that further proposals were being considered for areas of importance as bird nesting sites and noted 'in many cases an island and its associated coral reef are so interdependent that they must be considered as a whole and not as two separate entities'.\footnote{Ibid.} Sites which were being considered held importance for recreation, science, conservation (especially of turtles and birds), or were locations of historical significance, or held notable diversity of life and habitats and showed the least effects of

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\footnote{Knox to Maher (Under Sec Premier's Department), 7 October 1974, QSA, SRS 1043, ID538172.}
\footnote{Bjelke-Petersen to Whitlam, 25 November 1974, QSA, SRS 1043, ID538172.}
\footnote{Ibid.}
\footnote{Ibid.}
\footnote{Whitlam to Bjelke-Petersen, 29 January 1975, QSA, SRS 1043, ID538172.}
\footnote{Bjelke-Petersen to Whitlam, 24 February 1975, QSA, SRS 1043, ID538172.}
\footnote{See: copy of Department of Forestry memorandum, Marine National Parks, 8 January 1974 and Cabinet Minute, Decision 21270, Marine National Parks, 7 October 1974, QSA, SRS 1043, ID 538170 Marine National Parks.}
\footnote{Cabinet Minute, Decision 21270, Marine National Parks, 7 October 1974, 2. QSA, SRS 1043, ID 538170.}
\footnote{Ibid.}
human activities'. Furthermore, despite the uncertainty surrounding off-shore sovereignty, the Queensland government was prepared to include the area from the high water mark along the Queensland coast and its islands to the continental shelf to the northern Torres Strait limit within the Marine Parks. As the government prepared to make a public announcement, however, enthusiasm for the stretched off-shore sovereignty waned and settlement on the three-mile limit was 'strongly' recommended by an inter-department committee. By October 1974 The establishment of a 'State Authority to preserve and manage the Great Barrier Reef area' and the declaration of a Marine Park area was a major priority of the Queensland government. A 'top-level committee' to advise on their formation was established.

Queensland marine parks, however, did not prohibit oil drilling. Crucially, a declared Marine Park Area did little more than define an area 'under the jurisdiction of the State of Queensland and within which it may set aside specific Marine National Parks'. Under the Forestry Amendment Act 1971, oil drilling was permitted in Marine Parks and in Marine National Parks, a fact which attracted protests from the Queensland Conservation Council. It was suggested that the declaration of Marine Parks and Marine National Parks was not an earnest effort of nature conservation by the Queensland government but rather a way of placating public opinion. That claim is not unfounded considering the legal and political realities within which the Bjelke-Petersen government was operating. It is worth recognising, however, that the Bjelke-Petersen government at least endeavoured to introduce forms of conservation over the Reef – however insufficient. Nonetheless, the Commonwealth and Queensland governments' parks initiative demonstrated the political imperative of introducing bureaucratic mechanisms which would serve to protect large sections of the Reef while allowing for continued use of it by a range of competing industries. Some level of 'co-existence' or 'controlled exploitation' was central to both initiatives. The Queensland proposals, however, demonstrated not only their adherence to the notion that an oil industry

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117 Cabinet Minute, Decision 21309, Marine National Parks, 14 October 1974, 2-3. QSA, SRS 1043, ID 538170.
118 Marine National Parks Planning Committee in Cabinet Minute, Decision 21385, Marine Park Area, 28 October 1974. QSA, SRS 1043, ID 538170.
119 Cabinet Minute, Decision 21437, Report of Inter-Departmental Committee on Marine Park Areas, 11 November 1974, 2. QSA, SRS 1043, ID 538170.
120 Cabinet Minute, Decision 21385, Marine Park Area, 28 October 1974, 1. QSA, SRS 1043, ID 538170.
121 Cabinet Minute, Decision 21437, Report of Inter-Departmental Committee on Marine Park Areas, 11 November 1974, 1. QSA, SRS 1043, ID 538170.
122 Diane Tarte (Co-ordinator Queensland Conservation Council) to Bjelke-Petersen, 25 November 1974, QSA, SRS 1043, ID 538170.
123 See: Bowen, Great Barrier Reef, 352 and Wright, Coral Battleground, 175.
could co-exist alongside other Reef industries, but a continued willingness to test public opinion which had rarely supported the pro-oil stance.

The divide between the two governments was widened once more with the release of the Commission's report. On 22 May 1975, Moss Cass introduced the Great Barrier Reef Marine Park Act to the House of Representatives declaring that its Authority would:

Examine the entire Barrier Reef region, determine which sections of the region should be proclaimed as part of the Great Barrier Reef Marine Park, and decide appropriate uses for its various sections…Other zones will be set aside for tourist development, for shipping, fishing, and other appropriate uses. However, conservation and protection of the Great Barrier Reef will be the paramount aim of the Authority in all zones of the Marine Park.124

The next day in a letter to Bjelke-Petersen, Whitlam declared:

My Government has considered the Report and taken decisions on its Recommendations. We support the Chairman's position that drilling not be permitted in the area of the Reef until such time as reliable scientific information is available on the effects of oil on the Reef's ecosystems. I seek your Government's support for this stand and propose that the relevant Ministers of our Governments consult as soon as possible on arrangements to implement the decision.125

The Co-Ordinator General advised Bjelke-Petersen that since the Queensland government's review of the Report was still on-going, 'it would seem reasonable to advise the Prime Minister that the Queensland Government agrees to a stay of drilling for a period of twelve months when it will again review the position'.126 Ron Camm's suggested response was more inflammatory and he proposed that Bjelke-Petersen's reply should read:

It is noted that the Commonwealth Government does not accept the majority report of the Commission and has rejected the advice of the two commissioners, acknowledged world-wide as experts in marine biology and control of petroleum drilling, for the minority advice of the commissioner whose background is legal. The Queensland Government does not propose to support the Prime Minister's stand, which appears to make a mockery of the Royal Commissions for short-term political expediency, but intends to make its own decision after proper consultation.127

Clearly some within the Queensland government were more willing than others to co-operate with the Commonwealth and relinquish their pro-drilling stance.

Whitlam would never receive a reply to his 23 May letter, but continued to engage with the Queensland government over the introduction of GBRMPA which had been assented to in the Senate on 16 July 1975. The Queensland government continued to stress that the GBRMPA legislation was contingent on the outcome of the High Court case on the

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124 Moss Cass, House of Representatives, Hansard, 22 May 1975, 2690. The Bill was assented on July 16 1975.
125 Whitlam to Bjelke-Petersen, 23 May 1975, QSA, SRS 1043, ID 538165 Royal Commission, Risk of Damage Drilling Great Barrier Reef for Petroleum.
126 Co-Ordinator General to Premier's Department, 28 May 1975, QSA, SRS 1043, ID 538165.
127 Camm to Bjelke-Petersen, 1 July 1975, QSA, SRS 1043, ID 538165.
In the meantime, however, and to ensure that Queensland could wield ‘the greatest possible’ influence over the Reef it elected to utilise the opportunities presented through the nominations of the part-time member of the Authority and the members of the Consultative Committee. Various Queensland ministers were also concerned by the consequences GBRMPA would have for their departments. But these apprehensions did not extend to outright opposition to the Bill, and ministers usually suggested nominees for the respective positions in order to retain some input. The Queensland government was beginning to show signs of co-operation with the Commonwealth over the Reef and anticipated the passing and establishment of the GBRMPA by the Whitlam government.

Things move slowly in politics – until they do not. Whitlam was dismissed on Remembrance Day 1975. Malcolm Fraser was elected Prime Minister on 13 December. Two days later the Queensland government held a cabinet meeting to resolve its position on GBRMPA. It decided to co-operate by nominating members to the Authority and to the Consultative Committee. It would not, however, abandon its claim of sovereignty over Queensland territories, and would challenge actions taken under the Act which affected aspects within its jurisdiction. A decision was also reached on the appointment of a part-time member, Sir Charles Barton, who would join the appointed Chairman Don McMichael. Two days later, the High Court passed down its decision on the *Seas and Submerged Lands Act*, in favour of the Commonwealth five to two. The High Court decision was the final piece required for the Commonwealth to ensure oil drilling would be prohibited on the Reef. Fraser had maintained the Whitlam government's interpretation of the Commission's Report and pressed ahead with the implementation of GBRMPA with the Queensland government's assistance. Although its implementation would be drawn out over several more years, legislation, along with public opinion and expectation, had moved the notion of oil drilling on the Reef beyond the realms of probability. The Reef was saved; or at least saved from oil drilling.

128 Co-ordinator-General to Premier's Department, 23 October 1975, 2. QSA, SRS 1043, ID 538172.
129 See: Newbery (Minister for Tourism and Marine Services) to Bjelke-Petersen, 27 October 1975; Wharton (Minister for Aboriginal and Islanders Advancement and Fisheries) to Prem Department, 17 November 1975; Tomkins (Minister for Lands, Forestry, National Parks and Wildlife Service) to Bjelke-Petersen, 20 Nov 1975. QSA, SRS 1043, ID 538172.
131 Ibid.
132 Fraser to Bjelke-Petersen, 19 March 1976, QSA, SRS 1043, ID538172.
The Commission and the campaign to 'Save the Reef' were principally concerned with the possibility of drilling the Reef for oil. By 1975 this issue had been resolutely answered: The Reef would not be drilled for oil. The Commission, however, more so than the campaign, prompted broader questions on the Reef's various other competing uses and in doing so offered an opportunity to address how competing values could be reconciled into the future. Importantly, the Commission, especially the transcripts of proceedings and the exhibits, made clear that although the oil issue had been dominated by the anti and pro-oil drilling positions, there was a shared understanding of the Reef's composite value in economic and natural terms. What impeded assessments, for the purposes of evaluating the Reef's management, was a lack of understanding of Reef life, its systems and the impacts of various forms of pollution and exploitation upon them. Evidently, a single authority equipped with the requisite legislative powers was required to reconcile conflicting approaches to the Reef and manage its exploitation and conservation in line with the Reef's ecology and public expectations of resource use and conservation. The Commission recommended that Mather's legislation for a Great Barrier Reef Authority be considered for implementation, which resulted in the creation of GBRMPA.
Map 8: Map showing GBRMPA, GBRWHA, GRBP and Catchment Area.

Conclusion

The Reef has evoked passionate responses from Europeans since Cook first threaded through its elaborate mazes of reefs, rocks, cays and islands. European Australia has continually looked to the Reef for both economic and natural sustenance, hopeful of extracting value from an environment which dominates the Queensland seascape. Perceptions of the Reef have been shaped by composite evaluations of its economic and natural attributes. Understandings of the Reef's significance have been informed by scientists, politicians, natural history writers, tourism promoters and conservationists, and few have sought to disentangle entirely the economic and natural valuations of the Reef. The significance of these seemingly contradictory assessments helped inspire and were reflected in the legislation that established GBRMPA.

Between 1770 and 1975 those who lived upon, travelled through, or studied the Reef understood the collage of flora, fauna and geology as a living treasure trove. There was little perceived tension between valuing the Reef for its exploitable resources and for its less tangible, but equally identifiable, natural benefits. The conception of the Reef as an economic and natural resource has been a lasting and prevailing idea. Those who, according to modern day rhetoric, have been exclusively associated with a history of protecting the Reef have contributed to this composite valuation of the Reef. This thesis seeks to broaden the human history of the Reef and to complicate existing narratives of science's role by giving current ecological crises an historical context. It has demonstrated that perceptions of the Reef have been informed by a combined valuation of its economic and natural attributes. By appreciating this legacy, contemporary stake-holders might better understand perceptions of the Reef today.

Additionally, this thesis has broadened conceptions of how the Reef has been valued and cared for since European settlement. Approaches to the Reef which favoured its exploitation were not motivated by a lack of care or compassion. In many ways, calls for greater Reef development formed part of broader discourses of northern development and northern neglect; the Reef represented untapped wealth awaiting people, development and prosperity. Other proponents of the Reef's exploitation sought to reveal the Reef's wealth to further exemplify its worth to Australia, to bring greater attention to its scientific value and to highlight its natural assets. Conservationist or preservationist approaches to the Reef were similarly motivated by a sympathetic regard for the Reef's natural attributes and a promotion of their broader social worth. Appreciations of the Reef's natural merits were, however,
complicated by an understanding that the Reef's value to the Australian nation came from its combined economic and natural attributes. Few preservationists sought to exclude the exploitation or human use of the Reef; instead, most endorsed endeavours which allowed for multiple approaches to the Reef to continue, albeit with controls and regulations.

This combined valuation of the Reef has been evident throughout European engagement with it. When the maritime explorers threaded through the Reef's shoals, islands and corals they were at once fascinated with the Reef's vastness in size and diversity of life as well as its usefulness for settlement and trade. William Saville-Kent's *The Great Barrier Reef: Its Products and Potentialities* did not exclusively celebrate the Reef's rich biological tapestry; the book also drew attention to the Reef's seemingly limitless harvests. Tourism brochures of the early twentieth-century depicted the Reef's idyllic scenery alongside descriptions of its possibilities for settlement and development. In the post-war era geologists began investigating the Reef's petroleum and mineral potential and government-led development of the Reef was enhanced by the further expansion of Reef tourism. Tourism emerged in the twentieth century as an equivocal saviour for the Reef. Initially, tourism helped promote various Reef locations bringing further development to regional areas of Queensland. It also served as an economic rationale for the protection of birds, turtles and led to the declaration of sanctuaries, reserves and national parks on many of the Reef's most frequented islands. Consequently, in the post-war era the distinction between the Reef's natural and economic attributes became less obvious as both federal and state governments grew to explicitly link the Reef's economic prospects with the development of its tourism industry. Increasingly, efforts to protect the Reef's natural features became subsumed within a discourse of protecting its economic potential. Tourists were held responsible for the general denudation of popular reefs; they were accused of plundering them or at least supporting a market that led others to do so. The impacts of visitors, however, could be mitigated through improved management and education. Tourism was seen as presenting an enduring and sustainable form of economic exploitation of the Reef; the industry, however, was obviously dependent upon the Reef's natural splendour. In 1967, when mineral and oil exploitation on the Reef seemed likely, conservationists utilised the importance of Reef tourism to leverage support nationally for the Reef's protection. In the twenty-first century tourism remains a significant ally of conservationists, scientists and politicians concerned for the Reef's future. Nonetheless, much like during the initial Crown of Thorns outbreak in the 1960s, tourism operators continue to be sensitive about dramatic claims of the Reef's general decline. While tourism is an accepted economic pursuit which mostly operates as an important ally of
conservationists, there are clearly still tensions between the economic pursuits of mass tourism and the conservation of the Reef.

The existence of competing values of the Reef has been a continuous theme of this thesis. Within this thesis, the 'Save the Reef' campaign was not an aberration. Rather, it was a climax in which the broader Australian nation was forced to deliberate over how various valuations of the Reef could better inform conservation and exploitation efforts. Perhaps, had a history of the Reef been presented to the various campaigners or even the Innisfail Mining Warden or the Royal Commissioners, an awareness of a legacy of valuing the Reef might have improved understandings of the Reef's value. Perhaps, the campaigners might have found greater solace and solidarity had they known that the Cairns City Council had fought to protect Green Island and Upolu Cay from limestone mining in the 1920s and 1930s. The state and federal governments might have learned from local government experience that while perceptions of the Reef allowed for some exploitation there had been historic precedents where the limits of acceptability had been breached. The geological exploitation of the Reef in the 1920s and 1930s was unacceptable to a community that had become attached to the sites of Green Island and Upolu Cay as recreation and resort areas. The threat of broader geological exploitation of the Reef in the 1960s provoked similar opposition from a national community which held entrenched perceptions of the Reef's natural value and fears of the potential loss of tourism revenue. The 'Save the Reef' campaign, however, does have a significant legacy. The tension between the geological exploitation of the Reef and its broadly accepted natural value inspired the establishment of the Great Barrier Reef Marine Park Authority in 1975. GBRMPA's mandate, however, was not to prevent the development of the Reef, but to reconcile conflicting assessments of its value.

The historical existence of competing economic claims on the Reef forced legislators, and indeed conservationists, to appease potential exploiters to secure the Reef's protection. Since the Reef was clearly not 'worthless', the securing of any form of protection, especially something as grand as the Great Barrier Reef Marine Park, would almost inevitably require agitation and compromise. Alfred Runte argued that 'compromise in the ecological context, regrettably, is simply another definition for loss'.¹ I am not convinced, however, nor am I sure that others would agree, that the management for all 'reasonable uses' of the Reef is a loss. Ignoring this history of interaction between people and place diminishes the willingness and capacity of people to change to preserve an environment so entangled with their identities.

¹ Runte, 'Reply to Sellars', 141.
This thesis was not a detailed explanation of the physical change in the coral reef structure of the Reef following European engagement. The historic record is largely devoid of statements of obvious, physical change to coral reefs themselves. Until the initial Crown of Thorns outbreak, observers accepted that the Reef's structural existence was predicated on a constant violence – a continual process of construction, destruction and reconstruction. Since GBRMPA, however, there is acute awareness of the damage being done to the coral reefs of the Great Barrier Reef as a result of human activity and the public has regularly responded to known threats to the Reef system. Awareness has grown within the Queensland public about the impact of activities within the Reef's catchment area (see Map 8) on the Reef's water-quality and consequently on the Reef's resilience. Reef scientists have been working with farmers along the Queensland coast to help reduce nutrient loads, and suburban street drains have the message 'This drains to the Great Barrier Reef' painted or engraved into them. Publicly visible encouragement to adopt new more Reef-friendly behaviours is ubiquitous. Awareness of the impact of increased suspended sediment on coral reefs has driven much of the recent protests against port expansions along the Queensland coast. In the case of the Abbot Point expansion (25km north of Bowen) and the Adani Carmichael coal mine in the nearby Galilee Basin, broad alliances have been created between conservationists, Reef tourism operators and Indigenous traditional owner groups. As twin projects, the Abbot Point expansion and the Adani mine represent a new threat to the Reef. Increased sea-temperatures and ocean acidification, both products of anthropogenic climate change, have had dramatic impacts upon the Reef's coral structures. The impacts of global climate change have brought into reality the internationalism of the Reef itself and the ecological problems it faces. Consequently, global climate change has thrown into relief GBRMPA's ability to manage the Reef.

The internationalisation of the Reef's conservation, which was made official with its declaration as a World Heritage Area in 1981, has also complicated the politics of Reef conservation. The Australian government has, in recent years, seemed to struggle with the desire to either expand or at least maintain Australia's commitment to fossil fuel production and provide assurances for the Reef's future. In 1968, the Queensland government believed that they had to not only be well informed on issues of the Reef's exploitation but also appear well informed. Today, it seems as though governments are seeking to make the Reef appear to be protected, despite Reef scientists' claims that current initiatives towards the Reef's protection are not adequate enough. Examples of this strategy include the quest by the Australian and Queensland governments to ensure the Reef was not listed on the World
Heritage endangered list in 2015, and the Australian government's success in having the Reef removed from a UNESCO report detailing World Heritage sites threatened by climate change in 2016. The current 'Save the Reef' campaign is much more global than the first and governments, conservationists and scientists are finding the politics and route to compromise much more complex.

Furthermore, national and international adoration of the Reef and genuine concern for its future has had consequences for scientific discourse. As well as the production of a mass of scientific papers outlining issues facing the Reef and coral reefs generally there have emerged a much smaller number of critics who, have their voices amplified by the news media, and publicly question the rhetoric of scientists. Additionally, marine ecologists who research non-Great Barrier Reef environments within Australia have outlined the reality that a national fascination with the Reef helps Reef-scientists to produce nearly 50% of all the nation's marine research. These issues, along with the emphasis placed by scientists upon the importance of changing human behaviour to protect the Reef, will produce important ongoing questions for historians and other humanities scholars.

These recent developments make plain that the Reef's story did not end in 1975, but a new chapter began. The birth of GBRMPA – which ended the 'Save the Reef' campaign and formalised a utilitarian approach to the Reef – ensured novel approaches to and understandings of the Reef would continue to emerge. The Reef became partitioned: zoned for specific user-groups and agendas. Understanding destroyers of the Reef, both human-caused and naturally-occurring, became the paradigm. Reef scientists pursued their investigations in marine research stations from Lizard to One Tree Island. Notably, GBRMPA, and the steady increase in scientific inquiry into the Reef which followed its implementation, gave legitimacy to a perpetual discourse of saving the Reef. While the Reef's economic and natural values were reconciled and the 'Save the Reef' principles were affirmed, the campaign left a concept which continues to resonate with Australians: that the existence of the Reef alongside human activity, while possible, is worryingly precarious.

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