

Get lost! Safeguarding lost tourists in wilderness environments

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Introduction

Tourists venture into wilderness areas in pursuit of leisure and adventure (Boller *et al.* 2010, Kortenkamp *et al.* 2017). They can be uniquely vulnerable due to their lack of familiarity with the environment, their touristic behaviours, their attitudes and barriers to effective communication (Faulkner 2013, Gurtner 2014, Jeuring & Becken 2013). People becoming lost (hereafter called 'lost tourist events') can threaten and damage perceptions of safety of the destination and its appeal (Jeuring & Becken 2013). Understanding people who become lost can provide clues to their whereabouts and possible behaviours (Syrotuck & Syrotuck 2000, Koester 2008, AMSA 2021). There have been many attempts to categorise lost people based on demographics, psychographics and behavioural patterns (AMSA 2021; Koester 2008; Twardy, Koester & Gatt 2006). However, there has been little work to identify and address the unique needs of lost tourists.

This article establishes what is and is not known about lost wilderness tourists through a review of relevant multi-disciplinary literature. The paper overviews key terms and establishes a definition for lost wilderness tourist. It discusses tourist-focused search and rescue (SAR) and preventative search and rescue (PSAR) and shows how tourism disaster management tools might be useful to understand and prevent lost wilderness tourist events. It establishes that lost tourist events are likely to be phase-based and might be best understood by examining stakeholder interactions before, during and after lost experiences. The paper synthesises the literature and suggests future research.

Method

Literature searches were conducted of major academic databases via the James Cook University library search engine using key words such as 'lost person', 'search and rescue', 'tourism', 'disaster', 'crisis', 'community' and 'disaster management framework'. Initial searches yielded around 300 relevant scholarly articles. These articles were imported into an Endnote database and screened for relevance. Results were grouped and the findings summarised.

Abstract

People lost in the wilderness may be geographically disorientated, incapacitated or unable to return to places of safety. Tourists enter wilderness environments in pursuit of pleasure and leisure but sometimes things go wrong, and they become lost. Tourists have some unique needs dependent on their attitudes, behaviours, motivations and general lack of familiarity with the environment. These unique needs have been recognised in tourism disaster management literature but have not been addressed in search and rescue or lost-person literature. This paper reviews existing literature from the fields of tourism, search and rescue, preventative search and rescue, lost person behaviour, tourism disaster management and community engagement to propose a way forward for tourist safety research. One pathway is to deconstruct the event of a person lost in the wilderness into a series of linked phases. Deconstruction can inform theorists, practitioners and stakeholders about better ways to prevent and manage such events. This could benefit all stakeholders and provide empirical research grounded in established tourism, tourism disaster management and search and rescue theories.

Lost wilderness tourists

The Oxford Dictionary defines ‘lost’ as: ‘unable to find one’s way, unable to be found and unable to understand or to cope with a situation’. Lost person events may be triggered by geographic disorientation, inability to reorientate, inability to return to places of safety, misadventure, misunderstandings, psychological issues, injury, incapacitation or death (Boore & Bock 2013, Heggie & Heggie 2012, Hill 1998, Hung & Townes 2007, Pearce *et al.* 2019, Scott & Scott 2008).

Understanding lost wilderness tourists begins with defining the terms ‘wilderness’, ‘tourist’, ‘lost’ and ‘lost wilderness tourist’. Boller and co-authors (2010) define ‘wilderness’ as natural environments that have not been significantly modified by human activity. In Australia, this includes rainforests, mountains, outback deserts, inland waterways and other remote settings (AMSA 2021, Whitehead 2015). Tourism literature provides a range of definitions for ‘tourist’. The United Nations describes tourists as temporary visitors staying at least 24 hours for the purpose of leisure (Leiper 1979, p.393). Leiper (1979) advises that a tourist is a ‘man away from his usual habitat’. Cohen (1974, p.533) defines a tourist as ‘...a voluntary, temporary traveller, travelling in the expectation of pleasure’. McCabe (2005, p.87) describes a tourist as ‘... a person who travels outside of his normal environment for a period of more than 24 hours’. Yu and co-authors (2012) suggest that tourists might simply be people who identify as such.

Thus, lost wilderness tourists might be defined as:

...people who make discretionary trips away from normal places of residence for longer than 24 hours, who engage in touristic behaviours in wilderness environments and are identified, by themselves or others, as a tourist who is geographically disorientated and/or unable to return to places of safety.

Search and rescue theory

Searches are triggered when police receive notification of a lost person (Boore & Bock 2013, Harrington *et al.* 2018, Heggie & Amundson 2009, Phillips *et al.* 2014, Silk *et al.* 2018). When lost person events occur in wilderness areas then wilderness search and rescue (WiSAR) responses are launched (Doherty *et al.* 2014, Lin & Goodrich 2010). Searches aim to locate and recover lost people quickly and efficiently with minimum cost and minimum risk exposure (Doherty *et al.* 2014, Lin & Goodrich 2010). These typically involve predetermined actions organised in accordance with the knowledge, skills and abilities of search commanders and in accordance with search theory best practices (AMSA 2021, Lin & Goodrich 2010).

Academic interest in search theory dates back to the early 1900s as can be seen in *The Circular Track of Lost Persons* (Anonymous 1912). Since this early work, there has been an ongoing effort to develop and improve the accuracy of search

theory as can be seen through the work of Koester (2008), Lin and Goodrich (2010), Sava and co-authors (2016) and Twardy, Koester and Gall (2006). Most extant WiSAR research literature focuses on searching for, locating, rescuing and recovering lost people (Abi-Zeid & Frost 2005, Al-Kaff *et al.* 2019, Kenneth 2012, Koester 2008, Sava *et al.* 2016, Syrotuck & Syrotuck 2000, Twardy, Koester & Gall 2006). This has arguably led to an action-focused and searcher-centric understanding of WiSAR events. Search literature is mostly quantitative in nature and focused on where lost people might be found and typically concentrates on geo-fencing (Doherty *et al.* 2014), probability modelling (Lin & Goodrich 2010), lost person behaviour modelling (Twardy, Koester & Gall 2006) or a combination of these methods (Sava *et al.* 2016). There is however, a small and growing body of work that examines how to prevent or minimise the consequences of lost person events.

Preventative search and rescue

Preventative search and rescue aims to reduce the frequency and effects of lost person events (Pearce *et al.* 2019, Spano *et al.* 2019). PSAR is an emergent field and an identified growth area for WiSAR. Boore and Bock (2013) sought to identify where and when people are likely to get lost. Pearce and co-authors (2019) sought to understand behaviour patterns that might lead to lost person events and Kortenkamp and co-authors (2017) identified areas for lost person prevention. Boore and Bock (2013) and Pearce and colleagues (2019) also identified that education can help prevent lost person events. Some of these findings have been employed to drive functional PSAR initiatives in places such as the California Yosemite National Park program, PSAR: Keeping You Safe in Yosemite.¹ Effective PSAR initiatives will also benefit wilderness tourism operators in Australia and New Zealand.

Lost tourists, tourism disaster and event phases

Tourism disaster literature recognises the value of holistic, phase-based approaches to event management. Faulkner (2001) produced a framework that breaks tourism disaster events into 6 phases with identifiable boundaries, distinct event response procedures and strategies. These phases are pre-event, prodromal, emergency, intermediate, long-term (recovery) and resolution. Faulkner’s framework has been cited over 15,000 times in academic literature. It has also been tested in various disaster and crisis situations (Faulkner & Vikulov 2001, Gurtner 2014, Miller & Ritchie 2003) and has been shown to be generally robust. This phase-based approach is similar to the widely adopted Queensland Disaster Management Prevention, Preparedness, Response and Recovery (PPRR) model (Queensland Government 2018). It is the proposition of this article that an holistic, phase-based approach to understanding lost tourist events may be useful to SAR and PSAR academics, practitioners and stakeholders.

1. PSAR: Keeping You Safe in Yosemite 2021, at: <https://yosemite.org/psar-keeping-you-safe-in-yosemite>.

Lost person behaviour and event phases

Lost person behaviour models are concerned with the behavioural and psychological actions of people who are lost (Heggie & Amundson 2009, Hill 1998, Koester 2008, Lin & Goodrich 2010, Sava *et al.* 2016). Understanding lost person behaviour allows searchers to categorise lost people, predict likely locations of lost people, develop profiles of the lost people and anticipate possible behaviours and actions (AMSA 2021, Koester 2008, Twardy, Koester & Gall 2006). Theorists have developed lost person models that include up to 41 different groups but none of these models classify tourists as a unique subset of lost people.

The unique needs of tourists are well documented in tourism and tourism disaster management literature (Faulkner 2013, Gurtner 2014, Jeuring & Becken 2013). Jeuring and Becken (2013) call for more work to explain wilderness tourist behaviour. This indicates a need for tourist centric PSAR research that extends beyond searching and rescuing. Extending lost tourist knowledge beyond searching and rescuing might reduce the frequency and severity of lost person events. This reduction could be achieved by learning about risky tourist behaviours, developing tailored responses and creating post-event feedback loops.



Teams conducting search and rescue operations near Tully, Far North Queensland.

Source: Steven Schwartz

Community engagement

Community engagement is frequently discussed in both tourism disaster management and risk reduction. Community engagement can also be useful when addressing the needs of tourists (Bulley 2013; Kolopack, Parsons & Lavery 2015; Titz, Cannon & Krüger 2018) but communities can also have negative effects (Brint 2001, Titz, Cannon & Krüger 2018). Effective intervention requires community identification and appropriate

intervention strategies. This can be achieved by uncovering structural complexities and hidden features and developing appropriate community-based intervention strategies (Barrett 2015). This approach has been effective in social policy (Barrett 2015, Titz, Cannon & Krüger 2018) and consumer behaviour theory development (Schouten & McAlexander 1995) and has potential in PSAR theory development.

Identifying different communities and groups that may be involved in lost tourist experiences through each phase may give SAR and PSAR practitioners more effective intervention and response tools. Search and rescue literature shows that communities seek to connect with lost parties during the action phase of search events (Koester 2008, Sava *et al.* 2016, Twardy, Koester & Gall 2006, Whitehead 2015). The literature also shows attempts to connect with people to prevent them from becoming lost (Boore & Bock 2013, Pearce *et al.* 2019, Spano *et al.* 2019). Counterproductively, Kortenkamp and co-authors (2017) identified negative community-based peer pressure can lead to poor decision making in some lost person behaviour.

Discussion

It may be possible to extend SAR and PSAR theory through multi-disciplinary literature and through empirical research. New insights might be achieved by taking an holistic, phase-based approach to lost wilderness tourist event management. This approach has been shown to have value in tourism crisis management and in emergency management planning.

A review of literature identified that SAR and PSAR theory:

- is dominated by work that focuses on how to best conduct search and rescue or recovery operations
- is underdeveloped
- could be extended by developing pre- and post-event knowledge.

Tourism literature shows that tourists have unique needs that can lead to WiSAR events, that tourists are not considered unique by lost person behaviour theorists and that more wilderness tourist risk research is needed. Community literature shows that various stakeholders have different roles during tourism disasters phases and that it might be expected that tourists and communities have different needs and roles throughout lost wilderness tourist events

Examining interactions throughout each phase might identify the types of communities that wilderness tourists interact with and the influences these communities might have. A phase-based approach allows researchers to explore tourist interactions with communities and could lead to phase-appropriate interventions. Having a better understanding of the interactions between lost tourists, searchers and communities before, during and after lost wilderness tourist events might help identify better preventative interventions, better response procedures and effective feedback learning loops. PSAR practitioners could maximise the benefits of these interactions and minimise any negative effects. This offers the potential for PSAR initiatives that reduce or minimise the effects of WiSAR events and their associated costs and traumas.

Conclusions

Based on a literature review, this study proposes linking SAR research with tourism disaster research and adopting an holistic, phase-based approach to PSAR research that extends from pre-event to recovery and considers stakeholder interactions. This approach provides novel insights into the prevention and management of lost wilderness tourist events. It might also help develop a better understanding of the interactions between lost people, searchers and the extended stakeholder community. Linking SAR theory to tourism disaster theory could ground lost tourist experiences within the tourism disaster literature. This benefits tourists, search teams, wilderness area managers, tourism providers, educators, theorists and stakeholder communities. Benefits come from increased understanding of lost wilderness tourists, research-based policies and practices, reduced trauma, improved consumer confidence in wilderness tourism and improved demand for related goods and services.

Empirical research could develop a framework that is similar to Faulkner's (2001) disaster management framework or Queensland's PPRR model. This framework could drive tourist-specific PSAR interventions and SAR responses. This article focused on the needs of lost tourists because tourists are socially and economically important and because their unique needs have been overlooked in existing literature. There are other unique groups and, once a model is developed for tourists, it may be possible to develop the model to improve PSAR interventions and effectiveness for other groups of lost people such as children and the elderly. Future research could investigate the interaction between various lost person groups and community stakeholders through each phase from pre-event to resolution. This could lead to new insights that could be implemented before people become lost. There will always be a place for skilled search coordinators and trained searchers in the search process but, ultimately, prevention is always the best option.

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