

Lost person behaviour and First Nations peoples

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Australia is a country with the diverse range of topography and vegetation coupled with extremes of climate that can make survival for a lost person a precarious situation. This puts pressure on search coordinators to develop sound and resilient search areas to provide the greatest chance a lost person being found alive.

Within the arsenal of tools available to search teams is the Australian Lost Person Behaviour Database, which is a statistical analysis of the behaviour of lost people. While lost person behaviour has been the backbone of search area development for many years, prior to 2008, search coordinators took an 'educated guess' as to where to search. As more data has been collected from lost person searches, the study of lost person behaviour has increased the number of categories of lost people available.

In 2023, there was sufficient data to create a new and 15th lost person behaviour category, that of First Nation People. This groundbreaking additional category provides search coordinators with a better picture of the potential survival capabilities of Aboriginal and Torres Strait Islander people who may become lost in Australian remote areas, the aim to improve the chances of a successful search.¹ The participation of Indigenous community groups from the Northern Territory and Queensland aided in the development of this lost person category. Lost person behaviour is part of the statistical search strategy used by Police search and rescue coordinators when developing a search area for a lost or missing person. Lost person behaviour is a Bayesian analysis of previous lost people and is used as a predictive model for determining what actions a lost person may take based on what other people in similar circumstances have done. This can then be used in the planning for a search.

A small lost person study was undertaken in Australia between 2000 and 2006² using the Bayesian theory with the results tabled at the 2006 National Search and Rescue Council. The International Search and Rescue Incident Database (ISRID)³ is a statistical analysis of over 50,000 lost persons mainly from the United States, New Zealand, United Kingdom and Canada and where these people were found. Thirty-two categories of lost person were identified and each category was provided with statistical distances of travel, lost person characteristics and suggested search strategies.

It was identified that the ISRID data differed from what lost people in Australia were doing. This prompted an Australian study into any unique characteristics. The Australian Lost Person Behaviour Database has been collecting data from cases within Australia since 2010 and forms the basis for lost person behaviour, (see Appendix E-5 of the *National Search and Rescue Manual*⁴). The manual is updated biannually and is structured particularly for Australian situations. As further lost person behaviour data is acquired, more categories of lost people are added. In 2021, there was sufficient data to include 2 new categories of lost person:

- prospectors
- children with ADD, ADHD, Asperger's and autism.

In 2024, the 15th category, First Nation People, was adopted in the *National Search and Rescue Manual*.⁵

The distances used when assessing lost person behaviour were calculated from where the lost person was last seen to where they were found, a straight line or Euclidean distance determined by using Google Earth Pro™. It is accepted that many lost people tend to walk considerable distances in an attempt at self-recovering. However, during post-rescue interviews, it was difficult for those people to recall exactly what they did. Therefore, the Euclidean distance is used modelling lost person behaviour.

The First Nation People category

All 15 categories of lost person behaviour in the manual are set out in the same format (see Table 1). The sections in each lost person category are characteristics, tendencies, strategies, where the lost person was located statistically and the distances they were located from where they

were last seen. This information is based on the lost person profiles as entered into the Australian Lost Person Database by search coordinators.

The characteristics of lost people in this category relate to traits that arose most often in post-incident debriefs. These include that First Nations peoples often travel further than the lost people in all other categories and that they often have a greater understanding of the local environment. It was also identified that these people may not be lost in the traditional sense of the word, in that they may know where they are or are going, but because of tribal (mob), clan or spiritual law, these locations might not be known to others.

The tendencies section highlights particular behaviours for each category of lost person. Generally, First Nations peoples do not wander aimlessly and there is a purpose to

Table 2: Participant demographic information and associated survey responses split by variables with 2 samples or 3 or more samples.

Planning considerations	Characteristics (that differ from lost people in rural areas and in suburbia)					
Tendencies	<ul style="list-style-type: none"> • Often travel further than other lost person behaviour categories. • Often have a good understanding of their locale. • May head for a location known to them or of significance (spiritual, mob or clan). • Locations may or not be known by other family, mob or clan members. • Generally, travel to an area with survival resources (e.g. water). • Rarely respond to calls and whistles and may hide. • May be involved in rites such as singing/boning. • Drugs and/or alcohol might be involved. • May not want to be found (particularly by searchers). • Do not wander aimlessly; there is often a purpose. • May head to well known or spiritual places. • Can travel significant distance compared to people of similar age/build. • May be going to die. • May be undertaking a ritual activity and will return on completion. 					
Search strategies	<ul style="list-style-type: none"> • Investigation into circumstances is important. • Cultural understanding is vital, particularly of rituals, mob and clan aspects and seasonal activities. • Obtain a good subject profile from family, friends and off social media. • Urgent response, but lost person may have survival skills in their own environment. • Will require searching further distances than for other categories. • Confinement, that is, creating a cordon around the search area, is a low priority. • Passive techniques are generally not successful. Passive techniques are intended to draw a lost person towards a search base and include playing favourite music on loudspeakers or having a bonfire burning. 					
Where located (statistically)	<ul style="list-style-type: none"> • Open wilderness (desert/plains), 28%. • Water holes, 24%. • Forest/vegetation, 18%. • Sacred locations, 18%. • No trace, 12%. 					
% of lost person behaviour category (i.e. 25% of people in this category have been found within 7km of where they were last seen)		25%	50%	75%	80%	95%
Distance lost people have been found from where they were last seen (km)		7	12	19	23	43



People within the First Nation People category appear to have capability to cover vast distances and search coordinators generally work on a 23km distance from last sighting during the search planning stages.

Image: Photograph owner permission provided

their wandering. It was also identified that they can cover significantly greater distances compared to other people of a similar age or build.

The strategies section of each category is a guide to search coordinators as to what has the greatest potential to work. Investigation with a cultural understanding is essential as is obtaining a detailed personal profile. Most lost person incidents require an urgent response and this can be aided by the lost person having good survival skills. One of the most important strategies highlighted by research into this new category was that search areas should be considerably larger than for other categories.

The statistical locations raised several issues with respect to survival. Over a quarter of lost people in the First Nations people category were found in open arid areas; almost a quarter were near water and 18% were at or near sacred sites. Many search coordinators identified that the locations of water holes and sacred sites were not always forthcoming, particularly if there was significance to the lost person. Including other family, mob or clan members often becomes a necessity to search these areas.

People within this category appear to have capability to cover vast distances. Search coordinators commonly work on an 80% distance during the planning stages of a search. In these cases, that is 23km from where the lost person was last seen. Table 1 shows that 95% of lost people were found within 43km, making search planning additionally difficult for coordinators. With such distances, aerial search is frequently the only practical method to provide adequate search area coverage in a reasonable time.

Conclusion

The new First Nation People lost person behaviour category addresses an important gap in search team ability to develop appropriate search areas for lost people. This addition is a beginning and, as more data becomes available, it will be possible to refine current details and increase the ability to find lost and missing people in these uniquely Australian circumstances.

Endnotes

1. Whitehead J (2023) *National Search and Rescue Manual*. Australian Maritime Safety Authority website www.amsa.gov.au/national-search-and-rescue-council/manuals-and-publications/national-search-and-rescue-manual, accessed 26 September 2024.
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3. Koester R (2008) *Lost Person Behaviour. A Search and Rescue Guide on Where to Look - for land, Air and Water*. dbS Productions LLC.
4. Whitehead J and Latham J (2019) *Lost Person Behaviour*. 43 National Search and Rescue Council Conference, Adelaide.
5. Whitehead J (2024) *Schedule of Amendments to the National Search and Rescue Manual*. Australian Maritime Safety Authority, Canberra.