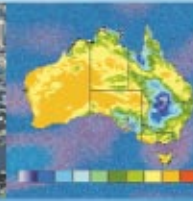


CHARACTERISTICS OF INTERSTATE AND OVERSEAS BUSHWALKERS IN THE ARTHUR RANGES, SOUTH-WEST TASMANIA



By Douglas A. Grubert & Lorne K. Kriwoken

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EXECUTIVE SUMMARY

Overnight bushwalking is a popular way by which local, interstate and overseas tourists experience and enjoy the Tasmanian Wilderness World Heritage Area (TWWHA). Although the proportion of total visitors who undertake an overnight bushwalk is comparatively low, the opportunity to do so is crucial to the identity of Tasmania as a nature-based tourist destination. Visitors seek a range of benefits from bushwalking in Tasmania: challenge; solitude; spectacular scenery and comradeship through shared experience to name just a few. However, there are also costs associated with bushwalking, most notably these are environmental and social impacts. It is inevitable that bushwalkers will cause some degree of impact to the area they visit, therefore it is incumbent upon those agencies responsible for TWWHA to address those impacts. Appropriate planning and management of bushwalkers and walking tracks will help to protect the integrity of the natural and cultural values of the TWWHA, and at the same time can maintain bushwalking as an important component of the state's nature-based tourist industry.

This report presents social data regarding bushwalkers who visit low-use walking destinations within the TWWHA. The Track Assessment Group, a Ministerial Committee established to review Tasmania's walking track management, identified the need for social research to be conducted to provide decision-makers with more information about the people who use the TWWHA. In particular, the Western Arthur Range and Eastern Arthur Range were identified as 'Priority 1' areas to be examined using a new planning process based on the *Limits of Acceptable Change* concept (Track Assessment Group 2001). Recognising that the Arthur Ranges receive relatively low levels of use yet have suffered considerable levels of impact, the Tasmanian Parks and Wildlife Service and Tourism Tasmania requested that social research be conducted in the area. The aim of the research was to determine the characteristics of interstate and overseas bushwalkers who visited the Arthur Ranges in South-West Tasmania during the 2000-2001 summer season. Five objectives were developed to achieve the aim:

- To determine the demographics and level of experience of interstate and overseas walkers;
- To ascertain the information sources that interstate and overseas walkers used to choose to walk in the Arthur Ranges;
- To determine the attributes or features that attracted interstate and overseas walkers to the Arthur Ranges;
- To establish what alternative and future walking destinations were considered by interstate and overseas walkers; and
- To determine the tourism services used by interstate and overseas walkers.

This information is useful for management agencies, planners and tourism operators who can make more informed decisions about bushwalkers and walking track management in low-use destinations.

Research Findings and Implications

Various characteristics of interstate and overseas bushwalkers were determined and the results can be interpreted in a number of ways. The key findings are:

- **Bushwalker demographics:** walkers were predominantly male (70%), aged 15-39 years (76%) and employed either in professional positions (35%) or as students (29%). The sample was comprised of 8 per cent overseas visitors and 92 per cent interstate visitors. Bushwalkers from New South Wales (39%), Victoria (24%) and Queensland (13%) dominated the sample.
- **Level of experience:** the total level of bushwalking experience among respondents was high although this declined when respondents' experience in Tasmania was considered. Nonetheless, 76 per cent of bushwalkers had bushwalked in Tasmania on at least one previous occasion with 67 per cent of the sample having experience on bushwalks of seven days duration or longer.

- **Information sources:** the findings demonstrate that a variety of information sources are used by bushwalkers to influence destination selection. The most popular source of information was from guidebooks which were used by 87 per cent of bushwalkers. Word of mouth information was popular and came from a variety of sources: friends and family; gear shops; and bushwalking clubs. Magazines and the Internet were used by 26 per cent and 24 per cent of the sample respectively. In addition, 98 per cent of walking parties carried maps produced by the Tasmanian government mapping agency.
- **Favourable site attributes:** five factors were identified as being particularly important influences of destination selection. Respondents wanted to 'be inspired', 'escape everyday life', 'see mountain scenery', 'experience wilderness' and 'go somewhere they hadn't been before'.
- **Alternative and future walking destinations:** respondents had a well developed knowledge of the walking opportunities available within the TWWHA and elsewhere in the state. Among those respondents who were involved in planning their bushwalk, 42.2 per cent did not consider walking in anywhere other than the Arthur Ranges which suggests that destination selection among some bushwalkers is highly specific. Twenty nine per cent of bushwalkers completed other bushwalks in addition to their visit to the Arthur Ranges. Importantly, 84 per cent of respondents indicated their intention to visit Tasmania in the future for bushwalking. This is creditable considering that 76 per cent of the sample was already on a return visit to Tasmania. Finally, there appears to be a strong relationship between the level of information available about walking destinations and their popularity as alternative or intended bushwalking destinations of the future.
- **Tourism services used:** bushwalkers visited Tasmania on a low budget with the average expenditure in the state being \$628 during an average length of stay of 20.7 days. Respondents relied on budget accommodation, such as hostels, and public transport whilst in Tasmania, which explains the low expenditure.

The findings provide agencies with an understanding of who constitutes the niche market of remote area bushwalkers. This can be compared with data about other segments of the bushwalking market to detect difference and similarities that can affect the type of management techniques that are adopted. Understanding the factors that influence destination selection among bushwalkers, as well as their past experience and future walking intentions enables planners to predict which areas may require actions to address potential impacts in the future.

Determining where bushwalkers are from and the information sources they use provides managers with the means by which to convey specific messages to bushwalkers before they arrive in Tasmania. Thus, supplying them with the knowledge of what walking opportunities are available, what equipment is required and what practices are acceptable within the TWWHA. Finally, by determining what tourism services this segment of the nature-based tourist market uses, tourism operators can maximise their market share by tailoring their products and advertising to what the market identifies as desirable.

Communication with Stakeholders

The findings of this research will be distributed to stakeholders by the following methods:

1. a literature review;
2. a Bachelor of Science (Honours) thesis;
3. an industry report that concentrates on the major findings of the research;
4. an article published in an internationally refereed journal; and
5. a series of presentations.

Copies of the literature review, thesis and industry report will be presented to the CRC for Sustainable Tourism, the Tasmanian Parks and Wildlife Service, Tourism Tasmania and the University of Tasmania. In addition the industry report will be made available to tourism operators. Presentations have been delivered to the University of Tasmania and to the Intergovernmental Agency Working Party for

Recreation and Tourism Use of State Owned Lands. The results will also be made available to the Bushwalking and Track Review Panel.

Further Research

The information obtained from this research will be used directly in the management of the Arthur Ranges however, it will also assist in the management of other low-use walking destinations within the TWWHA. The theoretical, practical and methodological experience gained from this study can be used to further enhance the level of social data pertaining to bushwalkers through a program of further research. As with any research, there were constraints placed on this study that limited the data information that could be obtained. Although the quality of information in this study is very high, the breadth of information is somewhat restricted, therefore the following factors should be considered for future research:

- In this study the sample consisted of interstate and overseas bushwalkers only. The scope of the research could be widened to include Tasmanian bushwalkers, therefore allowing comparisons to be made among the different subgroups.
- The results from this study represent a snapshot in time from the 2000-2001 season. Establishing a longitudinal study (a study over time) would allow comparison over years and the detection of patterns or trends, which would improve the depth of understanding about bushwalkers who visit low use destinations.
- The Arthur Ranges is just one area that has been identified for assessment. The Track Assessment Group also identified the Frankland Range; Labyrinth and Du Cane Range; and Mt Anne area as 'Priority 1' areas. Whereas the Walls of Jerusalem; Denison-Spires; Olympus; South Coast; Snowy Range; Southwest Cape; and Southern Ranges were identified as 'Priority 2' areas (Track Assessment Group 2001). An assessment of each of these areas would be dramatically improved with the aid of social data about the characteristics, expectations and patterns of use of those bushwalkers who visit the areas. Future research could be greatly enhanced because of the lessons learned in the design and implementation of this study.

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ABSTRACT

A study of interstate and overseas bushwalkers who visited the Arthur Ranges in South-West Tasmania during summer 2000-2001 was conducted to create a profile of the type of people who use the area, their patterns of use, reasons for choosing the area and the tourism services they used. The information was collected to assist planners and park managers to assess the management of walking areas in terms of walker quality of experience; to model displacement and trends in walking track use; and to assess the contribution bushwalkers make to the tourism industry. The characteristics of bushwalkers were similar to those from previous studies, however the results show a very high reliance on published information as an influence of walking track choice which should receive careful consideration with regard to the management of low-use walking destinations within the Tasmanian Wilderness World Heritage Area.

1.1 Overview

Tasmania is marketed as 'The Natural State' and its image as a tourist destination is directly linked with its image as a wilderness destination. Tasmania boasts a diverse array of national parks, state reserves and conservation areas, however, it is the designation of more than 20 per cent of the state as the 'Tasmanian Wilderness World Heritage Area' (TWWHA) that provides the Tasmanian tourism industry with a market advantage as a wilderness destination. If Tasmania is to continue to market its tourism opportunities using the wilderness brand it is essential that the quality of the natural environment be maintained. The provision of a high quality natural environment, supported by sensitive and innovative infrastructure and interpretation, will continue to attract local, interstate and overseas tourists. However, if areas designated for protection are mismanaged they can be degraded to the point where tourists seeking high quality experiences choose to go elsewhere. This represents a 'lose-lose' scenario whereby the integrity of the natural environment becomes decreased and the revenue from tourism is reduced. Such a situation reflects negatively on the tourism industry as a whole. The challenge of managing tourism within wilderness areas is to balance the presentation of the area to the public, with the preservation of those values for which the area was reserved.

The TWWHA is one of the world's last remaining temperate wilderness areas (Parks & Wildlife Service 1999). It was inscribed on the World Heritage list in 1982 as the 'Western Tasmania Wilderness National Parks' at the sixth session of the World Heritage Committee. In 1989, at the thirteenth session of the World Heritage Committee, an additional 604,645 hectares of land were included and the name 'Tasmanian Wilderness' was adopted (World Heritage Committee 1983, 1989). The TWWHA is approximately 1.38 million hectares (20% of the state) and incorporates Tasmania's four largest national parks: the Southwest; Franklin-Gordon Wild Rivers; Cradle Mountain-Lake St Clair; and the Walls of Jerusalem (Figure 1). The remaining area includes various state reserves, conservation areas, Aboriginal land and freehold land (Parks & Wildlife Service 1999).

The TWWHA was inscribed on the World Heritage list because its values were considered worthy of protection for all humanity. It is one of four Australian World Heritage areas, and only 23 worldwide that satisfies natural and cultural criteria for nomination. In total, the TWWHA satisfies seven of the eleven selection criteria; of the other 689 properties on the World Heritage list, only Mount Taishan in China satisfies as many criteria (World Heritage Committee 2000). Clearly, the TWWHA is an area of very high conservation status and significance.

Examples of the natural values of the TWWHA include exceptional geological formations and features; links to the super-continent Gondwana; a profusion of threatened, rare and endemic plants and animals; and areas of extreme scenic beauty (Parks & Wildlife Service 1999; Environment Australia 2000). The cultural values of the TWWHA are based on evidence of Aboriginal occupation dating back 35,000 years; the most southerly human inhabitation of the world during the last ice age that is reliably documented. Included in the evidence are extensive cave deposits, hand-stencilled cave art and numerous archaeological sites from the Holocene (McGowan *et al.* 1993; Kiernan & Eberhard 1993).

1.2 Tourism In The TWWHA

The significance and beauty of the TWWHA make it a popular tourist destination. According to the *Tasmanian Wilderness World Heritage Area Management Plan*, over half a million people visited the TWWHA annually since 1992 (Parks & Wildlife Service 1999). In addition, the management plan indicated that the majority of visits were focussed at three sites located within 'Visitor Services' zones. The areas that received the highest number of tourists were the Cradle Valley (170,000 visitors); the Gordon River (100,000 visitors); and Lake St Clair (100,000 visitors) (Figure 1).

Figure 1 The Tasmanian Wilderness World Heritage Area



[Source: Ling 2000]

The very large number of people visiting the three key tourist hotspots suggests the potential for considerable environmental degradation. However, Williams (1998) explains that where mass tourism is well planned and properly resourced, the environmental consequences may be less than those created by small numbers of people visiting locations that are unprepared for the tourist. This observation is extremely pertinent to the management of recreational use of the TWWHA. Although the majority of visits to the TWWHA are concentrated at three major tourist sites, each has undergone development to cater for high levels of use. The Cradle Valley and Lake St Clair have accommodation, visitor centres, car parks and other major modifications whereas the Gordon River receives several tourist cruise boats daily. Despite the high level of development, the total area that has been modified is relatively small. If managers accept the initial dramatic change from natural conditions, the additional impact of each tourist is negligible, therefore, the level of environmental impact is quite stable. A problem arises when tourists venture into the more remote, pristine areas of the TWWHA. The fragility of many of the ecosystems; combined with the frequency of use; type and behaviour of user; and the season of use can result in rapid deterioration of an area (Parks & Wildlife Service 1997; Marion & Cole 1996; Monz *et al.* 2000). Therefore, it is important to plan and manage activities, such as bushwalking, in remote and fragile parts of the TWWHA.

1.3 Bushwalking In The TWWHA

For those visitors to the TWWHA who desire more than a half-day of sightseeing at a major tourist hotspot, there is a range of nature-based activities that can be undertaken. By far the most popular of nature-based activity is bushwalking. Each year approximately 22,000 people undertake an overnight bushwalk that takes them out of the 'Visitor Services' zone and into the 'Recreation', 'Self-Reliant Recreation' and 'Wilderness' zones of the TWWHA. The walking opportunities within the TWWHA are world class; single overnight trips; commercial hut-based trips; right through to multi-week self-sufficient expeditions. Destinations such as the Overland Track, which receives approximately 7000 people per year, and the South Coast Track, which receives 2000 people a year, are respected around the world. In addition to the well known, frequently used tracks there are

numerous other tracks, routes and untracked areas that receive varied levels of use.

Although the total number of people engaged in bushwalking each year is comparatively low, the concentration of impacts in time and space mean that in some places, significant degradation has occurred. Monitoring in recent years suggests that walking tracks, and campsites, have suffered environmental degradation as a result of bushwalkers as seen in Figure 2 (Parks & Wildlife Service 1999; Diggins 1998). It is essential that walking tracks, and walkers, be managed to minimise the damage caused, and to protect the values of the TWWHA.

Figure 2 Campsite impacts at High Moor in the Western Arthur Range



[Source: Grubert 2001]

1.4 Significance Of The Study

Recreational bushwalking in the TWWHA dates back 150 years and has cultural importance, particularly to Tasmanian walkers (Track Assessment Group 2001). Over the past decade the Tasmanian Parks and Wildlife Service, the agency responsible for the management of bushwalking in the TWWHA, has made numerous attempts to implement a range of management techniques. The most significant

measure involved the implementation of an overnight bushwalker permit system throughout the TWWHA. This met with considerable public opposition and resulted in a re-assessment of the way by which walkers, and walking tracks, within the TWWHA should be managed. In 1999, the Minister for Primary Industries, Water and Environment, David Llewellyn officially deferred the implementation of the proposed permit system and established a Ministerial Committee, the Track Assessment Group, to review the issues associated with walking track management.

The Track Assessment Group recognised that there was inadequate information, particularly social data, about a number of the walking destinations within the TWWHA. The Tasmanian Parks and Wildlife Service, in conjunction with Tourism Tasmania, requested research that would provide information about those bushwalkers who use remote, low-use walking areas in the TWWHA. In particular, information was sought about those bushwalkers who visit the Arthur Ranges in South-West Tasmania.

The walking area known as the Arthur Ranges can be divided into the Western Arthur Range and the Eastern Arthur Range, both of which are located south of Scotts Peak Dam in the Southwest National Park (Figure 1). The Western Arthur Range is 22 km long, 4 km wide and aligned northwest-southeast while the Eastern Arthur Range is 9 km long, 3 km wide and aligned roughly north-south. The jagged, glacially formed landscape is one of the most rugged, spectacular and sought-after walking destinations in Australia (Figure 2 and Figure 3). Despite their rugged appearance, the Arthur Ranges have a fragile alpine ecosystem that has suffered severe impacts such as track erosion and campsite degradation (Parks & Wildlife Service 1998; Diggins 1998).

Figure 3 Lake Titania, a glacially eroded lake in the Western Arthur Range



[Source: Grubert 2001]

The Arthur Ranges was selected as the focus for the study because the Tasmanian Parks and Wildlife Service identified it as a key area that required examination. The high amount of environmental impact in the Arthur Ranges has occurred despite relatively low levels of use, therefore, it requires careful management. In order to provide appropriate management it is necessary to understand those walkers who use the area.

The Parks and Wildlife Service collects information about bushwalkers through walker registration logbooks and occasional walker surveys, however, the data from logbooks lacks detail and the walker surveys tend to represent walkers who use more popular tracks. What was sought from this study was detailed information about those bushwalkers who choose to visit more remote, challenging and less popular walking area. In addition, Tourism Tasmania was interested to determine the tourism services that were used by this segment of the walking community. After discussing the project with key stakeholders, the aim became to determine the characteristics of interstate and overseas bushwalkers in the Arthur Ranges, South-West Tasmania. To achieve the aim the following objectives were developed:

- To determine the demographics and level of experience of interstate and overseas walkers;
- To ascertain the information sources that interstate and overseas walkers used to choose to walk in the Arthur Ranges;
- To determine the attributes or features that attracted interstate and overseas walkers to the Arthur Ranges;
- To establish what alternative and future walking destinations were considered by interstate and overseas walkers; and
- To determine the tourism services used by interstate and overseas walkers.

1.5 Research Strategy

The comparatively low level of use that the Arthur Ranges receives has already been mentioned, however, the exact level of use has not been discussed. Various sources of information were consulted during the development of the research strategy, but most important was the Tasmanian Parks and Wildlife Service's walker registration data. The logbooks showed that in the twelve-month period from July 1999 until June 2000, 899 walkers visited the entire Arthur Ranges area (Parks & Wildlife Service 2000). Because of the low level of use, and fact that the sample frame consisted only of interstate and overseas walkers, the development of an efficient sampling technique was crucial to the success of the research.

A more detailed inspection of the 1999-2000 walker registration data for the Arthur Ranges indicated a number of important factors. Despite its relatively low level of use, walking in the Arthur Ranges was highly seasonal with 851 (94.7%) of the 899 walkers visiting between 1 November 1999 and 30 April 2000. More specifically, 719 walkers (80%) visited in the four-month period between 1 December 1999 and 31 March 2000. Interestingly, the majority of walkers, 473 (52.6%) were from interstate and overseas and of those, 383 (81%) accessed the area from Scotts Peak Dam in the Southwest National Park (Figure 1). That access point was considered the most likely point from which to obtain a sample.

Discussions with staff at the Tasmanian Parks and Wildlife Service and Tourism Tasmania indicated that a single commercial bus company ran a scheduled service to Scotts Peak Dam at Lake Pedder. Further enquiries indicated that TWT's 'TassieLink' bus service operated from the beginning of December until the end of March each year. The feasibility of administering a questionnaire to passengers on the service was discussed with the Sales and Marketing Manager of the parent company, Tasmanian Tours and Travel, who agreed to support the research. The research approach was considered suitable and the literature indicated a similar study in which information was obtained about white water rafters on the Thomson River, Victoria, Australia (Fluker & Turner 1998). In previous seasons up to 300 passengers had used TWT's TassieLink service to access Scotts Peak Dam (Di Felice 2000 pers comm.). A target sample size of 100 responses was set as a realistic goal.

1.5.1 Questionnaire design

A number of studies have investigated the impacts and issues associated with bushwalking and other recreational activities in the TWWHA. Some concentrate on the biophysical impacts and management techniques (Parks & Wildlife Service 1998; Rheinberger 1992), whereas other studies have focussed on social factors by examining the users of the TWWHA. Researchers who have examined users of the TWWHA include Bennett (2000), Bond (1990), Byers (1996), Carlington (1988) and Sawyer (1990). In addition, a series of Tasmanian Parks and Wildlife Service walker surveys are summarised by Tourism Tasmania *et al.* (1997). These studies used questionnaires to determine bushwalkers' demographics, levels of experience, site preferences and preferred management tools. Based upon these previous works, a questionnaire was selected as the most efficient way to collect information that was pertinent to the objectives of the research.

Questionnaires from previous work by Bennett (2000), Bond (1990), Byers (1996), Carlington (1988), Poll (1999) and Sawyer (1990) were consulted. These provided useful insight into types of question as well as questionnaire length and layout. Questions were chosen which would satisfy the objectives of the study. A combination of closed and semi-closed questions was used. Weisberg *et al.* (1996) argue that

response categories for closed questions must be mutually exclusive and categories must be exhaustive. However, to minimise the length of the questionnaire, only the most likely response categories were provided and respondents were instructed to write additional responses on the back of pages if necessary. Babbie (1990) recommended that questions should elicit data of the greatest possible detail to permit maximum opportunities for analysis. This recommendation was adopted where practical. For example, the 'place of residence' of interstate walkers was recorded by postcode, not by state, to maximise detail.

The layout of the questionnaire was based on previous questionnaires, and advice from researchers at the Tasmanian Parks and Wildlife Service, Tourism Tasmania and the University of Tasmania. It was decided that the questionnaire should consist of an information page and no more than five pages of questions. Each page should be single-sided, questions should be spaced clearly and pages should be numbered. Drafts of the questionnaire were circulated to a range of relevant parties for feedback, the purpose of which was to check that questions were unambiguous, logical and presented clearly. Several re-drafts occurred before the questionnaire was finalised. Response categories were pre-coded, as recommended by Weisberg *et al.* (1996) and a codebook was written to improve the speed and accuracy of data entry (de Vaus 1995).

A copy of the questionnaire (Appendix A) and the research proposal were provided to the University Human Research Ethics Committee at the University of Tasmania, both were approved without alteration.

1.5.2 Questionnaire administration

The questionnaire was administered in the following way: passengers bound for a number of different walking destinations travelled on the TassieLink service, from Hobart to a small town called Gretna. At Gretna, passengers travelling to Scotts Peak Dam were transferred to a minibus that operated every Tuesday, Thursday and Saturday between 2 December 2000 and 31 March 2001. Once on board the minibus, the driver asked passengers which bushwalking track they intended to use (this was standard practice and necessary because the bus provided access to several remote bushwalking areas). To make

the process of questionnaire administration easier for the driver, all passengers who were going to the Arthur Ranges were told about the study and asked if they would like to complete a questionnaire. Responses were not wanted from Tasmanian bushwalkers however, it was decided that questionnaire administration would be easier for the bus driver, and less prone to error, if all passengers were provided with questionnaires and the unnecessary questionnaires were sorted during the data entry phase of the research. Both the bus driver, and the information sheet attached to the questionnaire, stated that participation was voluntary. Passengers who were returning from Scotts Peak Dam were not asked to complete a questionnaire so that the method of administration was the same for all respondents. Passengers who chose to participate were given a questionnaire, clipboard and pen while the driver recorded how many people chose not to participate. The method of questionnaire administration was piloted during the first week of operation of the bus service to determine whether or not the technique would be effective. Three respondents participated in the pilot (the total number of relevant passengers during the first week of operation). Sampling occurred from 9 December 2000 until 29 March 2001.

2. RESULTS

2.1 Introduction

Completed questionnaires were collected by the bus driver and delivered to the office of Tasmanian Tours and Travel in Hobart. From there they were mailed to the Centre for Environmental Studies at the University of Tasmania. Data from the questionnaires were analysed using the *Statistical Package for Social Sciences (SPSS) Version 10* and *Microsoft Excel* software.

2.2 Sample Size And Response Rate

During the sampling period a total of 104 questionnaires were distributed, all were returned and 100 were useable, this represents a response rate of 96 per cent. However, in addition to the response rate, it was important to determine what percentage of the population of interstate and overseas walkers were represented by the sample. Two methods were used to determine this. First, the bus driver who administered the questionnaire was asked to record the number of people who chose not to complete questionnaires, and second, the data provided by the bus driver were crosschecked with the walker registration logbook at Scotts Peak Dam.

According to the bus driver, all walkers who travelled to the Arthur Ranges on the TassieLink bus service agreed to complete questionnaires. There was, however, an unforeseen need to change the bus on 28 December 2000 that meant fifteen walkers could not be provided with questionnaires. The logbook data for the sampling period (9 December 2000 to 31 March 2001) recorded 163 walkers who travelled to Scotts Peak Dam by bus (Parks & Wildlife Service 2001). Even when the 15 walkers who were omitted on 28 December 2000 were accounted for, there remained a difference of 44 between the number recorded by the bus driver and the number recorded in the walker logbook. The data were crosschecked and the following discrepancies were determined.

- Seventeen walkers indicated that they gained access to Scotts Peak Dam by bus on days when TassieLink's service did not

operate. It was discovered that although TassieLink provided the only scheduled service, other bus companies provided a charter service. It is also possible that walkers who used TassieLink's service recorded the wrong date in the walker registration logbook.

- Fifty-nine walkers indicated that they gained access to Scotts Peak Dam by bus on days when TassieLink's service operated but according to the driver, they did not use TassieLink's service.
- Six walkers completed questionnaires but did not register in the walker logbook at Scotts Peak Dam.
- Three walkers who completed questionnaires signed the walker logbook with different details from those on their questionnaire.

A calculation of the exact participation rate is best done using the information provided by the bus driver, however, there exists a small percentage of people who deliberately mislead, or refuse to provide details of their bushwalking activities. The Research Statistics Officer for the Tasmanian Parks and Wildlife Service estimates that 5 per cent of walkers refuse to comply with the request to register their bushwalk details in registration logbooks (Rundle 2001 pers comm.). It was nonetheless interesting that some walkers who were willing to complete questionnaires either refused to register in walker logbooks or provided different information.

At the completion of the sampling period, registration logbooks were collected and the total number of bushwalkers for the sampling period was calculated. In total, 538 walkers gained access to the Arthur Ranges from Scotts Peak Dam, thirty-four more than for the corresponding period in 1999-2000 (Parks & Wildlife Service 2000, 2001). Of those 538 walkers, 204 (37.9%) were Tasmanian; 298 (55.4%) were from interstate; 28 (5.2%) were from overseas and 8 (1.5%) did not provide their place of residence. Accordingly, the sample of 100 respondents represents 33.6 per cent of the interstate and overseas walkers, and 18.6 per cent of the total number of walkers who gained access to the Arthur Ranges from Scotts Peak Dam during the sampling period. This was an excellent result considering the difficulties associated with sampling in remote parts of Tasmania.

2.3 Characteristics Of Bushwalkers

Respondents were asked questions related to their age, sex, place of residence, occupation, the type of group with which they walked and their level of bushwalking experience. These characteristics were selected to provide a profile of the type of visitors who chose to walk in the Arthur Ranges. It should be noted that because the sample size equals 100 many results are presented as percentages only. However, some questions were not relevant to all respondents so that at times the sample is less than 100. Where this is the case, results are presented as the number of responses for a category as well as the percentage of total valid responses.

2.3.1 Demographics of respondents

In the sample, 70 respondents (70%) were male and 30 (30%) were female. Figure 4 and Table 1 provide age and sex data of respondents. They demonstrate that although the majority of respondents were male, the age structures were similar for both male and female walkers.

Figure 4 Age and sex structure of respondents in years

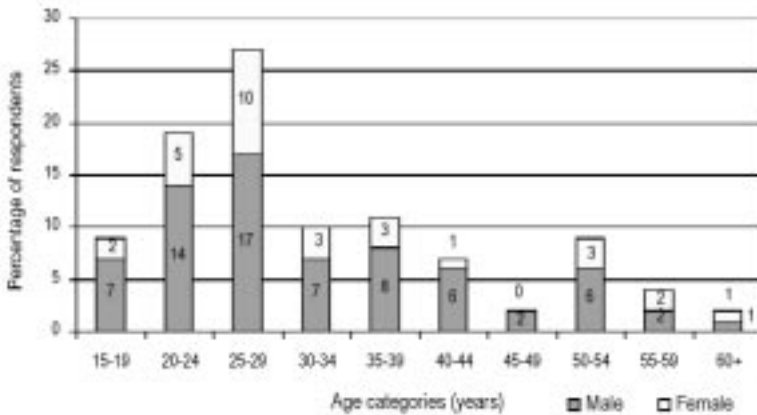


Table 1 Age/sex characteristics of respondents in years

	MINIMUM	MAXIMUM	MEAN	MEDIAN	MODE (RESPONSES)
Male	17	63	32.1	29	24(7)
Female	18	60	33.3	28.5	27(5)
Total	17	63	32.5	29	27(11)

Respondents from interstate were requested to provide the postcode of their normal place of residence whilst overseas bushwalkers were asked to provide their country of residence. Table 2 indicates that the majority of interstate and overseas bushwalkers came from New South Wales (39%) and Victoria (24%). In addition, Table 2 demonstrates that bushwalkers from every Australian state and territory visited the Arthur Ranges (with the exception of Tasmania, which was not in the sample). The eight bushwalkers from overseas came from five different countries: one each from Canada, Japan and New Zealand; two from the United Kingdom and three from Germany.

Table 2 Place of residence of respondents

PLACE OF RESIDENCE	PER CENT
New South Wales	39
Victoria	24
Queensland	13
South Australia	7
Australian Capital Territory	5
Western Australia	2
Northern Territory	2
Overseas	8
Total	100

Respondents were asked to provide their current occupation that was then categorised using the *Australian Standard Classification of Occupations* (Australian Bureau of Statistics 1997). Over one third of walkers (35%) were employed in professional occupations whilst an additional 29 per cent of bushwalkers were students. The occupational classifications applied to respondents are presented in Table 3.

Table 3 Current occupations of respondents

CLASSIFICATION OF OCCUPATION	PER CENT
Professionals	35
Students	29
Elementary Clerical, Sales & Service Workers	10
Managers & Administrators	9
Intermediate Clerical, Sales & Service Workers	9
Retired	3
Tradespersons & Related Workers	2
Associate Professionals	2
Missing responses	1
Total	100

The type of group with which respondents walked was of interest to determine group dynamics amongst walkers. Three walking group types were identified. Eighty one per cent of bushwalkers participated in a group composed of family or friends, 11 per cent walked solo; and the remaining 8 per cent walking with a bushwalking club.

2.3.2 Experience level of respondents

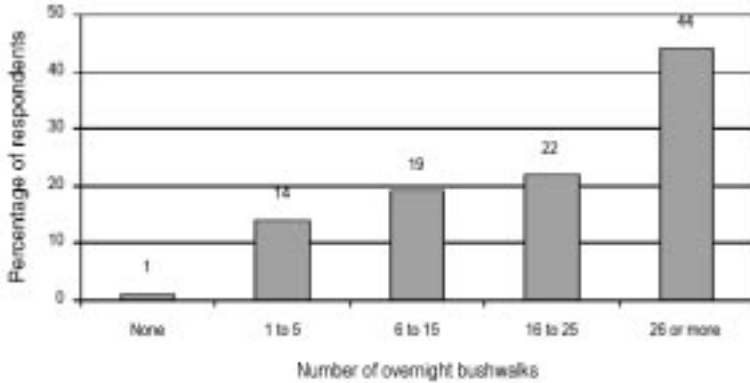
Respondents' levels of bushwalking experience were sought using three indicators of experience:

- 1) Total experience: the total number of overnight bushwalks completed anywhere in the world;
- 2) Tasmanian experience: the total number of overnight bushwalks completed anywhere in Tasmania; and
- 3) Experience on long trips in Tasmania: the total number of bushwalks of seven days or more undertaken in Tasmania.

Figure 5 shows the total experience of respondents. Nearly half the respondents (44%) had completed more than 26 overnight bushwalks compared to 15 per cent of the sample that had completed only 5 overnight bushwalks or fewer. In general,

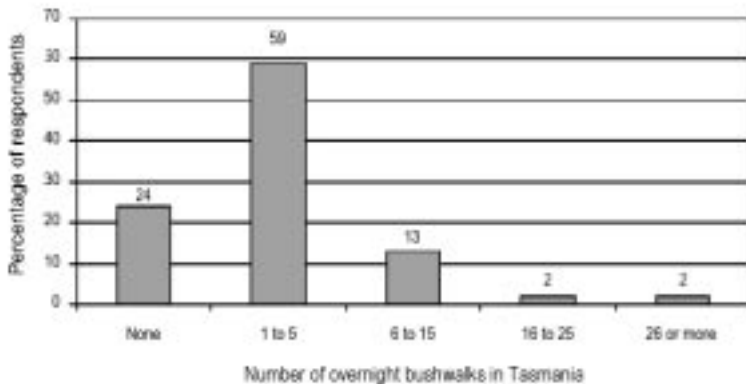
respondents' level of previous bushwalking experience was moderate to high.

Figure 5 Total bushwalking experience of respondents



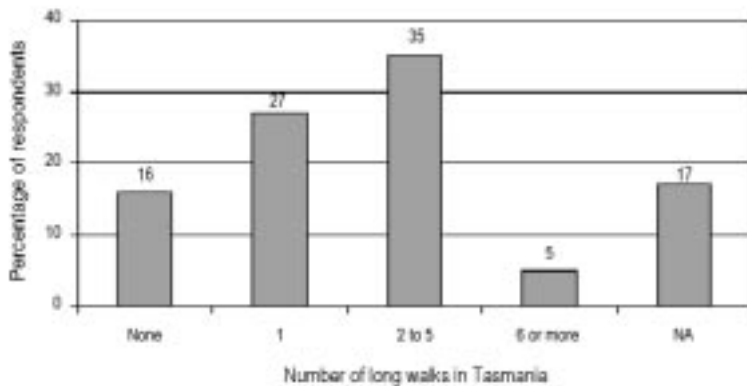
The second measure of respondents' level of bushwalking experience was their *Tasmanian experience*. In total 76 per cent of respondents had walked in Tasmania previously whereas the remaining 24 were on their first bushwalking trip in Tasmania. Of the 76 respondents who had walked in Tasmania previously, the majority (77.6%) had completed between one and five overnight bushwalks. In addition, 20 (26.3%) of those respondents had bushwalked in the Arthur Ranges on at least one previous occasion.

Figure 6 Total Tasmanian bushwalking experience



The third measure of bushwalking experience was the number of walks of seven days or more, that is 'long walks', that respondents had completed in Tasmania (Figure 7). One third of respondents (33%) had not done a long walk in Tasmania, 27 per cent had completed one long walk in Tasmania and the remaining 40 per cent of respondents had completed two or more long walks in Tasmania. The majority of respondents (67%) had experience on at least one long walk in Tasmania.

Figure 7 Respondents' experience on long walks in Tasmania



2.4 Patterns Of Use

Determining the patterns of use of interstate and overseas bushwalkers who visited the Arthur Ranges was considered important for two main reasons. Firstly, it enables planners and managers to determine what areas are being used presently and secondly, it provides a basis from which to predict what other walking destinations may be used in the future.

2.4.1 Trip planning

Several questions were asked regarding the process by which respondents planned their bushwalk to the Arthur Ranges. First, respondents were asked to indicate whether they had taken an active role in planning the bushwalk in which they were participating. Ninety

respondents were involved while the remaining ten indicated that they had not been involved in the trip planning process. Consequently, some results in this section are derived from a sample of 90 respondents.

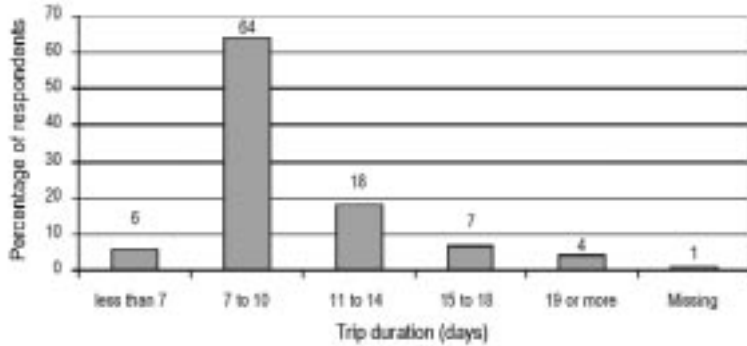
Figure 8 indicates how long in advance respondents planned their trip to the Arthur Ranges (n=90). Fifty three point three per cent planned between one month and six months in advance; 18.8 per cent planned their trip less than one month in advance and 27.7 per cent planned more than six months in advance.

Figure 8 Period of time in advance that bushwalking trips were planned



All respondents (n=100) were asked to provide the intended duration of their bushwalk and the route that had been selected. Figure 9 demonstrates that the most popular intended duration for bushwalks was between seven and ten days, this was the intention of 64 per cent of respondents. Only 6 per cent of respondents planned a trip of less than seven days duration whilst 29 per cent of respondents intended to bushwalk for eleven or more days.

Figure 9 Intended duration of respondents' bushwalk in the Arthur Ranges



The walking routes that respondents selected are presented in Table 4. The 'Full Traverse of the Western Arthur Range' was the most popular walking route and was selected by 40 per cent of respondents. Table 4 indicates that 57 per cent of respondents planned to bushwalk only in the Western Arthur Range, 24 per cent of respondents planned to walk only in the Eastern Arthur Range whereas the remaining 19 per cent of respondents intended to walk in both ranges. The results also show that 93 per cent of respondents started and finished their walk at Scotts Peak Dam whereas the remaining 7 per cent started their walk at Scotts Peak Dam and finished at Farmhouse Creek.

Table 4 Walking routes chosen by respondents

SELECTED ROUTE	PER CENT
Lake Oberon via Moraine A, return to Scotts Peak*	3
Western Arthur Range, Moraine A to K, return to Scotts Peak*	14
Full Traverse of Western Arthur Range, return to Scotts Peak*	40
Western Arthur Range, Federation Peak, return to Scotts Peak	13
Federation Peak via Arthur Plains, return to Scotts Peak^	23
Federation Peak via Arthur Plains, exiting via Farmhouse Creek^	1
Western and Eastern Arthur Ranges exiting via Farmhouse Creek	6
Total	100

* indicates a route exclusively in the Western Arthur Range;

^ indicates a route exclusively in the Eastern Arthur Range

Part of the decision-making process associated with choosing to bushwalk in the Arthur Ranges involved making the commitment to come to Tasmania (remembering that the sample was composed of bushwalkers from interstate and overseas). When asked about their motivation to visit Tasmania, 60 per cent said that the *only* reason they came to Tasmania was to walk in the Arthur Ranges. A further 24 per cent said they only came to Tasmania for a bushwalking holiday but they intended to use various tracks. The remaining 16 per cent of respondents said that bushwalking was only one attraction that motivated them to visit Tasmania. It is important to note that every respondent came to Tasmania with the intention of bushwalking.

To verify the question about respondents' motivation to visit Tasmania, and to determine what other walking destinations may have influenced them to visit Tasmania, respondents were asked whether they considered bushwalking in areas of Tasmania other than the Arthur Range. Thirty-eight respondents (42.2%) did consider other walking areas whilst the remaining 52 respondents (57.8%) did not ($n=90$). The other walking destinations that respondents considered are presented in Appendix B. Furthermore, all respondents were asked if their trip to the Arthur Ranges was the only bushwalk they would undertake on their current visit to Tasmania. Fifty eight per cent of respondents did not intend to use any other bushwalking tracks during their current visit to Tasmania; 9 per cent were unsure and 4 per cent of responses were missing. The remaining 29 per cent of respondents indicated that they had used, or intended to use, bushwalking tracks in addition to the Arthur Ranges. A list of other walking destination respondents used, or intended to use, is presented in Appendix C.

The ninety respondents who were involved in the planning process of their trips were asked what other nature-based activities they participated in, or considered undertaking, during their current trip to Tasmania. Eighty-two respondents (91.1%) indicated that they had not considered any other nature-based activities, two respondents (2.2%) were unsure and one response was missing (1.1%). Only 5 respondents (5.5%) indicated that they had considered doing one or more other nature-based activities in Tasmania. Cycle touring was

suggested three times, rafting the Franklin River was suggested twice whilst rock-climbing and caving were each suggested once.

2.4.2 Future bushwalking destinations

Another aspect of interstate and overseas bushwalkers' patterns of use that was of interest was to determine what Tasmanian walking destinations, if any, they intended to visit in the future. Of the 100 respondents, 84 per cent said they intended to return to Tasmania to bushwalk, 10 per cent of respondents were unsure and 6 per cent of responses were missing. Table 5 indicates the walking destinations that respondents intended to visit in the future and the percentage of people who intended to visit each destination.

Table 5 Respondents' intended destinations for future bushwalks in Tasmania

WALKING DESTINATION	PER CENT
South Coast Track	18
Walls of Jerusalem	10
Federation Peak (in the Arthur Ranges)	10
Overland Track	9
Frenchmans Cap	7
South-West Tasmania (unspecified)	5
Mount Anne	5
Precipitous Bluff	5
Freycinet*	4
South West Cape	4
Denison Range	4
Arthur Ranges (unspecified)	3
Mount Field*	1
North-East Tasmania*	1
Tarkine*	1
Many destinations	9
Unsure	9
Did not state	23

* indicates a walking destination outside the TWWHA.

2.5 Reasons Why The Arthur Ranges Were Selected

Both the Tasmanian Parks and Wildlife Service and Tourism Tasmania were interested to determine what factors influenced selection of the Arthur Ranges as a walking destination. A list of site attributes, and other factors that were thought to influence destination selection, was created. Respondents were then asked to rate how important each attribute was in influencing their decision to choose the Arthur Ranges as a walking destination. This was achieved using a Likert scale (see question 16, Appendix A).

Figure 10 indicates that 'Inspiration' was a value that 59 per cent of respondents perceived as either moderately or very important. Inspiration was not considered important by 13 per cent of respondents.

Figure 10 Importance of inspiration for choosing the Arthur Ranges

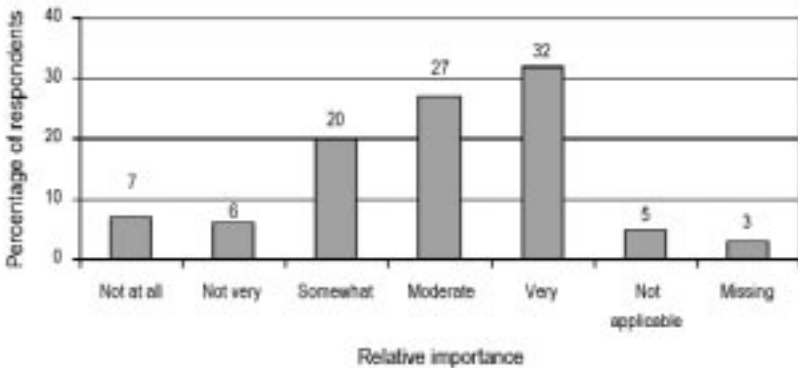
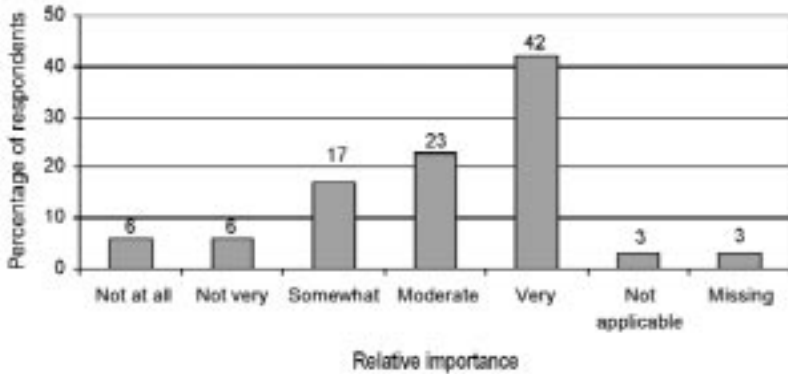


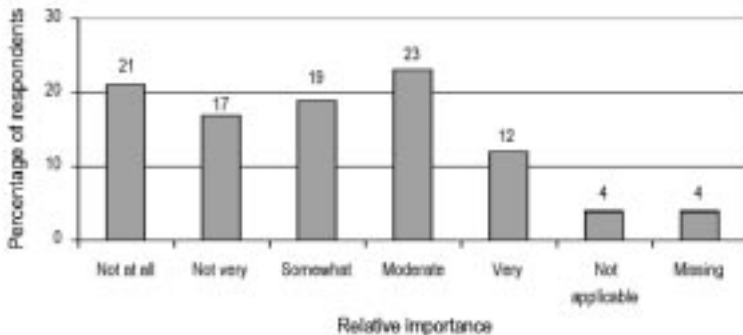
Figure 11 demonstrates the importance of 'escaping everyday life' as a factor that influenced respondents decision to walk in the Arthur Ranges. Sixty five per cent of respondents considered this type of escapism either moderately, or very important whereas only 12 per cent considered escapism as not at all, or not very, important.

Figure 11 Importance of 'escaping everyday life' for choosing the Arthur Ranges



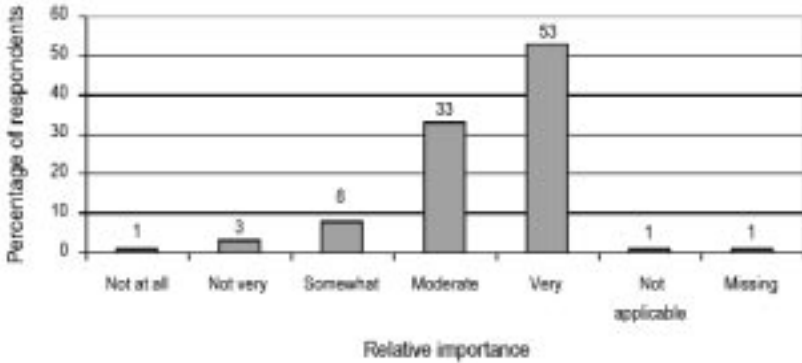
To verify the concept of 'escaping everyday life', respondents were also asked to rate the importance of 'getting away from other people'. Figure 12 indicates a relatively even distribution of respondents for whom 'getting away from other people' was, or was not important as a reason for choosing to walk in the Arthur Ranges.

Figure 12 Importance of escaping other people



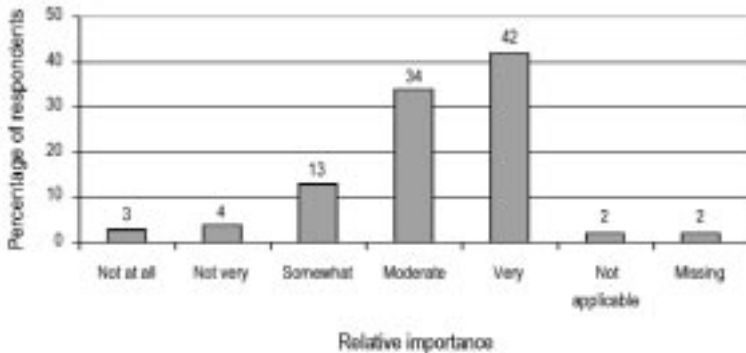
Being well known for its rugged, mountainous terrain it was of interest to see whether this was an important factor in the selection process. Figure 13 demonstrates that 'mountain scenery' was a very important influence of choice for 53 per cent of respondents with an additional 33 per cent applying moderate importance to mountain scenery. In total, 86 per cent of respondents applied importance to the mountain scenery they expected to see in the Arthur Ranges.

Figure 13 Importance of mountain scenery for choosing the Arthur Ranges



The importance of the natural setting as an influence of destination selection was further evidenced by the 76 per cent of respondents who indicated that the opportunity to 'experience wilderness' was very, or moderately, important (Figure 14).

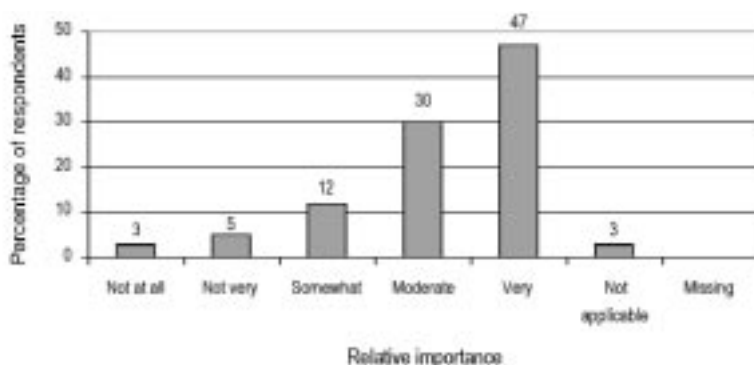
Figure 14 Importance of experiencing wilderness for choosing the Arthur Ranges



Many of the potential influences of site selection tested were directly related to the Arthur Ranges and demonstrated what attributes were important to interstate and overseas walkers. Such results could also be used to predict what other walking destinations might be used in the future. Figure 15 indicates that nearly half the respondents (47%) considered 'visiting a new walking area' a very important influence of

the decision making process. A further 30 per cent said visiting a new walking area was moderately important. Keeping in mind the desire of many of the respondents to visit new areas, the other attributes that attracted respondents (mountain scenery, wilderness) could be used to predict popular walking destinations of the future.

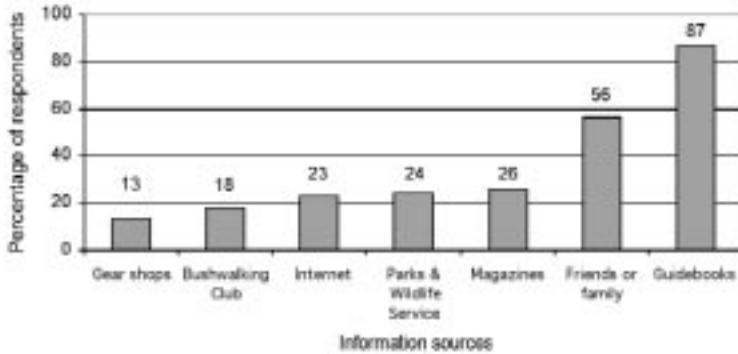
Figure 15 Importance of visiting a new walking area for choosing the Arthur Ranges



2.6 Information Sources

The perceived values of the Arthur Ranges provided reasons why interstate and overseas bushwalkers chose to visit the Arthur Ranges. However, if planners and managers are to influence choice amongst bushwalkers, it is necessary to know which information sources respondents use during walking track selection and trip planning. Figure 16 indicates that 87 per cent of respondents used information from guidebooks to help them choose to walk in the Arthur Ranges. The second most popular source of information was 'word of mouth'. Word of mouth information from family or friends influenced selection of the Arthur Ranges for 56 per cent of respondents. Bushwalking clubs (18%) and gear shops (13%) are also considered to be sources of 'word of mouth' information. Additional sources of information used by respondents were the Internet (23%); Parks and Wildlife Service (24%); and magazine articles (26%).

Figure 16 Sources of information used by respondents to choose the Arthur Ranges.



Once the sources of information used to choose to walk in the Arthur Ranges were determined, respondents were asked what information they carried with them during their bushwalk. Maps produced by Tasmapi, the Tasmanian Government mapping agency (1:25 000 or 1:100 000 scales) were carried by the walking groups of 98 per cent of respondents. Chapman's (1998) guidebook *South West Tasmania* was carried by 78 per cent of respondents; guidebooks by Collins (1990) (9%), Rankin (1995) (6%) and Thomas (2000) (2%) were also carried. In total, 87 per cent of respondents carried published notes from one or more guidebooks.

When asked about the ease with which information about bushwalking in Tasmania was obtained 29 per cent of respondents said it was average; 43 per cent said it was easy; and 28 per cent said it was very easy. No respondents regarded finding information difficult or very difficult. Nearly one in every five respondents (18%) provided additional comments regarding their attempts to obtain information about bushwalking in Tasmania. Comments are presented by topic, as written by respondents with additions for clarity.

Topic 1: Guidebooks

'Chapman can be a little deceiving'.

'(Easy) but more difficult to find info on Western Arthurs, only Chapman book'.

'Chapman has the best notes, Collins has more interesting geological info'.

'Most of the info seems concentrated in about 3 books with websites largely referencing them'.

Topic 2: Internet

'Internet stuff and John Chapman's book most useful'.

'Internet sites (were) very handy and John Chapman's book also useful'.

'Poor Internet coverage by Parks – nothing on Western Arthurs and Federation Peak'.

'Easy only because of access to Internet'.

Topic 3: Maps

'Could not attain TASMALP 1:25 000 outside this state (Tasmania)'.

'1:25 000 maps are a little hard to get in Sydney, not too many people hold them in stock if at all'.

Topic 4: General comments

'Working in an outdoor shop makes it easy'.

'For popular walks very easy, for Western Arthurs, average'.

'Difficult for Western Arthurs, easy for Tassy'.

'Tasmanians are always very ready to give info to promote their State'.

'The final travel and bus access routes and times weren't easy'.

'Done enough to either know what to expect or know where to look to find info'.

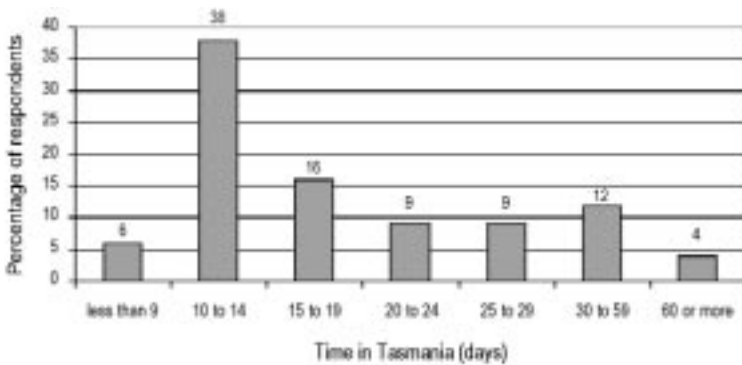
'(Easy) but there were mixed reports about the Fed(eration) Peak climb'.

The ease with which respondents found information about bushwalking in Tasmania, and more specifically in the Arthur Ranges, varies and has important implications for future management by the Tasmanian Parks and Wildlife Service, Tourism Tasmania and tourism operators.

2.7 Tourism Results

The final objective of the research was to determine what tourism services respondents used during their stay in Tasmania. Respondents' length of stay in Tasmania varied from eight days to three months. Figure 17 indicates that the most common length of stay was 10 to 14 days. A total of 72 per cent of respondents stayed between ten and twenty-nine days. The mode response for trip duration was 12 days (13 responses); the median was 15.5 days; and the average trip duration was 20.7 days.

Figure 17 Duration of respondents' stay in Tasmania



To determine the economic contribution they made to Tasmania, respondents were asked to state the expenditure for their visit to Tasmania (excluding travel to Tasmania). In total, 87 respondents provided details of their expenditure, 7 refused to provide information and the remaining 6 responses were missing. Results are presented in Table 6.

Table 6 Respondents' expenditure during their trip to Tasmania

MINIMUM	MAXIMUM	MEAN	MEDIAN	MODE (RESPONSES)
\$150	\$4000	\$628	\$500	\$300 (16)

When not bushwalking, the majority of respondents (59%) stayed in hostel-style accommodation. Table 7 provides the types of accommodation that were used by respondents while they were not actually bushwalking. Note that the total exceeds 100 per cent because some respondents used more than one type of accommodation.

Table 7 Types of accommodation used by respondents

TYPE OF ACCOMMODATION	PER CENT
Youth/Backpacker Hostel	59
Hotels or motels	21
Friend's or relative's home	20
Tent site	17
Caravan Park	8

Public transport was used by 92 per cent of respondents during their stay in Tasmania (Table 9). Taxis (27%), hire cars (20%) and friend's or relative's vehicles (19%) were also common forms of transport used. As in Table 7, the total in Table 8 exceeds 100 per cent because some respondents used more than one form of transport.

Table 8 Types of transport service used by respondents

TYPE OF TRANSPORT	PER CENT
Public transport	92
Taxi	27
Hire car	20
Friend's or relative's vehicle	19
Respondent's vehicle	1
Bicycle	1

3. DISCUSSION

3.1 Introduction

The results presented in the previous section are discussed with reference to the five objectives of the study outlined in section 1.4. Interestingly, the characteristics of interstate and overseas bushwalkers who visited the Arthur Ranges were not particularly dissimilar to those of walkers who visit the easier and more popular tracks within the TWWHA. The social data that were collected are pertinent to the assessment of the Arthur Ranges that has been recommended by the final report of the Track Assessment Group (Track Assessment Group 2001). In addition, those findings that relate to the sources of information used by bushwalkers and their patterns of use could prove useful in preventing deterioration of a number of other low-use walking tracks in the TWWHA.

3.2 Characteristics Of Bushwalkers

The demographic characteristics of respondents are important because they provide planners and managers with a profile of the interstate and overseas bushwalkers who visit the Arthur Ranges. Such information can be of immense value to decision-makers (Daigle *et al.* 1991). Using walker registration logbooks, the Tasmanian Parks and Wildlife Service collects data about walkers' sex, place of residence and group size. However, those data often only refer to the group member who signed the logbook so the level of detail is low. This study obtained information about individual walkers and provided a more comprehensive examination of respondents' demographics.

As detailed in section 2.3, 70 per cent of respondents were male and 30 per cent of respondents were female. A useful source of comparison for these results is the *Tasmanian Visitor Survey* (TVS) conducted by Tourism Tasmania. The TVS indicates that in 1995, 17,000 visitors to Tasmania undertook an overnight bushwalk of whom 14,500 walked in the TWWHA (Tourism Tasmania *et al.* 1997). In total, 40 per cent of respondents who undertook an overnight walk were female. Considering the sample size of the Arthur Ranges study,

the variation in the percentage of female respondents between the two studies (30% versus 40%) could be explained by chance alone. Nonetheless, the results from both the Arthur Ranges study and the TVS indicate that the majority of interstate and overseas visitors who undertake overnight bushwalks in Tasmania are male.

Bennett (2000) conducted two surveys of Tasmanian walkers and compared the percentages of male and female walkers with data from an Australian Bureau of Statistics (ABS) survey. The ABS survey investigated participation in sporting and other physical recreation activities amongst Tasmanian residents and recorded that 19,700 respondents had bushwalked in the previous year (Australian Bureau of Statistics 1995, in Bennett 2000). Of the 19,700 walkers surveyed, 10,000 (50.8%) were male and 9,700 (49.2%) were female. However, the results represented the level of participation in all types of bushwalking (not just overnight bushwalking) so the value of the comparison is debateable. For example, if all types of bushwalking were considered using the TVS data (not just overnight walks) then females would dominate the level of participation (Tourism Tasmania *et al.* 1997).

Although the majority of respondents in the Arthur Ranges study were male, the age structure for males and females were very similar (Figure 4 and Table 1). Over one quarter of walkers (27%) were aged between 25 and 29 years. More notably, 76 per cent of walkers were aged between 15 and 39 years with the remaining 24 per cent of walkers being 40 years and older. One explanation for this could be that the young age structure of respondents reflects the perceived need amongst walkers for a high level of fitness in order to walk in the Arthur Ranges, a level of fitness that older walkers may feel they lack. However, analysis of the TVS indicated an almost identical age structure; 74 per cent of respondents were aged 15-39 years and 26 per cent of respondents were aged 40 years and older (Tourism Tasmania *et al.* 1997). In conclusion, the age of interstate and overseas walkers reported in this study reflects the general pattern amongst walkers from throughout the TWWHA.

With regard to the place of residence of respondents, 92 per cent came from interstate and 8 per cent came from overseas. According to the Tasmanian Parks and Wildlife Service Walker Survey 1994-95

and the TVS, approximately 10-11 per cent of all overnight bushwalkers are from overseas (Brake 1996; Tourism Tasmania *et al.* 1997). Countries of residence recorded from this study, such as the UK, Germany and Canada are among the popular countries of residence for overseas visitors to Tasmania (Tourism Tasmania *et al.* 1997). Inspection of walker registration logbooks indicated that overseas visitors contributed 5.1 per cent of the total number of walkers in the Arthur Ranges during the 1999-2000 season and 4.8 per cent of the total number of walkers in the Arthur Ranges during the sample period. These data suggest that the percentage of walkers from overseas in the Arthur Ranges is lower than for Tasmanian walking tracks in general. This difference is probably best explained by the fact that, unlike the Overland Track or South Coast Track, the Arthur Ranges is not actively publicised or marketed as a destination for tourists. Consequently, overseas tourists with limited time are more likely to choose a walking track about which there is plenty of information available, for example, on the Internet or in Lonely Planet guides.

Ninety-two respondents from the sample were from interstate. New South Wales provided 39 respondents (42.2% of interstate visitors); 24 respondents (26.1%) came from Victoria; and 13 respondents (14.1%) came from Queensland. Respondents from other states and territories are listed in Table 2. The predominance of walkers from New South Wales and Victoria is supported by both in the Tasmanian Parks and Wildlife Service Walker Survey and the TVS data (Brake 1996; Tourism Tasmania *et al.* 1997). In terms of relevance to this study, closer analysis of the TVS data indicated that the number of respondents from each state or territory is roughly proportional to the total number of visitors from each state and territory. Therefore, although walkers from New South Wales and Victoria are numerically more significant than other states, the high numbers are explained by the fact that those states have the highest total number of visitor arrivals in Tasmania. This result suggests that if managers want to convey information to bushwalkers from other states, the audience they want to reach in each state is roughly proportional to the total number of visitors from each state.

The occupations of respondents were categorised using the *Australian Standard Classification for Occupations* (Australian Bureau

of Statistics 1997) and the results indicated that 35 per cent were professionals and 29 per cent were students (Table 3). The predominance of walkers employed as professional or as students in the Arthur Ranges study matches the general profile of interstate and overseas visitors who undertake overnight bushwalks in Tasmania (Tourism Tasmania *et al.* 1997).

A large majority of respondents (81%) undertook their bushwalk in a group composed of family or friends. Solo walkers comprised 11 per cent of the sample and the remaining 8 per cent of respondents walked in a bushwalking club group. The TVS also reports that the majority of overnight walkers travel with friends or in a larger group (Tourism Tasmania *et al.* 1997). The relatively high proportion of solo walkers may be related to a trend in wilderness recreation for more challenging activities. Barr (1997) reported that in New Zealand, more walkers were challenging themselves to undertake experiences faster or harder than before. Alternatively, some visitors may walk solo because family, friends or others did not have time. Irrespective of their reason, the majority of respondents undertake their walk as part of a group.

3.3 Level Of Experience Among Respondents

It was important to determine the level of experience of interstate and overseas walkers because experienced walkers are thought to prefer more natural settings, and be more sensitive to management restrictions, than less experienced users (McFarlane *et al.* 1998; Watson *et al.* 1991). Consequently, walkers' level of experience could influence the walking destinations they choose and the likelihood of displacement. A walker's level of experience can be determined in different ways. In a study of bushwalkers who visited the Mt Anne area in the TWWHA, Sawyer (1990) classified walkers as 'inexperienced' if they had not done an overnight bushwalk before, 'moderately experienced' if they had conducted 1 to 5 bushwalks and 'experienced' if they had completed 6 or more overnight bushwalks. Bennett (2000) criticised Sawyer's classification for being too narrow. Bennett (2000) expanded the scale of response categories using 0, 1 to 5, 6 to 20, 21 to 50 and 51 or more bushwalks as response categories. The expanded scale enabled more detailed comparison of

walkers' level of experience. Poll (1999) also utilised experience categories that were broader than those of Sawyer (1990).

Level of experience can be measured in ways other than the number of trips undertaken. Bennett (2000) used respondents' 'years of bushwalking' and amount of 'off-track bushwalking' as measures of walking experience. Section 2.3.2 indicates that for the Arthur Ranges study, three measures of experience were used, the first two being 'total experience' and 'Tasmanian experience'. The level of experience was determined as the number of completed overnight walks using the scale: 0, 1 to 5, 6 to 15, 16 to 25 and 26 or more. In terms of total experience, 44 per cent of respondents had completed 26 or more overnight bushwalks and a further 22 per cent had undertaken 16 to 25 overnight bushwalks. Bennett (2000) suggested that 'at least 21 overnight bushwalks' might be a useful way to classify very experienced walkers. Using that classification, at least 44 per cent of interstate and overseas respondents who were sampled were very experienced walkers. For comparison, if Sawyer's (1990) classification of 'very experienced' were used (6 or more walks) then 85 per cent of the Arthur Ranges sample would have been classified as very experienced walkers. The fact that 15 per cent of the sample had completed a total of five or fewer overnight walks is somewhat surprising because the Arthur Ranges is considered a challenging walk that is suitable only for experienced people.

Since respondents were from interstate and overseas, it was important to discriminate between their total level of experience and their level of experience in Tasmanian conditions. This was considered important because bushwalking areas in Tasmania have environmental conditions, such as extremes of weather and fragile ecosystems, with which walkers from other places may not be familiar. A poor understanding of Tasmanian conditions could mean walkers cause unacceptable levels of impact. Also there could be a safety risk to walkers who are unfamiliar with Tasmanian conditions. The results indicated that 76 per cent of respondents had walked in Tasmania previously whilst 24 per cent were on their first walk in Tasmania. Therefore, the majority of respondents had some understanding of what to expect on their bushwalk. A more detailed examination of the data indicated that 59 per cent of respondents

had completed 1 to 5 overnight walks and 13 per cent had completed 6 to 15 overnight walks in Tasmania.

The classification of walkers' level of experience is subjective. Nonetheless, this study classifies the 59 per cent of respondents who had done 1 to 5 walks in Tasmania as 'inexperienced' (in Tasmanian conditions). The 15 per cent who had undertaken either 6 to 15 or 16 to 25 walks should be considered 'moderately experienced' and only 2 per cent of respondents were 'very experienced' in Tasmania. Notably, the average age of respondents who had undertaken six or more walks in Tasmania was 40 years compared to 32.5 years for the total sample which suggests a relationship between the age of respondents and their level of experience.

The third measure of respondents' level of experience was the number of long walks undertaken in Tasmania. Long walks were classified as bushwalks of seven days duration or more. In general, long walks were presumed to require more preparation, better fitness and more developed skills. Many areas of the TWWHA, which could receive impacts due to displacement of walkers, are remote and would presumably preclude access by inexperienced walkers. Therefore, determining how many walkers were experienced on long trips could suggest how many of those walkers would have the skills to visit the more remote parts of the TWWHA. The results from Figure 7 indicated that 27 per cent of respondents had undertaken one long bushwalk in Tasmania, 35 per cent of respondents had done between 2 to 5 long walks and 5 per cent of respondents had done 6 or more long walks. In total, two-thirds of respondents (67%) had done at least one long walk in Tasmania. The remaining 33 per cent of respondents from Figure 7 had not done a long walk in Tasmania. When results from Figure 6 and Figure 7 are compared it is clear that 24 per cent of respondents had not walked in Tasmania previously and therefore could not have done a long walk. Consequently, only 9 of the 76 respondents who had walked in Tasmania previously had not undertaken a bushwalk of seven days or more. This indicator, combined with the intended bushwalk duration among respondents (Figure 9) suggests that the majority of interstate and overseas walkers are prepared to undertake long walks, therefore, planners and managers should be prepared for more people to access remote, low use parts of the TWWHA.

In summary, the general level of experience amongst respondents was high. The results for respondents' total experience indicated that 44 per cent were very experienced; 41 per cent were moderately experienced; 15 per cent were inexperienced. Applying the measures of experience selected for this study, respondents were generally inexperienced in Tasmania (59%) and nearly one quarter of respondents (24%) had no previous experience in Tasmania. Although respondents in general were classified as inexperienced in terms of the number of trips they had undertaken in Tasmania, it is important to note that two-thirds of respondents (67%) had some experience on a long walk in Tasmania. Furthermore, 94 per cent of respondents were engaged in a long bushwalk. This suggests that respondents' level of experience in Tasmanian walking conditions did not dictate the length or difficulty of bushwalk they selected. This is important because previously the Tasmanian Parks and Wildlife Service expected that only experienced bushwalkers chose to visit the Arthur Ranges.

3.4 Patterns Of Use

Determining patterns of use among respondents is important because it gives managers an understanding of the current trips that interstate and overseas walkers undertake and the factors they consider when choosing a destination. In addition, this information can be used to predict other walking destinations that may be used in the future.

3.4.1 Trip planning

The amount of planning that respondents conducted for their trip to Tasmania is important because it gives planners and managers an idea of how effectively they could communicate management messages to walkers. In addition, the amount of planning walkers do could give at least some impression of how disruptive certain management techniques, such as use-regulation, would be on interstate and overseas walkers. One point of interest was to determine whether all walkers were involved in trip planning or if some walkers simply 'tagged along' on a trip that was organised by others. When asked if they were involved in trip planning, 90 per cent indicated they were involved and 10 per cent were not. Since not all respondents were involved in the planning process, it is important to ensure that management messages reach all walkers, including those who do not

actively participate in the planning process. Educational material should stress the importance not just of practicing minimal impact bushwalking but of spreading that message to other walkers.

The 90 respondents who were involved in the planning process were asked how long in advance they had planned their bushwalk (Figure 8). The majority of walkers (53.3%) planned 1 to 6 months in advance. An additional 27.7 per cent planned 6 months or more in advance. This indicated that respondents identified their walking destination well in advance and that if management messages are provided in the right media, they will probably be learned by respondents before they come to Tasmania. In addition, appropriate publicity could also help walkers select the walking destination that is most appropriate for their needs. Five respondents (5.5%) planned their trip less than seven days in advance but four of those walkers were overseas visitors who probably had not heard of the Arthur Ranges until they arrived in Tasmania.

The most popular intended trip duration was 7 to 10 days that was recorded by 64 per cent of respondents (Figure 9). An additional 29 per cent intended to walk for 11 or more days. Only 6 per cent of respondents intended to walk for less than 7 days. These results show that the experience that respondents were seeking was a long trip. When the intended trip duration was compared to the intended trip routes indicated in Table 4, the results indicated that interstate and overseas walkers accurately matched their trip duration with the route chosen. This is probably related to the detail of information available about bushwalking in the Arthur Ranges.

Table 4 demonstrates that the most popular route was the 'Full Traverse of the Western Arthur Range' that was the planned route of 40 per cent of respondents. The popularity of that route could be related to the following description in the guidebook *South West Tasmania* by Chapman (1998), 'short visits to both ends of the range are possible but the real challenge for bushwalkers is to attempt the skyline traverse of the entire range'. It is possible that the reputation of the 'Full Traverse' is what encourages so many people to attempt it, particularly considering that 78 per cent of respondents admitted taking Chapman (1998) on their bushwalk.

The demand for the Western Arthur Range was greater than for the Eastern Arthur Ranges. In total, 57 per cent of walkers planned to walk only in the Western Arthur Range, 24 per cent of walkers planned to go only to the Eastern Arthur Range whilst the remaining 19 per cent of respondents intended to combine both the Western and Eastern Arthurs (Table 4). It would have been useful to compare the intended trip duration and route with the actual trip duration and route that was completed. A comparison of bushwalkers' intended route and actual route (along with reasons why they differed) would be useful information and should be considered in future research to determine whether walkers' expectations are met.

Of the 100 respondents, 60 per cent said that the only reason they came to Tasmania was to walk in the Arthur Ranges and a further 24 per cent said that the only reason they came to Tasmania was to bushwalk but on various tracks. The remaining 16 per cent said that they came to Tasmania for a holiday and bushwalking was one of the things they intend to do. From the 90 respondents who were involved in trip planning, 52 (57.8%) stated that they did not consider walking anywhere other than the Arthur Ranges. This result verified the result of the previous question; approximately 60 per cent of respondents focussed their trip to Tasmania solely on the Arthur Ranges. This demonstrated that trip planning was, in general, highly specific and goal oriented amongst a large percentage of walkers. These results suggested that managers may experience difficulty in trying to influence site selection because this is largely predetermined before walkers arrive in Tasmania.

3.4.2 *Bushwalking destination selection*

The results provided in sections 2.3.1 and 2.3.2 were important because they provide information about possible trends in walking track use amongst the interstate and overseas walkers. In addition, the results suggest how effective measures to influence future site selection could be. Of the 90 respondents who were actively involved in trip planning, 52 (57.8%) did not consider walking destinations other than the Arthur Ranges. However, 38 respondents (42.2%) did consider other walking destinations. The walking tracks that were considered were presented in Appendix B. The most popular tracks that were considered as alternatives to their current trip to the Arthur

Ranges were the Overland Track (13 responses), Mt Anne (8), the South Coast Track (8) and the Walls of Jerusalem (7). This demonstrates that well-known, popular walking tracks were considered the alternatives; not remote, low use areas of the TWWHA as might have been expected by some managers.

In addition to the walking tracks that respondents considered using instead of the Arthur Ranges, it was interesting to determine what walking tracks were used as well as the Arthur Ranges. Fifty-eight per cent of walkers did not, or did not intend to, do another bushwalk in Tasmania other than their Arthur Ranges walk. Four responses were missing and nine respondents were unsure. Twenty-nine respondents did, or intended to do, one or more other bushwalks. When asked where they had been, or would go, ten respondents did not provide a walking area. Therefore, nineteen respondents provided the twelve different walking areas listed in Appendix C. Again, the Overland Track and Mt Anne featured highly as other walking areas that were used. Interestingly, four of the locations were outside the TWWHA and three of those were coastal areas: Freycinet (5 responses), Cape Hauy (1) and Bruny Island (1). Although the sample size is very small, the popularity of Freycinet suggests that some walkers like to combine an alpine walk with a more relaxed trip with very different scenery and weather.

In terms of predicting future patterns of use, this study suggests that the number of interstate walkers will increase. Eighty-four per cent of respondents said that they would return to Tasmania to bushwalk in the future, 10 per cent of respondents were unsure and 6 per cent of responses were missing. It was expected that several respondents would be unsure of a return to Tasmania because they lived overseas. The very high number of respondents who intended to return to Tasmania is verified by the fact that 76 per cent had bushwalked in Tasmania on a previous occasion. It is suggested that those walkers who have been to Tasmania to bushwalk will return and that even more walkers will come in the future, largely because of word of mouth recommendations. Consequently, it is useful to try to determine where respondents might walk in the future.

Respondents were asked where they intended to visit on future walking trips to Tasmania and the results were presented in Table 5. Whereas 10 respondents did not provide the destination of the other walks they did on their current trip to Tasmania, in this question, 23

respondents did not state where they intended to go. This shows that nearly one quarter of respondents did not want to share, or even speculate, on the areas they intended to visit in the future. Nine respondents were unsure of where they intended to walk and a further nine respondents reported their intention to do 'many' walks or 'too many to list'. Collectively, the remaining respondents indicated fifteen areas they intended to visit on future trips to Tasmania. Interestingly, two of these were return trips to parts of the Arthur Ranges and four were areas outside the TWWHA.

The South Coast Track was suggested as a future walking destination by eighteen respondents and the nearby South West Cape track was suggested by an additional four respondents. This is a positive result for planners and managers because the South Coast Track is one track that has been identified as a 'Great Walk'. The 'Great Walks' project forms part of the *Tasmanian Walking Track Strategy and Marketing Plan*, an inter-agency plan developed by the Tasmanian Parks and Wildlife Service, Tourism Tasmania and Forestry Tasmania (Tourism Tasmania *et al.* 1997). The aim of the 'Great Walks' project is to provide a series of well managed walking tracks that can cater for the majority of bushwalkers. Sufficient infrastructure would be installed to facilitate high visitor numbers on 'Great Walks' and then those tracks would be publicised and marketed. By concentrating the 'tourist' and 'less experienced' segments of the walking community on resilient walking tracks, pressure could be relieved from more fragile environments. At the same time, other tracks in the TWWHA would be managed for lower use by more experienced users. In summary, the Tasmanian Walking Tracks Strategy and Marketing Plan is an attempt to develop products for the tourism industry, provide a range of potential walking experiences and maintain low use on other, more fragile walking tracks.

Nine respondents suggested that they intended to visit the Overland Track in the future, again this is positive because the Overland Track is one of the walking tracks in the Great Walks project. However, it is disconcerting that some people intend to walk on the Overland Track after they have visited the Arthur Ranges. The theory of recreational succession would suggest that walkers would have been to the Overland Track before going to the Arthur Ranges because the latter is more remote, has less infrastructure and requires more skill and

experience. Roberts (2001 pers. comm.) and Wyatt (2001 pers. comm.) both expressed concern that some of the visitors who go to the Arthur Ranges are probably too inexperienced to be there. The most probable explanation is that the reputation of the Arthur Ranges attracts several visitors with low experience who would be better off on walking tracks such as the Overland Track. The Walls of Jerusalem area was intended for future use by ten respondents that are of interest because some have argued that the area should be included in the 'Great Walks' project (Lennox 2001 pers. comm.). Future research could try to determine the level of support amongst the wider walking community for the Walls of Jerusalem being managed as a 'Great Walk'.

The equal second most popular area for a return trip to Tasmania was Federation Peak in the Eastern Arthur Ranges. This is not surprising considering the attention the mountain gets in magazines. Realistically, managers probably have little chance of redirecting use away from Federation Peak because it is an icon for which there is no credible substitute. For some walkers, the very purpose of their trip to Tasmania was to climb Federation Peak. Three other respondents indicated that other parts of the Arthur Ranges were intended future destinations. The desire amongst interstate walkers to return to the Arthur Ranges is clear, in total 13 respondents said they intended to return to the Arthur Ranges. That result has credence because 20 respondents were already on a return trip to the area (see section 2.3.2). Planners and managers should expect the level of use by interstate walkers to at least remain the same and probably increase in the future.

Four intended future destinations were suggested which were outside the TWWHA: Freycinet (4 responses), Mount Field (1), North-eastern Tasmania (1) and the Tarkine (1). Freycinet was discussed previously as an area that some respondents had visited on their current trip and so its popularity is reiterated by these results. The other areas outside the TWWHA were worth mentioning but since they were only suggested by one respondent each, all that can be stated is that some walkers are aware of various potential walking destination throughout the state.

Several conclusions can be made about possible future patterns of use. Firstly, it is important to acknowledge that a high percentage of

respondents (23%) were unwilling to discuss where they intended to walk in the future. This amounts to nearly one quarter of the sample. The reluctance to provide information could be related to a desire to avoid social impacts associated with crowding or management control. There is a very high probability that the majority of walkers will return to bushwalk in Tasmania. The evidence shows that 76 per cent of respondents were on a return trip to bushwalk in Tasmania and 84 per cent intended to return after their current walk. This suggests that walker numbers may increase.

In terms of destination selection, the majority of walkers who provided information demonstrated that well-known, alpine walking tracks were the most popular areas both for previous walks and for intended future walks. The most important results in terms of predicting future patterns of use and possible displacement effects in the TWWHA come from analysing Table 5 and Appendix B and Appendix C. From the questions that asked where respondents had walked, considered walking or intended to walk in the future, thirteen destinations were within in the TWWHA. Eleven of those walking areas were described in guidebooks by Chapman (1998) or Chapman & Siseman (1998). It is therefore, important to consider the information sources that are used by interstate and overseas bushwalkers.

3.5 Information Sources

Previous studies indicated that word of mouth and guidebooks were important sources of information for walkers. Results from the Tasmanian Parks and Wildlife Service's Walker Survey 1994-1995 indicated that 67 per cent of respondents used word of mouth and 13 per cent of respondents used guidebooks as sources of information for walking (Tourism Tasmania *et al.* 1997). Sawyer (1990) indicated that 57 per cent of respondents in the Mt Anne area used guidebooks and that guidebooks by the authors John Chapman and Tyrone Thomas were used by 38 per cent and 13 per cent of respondents respectively. Figure 16 presented the sources of information used by respondents in this study. The results indicated that guidebooks were the single most popular information source used to choose to walk in the Arthur Ranges. In total 87 per cent of respondents used at least one of the following four guidebooks:

- *South West Tasmania* (Chapman 1998 [or possibly a previous edition]);
- *South-West Tasmania: A Natural History and Visitor's Guide* (Collins 1990);
- *Classic Wild Walks of Australia* (Rankin 1995); or
- *100 Walks in Tasmania* (Thomas 2000 [or possibly a previous edition]).

In addition to guidebooks, magazine articles were used by 26 per cent of respondents to choose the Arthur Ranges whilst the Internet was used by 23 per cent of walkers. A surprising result was that 24 per cent of respondents said that information from the Tasmanian Parks and Wildlife Service influenced their selection of the Arthur Ranges; this is surprising because they do not actively promote the Arthur Ranges. Consequently, no explanation can be provided for the 24 per cent of respondents who said they used Tasmanian Parks and Wildlife Service information as a source. Respondents also used information from bushwalking clubs (18% of respondents), gear shops (13%) and friends or family (56%). Collectively, these three sources of information can be categorised as 'word of mouth'. As demonstrated in previous studies, word of mouth was an important source of information amongst respondents in this study, second only to guidebooks.

Not only did respondents use guidebooks to help them choose to visit the Arthur Ranges, they also used them as guides in the field. The vast majority of respondents (78% of the total) carried Chapman (1998), 9 per cent carried Collins (1990), 6 per cent carried Thomas (2000) and 2 per cent carried Rankin (1995). The other information that respondents carried with them was maps. Maps from the Tasmanian government mapping agency, Tasmapi (scales 1:25 000 and 1:100 000) were carried by 98 per cent of respondents. It is suggested that maps would be one of the best media through which the Tasmanian Parks and Wildlife Service could promote management messages because they are so widely used. Some respondents suggested that maps were difficult to obtain outside Tasmania so, the supply and distribution could be examined.

Section 3.4.2 discussed bushwalking destination selection. The results from this study show a strong link between the information sources that bushwalkers use and the destinations they select. As mentioned previously, of the thirteen future bushwalking destinations mentioned by respondents eleven appeared with published notes in Chapman (1998); that guidebook was carried by 78 per cent of respondents. The two walking areas that were not described by the guidebook were the Gordon Splits (2 responses) and the Truchanas Huon Pine Reserve (1 response). These areas received the least number of responses. These results indicate that the amount, and ease of finding information about walking tracks is a crucial factor in influencing future patterns of use. Respondents' level of experience, which has been postulated as a determinant of site selection, is probably subordinate to the availability of information (McFarlane *et al.* 1998; Watson *et al.* 1991). The results from this study support the view that public awareness is a major determinant of demand for recreation sites (Zanon & Costa 2000). The Tasmanian Parks and Wildlife Service already has a policy for controlling information about some walking tracks (Parks & Wildlife Service 1999). However, that policy will only be effective in influencing future site selection if, and only if, those responsible for the production and distribution of information agree to support the policy. With the increasing use of the Internet, it is likely that information will become more available and more difficult to regulate.

The results indicated that general information about bushwalking in Tasmania could be obtained relatively easily. However, some respondents indicated that it was more difficult to obtain information about the Arthur Ranges. This result was not surprising because the policy for management of the Arthur Ranges is to keep publicity 'low key' (Parks and Wildlife Service 1998). The results also indicate that when a useful source of information is identified its use becomes widespread, as in the case of the guidebook *South West Tasmania* (Chapman 1998).

3.6 Attributes And Features That Attract Walkers

Understanding the attributes and features that attracted respondents to the Arthur Ranges could help the Tasmanian Parks and Wildlife Service to plan and manage the area effectively, this could include

predicting future patterns of use. Tourism Tasmania could determine which attributes would be most attractive for marketing campaigns. An important feature of the way by which the questionnaire was administered is that respondents completed the questionnaire *before* they started their bushwalk. It is important to make the distinction between questionnaires that are issued before, or after, an event. The results from this study represent the values that respondents expected from the Arthur Ranges. These are in effect, the values that influenced their selection of the Arthur Ranges. Consider a question that asks respondents 'What attributes attracted you to the area?' after they had been to the area. There would be no way of proving whether the responses represented the factors that actually attracted walkers, or whether walkers simply reported the factors that they enjoyed on their trip. This study examined the factors that *attracted* respondents.

Respondents were requested to evaluate the importance of various reasons for visiting the Arthur Ranges (see question 16, Appendix A). Numerous indicators were used and in some cases similar indicators were used to cross-validate responses. For the majority of reasons that were listed in Question 16 there were no clear results. However, section 2.4 indicated that the following factors were important influences of walking track choice:

- 'To be inspired';
- 'To escape everyday life';
- 'To see mountain scenery';
- 'To experience wilderness'; and
- 'To go somewhere you haven't been before'.

Unfortunately, it cannot be proven whether or not respondents recorded the importance of these reasons in direct reference to their choice of the Arthur Ranges, or with reference to bushwalking destinations in general. Irrespective of whether the response related to the Arthur Ranges, or bushwalking in general, the results are important for managers. What the results indicated is that the natural values that attracted interstate and overseas walkers were wilderness and mountain scenery. In terms of the social experience respondents identified the desire for inspiration and escapism. Importantly, visiting a destination that had not been visited previously was influential in

walking track selection, possibly reflecting the desire to engage in 'discovery' or 'exploration'.

Escapism was very important to 42 per cent of respondents and moderately important to an additional 23 per cent of respondents. However, a second question asked respondents how important it was to 'get away from other people'. This question was asked to determine whether walkers chose the Arthur Ranges because they thought it would be used by fewer people than the other walks such as the Overland Track. The results suggested that 35 per cent of walkers wanted, or expected, to 'get away from other people' whilst 38 per cent did not consider escaping other people important. An additional 19 per cent of respondents thought that escaping other people were somewhat important. The exact meaning of these results is somewhat ambiguous. It could be that some respondents expected to see very few other walkers whilst other respondents expected to see more walkers. A second interpretation is that some respondents considered it important to 'get away from other people' whilst other respondents did not consider it important to 'get away from other people'. The difference in these meanings is subtle but worthy of future examination.

3.7 Tourism

The TVS data from 1993-1996 indicated that on average, 14,669 visitors to Tasmania (3.2% of the total) undertook an overnight bushwalk in the TWWHA (Tourism Tasmania *et al.* 1997). For perspective, 473 interstate and overseas walkers visited the Arthur Ranges in the 1999-2000 season. Combining the TVS data with the walker registration logbook data for the Arthur Ranges indicated that 3.2 per cent of bushwalking done by interstate and overseas visitors to the TWWHA was done in the Arthur Ranges. In total, approximately 0.1 per cent of all visitors to Tasmania walked in the Arthur Ranges.

Section 2.3.1 explained that the 90 respondents who were involved in trip planning were asked if they considered doing any activities other than bushwalking. Eighty-two respondents (91.1%) did not consider doing any other activities and only five respondents did consider other activities. The other activities were: rafting, cycle-touring, rock-

climbing and caving. These results are important because they suggest that although Tasmania has numerous adventure products to offer, bushwalking was the only one considered by the majority of respondents. The results could mean that respondents were aware of other potential activities but only really wanted to bushwalk. Alternatively, the results could mean that respondents were not aware of the range of other adventure activities that were available in Tasmania. One way to relieve environmental and social pressure on the walking tracks of the TWWHA would be to promote alternative adventures, such as cycle-touring.

Despite their very low number, determining the tourism preferences of respondents was important because they represent a niche market, which is likely to grow in the future (Lennox 2001 pers comm.). The average duration of stay in Tasmania by respondents was 20.7 days. Results from the TVS and a survey of bushwalkers in 1996-1997 indicated that the majority of respondents who undertook an overnight walk stayed in Tasmania for more than 14 days (Tourism Tasmania *et al.* 1997). In the Arthur Ranges study, a total of 56 per cent of respondents stayed for 15 days or more. However, the single most popular trip duration was 10 to 14 days (38% of the total) (Figure 17). Considering that the majority of walkers undertook walks of 7 to 10 days (Figure 9), then many walkers are only staying in Tasmania for 4 to 7 days longer than their intended walk duration.

The TVS also indicated that overnight bushwalkers used cheaper forms of accommodation and transport than other visitors (Tourism Tasmania *et al.* 1997). Amongst the respondents of this study, hostels were the most commonly used form of accommodation and public services were the predominant form of transport used. The trip budget varied widely but 45 per cent of respondents allocated between \$300 and \$600 to their trip. The mode response for trip budget was \$300, which was recorded by 16 respondents (Table 6). The average budget was \$628 but the average was inflated by outliers in the data (such as one international respondent who budgeted \$4000 for a stay in Tasmania). The results of the tourism characteristics for the sample indicated that the duration of stay and preferred transport and accommodation services mirrored those of interstate and overseas bushwalkers in general.

The previous sections of this report presented and discussed the characteristics of interstate and overseas bushwalkers that were determined by this study. It is necessary however, to take the knowledge that has been obtained and apply it in ways that improve the management of bushwalkers and walking tracks within the TWWHA, and throughout Tasmania's other protected areas. Therefore, the following conclusions and recommendations are presented for consideration.

4.1 Bushwalker Demographics

At the outset of the research there was an assumption that bushwalkers who visited low use walking areas such as the Arthur Ranges would have different characteristics from those who visit more popular walking tracks. The results indicate that the age, sex, occupation and place of residence among the sample do not differ from other segments of the bushwalking community with the exception of the proportion of overseas bushwalkers in the Arthur Ranges, which was below the average for the TWWHA in general. Consequently, from this study there appears to be no need to cater for specific subgroups of walkers from a tourism point of view. Further research is required to detect potential differences between Tasmanian bushwalkers and visitors to the state.

4.2 Level of experience

The level of experience among bushwalkers varied depending on the way by which experience was measured however, there was no clear indication that level of experience influenced walking track selection. It is important to note that one-quarter of respondents (24%) chose the Arthur Ranges for their first bushwalk in Tasmania. Considering the difficulty of the terrain and the potential severity of conditions, it is suggested that the Arthur Ranges is not the best place for tourists to be introduced to bushwalking in Tasmania. Observations of bushwalkers in the field confirmed that several groups were not adequately equipped. Challenge is certainly a value that some people seek when bushwalking however, it is necessary to stress the

importance of adequate preparation, equipment and the selection of an appropriate walking track if visitors to the state are to have safe, enjoyable experiences.

It is apparent that the icon status of the Arthur Ranges, with Federation Peak as the jewel, plus the attention the area receives in outdoor recreation magazines makes it inevitable that some walkers will visit the area despite a lack of experience and inadequate preparation. Ironically, it is difficult to develop any practical measure to address the problem of inappropriate walking track selection. For example, even if all available walking tracks were rated according to their relative difficulty, some people would choose an area because it was considered the most challenging. Nonetheless, a useful way to address this problem for many interstate and overseas bushwalkers would be to provide clear indications of what conditions, facilities and difficulties should be expected on different walking tracks.

4.3 Influencing Walking Track Selection

The attributes that influenced destination selection among respondents focussed on the natural environment. However, factors such as the desire to 'experience wilderness' or to 'see mountain scenery' provide limited usefulness to planners who are trying to predict future patterns of use because they could apply to so many potential walking areas. Of more importance is the finding that a large proportion of bushwalkers considered it important to choose a walking area that they had not visited previously. Furthermore, it appears that well-known, publicised walking tracks were the most popular destinations for future trips to Tasmania. Places like the Overland Track, South Coast Track, Mt Anne and the Walls of Jerusalem were identified as destinations of interest to respondents, suggesting that the 'Great Walks' project could prove successful. This would be positive because it means walking track use by the general nature-based tourist market could be concentrated at places that have the infrastructure to cope with high visitor numbers. At the same time, this would limit the likelihood of interstate and overseas bushwalkers visiting low-use or trackless areas and therefore, would help to slow the deterioration of existing walking tracks and campsites and minimise the proliferation of unplanned tracks.

4.4 Sources Of Information

Respondents' relied on guidebooks and word of mouth information, probably because detailed information removes much of the uncertainty associated with visiting a new walking destination. The availability of detailed information appears to make an important contribution to destination selection. The Tasmanian Parks and Wildlife Service has a policy regarding walking track publicity, however controlling information could prove extremely difficult. The fact that eleven of the thirteen future walking destinations suggested by respondents appeared in popular guidebooks means that managers should continue to liaise with guidebook authors about what areas should, or should not, receive publicity. Other sources of information, in particular word of mouth and the Internet, will prove very difficult, if not impossible to influence. This research suggests that although publicity of remote and fragile walking areas should be minimised, it would probably be more effective to actively promote those areas that *should* be used.

It is suggested that very few walkers are likely to visit truly remote, untracked areas therefore, efforts should be concentrated on directing the majority of bushwalkers to places such as those identified by the 'Great Walks' initiative. Since 76 per cent of respondents had bushwalked in Tasmania previously and 84 per cent intended to return in the future, it is essential that a variety of walking experiences are available to satisfy demand among returning tourists and to provide options to intending tourists. Only practical experience will demonstrate how many options should be provided but the five to eight 'Great Walks' suggested in the *Tasmanian Walking Track Strategy and Marketing Plan* (Tourism Tasmania *et al.* 1997) appears to be appropriate. It is essential that if particular walking tracks are to be publicised for greater use, they must first be upgraded to a condition to cater for the level of use that is encouraged, otherwise the concentration of use could result in unacceptable environmental and social impacts.

4.5 Nature-Based Tourist Management

Managing the TWWHA costs millions of dollars each year. Visitors who come to Tasmania to bushwalk receive a world-class experience without the crowds or regulations that are present in the United States, Europe or New Zealand. For all that they receive, their contribution to the tourism industry is minor. Amazingly, a two-month 'Parks Pass', which allows access to all Tasmanian national parks including the TWWHA, cost \$13.20. For comparison, a two-day pass to the Port Arthur Historic Site cost \$19.80 or, a trip to the Melbourne Aquarium cost \$19.90. Considering the expense of managing Tasmania's walking track network and the inevitable damage that results from bushwalking, it appears logical that a user pays system based on overseas models could be implemented to provide much needed funding for site maintenance and rehabilitation. For example, a charge of only \$10 per trip (not per night) for each of the 22,000 bushwalkers who visit the TWWHA each year would contribute \$220,000. Importantly, money used to rehabilitate degraded sites or to maintain facilities would address environmental impacts and in turn, provide a higher quality experience for bushwalkers.

In the long term Tasmania cannot afford, financially or environmentally, to continue to provide world-class experiences without having some of the cost of managing the TWWHA covered by those people who use the area. The past decade was characterised by division among stakeholders in walking track management based on the proposed implementation of an overnight walker permit system. Part of the debate focussed on the administrative costs associated with such a system. Despite the controversy, this study identifies the need to consider the implementation of a user pays system that could generate much needed funding for the continued protection and presentation of the values of the TWWHA.

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APPENDIX A: QUESTIONNAIRE

Arthur Ranges Survey 2000-01



UNIVERSITY OF TASMANIA
Centre for Environmental Studies

Dear Bushwalker

Your personal opinions are valuable. Information you provide will assist future management of the Arthur Ranges so please complete this important questionnaire. Participation is **VOLUNTARY** and your information is **CONFIDENTIAL** so give your honest opinions.

This is an independent study being conducted by the Centre for Environmental Studies at the University of Tasmania. Contact details are provided at the bottom of this page.

Instructions

- These questions are for people 15 years or older who are going to the WESTERN ARTHURS, EASTERN ARTHURS and/or FEDERATION PEAK
- Your INDIVIDUAL OPINIONS are important; each group member should complete a SEPARATE questionnaire
- If you need more space to answer a question use the back of the page and put the number of the question you are answering
- DO NOT put your name on the questionnaire

Please complete your questionnaire and place it in the box at the front of the bus

↓ The Fine Print ↓

The research is being conducted by Doug Grubert in part fulfilment towards the degree Bachelor of Science with Honours. The study has the support of the Cooperative Research Centre for Sustainable Tourism, Tourism Tasmania, Tasmanian Parks and Wildlife Service and TWT's Tassielink Bus Service.

If you have any concerns about the way this project is conducted please contact the Chair of the University Human Research Ethics Committee, Dr Margaret Otlowski, (03) 6226 7569 or Executive Officer Ms Chris Hooper, (03) 6226 2763.

A summary of results can be obtained by writing your **address only** on the back of your questionnaire. Any questions regarding the research can be directed to **Dr Lorne Kriwoken** (Chief Investigator) (03) 6226 2458 or **Doug Grubert** (03) 6226 7454 or email: dgrubert@postoffice.utas.edu.au

Thank you

TRIP INFORMATION

The following questions are about your trip to the Arthur Ranges

Date / /
 Day Month Year

Q1. What is your planned route

- Lake Oberon Return via Moraine A
 Western Arthurs Moraine A-K
 Full Traverse of the Western Arthurs
 Return trip to Federation Peak via the Arthur Plains
 Other (please specify)
-
-

Q2. Have you bushwalked in the Arthur Ranges before?

- No
 Yes
 Unsure/cannot remember

If YES, in what year did you last walk in the Arthur Ranges?

Q3. On this trip, what type of group are you walking with?

- Solo (by yourself)
 Friends/family
 Bushwalking Club
 Other (please specify)

Question 4. How long will you spend in the Arthur Ranges?

PREVIOUS EXPERIENCE

Please tell us about your level of bushwalking experience

Q5. How many OVERNIGHT bushwalks (treks or hikes) have you done in your life? (include those in Tasmania AND anywhere else)

- None, this is my first
 1-5
 6-15
 16-25
 26 or more

Q6. How many overnight bushwalks have you done in TASMANIA?

- None, this is my first
 1-5
 6-15
 16-25
 26 or more

Q7. How many of your Tasmanian bushwalks were of 7 DAYS duration or more?

- None
 1
 2-5
 6 or more
 Not applicable

Q8. Are you:

- Female Male

Q9. What is your age? _____ years

Q10. If AUSTRALIAN please write the postcode of your place of residence.

Q11. If from OVERSEAS please write your country of residence

INFORMATION ABOUT BUSHWALKING

There are many sources of information that can play a useful role in promoting safe, enjoyable and environmentally responsible bushwalking. Please tell us what information sources you used.

Q12. What sources of information did you use to help you CHOOSE to walk in the Arthur Ranges? (you can tick more than one box)

- TASMALP 1:25 000 maps
- TASMALP 1:100:000 maps
- Friends/family
- Bushwalking Club
- Gear Shops
- Parks & Wildlife Service Information
- Magazines
- Internet
- John Chapman's South West Book
- Ken Collins' South West Book
- Unsure/cannot remember
- Other (please specify)

Q13. What information are you TAKING WITH YOU on your walk to the Arthur Ranges? (tick one or more boxes)

- TASMALP 1:25 000 maps
- TASMALP 1:100:000 maps
- Notes from friends and/or family
- Bushwalking Club notes
- Parks & Wildlife Service Track Notes
- Magazine notes
- Internet notes
- John Chapman's South West Tasmania Book
- Ken Collins' South West Tasmania Book
- None, one of our group knows the way
- Other (please specify)

Q14. How easy was it for you to find information about bushwalking in Tasmania?

- Very difficult
- Difficult
- Average
- Easy
- Very easy

Comments:

Q15. Which of the following statements describes you best? (tick ONE box only)

- I came to Tasmania ONLY to walk in the Arthur Ranges
- I came to Tasmania ONLY to bushwalk but on a number of tracks
- I came to Tasmania for a holiday, bushwalking is one thing I will do here
- I came to Tasmania and then discovered I could go bushwalking
- I live in Tasmania
- Other (please specify)

WHY YOU CHOSE TO VISIT THE ARTHUR RANGES

Q16. People bushwalk in the Arthur Ranges for different reasons. How important were the following REASONS in influencing your CHOICE to visit the Arthur Ranges?

(Please circle)

Reasons for CHOOSING the Arthur Ranges	Not Applicable	Not at all Important	Not Very Important	Somewhat important	Moderately important	Not Applicable	
Access is convenient	na	1	2	3	4	5	A
There is a track to follow	na	1	2	3	4	5	B
To test your outdoor skills	na	1	2	3	4	5	C
To climb Federation Peak	na	1	2	3	4	5	D
To be inspired	na	1	2	3	4	5	E
To escape everyday life	na	1	2	3	4	5	F
To go somewhere you haven't been before	na	1	2	3	4	5	G
You heard it was a challenge	na	1	2	3	4	5	H
To see mountain scenery	na	1	2	3	4	5	I
Inspired by photos of the area	na	1	2	3	4	5	J
To share an experience with family/friends	na	1	2	3	4	5	K
Because you always wanted to do it	na	1	2	3	4	5	L
Because bushwalking in the Arthur Ranges is a major achievement	na	1	2	3	4	5	M
Because a bus service was available	na	1	2	3	4	5	N
To visit Lake Oberon	na	1	2	3	4	5	O
Magazine article or book inspired you	na	1	2	3	4	5	P
To get away from other people	na	1	2	3	4	5	Q
To get out of your comfort zone	na	1	2	3	4	5	R
Family or friends recommended it	na	1	2	3	4	5	S
Information about the area is available	na	1	2	3	4	5	T
The walk duration was a suitable length	na	1	2	3	4	5	U
To experience wilderness	na	1	2	3	4	5	V
Because the walk is a skyline traverse	na	1	2	3	4	5	W
To become a more experienced walker	na	1	2	3	4	5	X
Your family or friends were going so you decided to go too	na	1	2	3	4	5	Y
To meet new people	na	1	2	3	4	5	Z

PLANNING YOUR BUSHWALK

Please tell us about how you bushwalk was planned and whether you considered doing other bushwalks or activities instead

IMPORTANT NOTE: If you DID NOT help to plan the bushwalk you are going on please place a tick in this box and go to Question 20 otherwise continue below.

Q17. How long have you been planning this trip?

- Less than one week
- One week to less than one month
- One month to less than six months
- Six months to less than one year
- One year or more

Q18. When planning your trip to the Arthur Ranges, did you consider any other bushwalking areas?

- No
- Yes
- Unsure/cannot remember

If YES, what other bushwalking areas did you consider? (please specify)

Q19. When planning your trip to the Arthur Ranges, did you consider doing any other activities instead? (eg. Sea kayaking or bicycle touring)

- No
- Yes
- Unsure/cannot remember

If YES, what other activities did you consider? (please specify)

Q20. Are you:

- On annual leave
- On long service leave
- Travelling/backpacking
- On a long weekend
- On school/university holidays
- Retired
- Unemployed
- Other (please specify)

Q21. What is your occupation?

There are no more questions for TASMANIAN bushwalkers. Please put your questionnaire in the box at the front of the bus. Thankyou.

INTERSTATE/OVERSEAS WALKERS ONLY

Nature-based tourism is important to Tasmania. We would like to know a little more about your visit and what tourism services you have used or will use in Tasmania.

Q22. Is this bushwalk to the Arthur Ranges the ONLY bushwalk you will do whilst in Tasmania this trip?

- No
- Yes
- Unsure

If No, what other bushwalks have you done or will you do? (please specify)

INTERSTATE/OVERSEAS WALKERS ONLY

Q23. Do you intend to come back to Tasmania for future bushwalking?

- No
- Yes
- Unsure

If YES what other bushwalks do you intend to do? (please specify)

Q24. How many days will you stay in TASMANIA on this trip?

_____ days

Q25. How much money have you budgeted for this trip to Tasmania? (include transport within Tasmania but not to Tasmania)

\$ _____ per person (approximately)

Q26. What forms of transport have you used/will you use within Tasmania? (tick one or more boxes)

- Public transport
- Taxi
- Friend's or relative's vehicle
- Hitch-hiking
- Hire car
- Other (please specify)

Q27. When you are NOT bushwalking what type/s of accommodation are you using in Tasmania? (tick one or more boxes)

- Hotels/motels
- Youth/Backpacker Hostel
- Friend's or relative's place
- Caravan park
- Tent site
- Other (please specify)

There are no more questions! Please put your completed questionnaire in the box at the front of the bus.

Thank you for your time and enjoy your bushwalk!

APPENDIX B: OTHER WALKING AREAS CONSIDERED BY RESPONDENTS

WALKING AREA	FREQUENCY
Overland Track	13
Mount Anne	8
South Coast Track	8
Walls of Jerusalem	7
Federation Peak (Arthur Ranges)	6
New Zealand*	5
Southwest Tasmania (unspecified)	3
Frenchmans Cap	3
Precipitous Bluff	2
Frankland Range	2
Gordon Splits	2
Mainland Australia (unspecified) *	2
Truchanas Huon Pine Reserve	1
Overseas unspecified*	1
Freycinet*	1
Did not state	3

* denotes an area outside the TWWHA

APPENDIX C: OTHER WALKING AREAS USED BY RESPONDENTS

WALKING AREA	FREQUENCY
Overland Track	10
Mount Anne	10
Freycinet*	5
Frenchmans Cap	4
Precipitous Bluff	3
South Coast Track	2
Walls of Jerusalem	2
Federation Peak (Arthur Ranges)	1
Lake St Clair	1
Mount Field*	1
Cape Hauy*	1
Bruny Island*	1
Did not state	10

** denotes an area outside the TWWHA*

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The Cooperative Research Centre for Sustainable Tourism was established under the Australian Government's Cooperative Research Centres Program to underpin the development of a dynamic, internationally competitive, and sustainable tourism industry.

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