

INTERNATIONAL MARKET ANALYSIS OF WILDLIFE TOURISM



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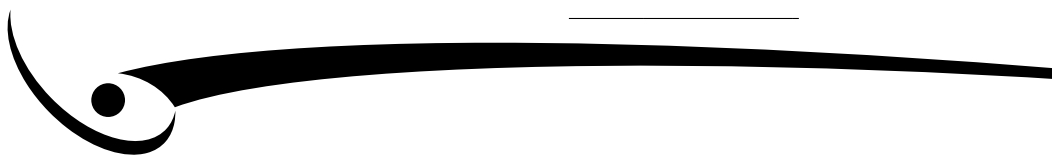
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EXECUTIVE SUMMARY

This report presents the results of a wildlife tourism project aimed at providing information about the role of Australian native wildlife as a tourism product in the international visitor market. The main objectives of the research were:

- to assess the role and significance of wildlife based experiences in Australian tourism product within inbound markets;
- to establish a typology of wildlife tourists and develop market profiles; and
- to examine satisfaction levels with wildlife encounters.

In assessing the role and significance of the wildlife tourism product, the principal findings were that:

- 18.4% of visitors were influenced to come to Australia to experience native animals, however, only 0.8% would not have come otherwise; and
- 67.5% of tourists wanted to see animals during their visit, and 71.1% actually did see animals during their visit.

Two definitions of wildlife tourists were subsequently explored:

1. **Strict definition** – only those visitors who identified themselves as being influenced to come to Australia to see native wildlife and who subsequently did see animals during their visit (17% of sample).
2. **Loose definition** – all visitors who had planned encounters with animals, that is, wanted to and did see animals during their visit (58.6% of sample).

Wildlife tourists were then profiled using both definitions and similar observations were made regardless of the definition. The findings suggest that wildlife tourists:

- Appear to stay longer and visit more regions than other tourists.
- Are more likely to visit regions outside the international gateways (regions with international airports).
- Have lower daily expenditures but higher overall expenditures because of their longer stays.
- Tend to be younger and are more likely to be travelling as couples or with friends.
- Are more likely to be from Europe, Japan and Korea.
- Are generally on their first visit to Australia travelling for a holiday rather than for business or to visit friends and relatives.

When asked about specific animals:

- More visitors wanted to see kangaroos (43.2%) and koalas (44%) than other animals, and little mention was given to any others with the next most desired animal encounter being with the wombat (4.4%).
- Similarly, the animals that tourists actually did most commonly see were the kangaroo (59.6%) and koala (50%), but other animals were also seen with fairly high frequency including the parrot (38.3%), the emu (35.1%), the wombat (30.7%), and the lizard (30.4%).

In an effort to segment the wildlife market, visitors were divided into groups based on the types of animals they most wanted to see. This was achieved using cluster analysis, and the groups identified were:

- Iconic Marsupials – kangaroo and koala

- Native Group 1 – wombat, emu and possum
- Sea Mammals – dolphin and whale
- Native Group 2 – platypus, Tasmanian devil, echidna and dingo
- Non-Unique Animals – crocodile, shark, snake, parrot, penguin, lizard, fish turtle, frog and seal

It was found that:

- males were more likely to want to see Non-Unique Animals; and
- visitors on their first trip were more likely to want to see iconic marsupials, while visitors on a return visit were more likely to want to see other types of animals.

A subsequent segmentation was undertaken based on whether the most enjoyed encounter was with animals in captivity or in the wild (free encounters). It was found that those who had only had captive encounters:

- were more likely to be from Asian countries;
- tended to be on a first visit (although Asian visitors on a return visit also tended to have captive encounters);
- were more likely to be on a group tour;
- were more likely to stay inside the international gateways (capital cities);
- were more likely to have active encounters, that is touching, holding, or feeding animals; and
- mostly wanted to see the iconic marsupials (koala and kangaroo).

On the other hand, those who had encounters with free animals:

- tended to be older;
- were more often from non-Asian countries, particularly Europe;
- were mostly on return visits;
- tended to go beyond international gateways into other regions;
- usually had passive encounters, that is viewing animals from a distance; and
- comprised a higher than expected proportion of tourists visiting friends and relatives.

With regard to satisfaction, high overall levels were observed with over 81.4% of the sample indicating that they were either satisfied or very satisfied with their wildlife experiences, and 98.4% indicating that they were satisfied or very satisfied with their overall visit to Australia.

To further investigate satisfaction, a success rate for each animal was calculated by matching the animals each visitor wanted to see with those they actually did see during their stay. The following points were observed:

- most animals had success rates higher than 50%;
- the highest success rates were for the parrot (81.8%), the kangaroo (81.1%) and the koala (74.7%);
- the lowest success rates were for the platypus (44.3%) and the whale (17.1%), however the latter result is no doubt affected by the timing of the survey, which was not within the whale watching season; and
- a predictable relationship was found between success and satisfaction, with those who saw all or most of the animals they wanted being more likely to be very satisfied, and those who saw

none of the animals they wanted to being more likely to be dissatisfied.

The following conclusions and recommendations were therefore made:

1. Wildlife is clearly an important part of the Australian tourism product - over 70% of international visitors see animals during their visit.
2. Most visitors do not see wildlife as a primary motivating factor.
3. It is important that wildlife operators acknowledge that they are one part of the broader Australian tourism industry and that they should forge appropriate linkages with other types of attractions in an effort to maximise exposure.
4. First time visitors tend to be focused on seeing kangaroos and koalas, but repeat visitors often seek encounters with other types of animal so such opportunities should be provided.
5. There is evidence to suggest that visitors (particularly non-Asian visitors) have a preference for seeing animals in free, or relatively free, settings rather than held captive.
6. Appropriate products should be developed that provide greater access to animals in their natural environment.
7. Given the strong relationship between success in seeing animals and satisfaction, it is important that any shift in emphasis from captive to free encounters not result in a substantial decline in success rates.
8. It is also important that visitors have realistic expectations about where and when they will be able to see various animals to avoid disappointment.

Future research needs to examine the benefits people seek in a wildlife encounter and the ways in which they prioritise different aspects of experiences. For example, some visitors clearly enjoy encounters that give them an opportunity to touch, hold, and feed animals. It is not yet known whether they value this more highly than seeing animals in their natural environment, and therefore whether they would be prepared to forego this opportunity.

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1. INTRODUCTION

This report presents the results of the International Market Analysis of Wildlife Tourism project, aimed at providing much needed information about the nature of the wildlife tourism product as it relates to international visitors. The main objectives of the research were:

1. To assess the role and significance of wildlife based experiences in Australian tourism product within inbound markets.
2. To establish a typology of wildlife tourists and develop market profiles.
3. To examine satisfaction levels with wildlife encounters.

It is commonly believed that Australia's wildlife is a major draw card for many international tourists, particularly the unique native animals, such as the kangaroo and koala, which are commonly associated with images of Australia. Hundloe and Hamilton (1997) estimated \$1.8 billion of tourist revenue in 1996 could be attributed to tourists who would not have visited if not for the unique Australian wildlife. Claims have also been made about increasing levels of demand for wildlife tourism experiences. However, as Moscardo, Woods and Greenwood (2001) point out, there is little evidence to support this claim, and where visitation data exist, they usually relate to only part of the wildlife product rather than the entire phenomenon.

For example, some figures can be drawn from the International Visitor Survey (IVS) conducted by the Bureau of Tourism Research (BTR), which asks visitors about specific activities undertaken while in Australia, as shown in Table 1. One category, which clearly relates to wildlife tourism, includes visits to zoos and other captive animal exhibits. From 1993 to 1996 the proportion indicates that at approximately half of all visitors to Australia visited this type of attraction. The observed reduction in proportion in 1997 may be an artefact of the change in wording. Prior to this date the category included marine parks, which after this date would probably have better fitted into the theme park category. In 1998 a new activity category was included dealing with whale and dolphin watching. However, additional years of data are required before changes in level of visitation for this activity can be tracked.

The IVS also collects data on visits to specific attractions in each state as shown in Table 2. The attractions included may change each year at the discretion of the states, and therefore the continuity of the data varies.

Table 1: IVS data of activities that involve wildlife

	1993		1994		1995		1996		1997		1998		1999	
	%	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%	'000
Visit zoos, animal or marine parks	51	1,420	51	1,583	50	1,711	48	1,838						
Visit wildlife parks and zoos									31	1,232	42	1,621	43	1,782
Go whale/dolphin watching											7	270	7	290

Source: BTR 1994, 1995, 1996, 1997, 1998, 1999, 2000.

There are other activity categories that clearly have the potential to involve wildlife experiences, for example; visiting national parks, bush walking and rainforest walks, visiting the outback, visiting farms, and even visiting theme parks may result in wildlife encounters. However, such encounters are not guaranteed and it would therefore be misleading to include these.

Since 1998, the IVS has included a question asking visitors about the factors that influenced their decision to come to Australia. One of the options is 'to experience Australia's nature and wildlife' and the proportion indicating that this was an influential factor has fluctuated from 14% in 1998 to 24% in 1999. Clearly additional years of data are required in order to observe trends.

Given a lack of suitable secondary data to accurately assess the wildlife tourism phenomenon, it was necessary to collect primary data to address the research objectives. The following section presents a review of the literature reporting previous research consulted in an effort to inform the research design and extend the accumulated body of knowledge.

Table 2. IVS estimates of visitors to specific wildlife based attractions

	1999		1998		1997	
	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS
Taronga Zoo (NSW)						
Other zoos, wildlife sanctuaries, aquariums (NSW)						
Phillip Island, Penguin Parade (VIC) *before 1996 the category was Phillip Island and did not specifically mention the penguin parade	7.8	322,886	8.1	313,490	7.2	285,579
Healesville Sanctuary (VIC) *1997 to 1999 figures include visitors to Dandenong Ranges and Puffing Billy	4.6	189,278	4.2	162,150	4.0	158,655
Melbourne Zoo (VIC)						
Great Barrier Reef (QLD)	16.8	694,400	16.3	628,320	15.7	624,340
Cleland Wildlife Park (SA)						
Monarto Open Range Zoo (SA)						
Monkey Mia/Shark Bay (WA)	1.4	59,829	1.2	45,522		
Tidbinbilla Nature Reserve (ACT)						

Source: BTR 1994, 1995, 1996, 1997, 1998, 1999, 2000.

[Note: The number of visitors is an estimate weighted up from proportions observed in the sample.]

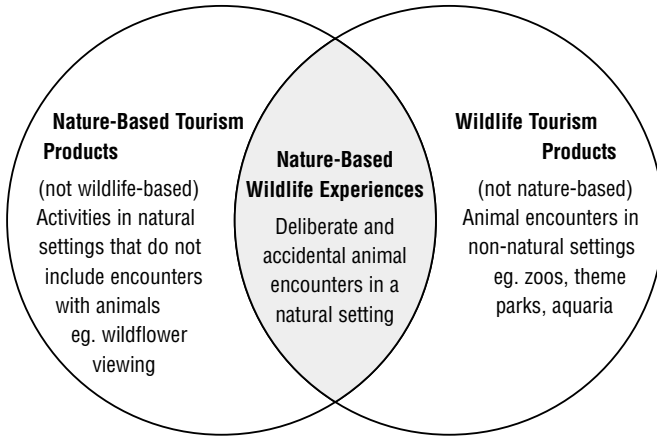
1996		1995		1994		1993	
% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS	% VISITORS TO AUSTRALIA	ESTIMATED NUMBER OF VISITORS
10.2	389,955	10.9	369,440	12.8	395,903		
19.0	727,916	19.0	646,520	20.1	625,110		
7.1	270,810	7.9	267,554	8.5	264,988	8.0	221,564
1.8	70,210	2.2	73,808	2.5	76,932		
3.4	130,390	4.1	138,390	4.1	128,220		
16.2	619,136	15.4	523,980	16.6	515,040		
1.2	47,488	1.1	37,635	1.4	43,571	1.3	36,635
0.2	5936	0.3	10,036				
1.0	39,392	1.1	35,952	1.2	37,764	1.1	29,584
0.6	22,576	0.5	16,470	0.5	14,190	0.6	16,695

2. LITERATURE REVIEW

Much of what has been written in the area of wildlife tourism is primarily concerned with the impacts on animals, management issues (Duffus & Dearden 1993, Orams 1996, 1997) or interpretative issues relating to the quality of captive wildlife exhibits (Ogden, Lindburg & Maple 1993, Woods 1998). However, a few attraction specific studies have investigated demographic, motivational and experiential factors related to wildlife tourism (Pearce & Wilson 1995, Davis, Banks, Birtles, Valentine & Cuthill 1997, Ryan 1998, Bulbeck 1999). These studies, while very useful, and frequently convergent in their findings, are not necessarily representative of wildlife tourism as a whole.

As suggested in the introduction, the Bureau of Tourism Research collects data on some activities that, although not specifically dealing with wildlife tourism, are more likely to provide wildlife experiences than some other activities. In 1998 they published an occasional paper, 'Profiles and Motivations of Nature-Based Tourists visiting Australia' (Blamey and Hatch 1998). Although the nature-based or eco-tourism product includes experiences unrelated to wildlife, and some aspects of the wildlife tourism product are not related to nature-based tourism, it is likely that the markets would overlap to some extent as shown in Figure 1. Although the magnitude of the overlap is unknown, the profiles and motivations of nature-based tourists may be of relevance to the current study.

Figure 1: Overlap between nature-based and wildlife tourism



2.1 What Is The Profile Of A Nature-Based Tourist?

The BTR paper summarised existing IVS data and also presented the results of a supplementary survey undertaken in the March quarter of 1996. For the purposes of the study, they defined nature-based visitors as those who went to a national park, or participated in one of the following activities: snorkelling, scuba diving, whale watching, horse riding, rock climbing, mountaineering, bush walking, outback safari, or four wheel drive tours.

The study showed that European, particularly Scandinavian, visitors were far more likely to undertake nature-based activities than Asian visitors, however the latter group still comprise more than 50% of nature-based tourists because far greater numbers of visitors come from this region. It was also found that younger people were more likely to undertake nature-based activities with participation rates declining for those 40 years and over. This relationship may however be linked with a greater propensity for older visitors to have come to Australia for business rather than pleasure, and a lower propensity for business visitors to undertake nature-based activities. There were some relationships observed with regard to gender, however these

were related more to the specific type of activity undertaken rather than a greater propensity for either males or females to be involved in nature-based tourism.

Very few of the nature-based visitors (5%) suggested that their intention to visit natural areas had been the most important factor in their decision to visit Australia. In fact, the largest proportion (41%) suggested that it had little or no influence on their decision. It would therefore appear that for most tourists who engaged in nature-based activities, this opportunity was a pleasant additional element of the Australian tourism product but certainly not the only element that motivated them to travel to Australia.

Some of the aspects of nature-based experiences that respondents rated as being most important were:

- seeing the natural beauty of the sites visited;
- a chance to see or experience something new;
- being close to nature;
- seeing wildlife in detail; and
- a different or unique way of experiencing nature.

It was found that visitors who participated in nature-based activities had a longer mean stay (approximately 32.5 nights)* than visitors did in general (24 nights). [*This mean was calculated from data reporting the mean length of stay of 3 nature-based visitor market segments by multiplying each mean by the relative size of each segment.]

2.2 What Is The Level Of Demand For Wildlife Tourism Products?

As mentioned previously, using visitation numbers as an estimate of demand for wildlife encounters is problematic, not only because the secondary data fail to measure the entire phenomenon. Confusion in both the estimation of demand and the development of profiles of wildlife tourists may be created by the fact that not all consumers of

wildlife tourism product are motivated by a desire to see animals (Moscardo, Woods & Greenwood 2001). When different types of products are bundled together, visitors may find themselves involved in wildlife encounters when their true reason for taking the tour was related to one of the other components. Similarly, some visitors find themselves undertaking activities because of the motivations of other members of their travel party. Moscardo, Woods and Greenwood (2001) also suggest that tourists may be motivated to undertake wildlife-based activities out of curiosity or a desire to 'notch up' experiences, rather than truly being motivated by a desire for interactions with animals. Reid (1996) (cited in Moscardo, Woods & Greenwood 2001) found that only 37% of whale watchers in South Australia engaged in the activity because they were interested in whales. Additionally, demand estimates can be confounded to the extent that some visitors may seek wildlife encounters and yet be disappointed in this endeavour for a variety of reasons.

An alternative indicator of demand would involve a pre-trip survey asking visitors about the importance of and intention to undertake wildlife-based activities. Surveys of this type have shown moderate to high and, in some cases, increasing levels of importance placed on the opportunity to see wildlife in both international and Australian contexts (Moscardo, Woods & Greenwood 2001).

2.3 Who Are Wildlife Tourists?

When broken down by country or region of residence, the 1999 IVS figures suggest that very high proportions of Japanese (60%) and Taiwanese tourists (67%) visited zoos and wildlife parks, while much smaller proportions of New Zealand visitors did (17%). Visitors from the United Kingdom (15%), Germany (17%) and other Europe (16%) went whale or dolphin watching more frequently than the overall proportion of 7% (BTR 1999). Pearce and Wilson (1995) have observed very similar proportions and patterns in New Zealand. They also found that wildlife tourists tended to be younger, better educated, and more affluent than the general visitor population. However, as the authors (and others) have acknowledged, it is not possible to establish a causal relationship here and the association between affluence and wildlife tourism encounters may be a function

of the cost of consuming many of the organised wildlife tourism products (Bulbeck 1999).

The New Zealand study also found that whale watchers were more likely than normal to be free independent travellers, while zoo visitors were more likely to be package tour visitors (Pearce & Wilson 1995). When considering main purpose of journey, those who visited Australia for a holiday were understandably more likely to visit wildlife parks and zoos (54%), than those who were in Australia visiting friends and relatives (32%) or travelling for business (15%) (BTR 1999).

In a study of tourist interactions with whale sharks in Ningaloo Marine Park in Western Australia, Davis, Banks, Birtles, Valentine and Cuthill (1997) found the largest group of respondents was Japanese (65% of international respondents) followed by Europeans (21%). However, given a response rate of 23% and the fact that the questionnaire was available only in English and Japanese, these proportions may be biased against inclusion of non-English, non-Japanese speaking tourists.

2.4 What Types Of Animals Do Wildlife Tourists Want To See?

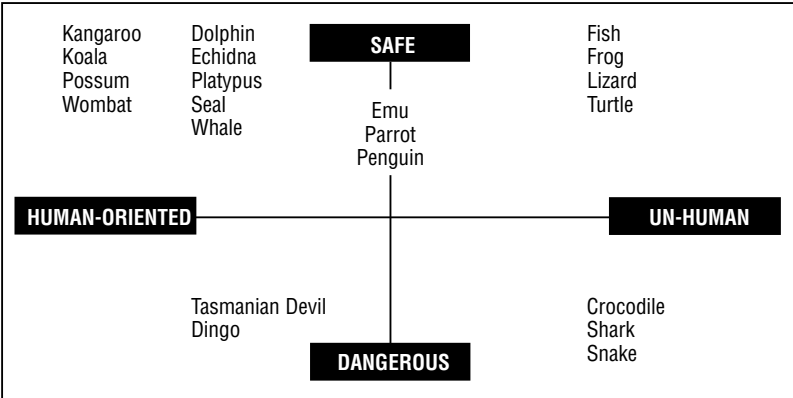
An important issue for wildlife tourism is the varying level of attractiveness of different animals to humans. Bart (1972) looked at the perceptions of university students with regard to their like or dislike of 30 animals. Animals ranked highly in terms of the proportion of respondents liking them tended to be mammals and birds, often domesticated animals that pose no threat to humans. The lowliest ranked animals were ones that some would consider as being dangerous, dirty or frightening.

Ryan (1998) suggests that the attractiveness of different types of animals may vary along a number of continuums including one ranging from safe to dangerous, and another measuring similarity to humans. Therefore a saltwater crocodile would be considered as being fairly un-human and dangerous, a gorilla would be dangerous but human-like, while a dolphin could be regarded as being somewhat human-like but relatively safe. Figure 2 shows Ryan's continuum plotted with some Australian animals. Mammals have

been classified as being more human-like than birds, amphibians, fish and reptiles.

Ryan further argues that, although it may seem intuitive that people would be attracted to 'friendly' animals that are safe and similar to humans, there may also be some inverse appeal for interactions with animals that are perceived as being very different from humans and some attraction for even dangerous animals because of the thrill involved.

Figure 2: Australian animals classified in terms of Ryan's (1998) appeal dimensions

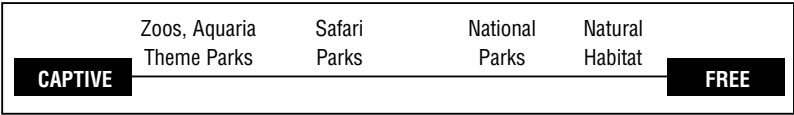


Adapted from Ryan (1998)

2.5 What Types Of Encounters Do Wildlife Tourists Want?

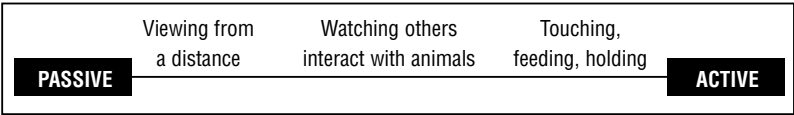
As shown in Figure 3, there are basically two main types of wildlife experience, interactions with captive animals and interactions with free animals in natural settings, although a midpoint may be represented by some semi-captive exhibits in which the animals are in fact held captive, but enclosures are large enough to allow them reasonable freedom of movement (Orams 1996, Shackley 1996).

Figure 3: Continuum of wildlife encounters ranging from captive to free



Another dimension on which wildlife encounters vary is the level of interaction with the animals. As shown in Figure 4, some encounters are passive, basically involving viewing of the animals from some distance while others involve physical contact in the form of feeding, touching or even holding the animals. Again a mid point may be represented by encounters that do not actually involve physical contact, but where the viewing is more intrusive because animal behaviour is being manipulated for the entertainment of the tourists through feeding by guides or some other mechanism.

Figure 4: Continuum of wildlife encounters ranging from passive to active



There is an obvious relationship between these two continua, which may be moderated by the specific type of animal. Active interactions with free animals are often difficult, and in some cases dangerous, therefore such encounters tend to be passive. There are a few exceptions, where wild animals tolerate close human contact, such as swimming with wild dolphins and other marine animals. Captive animal exhibits may be either active or passive depending on the nature of the exhibit and the animals involved.

In a recent study aimed at positioning the Gold Coast in international tourist markets, Chalip and Fairley (2001) reanalysed Australian Tourism Commission data collected between 1995 and 1997. Six major markets were asked about preferences with regard to 78 activities, and as shown in Table 3 there appears to be an overall

preference for seeing animals in natural surroundings rather than in zoos. However, the difference in rank of these alternative wildlife experiences is much more pronounced amongst Europeans than for the Japanese and Taiwanese markets.

Table 3: Rank order of wildlife activities preferred by six international markets

	JAPAN	KOREA	SINGAPORE	TAIWAN	ENGLAND	GERMANY
See wildlife in their natural surroundings	3	6	15	13	5	5
See unusual animals	7	9	16	14	18	9
Visit a wildlife park	5	13	17	12	16	16
Go to a zoo	15	36	39	19	63	55

Ryan (1998) suggests that wildlife, as a tourism attraction, has changed over the past two decades. There has been an increase in demand and opportunities to view wildlife in natural settings or settings that more closely approximate nature, more than previous wildlife encounters that were mostly available in zoos. Ryan’s study, on saltwater crocodiles as an attraction, found that a segment of the respondents indicated a distaste for seeing crocodiles in captive situations, and even in natural situations where their behaviour was being manipulated for touristic purposes.

Pearce and Wilson (1995) found that visitors to a variety of wildlife-based tourism attractions in the South Island of New Zealand felt that the most important aspect of the encounter was the natural surroundings of the area. Other issues associated with enjoyment were small groups of visitors, and a perception that the operators respected the wildlife and were not merely exploiting them for economic gain. Similarly, Schänzel and McIntosh (2000) found that visitors to a penguin watching attraction in New Zealand perceived both cognitive and emotional benefits. The former includes increased knowledge, increased environmental awareness, and pleasurable memories, while the latter included feelings of pleasure, curiosity, privilege, amazement and fascination.

With regard to the whale sharks in Ningaloo Marine Park, Davis *et al.* (1997) asked respondents about the factors which most contributed to their enjoyment of the experience. One of the key elements that emerged was the opportunity to get close to the animals. Interestingly though, no significant difference was observed between visitors who were only one meter away and those three or more meters away, in terms of their rating of the quality of the interaction. Negative comments about the experience related primarily to overcrowding in the water.

However, there still appears to be demand for opportunities to have close contact with animals and even physical contact either holding, touching or feeding some types of wildlife (Woods 1999). These types of interactions can be problematic with wild animals, potentially having negative outcomes in terms of disturbing or stressing the animals, habituating animals to human presence possibly leading to an alteration in behaviour, or even the possibility of physical harm to either animals or tourists (Shackley 1996). Therefore these types of interactions are more common with captive animals. Zoos typically offer an opportunity to get close to animals but the experience is generally still passive, with few opportunities to touch, hold or feed the animals. Other captive wildlife exhibits such as wildlife parks and theme parks are more likely to offer these experiences.

In a study of motives to visit the North Carolina Zoological Park, Anderek and Caldwell (1994) found that visitors were motivated to attend for recreation and novelty, for education (for self and children) and for the opportunity to take photographs.

Woods (1999) asked visitors to North Queensland about the factors that lead to good and bad wildlife experiences in both captive and free settings. As shown in Table 4, there are similarities in both captive and free animal encounters, particularly the aspects that tend to lead to good experiences. The major difference seems to be that free animal encounters take place in more natural settings, perceived as more authentic, while captive animal encounters provide opportunities to touch and feed the animals. In terms of negative experiences, visitors to captive exhibits were upset when they perceived that the animals were unhappy or poorly housed and

treated, while free animal encounters had the potential to be marred by few or no animal sightings, inclement weather or illness.

Table 4: Factors which led to best and worst experiences with wildlife

CAPTIVE ANIMAL ENCOUNTERS		FREE ANIMAL ENCOUNTERS	
BEST EXPERIENCES	WORST EXPERIENCES	BEST EXPERIENCES	WORST EXPERIENCES
See live animals previously only seen in photos or on TV Educational/learned new things Get close to animals /touch/feed Well kept animals/ space for animals Aspects of the natural environment	Dirty cages/small cages /inappropriate Boring Animals appear unhappy Animals badly treated Animal was threatening/attacked	Be in natural environment/ beautiful scenery See animals close up/get close See a variety of animals Interesting/ educational In animals world/ in the wild/not a staged experience	Weather/illness/other reasons beyond operator control Saw no or few animals Animal was threatening /attacked Boring

Kellert (1978) suggests that there are eight major orientations towards animals as shown in Table 5.

Table 5. Kellert’s orientations to animals

ORIENTATIONS	DEFINITIONS
1. Naturalistic	Interest and affection for wildlife and the outdoors
2. Ecological	Concern with the environment as a system with wildlife species and natural habitats
3. Humanistic	An emotional approach that favours specific animals particularly pets and ‘cute’ wild animals
4. Moralistic	Concern for animal rights and the prevention of ill treatment of animals
5. Aesthetic	Interest in animals based on their beauty
6. Utilitarian	Value animals in terms of their usefulness to humans
7. Dominionistic	Concern with mastering and controlling animals
8. Negative	Interest in avoiding animals because of indifference, fear, dislike or superstition

Kellert (1978) found some relationships between these orientations and behaviour in terms of activities undertaken. The findings most relevant to this study are a propensity for those who enjoy backpacking and camping out to have high naturalistic attitudes to animals, while those who like to visit zoos are more likely to have high humanistic orientations. Both groups had high concern for eco-systems (ecologicistic) and animal rights (moralistic) as shown in Table 6.

Table 6. Kellert’s orientations to animals by activity

ACTIVITIES	NATURALISTIC	ECOLOGISTIC	HUMANISTIC	MORALISTIC	UTILITARIAN	DOMINIONISTIC	NEGATIVISTIC
Backpacking and Camping Out	High	High	Moderately Low	High	Moderately Low	Moderate	Low
Zoo Enthusiasts	Moderately High	High	High	High	Low	Moderately High	Moderately Low

In Bulbeck’s (1999) study of visitors to a number of Australian and New Zealand wildlife-based attractions, there was some evidence to suggest that visitors with higher conservationist (naturalistic and ecologicistic) orientations were found at sites where the animals were free and the interaction was passive. Higher moralistic orientations were found among visitors to Monkey Mia, a dolphin exhibit where animals are free but the encounter is active in that many visitors have an opportunity to touch the animals. Visitors to captive animal exhibits had relatively low moralistic orientation scores. Humanistic orientations were similar across all venues.

Reynolds and Braithwaite (2001) outline six quality factors relating to the richness of the experience as shown in Table 7.

Table 7: Quality factors relating to the richness of wildlife tourism experiences

QUALITY FACTORS	DEFINITIONS
1. Authenticity	The degree of natural behaviour exhibited by the fauna, and the environment in which it is viewed
2. Intensity	Excitement generated by an experience
3. Uniqueness	A sense that the experience is special and unusual and that the participant is therefore privileged
4. Duration	The experience is heightened up to a certain point but then the visitor becomes saturated with it
5. Species Popularity	Driven by physical attractiveness, size, danger and drama, publicity etc.
6. Species Status	Species on rare and endangered lists hold a special attraction

Based on Reynolds and Braithwaite (2001)

Intuitively though, the relative importance of these quality factors would vary for individuals perhaps depending on their orientations towards animals. For example, it may be the case that individuals with a humanistic orientation towards animals would be less concerned with authenticity, while those with an ecological orientation would not be motivated by the popularity and physical attractiveness of an individual species. The latter group may even be prepared to forego intense and unique encounters particularly with rare and endangered animals because they may derive a sense of satisfaction in knowing they have not had a negative affect on the environment.

2.6 Summary

The literature referred to in the previous sections sheds some light on the phenomenon of wildlife tourism and seems to suggest that it is a fairly diverse collection of activities including a variety of different types of animals, places and types of encounters, and different underlying attitudes to animals. Although some commonalities may exist, wildlife tourists may in fact be a fairly heterogeneous group with different sub-groups preferring various types of product.

3. METHOD

The data were collected between 1 January and 31 March 2000, through a supplement added to the International Visitor Survey (IVS) conducted by AC Nielsen under contract to the Bureau of Tourism Research (BTR). All respondents who participated in the IVS during the period were directed on to the supplement, yielding a total sample size of 3,880 respondents.

The population of interest in the IVS comprised visitors to Australia, defined as persons that live overseas, were aged 15 years or over, and who stayed in Australia for less than 12 months. The participants were interviewed in the departure lounges of international airports as they left Australia, based on a quota for each country of residence group for each airport each month. The quota is based on the proportions observed in previous years.

The survey was administered through personal interviews primarily in English, but interviewers were available to conduct the survey in other languages including German, Japanese, Indonesian/ Malay, Korean, and Mandarin.

The supplement contained 13 additional questions designed by a group of CRC researchers in conjunction with the BTR. When analysed in conjunction with the main IVS data, the data provided an overview of the ways in which visitors interacted with animals during their stay in Australia.

In keeping with the style of the IVS, most of the questions were either prompted or unprompted multiple response questions which essentially returned dichotomous data (the options representing yes and no responses). There were also single response questions, which asked visitors to select only one response. Questions 11, 12, and 13 used 4-point Likert type scales to gauge perceptions and satisfaction. A full copy of the survey supplement is contained in Appendix A.

4. RESULTS

4.1 The Role And Significance Of Wildlife Tourism

The first aim of the study was to assess the role and significance of wildlife experiences in the Australian tourism product within inbound markets. This requires a suitable definition of wildlife tourists in an effort to determine the magnitude of the phenomenon. A number of alternative definitions are available, two of which are explored below.

4.1.1 *Visitors specifically motivated by native wildlife*

The first question in the supplement was filtered through Question 17 in the main IVS, which asked respondents about what influenced them to come to Australia. Excluding those who said that there were no particular influences (60.62% of respondents), the major influences reported were 'to experience Australia's coastline and beaches' (19.74% of respondents) and 'to experience Australia's nature, landscapes and wildlife' (18.92% of respondents), as shown in Table 8. The latter category was the filter for the first supplement question that further subdivides these into those influenced by the natural environment (18.5%) and those specifically influenced to come to Australia to experience Australia's native animals (18.4%) (see Table 9).

Table 8: Factors which influenced visitors' decision to come to Australia

FACTORS	COUNT	% RESPONSES	% CASES
Sydney 2000 Olympics and Paralympic Games	56	1.0	1.4
To visit Australia's Casinos	50	0.9	1.3
To experience Aboriginal Culture	140	2.5	3.6
To experience Australia's nature, landscapes and wildlife	734	12.9	18.9
To experience Australia's coastline and beaches	766	13.5	19.7
To experience a nature based outdoor activity (e.g. bush walking, camping etc)	288	5.1	7.4
To attend a festival or carnival	109	1.9	2.8
To experience Australia's food, wines and wineries	185	3.3	4.8
To experience Australia's shopping	256	4.5	6.6
To visit rural areas or the outback	201	3.5	5.2
To experience Australia's cultural life (e.g. theatre, music, arts etc)	182	3.2	4.7
To participate in or watch an organised sporting event	86	1.5	2.2
No particular influences	2352	41.4	60.6
Other	283	5.0	7.3
TOTAL	5688	100	

Table 9: Proportions of visitors influenced to visit Australia by natural environment and native animals

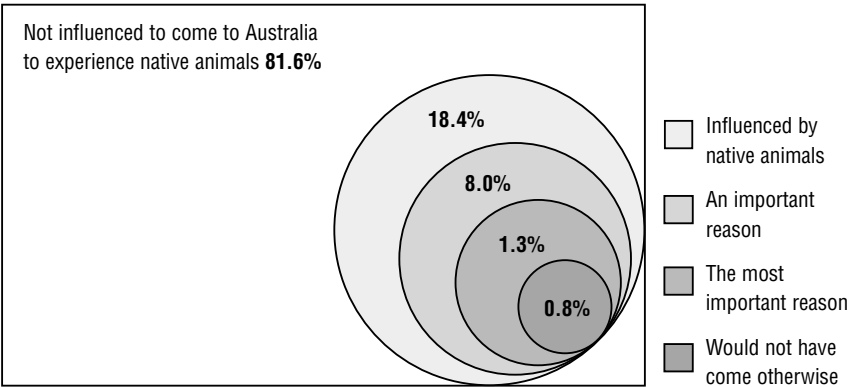
QUESTIONS		FREQUENCY	% QUESTION RESPONDENTS	% OF TOTAL RESPONDENTS
Were you influenced to come to Australia to experience natural environment?	Yes	719	98.0	18.5
	No	11	1.5	0.3
Were you influenced to come to Australia to experience native animals?	Yes	714	97.3	18.4
	No	20	2.7	0.5
TOTAL		734	100	18.9

Those who identified that they were influenced to come to Australia to see native animals were then asked about how important this was to them. The results, summarised in Table 10, show that the majority of respondents rated it as either an important reason (8.0%) or as being no more important than any other reason (7.7%) but very few visitors (less than 1%) suggested that they would not have come to Australia if there had not been an opportunity to see native animals. These proportions are summarised in Figure 5.

Table 10: Importance of opportunity to see native animals

FACTORS	FREQUENCY	% QUESTION RESPONDENTS	% TOTAL RESPONDENTS
Would not have come otherwise	31	4.3	0.8
The most important reason	52	7.3	1.3
An important reason in my decision to come	310	43.4	8.0
No more important than other reasons	300	42.0	7.7
Don't know	21	2.9	0.5
Total	714	100.0	18.4

Figure 5: Proportions of visitors influenced to come to Australia by native wildlife



4.1.2 Visitors who wanted to and did see animals

Although only 18.4% of respondents felt that wildlife had been an influential factor in their decision to come to Australia, a much larger proportion wanted to see animals during their visit (67.5%) and actually did see animals (71.1%) during their visit. Figure 6 summarises the proportions that fit into each category and how they relate to each other. The visitors that were influenced to visit by native animals fit almost entirely within the group that both wanted to see and did see animals during their visit. It is therefore this group of 659 respondents (17%) who have been defined as wildlife tourists in the first instance. However, a looser definition would include all those who wanted to and did get to see animals during their trip (58.6%).

Figure 6: The proportions of visitors who wanted to and actually saw wildlife

		Did you want to see animals?	
		Yes	No
Did you actually see animals?	Yes	58.6%	13.0%
	No	8.8%	19.5%

Table 11 summarises the similarities and differences between wildlife tourists and the remainder of the sample using both of these definitions. The distributions of expenditure and length of stay are extremely positively skewed and this limits the interpretation of the data in terms of central tendency. However, from the means and medians reported, it would appear safe to conclude that wildlife tourists stay longer than other visitors and generally spend less per day, but that overall expenditure is somewhere in the order of about 25% higher for the wildlife group. Note that cases where the trip was part of a package tour that included stops in other countries were excluded from the expenditure calculations because it was impossible to identify the proportion of expenditure in Australia.

Table 11: Comparison of wildlife tourists with others – expenditure data

		STRICT DEFINITION		LOOSE DEFINITION		OVERALL
		WILDLIFE TOURISTS	OTHER TOURISTS	WILDLIFE TOURISTS	OTHER TOURISTS	
Proportion of sample		17%	83%	58.6%	41.4%	100%
Length of stay	Mean	34.9 nights	26.2 nights	33.7 nights	19.1 nights	27.6 nights
	5% trimmed mean	25.9 nights	16.8 nights	23.3 nights	12.1 nights	18.2 nights
	Median	16 nights	10 nights	14 nights	7 nights	10 nights
Number of regions visited	Mean	5.2 regions	2.2 regions	3.3 regions	1.6 regions	2.6 regions
	5% trimmed mean	4.6 regions	1.8 regions	2.8 regions	1.4 regions	2.1 regions
	Median	3 regions	1 regions	2 regions	1 regions	2 regions
Daily expenditure	Mean	\$348.56	\$455.05	\$350.96	\$558.76	\$437.89
	5% trimmed mean	\$300.61	\$354.01	\$303.30	\$425.38	\$343.17
	Median	\$221.10	\$242.78	\$220.23	\$265.23	\$238.69
Total trip expenditure	Mean	\$4781.94	\$4194.85	\$4678.10	\$3749.02	\$4289.44
	5% trimmed mean	\$4389.81	\$3471.03	\$4056.81	\$3011.83	\$3621.37
	Median	\$3955.98	\$2903.79	\$3457.75	\$2441.11	\$3044.55
TOTAL		659	3221	2276	1604	3880

Table 12: Comparison of wildlife tourists with others – demographic and trip characteristics

		STRICT DEFINITION		LOOSE DEFINITION		TOTAL
		WILDLIFE TOURISTS	OTHER TOURISTS	WILDLIFE TOURISTS	OTHER TOURISTS	
Gender	Male	50.1%	53.1%	48.8% ↓	57.9% ↓	2039
	Female	49.9%	46.9%	51.2% ↑	42.1% ↑	1841
Age	15-24 years	25.5% ↑	17.8%	24.1% ↑	12.1%	742
	25-34 years	42.3% ↑	33.5%	37.7% ↑	31.2% ↓	1359
	35-44 years	13.4% ↓	19.3%	15.2% ↓	22.8% ↑	710
	45-54 years	8.8% ↓	15.6%	11.5% ↓	18.6% ↑	560
	55-64 years	7.1%	8.9%	8.0%	9.5%	334
	65 years +	2.9% ↓	4.8%	3.6% ↓	5.9% ↑	175
Country of residence	The Americas	8.8% ↓	12.4%	12.1%	11.4%	458
	UK & Ireland	18.2% ↑	14.2%	16.0%	13.2%	576
	Scandinavia	5.6% ↑	3.0%	4.1%	2.5% ↓	134
	Other Europe	22.8% ↑	8.3% ↓	13.8% ↑	6.4% ↓	418
	South East Asia	7.6% ↓	18.5% ↑	13.7% ↓	20.9% ↑	647
	Japan & Korea	27.2% ↑	18.8%	25.4% ↑	12.9% ↓	786
	China & Taiwan	6.7%	5.7%	6.2%	5.5%	228
	Other	3.2% ↓	19.0% ↑	8.6% ↓	27.2% ↑	633
First trip to Australia?	Yes	71.9% ↑	40.2% ↓	63.3% ↑	20.0% ↓	1769
	No	28.1% ↓	59.8% ↑	36.4% ↓	80.0% ↑	2111
Group Tour?	Yes	17.9% ↑	9.5% ↓	15.3% ↑	4.7% ↓	424
	No	82.1%	90.5%	84.7% ↓	95.3% ↑	3456
Immediate Travel party	Unaccompanied	34.6% ↓	55.9% ↑	41.6% ↓	67.5% ↑	2029
	Adult couple	36.7% ↑	23.2% ↓	31.3% ↑	17.2% ↓	988
	Family	9.7%	8.0%	10.1% ↑	5.7% ↓	322
	Friends/relatives	17.9% ↑	9.7% ↓	14.9% ↑	5.7% ↓	432
	Business associates	1.1% ↓	3.2%	2.1% ↓	3.9% ↑	109

		STRICT DEFINITION		LOOSE DEFINITION		TOTAL
		WILDLIFE TOURISTS	OTHER TOURISTS	WILDLIFE TOURISTS	OTHER TOURISTS	
Main purpose of visit ⌘	Holiday	87.1% ↑	50.6% ↓	72.0% ↑	34.8% ↓	1962
	VFR	12.2% ↓	32.2% ↑	22.5% ↓	37.8% ↑	976
	Business	0.6% ↓	17.2% ↑	5.5% ↓	27.4% ↑	483
Travel outside of regions with international gateways	Yes	58.1% ↑	26.9% ↓	58.1% ↑	18.4% ↓	2631
	No	41.9% ↓	73.1% ↑	41.9% ↓	81.6% ↑	1249
TOTAL		659	3221	2276	1604	3880

*proportions are reported within columns

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

⌘ Groups do not add to total because other purposes were removed from analysis

Table 13: Chi-Square statistics and probability values for analyses in Table 12

VARIABLE	STRICT DEFINITION	LOOSE DEFINITION
Gender	$\chi^2_{(1)} = 2.0, p > 0.05$	$\chi^2_{(1)} = 30.8, p < 0.05$
Age	$\chi^2_{(5)} = 63.7, p < 0.05$	$\chi^2_{(5)} = 158.9, p < 0.05$
Country of residence	$\chi^2_{(7)} = 271.5, p < 0.05$	$\chi^2_{(7)} = 364.0, p < 0.05$
First trip to Australia?	$\chi^2_{(1)} = 221.9, p < 0.05$	$\chi^2_{(1)} = 721.3, p < 0.05$
Group Tour?	$\chi^2_{(1)} = 39.7, p < 0.05$	$\chi^2_{(1)} = 107.6, p < 0.05$
Immediate Travel party	$\chi^2_{(4)} = 130.3, p < 0.05$	$\chi^2_{(4)} = 297.5, p < 0.05$
Main purpose of visit	$\chi^2_{(2)} = 290.0, p < 0.05$	$\chi^2_{(2)} = 540.8, p < 0.05$
Travel outside of regions with international gateways	$\chi^2_{(1)} = 244.5, p < 0.05$	$\chi^2_{(1)} = 238.5, p < 0.05$

Table 12 summarises the results of cross tabulations examining the differences between wildlife and other visitors in terms of demographic and trip characteristic variables. The cross tabulations were evaluated using the Chi-Square statistic, and the relevant statistics and probability values are contained in Table 13. A significant Chi-Square indicates a relationship between the distributions of responses in the two variables being examined. Each cell was then evaluated through examination of the standardised residuals. A cell in which the observed frequency was significantly higher than expected is denoted in the column by an upward arrow (↑) while a less than expected frequency is denoted by a downward arrow (↓).

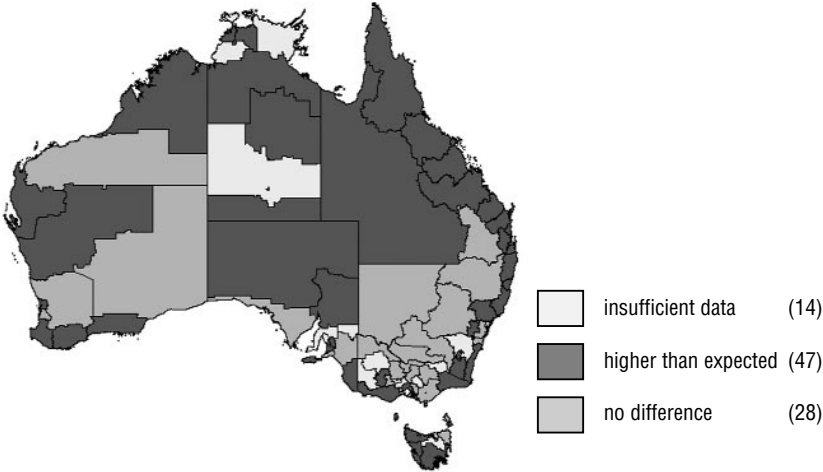
Although the proportions vary slightly, fairly similar relationships were observed using both definitions. Under the strict definition, no significant difference was observed in the gender distributions, but with the looser definition the proportions of males were slightly lower amongst the wildlife tourists and somewhat higher in the other group. Age differences were also observed, with the wildlife visitors more likely to be in the younger age categories up to 34 years of age. Greater proportions of visitors from Europe, Japan and Korea were found to be in the wildlife group, while lower than expected proportions from the Americas (Canada, USA, and South America), South East Asia and other countries (predominantly New Zealand) were in this group.

Wildlife tourists were much more likely to be on their first trip to Australia and they were also more likely than expected to be on a package tour (although the proportion were only 17.9% and 15.3% respectively for the strict and loose definitions). Their main purpose was more often a holiday rather than visiting friends and relatives or business, and they were more frequently observed to travel as part of an adult couple or to travel with friends or relatives. They were less likely to be travelling unaccompanied or with business associates. The observed relationship with gender referred to above is likely to be associated with the lower propensity of business travellers to be wildlife tourists and the higher propensity for males to be travelling for business purposes (22.4% of males visitors were primarily in Australia for business compared with only 5.4% of females).

Wildlife tourists were much more likely than others to have travelled beyond the international gateways, or regions with international airports. The definition of major international gateways includes all capital cities (Adelaide, Brisbane, Canberra, Darwin, Hobart, Melbourne, Perth and Sydney) and two major tourism hubs (Tropical North Queensland and the Gold Coast). All of these regions have international airports and together they account for 99.99% of international arrivals into Australia (excluding Norfolk and Christmas Islands) (ABS 1999).

In an effort to expand upon this observed relationship, the spatial distribution of wildlife and non-wildlife tourists was mapped using the Geographic Information System (GIS) software package, Figure 7 (MapInfo 5.0.) shows the regions in which the visitation by wildlife tourists was higher than expected in comparison to other tourists. This was evaluated using Chi-Square contingency tables with the darkest regions indicating those areas where visitation by wildlife tourists is significantly higher than expected. The map does not imply that these are the regions in which animal encounters took place, as no data were collected to link animal encounters with specific regions. Note that in some regions, small visitation numbers precluded the investigation of the relationship.

Figure 7: Regions with higher than expected visitation by wildlife tourists



As seen in Figure 7, wildlife tourists are more likely to visit most regions in Queensland and the Northern Territory, than other visitors are.

4.2 A Typology Of Wildlife Tourists

The second aim of the research was to establish a typology of wildlife tourists in an effort to further segment the market. Respondents were asked a number of questions about their perceptions of, and expected and actual experiences with Australian animals during their visit. These data provide some insight into differences between wildlife tourists and may provide a suitable basis for segmentation.

Visitors were asked about which animals they most wanted to see before coming to Australia. Respondents were unprompted and multiple responses were allowed. The data were coded in a binary format reflecting whether or not each of 21 Australian animals was mentioned. It must be noted that, given that this question was asked as visitors were leaving the country, there is some likelihood that these results were contaminated by their experiences within Australia. Table 14 summarises the results. It is clear that the koala and the kangaroo or wallaby or other members of the kangaroo family (hereafter collectively referred to as kangaroos) were favoured much more than other animals.

Table 14. Animals mentioned by visitors

ANIMALS	FREQUENCY	% RESPONSES	% CASES
Koala	1707	27.6	44.0
Kangaroo	1678	27.1	43.2
Wombat	172	2.8	4.4
Crocodile	169	2.7	4.4
Platypus	167	2.7	4.3
Dolphin	151	2.4	3.9
Emu	103	1.7	2.7
Shark	78	1.3	2.0
Snake	73	1.2	1.9
Tasmanian Devil	63	1.0	1.6
Dingo	59	1.0	1.5
Penguin	57	0.9	1.5
Parrot	55	0.9	1.4
Whale	41	0.7	1.1
Possum	40	0.7	1.0
Echidna	35	0.6	0.9
Lizard	35	0.6	0.9
Fish	21	0.3	0.5
Turtle	12	0.2	0.3
Seal	11	0.2	0.3
Frog	6	0.1	0.2
Other animals that live on land	17	0.3	0.4
Other animals that live in water	36	0.6	0.9
None	1189	19.2	30.6
Other	145	2.3	3.7
Don't know	72	1.2	1.9
Total	6192	100	

In an effort to aid the identification and summary of groups of animals, a cluster analysis was undertaken on the variables (this is analogous to factor analysis, which was not possible given the binary nature of the data). The measure used was the Phi 4 point correlation which is a binary analogue of Pearson's R. A correctional measure was used instead of the more traditional distance measure to examine similarities in the patterns of response rather than similar values across the range of responses (Hair, Anderson, Tatham & Black 1995). However, given the binary nature of the data the two concepts are not dissimilar. Clusters were formed using the average linkage between groups method, whereby the agglomeration coefficient is the average of the similarities between the new case and those cases already assigned to the cluster. This type of cluster analysis groups together the variables (animals that visitors wanted to see) that correlate together. Therefore people responded in a similar way to animals within each group, either they wanted to see all or most of the animals in the group or didn't want to see them.

Table 15. Groups of animals that visitors wanted to see

ICONIC MARSUPIALS		NATIVE GROUP 1		SEA MAMMALS		NATIVE GROUP 2		NON-UNIQUE ANIMALS	
Koala	44.0%	Wombat	4.4%	Dolphin	3.9%	Platypus	4.3%	Crocodile	4.4%
Kangaroo	43.2%	Emu	2.7%	Whale	1.1%	Tasmanian Devil	1.6%	Shark	2.0%
		Possum	1.0%			Dingo	1.5%	Snake	1.9%
						Echidna	0.9%	Penguin	1.5%
								Parrot	1.4%
								Lizard	0.9%
								Fish	0.5%
								Seal	0.3%
								Turtle	0.3%
								Frog	0.2%

A five-cluster solution was chosen as being both parsimonious and easily interpretable. The groups of animals are shown in Table 15 along with the proportion of the sample mentioning each animal. The first group, containing the koala and the kangaroo, has been labelled Iconic Marsupials, given that these two animals are those that most people associated with the image of Australia, and most people wanted to see before they came to Australia. The second group included three native animals, the wombat, the emu, and the possum. The third group, labelled as Sea Mammals, includes the dolphin and the whale. Group Four comprises the remaining native animals, including the two monotremes (platypus and echidna) and the Tasmanian devil and dingo, the latter is not strictly speaking a native animal, but clearly associated with Australia. The final group included all the remaining animals, which can be regarded as non-unique to the extent that varieties of all of these animals can be observed in other places. Interestingly, the three animals that attracted the highest proportions in this group, the crocodile, the shark, and the snake, would generally be regarded as dangerous animals.

The groups identified understandably differ from taxonomic classifications of Australian wildlife (for example Green & Higginbottom 2001), but it is interesting to observe that four of the five clusters were completely comprised of mammals, with all other classifications (birds, reptiles, amphibians and fish) were found in the one cluster. Also, the two monotremes appeared in the same grouping, as did the two marine mammals.

In an effort to identify sub groups of the population that were attracted to Australia by different types of animals, a conventional cluster analysis (by cases) was then undertaken based on the groupings identified above. This was again a hierarchical analysis based on the counts of animals in each of the above categories. A Phi-Square measure was used with the between groups linkage method. Respondents who mentioned no animals were not included in the analysis. The selected solution identified five groups of varying sizes that were primarily interested in one of each of the animal groupings.

Table 16: Proportions of each cluster who wanted to see each animal

		1	2	3	4	5	TOTAL
		Iconic Marsupials	Native Group 1	Sea Mammals	Native Group 2	Non-Unique Animals	
Proportion of Sample		88.4%	1.5%	1.8%	3.7%	4.5%	
Mean number of animals mentioned		1.9	1.1	1.3	1.2	2.0	1.2
Iconic Marsupials	Koala	75.5%	0%	0%	1.1%	5.2%	1705
	Kangaroo	74.2%	0%	0%	0%	7.0%	1676
Native Group 1	Wombat	5.7%	82.1%	0%	4.2%	5.2%	170
	Emu	3.9%	15.4%	0%	1.1%	5.2%	101
	Possum	1.3%	10.3%	0%	1.1%	3.5%	38
Sea Mammals	Dolphin	4.6%	2.6%	84.8%	0%	4.3%	149
	Whale	1.0%	2.6%	23.9%	1.1%	2.6%	39
Native Group 2	Platypus	4.3%	0%	2.2%	66.3%	4.3%	165
	Tasmanian Devil	1.6%	0%	0%	24.2%	2.6%	61
	Echidna	0.9%	0%	0%	10.5%	2.6%	33
	Dingo	2.0%	0%	0%	8.4%	4.3%	57
Non-Unique Animals	Crocodile	4.8%	0%	4.3%	1.1%	48.7%	167
	Shark	2.0%	0%	8.7%	2.1%	21.7%	76
	Snake	2.0%	0%	0%	1.1%	20.9%	71
	Parrot	1.5%	0%	2.2%	0%	16.5%	53
	Penguin	1.9%	0%	2.2%	0%	10.4%	55
	Lizard	0.8%	0%	0%	2.1%	10.4%	33
	Fish	0.3%	0%	0%	0%	10.4%	19
	Turtle	0.2%	0%	0%	0%	5.2%	10
	Frog	0.0%	0%	0%	0%	3.5%	4
	Seal	0.3%	0%	0%	0%	2.6%	9
TOTAL		2,248	39	46	95	115	2,543

As shown in Table 16, Group One contains visitors who were primarily interested in the Iconic Marsupials, that is the koala and kangaroo. This was by far the largest cluster containing more than 88% of the sample. Small proportions of this group also showed interest in the range of other animals. The second group contained only 1.5% of the sample, and showed no interest in the Iconic Marsupials but was interested in other native animals, primarily the wombat. The third group, Sea Mammals, was mostly interested in seeing a dolphin, and interestingly, almost all of the animals they showed any interest in were animals that are associated with water.

Cluster Four was primarily interested in the animals in Native Group 2, most notably the platypus. Group Five showed some interest across all animals, but particularly high levels across the Non-Unique Animals, especially the crocodile. This cluster contains a few individuals who mentioned large numbers of different animals (10 or more).

4.2.1 Profiles of the clusters

The clusters were then profiled based on the demographic and trip characteristic variables to examine differences related to animal preferences as shown in Table 17. Males were more likely than expected to be in the Non-unique Animal cluster and females were less likely to be. Visitors from the Americas (Canada, USA and South America) were more likely than expected to be interested in the animals in the Native Group 2, while higher than expected levels of interest were shown in the Non-Unique Animals by visitors from the UK and Ireland and Other Countries (predominantly New Zealand visitors). Asian tourists showed lower levels of interest in these Non-Unique Animals.

Table 17: Profile of clusters

VARIABLE	RESPONSE	1	2	3	4	5	TOTAL
		Iconic Marsupials	Native Group 1	Sea Mammals	Native Group 2	Non-Unique Animals	
Gender $\chi^2_{(4)} = 17.8, p < 0.05$	Male	48.3%	43.6%	37.0%	60.0%	63.5% ↑	1249
	Female	51.7%	56.4%	63.0%	40.0%	36.5% ↓	1294
Age $\chi^2_{(20)} = 12.5, p > 0.05$	15-24 years	24.0%	23.1%	30.4%	17.9%	22.6%	605
	25-34 years	36.6%	46.2%	37.0%	38.9%	40.0%	941
	35-44 years	16.1%	10.3%	13.0%	18.9%	13.0%	406
	45-54 years	12.0%	5.1%	10.9%	12.6%	16.5%	307
	55-64 years	7.9%	12.8%	6.5%	7.4%	5.2%	198
	65 years +	3.4%	2.6%	2.2%	4.2%	2.6%	86
Country of Residence $\chi^2_{(20)} = 79.5, p < 0.05$	The Americas	11.9%	7.7%	6.5%	20.0% ↑	10.4%	304
	UK & Ireland	14.7%	7.7%	19.6%	12.6%	28.7% ↑	387
	Scandinavia	4.2%	0%	4.3%	3.2%	4.3%	105
	Other Europe	12.5%	7.7%	19.6%	18.9%	13.0%	326
	South East Asia	15.6%	23.1%	15.2%	15.8%	7.8% ↓	391
	Japan & Korea	25.4%	35.9%	19.6%	17.9%	13.0% ↓	627
	China & Taiwan	6.9%	5.1%	8.7%	1.1% ↓	0.9% ↓	163
	Other	8.8%	12.8%	6.5%	10.5%	21.7% ↑	240
First Trip to Australia? $\chi^2_{(4)} = 74.6, p < 0.05$	Yes	63.9%	28.2% ↓	41.3%	32.6% ↓	47.0%	1551
	No	36.1% ↓	71.8% ↑	58.7% ↑	67.4% ↑	53.0% ↑	992
Group Tour? $\chi^2_{(4)} = 19.4, p < 0.05$	Yes	15.4%	15.4%	13.0%	5.3% ↓	3.5% ↓	367
	No	84.6%	84.6%	87.0%	94.7%	96.5%	2176
Immediate Travel Party $\chi^2_{(16)} = 27.9, p > 0.05$	Unaccompanied	42.4%	41.0%	56.5%	61.1%	54.8%	1117
	Adult couple	30.4%	28.2%	28.3%	21.1%	25.2%	757
	Family	9.9%	10.3%	4.3%	7.4%	9.6%	246
	Friends/relatives	14.6%	20.5%	10.9%	7.4%	8.7%	359
	Business associates	2.6%	0%	0%	3.2%	1.7%	64
Main purpose of visit $\chi^2_{(6)} = 5.6, p > 0.05$	Holiday	68.3%	71.4%	62.8%	65.4%	69.8%	1564
	VFR	23.5%	20.0%	34.9%	24.7%	20.8%	540
	Business	8.2%	8.6%	2.3%	9.9%	9.4%	189

VARIABLE	RESPONSE	1 Iconic Marsupials	2 Native Group 1	3 Sea Mammals	4 Native Group 2	5 Non-Unique Animals	TOTAL
Travel outside of regions with international gateways $\chi^2_{(4)} = 7.9, p > 0.05$	Yes	63.1%	64.1%	58.7%	61.1%	50.4%	1587
	No	36.9%	35.9%	41.3%	38.9%	49.6%	956
Influenced to come to Australia by wildlife $\chi^2_{(4)} = 7.0, p > 0.05$	Yes	25.3%	12.8%	32.6%	21.1%	30.4%	644
	No	74.7%	87.2%	67.4%	78.9%	69.6%	1899
TOTAL		2248	39	46	95	115	2543

* proportions are reported within columns

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

⌘ Groups do not add to total because other purposes were removed from analysis

Visitors on second or subsequent trips to Australia were less likely to want to see the Iconic Marsupials, possibly because they had seen them on a previous visit. They were more likely to want to see all other types of animals. Tour groups were less likely to be interested in the Native Group 2 and Non-Unique Animals.

No relationships were observed between cluster membership and age, travel party, main purpose of visit, travel outside of regions with international gateways, or wildlife tourist status.

The next question asked respondents about which animals they actually did see while they were in Australia. This question also allowed multiple responses, but in this instance respondents were shown a card listing 16 Australian animals in an effort to prompt memory and ensure accuracy. Interestingly, even though 34.4% of visitors to Australia expressed no interest in seeing Australian animals, only 28% of visitors left the country without actually seeing any animals. On average, visitors saw 4.3 different animals during their stay, however the data are skewed by the 28% of visitors who saw no animals.

It is interesting to observe that, in keeping with the preferences stated in the previous question, the kangaroo and koala were the most commonly seen animals. However, the sharp decline in frequency for other animals is not observed here, with moderate proportions of visitors seeing a variety of different Australian animals. Table 18 shows the overall frequencies and proportions of animal sightings.

Table 18: Proportions of animals seen

ANIMAL	FREQUENCY	% TOTAL SIGHTINGS	% CASES
Kangaroo	2311	13.0	59.6
Koala	1941	10.9	50.0
Parrot	1486	8.4	38.3
Emu	1360	7.6	35.1
Wombat	1191	6.7	30.7
Lizard	1179	6.6	30.4
Crocodile	1110	6.2	28.6
Snake	1062	6.0	27.4
Dingo	914	5.1	23.6
Dolphin	831	4.7	21.4
Possum	748	4.2	19.3
Shark	626	3.5	16.1
Tasmanian Devil	553	3.1	14.3
Platypus	501	2.8	12.9
Echidna	377	2.1	9.7
Whale	114	0.6	2.9
None	1088	6.1	28.0
Other	404	2.3	10.4
Don't know	11	0.1	0.3
TOTAL	17807	100	

When comparing the animals seen in Australia across the groups based on preferences for seeing various animals, some relationships can be observed, as shown in Table 19. Although encounters with kangaroos and koalas were frequent across all groups, the Sea Mammal and Non-Unique Animal groups were less likely to see them.

The Sea Mammal group was also less likely than expected to see a wombat, but much more likely to see a dolphin. The visitors in Native Group 2 were much more likely to see the animals in this category, particularly the more rarely displayed animals such as the echidna, the Tasmanian devil and the platypus.

Table 19: Proportions of each cluster who actually saw each type of animal

GROUP	ANIMAL		1 Iconic Marsupials	2 Native Group 1	3 Sea Mammals	4 Native Group 2	5 Non-Unique Animals	TOTAL
Iconic	Kangaroo	$\chi^2_{(4)} = 19.1, p < 0.05$	78.8%	79.5%	58.7%	72.6%	67.8%	1976
Marsupials	Koala	$\chi^2_{(4)} = 44.1, p < 0.05$	70.5%	61.5%	39.1% ↓	57.9%	51.3% ↓	1741
Native Group 1	Emu	$\chi^2_{(4)} = 7.4, p > 0.05$	48.3%	59.0%	37.0%	43.2%	40.9%	1214
	Possum	$\chi^2_{(4)} = 7.4, p > 0.05$	24.9%	28.2%	23.9%	32.6%	33.9%	652
	Wombat	$\chi^2_{(4)} = 13.2, p < 0.05$	41.9%	56.4%	21.7% ↓	46.3%	36.5%	1061
Sea Mammal	Dolphin	$\chi^2_{(4)} = 21.1, p < 0.05$	28.1%	20.5%	56.5% ↑	24.2%	33.0%	726
	Whale δ	$\chi^2_{(4)} = 2.5, p > 0.05$	3.8%	5.1%	2.2%	6.3%	5.2%	101
Native Group 2	Dingo	$\chi^2_{(4)} = 4.8, p > 0.05$	32.2%	23.1%	26.1%	31.6%	39.1%	820
	Echidna	$\chi^2_{(4)} = 19.3, p < 0.05$	12.2%	17.9%	8.7%	25.3% ↑	19.1%	331
	Tasmanian Devil	$\chi^2_{(4)} = 30.4, p < 0.05$	19.2%	30.8%	10.9%	38.9% ↑	13.9%	501
	Platypus	$\chi^2_{(4)} = 24.7, p < 0.05$	16.9%	10.3%	8.7%	34.7% ↑	20.0%	443
Non-unique	Crocodile	$\chi^2_{(4)} = 9.6, p < 0.05$	40.0%	33.3%	28.3%	27.4%	42.6%	1000
	Shark	$\chi^2_{(4)} = 8.5, p > 0.05$	21.6%	12.8%	21.7%	18.9%	31.3%	554
	Snake	$\chi^2_{(4)} = 11.0, p < 0.05$	36.3%	38.5%	23.9%	44.2%	47.0%	937
	Parrot	$\chi^2_{(4)} = 5.7, p > 0.05$	46.9%	41.0%	45.7%	49.5%	57.4%	1205
	Lizard	$\chi^2_{(4)} = 16.6, p < 0.05$	37.9%	41.0%	37.0%	42.1%	56.5% ↑	989
TOTAL			2248	39	46	95	115	

* proportions are reported within columns

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

δ indicates that the analysis violated the requirement for expected cell frequencies of 5 or more in more than 20% of cells. These results should therefore be interpreted as being indicative only.

Question 6 asked respondents which of the animals they had enjoyed seeing most. In this case only a single response was allowed from the list that was used in the previous question. The results are shown in Table 20. Again the koala and kangaroo are rated as favourite by much larger proportions of visitors than any other animals.

Table 20: Animals that visitors enjoyed seeing most

	FREQUENCY	PERCENT
Koala	846	21.8
Kangaroo	755	19.5
Dolphin	180	4.6
Parrot	172	4.4
Shark	86	2.2
Wombat	81	2.1
Crocodile	65	1.7
Platypus	61	1.6
Lizard	60	1.5
Poosum	37	1.0
Tasmanian Devil	31	0.8
Dingo	29	0.7
Emu	25	0.6
Snake	21	0.5
Whale	21	0.5
Echidna	19	0.5
None	49	1.3
Other	192	4.9
Don't know	51	1.3
Total	2781	71.7
Did not see any animals	1099	28.3
TOTAL	3880	100.0

Question 7 asked respondents about the type of encounter that had taken place with the animal they had enjoyed seeing most. Therefore the proportions shown in Table 21 cannot be considered to be representative of all wildlife interactions, however they do give some

indication of the type of encounters likely to produce satisfaction. Multiple responses were allowed if more than one type of encounter took place with that animal. The most frequent type of interaction overall is viewing from less than 10 meters (34.5% of interactions), followed by photographing (23.6% of interactions) and touching animals (14.2% of interactions).

Table 21: Encounters that were most enjoyed

ENCOUNTERS	FREQUENCY	% RESPONSES	% CASES
Feeding	367	6.53	13.69
Watching others feed animals	242	4.30	9.03
Touching	797	14.17	29.73
Holding	366	6.51	13.65
Viewing from less than 10 meters	1938	34.47	72.29
Viewing from more than 10 meters	545	9.69	20.33
Photographing	1328	23.62	49.53
Hunting	7	0.12	0.26
Other	33	0.59	1.23
TOTAL	5623	100.00	

Table 22 shows where these interactions took place. Most commonly, the encounters that were enjoyed most took place in the natural environment and in wildlife parks and sanctuaries.

Table 22: Where encounters took place

LOCATIONS	FREQUENCY	% RESPONSES	% CASES
In a natural park or other conservation	467	12.8	17.4
In their natural environment elsewhere	930	25.6	34.7
On a guided tour or excursion	117	3.2	4.4
While visiting a farm or station	68	1.9	2.5
In a zoo	618	17.0	23.1
In a wildlife park or sanctuary	920	25.3	34.3
In a theme park	201	5.5	7.5
In an aquarium	108	3.0	4.0
While snorkelling	30	0.8	1.1
While scuba diving	41	1.1	1.5
While hunting	1	0.1	0.1
While bird watching	17	0.5	0.6
While fishing	10	0.3	0.4
Other	112	3.1	4.2
TOTAL	3640	100	

Given that these responses were filtered through the ‘most enjoyed’ question, it is useful to look at these responses for each different type of animal. As multiple responses were allowed the relationship between the types of encounters and types of animals could not be examined overall, as the observations are not independent from one another. Therefore, Tables 23 and 24 summarise the results of a series of contingency table analyses evaluated using the Chi-Square statistic. Each column represents an analysis investigating the relationship between the type of animal and whether or not visitors had a specific type of encounter with that animal. The other category was removed because it included a variety of unclassifiable responses, while the hunting category was removed because of the low number of responses.

Table 23: Most enjoyed types of encounter for each animal

ANIMAL	FEED $\chi^2_{(15)}=191.9$ $p<0.05$	WATCH OTHERS FEED Ω $\chi^2_{(15)}=64.9$ $p<0.05$	TOUCH $\chi^2_{(15)}=362.8$ $p<0.05$	HOLD $\chi^2_{(15)}=446.0$ $p<0.05$	VIEW FROM < 10 m $\chi^2_{(15)}=56.4$ $p<0.05$	VIEW FROM >10 m $\chi^2_{(15)}=143.6$ $p<0.05$	PHOTO $\chi^2_{(15)}=249.2$ $p<0.05$	TOTAL
Dingo	10.3%	0%	6.9%	0% ↓	69.0%	31.0%	37.9%	29
Echidna	10.5%	0%	10.5%	5.3%	94.7%	10.5%	36.8%	19
Emu	20%	8%	12%	8%	68.0%	36.0%	40.0%	25
Kangaroo	27.8% ↑	11.7%	40.3% ↑	4.5% ↓	71.0%	20.1%	51.9%	755
Koala	8.0% ↓	9.2%	47.4% ↑	35.2% ↑	70.8%	11.8% ↓	66.4% ↑	846
Lizard	5.0%	3.3%	6.7% ↓	3.3% ↓	85.0%	15.0%	16.7% ↓	60
Parrot	15.1%	4.1% ↓	3.5% ↓	3.5% ↓	70.9%	34.9% ↑	23.8% ↓	172
Possum	8.1%	5.4%	8.1% ↓	2.7%	75.7%	21.6%	16.2% ↓	37
Snake	0%	0%	14.3%	19.0%	85.7%	23.8%	38.1%	21
Tasmanian Devil	3.2%	6.5%	6.5% ↓	6.5%	87.1%	12.9%	45.2%	31
Wombat	8.6%	11.1%	32.1%	8.6%	82.7%	11.1%	46.9%	81
Crocodile	7.7%	32.3% ↑	13.8% ↓	7.7%	69.2%	27.7%	64.6%	65
Dolphin	7.2% ↓	8.9%	10% ↓	1.1% ↓	65.0%	35.0% ↑	50.0%	180
Platypus	0% ↓	3.3%	0% ↓	0% ↓	90.2%	8.2%	16.4% ↓	61
Shark	1.2% ↓	5.8%	1.2% ↓	0% ↓	75.6%	25.6% ↑	22.1% ↓	86
Whale	4.8%	9.5%	4.8% ↓	0% ↓	28.6% ↓	71.4% ↑	38.1%	21
TOTAL	367	242	797	366	1938	545	1328	

* proportions are reported within rows

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

Ω indicates that the analysis violated the requirement for expected cell frequencies of 5 or more in more than 20% of cells. These results should therefore be interpreted as being indicative only.

The koala is the animal most commonly touched, held and photographed, and encounters with this animal were more likely to take place in captive settings such as zoos, wildlife parks and theme parks. The kangaroo was also frequently touched and fed and encounters took place in both captive (zoos) and non-captive (farms, natural

parks, and other natural environments) situations. Most other animals were rarely held, touched or fed.

Understandably, animals such as the dolphin, shark, and whale were seen more often in aquaria and in their natural environment while engaging in water-based activities.

Table 24: Most enjoyed place of encounter for each animal

ANIMAL	NATURAL PARK $\chi^2_{(15)} = 42.7$ $p < 0.05$	NATURAL ENVIRONMENT $\chi^2_{(15)} = 558.7$ $p < 0.05$	GUIDED TOUR Ω $\chi^2_{(15)} = 61.9$ $p < 0.05$	FARM Ω $\chi^2_{(15)} = 47.0$ $p < 0.05$	ZOO $\chi^2_{(15)} = 175.9$ $p < 0.05$	WILDLIFE PARK Ω $\chi^2_{(15)} = 434.5$ $p < 0.05$
Dingo	24.1%	41.4%	3.4%	0%	17.2%	20.7%
Echidna	10.5%	57.9% ↑	0%	0%	26.3%	10.5%
Emu	20.0%	36.0%	8.0%	16.0% ↑	12.0%	36.0%
Kangaroo	22.3% ↑	43.8% ↑	3.7%	4.5% ↑	28.5% ↑	39.1%
Koala	14.9%	9.9% ↓	3.0%	1.7%	31.4% ↑	56.4% ↑
Lizard	20.0%	60.0% ↑	5.0%	5.0%	10.0% ↓	6.7% ↓
Parrot	19.2%	82.6% ↑	3.5%	2.9%	7.6% ↓	5.8% ↓
Possum	10.8%	62.2% ↑	0%	0%	2.7% ↓	5.4% ↓
Snake	9.5%	38.1%	0%	0%	14.3%	38.1%
Tasmanian Devil	22.6%	0% ↓	0%	0%	45.2% ↑	38.7%
Wombat	17.3%	13.6% ↓	1.2%	1.2%	33.3%	50.6% ↑
Crocodile	15.4%	21.5%	10.8% ↑	6.2%	30.8%	41.5%
Dolphin	8.9% ↓	42.8% ↑	8.9% ↑	0%	1.7% ↓	1.7% ↓
Platypus	4.9% ↓	6.6% ↓	3.3%	1.6%	39.3% ↑	19.7% ↓
Shark	8.1% ↓	25.6%	7.0%	0%	1.2% ↓	0% ↓
Whale	14.3%	71.4% ↑	28.6% ↑	0%	4.8%	0% ↓
Total	419	799	103	66	607	908

* proportions are reported within rows

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

Ω indicates that the analysis violated the requirement for expected cell frequencies of 5 or more in more than 20% of cells. These results should therefore be interpreted as being indicative only.

THEME PARK Ω $\chi^2_{(15)} = 203.4$ $p < 0.05$	AQUARIUM Ω $\chi^2_{(15)} = 758.6$ $p < 0.05$	SNORKELLING Ω $\chi^2_{(15)} = 107.3$ $p < 0.05$	SCUBA DIVING Ω $\chi^2_{(15)} = 492.0$ $p < 0.05$	BIRD WATCHING Ω $\chi^2_{(15)} = 71.9$ $p < 0.05$	FISHING Ω $\chi^2_{(15)} = 29.1$ $p < 0.05$	TOTAL
6.9%	0%	0%	0%	0%	0%	29
5.3%	0%	0%	0%	0%	0%	19
0%	0%	0%	0%	0%	0%	25
3.4%	1.1% ↓	1.1% ↓	0.1% ↓	0.1%	0.1%	755
11.3% ↑	0.5% ↓	1.1% ↓	0% ↓	0.1%	0%	846
8.3%	1.7%	1.7%	0%	0%	0%	60
0.6% ↓	0% ↓	1.2%	0.6%	4.7% ↑	0.6%	172
0%	0%	0%	0%	0%	0%	37
4.8%	9.5%	0%	0%	0%	0%	21
0%	0%	0%	0%	0%	0%	31
3.7%	0%	0%	0%	0%	0%	81
3.1%	7.7%	0%	0%	3.1% ↑	1.5%	65
31.7% ↑	8.9% ↑	3.9% ↑	2.2%	0.6%	1.7%	180
1.6%	34.4% ↑	0%	0%	0%	0%	61
4.7%	54.7% ↑	8.1% ↑	26.7% ↑	0%	2.3% ↑	86
0%	4.8%	9.5% ↑	9.5% ↑	0%	0%	21
199	105	21	31	13	8	

In an effort to summarise the above tables (and create variables with mutually exclusive categories for use in subsequent analysis), the types of encounters were recoded to reflect their position on the active – passive continuum (see Table 25). The new variable represents the most active encounter. Those coded as active (feeding, touching, holding) may also have had a passive encounter (viewing, photographing) but those coded as passive did not have an active encounter. Those who had manipulated encounters (watching others feed animals) were not included in the recode because the group was too small for analysis.

Table 25: Relationship between animal and type of encounter

$\chi^2_{(15)} = 408.8, p < 0.05$	ACTIVE	PASSIVE	TOTAL
Dingo	17.2% ↓	82.8%	29
Echidna	10.5% ↓	89.5%	19
Emu	30.4%	69.9%	23
Kangaroo	46.3% ↑	53.7%	722
Koala	61.7% ↑	38.3% ↓	813
Lizard	7.1% ↓	92.9% ↑	56
Parrot	16.2% ↓	83.8% ↑	167
Possum	13.9% ↓	86.1% ↑	36
Snake	23.8%	76.2%	21
Tasmanian Devil	6.9% ↓	93.1% ↑	29
Wombat	39.5%	60.5%	76
Crocodile	25.5%	74.5%	51
Dolphin	17.5% ↓	82.5% ↑	166
Platypus	0% ↓	100% ↑	59
Shark	2.5% ↓	97.5% ↑	81
Whale	5.3% ↓	94.7% ↑	19
TOTAL	968	1399	2367

* proportions are reported within rows

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

As previously noted, visitors were more likely than expected to have active encounters with the kangaroo and koala, and more likely to have passive encounters with the lizard, parrot, possum, Tasmanian devil, dolphin, platypus, shark and whale. Similarly, the place of encounter was recoded to reflect whether visitors had had encounters with captive animals only (zoo, theme park, aquarium, wildlife park or sanctuary), free animals only (natural park, natural environment, snorkelling, scuba diving, bird watching), or a mixture of both types of encounter. The results are shown in Table 26. Other places (guided tours, farm, and fishing) were not included in the recode as it was difficult to accurately classify them on this continuum. However, they did not account for many encounters. Visitors who had no encounters or had both types were removed from the analysis, as the aim was to investigate differences.

Table 26: Relationship between animal and place of encounter

$\chi^2_{(15)} = 557.4, p < 0.05$	CAPTIVE ONLY	FREE ONLY	TOTAL
Dingo	42.3%	57.7%	26
Echidna	35.3%	64.7%	17
Emu	42.1%	57.9%	19
Kangaroo	50.0% ↓	50.0% ↑	530
Koala	85.5% ↑	14.5% ↓	635
Lizard	14.0% ↓	86.0% ↑	43
Parrot	1.4% ↓	98.6% ↑	143
Possum	7.7% ↓	92.3% ↑	26
Snake	58.8%	41.2%	17
Tasmanian Devil	82.8%	17.2% ↓	29
Wombat	81.7% ↑	18.3% ↓	71
Crocodile	77.8%	22.2%	45
Dolphin	46.5% ↓	53.5% ↑	157
Platypus	87.3% ↑	12.7% ↓	55
Shark	54.7%	45.3%	75
Whale	5.6% ↓	94.4% ↑	18
TOTAL	1148	776	1924

* proportions are reported within rows
 ↑ indicates that the proportion is significantly higher than expected at 0.05 probability level
 ↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

The koala, wombat and platypus were most commonly seen in captive situations whilst the lizard, parrot, possum, and whale were more likely to be seen in free situations. The kangaroo and dolphin were more likely than expected to be seen in the wild, but these and other animals were frequently seen in both free and captive situations. It is therefore interesting to examine differences in the types of visitors who saw the animals under different circumstances.

Table 27 examines the differences between those who had captive only and those who had free only encounters in terms of demographic and trip characteristic variables. Although there was a significant relationship for gender, none of the cells had significant residuals in isolation. Older visitors were more likely than expected to have encounters with free animals, and less likely to have encounters with captive animals. Visitors from Asia were much more likely to see animals in captive situations than all other visitors.

Captive wildlife tourists were more likely to be on their first trip to Australia, and more likely than the free group to be on a group tour. People travelling alone more commonly had free encounters, while those travelling as a family or with friends or relatives were more likely to see captive animals. The captive group was most commonly on holiday, as was the free group, but the latter were more likely than expected to be visiting friends and relatives. The members of the free group were also much more likely to travel outside of regions with international gateways. Perhaps these associations are interrelated. Tourists visiting friends and relatives are possibly more likely to have easy access to private transport that gives them greater freedom of movement. Finally, the visitors who only had captive encounters were more likely to have wanted to see the Iconic Marsupials before they came to Australia, and were also more likely to have had active encounters with these animals. The free encounter group was more likely to have wanted to see Sea Mammals and Non-Unique Animals.

Table 27: Profiles of captive only and free only wildlife tourists

VARIABLE	RESPONSE	1	2	TOTAL
Gender $\chi^2_{(1)} = 5.6, p < 0.05$	Male	Captive Only 47.6%	Free Only 52.8%	1047
	Female	52.4%	47.2%	1051
Age $\chi^2_{(5)} = 60.4, p > 0.05$	15-24 years	24.1%	18.5% ↓	454
	25-34 years	49.5%	32.5% ↓	764
	35-44 years	16.0%	14.9%	325
	45-54 years	10.6%	14.6% ↑	259
	55-64 years	7.1% ↓	11.9% ↑	193
	65 years +	2.7% ↓	7.7% ↑	103
Country of Residence $\chi^2_{(7)} = 255.1, p < 0.05$	The Americas	9.6%	13.6% ↑	239
	UK & Ireland	10.9% ↓	23.5% ↑	346
	Scandinavia	2.8%	4.9% ↑	78
	Other Europe	8.4% ↓	14.6% ↑	234
	South East Asia	17.7% ↑	10.4% ↓	304
	Japan & Korea	32.4% ↑	13.1% ↓	501
	China & Taiwan	8.4% ↑	1.6% ↓	114
	Other	9.6% ↓	18.4% ↑	282
First Trip to Australia? $\chi^2_{(1)} = 94.6, p < 0.05$	Yes	63.7% ↑	42.4% ↓	1140
	No	36.3% ↓	57.6% ↑	958
Group Tour? $\chi^2_{(1)} = 113.1, p < 0.05$	Yes	20.3% ↑	4.4% ↓	279
	No	79.7% ↓	95.6% ↑	1819
Immediate Travel Party $\chi^2_{(4)} = 71.1, p < 0.05$	Unaccompanied	39.8% ↓	56.0% ↑	985
	Adult couple	29.7%	26.2%	591
	Family	12.6% ↑	5.6% ↓	198
	Friends/relatives	15.5% ↑	9.6% ↓	271
	Business associates	2.6%	2.5%	53
Main purpose of visit ⌘ $\chi^2_{(2)} = 70.7, p < 0.05$	Holiday	72.7% ↑	55.7% ↓	1254
	VFR	19.9% ↓	36.9% ↑	527
	Business	7.4%	7.4%	142

VARIABLE	RESPONSE	1	2	TOTAL
Travel outside of regions with international gateways $\chi^2_{(1)} = 193.9, p < 0.05$	Yes	26.7% ↓	56.7% ↑	838
	No	73.3% ↑	43.3%	1260
Type of encounter ⌘ $\chi^2_{(1)} = 227.6, p < 0.05$	Active	49.6% ↑	16.5% ↓	690
	Passive	50.4% ↓	83.5% ↑	1253
Influenced to come to Australia by wildlife $\chi^2_{(1)} = 1.2, p > 0.05$	Yes	22.9%	24.9%	499
	No	77.1%	75.1%	1599
Animals that visitors wanted to see ⌘ $\chi^2_{(5)} = 119.1, p < 0.05$	Iconic Marsupials	79.5% ↑	59.7% ↓	1456
	Native Group 1	1.7%	0.8%	27
	Sea Mammals	1.1%	2.5% ↑	35
	Native Group 2	3.2%	3.3%	66
	Non-Unique	2.5% ↓	5.3% ↑	76
	No Animals	12.0% ↓	28.5% ↑	392
TOTAL		1172	926	2098

* proportions are reported within columns

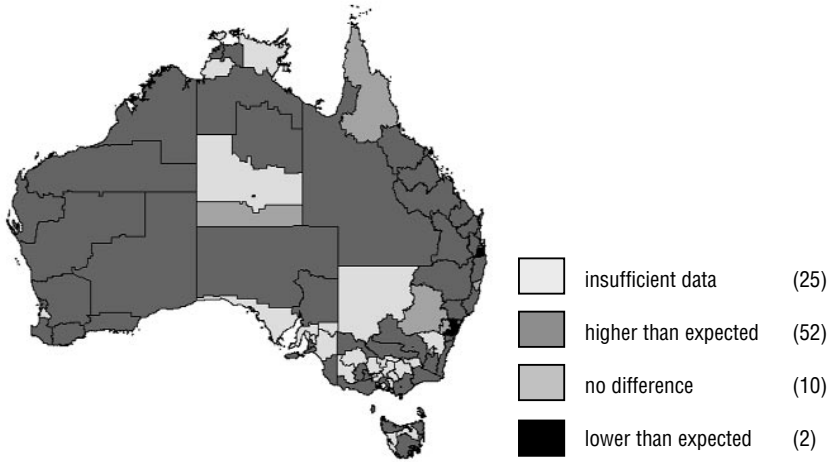
↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

⌘ Groups do not add to total because of missing data

In an effort to investigate any spatial relationships with captive and free encounters, the propensity to have free encounters only was mapped across the regions. The results indicate that there are numerous regions that people who have only had free encounters are more likely to have visited. There are only two regions that are less likely to be frequented by visitors who only have free animal encounters and more likely to have had captive animal encounters. These are Sydney (New South Wales) and the Gold Coast (Queensland).

Figure 8: Patterns of visitation by tourists who have only had free animal encounters



4.3 Satisfaction Levels With Wildlife Encounters

The final questions in the supplement asked visitors about their satisfaction levels with their native wildlife experiences and with their trip to Australia. Very high levels of satisfaction were observed as shown in Table 28. Although it must be acknowledged that satisfaction questions, particularly when administered through personal interview as in this case, are particularly prone to bias brought about by the respondents desire to please (or not displease) the interviewer. Therefore this type of question often results in high estimations of satisfaction.

Table 28: Satisfaction with wildlife experiences and trip

	VERY SATISFACTORY	SATISFACTORY	UNSATISFACTORY	VERY UNSATISFACTORY	DON'T KNOW
Overall rating of satisfaction with experience of native wildlife	36.6%	44.8%	3.6%	0.6%	14.4%
Overall level of satisfaction with visit to Australia	62.9%	35.5%	1.1%	0.2%	0.3%

In an effort to further investigate variations in satisfaction levels, responses were matched across cases for the animals that visitors wanted to see and the animals that they actually did see to examine whether success or failure to see desired animals was responsible for variations in satisfaction.

As shown in Table 29, the whale had the lowest success rate with only 17.1% of visitors who indicated that they wanted to see a whale actually getting to do so. Opportunities to see whales, which are rarely held in captivity, require more effort on the part of the tourist than many other wildlife encounters, but the timing of the survey would have undoubtedly distorted the success rate. This is because whales are only seen in Australian waters during part of the year as they migrate north from Antarctica in the colder months. The season varies in different parts of Australia, but in no region does it fall outside the range of May to December. As this survey was conducted in February and March, there would have been little opportunity for visitors to see whales unless they had been in Australia since the previous season.

The only other animal with a less than 50% success rate is the platypus, a rare and shy animal that is difficult to see in the wild, and is rarely kept in captivity.

Table 29: Success rates for seeing various types of animal

ANIMAL	NUMBER OF VISITORS WHO WANTED TO SEE	% SUCCESS	% FAILURE
Parrot	55	81.8	18.2
Kangaroo	1678	81.1	18.9
Koala	1707	74.7	25.3
Dingo	59	74.6	25.4
Lizard	35	71.4	28.6
Emu	103	68.0	32.0
Wombat	172	67.4	32.6
Possum	40	65.0	35.0
Dolphin	151	64.2	35.8
Tasmanian Devil	63	63.5	36.5
Shark	78	62.8	37.2
Crocodile	169	61.5	38.5
Snake	73	60.3	39.7
Echidna	35	57.1	42.9
Platypus	167	44.3	55.7
Whale	41	17.1	82.9

A success ratio was then calculated based on the number of matches between animal encounters desired and actuated, divided by the number of desired encounters, and this was compared with visitors' satisfaction with their wildlife encounter. The very unsatisfactory category was collapsed into the unsatisfactory category because of lower numbers of responses, and the 'don't know' category was omitted from the analysis. A predictable relationship was observed, as shown in Table 30, with lower success rates associated with a higher propensity to rate the experience as unsatisfactory, and high success rates associated with higher ratings of satisfaction.

Table 30: Relationship between success rate and satisfaction

$\chi^2_{(8)}=345.8, p<0.05$	VERY SATISFACTORY	SATISFACTORY	UNSATISFACTORY	TOTAL
0	24.0 ↓	57.2 ↑	18.8 ↑	421
1% - 25%	22.2 ↓	61.1	16.7 ↑	18
26% - 50%	37.3	57.5 ↑	5.2	24
51% - 75%	63.7	34.1	2.2	91
76% - 100%	59.2 ↑	39.5 ↓	1.3 ↓	1708
Total	1224	1034	114	

* proportions are reported within columns

↑ indicates that the proportion is significantly higher than expected at 0.05 probability level

↓ indicates that the proportion is significantly lower than expected at 0.05 probability level

4.4 Other Data

A number of other questions were asked, which did not specifically address the research objectives, but nonetheless provide interesting insights into wildlife tourism. Question 3, which was referred to the total sample, asked respondents ‘Which native Australian animal do you most associate with your image of Australia?’ This was unprompted with a single response only allowed. As Table 31 shows, the kangaroo is by far the most frequently identified animal (64%), followed by koalas (nearly 30%) with no other animals attracting any substantial response.

Table 31: Which native animal do you most associate with your image of Australia?

	FREQUENCY	%
Kangaroo	2482	64.0
Koala	1144	29.5
Wombat	31	0.8
Crocodile	28	0.7
Platypus	19	0.5
Dolphin	14	0.4
Dingo	11	0.3
Snake	10	0.3
Tasmanian Devil	10	0.3
Emu	7	0.2
Parrot	7	0.2
Echidna	6	0.2
Possum	6	0.2
Shark	5	0.1
Lizard	4	0.1
Fish	3	0.1
Penguin	2	0.1
Frog	1	0
Turtle	1	0
Whale	1	0
None	23	0.6
Other animals that live in water	3	0.1
Other animals that live on land	2	0.1
Other	29	0.7
Don't know	31	0.8
TOTAL	3880	100%

Question 9 asked respondents if they had obtained any information about the animal that they had enjoyed seeing most, before they had come to Australia. Only 279 respondents (10.4% of those who had seen animals in Australia) had done so. As shown in Table 32, the most common sources of information were travel books or guides, as

well as programming content and advertising on television, film, video and radio.

Table 32: Sources of information about animals

SOURCES	FREQUENCY	% RESPONSES	% CASES
Travel book or guide	95	21.4	34.1
Program on TV, film, video or radio	53	12.0	19.0
Advertising on TV, film, video or radio	48	10.8	17.2
Library	37	8.4	13.3
Advertising in newspaper or magazine	32	7.2	11.5
Friend or relative living in Australia	21	4.7	7.5
Friend or relative who have visited Australia	21	4.7	7.5
Searches on internet	19	4.3	6.8
Article in newspaper or magazine	18	4.1	6.5
Travel agent	18	4.1	6.5
Tour operator	15	3.4	5.4
Previous visits	5	1.1	1.8
Tourist bureau/information centre	5	1.1	1.8
Other	54	12.2	19.4
Don't know	2	0.5	0.7
TOTAL	443	100	158.8

5. CONCLUSIONS

As stated in the introduction, this study has three main aims:

1. To assess the role and significance of wildlife-based experiences in Australian tourism product within inbound markets.
2. To establish a typology of wildlife tourists and develop market profiles.
3. To examine satisfaction levels with wildlife encounters.

Wildlife is clearly an important part of the Australian tourism product, with over 70% of international visitors seeing animals during their trips to Australia. However, for the majority of tourists it would appear as though wildlife is an additional motive for coming to Australia rather than it being the only reason, as very few respondents suggested that they would not come to Australia if there was no opportunity to see the native wildlife.

There is evidence to suggest that wildlife tourists tend to stay longer than others do, and that although they spend less per day on average, the longer stay means that overall expenditures are somewhat higher than for those who did not see wildlife. Wildlife tourists are more likely to be younger, come from Europe, Japan and Korea, and be on their first visit to Australia. They were also much more likely to travel beyond the major cities into regional parts of Australia.

In an effort to further segment the wildlife tourism market an examination was made of the different types of animals that visitors wanted to see. Although some relationships were observed with demographic and travel characteristics, a far better segmentation was achieved by dividing the visitors into those who only had encounters with free animals and those who only had encounters with captive animals. The former group was made up of visitors more likely to be older and from Non Asian countries. They were more often on a return visit to Australia and rarely travelled as part of a tour group, with much higher than expected proportions travelling alone. Although the majority of them were on a holiday, there was also a

large proportion visiting friends and relatives, and this group was more likely to go beyond the major international gateways (capital cities) to other regions of Australia. They were less likely than expected to want to see the Iconic Marsupials.

Members of the latter group (captive) were far more likely to be Asian visitors on their first trip to Australia, most commonly for a holiday. They mostly wanted to see Iconic Marsupials, and were more likely to have active encounters. They tended to stay in the major cities rather than travel to regional destinations. This is not necessarily because of a preference for this type of wildlife experience; it may be that a lack of familiarity with Australia and language barriers makes other experiences too difficult.

Finally, very high satisfaction levels were observed overall, but there was an observed relationship between the success visitors had in seeing the animals they wanted to and their satisfaction with wildlife experiences. Understandably visitors who were able to see most or all of the animals they had hoped to see were more likely to be very satisfied.

5.1 Limitations

This study was conducted between January and March 2000 and therefore the results may be affected by any temporal bias influencing the wildlife tourism phenomenon. The survey was administered using personal interviews, and therefore some responses may be affected by a desire to please the interviewer. Satisfaction with trip questions are particularly prone to this type of influence. Additionally, varying language skill levels on the part of both interviewers and interviewees may potentially cause confusion in the interpretation of responses.

5.2 Recommendations For Industry

There is clearly a high level of overall interest in wildlife tourism as an attraction supported by the finding that 67.5% of visitors wanted to see animals during their visit and 71.1% actually did see animals. Using the total visitor numbers for the year 2000 (ABS 2001) this provides estimates of 3.3 million and 3.5 million respectively. However, only a few visitors suggested that it was a very important

reason for coming to Australia, which implies that the wildlife product supports other attractions to make Australia popular, but that the destination could not be sold solely on wildlife.

- Therefore, it is important that wildlife operators acknowledge that they are one part of the broader Australian tourism industry and that they should forge appropriate linkages with other types of attraction in an effort to maximise visitation.

There is a strong indication that the Iconic Marsupials, the koala and the kangaroo, are the most popular animals overall, but particularly for repeat visitors, other animals are also attractive.

- Thus it is important that wildlife products include opportunities to interact with a variety of different Australian animals.

The study showed that European visitors were more likely to have encounters with free animals while Asian visitors were more likely to see animals in captive situations. However, Chalip and Fairley (2001) found a preference for seeing animals in their natural environment across both Asian and European markets, although Asian markets rated captive encounters relatively higher than Europeans. Asian visitors are far less likely to travel outside international gateways, which makes it more difficult for them to have encounters with free animals. Perhaps Asian visitors are constrained by language barriers, or a greater propensity to travel with group tours. In any case, there may be potential in exploring alternatives for encouraging greater access to free animals by Asian tourists. This could be achieved in two ways, by creating products that make it easier for these visitors to travel to regional areas, or by creating (or building upon existing) sanctuaries or national parks on the fringe of cities that closely replicate animals in their natural environment.

- It is recommended that consideration be given to developing products that offer greater opportunity for encounters with free animals or animals in environments that closely approximate their natural environment.

A strong relationship was observed between satisfaction and success in seeing animals.

- There is therefore an imperative to ensure that any shift in focus from captive to free wildlife products not result in a substantial decline in success rates.

The low success rates in seeing some animals, particularly the whale, and to a lesser extent the platypus, are of concern.

- It is therefore important to try to ensure that visitors have realistic expectations about what types of wildlife encounter they will be able to have in various regions and at various times of the year.

Further research is required to more thoroughly investigate the attractiveness of different wildlife products to different market segments. This would require some investigation of personality variables, such as Kellert's orientations to animals, as well as an examination of the benefits people seek in a wildlife encounter and the ways in which they prioritise different aspects of experiences. For example, some visitors clearly enjoy encounters that give them an opportunity to touch, hold, and feed animals. It is not yet known whether they value this more highly than seeing animals in their natural environment, and therefore whether they would be prepared to forego this opportunity.

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APPENDIX A – SURVEY SUPPLEMENT

CAPI Ident:

2000 INTERNATIONAL VISITOR SURVEY: 2000 WILDLIFE SUPPLEMENT

FIELD PERIOD: FEBRUARY 1, 2000 TO MARCH 31, 2000

Introduction: I would now like to ask you some questions about Australian animals.

CHECK QUESTION A

CHECK Q.17 IN THE MAIN IVS 2000. 'Before you came to Australia, did any of the following influence you to come'

If said 'To experience Australia's nature, landscape and wildlife' ask Q.1

(If Q.17 main IVS 2000 = 4 → Q.1), OTHERWISE go to Q.3.

Q.1 You mentioned earlier that you were influenced to come to Australia to experience Australia's nature, landscape and wildlife, was that to:

a) experience Australia's natural environment?

Yes 1

No 2

Don't know 9

b) experience Australia's native animals?

Yes 1 → Q.2

No 2 → Q.3

Don't Know 9 → Q.3

→ SHOWCARD W1

Q.2 Looking at card W1, how important was it to see Australia's native animals?

Would not have come otherwise 1

The most important reason for my decision to come 2

An important reason for my decision to come 3

No more important than other reasons. . . . 4

Don't Know 9

Q.3 Which native Australian animal do you most associate with your image of Australia?
DO NOT READ OUT ANIMAL LIST – SINGLE RESPONSE ONLY
(Record response in the 2nd column below).

Q.4 Which native Australian animals did you most want to see before coming to Australia?
DO NOT READ OUT ANIMAL LIST – MULTIPLE RESPONSE
(Record response in the 3rd column below).

ANIMAL – DO NOT READ OUT	Q.3 SINGLE RESPONSE ONLY	Q.4 MULTIPLE RESPONSE
Crocodile	1	1
Dingo	2	2
Dolphin	3	3
Echidna	4	4
Emu	5	5
Fish	6	6
Frog	7	7
Kangaroo, Wallaby, or other member of the kangaroo family	8	8
Koala	9	9
Lizard (e.g., frill-neck lizard)	10	10

ANIMAL – DO NOT READ OUT	Q.3 SINGLE RESPONSE ONLY	Q.4 MULTIPLE RESPONSE
Parrot	11	11
Penguin	12	12
Platypus	13	13
Possum	14	14
Seal	15	15
Shark	16	16
Snake	17	17
Tasmanian Devil	18	18
Turtle	19	19
Whale	20	20
Wombat	21	21
Other animals that live on land	22	22
Other animals that live in water	23	23
Other (SPECIFY)	98	98
None	97	97
Don't Know/Not sure	99	99

→ SHOWCARD W2

Q.5 Looking at Card W2, which native Australian animals did you see during your visit to Australia?
MULTIPLE RESPONSE – (Record response in the 2nd column below).

CHECK Q5a: If Q.4 = code 8 (Kangaroo, wallaby etc) AND Q.5 NOT equal to code 4 (Kangaroo, Wallaby etc); then ask Q.5a, OTHERWISE continue to Q.6.

Q.5a So you didn't see a kangaroo/wallaby even though you indicated it was one of the native Australian animals you most wanted to see before coming to Australia. Why didn't you see a kangaroo/wallaby when you were here? OPEN-ENDED QUESTION – Please record all responses verbatim.

Q.6 Of the native Australian animals you saw which did up enjoy seeing most?
 SINGLE RESPONSE ONLY – MUST BE AN ANIMAL SELECTED IN Q.5 - (Record response in the 3rd column below).

ANIMAL – SHOWCARD W2	Q.5 MULTIPLE RESPONSE	Q.6 SINGLE RESPONSE ONLY
Animals that live on land		
Dingo	1	1
Echidna	2	2
Emu	3	3
Kangaroo, Wallaby, or other member of the kangaroo family	4	4
Koala	5	5
Lizard (e.g., frill-neck lizard)	6	6
Parrot	7	7
Possum	8	8
Snake	9	9
Tasmanian Devil	10	10
Wombat	11	11
Animals that live in water		
Crocodile	12	12
Dolphin	13	13
Platypus	14	14
Shark	15	15
Whale	16	16
Other (SPECIFY)	98	98
None	97 - SKIP TO Q.11	97 - SKIP TO Q.11
Don't Know/Not sure	99 - SKIP TO Q.11	99 - SKIP TO Q.11

CHECK QUESTION Q.5

IF said 'None' or 'Don't Know/Not sure' (code 97 or 99) in Q.5 SKIP to Q.11.

OTHERWISE, continue to Q.6.

CHECK QUESTION Q.6

IF said 'None' or 'Don't Know/Not sure' (code 97 or 99) in Q.6 SKIP to Q.11.

OTHERWISE, continue to Q.7.

→ SHOWCARD W3

Q.7 Looking at Card W3, which type of interactions did you have with < insert animal chosen in Q.6>?

MULTIPLE RESPONSES

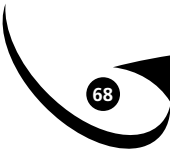
- Feeding. 1
- Watching others feed animals 2
- Touching. 3
- Holding. 4
- Viewing from less than 10 metres/yards . . . 5
- Viewing from more than 10 metres/yards . . 6
- Photographing 7
- Hunting 8
- Other (SPECIFY).
- 98

→ SHOWCARD W4

Q.8 Looking at Card W4, in which situations did you see < insert animal chosen in Q.6 > during this trip?

MULTIPLE RESPONSES

- While in a Natural Park or other conservation area 1
- In their natural environment elsewhere 2
- On a guided tour or excursion (whale watching, river cruises, guided beach walks) . 3
- While visiting a farm or station. 4
- In a zoo 5
- In a wildlife park or sanctuary 6
- In a theme park. 7
- In an aquarium 8



While snorkelling	9
While scuba diving	10
While hunting	11
While bird watching	12
While fishing	13
Other	
.	98

Q.9 Did you obtain any information about <insert animal chosen in Q.6 > before coming for this trip?

Yes	1
No	2 → Q.11
Don't Know	99 → Q.11

Q.10 Where did you get this information?

DO NOT READ OUT – MULTIPLE RESPONSE

Advertising in Newspaper or magazine (print magazine)	1
Advertising on TV, film, video or radio	2
Airline	3
Article in Newspaper or magazine (print media)	4
Friend or relative living in Australia	5
Friend or relative who have visited Australia	6
Library	7
Other Advertising (e.g., billboard etc)	8
Previous visits	9
Program on TV, film, video or radio	10
Searches on the Internet	11
Tour operator	12
Tourist Bureau/Information Centre	13
Travel agent	14
Travel book or travel guide	15
Other	98
Don't Know	99

→ SHOWCARD W5

Q.11 Looking at Card W5, give a rating against the following statements that best reflects your experiences:

- a) If there were no kangaroos I would not have come to Australia:
- Strongly agree 1
 - Agree 2
 - Disagree 3
 - Strongly disagree 4
 - Don't Know 9

- b) Access to seeing kangaroos is well promoted in Australia:
- Strongly agree 1
 - Agree 2
 - Disagree 3
 - Strongly disagree 4
 - Don't Know 9

→ SHOWCARD W6

Q.12 Looking at Card W6, rate the overall level of satisfaction with your experience of native Australian wildlife on this visit?

- Very satisfactory 1
- Satisfactory 2
- Unsatisfactory 3
- Very unsatisfactory 4
- Don't Know 9

Q.13 Still looking at Card W6, rate the overall level of satisfaction with your visit to Australia?

- Very satisfactory 1
- Satisfactory 2
- Unsatisfactory 3
- Very unsatisfactory 4
- Don't Know 9

THANK AND TERMINATE

APPENDIX B – COUNTRY CLASSIFICATIONS AND FREQUENCIES

COUNTRY CATEGORIES		FREQUENCY	PERCENT
The Americas	USA	349	76.2
	Canada	98	21.4
	South America	10	2.2
	Mexico	1	0.2
	Total	458	100.0
United Kingdom & Ireland	England	363	63.0
	United Kingdom	117	20.3
	Irish Republic	37	6.4
	Scotland	31	5.4
	Ireland	14	2.4
	Wales	13	2.3
	Channel Islands	1	0.2
	Total	576	100.0
Scandinavia	Sweden	67	50.0
	Denmark	39	29.1
	Finland	14	10.4
	Norway	14	10.4
	Total	134	100.0
Other Europe	Germany	147	35.2
	Netherlands/Holland	75	17.9
	Switzerland	65	15.6
	Italy	40	9.6
	France	36	8.6
	Belgium	12	2.9
	Austria	11	2.6
	Spain	8	1.9
	Hungary	5	1.2
	Russia	4	1.0
	Europe	3	0.7
	Greece	3	0.7

COUNTRY CATEGORIES		FREQUENCY	PERCENT
Other Europe	Yugoslavia	3	0.7
	Czech Republic	1	0.2
	Bulgaria	1	0.2
	Poland	1	0.2
	Portugal	1	0.2
	Iceland	1	0.2
	Slovak Republic	1	0.2
	Total	418	100.0
Japan & Korea	Japan	649	82.6
	Korea	137	17.4
	Total	786	100.0
China & Taiwan	Taiwan	149	65.4
	China	79	34.6
	Total	228	100.0
South East Asia	Singapore	162	25.0
	Hong Kong	138	21.3
	Malaysia	91	14.1
	Indonesia	89	13.8
	Thailand	49	7.6
	India	49	7.6
	Philippines	39	6.0
	Sri Lanka	12	1.9
	South East Asia	4	0.6
	Vietnam	4	0.6
	Brunei	4	0.6
	Bangladesh	2	0.3
	Burma	1	0.2
	Laos	1	0.2
	Macau	1	0.2
	Pakistan	1	0.2
	Total	647	100.0
Other	New Zealand	419	66.2
	Papua New Guinea	66	10.4
	South Africa	54	8.5

COUNTRY CATEGORIES		FREQUENCY	PERCENT
Other	Fiji	26	4.1
	Solomon Islands	11	1.7
	Israel	8	1.3
	Other Africa	8	1.3
	Mauritius	7	1.1
	Norfolk Islands	5	0.8
	New Hebrides/Vanuatu	3	0.5
	A Pacific Ocean Island	3	0.5
	Saudi Arabia	2	0.3
	United Arab Emirates	2	0.3
	New Caledonia	2	0.3
	Tahiti	2	0.3
	Kiribati	2	0.3
	Egypt	1	0.2
	Iran	1	0.2
	Turkey	1	0.2
	Qatar	1	0.2
	Cyprus	1	0.2
	Oman	1	0.2
	Bahrain	1	0.2
	Afghanistan	1	0.2
	Bermuda	1	0.2
	West Indies	1	0.2
	An Atlantic Ocean Island	1	0.2
Samoa Islands	1	0.2	
Cook Islands	1	0.2	
Total	633	100.0	

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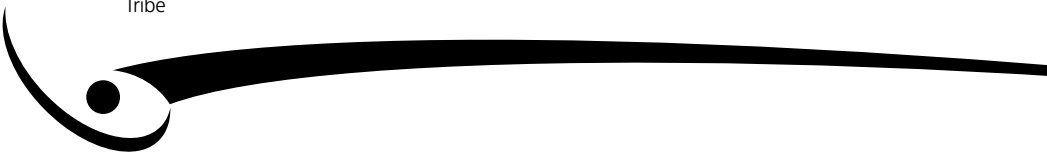
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