

UNDERSTANDING VISITOR PERSPECTIVES ON WILDLIFE TOURISM



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WILDLIFE TOURISM RESEARCH REPORT SERIES: NO. 2
Status Assessment of Wildlife Tourism in Australia Series

RESEARCH REPORT SERIES

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This series presents research findings from projects within the Wildlife Tourism Subprogram of the CRC. The Subprogram aims to provide strategic knowledge to facilitate the sustainable development of wildlife tourism in Australia.

Status Assessment of Australian Wildlife Tourism, Editorial Team: Dr Karen Higginbottom, Ms Kelley Rann, A/Prof Derrin Davis

This report is one in a series comprising a status assessment of wildlife tourism in Australia. It comprises the initial stages of research undertaken by the Wildlife Tourism Subprogram of the CRC. Reports in this series cover various disciplinary perspectives (visitors, economics, hosts, wildlife management) as well as various subsectors (such as zoos, bird watching and hunting). Together, the reports identify the current status and key issues facing Australian wildlife tourism, and make recommendations to enhance its sustainability.

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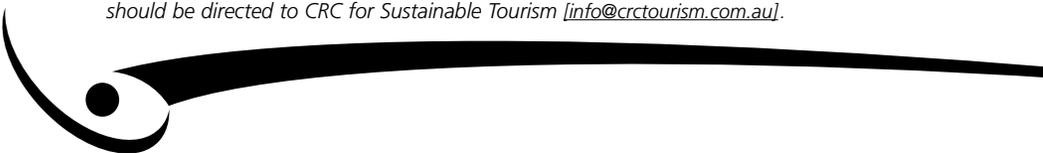
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EXECUTIVE SUMMARY

Visitors are an integral element of any tourism product or service. Ultimately, a sustainable tourism activity is one that provides a quality experience for visitors and which encourages those visitors to be concerned about the conservation of the places they visit. In order to achieve this we need detailed, reliable and relevant information on visitors. The aims of this report are to:

- identify and describe key features of wildlife tourism situations that influence visitor behaviour, satisfaction and attitudes
- review the current status of knowledge about these key features
- recommend further research to enhance the sustainability of wildlife tourism in Australia
- explore the possibility of making recommendations to improve current wildlife tourism practices.

Issues raised by key informants

Discussions with key informants from a number of tourism and protected area management organisations identified five key issues or challenges facing wildlife tourism in Australia. These were:

1. whether or not current experiences were satisfying visitor expectations
2. ongoing tensions between public and private sector managers and operators
3. handling and feeding wildlife
4. confusion over demand for wildlife tourism experiences
5. concerns over the quality and quantity of available interpretation.

What is known about demand for wildlife tourism experiences in Australia?

There is evidence that opportunities to see wildlife are very important to a majority of international and domestic tourists. The available evidence suggests that for the majority of visitors wildlife is either one factor amongst many others in travel decisions, or an added bonus rather than the sole reason for choosing a destination. While there is also some evidence that interest in wildlife viewing opportunities is increasing for some international groups, it appears that attendance at many captive attractions is steady or in decline. There is very little information available on the numbers of visitors going to sites specifically to see wildlife or numbers of visitors taking tours with the specific aim of seeing wildlife. The information that exists suggests high levels of interest in both captive and non-captive settings for wildlife experiences.

What is known about the markets for wildlife tourism experiences in Australia?

Very little is known about the characteristics of either international or domestic visitors, who seek wildlife tourism activities in Australia. From the few studies that have been conducted, it seems that specialisation is a major dimension along which visitors vary. Highly specialised wildlife activity participants tend to be a minority group. For the bulk of participants, there is a more general interest in nature and a range of wildlife. There is some evidence that wildlife visitors differ in terms of motivations or benefits sought and the type of activities desired.

How satisfied are visitors with their wildlife tourism experiences?

There is little information available on the satisfaction of visitors with wildlife tourism experiences. Only a handful of Australian studies exist and most of these are site and/or species specific. The studies that do exist suggest that visitor satisfaction may be influenced by features of the species such as rarity, size, symbolic characteristics, and endangered status. The variety of species that are seen or encountered is also an important factor, as are features of the setting

such as comfort, beauty, scenery, the ability to get close to and ease of viewing the species. Educational and interpretive components, and the level and quality of service and facilities also have a major influence on visitor satisfaction. There is also evidence that visitors to captive settings have strong expectations that animals will appear to be well cared for, and kept in clean and spacious enclosures.

What is the role of interpretation in wildlife tourism experiences?

There is evidence that visitors expect interpretation to be a part of their wildlife experiences and that for many visitors, good quality interpretation is a major contributor to their satisfaction. There is also some evidence that effective interpretation in association with wildlife interaction or viewing opportunities can result in more positive attitudes towards wildlife conservation.

What is known about visitor responses to management actions?

There is some evidence that suggests that visitors can be supportive of restrictions to their activities and access to wildlife, especially if supported by an effective interpretation program. There is a major gap in our understanding of visitor perceptions of wildlife feeding.

Recommendations

A series of recommendations are made including:

- that a standard set of questions to measure interest in wildlife and specific types of wildlife opportunities be included in state and national visitor surveys.
- that attention is paid to promotional images of wildlife tourism experiences to ensure accuracy in terms of numbers of wildlife likely to be seen and types of activities that will be offered.
- that visitors be adequately prepared for wildlife tourism experiences in terms of having realistic expectations and an understanding of appropriate behaviours.

- that interpretation programs be developed and upgraded to meet international best practice standards.
- that managers in both the private and public sectors work to develop alternative ways to view and interact with wildlife.

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1. INTRODUCTION

This report is one in a series that, in combination, comprise an initial status assessment of wildlife tourism in Australia. The focus of this report is on the role of the visitor in wildlife tourism.

The aims of this report are:

- to identify and describe key features of wildlife tourism situations that influence visitor behaviour, satisfaction and attitudes
- to review the current status of knowledge about these key features
- to recommend further research to enhance the sustainability of wildlife tourism in Australia
- to explore the possibility of making recommendations to improve current wildlife tourism practices.

It is important to note that it was not the aim of this report to actually conduct research into visitor perspectives but rather to review and assess the current state of knowledge, particularly with regard to Australia.

1.1 Some Background and Context

It has been suggested that there are four different ways in which people talk and think about tourism (Jafari, 1990). There are advocates who report on growth and increasing demand for various tourism experiences, services and products. Advocates also stress the positive social, economic and environmental benefits of tourism. Then there are those who react to these advocates arguing strongly that tourism is often a negative force destroying the resource that it is based upon. These reactionaries are usually also quick to point out that the advocates often overestimate the positive benefits of tourism. A third and growing group is made up of those who believe that tourism can be adapted, managed or modified to minimise negative impacts and maximise benefits. Calls for alternative, green or

ecotourism are examples of this adaptancy perspective. The challenge for this group is to demonstrate that the adapted or alternative forms are better than the types of tourism they seek to replace. Answering this challenge depends on developing an understanding of how various factors combine to create tourism experiences and impacts, and to use this knowledge to better plan for and manage tourism. It is this fourth or knowledge based platform that Jafari describes as the one that should be taken by researchers and that will ultimately provide a way forward to improve the sustainability of tourism operations.

This report is the result of increasing recognition that knowledge about wildlife tourism needs to be developed in order to improve the sustainability of this particular type of tourism experience. More specifically, the report aims to examine what is already known about visitors and their expectations, behaviours and responses to the wildlife tourism experiences available in Australia. The overall objective is to begin building a knowledge base for the improved management of wildlife tourism. This report focuses on the visitor as part of a series of reports covering economic, ecological, community and other perspectives on wildlife tourism in Australia.

1.2 The Approach Taken

Prior to the development of a wildlife tourism project in the Cooperative Research Centre (CRC) for Sustainable Tourism, the authors had been involved in a series of projects on nature-based tourism funded by the Reef and Rainforest CRCs. During the course of these projects, it became clear that many nature-based visitors had an interest in wildlife and expected that wildlife would be part of their experiences. In response to these findings and with the support of various stakeholders, the authors began to develop new projects. These projects involved both the analysis of existing visitor survey data and the collection of new data into the level and nature of demand for wildlife interaction experiences in the Great Barrier Reef and Wet Tropics regions of Queensland. As part of these projects, the authors had conducted an extensive literature review and were aware of the general lack of research into this topic. Given that we knew already that the published academic literature would be sparse and mostly focused on international sites or cases, it was decided to supplement

a literature review with two other activities. The first would be to contact as many relevant organisations as possible within the time and budget constraints to request both unpublished reports and an interview with a key informant. The second additional activity was to analyse visitor data available through the CRC Reef and Rainforest projects.

In summary this report is based on the following activities:

1. Face-to-face, telephone and email conversations with key informants in state tourism marketing organisations, appropriate natural resource agencies, tour operators and relevant tourism associations such as the Queensland Wildlife Parks Association. The aim of these interviews was to identify issues in wildlife tourism, seek views on research needs and request information on existing reports. Table 1 lists the organisations consulted. Names of the key informants have not been given as we promised confidentiality in the interviews. We have also not included descriptions of their positions, as in many cases this would also identify individuals. All the organisations contacted, except for the Australian Tourist Commission, agreed to supply what information they had available and were happy to cooperate if an interview was requested.

Table 1: Organisations consulted

TOURISM ASSOCIATIONS AND ATTRACTIONS
Australian Tourist Commission, Tourism Queensland, South Australian Tourist Commission, David Fleay Wildlife Park (QLD), Taronga Zoo (NSW), Adelaide Zoo, Queensland Wildlife Parks Association, Warrawong Sanctuary (SA), Rainforest Habitat (QLD), Cleland Wildlife Park, South Australian Whale Centre, Tourism Victoria, designers for the Seal Rocks Visitor Centre (VIC), Northern Territory Tourist Commission, Tourism New South Wales, Canberra Tourism and Events Corporation, Western Australian Tourism Commission, Tourism Tasmania.
MANAGEMENT AGENCIES
Queensland Parks and Wildlife Association, Great Barrier Reef Marine Park Authority, National Parks and Wildlife South Australia, Parks Victoria, Parks and Wildlife Commission of the Northern Territory, ACT Parks and Conservation, NSW National Parks and Wildlife Service, Conservation and Land Management (WA), Parks and Wildlife Service, Tasmania.
INTERNATIONAL CONTACTS
Interpretation and marketing staff at the Vancouver Aquarium, Alaska Sea Life Aquarium (Seward), the Shedd Aquarium (Chicago), Brookfield Zoo (Chicago), and Wolf Park (Purdue University, West Lafayette, Indiana). Interpretation staff and planners from Denali National Park (Alaska), and the US Fish and Wildlife Service. Members of the Alaska Wilderness Recreation and Tourism Association.

The budget provided for the project did not allow for interviews or contacts with organisations outside Australia. The authors were, however, able to supplement the interviews with information gathered in Canada and Alaska during a conference trip again funded jointly by the Reef and Rainforest CRCs.

2. A review of reports on visitor numbers for various wildlife tourism activities, reports on wildlife tourism markets and reports on wildlife tourist satisfaction provided by the organisations contacted.
3. Analyses of data available to the research team. The data analysed included the AGB McNair PTAMS surveys conducted for the USTTA and Tourism Canada. These are household surveys of international long haul pleasure travellers conducted in Japan, Germany, the United Kingdom and the Netherlands. The surveys ask about features sought in an international destination in general, activity participation on most recent long haul international trip, trip

planning and decision-making, socio-demographics, patterns of travel and likely future destinations. The team also examined the CRC Reef Research Centre regional visitor database. This database contains information from more than 7000 international and domestic visitors to the coastal regions adjacent to the Great Barrier Reef, conducted in several languages. As well as information on reef and regional travel, these surveys also ask about general travel motivations. In addition the authors were able to use preliminary data available from a survey project conducted with funding by the Rainforest CRC.

4. A review of existing published studies and papers on human animal interaction and wildlife tourism.

1.3 Definitions – Tourists and Visitors

This report will use the World Tourism Organization's standard definitions as follows:

Tourism – the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business, and other purposes.

Traveller – any person on a trip between two or more locations.

Visitor – any person travelling to a place other than of his/her usual environment for less than 12 consecutive months and whose main purpose of travel is not to work for pay in the place visited.

Tourist – (overnight visitor) visitor staying at least one night in collective or private accommodation in the place visited.

Excursionist – (same day visitor) a visitor who does not spend the night in collective or private accommodation in the place visited.

In most of the research referred to in this report, the samples are either not defined or are made up of a combination of actual and potential tourists, excursionists and local residents on day trips. It is thus more accurate to use the label visitor and this will be the term used throughout the rest of this report.

1.4 Definitions – Wildlife Tourism

For the purpose of this project wildlife tourism is defined to mean tourism based on interactions with non-domesticated animals in either their natural environment or in captivity. Note that this report is only concerned with non-consumptive forms of wildlife tourism.

2. ISSUES AND CHALLENGES IDENTIFIED BY KEY INFORMANTS

During the discussions with the key informants a number of key themes and issues related to wildlife tourism emerged. The major and most common themes and issues were:

2.1 Confusion Over Demand for Wildlife Tourism

A concern raised by many of the informants from the tourism sector was that of confusion over the level of demand for wildlife tourism experiences. It was noted that it is often stated in industry media and presentations that there is high or growing demand for wildlife experiences, but that there appears to be little evidence for this in the numbers of visitors seeking tours or going to attractions. With some exceptions, many reported stable or declining visitor numbers. This raises the question of whether the reports of demand are accurate and/or what sort of experiences the demand is for. A related concern was then over what kinds of experiences were sought by visitors and what sorts of activities and features should operators incorporate into their existing or proposed new tourism ventures.

This suggests research needs in the areas of:

- more detailed and accurate estimates of the level of demand for wildlife tourism opportunities, especially broken down by the type of wildlife experience sought, and
- more detailed descriptions of market segments and their characteristics.

2.2 Concerns Over Meeting Visitor Expectations

Many key informants both from the tourism and protected area management sectors suggested that they suspected many visitors, particularly international visitors, expected to be able to see more wildlife, and to get closer to wildlife than was often possible. Most informants believed that there were high levels of visitor dissatisfaction with the current range of wildlife experiences available in Australia.

The discussions suggested a need to develop a better understanding of:

- visitor expectations in terms of the numbers and variety of wildlife tourism opportunities and how these expectations are formed,
- the importance of wildlife to visitors' destination choices, and
- the factors that contribute to satisfaction and dissatisfaction with currently available opportunities.

2.3 Ongoing Tension Between Operators and Protected Area Managers

A number of different tensions or problems between tour operators and protected area managers were noted. The most common and basic seemed to be between operators seeking greater access to wildlife and managers seeking to restrict access and increase the distance between visitors and the wildlife. From the perspective of some in the tourism industry, protected area managers seek to restrict visitors based on a philosophical or social objection to visitors rather than on sound evidence of ecological impacts on the visited environment or wildlife. From the perspective of some of those concerned with wildlife conservation and management, operators often make claims about the viability of their operations that cannot be backed up by evidence. In each case there appears to be a lack of understanding by each party of the constraints and pressures on the other, and in each case people are often operating on a precautionary principle not understood or recognised by the other. In the case of managers, restrictions are often based not on evidence of actual impacts but on concerns over possible impacts. In the case of operators, concerns over what will make acceptable and saleable experiences for visitors are also driven not by direct evidence but by fears of possible problems.

Clearly what is needed from research is:

- reliable, independent and relevant evidence concerning the impacts of visitors on wildlife and environments, with specific information on which aspects of visitation contribute to the impacts,

- reliable information on what motivates visitors,
- information regarding the understanding visitors have of their own impacts, and
- how visitors respond to current or proposed management actions or strategies.

2.4 Handling and Feeding Wildlife

The handling and feeding of wildlife, the most common area of debate and tension between and within the tourism and protected area management sectors, was a prime focus. Many management agencies noted the numerous problems associated with visitors or tour guides feeding and handling wildlife. Direct physical harm to the wildlife, changes in reproductive and other behaviour and aggressive animals were all considered to be common outcomes of too close contact between visitors and wildlife. In addition, many informants felt that in the longer term, sustainable wildlife tourism had to create changes in the way visitors' perceived wildlife if larger conservation goals were to be achieved. These informants believed that handling and feeding wildlife supports stereotypes of animals as objects or toys for visitors' entertainment and discourages concern over conservation of habitats.

Further, there were those who felt that in some circumstances feeding and handling was acceptable, but that to allow it in some situations and not in others would be confusing to visitors and would continue to encourage feeding and handling in inappropriate places. It was suggested that there is substantial confusion amongst operators and visitors over when and under what circumstances they are allowed to feed or handle wildlife. In many places, feeding or close contact has a long tradition and recent changes have created problems with both informing repeat visitors, managing the wildlife that have become dependent upon visitors or whose aggressive behaviour continues, hostility from tour operators who feel that they can no longer provide the experience expected by visitors, and concerns over the difficulties of seeing wildlife in settings that have traditionally advertised that option or activity.

An alternative viewpoint was that some feeding and some opportunities for contact could be created that did not result in harm to the wildlife or the visitors. It was thought that these opportunities should be allowed as the opportunity for close contact was a powerful educational tool that would encourage visitor support for wildlife conservation. A past issue of the Ecotourism Association of Australia newsletter (December 1997) provides some examples of the division of opinions on this topic.

Many informants felt that research was needed to understand:

- why visitors sought to feed and handle animals
- what visitors get out of these experiences in terms of support for wildlife conservation
- what kinds of interpretation or information could be put in place to discourage these activities, especially in those places where it was clearly inappropriate.

2.5 The Nature of Wildlife Interpretation

Various key informants raised three main interpretation issues. Firstly, there were those who felt that there is not enough interpretation available for visitors and that what was available was of poor quality. Secondly, there were concerns raised over confusing and contradictory messages contained in existing interpretation, especially with regard to feeding. Thirdly, there were concerns over the focus and content of current interpretation. In this case it was felt that often interpretation focused on individual animals and tended to encourage visitors to think of wildlife as pets, and to value only those that were attractive and cuddly.

What is required is research into:

- the importance of interpretation for improving visitor experiences
- the effectiveness of interpretation in encouraging sustainable visitor behaviour

- the actual outcomes of current interpretation in terms of visitor understanding of, and attitudes towards, the wildlife being presented.

2.6 Summary of Identified Information Needs

The discussions with the key informants indicated research needs in the areas of:

- the level and nature of demand for wildlife tourism experiences, including more detailed and accurate estimates of the level of demand for wildlife tourism opportunities broken down by the type of wildlife experience sought. Such research should also examine visitor expectations in terms of the numbers and variety of wildlife tourism opportunities, and how these expectations are formed, as well as the importance of wildlife to visitors' destination choices.
- more detailed descriptions of market segments and their characteristics.
- the factors that contribute to satisfaction and dissatisfaction with currently available wildlife tourism opportunities.
- the role of interpretation in wildlife tourism experiences. This topic would include research into what visitors get out of experiences in terms of support for wildlife conservation, what kinds of interpretation or information could be put in place to discourage inappropriate behaviours, and the actual outcomes of current interpretation.
- understanding how visitors react to management strategies and actions. This would include examinations of the levels of knowledge visitors have of their own impacts, and why visitors sought to feed and handle animals.

The remainder of this report examines what is currently known about each of these topics.

3. WHAT IS THE LEVEL AND NATURE OF DEMAND FOR WILDLIFE TOURISM?

A notable feature of the introductions to many of the discussions of non-consumptive wildlife tourism is the argument that this form of tourism is growing at a considerable rate or that there is increasing demand for such experiences from tourists. A number of problems can be identified with such claims.

1. They are often made without any evidence to support them. In many cases the authors simply refer to others as the sources of their evidence and often those references quoted are old (see Amante-Helweg, 1996, as an example).
2. Where evidence is provided, it is usually a set of figures for participation in a particular type of activity, most commonly whale watching or recreational bird watching in the USA. Extrapolation to wildlife tourism in general from these situations is questionable. The use of the US Fish and Wildlife Service surveys is particularly common (see Duffus and Dearden, 1990; Duffus and Wipond, 1992; Hammitt, Dulin and Wells, 1993; McFarlane, 1994; Whittaker, 1997). But the surveys referred to are usually from before 1990, and include recreational activities pursued within one mile of the respondent's residence. While it is true that non-consumptive and non-residential wildlife recreation increased during the period from 1980 to 1990 (US Department of the Interior Fish and Wildlife Service, 1991), the results of the most recently available survey conducted in 1994/1995 indicated a decline during the period from 1990 to 1994/1995 (US Department of the Interior Fish and Wildlife Service, 1996). The 1996 report found a decrease of 17% in all forms of wildlife viewing and a decrease of 21% for non-residential wildlife viewing.
3. Activity participation figures are usually presented only for one point in time, often several years previous to the date of publication of the claim. Rarely are claims based on evidence of changes in participation over time.

Tables 2, 3 and 4 present summaries of a range of statistics gathered from Australian state and national tourism organisations for participation in wildlife activities or attendance at wildlife attractions. A number of points can be made about the information in these tables.

1. There is no uniform collection of tourism statistics making it difficult to compare or interpret the available information.
2. Neither the International Visitor Survey nor the National Visitor Survey includes questions on interest in wildlife. The International Visitor Survey does ask if people visited a zoo, animal or marine park, and in some states specific attractions are included. The latest data available from the Bureau of Tourism Research indicate that international visitors are asked about attendance at the following wildlife attractions – Monkey Mia/Shark Bay (WA), Phillip Island, Penguin Parade (VIC), and the Dandenong Ranges, Puffing Billy/Healesville Sanctuary combined (VIC).
3. Where surveys have included questions on interest in wildlife tourism, they have often combined activities such as nature study and wildlife viewing, nature and wildlife, and bird watching and wildlife viewing into a single question making interpretation of the data difficult.
4. Where time series data is available there is no clear evidence of growth. In addition, the interviews with key informants suggested that steady levels of visitation or decline were common.
5. Much of the available data refer to captive wildlife settings. Virtually no published statistics are available on tour operations or on encounters in natural settings by independent visitors.

Table 2: Data available from the international visitor survey

	YEAR	%	NUMBER	
Visitors to Australia who went to a wildlife park or zoo	1997 ¹	31	133,8549	
Visitors to Western Australia who went to Monkey Mia/Shark Bay	1998 ²	9	43,530	
Visitors to Victoria who went to Phillip Island, Penguin Parade	1998 ²	29	314,158	
Visitors to Victoria who went to Dandenong Ranges/ Puffing Billy/Healesville Sanctuary	1998 ²	15	167,337	
	YEAR	%	NUMBER	
Change in numbers of visitors who went to a wildlife park or zoo while in Australia ³	1989	57	1,096,647	
	1990	46	952,168	
	1991	54	1,188,720	
	1992	47	1,151,642	
	1993	51	1,428,763	
	1994	51	1,593,851	
	1995	50	1,711,772	
	1996	48	1,832,388	
	1997	31	1,338,549	
	WILDLIFE ATTRACTION		YEAR	%
Changes in the percentage of international visitors attending specific wildlife attractions ⁴	Phillip Island Penguin Parade (VIC)		1990	30
	Phillip Island Penguin Parade (VIC)		1995	29
	Phillip Island Penguin Parade (VIC)		1998	29
	Melbourne Zoo (VIC)		1990	20
	Melbourne Zoo (VIC)		1995	15
	Healesville Sanctuary (VIC)		1990	9
	Healesville Sanctuary (VIC)		1995	8
	Cleland Wildlife Park (SA)		1990	18
	Cleland Wildlife Park (SA)		1995	15
	Monkey Mia/Shark Bay (WA)		1990	8
	Monkey Mia/Shark Bay (WA)		1995	9
	Tidbinbilla Nature Reserve (ACT)		1990	11
Tidbinbilla Nature Reserve (ACT)		1995	6	

¹ Bureau of Tourism Research (1998) International Visitor Survey 1997. BTR, Canberra

² Tables from the International Visitor Survey 1998 provided by the BTR.

³ Tables generated by CD MOTA supplied by the BTR. Please note a change in the question from a zoo, wildlife or marine park to a wildlife park or zoo.

⁴ Bureau of Tourism Research (1992) International Visitor Survey 1991. BTR, Canberra. Bureau of Tourism Research (1997) International Visitor Survey 1996. BTR, Canberra. Tables from the International Visitor Survey 1998 provided by the BTR.

Table 3: Available attendance figures for a selection of Australian wildlife based attractions

VICTORIA⁵ (1995)	NUMBER
Melbourne Zoo	957,997
Phillip Island Penguin Reserve	512,678
Healesville Sanctuary	319,245
Wildlife Wonderland	285,245
Koala Conservation Centre	109,105
NORTHERN TERRITORY⁶ (1997/98)	NUMBER
NT Wildlife Park	75,000
Mary River Wetlands	50,000
TASMANIA⁷ (1997/98)	NUMBER
Went to zoo/sanctuary/animal park or experienced countryside/wildlife/scenery	173,954 (35% of interstate and international visitors to the state)
QUEENSLAND⁸ (1996)	NUMBER
Mon Repos Turtle Nesting	25,000
Currumbin Sanctuary	550,000
Fleay's Wildlife Park	50,000
Hervey Bay Whale watching	83,000 (1997)

⁵ Tourism Victoria (1999) Visitors to Victoria's Attractions.
www.tourism.vic.gov.au/victour.attr95.htm

⁶ Northern Territory Tourist Commission (1999) Selected Statistics 1997/98.

⁷ Statistics and results provided by Tourism Tasmania.

⁸ Figures provided by David Fleay Wildlife Park for Fleay's Wildlife Park and Currumbin Sanctuary. Figures for Hervey Bay Whale watching from Tourism Queensland (1999a). Figures from Mon Repos Turtle nesting from Howard (1999).

Table 4: Attendance at South Australian wildlife based attractions 1990/91 – 1996/97⁹

ATTRACTION	1990/91	1996/97
Cleland Wildlife Park	149,400	117,000
Monarto Zoo	NA	29,900
Seal Bay	63,800	105,200
Urimburra Wildlife Park	29,600	27,500
Adelaide Zoological Gardens	354,300	358,500

⁹Tourism South Australia (1999) Estimated numbers of visitors to public sector attractions in South Australia. www.tourism.sa.gov.au/files/aboutsite/rsch_visitationevents_9697.html

Even when claims for growth are supported by evidence of actual growth in participation, it is rare to find growth rates for wildlife tourism in relation to growth rates for a region or destination as a whole. In other words, it is possible that growth rates for specific tourist activities may simply reflect increasing general tourism to the destination region. Blamey and Hatch (1995), for example, analysed claims that demand for ecotourism products in Australia was increasing. They found that tourism to Australia as a whole was growing faster than participation in ecotourism, leading to the conclusion that international demand for eco-tourism products in Australia was actually in decline.

Secondly, it is often assumed that past growth rates will continue into the future. It is possible however, that past growth reflects growth in opportunities or supply rather than interest or demand from visitors. In this case, growth in participation reflects the take up of latent or existing demand. Once this existing demand is catered for, the apparent growth may cease. In addition, growth in supply can result in a decline in demand for individual sites or operations. That is, a larger number of choices may mean that for any one operation there are fewer visitors. It is important to note that growth in any activity is not inevitable.

A third problem with using actual activity participation as a measure of demand or interest is that not all the tourists who participate in a wildlife tourism activity are motivated by the wildlife. That is, there is

a tendency to assume that the wildlife is the central interest of all the participants. There are many different factors that can lead to participation in a tourist activity. It is possible, for example, that a wildlife tourist activity is part of a larger tour program and that some participants are there only because they were interested in something else in the tour package. It is also the case that some participants will be there because they are accompanying others who are interested in the wildlife. Two other forms or motives for participation in tourist activities have also been identified. One is curiosity and novelty seeking and the other is a desire to experience as many of the tourist activities available at a destination as possible.

Reid's (1996) study of whale watchers in South Australia, for example, found that less than one third of the sample had travelled to the region to go whale watching, and only 37% engaged in the activity because of an interest in whales. One tenth of the sample participated because they happened to be passing by and were curious, and another tenth were there because others had told them that it was an interesting experience. A further 12% were seeking a novel and different experience. Another Australian study, bird watching in the Far North Queensland region (QTTC, 1998), found that bird watching was a core reason for visiting the region for only a very small percentage of the sample (<10%). For most of those who participated, it was seen as one of a set of activities that allowed for contact with nature.

A final limitation of using an activity or product-based measure of tourist demand is that it misses those tourists who want or expect a wildlife tourism experience but who do not actually participate. Moscardo's (1999) analysis of visitors to the Whitsunday region of Queensland, for example, found that 22% of surveyed visitors who stated that "opportunities to see wildlife/birds" was always important in their travel decisions did not, and were not going to, participate in any of the available wildlife tourism activities. Lack of participation can result from a number of factors including barriers such as cost, distance and time, poor information services, or perceptions that available activities are not appropriate.

3.1 Alternative Approaches to Estimating Demand for Wildlife Tourism

The major alternative approaches to measuring actual activity participation usually involve surveying or interviewing potential visitors before they arrive at a destination region, actual visitors en-route to the destination, or a sample of visitors from various locations within a destination. The key feature of these approaches is to have a sample that is likely to include visitors who have not participated in the activities of interest. These surveys or interviews can involve questions about such things as intended participation in wildlife activities, levels of interest in participating in such activities, or the importance of opportunities to participate in wildlife activities to their enjoyment and/or to their decision to travel to the destination region.

Table 5 contains a summary of evidence available on the importance of wildlife tourism opportunities in travel decision-making by major international travel markets. As can be seen, opportunities to see wildlife/birds is a very important factor in the decision making of these major international travel markets. These figures also indicate growth in the importance of wildlife tourism opportunities for the German and Japanese markets.

Table 5: Importance of wildlife tourism in travel decision-making (International Long Haul Pleasure Traveller Household surveys)

IMPORTANCE IN SELECTING AN INTERNATIONAL HOLIDAY DESTINATION IN GENERAL	COUNTRY	1985/86	1995/96
Opportunities to see wildlife/birds I don't normally see (4 point scale from 'not at all', through 'not very' and 'often' to 'always important')	Germany		
	Often important	29%	37%
	Always important	10%	38%
	Japan		
	Often important	14%	44%
	Always important	34%	25%
	United Kingdom		
	Often important	38%	38%
	Always important	32%	24%
	Netherlands		(1993)
	Often important	NA	62%
	Always important	NA	36%

Source: PTAMS data supplied by USTTA/Tourism Canada through a partnership between the Reef and Rainforest CRC's and Purdue University, USA.

Results of studies conducted in Australia are consistent with these international patterns. A telephone survey of 600 domestic holiday travellers conducted for the QTTC (now Tourism Queensland) in 1996 found that 21% of the sample described “a place where I can get close to nature and see wildlife” as essential in their choice of a holiday destination. Also 42% described this item as very appealing in a holiday destination. Another survey of 780 Australian households conducted for Tourism Queensland in 1998 (1999b) found that the highest levels of interest were given to seeing animals in the wild from a list of 11 recreational activities. A survey of more than 2200 international and domestic visitors to the Whitsunday region of Queensland found that 34% of visitors rated “opportunities to see wildlife/birds I don’t normally see” as very important in their choice of a holiday destination in general (Moscardo, 1999). “Opportunities to see wildlife/birds I don’t normally see” was also rated as very important in holiday decisions by 35% of 1600 international and domestic visitors surveyed in the Far North Queensland region (data supplied by project 3.1 rainforest visitor databank, Rainforest CRC).

Table 6 contains a summary of results of two surveys of visitors conducted by the Rainforest CRC in the North and Far North Queensland regions and surveys conducted at Flinders Chase National Park, Kangaroo Island in South Australia. As can be seen, visitors vary in terms of the importance they attach to opportunities to view wildlife and as would be expected, the higher levels of importance are found in more specialised wildlife settings such as tours to Flinders Chase National Park on Kangaroo Island. Across all settings, however, very few respondents were not interested in wildlife as a part of their holiday experience.

Table 6: Levels of importance of wildlife opportunities to destination decisions from North/Far North Queensland and Kangaroo Island surveys

IMPORTANCE OF WILDLIFE OPPORTUNITIES TO TRAVEL DECISIONS	% NQ/FNQ SAMPLE (N~790)¹⁰	% RAINFOREST HABITAT SAMPLE (N~950)¹¹	% FLINDERS CHASE NP SAMPLE (N~700)¹²
I prefer to avoid wildlife while on holidays	3%	0%	1%
I am not interested in viewing wildlife while on holidays	1%	1%	2%
Viewing wildlife is not included in my travel decisions, but I enjoy seeing wildlife while doing other things	57%	37%	17%
The opportunity to view wildlife is included as part of my travel decisions	32%	46%	45%
The opportunity to view wildlife is one of the most important factors in my travel decisions	7%	16%	35%

¹⁰ Data supplied by project 3.2 rainforest presentation, Rainforest CRC

¹¹ Woods (1999)

¹² Greenwood, Moscardo, Woods, Johnstone, Richards and Pearce (2000)

3.2 What Types of Wildlife Experiences are Sought?

The previous section has reviewed evidence on overall interest in seeing wildlife while on holidays or the importance of wildlife opportunities in travel decision-making. What this information does not provide is any understanding of the types of experience desired. For example, do visitors prefer to see wildlife in captive or natural settings? What level of facilities do they expect? What kind of interaction with wildlife are they seeking? Very little evidence exists to answer these questions. Four studies were available to shed some light on these questions. Ryan (1998) in a qualitative study of 50 visitors in the Northern Territory concluded that in general, visitors had a preference for seeing crocodiles in their natural environment. This conclusion is consistent with the results of studies conducted at Flinders Chase National Park, South Australia and at Rainforest Habitat, a captive setting in Queensland. Table 7 summarises the results of these studies. As can be seen, the majority of visitors surveyed were interested in, or preferred, seeing wildlife in their natural surroundings. In a similar study conducted by the Department of Tourism, Sport and Recreation, Tasmania, (1996) 100% of 177 tourists to Tasmania stated that they would prefer to see wildlife in its natural setting.

A number of other features of the results reported in Table 7 are worth highlighting. In both studies the two least important features are large numbers of wildlife and being able to touch or feed wildlife, and in both settings being able to get close to wildlife is important. In the captive setting, a pleasant environment and opportunities for learning and experiencing interpretation are important features of the experience as are the ability to easily see and get close to wildlife. In the non-captive setting, the unique nature of the wildlife has high importance ratings.

Table 7: Importance of various features of wildlife experiences

FEATURE	% RAINFOREST HABITAT SAMPLE	% FLINDERS CHASE SAMPLE
Seeing wildlife behaving naturally	-	72%
Seeing wildlife in a natural environment	76%	74%
Knowledgeable guides/staff are available	72%	44%
Interesting information about the wildlife	50%	44%
Unique/unusual wildlife	37%	54%
Being able to get close to the wildlife	50%	51%
A natural environment with little evidence of humans	-	47%
Feeling safe	53%	42%
Pleasant environment	63%	46%
Visitor numbers are limited	-	30%
Seeing rare/endangered species	40%	49%
Large variety of wildlife to see	35%	39%
Wildlife are easy to see	56%	39%
Large numbers of wildlife to see	28%	33%
Being able to touch or feed the wildlife	17%	13%

Note: Figures refer to percent of the sample rating the feature as very important on a four point scale from not at all to very important

Sources: See Table 6.

An interest in seeing wildlife in natural settings does not, however, appear to preclude an interest in visiting captive settings. In the Tasmanian study the majority of visitors (94%) also agreed that they enjoyed visiting wildlife parks. In the Rainforest Habitat study, 57% of respondents stated that they had visited a zoo, aquarium or wildlife park in the last 12 months (Woods, 1999), while in the Flinders Chase study, 58% had visited a captive wildlife setting in the last 12 months (data supplied by James Cook University's tourism program, see Greenwood *et al.* 2000, for a description of this project). Table 8 provides rates of participation in a range of wildlife activities based on these two surveys. As can be seen, captive wildlife settings dominate activity patterns. These results are consistent with the findings of the Tourism Queensland ecotourism study (1999b), which reported that 46% of the respondents had visited a botanic garden/zoo in the previous 12 month period.

Table 8: Percent of sample who have undertaken wildlife activities in the last 12 months

WILDLIFE BASED ACTIVITY	% OF RAINFOREST HABITAT SAMPLE	% OF FLINDERS CHASE SAMPLE
Zoos, aquaria, wildlife parks	57%	58%
Land based trips specifically to view animals	29%	27%
Land based trips to places where wildlife is often seen	38%	47%
Water based trips or cruises specifically to view animals	39%	24%
Water based trips to places where wildlife is often seen	22%	28%

Source: see Table 6.

3.3 Why Does Understanding Demand for Wildlife Tourism Matter?

Private sector tourism managers use estimates of demand for a tourist activity to develop or modify products and facilities. Managers of the protected areas where wildlife are usually found also use estimates of demand to develop plans which may include the development of infrastructure and decisions about permitted activities and levels of use. If the available figures overestimate demand, then tour operators may develop too many or inappropriate products. The resulting oversupply of opportunities can result in severe competition between operators. Under these conditions there is increasing pressure on operators to find a competitive edge. One way to establish this competitive edge in wildlife activities may be to engage in less desirable practices such as going closer to the wildlife or feeding wildlife to encourage their presence.

Overestimates of demand may also put unnecessary pressure on protected area managers to provide infrastructure and facilities. Such facilities and infrastructure can be costly, taking resources away from other management activities. Facilities and infrastructure for visitors are often difficult to remove, and an over supply of these features can detract from the experience for some groups of visitors.

Underestimates can also be problematic, with managers having to respond in a reactive fashion to unanticipated pressures and crises.

In addition to needing accurate estimates of the levels of demand for wildlife activities, both private and public sector managers need to understand the range of experiences sought and the different types of visitors involved. Without this understanding, inappropriate products or services can be provided resulting in visitor dissatisfaction.

3.4 Summary – What is Known About Demand for Wildlife Tourism Experiences in Australia?

- There is some evidence that opportunities to see wildlife are very important to a majority of international and domestic tourists. The available evidence suggests that for the majority of visitors, wildlife is either one factor amongst many others in travel decisions or an added bonus rather than the sole reason for choosing a destination.
- There is some evidence that interest in wildlife viewing opportunities is increasing for some international groups. But in general, evidence for growth in demand is limited in many ways.
- There is evidence that attendance at some captive attractions is steady or in decline.
- There is very little information available on the numbers of visitors going to sites specifically to see wildlife or numbers of visitors taking tours with the specific aim of seeing wildlife.
- There is very little information on the types of wildlife experiences sought by visitors or the species they are most interested in. The information that exists suggests high levels of interest in both captive and non-captive settings for wildlife experiences.

4. WHAT IS THE NATURE OF THE MARKET FOR WILDLIFE TOURISM?

In addition to more accurate estimates of levels of overall demand for wildlife viewing activities, it is necessary to measure and profile different market segments. Duffus and Dearden (1990, p. 222) point out that 'tourists cannot be considered as an homogeneous population; even tourists that may primarily be motivated by the same stimulus, such as wildlife viewing'. Despite these calls in the academic literature, there has been little in the way of research into even the most basic characteristics of visitors to specific wildlife activities or attractions.

In the Australian context, two studies provide some insights into the characteristics of wildlife visitors. In the first case, data from the Tasmanian Visitor Survey were used to identify and describe visitors who listed wildlife viewing as an activity they participated in while travelling in Tasmania. Key features of this group were:

- more likely to be from North America, the UK and Germany than other visitors (14% of the wildlife group compared to 8% of all visitors)
- more likely to be female than male (55% compared to 50%)
- more likely to be backpackers (12% compared to 8%)
- less likely to be visiting friends and relatives (15% compared to 23%)
- more likely to use the Internet as a main source of information (14% compared to 9%).

(Analyses supplied by Tourism Tasmania)

In the second case, a survey of nearly 3000 visitors to the Great Barrier Reef found that just over 20% participated in bird watching while on holidays in the GBR region (Moscardo, 1997). This study concluded that birdwatchers were more likely to be international visitors, to be seeking an educational holiday experience and to have a high level of interest in interpretive activities.

4.1 Level of Specialisation

Many of the published studies that are available have been concerned with using specialisation as a core dimension for categorising and describing different visitors in wildlife situations. Duffus and Dearden (1990) were the first to adapt this concept from leisure activities in general to non-consumptive wildlife activities. They made a distinction between experts/specialists and novices/generalists.

This basic distinction has been used in several Australian studies. A study on birdwatchers in North Queensland (QTC, 1998) suggested that two major markets could be identified – specialists or “twitchers” and a more general nature based group. This study estimated that “twitchers” made up less than 10% of domestic visitors who went bird watching and a higher, but unspecified, proportion of international visitors. Moscardo (2000) also identified a specialist and a generalist wildlife watching group amongst visitors to the Whitsunday region. In both these studies, those with a more specialised interest were more physically active and more likely to get further into the natural environment than those with a more general nature based set of interests.

Moscardo (2000) also identified a group of visitors who participated in wildlife activities but who expressed little interest in seeing wildlife. In this case, it appeared that participation in wildlife activities was accidental or coincidental to other activities or goals. A study conducted for Tourism Queensland (1999a) identified similar groups amongst visitors on whale watching boats in Hervey Bay and Moreton Bay in southeast Queensland. These groups were made up of visitors who were there solely because of recommendations or decisions made by others in their family or travel party. The study identified another three groups of visitors – those with a specific interest in watching and learning about whales, those with a more general interest in nature based activities and experiences and those seeking relaxation and fun.

Foxlee (1999) also studied whale watchers in Hervey Bay and described four groups of visitors based on their motivations for visiting Hervey Bay.

1. Generalists with an interest in relaxing, spending time with family and friends, learning new things and seeing whales.
2. Nature enthusiasts whose primary motive was to see whales, experience wilderness and improve their knowledge.
3. Socialisers who considered the natural setting as a pleasant backdrop for relaxing and spending time with family and friends.
4. Tag alongs who were whale watching because somebody else wanted to go.

Table 9 summarises the results of two North American studies that found similar distributions and patterns amongst wildlife viewers in Colorado and Alberta.

Table 9: Some types of wildlife tourism activity participants

MCFARLANE (1994) BIRD WATCHING IN ALBERTA	MANFREDO AND LARSON (1993) WILDLIFE VIEWING IN COLORADO
<p>Advanced (7% of sample) Most interested in achievement motivations such as improving skills and knowledge and seeing new and/or rare species.</p>	<p>High involvement (22% of sample) More interested in seeing as many animals as possible, and want more information about the activity and the wildlife than other groups. High levels of physical activity in the natural environment.</p>
<p>Intermediate (12% of sample) Most interested in learning about the natural environment, and contributing to conservation.</p>	<p>Moderate involvement (15% of sample) High importance placed on opportunities for photography and seeing animals in the wild.</p>
<p>Novice (38% of sample) Very like Intermediate group.</p>	<p>Generalists (32% of sample) Interested in escape, relaxation and studying nature.</p>
<p>Casual (43% of sample) Interested in relaxation, being outdoors and seeing a range of wildlife.</p>	<p>Occasionalists (31% of sample) More passive, interested in scenery and escape.</p>

4.2 Summary – What is Known About the Markets for Wildlife Tourism Experiences in Australia?

- Very little is known about the characteristics of visitors, either international or domestic, which seek wildlife tourism activities in Australia.
- Specialisation appears to be a major dimension along which visitors vary.
- Highly specialised wildlife activity participants tend to be a minority group. For the bulk of participants there is a more general interest in nature and a range of wildlife.
- There is some evidence that wildlife visitors differ in terms of motivations or benefits sought and the type of activities desired.

5. HOW SATISFIED ARE VISITORS WITH THEIR WILDLIFE TOURISM EXPERIENCES?

As in the previous sections, there have been virtually no large-scale studies into the experiences or satisfaction levels of visitors participating in wildlife tourism activities across Australia as a whole or at particular destinations. A handful of Australian and international case studies exist that have investigated satisfaction at particular sites or for particular activities. In most cases overall satisfaction levels are high. But the specific nature of these cases makes it difficult to extrapolate to wildlife activities in general.

Table 10 contains a summary of the key findings of these studies with regard to the factors that were found to be significantly related to overall satisfaction and enjoyment. As can be seen in this table, some consistent factors emerge including the variety of animals seen, being able to get close to the wildlife, seeing large, rare or new species, the natural setting itself and being able to learn about the wildlife or the setting.

Table 10: Summary of factors related to satisfaction with wildlife activities

STUDY	FACTORS CONTRIBUTING TO ENJOYMENT/ SATISFACTION IN ORDER OF IMPORTANCE
<p>Duffus and Dearden (1993) Whale watching tours on Canada's Pacific Coast – killer whales</p>	<p>Seeing whales Getting close to whales Seeing displays of whale behaviour Seeing coastal scenery Having a naturalist/crewmember to answer questions Seeing other marine mammals</p>
<p>Davis <i>et al.</i> (1997) Whale shark tours in Western Australia</p>	<p>Being close to nature Seeing large animals Seeing many different types of marine life Excitement Learning about the marine environment Adventure Underwater scenery Freedom Relaxation Being with friends</p>
<p>Leuschner <i>et al.</i> (1981) (Specialist) Birdwatchers in Virginia</p>	<p>Seeing species not previously seen Seeing many different species Seeing rare or endangered species</p>
<p>Foxlee (1999) Whale watching in Hervey Bay, Australia</p>	<p>Numbers of whales seen Distance from whales Whale activity Information available about whales Information available about other marine life The style in which information was presented</p>
<p>Hammit <i>et al.</i> (1993) Wildlife viewing in the Great Smoky Mountains National Park</p>	<p>Seeing many different kinds of wildlife Seeing black bears Seeing white-tailed deer Seeing a larger number of animals First time visitors Using binoculars/telescopes to see wildlife Taking photographs If numbers seen matched expected numbers</p>

The results of the Tourism Queensland (1999a) study of whale watching in southeast Queensland were consistent with some of the findings reported in Table 10. The number of whales seen was a critical factor in satisfaction in this setting, with eight whale encounters appearing to be the minimum necessary for satisfaction. This study also found that satisfaction was significantly related to:

- the nature of the travel party, with families less satisfied than other groups
- the experience of the visitors, with repeat visitors more satisfied than first time visitors
- the origin of the visitors, with international visitors less satisfied than domestic visitors
- the size of the boat, with visitors on smaller boats more satisfied than those on bigger boats
- the weather, with better weather associated with higher satisfaction
- onboard commentaries, with commentaries associated with higher satisfaction.

Each of the cases reviewed in this section were focused on a single type of wildlife activity. Research currently being undertaken at James Cook University provides a different perspective on this issue of factors related to satisfaction. Staff in the Rainforest CRC project 3.2: rainforest presentation have been asking both residents of, and visitors to, North and Far North Queensland to describe their best and worst wildlife experiences while on holidays. Currently this information has been analysed for nearly 500 individuals and a summary can be found in Table 11. Only 3% of this sample stated that the opportunity to see wildlife was one of the most important factors in travel decisions, compared to 27% who stated that it was included in travel decisions, and 64% who stated that it was not included in their travel decisions, but was something they enjoyed being able to do.

These preliminary results highlight the popularity of captive settings (96% of the sample had been at least once to a captive wildlife setting in the past 3 years). The results also confirm the importance of variety, close contact, rare or new species, the natural environment and education/interpretation. As this study did not confine the responses to a single situation or species, feeding and touching animals also emerged as a factor contributing to the quality of the experience (although only for 14% of the sample). The additional investigation of worst wildlife experiences indicated that close contact with wildlife can also be a problem with 37% of respondents reporting being attacked, harassed or frightened by wildlife. Additional sources of concern were the welfare of the wildlife, poor conditions and facilities, bad weather and poor staff and service.

Table 11: Summary of best and worst wildlife experiences

TYPE OF SITUATION	BEST EXPERIENCE	WORST EXPERIENCE
Species in the wild	40%	28%
Captive setting	54%	60%
Not captive setting but tame/habituated to people	4%	7%
Features or behaviour of the wildlife key theme in description	79%	53%
TOP TEN THEMES IDENTIFIED		
BEST EXPERIENCE	WORST EXPERIENCE	
Being in a natural environment (27%)	Being attacked, frightened or harassed by wildlife (37%)	
Getting close to animals (23%)		
Educational/interpretation (18%)	Poor conditions for wildlife in captive settings (34%)	
Seeing a variety of species (15%)		
Seeing live animals only previously seen in books or on TV (14%)	Concerns over animal welfare (32%)	
	Saw too few or no animals (16%)	
Beautiful scenery (8%)	Too commercial or exploitative (11%)	
Being able to feed the wildlife (8%)	Bad/uncomfortable weather (8%)	
Being able to touch the wildlife (6%)	Poor variety of species (5%)	
Seeing rare and endangered species (6%)	Poor interpretation (5%)	
	Animals don't do anything (5%)	
	Poor/unfriendly staff (4%)	

Source: Data supplied by project 3.2: rainforest presentation, Rainforest CRC.

5.1 What Attracts Zoo Visitor Attention?

Another source of information on visitor satisfaction can be found in surveys and observations of visitors in zoos, aquaria and other captive settings. Reviews by Kreger and Mench (1995) and Bitgood *et al.* (1988) suggest the following factors are associated with visitor interest and enjoyment:

- Being able to get close, touch or feed.
- Educational shows and/or demonstrations.
- Pleasant natural outdoor settings.
- Naturalistic enclosures.
- Being able to easily see wildlife.

5.2 Characteristics of the Wildlife

In addition to these factors, several authors have noted that aspects of the species are related to visitor interest and enjoyment. Bitgood *et al.* (1998) noted that infant animals and large animals attract visitor attention and infants also appear to create excitement and enthusiasm. Broad (1996) reports that visitors to the Jersey Zoo most enjoyed primates (especially free ranging species such as tamarins and marmosets), bears and baby animals. Shackley (1996) reports from studies at London Zoo that big cats, primates, penguins and seals were the most popular exhibits. One of the difficulties of interpreting results from captive settings is that different species are displayed in different ways and the exhibition and interpretation techniques may influence popularity as much as the species being exhibited.

In a more general sense, Arluke and Sanders (1996) reflect on preferences for animals in the context that societies rank everything on a ladder of worth, and this includes animals. They argue that a hierarchical model of animals permeates public attitudes toward species. This model stems from both theological and evolutionary ideas of worth, which places humans at the top of the linear

progression of life. Thus animals are ranked on a phylogenetic scale with the animals most like humans at the top, and the animals least like humans at the bottom. Thus the “good” animals are tame and human-like and include pets and animals that are useful to humans, as well as large vertebrates (Kellert *et al.*, 1995), which have features and exhibit behaviour that humans can understand. For example, part of the attraction to viewing primates appears to be that it is so easy for humans to relate to the behaviour of the animals (Shackley, 1996). Other animals such as ‘penguins, pandas, seal pups, monkeys, dogs, cats and many other “higher” vertebrates evoke inordinate amounts of sympathy. They are easy to anthropomorphise, and therefore relatively difficult to exploit with impunity’ (Serpell, 1986, p. 141). Conversely, the “bad” animals are least like humans, they are wild and unpredictable (Arluke and Sanders, 1996). While many authors have agreed with the concept that preferred animals are most like humans, the available research suggests that this is only a partial answer. For example, the most popular wild animals in Kellert’s study were birds, an insect and two fish species, whose characteristics are rather dissimilar to humans.

Studies of animal popularity among children reveal that most popular animals are often mammals, particularly furry, mobile, harmless mammals with humanoid features (Surinova, 1971). Popular animals include the monkey, dog, horse, cat and those that can be raised at home or are useful to man. Unpopular animals included snakes, rats, wolves, lions and animals that invoke fear, or are perceived as ugly, harmful or smell (Surinova, 1971). There is also a link between animals popular with children and those represented in children’s books. More (1979) reports that the majority of children’s books were about mammals (62%) and birds (18%); and the top 10 animals featured overall were horse/pony, dog, cat, bear, mouse, rabbit, lion, goose, elephant, and pig. In addition, stories about mammals were targeted at a younger readership, indicating that children begin to learn about the animal world through them. The characters are often highly anthropomorphised, encouraging familiarity and affection for these animals that are presented as having thoughts, feelings and behaviour that children can understand and relate to.

Other authors speak of symbolic aspects of preference. The example of attitudes toward the wolf in USA and Canada illustrate that it can

be difficult to generalise preference, because animals can evoke strong emotions between different groups. Scarce (1998, p. 32) reports that 'wolves are a huge management problem because nobody is neutral. They play most strongly to people's emotions, and not to people's reasonability or logical side. You hate them or you love them. It's religious on both sides....'. Other species also have strong symbolic or superstitious connotations. Serpell (1986) notes that the existence of bear cults in the circumpolar region is likely to be due to their ease of anthropomorphism, since the skinned bear carcass looks disconcertingly like a human corpse in physical proportions. Ris (1993, p. 158) speaks of the conservation movement creating a symbolic, invented whale, which is 'even more powerful than real whales, since it comes to possess a whole set of human-like characteristics' that are taken and exaggerated from a number of species.

As well as the most popular animals, it is important to consider the least popular animals, and the reasons for their lack of favour. Studies indicate that invertebrates are almost universally disliked. Kellert (1993, p. 849) found that a majority of the American general public 'indicated a dislike of ants, bugs, beetles, ticks, cockroaches, and crabs; an aversion to insects in the home; a fear of stinging insects, spiders and scorpions; a desire to eliminate mosquitoes, cockroaches, fleas, moths and spiders; and a view of the cockroach and octopus as highly unattractive animals'. Reasons for these aversions included the perceived lack of capacity for affection, conscious decision-making and future thinking in arthropods, and the general alienation humans have from species so behaviourally and morphologically different to our own. Further reasons include the connection between many arthropods and human disease, damage to agriculture and horticulture, and the autonomy invertebrates have from human control, illustrated by their invasion of human space.

In terms of empirical studies of preference, major work has been conducted by Kellert (1989) and Bart (1972) in relation to animals familiar to the American public. Bart's study found the most popular animals to be the horse, dog and deer, with the least popular animals being the snake, rat and scorpion. Kellert's studies required respondents to rank 33 species on a seven point like/dislike scale. The most preferred animals overall were the dog and the horse. The most favoured wild animals were the swan and robin, followed by the

butterfly and trout. The most popular predator was the eagle (ranked 8th) and the most popular non-domestic mammal was the elephant (ranked 9th). The least favourite animals were insects such as the cockroach and mosquito.

A difficulty with these studies of preference for wildlife is that they tend to use a researcher generated list of animals, thereby possibly excluding species that the public liked/disliked more than the listed species. The existing research is also dated and North American in its focus. The Rainforest CRC project 3.2 survey of residents and tourists in North and Far North Queensland also includes an open-ended question asking for the respondents' five most and five least favourite animals. Table 12 lists results from analysis of 790 surveys. Three key points can be made from the results listed in this table. Firstly there is not always consensus in terms of preference for a particular species. Domestic cats fall into both categories. Secondly there is not a simple relationship between preference and likelihood of seeking to see the species in the wild. Crocodiles are not preferred but are popular tourist attractions in many parts of the world. See Ryan (1998) for a more detailed discussion of perceptions of saltwater crocodiles. Thirdly, the reason given to support preferences are a combination of species' characteristics and behaviours, as well as symbolic features such power or freedom. These symbolic features are likely to differ across cultures and over time and to be influenced by mass media and education.

Table 12: Most and least favourite animals

10 MOST FAVOURITE ANIMALS	10 LEAST FAVOURITE ANIMALS
Domestic dogs	Insects in general
Big cats (tigers, lions, leopards)	Snakes
Dolphins	Cane toads
Birds	Domestic cats
Koala	Crocodiles
Fish	Rodents
Large zoo animals (elephants, giraffe, hippo)	Domestic farm animals in general
Domestic cats	Birds (eg. magpie, pigeon)
Horses	Lizards/reptiles (excluding snakes and crocodiles)
Kangaroo/wallaby	Sharks
KEY FEATURES	KEY FEATURES
Intelligence	Ugly
Colour	Dangerous/scary/aggressing
Strength/power	Sneaky/unpredictable
Cuddly	Detrimental impact on other species
Large size	Creepy/slimy
Beauty	Smell
Loyalty	Spread disease
Playfulness	No use to humans
Usefulness	Small
Personality	Noisy

Source: See Table 11.

5.3 Summary – How Satisfied are Visitors with Their Wildlife Tourism Experiences?

- There is little information available on the satisfaction of visitors with wildlife tourism experiences. Only a handful of Australian studies exist and most of these are site and/or species specific.
- The studies that do exist suggest that the following factors may influence visitor satisfaction:

- features of the species such as rarity, size, symbolic characteristics, and endangered status
 - the variety of species that are seen or encountered
 - features of the setting such as comfort, beauty, scenery, ability to get close to and ease of viewing the species
 - educational and interpretive components
 - level and quality of service and facilities.
- There is also evidence that visitors to captive settings have strong expectations that animals will appear to be well cared for, and kept in clean and spacious enclosures.

6. WHAT IS THE ROLE OF INTERPRETATION IN WILDLIFE TOURISM EXPERIENCES?

6.1 The Importance of Interpretation for Visitor Experiences

A recurring theme in the previous sections has been that of the importance of interpretation both in visitor motivations and expectations and in visitor satisfaction with wildlife tourism experiences. The Flinders Chase National Park study (Greenwood *et al.*, 2000), for example, found that 44% of respondents rated both the availability of interesting information about wildlife and knowledgeable guides/staff as very important features of a wildlife experience. In the Rainforest Habitat study (Woods, 1999) 50% of the respondents gave a very important rating to the availability of interesting information about wildlife, and 72% gave a very important rating to the availability of knowledgeable guides/staff. In each of these studies open-ended questions asking for suggested improvements found that calls for more and better quality interpretation, especially signs, were dominant themes. A number of other studies have also identified the importance of quality interpretation for improving visitor satisfaction (Duffus and Dearden, 1993; Davis *et al.*, 1997; Foxlee, 1999; Tourism Queensland, 1999a).

6.2 Visitor Preferences for Interpretation Topics and Methods

Visitors in the Flinders Chase National Park study were also asked to rate their interest in a series of possible topics for a proposed visitor information centre. The top five topics were wildlife in the park, interesting geographical features, hints on how to see the wildlife, information on how visitors could minimise their impacts on the park and information on how visitors could minimise their impacts on the wildlife (Greenwood *et al.*, 2000). Visitors to the Rainforest Habitat gave the following five topics their highest interest ratings (Woods, 1999):

- peculiar and strange characteristics of the animals
- importance in ecosystems
- relationships with other species

- where to find the animals in the wild
- their social habits and relationships within groups.

Foxlee (1999) also asked her respondents to rate their interest in a series of topics about whales. In this study respondents were most interested in information on whale behaviour, their peculiar and strange characteristics, their importance in the environment and their protection and management. The respondents were least interested in how whales have been used by humans, their lifecycle or their biological details.

Finally, the Rainforest Habitat study participants were also asked to rate their preference for different forms of wildlife interpretation. The following lists the methods examined in order of preference:

- guides
- interpretive signs
- just watching the animals
- brochure with information
- guidebook
- animal shows or displays
- TV/video/films
- interactive computers.

It is difficult to know how much this ranking reflects preferred delivery methods versus familiar delivery methods, as the order of the list is similar to a ranking of the most frequently used methods in wildlife settings.

6.3 Is There Any Evidence That Wildlife Tourism has an Impact on Visitor Knowledge or Attitudes?

As might be expected from the previous sections, there is very limited information available that is relevant to understanding the potential contribution of interactions and encounters with wildlife on human knowledge of, and attitudes towards, wildlife. Much of what is available is British or American and is dominated by studies of captive settings. From the few studies that have been done (see Broad, 1996; Kellert and Dunlap, 1989; Kerger and Mench, 1995; Ogden *et al.*,

1993; Orams, 1996; Tarrant *et al.*, 1997) the general pattern of findings is that exposure to species in combination with some form of interpretation is associated with increased support for conservation of both the target species and wildlife in general. Few of the earlier studies found any evidence of increased knowledge associated with interactions with wildlife, but this may have been due to the limited measurement methods used.

Broad and Weiler (1998) used more complex methods to measure the impacts of Tigerworld at Dreamworld and the tiger exhibit at Western Plains Zoo and concluded that both displays were associated with a variety of types of learning. Woods (1999) found evidence that the Rainforest Habitat experience was associated with more positive attitudes towards animals. More specifically, visitors surveyed after their experience were found to give significantly higher agreement ratings with the following statements:

- Animals provide meaning and interest to my outdoor activities.
- I enjoy learning how species are dependent on each other and the natural environment.
- I believe that animals have thoughts and emotions like humans.
- I think it is wrong to inflict pain or suffering on animals for human gain without justification.
- I am attracted to the beauty, movement and artistic form of animals.
- I enjoy learning about the biological and physical details of particular animal species.
- I am concerned about ways in which I can minimise my personal impact on the wildlife and environment where I live.

Howard (1999) evaluated the interpretation provided to visitors watching turtle nesting at Mon Repos in Queensland. He found that visitor knowledge of turtle species, threats to turtles and actions that people could take to conserve turtles was significantly higher after

their experience. In addition, he also found a significant increase in people's intention to do more to conserve turtles.

6.4 Factors Associated with the Effectiveness of Available Interpretation

Broad and Weiler's study also concluded that visitors to Tigerworld reported learning 'more detailed and contextual information; and were more likely to process the facts acquired into their wider understanding of tigers and wildlife in general' (1998, p. 21). The authors suggest that this success was based upon the use of more interactive and flexible interpretive techniques as part of this experience. This finding reminds us that not all interpretation is equally effective and that different combinations of media, techniques and content can result in varied effectiveness. There has been some research into the effectiveness of different techniques used in wildlife interpretation, but it is restricted to captive settings. Woods (1998) provides a review of what is known about the factors that contribute to effective interpretation in captive settings and concludes that on the whole, the evidence available is consistent with findings from other settings. Table 13 contains a summary of the key findings of this review. As Woods (1998) notes, these findings are consistent with those found across a variety of interpretive settings and topics, and are similar to the suggestions made in other reviews of interpretation practice (see Beck and Cable, 1998; Moscardo, 1996 and 1999b; Regnier *et al.*, 1994).

Table 13: Factors associated with effective interpretation in zoos, aquaria and other captive settings

<p>Enclosures that are as naturalistic as possible and which allow for movement and activity and for more natural behaviour are associated with greater visitor attention, learning and enjoyment.</p> <p>Opportunities to interact with wildlife are associated with greater learning and more positive attitudes. Many institutions are developing behavioural enrichment opportunities for their captive species that allow for interaction with visitors.</p> <p>The use of personal interpretation such as presentations and demonstrations is also associated with greater learning and enjoyment.</p>
<p>Features associated with effective signs and labels include:</p> <ul style="list-style-type: none">• The use of heading and layering of information• The use of questions in titles• Emphasis on important points• Use of clear fonts and large type size• Active, direct, conversational style• Use of analogies to make connections to what visitors already know or understand.

Woods (1998) also reviewed the debate over the content of wildlife interpretation. On the one side of this debate are those who argue that wildlife interpreters must take care not to anthropomorphise species by concentrating on how similar they are to humans or by interpreting wildlife behaviour in terms of human emotions or behaviours. It has also been argued that wildlife interpretation should avoid concentrating on individuals, as this encourages visitors to ignore the relationships between animals and species. These critics argue that wildlife interpretation focuses on the individual at the expense of whole systems and habitats, and often encourages appreciation and support for conservation of some species at the expense of others. On the other hand, there are those who believe that visitors are only capable of understanding animals in terms of human behaviours and interpretations. According to this perspective, it is impossible not to be anthropomorphic, and that making connections between wildlife and humans is a necessary first step to developing human appreciation and support for broader conservation.

6.5 Summary – Is There Any Evidence That Wildlife Tourism Has an Impact on Visitor Knowledge or Attitudes?

- There is evidence that visitors expect interpretation to be a part of their wildlife experiences and that for many, good quality interpretation is a major contributor to their satisfaction.
- There is some evidence that effective interpretation in association with wildlife interaction or viewing opportunities can result in more positive attitudes towards wildlife conservation.

7. WHAT IS KNOWN ABOUT VISITOR RESPONSES TO MANAGEMENT ACTIONS?

There is a widespread belief that interpretation programs are the most effective management options for encouraging sustainable visitor behaviour, and that restrictions to access and activities are likely to be perceived by visitors as detracting from their wildlife experiences. While there is substantial evidence that interpretation can be effective at changing visitor knowledge, understanding of, and attitudes towards sustainable behaviours, and some evidence that interpretation can change visitor behaviours, there is little evidence available to support the belief that education and interpretation are more effective than regulation. There is, however, some evidence that contradicts the second belief. Harris *et al.* (1995) found that 49% of visitors to the Pusch Ridge Wilderness in Arizona were willing to have their recreational activities prohibited or restricted to protect the mountain sheep populations that live in that area. Frost and McCool (1988) in a study of visitors viewing the bald eagle migration in Glacier National Park, found that 90% of those visitors who were aware of various restrictions on their behaviour believed that the regulations were necessary and 56% further stated that the restrictions had no impact on their experience, with 32% stating that the restrictions enhanced their experience. In this case, the restrictions included limited access to certain areas of the park, limits to numbers of visitors allowed into viewing areas and the requirement that visitors can only enter the viewing areas with a naturalist. Davis (1998) compared the enjoyment ratings of people swimming with whale sharks in Western Australia before and after changes to regulations that increased the distance between swimmers and the sharks. He found no change in overall satisfaction and an improvement in perceptions of crowding.

7.1 Feeding Wildlife

As noted in an earlier section, the issue of feeding wildlife is of major concern to many of those involved in the management and presentation of wildlife. A number of negative impacts have been identified as resulting from visitors feeding wildlife (see Burger, 1997 for a review). As a consequence, many management agencies and managers of captive settings are restricting or prohibiting feeding.

Often such actions are opposed by tour operators, because of a belief that visitors expect and enjoy feeding and that the restrictions will severely impact upon visitor enjoyment. In many cases prohibiting feeding also results in greater difficulties for visitors accessing and seeing wildlife. There is unfortunately, very little information available to inform this debate. Kreger and Mench (1995) have suggested that feeding results in movement and interaction, both factors that are sought by visitors, and that feeding may represent 'a way for the visitor to express a caring and nurturing interest in the animal' (1995, p. 147). In addition to the difficulties associated with wildlife feeding on the management/operator side, the visitors themselves appear to be divided on their preferences for the activity. In the study of visitors to Rainforest Habitat (Woods, 1999), 63% of visitors stated it was not at all or not very important to their experience to feed wildlife, while 37% stated it was somewhat or very important. This finding was replicated in the study of visitors to Kangaroo Island (Greenwood *et al.* 2000), where 62% indicated feeding/touching wildlife was not at all or not very important, and 38% indicated it was somewhat or very important. Despite the differences in the contexts of these studies (one a captive environment and the other a non-captive environment), the respondents were similarly divided in their response to preferences for wildlife feeding. There is however, no information available on why visitors feed wildlife, what they hope to achieve and what might act as a substitution for this activity.

7.2 Summary – What is Known About Visitor Responses to Management Actions?

- There is some evidence that suggests that visitors can be supportive of restrictions to their activities and access to wildlife, especially if supported by an effective interpretation program.
- There is a major gap in our understanding of visitor perceptions of wildlife feeding.

8. IDENTIFIED KNOWLEDGE GAPS

8.1 Demand

There is no information available in relation to the wildlife tourism expectations of international visitors to Australia. In particular, we know little about the species and abundance of wildlife visitors expect or seek, how important wildlife is in their decision to travel to Australia, or the types of experience sought. There is very little information on visitation to sites where wildlife can be seen or levels of usage of wildlife-focused tours.

8.2 Nature of Wildlife Tourism Markets

There is no information on the characteristics of visitors, either international or domestic, which seek wildlife experiences. There have been only very limited investigations of the different types of wildlife tourism markets.

8.3 Factors Associated with Satisfaction

A range of factors have been suggested or identified as having an influence on visitor satisfaction. No evidence is available on the relative importance of these factors. There has been no analysis of the relationships between the importance of these factors and different types of experience and/or different types of visitor.

8.4 Interpretation

There have been very few Australian studies of the effectiveness of available wildlife interpretation.

8.5 Responses to Management Actions

There is very little Australian information on visitor responses to the range of management actions currently in use or likely to be used to limit the negative impacts of wildlife tourism. The feeding of wildlife has been identified as a major issue and little information is available on visitor perceptions of this activity.

9. RECOMMENDATIONS TO IMPROVE CURRENT WILDLIFE TOURISM PRACTICES

One of the aims of this report is to explore the possibility of making recommendations to improve current wildlife tourism practices. The assessment of what is currently known has indicated that major gaps exist in our understanding of visitor demand for, use of, and satisfaction with current wildlife tourism opportunities. This makes it difficult to develop anything other than very broad and general recommendations. Nevertheless, five areas for recommendations can be identified.

9.1 A Better and More Accurate Understanding of Levels of Demand for Wildlife Experiences

It would benefit all stakeholders if the various national and state visitor surveys could incorporate a standard set of questions which assessed level of interest in wildlife in general and in types of wildlife experiences in particular. The addition of standard questions to the International and National Visitor Surveys would be particularly useful.

9.2 Factors Related to Satisfaction

The available evidence suggests that while the wildlife plays a central role in visitor satisfaction, it is important that commercial operations do not ignore other aspects of the experience especially interpretation, standards of facilities, and equipment and service. The same pressure to provide a quality experience exists for commercial wildlife tourism operations as for any other kind of tourism venture.

9.3 Promotion, Expectations and Preparation

One of the issues identified in both the key informant interviews and in studies of satisfaction was that of visitor expectations. Generally, it has been found that visitors with greater experience and more realistic expectations were less likely to be concerned about the numbers of wildlife encountered or the distance between themselves and the wildlife. This suggests that careful attention be paid to the images used in promotional campaigns to ensure they are up to date and

accurate, especially in terms of whether or not they show activities such as touching and feeding, which may not be allowed.

In addition, preparation of visitors before arrival at wildlife tourism sites or at the start of tours is also recommended. In particular, such a preparation should reinforce more accurate expectations, describe the likely conditions that will be encountered, and explain any rules and guidelines for minimal impact behaviours. It is important that this preparation be earlier in an experience, as visitor attention is likely to be taken up by the wildlife once they are encountered. This preparation of visitors could also include hints on how to look for less easily spotted wildlife species.

9.4 Interpretation

The available evidence shows that interpretation is both a significant contributor to visitor satisfaction and a potentially powerful tool to assist in the management of visitors. Continued staff training, and the development and upgrading of interpretation programs are recommended. No principles specific to wildlife interpretation have yet been developed. Rather, it is recommended that the principles and guidelines available for interpretation in general be used.

9.5 Developing New Ways to See and Experience Wildlife

One way to alleviate pressure on wildlife and their habitats and to enhance visitor experiences is to develop alternative ways to see and experience wildlife. It is recommended that management and tourism agencies explore new technologies to allow visitors remote or distant access to wildlife. Such technologies could act as substitutions for existing high pressure situations, as additional wildlife opportunities, and/or as enhancements to current experiences.

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