PART I: DESCRIPTIVE OVERVIEW OF WILDLIFE TOURISM

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WILDLIFE TOURISM RESEARCH REPORT SERIES: NO. 1
Status Assessment of Wildlife Tourism in Australia Series
EXECUTIVE SUMMARY

Introduction

Wildlife tourism is tourism based on encounters with non-domesticated (non-human) animals in either their natural environment or in captivity. It includes both so-called non-consumptive forms of wildlife tourism, such as viewing, photography and feeding; and consumptive forms, such as hunting and recreational fishing.

This report aims to achieve the following with respect to wildlife tourism in Australia:

- Describe the current status of the industry.
- Identify key issues and obstacles relating to development and sustainability.
- Identify potential unrealised opportunities.
- Identify key gaps in research.
- Create a basis for conceptual and practical links between diverse disciplines and stakeholder groups.

It is the central document for the wildlife tourism status assessment project, which in turn comprises the first stage of a large interdisciplinary research program of the CRC for Sustainable Tourism on wildlife tourism. Part I of the report provides a descriptive overview of wildlife tourism in Australia, placing it in the context of international tourism and wildlife tourism. Part II synthesises information from a series of individual status assessment reports on different aspects of Australian wildlife tourism and presents findings of stakeholder consultation processes. It then uses this information, combined with the more descriptive information provided in Part I, to draw conclusions and make recommendations for the future directions of Australian wildlife tourism.
Methods

Several components were combined in compiling this report:

1. Synthesis of information provided by 13 individual status assessment reports. These reports dealt with different disciplinary components of wildlife tourism (visitors, economics, wildlife, and host communities) and with different sub-sectors (such as birdwatching, tourism based on free-ranging marine wildlife, captive wildlife tourism and fishing). The research for these reports in turn was conducted mainly through literature reviews, often supplemented by interviews of key informants and some limited primary research.

2. Compilation of a database of wildlife tourism enterprises and activities in Australia. This was analysed to provide a broad description of the industry.

3. Stakeholder consultations. These comprised a series of regional workshops of wildlife tourism stakeholders, a workshop of the research program steering committee, and interviews with key staff from government tourism and conservation agencies.

4. Literature review and professional judgement. The contextual material provided in this report is based mainly on literature reviews, supplemented in some cases with judgements based on the authors’ combined professional knowledge.

The Current Status of Wildlife Tourism in Australia

Wildlife tourism in Australia consists of a wide range of different types of activities, and involves a very wide range of species. There are at least 1,196 enterprises that include wildlife as a planned component of the experience they offer to tourists. The largest numbers of operators of organised wildlife tourism are those running nature-based tours, and about 65% of wildlife tourism activities include wildlife as only one component of a more generalised experience. With eight million visitors per year, zoos and wildlife parks probably attract by far the greatest number of visitors. In addition, an unknown but probably very large number of visitors experience wildlife as independent travellers, often in protected areas. Kangaroos and their relatives seem to be the wildlife-group that features most often in wildlife tourism activities; kangaroos and koalas are the most popular among international visitors. Principally because of the diversity of sub-sectors involved, there is no overarching organisation or coordination of wildlife tourism in Australia. Instead there are a wide range of stakeholders covering tourism and wildlife-related interests.

Wildlife tourism is economically important globally and in Australia, although there are no reliable estimates of total participation or revenues for Australia. There is some evidence that wildlife tourism has the potential to bring even greater economic and employment benefits to Australia than is currently the case, although this has not been clearly established.

Australia has a number of important competitive advantages in relation to wildlife tourism. These relate principally to features of the wildlife such as high biodiversity and unusual species, a natural environment that is in some ways unusually conducive to wildlife viewing, and perhaps a high level of demand from tourists.

The most critical obstacles that the Australian wildlife tourism industry needs to overcome to ensure its sustainability are probably:

- Limited capacity within the industry to deliver high quality wildlife tourism experiences and financially sustainable businesses.
- The risk of negative effects of wildlife tourism on wildlife and habitats, if the current regimes of monitoring and management are not improved.
- Low levels of communication, coordination, strategic direction and government support for wildlife tourism.
- Lack of research in a range of critical areas.

Judging by international trends, there may be opportunities in Australia for:

- Increasing the level of specialisation in wildlife tourism products.
• Including new species and environments
• Increasing and improving the use of interpretation
• Increasing the use of technology to facilitate wildlife viewing
• Creating more experiences that combine captive and free-ranging wildlife tourism
• Building further synergies between tourism and conservation within wildlife tourism experiences

However, given the lack of good information at this stage on current and potential demand for wildlife tourism, it is not possible to make conclusive recommendations about types of new products that should be developed.

**Key Gaps in Research**

There are huge gaps in our knowledge of many aspects of wildlife tourism, especially in Australia. This is a major impediment to the sustainability and development of this industry.

Probably the most critical research gap is in relation to understanding of demand-side issues. Fundamental to strategic planning of wildlife tourism is a better understanding of the levels and nature of demand (both existing and latent), and how this differs between different market segments. Knowledge of visitor reactions (especially satisfaction) to existing experiences is also critical in improving product quality.

A lack of research on product development opportunities is another impediment to sustainable growth of wildlife tourism. Development of new product ideas and research into their feasibility are critical if the industry is to develop further. However in most cases expending significant resources on product development research would be premature before a better general understanding of the market is achieved.

Although this study found no evidence that Australia is yet experiencing widespread problems in terms of negative effects of wildlife tourism on wildlife, this is difficult to ascertain given the very limited research and monitoring that has occurred. This issue is likely to become more critical if wildlife tourism on free-ranging species expands further.

The lack of good information on the economic value of wildlife tourism and its various sub-sectors is an impediment to arguments for increased government support for wildlife tourism. If it can be demonstrated that a particular sub-sector or site provides significant economic benefits to regions or to Australia as a whole, then this may be an effective political argument for greater government funding and support for the industry and for its sustainable management.

In terms of sustainability of individual businesses, there is a serious lack of research on critical success factors for wildlife tourism enterprises, although some broad principles applying to tourism and nature-based tourism can be applied. According to feedback from the tourism industry, the most critical aspect requiring further research and attention is marketing.

While stakeholders raised a range of criticisms of current government and industry mechanisms for supporting and regulating wildlife tourism, these have not been systematically assessed. Ensuring that the bureaucratic environment supports the industry and yet protects the natural environment is vital to the sustainability of wildlife tourism. In particular, there is a need for a critical analysis of the existing legislative and policy frameworks, along with further consultation with stakeholders.

**The Need for a Holistic, Coordinated Approach to Wildlife Tourism**

Sustainability of wildlife tourism requires simultaneous attention to visitor satisfaction, visitor education, financial viability of individual businesses, economic benefits to society as a whole, impacts on wildlife and their habitats, and social effects on host communities. Where possible, future research designed to understand factors
contributing to sustainability of wildlife tourism enterprises should adopt this inter-disciplinary approach.

There are serious deficiencies in communication and coordination among wildlife tourism stakeholders. There is support among stakeholders for developing higher levels of communication and cooperation, and for a coordinated and strategic approach to sustainable development of wildlife tourism, particularly with regard to marketing. This status assessment project has begun the process of facilitating communication among wildlife tourism stakeholders, but it is the responsibility of governments and industry to drive any future process of coordinated strategic development of wildlife tourism.

**Recommended Research Priorities to Support Sustainable Development of Wildlife Tourism**

**Understanding Visitors**
- Determine size and nature of demand for various forms of wildlife tourism.
- Determine visitor expectations and reactions in relation to existing wildlife tourism experiences, especially in relation to satisfaction, and factors that influence these.
- Determine variability between market segments in the above.
- Assess visitor responses to different approaches to visitor management designed to minimise negative effects on wildlife.

**Effects of Wildlife Tourism on Wildlife and Management of these Effects**
- Determine the magnitude and nature of negative effects (if any) on wildlife for high risk species and situations, and factors that influence these.
- Assess the relative effectiveness of different management approaches in minimising negative effects and maximising positive effects of wildlife tourism on wildlife.

- Develop tools that can be used to more effectively monitor and manage effects of wildlife tourism on wildlife.

**Economic Value**
- As far as feasible, determine the total economic value of various forms of wildlife tourism in Australia.

**Business Operation**
- Determine critical factors influencing business success in wildlife tourism.
- Identify major areas of deficiencies in wildlife tourism business performance.
- Assess effectiveness of current marketing of wildlife tourism and identify areas for improvement.

**Opportunities for New Product Development**
- Develop a framework for investigating potential for, and developing new wildlife tourism products.
- Investigate feasibility of specific product development ideas.

**Policy and Legislation**
- Critically assess policy and legislative environment for wildlife tourism in consultation with stakeholders.
- Evaluate the performance of wildlife watching initiatives in North America and derive lessons applicable to Australia.

**Recommendations for Future Directions of Wildlife Tourism in Australia**
- Encourage innovation and adoption of world’s best practice in product development, supported by adequate research.
- Raise standards of product quality.
- Improve effectiveness of marketing.
• Build industry capacity to deliver high quality wildlife tourism experiences and be financially successful.

• Improve and expand application of techniques for minimising negative effects of wildlife tourism on wildlife.

• Improve and expand application of techniques for maximising positive effects of wildlife tourism on wildlife.

• Make regulation more operator-friendly while still achieving goals for high industry and environmental standards.

• Improve effectiveness of accreditation programs.

• Increase levels of government support for sustainable development of wildlife tourism.

• Increase the role of Indigenous people and issues in wildlife tourism.

• Build communication channels between wildlife tourism stakeholders.

• Initiate coordination and strategic development of wildlife tourism.

• Provide and facilitate funding for research to address key priorities.

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This report describes the current status of wildlife tourism in Australia, including its scope and scale, key issues and obstacles relating to its development and sustainability, and potential unrealised opportunities. It is based on a literature review, a descriptive database of wildlife tourism operators, and a synthesis of 14 related reports on different aspects of wildlife tourism, stakeholder consultations and professional judgement. Part I of the report provides a descriptive overview of wildlife tourism in Australia, and Part II uses information from Part I, the 14 reports and stakeholder consultation processes to draw conclusions and make recommendations for the future directions of Australian wildlife tourism.

Wildlife tourism in Australia consists of a wide range of different types of activities, a wide range of species, and involves at least 1,196 tourism enterprises. Wildlife tourism is economically important globally and in Australia, and there is some evidence that these economic benefits could be substantially increased. An analysis of international trends allows us to predict likely opportunities for further development of the sector. Australia has a number of important competitive advantages in relation to wildlife tourism, but also faces some critical obstacles. One of these obstacles is the lack of research on many aspects of wildlife tourism, especially in relation to demand-side issues. Sustainability of wildlife tourism requires simultaneous attention to visitor satisfaction, visitor education, financial viability of individual businesses, economic benefits to society as a whole, impacts on wildlife and their habitats, and social effects on host communities. There is support among stakeholders for a coordinated and strategic approach to sustainable development of wildlife tourism, particularly with regard to marketing. Specific recommendations for the future development of wildlife tourism in Australia are given.
1. INTRODUCTION

1.1 The Wildlife Tourism Research Program

The Cooperative Research Centre (CRC) for Sustainable Tourism is a research partnership between universities, the tourism industry and governments that has been established to develop and share knowledge that will enhance the environmental, economic, social and cultural sustainability of tourism. CRC Tourism is undertaking a major research program to identify and realise opportunities for wildlife tourism in Australia and to facilitate enhancement of its sustainability.

This wildlife tourism research program has a planned initial duration of six years (1999-2005) and is divided into three main stages. The first stage involves an assessment of the current status of wildlife tourism in Australia (the wildlife tourism status assessment project), including key issues and research priorities, and is the topic of this report. The second and major research stage focuses on detailed field research. In particular, case studies of various sub-sectors and at various scales are being conducted to derive lessons for the future direction and management of wildlife tourism and for appropriate product development. The final phase will use the results of the first two stages to develop policies and products that will support the sustainable management and development of the wildlife tourism industry. There is, however, much overlap between all of these phases.

The wildlife tourism status assessment project has generated 14 reports, covering a range of different aspects and perspectives (see Appendix B). The present report synthesises information from the other status assessment reports and provides additional general material in order to provide an overview of the current status of wildlife tourism in Australia.

1.2 What Is Wildlife Tourism And What Are Its Components?

For the purpose of this research program and report, the term wildlife tourism is defined as tourism based on encounters with non-domesticated (non-human) animals in either their natural environment or in captivity. The scope of this definition includes both so-called non-consumptive forms of wildlife tourism, such as viewing, photography and feeding; and consumptive forms, such as hunting and recreational fishing.

Technically, wildlife includes both fauna and flora, but here we restrict it to fauna (animals), as usually understood in common usage and by the tourism industry. The term ‘animal’ is defined in the biological sense to mean any member of the Kingdom Animalia (except humans, for our purposes), and thus includes not only land-dwelling vertebrates such as mammals and birds, but also aquatic vertebrates that usually live in the sea or inland waters, such as platypus, frogs, fish and turtles. It also includes invertebrates such as glow worms, butterflies, corals and starfish. Non-domesticated animals are not restricted to animals that are native to the country in question – such as kangaroos and galahs in Australia – but also include exotic animals, whether held in captivity (e.g. tigers), or introduced into the natural environment either deliberately (e.g. foxes) or accidentally (e.g. feral pigs). The term ‘non-domesticated’ rather than ‘wild’ is used because the latter term is ambiguous with regard to whether it refers to the type of animal or to its setting (e.g. a koala in a zoo is still technically a non-domesticated species, but it is not clear whether it is any longer a wild animal).

Wildlife tourism overlaps with nature-based tourism, special interest tourism and ecotourism (Figure 1), the extent of the overlap depending on exactly how these terms are defined. Most wildlife tourism is a subset of nature-based tourism, in that animals are a subset of nature. However, zoos and other attractions where wildlife are kept in captivity are often not seen as nature-based tourism, though clearly they are based on a component of nature. Wildlife tourism that occurs within the context of nature-based activities that provide environmental interpretation and adopt environmentally responsible practices would generally be considered ecotourism1. In cases where a tourist travels to a particular destination primarily for the purpose of having a wildlife experience, then wildlife tourism can be seen as a form of special interest tourism (Hall and Weiler 1992). However, for most wildlife tourism activities, motivations will differ

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1 See Commonwealth Department of Tourism (1994) for a widely accepted definition of ecotourism in Australia.
between visitors. Hunting is not normally considered ecotourism in Australia, although this position appears to be largely a value judgement rather than relying on objective application of the criteria by which ecotourism is usually defined in the academic and government literature.\(^2\) The use of the above terms to describe types of wildlife tourism are avoided because of such ambiguities, and they are replaced with what we believe is a more useful classification system in section 2.7. Other definitions that apply to key terms used in the present report, as well as in other reports in this series, are given in Appendix A.

**Figure 1: Relationship of wildlife tourism to other forms of tourism**

The visitor-wildlife encounter that comprises the core of a wildlife tourism experience is a result of the interaction of components relating to the natural resource base (wildlife and its habitat), the visitor, the operator or business, and the setting (Figure 2). Encounters will also lead to consequences for the visitor, the natural resource base, the economy (from the level of the individual business to that of the country as a whole), and for the host community. There will also often be interdependencies between and within these components. All these components will, in turn, depend on the wider context in which the experience occurs. In order to understand and manage wildlife tourism appropriately, there is a need to consider all of these components in an integrated way. Thus, this status assessment project takes the approach of considering different components separately, and then drawing them together in the present report.

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\(^2\) In theory, hunting which involves a sustainable harvesting regime, does not negatively impact on the natural environment and includes interpretation, could be considered ecotourism.
1.3 The Sustainability Of Wildlife Tourism

The focus of this research program on wildlife tourism is to identify the opportunities and constraints that exist in relation to the sustainable development and management of the wildlife tourism industry. Therefore, it is appropriate to provide some background information on sustainability and what it means for wildlife tourism.

The Brundtland Report (World Commission on Environment and Development 1987) defined sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Kirk 1996). This definition implies that development needs to use resources at a rate and in a way that will allow future generations to do the same. Development of tourism activities must be consistent with the principles of sustainability. In relation to the natural environment, this is summed up by Eber (1992) who states that if it is not to contribute further to environmental degradation and destroy itself in the process, the tourism industry, like other businesses, must recognise its responsibility to the environment and learn how to become sustainable (Eber 1992). This concept applies equally to the wildlife tourism industry.

However the concept of sustainability extends beyond the natural environment. In Australia we have had the benefit of a federal government sponsored process designed specifically to address the need for sustainability within the tourism industry (ESD Working Group 1991). The resulting report defined sustainable tourism as tourism that:

- is concerned with the quality of experience offered to visitors;
- provides economic returns to host communities;
- ensures cultural integrity and social cohesion of host communities;
- protects biological diversity;
- maintains ecological systems;
operates within the limits of the resources available;

• maintains the full range of opportunities within and across generations;

• is based upon activities or designs which reflect the character of the region; and

• allows visitors to gain an understanding of the destination and encourages them to be concerned about, and protective of, the destination.

Aspects of sustainability that are most relevant for wildlife tourism are financial viability, visitor satisfaction, visitor education, and impacts of tourism on wildlife and habitats.

The problem then becomes what level and kind of activity will result in a sustainable wildlife tourism industry. Sustainability is difficult to measure. Physical, economic and social components of sustainability need to be considered, as well as any trade-offs between these. For example, activities that lead to an economic benefit may contribute to degradation of the physical environment. Moreover, social costs may be accepted by host communities where the economic benefits are perceived to outweigh the costs. It is also important to recognise that often, some stakeholders may experience benefits while others experience costs. Additionally, as stated by Barbier (1987, p.104) ‘the dynamic nature of development, and the diverse social, economic and ecological conditions in which it must be pursued, mean that the various trade-offs involved are constantly changing over time’. Determining a sustainable level of activity is a complex task.

Concepts such as carrying capacity, limits of acceptable change (LAC) and the precautionary principle are relevant to determining a sustainable level of activity for wildlife tourism activities. The carrying capacity concept as it relates to wildlife tourism refers to the maximum level of activity that will not cause ‘unacceptable impacts’ on wildlife species, wildlife habitats and host communities. The LAC approach is ‘based on the premise that change is inevitable, but that it is important to decide just how much change is acceptable’ (Davis 1997, p. 31). Alternatively, the precautionary principle focuses on preventing potential impacts through the implementation of control measures. There are proponents for each of these management concepts, so each needs to be considered when determining what level of activity will result in the sustainable development and management of wildlife tourism.

In the future, tourism operators will need to adopt best practice environmental management processes that will contribute to sustainability. It is possible that managers of tourism organisations in the future will be required to have an environmental skill base, enabling them to determine sustainability indicators and conduct evaluation processes. A significantly different management style may emerge as the wildlife tourism industry comes to terms with the requirements of sustainable development practices.

Furthermore, adopting the concept of sustainability will require that wildlife tourism development is integrated into national, regional and local strategic planning frameworks. Planning will be required to ensure that wildlife resources are not over-exploited, that natural environments are protected and that tourism provides real benefits to local host communities. Host communities are often the basis of the tourism enterprise, therefore local people should be involved and included in planning and implementation, and their cultures and traditions need to be respected (Eber 1992). The development and management policies adopted in the future need to reflect these environmental and cultural concerns so that sustainability can be achieved.

1.4 Why Is Wildlife Tourism An Important Topic For Research?

This research program comprises, as far as we are aware, the world’s first major interdisciplinary research program on wildlife tourism. In summary, the reasons that such a program is needed in Australia are:

1. There are a number of indirect lines of evidence indicating that Australia has the potential to obtain more revenue from wildlife tourism than is currently the case (sections 2.2, 2.3, 2.6). In particular, it has been suggested that it could bring financial benefits to economically depressed regional communities, farmers
1.5 Aims and Approach of the Status Assessment Project

The status assessment project aims to achieve the following with respect to wildlife tourism in Australia:

- Describe the current status of the industry;
- Identify key issues and obstacles relating to development and sustainability;
- Identify potential unrealised opportunities;
- Identify key gaps in research, policy, and training;
- Create a basis for conceptual and practical links between diverse disciplines and stakeholder groups, and between industry and academics;
- Disseminate this information to stakeholders.

1.6 The Purpose of This Report

This report as a whole comprises the central document for the wildlife tourism status assessment project. It provides background contextual information, presents a synthesis of the findings of the individual

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3 See Green and Higginbottom (2001) for further information on negative effects of wildlife tourism on wildlife and management of those effects.

4 This aim will be addressed in more detail in a future CRC report by C. Fausnaugh, K. Higginbottom, and S. Noakes.

5 The building of links between industry and academics and the dissemination component is being addressed through publication and distribution of the CRC reports (and academic papers) and fact sheets, a series of wildlife tourism workshops in different parts of Australia (see section 1.5.2), spoken presentations at various conferences, written contributions to industry newsletters, and use of the CRC’s website.
status assessment reports (listed in Appendix A) and presents input from workshops and key informants. This information is then used to draw general conclusions about the current status of the Australian wildlife tourism industry and the key opportunities and obstacles it is facing, as well as offer recommendations regarding future needs in terms of research, policy, and training. Overall, the report provides directions for Australian wildlife tourism that will support its sustainable development and management.

In particular, Part I provides a descriptive overview of wildlife tourism in Australia, placing it in the context of international tourism and wildlife tourism. For the reader who simply wishes to understand what wildlife tourism is, its significance, and what form it takes in Australia, it may be read without reference to Part II. Readers who are interested in future directions for Australian wildlife tourism will need to read both parts. Further, this report may be read alone or in conjunction with more detailed reports on aspects of particular interest to the reader. Readers of the other status assessment reports will gain a better appreciation of the context of those reports by reading them in conjunction with the present report.

1.7 Methods Used For Part I

Literature Reviews
Relevant published and grey literature was critically reviewed in order to provide background and context to Australian wildlife tourism (sections 2.1, 2.2, 2.3, 2.4, 2.6, 2.8).

‘Expert’ Knowledge
Some of the descriptive summaries and views expressed in this report were based partly on the professional experience of the research team, including that based on informal conversations with a wide range of people involved in different aspects of wildlife tourism. This applies to identified trends in tourism (section 2.1) and wildlife tourism (section 2.3), as well as key issues relating to wildlife (section 2.4) and the summary of organisation of wildlife tourism in Australia (section 2.8).

Description of Wildlife Tourism Activities in Australia
The main source of information used to describe wildlife tourism activities (section 2.5) was a database of commercial wildlife tourism operators compiled for the purpose of this study. Initially, attempts were made to obtain relevant government lists of permit holders (commercial operators in protected areas and state forests, wildlife exhibitors etc.) but this proved not possible due to privacy regulations. Thus information was obtained mainly from advertising sources.

- Promotional material (mainly brochures and regional guides) available through offices of Regional Tourism Associations (RTAs) and Local Tourism Associations (LTAs). All Australian RTAs and selected LTAs were contacted and asked to send all material relating to tourism enterprises that featured wildlife. A response rate of approximately 80% was achieved, with no major differences in response rates between States. It is assumed that most of these staff would have sent the majority of material relating to wildlife. Since LTAs occurred within RTA areas, the coverage of businesses that produce promotional brochures would have been higher than indicated by the above response rate.

- A complete search of relevant categories in the electronic yellow pages of Australian phone directories.

- Guides to Australian host farms produced by each State’s host farm association.

- Membership lists of some of the main organisations representing wildlife tourism operators (ARAZPA, QWPA, EAA).

- Selected specialist wildlife magazines (Nature Australia, Wildlife Australia, Geo, Australian Geographic, Wingspan, Guns Australia, Sporting Shooting, Feathers and Fur).

- Websites of the Australian Tourism Commission, various state tourism agencies, and Western Australian Department of Conservation and Land Management.

- Word-of-mouth information provided by key informants, including staff of state tourism and conservation agencies.
It is expected that the following types of wildlife tourism businesses might be under-represented because they advertise or sell through very specialised channels: birdwatching, hunting, fishing, mobile wildlife exhibitors, and research or conservation holidays. It is further expected that many general sightseeing tours that include a small wildlife component would have been overlooked by RTA staff. Otherwise we expect that coverage was fairly comprehensive and representative.

Information on the following variables (among others) was recorded where available into a Microsoft Access (relational) database. Since data were not always available for all of these, sample sizes vary between variables:

For each Enterprise:
- Business or organisation name
- Contact details
- Type of animals (species-groups) used in visual images in promotional material (each species-group that occurred once or more for a particular enterprise was entered once for that enterprise – i.e. multiple entry.)

For each Activity run by the Enterprise:
- Type of activity (as commonly distinguished) e.g. zoo, farm, specialised wildlife tour
- Type of interaction with wildlife e.g. handling, viewing only (multiple entry)
- Type of animals visitors can expect to see (multiple entry)

This information was then used to provide breakdowns of the number of enterprises and activities in each of the various categories of the above variables. Note that for variables with multiple entries, the total number of activities is less than the total number of records for this variable.

Classification of Wildlife Tourism Activities (section 2.7)
A detailed list of types of wildlife tourism activity collected during compilation of the database was examined to determine the smallest number of variables that could be used to distinguish between types of activities. During persual of information on individual enterprises, other variables expected to have significance for design, marketing or management were also listed.

Identification of Stakeholders (section 2.8)
A list of stakeholder groups was compiled by the authors and sent to the wildlife tourism research subprogram steering committee* for additional input. Thus the compiled list contains a synthesis of those readily identifiable groups perceived by the research team to have significant interests in – or that could be significantly affected by – wildlife tourism in Australia.

Interviews (principally section 2.8 and Appendix D)
Attempts were made to interview one or more key staff members in the government tourism agency and conservation agency in each major state and Territory (i.e. excludes ACT). Through consultation with senior staff of these agencies, the people thought to be most knowledgeable in relation to wildlife tourism were identified. In some cases different people were put forward to answer different questions. Due to either difficulty in finding someone with appropriate knowledge, or the lack of availability of the relevant people within the required time, there were some gaps in coverage. A total of 16 senior staff members were interviewed (Appendix C).

Interviewees were informed of the definition of wildlife tourism being applied (as in section 1.2). The semi-structured interview questions listed in Box 1 were used, with additional prompting where necessary. Answers to questions 1, 2 and 3 are covered in Part I and answers to questions 4, 5, and 6 are covered in section 4.3 of Part II of the report.

* The steering committee consists of key staff from a range of government and non-government wildlife-related and tourism-related organisations and several wildlife tourism operators.
Box 1: Interview questions for government staff in relation to general issues pertaining to wildlife tourism.

Conservation agency informants were explicitly asked not to comment in detail on issues relating to impacts of wildlife tourism on wildlife and habitats as this was being addressed in another report (Green and Higginbottom 2001).

1. Is your organisation doing anything to actively support sustainable development of ecotourism/wildlife tourism? (If so, explain including documentation e.g. strategies, policies, plans, research; staff allocated)?
2. What is the relationship between conservation and tourism interests in your organisation? (Include: staff attitudes, role of tourism/conservation in policies and legislation, cooperation between tourism bodies and conservation agencies)
3. What does your department see as the role of the public and private sector in wildlife tourism? What implications, if any, does the competitive neutrality principle have for your State?
4. What in your opinion are the major obstacles facing wildlife tourism currently? (from the point of view of operators and sustainable development of the industry as a whole)
5. Are there opportunities for more wildlife tourism activities in your State? If so, what? (including locations, species, types)
6. Are there any major gaps in information, training or documentation that would assist in overcoming obstacles or meeting opportunities more effectively?

1.8 Outline

Part I of this report begins by providing contextual information through an overview of relevant features of the tourism industry as a whole, both internationally and in Australia (section 2.1). It then describes wildlife tourism on a global scale (section 2.2), and identifies international trends that are important to consider in planning for a sustainable future for Australian wildlife tourism (section 2.3). A descriptive overview of Australian wildlife tourism is then provided, including a review of relevant aspects of the wildlife resource (section 2.4), a description of the scope and scale of wildlife tourism (section 2.5), and some preliminary information on its economic importance (section 2.6). A classification system that can be used to describe different forms of wildlife tourism in ways that are relevant to its management is presented in section 2.7. The final descriptive section (section 2.8) presents a brief description of how Australian wildlife tourism is organised, identifies the major stakeholders and their roles and relationships, including the roles of the private and public sectors. A concluding section then summarises the main points raised in this document.
2. DESCRIPTIVE OVERVIEW OF WILDLIFE TOURISM

2.1 International And Australian Tourism

In order to examine constructively its potential, wildlife tourism must be seen not in isolation but within the context of tourism in general. As such, wildlife tourism is responding to the same forces and reflecting similar trends as tourism in general.

Tourism is one of the world’s (as well as Australia’s) largest and fastest growing economic activities. According to the World Travel and Tourism Council (WTTC), tourism worldwide generates either directly or indirectly 11% of GDP, 200 million jobs and eight per cent of employment (WTTC 2000a). More than 660 million people spent at least one night in a foreign country in 1999 and this group of international tourists spent more than US$453 billion dollars while travelling. The World Tourism Organization (WTO) predicts that annual growth for international tourism over the next twenty years will be approximately four per cent with the number of international travellers reaching one billion per year by 2010 and more than 1.6 billion by 2020 (WTO 2000a).

Australia is a relatively small player in global international tourism. Travel from, to and within Europe makes up by far the largest proportion (58.7% of international tourist flows) of the world’s international tourism of any region. Australia is ranked number 32 for international arrivals out of the 40 countries that provide statistics to the WTO (WTO 2000b), and as number 33 for outbound tourists.

However, growth in tourism within Australia has been rapid in the last decade and it is now a major industry in this country. In 1999, more than 4.3 million international tourists visited Australia and 76% of these came to visit friends and relatives (20%) or for a holiday (56%). These inbound tourists spent AUD$16.4 billion, and created export earnings of AUD$17 billion, which accounted for nearly 15% of the country’s total export earnings. In 1990, the number of international tourist arrivals was only 2.2 million. International tourism to Australia has been growing steadily with annual growth rates of around seven per cent for the last decade, although growth has slowed considerably in the last three years. The Tourism Forecasting Council predicts that international visitors will exceed eight million by the year 2008. The majority of Australia’s international visitors are from Asia (2.3 million) and Europe (1.1 million), with the fastest growth rates recorded and predicted for Asia (sources for statistics on international tourism to Australia are WTO 2000a, 2000b; ATC 2000; BTR 1991, 1998).

Domestic tourism is also a major industry in Australia. In the 1998-1999 financial year, more than 263 million nights were recorded for domestic travellers, with nearly 70% of these nights being for holidays or spent visiting friends and relatives. Predictions for the next 10 years are for annual growth rates of around two per cent (sources for statistics on domestic tourism in Australia are BTR 1999, OFT 2000).

Nature-based tourism, depending on how it is defined, is one of the largest tourism sectors globally, and provides an annual financial contribution of somewhere between US$600 billion and US$6 trillion in 1996 (Weaver et al. 1999). The common claims in the popular (and sometimes academic) literature that nature-based tourism is the fastest growing segment of the tourism industry worldwide have not been substantiated quantitatively. However, as stated by Weaver et al. (1999, p. 17) ‘ample anecdotal evidence combines to suggest the paramount status of this sector within the overall tourism industry’ of Australia. This is associated with the diverse and relatively undisturbed natural environments, high safety levels, and large network of protected areas, combining with the infrastructure of a developed country. In recognition of its importance, most Australian States/Territories place a major emphasis on nature in their tourism promotional efforts.

Several major trends in international tourism are worth noting in relation to their potential significance for wildlife tourism. These include:

- Growth of international tourism to, within and from the East Asia/Pacific region.

Note that these estimates include indirect economic effects, in contrast to the figures above dealing with tourism in general, which cover only direct expenditure.
Consequently, wildlife tourism generates very large financial revenues on a global scale, which almost a decade ago were estimated as US$47-$155 billion annually (Filion et al. 1992 cited in Ceballos-Lascurain 1996). Wildlife viewing in Canada and a number of American states is said to be ‘a multi-million dollar industry’ (Duffus and Dearden 1990). Hunting, although having a lower public profile than wildlife viewing, involves a large proportion of ‘tourists’ as defined here, and is reported to be a multi-billion dollar industry within the United States alone (Bauer and Giles 2001). Whale watching seems to be the only sub-sector of wildlife tourism for which a reasonably accurate global estimate of annual revenue is available: total whale watching tourism expenditures in 1998 have been estimated at US$1,049 million (Hoyt 2000).

To the authors’ knowledge, the only detailed research (based on large scale surveys) to determine the importance of wildlife-related recreation has been in North America, although these statistics generally do not distinguish tourism from recreation by local residents. The most up-to-date and comprehensive study estimates that during 1996 more than 62 million United States adults participated in ‘wildlife watching’ and spent a total of US$29.2 billion on their wildlife-related trips, activities and equipment (direct and indirect expenditures) (US Department of the Interior, Fish and Wildlife Service 1998). In the same study, the total economic output of wildlife watching, hunting and fishing was estimated to be greater than US$254 billion. A slightly earlier study estimated that there were about 37.5 million people in the United States who annually travel more than 1.6 km from their place of residence in the United States to observe, photograph or feed wildlife (Flather and Cordell 1995), and another estimated that in 1994, 76.5 million United States residents participated in ‘wildlife viewing’ (State Task Force on Texan Nature Tourism 1994).

Within the United States, information on participation rates or economic benefits is also available for certain sub-sectors.

2.2 International Wildlife Tourism

Wildlife tourism globally attracts very large numbers of tourists, though there are no reliable global estimates for this sector as a whole. For whale watching alone, there were an estimated nine million participants around the world in 1998 (Hoyt 2000). Judging by statistics available for North America (see below), many millions more participate in other forms of viewing of free-ranging animals. Probably even greater numbers of people participate in viewing animals in zoos, with an estimated 600 million visitors annually (IUDZG/CBSG 1993). However, it is not clear in either case what proportion of these visitors are tourists. In addition, millions of people worldwide participate in hunting tourism (Bauer and Giles 2001), and a further unknown, but very large number of people participate in fishing tourism.

8 The study was based on interviews with 34,000 people. The figures comprise people of at least 16 years of age for whom the primary motivation for a trip is wildlife-related, but include local recreationists as well as tourists.

9 This figure appears to be restricted to viewing of wildlife in natural areas although this is not made explicit.
Birdwatching has been estimated to involve up to 60 million people (Hall and O’Leary 1989) or alternatively 20-35% of the adult population (Adams et al. 1997). Whale watching is estimated to have attracted just over 4.3 million visitors in 1998, with a total expenditure of about US$357 million (Hoyle 2000). There are estimated to be 14 million active recreational hunters, spending between US$28 billion and $70 billion on hunting and related activities (Bauer and Giles 2001). Although participation rates are lower, this total expenditure is much greater than the estimated figure for non-consumptive forms of wildlife tourism in natural areas given above.

Wildlife viewing has been identified as the activity forecast to have the strongest growth potential within the adventure travel sector in western Canada (Ethos Consulting 1991). A number of American states and Canadian provinces, with support from their national governments, have also identified wildlife viewing as an important growth area within their jurisdictions.

Information on the importance of wildlife tourism outside North America is difficult to obtain, though a few scattered statistics are available. For example in the United Kingdom, enjoyment of wildlife was found by one survey to be a priority for 90% of holidaymakers (Roe et al. 1997). Another survey in the mid 1990s indicated that more than half of the United Kingdom population had visited a zoo, wildlife or safari park over the previous five years (Shackley 1996). Wildlife is reported to be a prime attraction for 32% of international tourists to Australia and 80% of international tourists to Kenya and Zimbabwe (Risk & Policy Analysts Ltd 1996 cited in Roe et al. 1997). In Kenya, tourism based on the viewing of free-ranging wildlife has been estimated to be worth US$400 million to the national economy (WTO and UNEP 1992). The hunting industry in South Africa is estimated to be worth US$69.3 million annually, and the revenue from hunting license fees alone in Tanzania is about US$4.5 million (more than that raised from park entry fees) (Makombe 1993). These and other examples illustrate that at least some forms of wildlife tourism are economically important in some parts of the world.

Further, because wildlife is often most abundant far from major urban development, it has been argued that wildlife tourism can provide a much needed boost to depressed economies in rural areas (McCool 1996, Goodwin et al. 1998). For example, in parts of southern Africa, game viewing is much more valuable than farming of domestic livestock (although this is sometimes associated with land-use conflicts) (Muir 1987, Sindiga 1995, Akama 1996).

Because the world’s highest levels of biodiversity tend to occur in less developed countries, they offer some of the world’s most well-known wildlife tourism destinations. The world’s most ‘popular’ destination for international non-consumptive wildlife tourism based on free-ranging animals (as indicated by numbers of tour operators) is reported to be Eastern Africa (particularly safari-style viewing of large cats and ungulates), followed by Central and Southern America (rainforest wildlife and the Galapagos National Park) (Shackley 1996). In some of these countries (e.g. Kenya, Costa Rica, Ecuador), wildlife is the major motivation for tourism.

Thus, although the available information is limited in terms of geographical coverage and accuracy, the evidence points to wildlife tourism based on free-ranging animals being very important economically on a global scale. It seems to be particularly important in those countries with a well-developed market for such activities (North America and Europe) and those with exceptional wildlife resources.

By contrast zoos and other captive wildlife attractions seem to be most abundant and most developed in more developed countries, where the greatest markets for wildlife tourism exist (section 2.1) and where it is often most difficult for people to see a wide range of species in their natural habitats. Similarly, while subsistence fishing and hunting are clearly widespread in less developed countries, recreational forms of such activities are most widespread in the more developed countries.

Thus there are a range of statistics indicating high rates of participation and expenditure associated with wildlife tourism. Caution is however required in drawing conclusions that there is a high or growing demand for wildlife tourism experiences. Using participation rates to measure or demonstrate growth can be called a product or supply driven perspective on demand, and such an approach has several major limitations. Firstly, it is rare to find the growth rates for wildlife tourism compared to growth rates for a...
engage in less desirable practices such as going closer to the wildlife or feeding wildlife to encourage their presence. Overestimates of demand may also apply 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 tourism 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 may be provided, resulting in visitor dissatisfaction. In other words, managers would be better served with information about such things as the types of wildlife experience desired, the levels of specialisation amongst visitors, and differences in their characteristics.

While the evidence presented in this section supports the general conclusion that there exists substantial demand for wildlife tourism and recreational activities there are major gaps in our understanding of the nature of this demand. More specifically very little is known about:

- the levels of demand for viewing particular species;
- the levels of demand for different types of wildlife encounters such as free-range versus captive and remote versus easily accessible;
- the characteristics of tourists who seek wildlife encounters;
- the range of different types of wildlife tourism markets; and
- whether existing growth reflects an increasing interest in wildlife or the filling of existing latent demand.
2.3 Trends in Wildlife Tourism

A number of key global trends in wildlife tourism can be identified, and are described below. It is important that Australia is aware of and responds where appropriate to these trends to maximise its competitive advantage in the international tourism market.

Increased levels of participation or interest in some types of wildlife tourism

There are frequent claims in the literature that tourist demand for, and interest in, opportunities to see and interact with wildlife is growing at a rapid rate (e.g. Vickerman 1988, Shackley 1996, Roe et al. 1997). However, the evidence for such claims is difficult to assess (see also section 2.2). As noted by Roth and Merz (1997, p.71), ‘the flow of tourists to the designated wildlife areas is rather difficult to evaluate as it is monitored reliably only in some countries’. Statistics from the United states indicate that participation in non-consumptive and non-residential wildlife recreation increased substantially during the period from 1980 to 1990, but declined during the period from 1990 to 1995, with a decrease of 17% in all forms of wildlife viewing and a decrease of 21% for non-residential wildlife viewing10 (US Department of the Interior, Fish and Wildlife Service 1996). On the other hand the evidence that is available indicates that there has been exponential growth in the numbers of visitors participating in whale watching (Hoyt 2000) and possibly also substantial growth in bird watching (Jones and Buckley 2001).

While viewing of free-ranging wildlife in North America at least in some sub-sectors may have increased in recent decades, the opposite trend seems to apply to consumptive wildlife tourism, although there appears to be no global statistics available. In particular, recreational hunting is reported to be in decline in most developed countries (e.g. Backman and Wright 1990 cited in Mieczkowski 1995). The number of hunters in the United states fell from 30 million to 21.2 million between 1982 and 1994, while the number of people who engaged in recreational fishing fell from 60.1 million to 58.3 million during the same period (Cordell et al. 1995).

In a recent Australian study, Moscardo et al. (2001) reported that opportunities to see wildlife/birds are a very important factor in holiday destination decisions for:

- 37% of German long haul international travellers,
- 44% of Japanese long haul international travellers,
- 38% of United Kingdom long haul international travellers,
- 62% of Dutch long haul international travellers11,
- 34% of tourists to the Whitsunday region in Australia, and
- 35% of tourists to the Far North Queensland region in Australia.

They also report that having opportunities to see wildlife is a factor in the travel decisions of:

- 80% of visitors to Flinders Chase National Park in South Australia,
- 39% of a sample of visitors and residents in North and Far North Queensland, and
- 35% of tourists to the Far North Queensland region in Australia.

While no overall figures appear to be available, numbers of visitors to some of the larger Australian zoos have increased substantially over the last five years, whereas they have decreased for others (Tribe 2001). Clearly the picture regarding growth of wildlife tourism is a complex one, and needs to be examined carefully on a sector and location-specific basis.

Increased specialisation of wildlife tourism

There is some evidence to suggest that there has been an increase in the level of specialisation of wildlife watchers over recent years.

10 However there was no decline in total expenditure.

11 These last four figures were derived from surveys of international travellers in their home country about their international pleasure travel in general.
Although rates of participation in wildlife viewing in the United States decreased during 1990-1995, expenditure on specialised equipment for this group increased by 35% from 1990 to 1995 (US Department of the Interior, Fish and Wildlife Service 1996). There have also been reports of increasing membership in specialist organisations such as the American Birding Association (Adams et al. 1997). Thus, although overall participation in wildlife viewing may not be increasing, it seems that specialisation in species viewed may be on the rise.

Although there is evidence that wildlife watchers may be becoming more specialised in their interest and skills, there has been little research into either wildlife watchers in general or into the factors related to specialisation. Thus, it is important to be careful about assumptions made about the implications of increasing specialisation for tour operations and attractions. Duffus and Dearden (1990) have suggested the following continuum of activities from generalist to specialist wildlife viewing:

1. Visits to captive settings.
2. Outdoor activities in which wildlife might be expected to be a component.
3. Taking specific trips to places where wildlife is likely to be seen.
4. Taking trips to view particular species.

These stages were meant to reflect increasing commitment especially in terms of time, effort and money invested (Duffus and Dearden 1990). It appears that as visitors gain more experience and greater environmental awareness there is an increase in their expenditure on specialist equipment and their interest in more specialised wildlife activities. Recent Australian research by Moscardo (2000) supports this sequence, but notes that movement along the sequence does not mean that visitors with a specialist interest in wildlife abandon more generalist activities. In fact, wildlife viewers who participate in more specialised wildlife activities were also more likely than those with a general interest in wildlife to visit and attend less specialised activities such as visits to captive settings.

**Development of wildlife viewing opportunities in a wider range of environments with a wider range of target species**

A major trend in free-range wildlife viewing is towards developing wildlife viewing in a wider range of environments and focused on a wider range of species. In the past, non-captive wildlife viewing has been concentrated on large species that were easy to see in environments that were readily accessible. Thus, wildlife tourism in rainforests has not had the same profile as whale watching or safaris in Africa. Both Roe et al. (1997) and Roth and Merz (1997) provide examples of a change in this pattern with a trend towards the development of tourism in environments such as tropical rainforests and with a focus on species that are more difficult to find and observe. This trend probably reflects factors such as increased ease of international transport, support from governments for development of nature-based and wildlife tourism, and demand for new products from an increasingly sophisticated market (Shackley 1996). This trend also seems to be reflected in Australia, though it has not been researched directly.

**Increased consideration of animal welfare issues**

The early days of wildlife tourism were comprised mainly of trophy hunting and of zoos with animals exhibited in small, bare cages. Recent decades have witnessed a shift in prevalent public values within more developed countries from a dominant and utilitarian attitude to one referred to as humanistic and moralistic, in which animals are valued more highly alive than dead (Kellert 1996). This change in attitude has been accompanied by increasing public concern about animal welfare issues. This shift has been largely responsible for changes in zoo objectives, the design of more humane exhibits, improvement in animal husbandry standards, and increased use of behavioural enrichment (Van Linge 1992). It has also been associated with the decline of circuses and blood sports (Shackley 1996); and in the decline in the numbers of people involved in recreational hunting, at least in the United States. Similarly, catch and release fishing is becoming an increasingly popular form of recreational fishing and one that is offered by a growing number of tour operators. These trends also seem to apply to Australia.
Increased environmental awareness

Growing interest in, and concern for the natural environment (including wildlife) among residents of more developed countries has apparently contributed greatly to increased demand for tourism in viewing animals within their natural environment (Shackley 1996). On one hand, this has ironically led to increased visitation pressures on some sensitive natural areas and wildlife species. On the other hand, it is often reported that this growing awareness has meant that tourists are increasingly concerned that their tourism activities do not damage the natural environment, and are increasingly motivated to contribute to conservation (e.g. participating in conservation holidays, or making donations to wildlife conservation) (e.g. Shackley 1996). Perhaps because people empathise more strongly with animals than they do with the natural environment as a whole, this trend seems to be particularly apparent with wildlife tourism. This change in the nature of demand from tourists has apparently led, to some extent, to tourism operators becoming more environmentally responsible, although it is often claimed that such changes have mainly been only superficial (Shackley 1996). Similar trends are apparent in Australia.

Increased use of technology to facilitate wildlife viewing

The Alaska SeaLife Centre also provides an example of another trend in captive settings in North America: the use of technology to allow visitors to a captive setting or attraction to watch animals in the wild. In the Alaskan example, free-ranging seals are fitted with cameras that relay back to the centre images of the seal’s world. In free-ranging settings, technology is also increasingly allowing ‘close-up’ views of animals that could not otherwise occur without causing excessive disturbance. For example there are now a range of such experiences available in Scotland (B. Taylor, pers. comm.). A hide at Kylerhea allows viewing of otters as they move into pools that have been excavated to attract them to this location; when the otters are not present, visitors can view footage of the otters on a video monitor. Video monitors are available for remote viewing of a range of birds of prey in various visitor information centres. Tourists can monitor locally resident dolphins through underwater microphones near Inverness. Such uses of technology are only beginning to be explored in Australia. Remote viewing of a bat colony at the Naracoorte Caves (South Australia) using remotely controlled infrared cameras is at the forefront of such technology. Seals are remotely viewed on a movie screen at a man-made facility adjacent to the colony at Seal Rocks (Victoria, Australia). A wildlife tour operator in North Queensland (Wildscapes Safaris) uses an infrared video camera on the top of his four-wheel drive to allow visitors clearer views of nocturnal wildlife than they would otherwise obtain (pers. obs.).

It is yet to be determined whether such remote or substitution options will be successful with visitors. If they are, it will become possible to offer a much wider range of opportunities for presenting wildlife to visitors at the same time as limiting the negative impacts of direct contact on wildlife.

Increased use of interpretation in captive settings

Captive settings such as zoos and aquaria, especially in North America, are recognising the wide range of interests amongst their visitors and have been developing a number of features in response to this recognition. The amount and quality of interpretation is increasing, with many zoos in the United States and Europe creating major exhibitions using a variety of interpretive techniques to supplement their animal displays. Visitors to Tropic World at Chicago’s Brookfield Zoo, for example, enter the exhibition area by passing along a trail that provides various interpretive stations offering interactive opportunities related to understanding that humans are primates. Inside the exhibition there are many display panels, and interactive games supporting various messages about the species on display. The African Savannahs exhibition area at the Denver Zoo offers visitors a discovery trail through a recreated savannah area, with no animals actually displayed in this area. Most large zoos and aquaria in North America and in other more developed countries are also moving to exhibitions which provide immersion experiences for their visitors and which group animals together according to ecosystems or habitats. While some Australian zoos and wildlife parks have increased the level of use and sophistication of interpretation in recent years, such changes generally seem to be ‘behind’ those in North America.
**Blurring of the distinction between captive and free-ranging wildlife tourism**

In the early days of zoos, the distinction between the small sterile cages (then typical of zoos) and the animal’s natural habitat was very clear cut. These days, as zoos move towards larger and more naturalistic exhibits, and as natural environments become increasingly fragmented and modified, the distinction is less clear. Many national parks (e.g. in Africa) are surrounded by fences in order to keep wildlife in or sometimes to keep people out. Even in Australia, the maintenance of endangered animal populations is sometimes reliant on fences that exclude introduced predators (e.g. properties owned by Earth Sanctuaries Ltd). Meanwhile, some wildlife parks now cover very large areas and are either constructed around the existing natural environment (often with some rehabilitation), or contain relatively accurate reconstructions of these habitats. Another type of ‘intermediate’ viewing situation is the use of remote viewing of wild animals within a man-made facility, such as the examples given in the previous section. In a slightly different approach, at the adjacent Phillip Island Penguin Reserve interpretive facility, visitors can see unconfined wild penguins in nesting boxes that have been positioned so that they can be viewed from inside the facility. Thus, there is no longer a clear distinction between captive and free-ranging wildlife tourism experiences.

**Increased recognition of synergies between wildlife tourism and conservation**

Until the last decade or so, the dominant conservation philosophy has been to rely principally on legally protected areas (which occupy only a small proportion of the earth’s surface) for wildlife conservation. There has more recently been a progressive recognition that if conservation is to be successful in the long term, it must be promoted on other lands, and must be integrated with the realities of modern economies and meeting people’s needs (Shea et al. 1997). Governments and major international conservation organisations now widely support the view that well-managed nature-based tourism is one form of land use that can meet these joint goals (a view first clearly articulated by Budowski 1976). In areas where suitable wildlife exists, development of tourism based on wildlife viewing or consumption can (at least in theory) provide economic incentives and revenue for conservation of natural habitats and wildlife (Higginbottom et al. 2001).

One consequence of this change in philosophy is promotion, support for and growth of development of wildlife tourism on privately or communally owned land. There has been a long tradition of game hunting on private lands in North America, Southern and Eastern Africa, which has acquired renewed impetus from greater recognition of the potential conservation benefits. The CAMPFIRE program in Zimbabwe is one of the most widely quoted examples of such initiatives. This program provides income to local people in exchange for safari hunting on their lands and has led to a number of conservation gains (Makombe 1993). In more developed countries, this impetus has been applied more strongly to non-consumptive wildlife tourism activities than to consumptive forms, given an apparent decreased level of broad community support for the latter. While wildlife viewing is still carried out mostly in protected areas, there have been a number of initiatives motivated by conservation interests to encourage private landowners to take up wildlife tourism. The Conservation Corporation Africa, a private wildlife tourism company reportedly ‘represented the biggest private investment in conservation in southern Africa’ by 1993 through its purchase and management of land for this purpose (Roe et al. 1997, p. 30). Together, private game reserves in South Africa have been responsible for reintroductions of many native animals (see Higginbottom et al. 2001 for further details). Similarly in Costa Rica, nature-based tourism (with a significant wildlife component) has helped provide funds for a large number of privately owned forest reserves seen as important to conservation goals (Honey 1999).

A second and related trend is the initiation of programs with joint conservation and wildlife viewing objectives. The United states is probably at the forefront of such initiatives, particularly with its National Watchable Wildlife Program, initiated in 1990. This program involves cooperation between state and federal government land management and conservation agencies, non-government conservation groups, local communities, and business and industry participants and has the goals of:
• providing enhanced opportunities for the public to enjoy wildlife on public and private lands;
• contributing to local economic development;
• promoting learning about wildlife and habitat needs; and
• enhancing public support for resource conservation.

The program’s main initiatives have been to support the development of a network of wildlife viewing areas that incorporate interpretation, to produce a set of wildlife viewing guides (now available for more than half of American States), and to set up a communication network (The National Watchable Wildlife Program 2001).

A similar earlier initiative in British Columbia (Canada), The Wildlife Viewing Program, was formally established in 1989 with approval for a five year, CAN$1.7 million budget (Duffus and Wipond 1992). Program implementation revolved around the production of Regional Wildlife Viewing Plans and Wildlife Viewing Site Development Plans.

Two other initiatives in the United states that were set up primarily for conservation purposes, but which also include goals relating to promotion of appropriate wildlife tourism are the ‘Teaming with Wildlife’ Campaign and The National Wildlife Refuge System/Partners for Fish and Wildlife Program.

Teaming With Wildlife is a legislative initiative driven by a coalition of 3,000 organisations and businesses (led by a non-government conservation organisation and with strong involvement from state conservation agencies). It aims to prevent species from becoming endangered and nurture a new generation of wildlife stewards by securing funding for non-game wildlife conservation and related education and recreation programs. Secondary stated goals are to help meet escalating demands for outdoor recreation and education, and to assure an economic future for nature tourism and the outdoor industry (Teaming With Wildlife 2001). The key problem this initiative seeks to address is that currently there is no secure funding from the federal government for conservation of species unless they are fished or hunted (for which user fees support conservation initiatives) or endangered. Largely as a result of this campaign, a federal Bill was passed in late 2000 that secured partial funding for this program for 2001, but with no assurance of continuation after one year.

The National Wildlife Refuge System/Partners for Fish and Wildlife Program is administered by the US Fish and Wildlife Service with the aim of creating, protecting and managing areas for wildlife. One part of this program is the development of partnerships with private landowners to support the creation and conservation of wildlife habitats on private land. As in the other two programs, there is a major emphasis on the use of these sites for recreation and interpretation, particularly wildlife-related recreation and interpretation (USFWS 2001a, USFWS 2001b).

Australian governments have incorporated statements about the merits of using nature-based tourism to help foster conservation goals into various strategy documents (e.g. Tourism Victoria 2001, Commonwealth Department of Tourism 1994). The recent strategy on nature-based tourism produced by Tourism Victoria states: ‘Central to Victoria’s strategy for nature based tourism is a clear commitment to ensure that tourism is an effective vehicle for conservation.’ (Tourism Victoria 2001, p.4). However this does not seem to have led to any specific government programs to facilitate such links12. Australia’s Land for Wildlife program aims to encourage private landowners to restore and conserve habitats for wildlife (Land for Wildlife 2001). However, this program differs from the American examples previously cited in that it does not emphasise the use of these areas for tourism or recreation.

The second major way in which wildlife tourism and conservation are becoming increasingly integrated is that individual wildlife tourism enterprises are becoming progressively more involved in conservation and research activities. This applies particularly to larger zoos, where conservation is now regarded as a primary role (Tribe 2001). This is implemented through captive breeding of endangered species, education programs and research. Wildlife tourism enterprises are increasingly using their involvement in research and/or conservation as

12 Instead, the key approach seems to support industry initiatives to raise standards of environmental practices and interpretation.
a drawcard for visitors. For example, The Alaska SeaLife Centre provides a number of opportunities for visitors to watch ongoing marine research, while Seaworld (Gold Coast, Australia) widely promotes its involvement in research and rescue relating to marine mammals. Although no quantification is available, there also seems to be a trend for free-ranging wildlife tourism enterprises to become increasingly involved in conservation (see Higginbottom et al. 2001 for further details on positive effects of wildlife tourism on wildlife). A related trend is that conservation organisations are becoming progressively more involved in tourism, in recognition that this can provide a source of revenue as well as increase promotion of their goals. Wolf Park (Indiana, USA) is an example of a research centre that has provided limited visitor access to support its goals of research and education about wolves. Visitors can participate in a Wolf Howl on Friday evenings, guided tours and lectures on Saturdays and a Wolf-Bison lecture and demonstration on Sunday afternoons. Non-government conservation organisations like Worldwide Fund for Nature and the Australian Koala Foundation have also branched out into running tourism ventures, as a way of raising revenue and providing education.

Accompanying such changes, both in Australia and internationally, is a move towards greater communication between tourism and conservation stakeholders. In Australia this has occurred most noticeably within government processes, whereby informal or formal communication mechanisms have been set up between tourism organisations and conservation agencies at head office and local levels. It is also apparent in changes of approach within many non-government conservation organisations, many of who are now working directly with government bodies and are less involved in public activism than in previous decades. Stakeholders with tourism interests seem to be motivated by growing recognition of the importance of conserving the resource base on which tourism relies, and a perception that tourists are increasingly expecting high environmental standards. Those with conservation interests may be motivated by recognition that appropriate forms of tourism can contribute to conservation. Both groups seem to have increasingly accepted the existence and legitimacy of the other, and recognised that working cooperatively is the most effective way to achieve their own goals.

Summary
In summary, it is clear that opportunities to see wildlife are a major component of both international and domestic travel. The following trends in international wildlife tourism have been identified, and are also occurring to varying extents in Australia:

- Increased levels of participation or interest in some types of wildlife tourism.
- Increased specialisation of wildlife tourism.
- Development of wildlife viewing opportunities in a wider range of environments with a wider range of target species.
- Increased consideration of animal welfare issues.
- Increased environmental awareness.
- Increased use of interpretation in captive settings.
- Increased use of technology to facilitate wildlife viewing.
- Blurring of the distinction between captive and free-ranging wildlife tourism.
- Increased recognition of synergies between tourism and conservation.

2.4 The Wildlife Viewing Resource In Australia

The Australian fauna is remarkable on a global scale in a number of ways, providing the potential basis for a world-renowned wildlife tourism destination. On the other hand, there are a number of features of Australian wildlife that provide constraints on the type of wildlife tourism experiences that can be provided, and possibly on overall development of this form of tourism. These features are reviewed below, along with relevant background information on the Australian fauna. More detail is provided on the features,
opportunities and constraints relating to particular types of Australian animals in Green et al. (2001).

Australia is known as one of the few great centres of megadiversity in the world (Beattie 1995), and the only one with a developed, industrialised economy (Burgman and Lindenmayer 1998). It is home to between 200,000 and 300,000 animal species, with only 100,000 so far described (Richardson 1987), and has the world's third largest number of mammal species (WCMC 1992). Such biodiversity is particularly pronounced when compared with other developed countries and those with large numbers of tourists. This high biodiversity relates to size of the country (Australia is the largest island in the world), the wide range of climatic conditions and natural habitats, and the lack of major human influence until recently. Habitats in the coastal areas of Australia comprise mostly eucalypt forests and open savannah woodlands. Most of Australia (especially the interior) is arid or semi-arid, and comprises mainly open grassland, shrubland or desert. There are also a range of distinct habitat types occurring in relatively limited areas, such as rainforest, coastal swamp forest, and mountain heath.

However only a fraction of Australia's animal species are known to the Australian public, let alone the international community. The positive side of this for the Australian wildlife tourism industry is that tourists can experience the excitement of seeing species they did not even know existed; the negative side is that there will be no demand for something that a tourist does not know exists.

Although experiencing a range of climates, temperatures in Australia never become very low, so most Australian endotherms 13 (mammals and birds) do not display the strong seasonality of activity seen in much of Europe and North America. There are seasonal variations, such as migration of many bird species and occurrence of breeding at a certain time of year, that need to be taken into account in planning, but this would not be sufficient to preclude tourism at a particular time of year in most areas. Terrestrial ectotherms (reptiles, frogs and invertebrates), however, usually do exhibit strong seasonality.

13 Animals that maintain high body temperatures using their own metabolic processes, as opposed to relying on external temperatures (ectotherms).

Australian fauna are also highly unusual, in terms of both exceptionally high levels of endemism 14 and unique features of certain species. This is due largely to Australia's long history of geographical isolation, being isolated from other continents for more than 50 million years. About 80% of Australian animal and plant species are endemic, and there are more known endemic terrestrial vertebrate species that in any other country (Burgman and Lindenmayer 1998). Australia ranks first in the world in terms of number of endemic species for mammals and reptiles, second for birds, and third for amphibians (WCMC 1992). High endemism at the species or genus level is to be expected for any island, but in Australia that endemism extends in many cases to the family level – leading to whole groups of animals that are conspicuously different from those found elsewhere in the world.

The Australian fauna has a number of other features of scientific interest (Biodiversity Unit 1994). Largely as a result of an unusually long period of geological stability, it has a number of primitive, relict species. There are a number of types of unusual ecological interactions between animals and plants that are particularly well developed in Australia, such as certain forms of seed dispersal, pollination and protection from predation. For many threatened species that also occur elsewhere (such as marine turtles, marine mammals and certain migratory birds) Australia plays an important role as a refuge from severe threats that occur in other parts of their range. In combination, these features combined with the high levels of diversity, endemism and otherwise unusual fauna, lead to Australia having a very high conservation value, which could be used as a selling point for tourism.

Levels of abundance differ greatly between species, but many Australian species occur in large numbers. In particular, the 20 million or so kangaroos in Australia are one of the world's largest remaining 'populations' of large wild terrestrial mammals (Pople and McLeod 2000). The relatively low human population densities, low scale of development and consequent large areas of remaining natural habitat compared with many other countries have allowed many species of

14 A species (or other taxon) that is endemic to a region is one that occurs naturally only in that region.
native animals to continue to live through much of the country. Although large areas of Australia are used for farming, by far the majority of this consists of extensive livestock grazing, where (to varying extents) much of the native vegetation remains. Even Australian cities and towns are unusually ‘green’ by world standards, with native parklands and roadside verges of native trees being common. Thus, in most places where tourists visit in Australia, they can expect to see at least some native wildlife.

The relatively extensive network of terrestrial protected areas that cover more than 7.5% of the country (580,000 km²) preserves examples of most major habitat types, with their associated fauna. There is a similar total area of marine protected areas, the largest by far being the Great Barrier Reef Marine Park. However, a downside of Australia’s large size and relatively low level of development in relation to viewing wildlife is difficulties associated with access. Many of the most prolific wildlife areas are very remote from major urban centres, and lack good roads and other infrastructure desired by most tourists.

Compared with many of the other countries with high biodiversity, levels of safety for tourists walking in natural wildlife habitat are high. Although some Australian native animals can be dangerous (poisonous snakes, saltwater crocodiles, certain insects and arachnids, several marine species), these can easily be avoided either by staying on walking tracks or adopting some simple precautions (see Green et al. 2001 for further details). There are no large terrestrial predators comparable with large cats or bears that occur in the wilderness areas of other continents. Perhaps a downside of the lack of large dangerous animals is that, apart from the crocodile, tourist satisfaction based on the excitement associated with danger is relatively low. Small dangerous species like snakes and spiders are probably less likely to be associated with such excitement.

Although wild animals still occur throughout most of Australia, the fauna does now face several major threats due to recent human influence. For terrestrial species, probably the most significant negative influence has been habitat destruction and modification, associated with tree clearing, farming techniques and urbanisation. Since 1840, it is estimated that 66% of Australian forests have been cleared. Although partially balanced by creation of new protected areas, habitat destruction continues to be a threat in many areas. There have also been profound negative effects on the native fauna caused by introduced animals (Thomson 1987). These include species deliberately introduced by early European settlers (e.g. rabbit, hare, fox, cane toad, European carp), those accidentally introduced (e.g. European rats and mice), and domestic species that have become feral (e.g. horse, donkey, pig, camel, and cat). Although there are introduced species in most faunal groups, the mammals are thought to have had the most devastating effects. Particularly damaging species are thought to be foxes and cats, which prey on native species; and rabbits, which have been responsible for extensive habitat modification. In marine environments, key threats include the effects of global warming, particularly on the Great Barrier Reef, effects of anthropogenic pollution on coastal waters, and effects of fishing (bycatch and overfishing).

While there are many conservation programs funded by Australian governments and non-government organisations, many environmentalists believe that current levels of funding and political commitment are insufficient to reverse declines. Further, since most viewing of free-ranging wildlife occurs in protected areas, it is of concern that funding for management of these areas has not kept pace with growth in visitation (Buckley 2000, QPWS 2000).

As a consequence of these and other threats, Australia has the highest percentage of rare and threatened mammal species of any continent (extrapolated from Environment Australia 2001) and ranks seventh for vertebrate species overall (WCMC 1992). In fact Australia has the highest recorded rate of recent mammal extinctions of any country (Burghman and Lindenmayer 1998). About 17 species have become extinct in the last 200 years, and 22 species are classified as threatened with extinction unless action is taken to reverse these threats. This is a threat to the wildlife tourism industry because if species continue to decline the wildlife viewing resource will be reduced. It also means that in cases where tourism could potentially cause additional stresses on already threatened populations, it should be avoided altogether.

Conversely, threatened native species are being reintroduced into some areas, where they can ultimately comprise a new resource for
wildlife viewing, and, at the same time, tourism could potentially help support such conservation programs. These include some of our most unusual and perhaps attractive mammals, such as numbats and bilbies. The two major examples of this phenomenon are being carried out by Earth Sanctuaries Pty Ltd and by the Western Australian Department of Conservation and Land Management. Earth Sanctuaries is a public company that owns a number of areas of native habitat that have been fenced to keep out introduced predators, and restocked with threatened species. Guided tours take visitors to see these animals. In Western Australia, threatened mammals are being reintroduced to large areas with active fox baiting programs, and fledgling tourism operations are being set up with these species as a focus. In both cases, tourism is seen as a revenue generator and an educational tool to support conservation. Time will tell whether these programs are successful in achieving all these objectives.

Perhaps the greatest constraint to wildlife tourism based on free-ranging animals is that most Australian terrestrial animals are difficult to view without some skill and knowledge, and for mammals and frogs night viewing is preferable. Birds and several of the larger mammal species are the vertebrate animals that are most easily amenable to viewing. This situation creates constraints on viewing, such that only the most dedicated and persistent independent travellers are likely to see a wide range of species. On the other hand, it creates opportunities for tourism operators who have good wildlife skills and are able to creatively overcome the hardships associated with viewing that would be experienced by the independent traveller.

Research by the CRC for Sustainable Tourism indicates that, for international visitors, koalas and kangaroos are well ahead of any other animals in terms of desirability of viewing, enjoyment and association with Australia in the visitor’s mind (Fredline and Faulkner 2001). Thus at this stage these two kinds of animals can be seen as the ‘icon’ animals for Australian wildlife tourism. Since these are probably also the animals that are most frequently featured in organised tourism, and the most heavily promoted (section 2.5), this preference could be at least partly driven by marketing. More detailed information on characteristics of different faunal groups in relation to their suitability for tourism is covered in Green et al. (2001).

To summarise, positive features of Australian wildlife in relation to tourism are principally:

- high biodiversity;
- high levels of endemism;
- fauna with unusual features;
- high conservation value of Australia for wildlife;
- high levels of scientific interest;
- relatively low seasonality;
- ease of finding and observing some species that occur in high numbers and/or predictable concentrations;
- relatively few dangerous species; and
- relatively large areas of habitat remaining and under legal protection.

Features that may be constraints on sustainable development of wildlife tourism are:

- many species that are difficult to find and/or observe and/or occur in remote areas;
- high proportion of threatened species; and
- relative lack of large or dangerous native species.

### 2.5 Scope And Scale Of Wildlife Tourism In Australia

Wildlife tourism in Australia is highly diverse in terms of species, habitats, geographical location and type of activity; and an understanding of the nature of this diversity is important as a basis for future discussion. According to the database compiled as part of this project, there are 1,196 wildlife tourism operators in Australia. This
figure can be viewed as a minimum estimate, as explained in section 1.7. The activities vary hugely in terms of visitor numbers, with a major attraction like Melbourne Zoo attracting almost a million visitors (not all tourists) in 1994/95, and some small ecotour businesses receiving numbers in the low hundreds. Available figures on total numbers of visitors and revenue for sub-sectors are presented in section 2.6.

Types of activities
Organised wildlife tourism in Australia includes a diverse array of types of activities (Table 1). By far the most common (28.2% of activities) are nature-based tours. Three of the four most common activities and 64.8% of all activities include wildlife as only one component of a broader experience. Specialised wildlife experiences consist of similar proportions of captive situations (14.6% of all activities), and activities involving consumptive use of wildlife (13.6%). A smaller proportion of these specialised activities involve non-consumptive tourism based on free-ranging animals (7.0%).

<table>
<thead>
<tr>
<th>TYPE OF ACTIVITY</th>
<th>NUMBER OF ACTIVITIES</th>
<th>% OF ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Tour – Land-based</td>
<td>392</td>
<td>28.2</td>
</tr>
<tr>
<td>Zoo/Wildlife Park/Theme Park</td>
<td>184</td>
<td>13.2</td>
</tr>
<tr>
<td>Farm stay</td>
<td>130</td>
<td>9.3</td>
</tr>
<tr>
<td>General Tour</td>
<td>129</td>
<td>9.3</td>
</tr>
<tr>
<td>Fishing</td>
<td>102</td>
<td>7.3</td>
</tr>
<tr>
<td>Wildlife Tour – Land-based</td>
<td>84</td>
<td>6.0</td>
</tr>
<tr>
<td>Diving/Snorkelling</td>
<td>79</td>
<td>5.7</td>
</tr>
<tr>
<td>Wildlife Accommodation</td>
<td>64</td>
<td>4.6</td>
</tr>
<tr>
<td>Exotic Wildlife Farm</td>
<td>57</td>
<td>4.1</td>
</tr>
<tr>
<td>Wildlife Tour – Marine-based</td>
<td>55</td>
<td>4.0</td>
</tr>
<tr>
<td>Aquarium/Marine Park</td>
<td>21</td>
<td>1.5</td>
</tr>
<tr>
<td>Nature Tour – Marine-based</td>
<td>18</td>
<td>1.3</td>
</tr>
<tr>
<td>Hunting</td>
<td>17</td>
<td>1.2</td>
</tr>
<tr>
<td>Native Wildlife Farm</td>
<td>15</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>3.2</td>
</tr>
<tr>
<td>Total known</td>
<td>1392</td>
<td>100%</td>
</tr>
<tr>
<td>Unknown</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1404</td>
<td></td>
</tr>
</tbody>
</table>

Animals used in visual images
Kangaroos and their relatives comprise by far the largest proportion of visual images in promotional brochures (featured in 41.2% of all brochures), followed by koalas (21.6%) (Table 2). No other animal features in more than 10.5% of brochures. Altogether, 116 types of animals in visual images were recorded.

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15 General Tours are tours that stop at both wildlife and non-wildlife attractions, and general sightseeing tours that include seeing free-ranging animals.
16 Wildlife Accommodation is any tourist accommodation where wildlife is advertised as one of the features.
17 E.g. alpaca or ostrich farm.
18 E.g. emu or crocodile farm.
Other breakdowns of wildlife tourism activities were done separately for captive attractions (zoos, wildlife parks, theme parks, and aquaria) and for free-ranging non-consumptive activities (including tours, attractions and accommodation). Insufficient information was available to undertake breakdowns for hunting and fishing.

### Types of animals featured in wildlife tourism activities

While the kangaroo or its relatives were the kinds of animals most frequently advertised in both captive and free-range activities, the predominance of this group was much more marked in the free-ranging situation than in captivity (Table 3). Conversely, koalas were more commonly advertised as occurring in captive than free-ranging situations. Aquatic animals featured more frequently in advertising associated with free-ranging activities than those for captive situations. In total, 260 different types of animal were mentioned in advertising material.

### Table 2: Frequency of visual images of different types of animals in promotional brochures

<table>
<thead>
<tr>
<th>TYPE OF ANIMAL PICTURED</th>
<th>NUMBER OF BUSINESSES</th>
<th>% OF ANIMAL PICTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangaroo/Wallaby/Potoroo</td>
<td>126</td>
<td>14.3</td>
</tr>
<tr>
<td>Koala</td>
<td>66</td>
<td>7.5</td>
</tr>
<tr>
<td>Crocodile</td>
<td>32</td>
<td>3.6</td>
</tr>
<tr>
<td>Lizard</td>
<td>31</td>
<td>3.5</td>
</tr>
<tr>
<td>Emu</td>
<td>24</td>
<td>2.7</td>
</tr>
<tr>
<td>Possum</td>
<td>23</td>
<td>2.6</td>
</tr>
<tr>
<td>Wombat</td>
<td>22</td>
<td>2.5</td>
</tr>
<tr>
<td>Cockatoo</td>
<td>21</td>
<td>2.4</td>
</tr>
<tr>
<td>Dolphin</td>
<td>21</td>
<td>2.4</td>
</tr>
<tr>
<td>Sea-lion/Seal</td>
<td>17</td>
<td>1.9</td>
</tr>
<tr>
<td>Whale</td>
<td>17</td>
<td>1.9</td>
</tr>
<tr>
<td>Lorikeet</td>
<td>17</td>
<td>1.9</td>
</tr>
<tr>
<td>Snake</td>
<td>16</td>
<td>1.8</td>
</tr>
<tr>
<td>Parrot</td>
<td>15</td>
<td>1.7</td>
</tr>
<tr>
<td>Platypus</td>
<td>15</td>
<td>1.7</td>
</tr>
<tr>
<td>Eagle</td>
<td>14</td>
<td>1.6</td>
</tr>
<tr>
<td>Frog</td>
<td>13</td>
<td>1.5</td>
</tr>
<tr>
<td>Penguin</td>
<td>13</td>
<td>1.5</td>
</tr>
<tr>
<td>Tasmanian Devil</td>
<td>13</td>
<td>1.5</td>
</tr>
<tr>
<td>Dingo</td>
<td>13</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>354</td>
<td>40.0</td>
</tr>
<tr>
<td><strong>Total number of species pictures</strong></td>
<td>883</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Total businesses with promotional brochures perused</strong></td>
<td>306</td>
<td></td>
</tr>
<tr>
<td><strong>Businesses without information on species pictures</strong></td>
<td>890</td>
<td></td>
</tr>
<tr>
<td><strong>Total businesses</strong></td>
<td>1196</td>
<td></td>
</tr>
</tbody>
</table>

Frequencies are the total number of businesses for which each type of animal was pictured at least once in promotional material perused. Percentages are the proportions of all visual images across all brochures that featured the animal in question. Only the 20 most frequently pictured species are listed.

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46 As explained in section 1.7, the total number of activities is less than the total number of records because each business may have more than one type of animal pictured; the same principle applies to Table 3.
Table 3: Frequency of the 20 types of animals most frequently mentioned in advertising materials

(a) Captive wildlife activities

<table>
<thead>
<tr>
<th>TYPE OF ANIMAL</th>
<th>NUMBER OF ACTIVITIES FOR WHICH TYPE OF ANIMAL IS CITED</th>
<th>% OF SPECIES CITATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangaroo/Wallaby/Potoroo</td>
<td>66</td>
<td>13.3</td>
</tr>
<tr>
<td>Koala</td>
<td>53</td>
<td>10.7</td>
</tr>
<tr>
<td>Wombat</td>
<td>27</td>
<td>5.6</td>
</tr>
<tr>
<td>Emu</td>
<td>27</td>
<td>5.6</td>
</tr>
<tr>
<td>Crocodile</td>
<td>23</td>
<td>4.7</td>
</tr>
<tr>
<td>Snake</td>
<td>16</td>
<td>3.2</td>
</tr>
<tr>
<td>Dingo</td>
<td>14</td>
<td>2.8</td>
</tr>
<tr>
<td>Lizard</td>
<td>11</td>
<td>2.2</td>
</tr>
<tr>
<td>Possum</td>
<td>10</td>
<td>2.0</td>
</tr>
<tr>
<td>Tasmanian Devil</td>
<td>10</td>
<td>2.0</td>
</tr>
<tr>
<td>Butterfly/Moth</td>
<td>8</td>
<td>1.6</td>
</tr>
<tr>
<td>Parrot</td>
<td>8</td>
<td>1.6</td>
</tr>
<tr>
<td>Owl</td>
<td>8</td>
<td>1.6</td>
</tr>
<tr>
<td>Monkey</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>Deer</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>Flying Fox/Fruit-bat/Bat</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>Echidna</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>Platypus</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>Bilby</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td>Cassowary</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td>Other</td>
<td>169</td>
<td>34.1</td>
</tr>
<tr>
<td><strong>Total number of species citations</strong></td>
<td><strong>495</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td><strong>Activities with known species citations</strong></td>
<td><strong>102</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Activities with unknown species citations</strong></td>
<td><strong>102</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Activities</strong></td>
<td><strong>204</strong></td>
<td></td>
</tr>
</tbody>
</table>

(b) Free-range non-consumptive activities

<table>
<thead>
<tr>
<th>TYPE OF ANIMAL</th>
<th>NUMBER OF ACTIVITIES FOR WHICH TYPE OF ANIMAL IS CITED</th>
<th>% OF SPECIES CITATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangaroo/Wallaby/Potoroo</td>
<td>175</td>
<td>14.9</td>
</tr>
<tr>
<td>Dolphin</td>
<td>76</td>
<td>6.5</td>
</tr>
<tr>
<td>Emu</td>
<td>63</td>
<td>5.4</td>
</tr>
<tr>
<td>Crocodile</td>
<td>62</td>
<td>5.3</td>
</tr>
<tr>
<td>Koala</td>
<td>57</td>
<td>4.9</td>
</tr>
<tr>
<td>Wombat</td>
<td>35</td>
<td>3.0</td>
</tr>
<tr>
<td>Whale</td>
<td>32</td>
<td>2.8</td>
</tr>
<tr>
<td>Possum</td>
<td>30</td>
<td>2.6</td>
</tr>
<tr>
<td>Turtle</td>
<td>26</td>
<td>2.2</td>
</tr>
<tr>
<td>Penguin</td>
<td>24</td>
<td>2.0</td>
</tr>
<tr>
<td>Eagle</td>
<td>22</td>
<td>1.9</td>
</tr>
<tr>
<td>Platypus</td>
<td>21</td>
<td>1.8</td>
</tr>
<tr>
<td>Tasmanian Devil</td>
<td>19</td>
<td>1.6</td>
</tr>
<tr>
<td>Echidna</td>
<td>17</td>
<td>1.4</td>
</tr>
<tr>
<td>Sea-lion/Seal</td>
<td>17</td>
<td>1.4</td>
</tr>
<tr>
<td>Lizard</td>
<td>17</td>
<td>1.4</td>
</tr>
<tr>
<td>Cockatoo</td>
<td>15</td>
<td>1.3</td>
</tr>
<tr>
<td>Camel</td>
<td>13</td>
<td>1.1</td>
</tr>
<tr>
<td>Manta Ray</td>
<td>12</td>
<td>1.0</td>
</tr>
<tr>
<td>Kingfisher</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td>Other</td>
<td>429</td>
<td>36.6</td>
</tr>
<tr>
<td><strong>Total number of species citations</strong></td>
<td><strong>1173</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td><strong>Activities with known species text</strong></td>
<td><strong>429</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Activities with unknown species text</strong></td>
<td><strong>542</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Activities</strong></td>
<td><strong>971</strong></td>
<td></td>
</tr>
</tbody>
</table>

Frequencies are the total number of activities in which each type of animal was cited at least once in promotional material. Percentages are the proportions of all citations of species across all brochures that featured the animal in question. Types of animals are listed in order of descending frequency.
Interaction type
Nearly all wildlife tourism activities, whether involving free-range non-consumptive or captive wildlife, were advertised as allowing for viewing of animals (Table 4). In both cases, the next most frequently mentioned form of interaction was photography. Handling and feeding were more common in captive situations (35.8% and 33.0% of activities respectively) than in free-range situations (5.6% and 11.3% respectively). A more diverse array of interaction types occurred in the free-range situations.

Table 4: Frequency of different types of tourist-wildlife encounters

(a) Captive wildlife activities

<table>
<thead>
<tr>
<th>INTERACTION TYPE</th>
<th>NUMBER OF ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>106</td>
</tr>
<tr>
<td>Photograph</td>
<td>40</td>
</tr>
<tr>
<td>Handle</td>
<td>38</td>
</tr>
<tr>
<td>Feed</td>
<td>35</td>
</tr>
<tr>
<td>Ride</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total activities with known interaction type(s)</strong></td>
<td><strong>106</strong></td>
</tr>
<tr>
<td><strong>Activities with unknown interaction type(s)</strong></td>
<td><strong>98</strong></td>
</tr>
<tr>
<td><strong>Total Activities</strong></td>
<td><strong>204</strong></td>
</tr>
</tbody>
</table>

(b) Free-range non-consumptive activities

<table>
<thead>
<tr>
<th>INTERACTION TYPE</th>
<th>NUMBER OF ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>572</td>
</tr>
<tr>
<td>Photograph</td>
<td>97</td>
</tr>
<tr>
<td>Feed</td>
<td>68</td>
</tr>
<tr>
<td>Fish</td>
<td>54</td>
</tr>
<tr>
<td>Handle</td>
<td>34</td>
</tr>
<tr>
<td>Ride</td>
<td>17</td>
</tr>
<tr>
<td>Eat</td>
<td>9</td>
</tr>
<tr>
<td>Capture</td>
<td>4</td>
</tr>
<tr>
<td>Tag</td>
<td>4</td>
</tr>
<tr>
<td>Hunt</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total activities with known interaction type(s)</strong></td>
<td><strong>602</strong></td>
</tr>
<tr>
<td><strong>Activities with unknown interaction type(s)</strong></td>
<td><strong>369</strong></td>
</tr>
<tr>
<td><strong>Total Activities</strong></td>
<td><strong>971</strong></td>
</tr>
</tbody>
</table>

Frequencies are the total number of activities in which each type of interaction was recorded as typically occurring in promotional material. Since each activity may have more than interaction type, the total number of activities is less than the total number of records of types of interactions.

Geographical distribution
The distribution of wildlife tourism enterprises around Australia, both overall (Figure 3a) and within particular sectors (Figures 3b to 3h) are illustrated below.
Figures 3a-h: Distribution of wildlife tourism enterprises around Australia, both overall (3a) and within particular sectors (3b-3h)

Figure 3a. Distribution of Wildlife Tourism Enterprises around Australia

Figure 3b. Distribution of Captive Wildlife Attractions in Australia
Figure 3c. Distribution of Wildlife Farms around Australia

Figure 3d. Distribution of Businesses running land-based tours that include free-ranging wildlife in Australia
Figure 3e. Distribution of Accommodation featuring free-ranging wildlife around Australia

Figure 3f. Distribution of Businesses running Marine or Coastal tours that include free-ranging wildlife in Australia
Overall, wildlife tourism occurs in many locations around Australia, with concentrations along the east, southeast and southwest coasts, the major urban centres and coastal North Queensland (Figure 3a). The latter area emerges as the home of by far the greatest number of wildlife tourism operators overall. However, different types of wildlife tourism businesses have distinctly different patterns of spatial distribution. Captive wildlife attractions are concentrated mainly around the major urban centres, especially Cairns and Melbourne (Figure 3b). Wildlife farms also tend to be clustered around the state capital cities (Figure 3c). Businesses running land-based tours featuring wildlife are the most widely dispersed (including inland
areas), with the largest concentration in the Cairns area (Figure 3d). Accommodation featuring free-ranging wildlife is mostly dispersed fairly evenly along the east and west coasts (Figure 3e). Businesses running marine or coastal tours are heavily concentrated around Cairns, the Ningaloo Reef region of Western Australia and to a lesser extent in southeast Queensland (Figure 3f). Tourist fishing businesses occur right around the coast, with the greatest concentration in Far North Queensland especially around Hervey Bay (Figure 3g).

A more detailed though preliminary guide to wildlife tourism in each Australian state is given in Appendix D.

Summary
There are at least 1,196 wildlife tourism operators in Australia. They offer a considerable diversity of types of activities and animal species. The largest numbers of organised activities comprise wildlife viewing as a component of nature-based tours. Kangaroos seem to be the group of animals most frequently featured20. While wildlife tourism occurs over most of Australia, the greatest concentration of operators is found in coastal North Queensland.

2.6 Economic Importance Of Wildlife Tourism In Australia

The last section showed that a substantial number of commercial enterprises in Australia are already involved in wildlife tourism. However for many of these operators, wildlife is only a component of, rather than the focus of, the tourist experience. Unfortunately, there is no information available on the combined financial value of these businesses, the extent to which they are financially successful, or the amount of employment they provide.

Information on reasons for destination choice gives some indirect idea of the economic importance of wildlife in Australian tourism. Supplementary questions to the International Visitor Survey administered in January-March 2000 showed that 18.4% of international visitors were influenced in their decision to visit Australia 'to experience native animals'21. However for 85.4% of these visitors, this was either 'an important reason' or 'no more important than any other reason' – only 0.8% said they 'would not have come otherwise'. Thus, although wildlife is a component of a destination choice for a significant proportion of international visitors, it cannot be said to be critical to inbound tourism.

The only study that has tried to estimate the total value of wildlife to overseas tourism in Australia was based on the stated importance of wildlife in attracting tourists to Australia, and the subsequent expenditure by those tourists (Hundloe and Hamilton 1997). This study estimated the total value as in the range of $1.8 to $3.5 billion. These results depend, however, on a range of assumptions (see Davis et al. 2001), and do not include domestic tourism, which is the largest tourism sector. The economic value of a number of Australia’s larger wildlife attractions has been estimated, although there are few publicly available figures. The Phillip Island Penguin Reserve, perhaps Australia’s most lucrative wildlife tourism attraction, is estimated to generated total annual economic benefits of $96 million to the state of Victoria (Leivers 2000) and to have led to the creation of 1,000 jobs (Stone 2001). Expenditure occurring in the Bundaberg region as a result of turtle viewing at the Mon Repos Conservation Park is estimated to be about AUD$1 million per annum (Tisdell and Wilson 2001).

Nevertheless, the little that is known about the rates of participation in wildlife tourism suggests that these are high, and probably generate considerable economic benefits. According to the International Visitor Survey, between 48% and 51% of international visitors to Australia went to a zoo, animal park or aquarium during each of the years from 1993 to 1996 (Fredline and Faulkner 2001). Total annual visitation to Australian zoos and wildlife parks is almost evenly divided between domestic and international visitors (about 5 million domestic and 3 million international) (Tribe 2001). Australian zoos and aquaria generate an operating surplus of about $16 million and employ about 2,000 people (ibid). About half of international visitors have also visited at least one national park (BTR 1997).

20 However, there are some 49 species in this group in Australia (Macropodidae and Potoroidae), whereas many of the other groups contain a single species.

21 Fredline and Faulkner (2001); an earlier but less representative survey undertaken by Hundloe and Hamilton (1997) found that ‘Australia’s unique wildlife’ was a factor that influenced 22 percent of those tourists to visit Australia, and of these 11% said they would not have visited Australia if there were no unique wildlife, with koalas and kangaroos the most important animal attractions.
It must however be acknowledged that there are often likely to be considerable difficulties in attracting sufficient tourists to such areas. Thus, Australia may have the potential to obtain more revenue from wildlife tourism than is currently the case. Clearly, however, careful research is needed to determine the current economic benefits of the various forms of wildlife tourism in Australia and the nature of demand before making definitive statements about the economic importance of wildlife tourism to Australia.

2.7 Classification Of Wildlife Tourism Activities In Australia

Various authors have attempted to classify wildlife tourism for different purposes, though these purposes are often not made explicit. For example, Orams (1996) classified ‘tourist-wildlife interaction opportunities’ on a spectrum from wild to captive, and also according to management strategies and outcome indicators. Shackley (1996) classified wildlife viewing experiences from the visitor’s perspective as varying along two dimensions: captive vs. free, and observation vs. participation. Reynolds and Braithwaite (2001) classified different types of experiences (e.g. bushwalking, visiting an animal sanctuary, hunting safari) in relation to their expected (negative) effect on wildlife and the richness/intensity of the experience. They illustrate that trade-offs often occur requiring appropriate management, and that the sorts of activities that should be encouraged are those with low negative effects and high richness of the tourist experience. However, none of these classifications are very practical for generating a detailed classification system to describe the range of types of wildlife tourism experiences.

Most, if not all, recognised types of wildlife tourism occurring in Australia can conveniently be distinguished from each other by a unique combination of values of the variables listed in Table 5. These are: level of confinement, habitat type, type of encounter, degree of emphasis on wildlife, and dispersion of the activity. However, tours that specialise in certain types of animal (notably birds, whales, dolphins, and seals) or likewise specialist wildlife farms (notably emus, ostriches, alpacas, llamas, and crocodiles) are commonly further distinguished by the animal concerned (e.g. ‘whale watching’, ‘crocodile farm’). Note that incidental encounters between tourists and wildlife outside of organised tourism (e.g. seeing magpies in the

although there is no information on the importance of wildlife in such visits. Australia is one of the world's foremost whale watching destinations, with an estimated 734,962 participants in 1998, with direct expenditures of US$11.9 million and total expenditures of US$56.3 million (Hoyt 2000). One study found that 20% of visitors to North Queensland reported engaging in birdwatching during their visit (Moscardo 1997). Finally, it is estimated that 4.5 million Australians (including unknown proportions of locals and tourists) undertake recreational fishing at least once a year (raising about AUD$2 billion in annual revenue), and that 101,000 international tourists per year participate in fishing while in Australia (Dovers 1994). Another 0.9 million people per year (again not distinguishing locals and tourists) are estimated to undertake recreational hunting, and are estimated to generate more than AUD$1 billion dollars annually, including $325 million to regional communities (Bauer and Giles 2001).

There is also evidence that wildlife is important in Australia’s image as a tourist destination. The kangaroo, in particular, is one of the world’s most recognisable icons for Americans in terms of proportion of people correctly associating a symbol with the country of origin (Hill et al. 2001).

We have seen that, on a global level, wildlife tourism raises substantial revenue and is associated with considerable demand (section 2.2). Given that Australian wild animals have many features expected to appeal to visitors (section 2.4), and the importance of nature-based tourism within Australian tourism (section 2.1), wildlife can be seen as adding further value to the competitive advantage that Australia has with regard to nature-based tourism.

Further, because wildlife in Australia is often most abundant far from major cities and towns, it may have potential to provide income to depressed economies in rural areas (section 2.2). This might be particularly applicable to farmers who are struggling to make a living through livestock, but have substantial wildlife habitats remaining on their lands that could be exploited for tourism. It might also be applicable to some indigenous communities who occupy large areas of Australia with considerable wildlife resources (see Muloin et al. 2000).
Further dissection of the variables listed in Table 5 and certain additional variables can be used to characterise Australian wildlife tourism activities in ways that have significance for some aspect of their design, marketing or management (Table 6). For example, if an activity involves heavily confined animals it is likely to attract a different market to one that involves free-ranging animals. Therefore, marketing and product design needs to be planned accordingly. In the heavily confined setting, impacts of captivity on the welfare of individual animals are of concern to visitors, and thus animal husbandry and presentation style should be designed accordingly. In a free-ranging setting, the conservation of populations and communities, as well as the natural environment as a whole, are of concern to both tourists and management.
Table 6: Variables used to differentiate wildlife tourism activities according to design, marketing and management significance

<table>
<thead>
<tr>
<th>CLASSIFYING VARIABLE</th>
<th>DEFINITION AND RANGE</th>
<th>SIGNIFICANCE</th>
</tr>
</thead>
</table>
| Level of confinement of animals | A basic distinction can be made between situations where animals are free-ranging (living in their natural environment) and those where they are captive (retained by physical barriers). However there is in fact a continuous spectrum ranging from situations where animals are living without any man-made influence, through varying degrees of provisioning (where free-ranging animals are provided with resources by tourists or tourism operators) to varying levels of restraint within captivity. This can range from a very large reserve contained by fences to a small cage with no attempt to simulate the animal’s natural environment. | • Design of the tourism experience.  
• Nature and extent of any negative effects on wildlife and approaches to their management.  
• Likely market. |
| Environment | The type of natural environment in which the wildlife species naturally occurs. The principle distinctions are between land, marine, coastal, and freshwater environments. Further distinctions can be made between habitat types, with some habitat types being especially vulnerable to disturbance, and also involving varying degrees of effort or forms of transport. | • Design of the tourism experience.  
• Nature of any negative effects on wildlife and approaches to their management. |

**Type of Wildlife Tourism Activity** | **Level of Confinement** | **Environment (or Simulated Environment) Where Interaction Occurs** | **Principle Type of Encounter** | **Degree of Emphasis on Wildlife** | **Dispersion** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-nature based land tour with wildlife component</td>
<td>F</td>
<td>L</td>
<td>V</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Nature-based land tour including wildlife</td>
<td>F</td>
<td>L</td>
<td>V</td>
<td>N</td>
<td>D</td>
</tr>
<tr>
<td>Research or conservation holidays involving wildlife</td>
<td>F</td>
<td>R</td>
<td>F/N</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>River or lake cruise with wildlife component</td>
<td>F</td>
<td>Fa</td>
<td>V</td>
<td>N</td>
<td>D</td>
</tr>
<tr>
<td>Land-based wildlife tour, including birdwatching or general wildlife tour</td>
<td>F</td>
<td>L</td>
<td>V</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>Marine cruise with wildlife component</td>
<td>F</td>
<td>Ma</td>
<td>V</td>
<td>N</td>
<td>D</td>
</tr>
<tr>
<td>Marine wildlife tour, including whale watching, general marine wildlife cruise, marine birdwatching</td>
<td>F</td>
<td>Ma</td>
<td>V</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>Diving/snorkelling with wildlife component</td>
<td>F</td>
<td>Mb, Fb</td>
<td>V</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>Beach or reef walk with wildlife component</td>
<td>F</td>
<td>C</td>
<td>V</td>
<td>N</td>
<td>D</td>
</tr>
<tr>
<td>Managed static natural wildlife attraction</td>
<td>F</td>
<td>C, L</td>
<td>V</td>
<td>F</td>
<td>F</td>
</tr>
</tbody>
</table>

_**Level of confinement:** C=captive, F=free-ranging; _**Environment where interaction occurs:** L=land, C=coastal Ma=marine not in water, Mb=marine underwater, Fa=freshwater not in water, Fb=freshwater underwater; _**Principle type of encounter:** V=view natural or simulated natural activities, P=view performing animals, D=view dead animals, K=kill animals, R=research or conservation work, I=indirect, no ‘real’ animals; _**Degree of emphasis on wildlife:** F=wildlife focus, N=wildlife as component of nature experience, C=wildlife as component of non-nature experience; _**Dispersion:** F=fixed site attraction, D=dispersed activity, M=mobile attraction._
### CLASSIFYING VARIABLE | DEFINITION AND RANGE | SIGNIFICANCE
--- | --- | ---
**Type of wildlife encounter** | Basic distinctions can be made between those activities that principally involve viewing of animals, those involving animals performing (circuses), those involving killing animals for sport, and those involving research or conservation work with the animals. Within the viewing category, activities can be further categorised according to whether they involve tourists handfeeding, handling, or photographing animals or simply observing them. Some authors have subdivided these into consumptive activities that involve killing or removing the animals from their natural environment, as opposed to non-consumptive activities. We avoid this distinction here as it may create a false perception of dichotomy in terms of degree of impact on wildlife populations. | • Design of the tourism experience.  
• Nature of any negative effects on wildlife and approaches to their management.  
• Likely market. |
**Degree of emphasis on wildlife** | The degree of emphasis on wildlife actually involves a continuous spectrum from wildlife featuring as one aspect of a natural setting or tour, to wildlife as the sole focus of the activity. | • Design of the tourism experience.  
• Likely market. |
**Dispersion** | Degree of dispersion of (single-species) populations, or of a range of species seen on a tour, technically involves a continuous spectrum. However, some Australian wildlife tourism involves single (or small numbers of) species that congregate in large numbers in one small area either for breeding or shelter purposes (notably seabirds and nesting turtles) or because they are sessile (glow worms and many marine invertebrates). | • Design of the tourism experience.  
• Nature of any negative effects on wildlife and approaches to their management.  
• Likely market. |
**Tourism volume** | Wildlife tourism can include the full spectrum from large-scale mass tourism to a single visitor. | • Design of the tourism experience.  
• Nature and extent of any negative effects on wildlife and approaches to their management.  
• Likely market. |
**Primary objective** | While most wildlife tourism activities have entertainment as their principle purpose, others primarily involve research, educational or conservation work, to which entertainment is an adjunct. | • Design of the tourism experience.  
• Likely market. |
**Level of interpretation** | Most wildlife tourism activities involve some degree of wildlife interpretation, but this can range from very minimal information provided by a guide, on signs, or in pamphlets; through to interpretation being an integral part of the whole experience, generally facilitated by a guide. | • Extent of any negative effects on wildlife, and potential for positive effects through education.  
• Likely market. |
**Type of species** | Some WT activities specialise in certain groups, such as fish, birds or even single species, whereas others involve broad groupings such as land-dwelling animals. Species may be natives or exotics (not native to Australia), and may be common, rare or threatened. | • Design of the tourism experience.  
• Nature and extent of any negative effects on wildlife, level of concern about these effects, and approaches to their management. |
**Land tenure** | Wildlife tourism activities can occur in protected areas, state Forests, private land, other government land. | • Level of concern about any negative effects on wildlife, and approaches to their management. |
**Transport** | Motorised vehicles can be air (aeroplane or helicopter), aquatic (boats of various types and sizes), or land-based (large buses through to small 4WDs). Tourists may also travel on foot or by swimming, or travel on horse or camel-back. | • Design of the tourism experience.  
• Nature and extent of any negative effects on wildlife and approaches to their management.  
• Likely market. |
**Time of day** | Some wildlife tourism activities or their components occur at night because the species are nocturnal, while others occur during the day. | • Design of the tourism experience.  
• Nature and extent of any negative effects on wildlife and approaches to their management. |
**Ownership** | Private sector commercial, private sector not for profit, public sector, Indigenous-owned. | • Design of the tourism experience.  
• Approaches to management of any negative effects on wildlife. |
Table 7: Key wildlife tourism stakeholders in Australia

<table>
<thead>
<tr>
<th>STAKEHOLDER GROUP</th>
<th>KEY ORGANISATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TOURISM INDUSTRY</td>
<td></td>
</tr>
<tr>
<td>Tourists (domestic and international)</td>
<td></td>
</tr>
<tr>
<td>Individual operators</td>
<td></td>
</tr>
<tr>
<td>General tourism industry associations</td>
<td>Ecotourism Association of Australia, The International Ecotourism Society, Interpretation Association of Australia, Australian Tourism Operators Network, Inbound Tour Operators Association, Australian Federation of Travel Agents, regional and local tourism associations in areas with wildlife tourism</td>
</tr>
<tr>
<td>Captive wildlife attractions</td>
<td>ARAZPA, state wildlife park associations, state zoological boards and societies</td>
</tr>
<tr>
<td>Diving</td>
<td>Dive Queensland</td>
</tr>
<tr>
<td>Marine</td>
<td>Association of Marine Park Tour Operators (Qld), Great Barrier Reef Charter Association; local operator associations</td>
</tr>
<tr>
<td>Farm stays</td>
<td>National and state host farm associations</td>
</tr>
<tr>
<td>Other</td>
<td>Caravan Parks Association of Qld, Museum Association of Australia</td>
</tr>
<tr>
<td>2. RECREATION</td>
<td></td>
</tr>
<tr>
<td>Birdwatching</td>
<td>Birds Australia (formally RAOU)</td>
</tr>
<tr>
<td>Hunting</td>
<td>Sporting Shooters Association of Australia, Victorian Field and Game Association, Federation of Hunting Clubs, Australian Deer Association</td>
</tr>
<tr>
<td>Fishing</td>
<td>Angling Association of NT, Recreational fisheries associations/clubs</td>
</tr>
<tr>
<td>3. GOVERNMENT</td>
<td></td>
</tr>
<tr>
<td>Government tourism organisations</td>
<td>State &amp; Territory tourism agencies, Office of National Tourism, Australian Tourism Commission, Bureau of Tourism Research, Commonwealth Dept of Industry, Science and Resources, Tourism Forecasting Council</td>
</tr>
<tr>
<td>Other government agencies</td>
<td>State &amp; Territory agricultural departments, Western Lands Commission</td>
</tr>
</tbody>
</table>

Note that the first five variables involve a refinement of those used in the simple classification given in Table 5.

2.8 Structure, Organisation And Management Of Wildlife Tourism In Australia

2.8.1 Stakeholders and their roles

Wildlife tourism is of interest to a diverse range of stakeholders spanning both tourism and wildlife issues (Table 7). This fragmentation makes the industry difficult to coordinate and manage. In terms of their influence on wildlife tourism, the most important stakeholders are probably the tourists, the operators, certain key industry associations, government conservation agencies and government tourism agencies.
There is no overarching industry association or other organisation that represents wildlife tourism operators in Australia. This is mainly because wildlife tourism consists of a diverse range of activity types that are often subsets of other sub-sectors – for example farm stays and nature based tours. The main exception is that some captive wildlife facilities (mostly the larger ones) are represented by the Australasian Regional Association of Zoological Parks and Aquaria (ARAZPA) at the national level, and in certain states by state-wide organisations (e.g. Queensland Wildlife Parks Association (QWPA), NSW Fauna and Marine Parks Association). These organisations were set up principally to facilitate coordinated management of animal collections for conservation purposes. However, they are becoming involved in a range of issues on behalf of their members including raising husbandry standards and lobbying. There is no association specifically for tourism-related operators for fishing and hunting, although there are a number of organisations comprised of domestic recreational fishers or hunters. Small subsets of operators of nature-based tours, attractions and accommodation, including some that feature wildlife, belong to the Ecotourism Association of Australia (EAA). The vision of this organisation is ‘to be leaders in assisting ecotourism and other committed tourism operations to become environmentally sustainable, economically viable, and socially and culturally responsible’ (Ecotourism Association of Australia 2001). A large proportion of farm stay operators are affiliated with state based host farm associations, whose main function is to undertake cooperative marketing. In Queensland only, marine and dive boat operators have their own representative organisations. Like other tourism operators, those involved in wildlife tourism may or may not be members of local and regional tourism associations, as well as national bodies involved in mainstream tourism.

The major stakeholder group dealing with management of the impacts of wildlife tourism on the wildlife and natural environment consists of the state or Territory natural resource management agencies (dealing with protected areas and general conservation, forestry and fisheries). Wildlife tourism operators are subject to certain government regulatory systems in addition to those applying

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72 Australian states differ as to whether these responsibilities are held by different departments, or together in various combinations.
to tourism operators in general. These depend on the tenure of the land where these activities occur, whether or not the wildlife species involved are protected under law, and the nature of the interaction with wildlife. Regulation occurs principally according to state-level legislation (except for federally managed parks, such as the Great Barrier Reef Marine Park Authority), and is administered by state natural resource management agencies. The principal mechanism is through permit or licensing systems. Commercial activities, including those related to tourism, occurring in protected areas or state forests automatically require permits from the relevant department, which to varying degrees place constraints on the nature of such activities.

In most states, most native mammals, birds, reptiles and amphibians are considered 'protected' under law. However states differ as to whether and which fish and invertebrates they consider protected. Activities that involve direct contact with protected wildlife, such as trapping or handling, require a special permit, and are normally granted only if the activity forms part of a research or conservation program. Certain species of particular conservation and public concern, such as marine mammals and whale sharks, have additional legislative provisions designed specifically to protect them from adverse effects of tourism. Most species of fish are not protected (unless they are considered under threat) and therefore can be caught without permits. For those species that are protected there are generally limits set on numbers and size of fish that can be caught. Tourist hunting in Australia involves mainly introduced species, which are not protected under conservation legislation. Hunting of waterfowl (in the states where it still occurs) involves a short open season, an intensive licensing system, and strict limitations on the numbers and species that can be hunted.

Operators running captive wildlife attractions are required to have a wildlife exhibitor’s license, which helps ensure adequate standards of animal husbandry. While all these systems have been set up in order to maintain environmental and/or ethical standards, there are not always sufficient resources to ensure that they are fully enforced. Other roles of the natural resource management agencies in relation to tourism are monitoring, research, and enforcement of regulations relating to specific types of activities, such as legislative guidelines for whale watching. Further details of these management regimes are given by Green and Higginbottom (2001).

There are also several systems for self-regulation within the Australian tourism industry. Of particular relevance to wildlife tourism are the Nature and Ecotourism Accreditation Program (NEAP) (NEAPWG 2000) and moves towards self-regulation by zoos and wildlife parks. A major objective in establishment of the NEAP was to raise environmental standards within the nature-based tourism sector. In order to be accredited as an ecotourism operator under this scheme, operators must demonstrate that they meet a number of criteria relating to sound environmental practices and use of environmental interpretation. ARAZPA and QWPA have a Code of Ethics and Code of Practice which all members must sign and which are designed to ensure member institutions pursue high standards of animal welfare, record keeping, conservation, regional species management, public education, human safety, visitor service, training and animal display. They also have ethics committees charged with addressing submissions regarding breaches of these codes. The Queensland Wildlife Parks Association is also trialling a system for self-assessment of exhibit and husbandry practices as an industry-driven way of raising standards. Operators of the same type have occasionally formed some sort of locally-based cooperative group for the purposes of marketing and/or management. For example, whale or dolphin watching operators in some regions have set up their own associations that include voluntary codes of conduct (e.g. Nelson Bay, NSW). Such cooperative arrangements are, however, unusual.

Marketing of wildlife tourism products occur at a range of levels, as with other forms of tourism. At the government level, the Australian Tourism Commission and state tourism agencies promote destinations and also specific products, through their websites, the mass media and a range of other methods. Individual operators can choose to promote, package and sell their products through various tourism distribution channels. Many of the smaller operators produce their own brochure and/or website and promote themselves through local outlets and through their local and regional tourism associations. Others sell through travel agencies, tour wholesalers based in Australia or overseas, or other intermediaries. There has been no
Wildlife tourism product development is undertaken primarily by operators, but state tourism agencies to varying extents see this as one of their functions, with support from other relevant government departments and funding schemes. Conservation agencies also play a role in product development within protected areas (principally interpretive infrastructure and services), the extent of their role in this area again varying substantially between States.

2.8.2 Government support for wildlife tourism

Key informants from tourism and conservation agencies of all but one Australian state (see next paragraph) said that their organisations see non-consumptive tourism based on free-ranging animals as an integral component of the nature-based tourism product, rather than as separate from other aspects of the natural environment. This attitude is reflected in the various nature-based tourism strategies and promotional efforts by the States, in which terms such as wildlife, fauna and biodiversity are often mentioned, but within the context of the natural environment as a whole. Informants from the tourism agencies of all but one state saw no value in promoting wildlife tourism as a brand, one going so far as to say that if they did ‘marketers would laugh at us’. However informants from some state tourism agencies stated that wildlife had been identified as a component of nature-based tourism that might provide growth opportunities.

Tasmania is unique in having identified its wildlife as worthy of specific focus in planning and promotion. To this end it is in the process of developing a wildlife tourism strategy, informed in part by research funded through the CRC for Sustainable Tourism. This strategy focuses on non-consumptive use of wildlife, including plants, and sees captive and free-ranging components as fulfilling potentially important and complementary roles. One of the key members of the joint working group on wildlife tourism stated that he believes promoting wildlife tourism as a distinct sector is worthwhile because wildlife is something the public can easily relate to, while the concept of ecotourism has become clouded with confusion (N. Mooney, pers. comm.).

All state tourism agencies place a major emphasis on nature-based activities within their marketing and other efforts to facilitate growth of tourism. Marketing is a key responsibility of all these agencies, and states vary with respect to their degree of involvement in product development. Conservation legislation in all states recognises recreation within protected areas as a legitimate use (subject to various constraints). Most states either have, or are developing, some form of nature-based tourism strategy, with involvement from a range of government departments and other stakeholders. These strategies all aim to facilitate the sustainable growth of nature-based tourism, implicitly including a wildlife component. The envisaged conservation benefit associated with sustainable nature-based tourism (section 2.3) has in some cases (especially NT and WA) been an important motivator for conservation agencies to become actively involved in developing and promoting nature-based tourism, rather than just managing its impacts. The other major factor contributing to this has been an increasing push for a ‘user-pays’ approach to help fund environmental management (see Green and Higginbottom 2001).

Zoos and other captive wildlife facilities, and to some extent the large static wildlife attractions based on free-ranging animals (notably the Phillip Island Penguin Parade), tend to be grouped with other mass tourism attractions in planning and promotion by tourism agencies. There is considerable cooperation between conservation agencies and the larger zoos with respect to conservation and research initiatives, although such relationships rarely seem to extend to the small wildlife parks.

Fishing is a sector that has generally not received much attention by tourism organisations, and is usually seen as distinct from nature-based tourism or ecotourism. However, it is now attracting particular attention from certain state tourism agencies (e.g. Victoria and Tasmania). Hunting tourism is not actively promoted by mainstream tourism organisations, probably because of strong resistance to hunting from a number of influential non-government organisations, as well as an apparently low level of general community support.
2.8.3 Relationships between tourism and conservation organisations

All States and Territories have some sort of formal relationship between staff in their tourism and conservation agencies, which allows them to communicate in a cooperative environment about wildlife tourism (among other issues). However, the nature and extent of this relationship seems to vary greatly between States. Communication mechanisms currently occurring include:

• membership on each others’ Boards,
• memoranda of understanding or other written agreements on areas of cooperation and responsibility,
• regular meetings between CEOs,
• tourism liaison groups initiated by the conservation agency at regional and local levels (involving conservation staff and tourism operators),
• membership of conservation agency staff on a range of State, regional and local tourism committees initiated by the state tourism agency or tourism industry; and
• joint responsibility for implementation of state nature-based tourism or equivalent strategy.

Most government key informants said that there was also a lot of informal communication and cooperation between state tourism and conservation agencies.

The only state in which there is any formal cooperation specifically with respect to wildlife tourism is Tasmania. Its wildlife tourism strategy is a joint initiative between the tourism, conservation and forestry agency, and a joint working group has been set up to drive this initiative\(^3\). Perhaps even more importantly, there is a high level of informal cooperation in this initiative between a key staff member from each of the tourism and conservation agencies. The conservation agency employee is also playing a critical role in attempting to promote development of high quality sustainable wildlife tourism around the state through informal advice and support given to operators on site.

Although the official approach in all state conservation agencies is to work cooperatively with tourism interests, to some extent this seems to be countered by staff attitudes. When asked, key informants from all state conservation agencies, except for the Northern Territory, said that some of their staff were generally negative about tourism in protected areas, seeing it as a threat to conservation. Further, they said that this sometimes led to difficulties in forging cooperative relationships with the tourism industry. However the proportion of staff to which this was reported to apply varied between states from ‘most rangers’ through ‘some individuals at all levels of the organisation’ to ‘none of them, to my knowledge’. Different states place differing levels of emphasis on recreational use and tourism within the sections of their Acts that deal with objectives and management of protected areas, and also differ in their organisational ethos relating to visitor use. Some of the informants from tourism agencies (as well as members of the tourism industry we have spoken to) expressed the view that conservation staff are sometimes overly insistent on use of the precautionary principle, and/or have a ‘keep out mentality’. They felt that lack of knowledge about whether a tourism development will cause harm to the natural environment should not be a blanket reason not to proceed with such development. Another source of tension cited by government informants from Western Australia was a perception from some members of the tourism industry that the conservation agency has an unfair monopoly over operation of natural attractions.

The only problem mentioned by conservation agency informants with regard to their relationship with tourism organisations was a lack of promotion of protected areas by regional tourism associations. However this may be partly because they were not specifically asked to mention any problems. Discussions by Moore and Carter (1993) with senior conservation agency personnel from Queensland and Northern Territory elicited a number of concerns about tour operators

\(^3\) However it has recently been decided to incorporate the wildlife tourism strategy within the nature-based tourism strategy that is now being developed (S. Lennox, pers. comm.).
private sector (e.g. joint ventures between government and private sector, outsourcing of non-core services) are being investigated or implemented. In contrast to the general pattern of dominance of the public sector in major captive wildlife attractions, the large privately owned theme parks Dreamworld and Seaworld (each of which also feature a range of non-wildlife activities) have both recently made major investments in expanding the wildlife tourism components of their businesses, aiming to provide world standard, sophisticated facilities.

Major wildlife attractions based on predictable concentrations of free-ranging animals in fixed areas, such as the Penguin Parade (Victoria), Mon Repos turtle rookery (Queensland), Seal Bay (South Australia) and Monkey Mia (Western Australia), also tend to be state run. This is based principally on the argument that they need to be very carefully managed for conservation and that they provide a vital role in conservation education that could not be provided as effectively by the private sector. However this has been a source of political controversy in Western Australia, and the future ownership status of such attractions is not entirely clear.

Most tours within protected areas are operated by private businesses. Most states also have some form of low cost or intermittent interpretive programs provided by their own conservation staff, although the extent of these varies greatly between States. This seems to be partly dependent on available funding, but also on the State's implicit policy position regarding the role of the state in providing educational services within protected areas. Victoria, for example, has experimented with outsourcing of certain interpretive services, but on the basis of this experiment decided to maintain these services within state hands.

Within nature-based or wildlife tourism enterprises that are otherwise State-run, the issue of whether they should be involved in merchandising and other sources of income generation is also a source of controversy. Australia seems to be at a crossroads with respect to the role of the private sector in wildlife tourism, and the balance that is struck may be expected to have important implications for the future of this industry. Critical analysis of the differential success of different models would be useful in informing this direction.

2.8.4 Role of the public and private sectors

Closely linked to the issue of cooperation between conservation and tourism agencies is the question of the extent to which operation of wildlife and other nature-based tourism enterprises should be owned or operated by the private sector as opposed to by government conservation-related organisations. The general principle currently applied across Australia is that the private sector should run all commercial operations unless it can be demonstrated that it's in 'the State's interest' for the government to do so. Governments must adhere to the requirements of National Competition Policy by not competing 'unfairly' with private enterprise. It is typically argued that governments should run wildlife tourism enterprises where there is a strong conservation or educational interest that the private sector could not be expected to uphold, or where the private sector is not likely to undertake the venture because of lack of capital or financial risk factors. It was clear however from each government informant's description of the situation in their state that the interpretation of this policy varies between States. In at least four states (Queensland, Victoria, Western Australia and South Australia) the balance between private and public sectors was a politically contentious issue to which the conservation agency was devoting particular attention. For example, the Department of Natural Resources and Environment in Victoria has established a Competitive Neutrality Unit to investigate such issues.

Typically in Australia, the major zoos and wildlife parks are owned and operated by the State. This has however been subject to legal challenge in South Australia, where John Walmsley (founder of Earth Sanctuaries Ltd) argued that State-owned Cleland Wildlife Park provided unfair competition to his Warrawong Sanctuary. The case has forced the government to reconsider their approach to the management of Cleland (D. Barrington, pers. comm.). Further, in the face of difficulties in providing adequate government funding to provide high quality facilities, various models of involvement of the private sector (e.g. joint ventures between government and private sector, outsourcing of non-core services) are being investigated or implemented. In contrast to the general pattern of dominance of the public sector in major captive wildlife attractions, the large privately owned theme parks Dreamworld and Seaworld (each of which also feature a range of non-wildlife activities) have both recently made major investments in expanding the wildlife tourism components of their businesses, aiming to provide world standard, sophisticated facilities.

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Within nature-based or wildlife tourism enterprises that are otherwise State-run, the issue of whether they should be involved in merchandising and other sources of income generation is also a source of controversy.
3. CONCLUSIONS

This first part of the status assessment report of wildlife tourism provided a broad descriptive overview of Australian wildlife tourism in the broader context of international tourism and wildlife tourism. It also identified some of the issues that need to be dealt with in ensuring future sustainability – and where appropriate – growth of this sector.

Wildlife tourism in Australia consists of a wide range of different types of activities, and involves a varied range of species. There are at least 1,196 enterprises that include wildlife as a planned component of the experience they offer to tourists. About 65% of wildlife tourism activities include wildlife as only one component of a more generalised tourism experience. The largest groups of operators of organised wildlife tourism are those running nature-based tours that include a wildlife component. The largest numbers of tourists who participate in wildlife tourism are those visiting zoos, and independent travellers visiting public protected areas. Kangaroos and their relatives seem to be the wildlife-group that features most often in wildlife tourism activities; kangaroos and koalas are the most popular among international visitors.

Wildlife tourism is economically important globally, with annual visitation at least in the high hundreds of millions, and multi-billion dollar annual revenues. In Australia, wildlife tourism also has high participation rates and has been estimated to generate several billion dollars in annual revenue. In some cases, economic benefits are provided to regional areas where there may be few other major sources of income and employment. There is some evidence that wildlife tourism has the potential to bring even greater economic and employment benefits to Australia than is currently the case.

Australia offers considerable competitive advantages in relation to wildlife tourism, but also some significant obstacles and constraints. Planning for the future development of this sector should occur in full cognisance of both. It should also respond where appropriate to international trends, such as increased levels of specialisation, increased environmental awareness of the market and increased use of technology to facilitate wildlife viewing.

In order to plan and manage wildlife tourism to ensure its long-term sustainability, it is necessary to ensure protection of the wildlife and its habitat, high quality visitor experiences and sufficient economic returns to operators and host communities. These elements are not independent; they interact in complex ways, and better understanding of these interactions (through research) should facilitate more effective planning than is currently possible.

There is a lack of any strategic, coordinated approach to the design, management and promotion of wildlife tourism in Australia. This is to some extent inevitable given the diversity of types of operators, many of whom are small businesses, and the diversity of stakeholders.

There are serious gaps in research on wildlife tourism that make it difficult to plan and manage wildlife tourism effectively. While such gaps are significant for most of the aspects covered in this study, a better understanding of the demand for wildlife tourism is probably the most critical.

Part II of this report expands on the above findings by providing additional detailed information on different aspects of wildlife tourism. It also investigates the views of key stakeholders about the sector and its future directions. Information in both parts of the report is then used to generate recommendations for the future sustainable development of wildlife tourism in Australia.


### APPENDIX A: GLOSSARY OF TERMS USED IN WILDLIFE TOURISM REPORT SERIES

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Captive wildlife</td>
<td>Animals existing in a man-made environment, with confinement. Note that in some cases wildlife may be considered in a situation that is intermediate between free-ranging and captive, for example because they are in their natural habitat that has been enclosed by a fence.</td>
</tr>
<tr>
<td>Consumptive wildlife tourism</td>
<td>Wildlife tourism which involves killing or directly injuring animals (e.g. hunting, fishing, bullfighting). Although the term ‘consumptive’ is used for descriptive purposes, this should not be taken to automatically reflect on the ecological sustainability of such activities, as consumptive use may have less impact on populations as a whole than non-consumptive use in some cases.</td>
</tr>
<tr>
<td>Domestic tourist</td>
<td>A tourist who travels within their own country (Harris and Howard 1996, p. 88).</td>
</tr>
<tr>
<td>Ecotourism</td>
<td>Nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable (Commonwealth Department of Tourism 1994).</td>
</tr>
<tr>
<td>Excursionist</td>
<td>A visitor who does not make an overnight stay in a destination (Harris and Howard 1996, p. 92).</td>
</tr>
<tr>
<td>Free-ranging wildlife</td>
<td>Animals existing in their natural habitat, without confinement. Also referred to as ‘non-captive’. Also referred to as ‘wildlife in natural areas’.</td>
</tr>
<tr>
<td>International tourist</td>
<td>A tourist from another country who stays for at least one night in a country (Harris and Howard 1996, p. 111).</td>
</tr>
<tr>
<td>Nature-based tourism</td>
<td>Tourism based on features of the natural environment. This includes tourism based in protected areas, sites of scenic beauty, beaches, marine areas and environments with unusual natural features (WTO 1997). Typically nature-based tourism is taken to exclude zoos, but to include large wildlife sanctuaries and other recreated natural environments (although wild animals even in captivity could be seen as a feature of the natural environment).</td>
</tr>
<tr>
<td>Non-consumptive wildlife tourism</td>
<td>Wildlife tourism which does not involve killing or directly injuring animals. This is also sometimes referred to as ‘wildlife watching’ or ‘wildlife viewing’, which strictly speaking is not accurate as it ignores other forms of interaction such as feeding, handling and listening.</td>
</tr>
<tr>
<td>Tourism</td>
<td>The sum of government and private sector activities which shape and serve the needs and manage the consequences of holiday, business and other travel (Pearce et al. 1998, p. xvi).</td>
</tr>
<tr>
<td>TERM</td>
<td>DEFINITION</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tourist</td>
<td>A person who travels 40km or more away from their home for a period of at least one night, for any reason other than paid employment (Harris and Howard 1996, p. 88).</td>
</tr>
<tr>
<td>Visitor</td>
<td>A person who undertakes temporary travel outside their home to another location for any purpose other than engaging in paid employment in the location visited (Harris and Howard 1996, p. 162).</td>
</tr>
<tr>
<td>Wildlife</td>
<td>Non-domesticated (non-human) animals: these include animals in captive and free-ranging settings; vertebrates and invertebrates; native and exotic species.</td>
</tr>
<tr>
<td>Wildlife tourism (WT)</td>
<td>Tourism based on encounters with non-domesticated (non-human) animals. (Alternatively known as wildlife-based tourism)</td>
</tr>
<tr>
<td>Wildlife tourism activity</td>
<td>Generic term used for any managed wildlife tourism experience, including wildlife tourism attractions, accommodation providers and tours. Note that unguided encounters with wildlife are not included.</td>
</tr>
<tr>
<td>Wildlife tourism experience or encounter</td>
<td>A broader term referring to any type of tourist encounter with wildlife, whether managed or not.</td>
</tr>
<tr>
<td>Wildlife tourism operation or enterprise</td>
<td>Any business or organisation (whether public or private sector) that includes wildlife encounters as a planned component of its operation. Note that this is a very broad definition, that includes, for example, ecotours with a small wildlife component, or theme parks with a wildlife section.</td>
</tr>
</tbody>
</table>

**APPENDIX B: LIST OF INDIVIDUAL STATUS ASSESSMENT REPORTS**

**Discipline-based status assessments**


Sub-sector status assessments


The following is a provisional summary of the key features of wildlife tourism in each Australian State. It is not intended to be comprehensive or definitive, but represents a preliminary review that can be modified and expanded on by users. Sources are Grant (1996), Browne (1998), Bennett et al. (2000), the personal knowledge of the authors and interviews with key government informants (Appendix C). States are listed in alphabetical order.

### AUSTRALIAN CAPITAL TERRITORY

**Major Mass Wildlife Tourism Attractions**
- Tidbinbilla Nature Reserve – large natural enclosures of different habitat types in a nature reserve, includes a walking trail
- National Zoo and Aquarium – large variety of wildlife including ocean and river fish, native animals and birds, exotic animals, coral reef tanks, shark tank and a wide range of reptiles and frogs

**Key Wildlife Regions**
- Tidbinbilla Nature Reserve – well known for viewing kangaroos, koalas, emus and other native wildlife in a semi-natural setting
- Namadgi National Park – covers 40% of the state and is the most northerly alpine environment in Australia, popular with campers and bushwalkers
- Snowy Mountains

**Key Wildlife Habitats**
- Bushland
- Alpine highlands

**Wildlife Likely To Be Of Particular Interest To Tourists**
- Kangaroos – various species are easily seen in the parks and reserves
- Brush-tailed Rock-wallaby – can be seen at Tidbinbilla Nature Reserve along with other wallabies

### NEW SOUTH WALES

**Major Mass Wildlife Tourism Attractions**
- Taronga Zoo – zoo with over 3,000 animals including Sydney’s only platypus exhibit
- Western Plains Zoo – more than 1,100 animals from around the world are housed in large open range displays, allowing visitors to get up close to view the animals
- Sydney Aquarium – marine aquarium with seal pool, shark display and various habitat simulation tanks including the Great Barrier Reef exhibit

### APPENDIX C: SENIOR GOVERNMENT STAFF INTERVIEWED

<table>
<thead>
<tr>
<th>STATE/TERRITORY</th>
<th>STAFF INTERVIEWED IN TOURISM AGENCY</th>
<th>STAFF INTERVIEWED IN CONSERVATION AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NT</td>
<td>None available within study timeframe</td>
<td>David Lawson, Mike Butler (PWCT)</td>
</tr>
<tr>
<td>WA</td>
<td>Steve Crawford (WATC)</td>
<td>Daryl Moncrieff, Colin Ingram (CALM)</td>
</tr>
<tr>
<td>TAS</td>
<td>Stuart Lennox (TT)</td>
<td>Nick Mooney, Bob Tyson</td>
</tr>
<tr>
<td>SA</td>
<td>Paul Donnellan, Susan Novak (SATC)</td>
<td>Fraser Vickery (DENR)</td>
</tr>
<tr>
<td>QLD</td>
<td>David Morgans (TQ)</td>
<td>Ralph Henderson (EPA)</td>
</tr>
<tr>
<td>NSW</td>
<td>None available within study timeframe</td>
<td>None available on this topic</td>
</tr>
<tr>
<td>VIC</td>
<td>Bill Fox (TV)</td>
<td>Russell Mason (Parks VIC), Brian Doolan (DNR)</td>
</tr>
</tbody>
</table>

### APPENDIX D: WILDLIFE TOURISM RESOURCES ACROSS AUSTRALIA

The following is a provisional summary of the key features of wildlife tourism in each Australian State. It is not intended to be comprehensive or definitive, but represents a preliminary review that can be modified and expanded on by users. Sources are Grant (1996), Browne (1998), Bennett et al. (2000), the personal knowledge of the authors and interviews with key government informants (Appendix C). States are listed in alphabetical order.

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- National Zoo and Aquarium – large variety of wildlife including ocean and river fish, native animals and birds, exotic animals, coral reef tanks, shark tank and a wide range of reptiles and frogs

**Key Wildlife Regions**
- Tidbinbilla Nature Reserve – well known for viewing kangaroos, koalas, emus and other native wildlife in a semi-natural setting
- Namadgi National Park – covers 40% of the state and is the most northerly alpine environment in Australia, popular with campers and bushwalkers
- Snowy Mountains

**Key Wildlife Habitats**
- Bushland
- Alpine highlands

**Wildlife Likely To Be Of Particular Interest To Tourists**
- Kangaroos – various species are easily seen in the parks and reserves
- Brush-tailed Rock-wallaby – can be seen at Tidbinbilla Nature Reserve along with other wallabies

**NEW SOUTH WALES**

- Taronga Zoo – zoo with over 3,000 animals including Sydney’s only platypus exhibit
- Western Plains Zoo – more than 1,100 animals from around the world are housed in large open range displays, allowing visitors to get up close to view the animals
- Sydney Aquarium – marine aquarium with seal pool, shark display and various habitat simulation tanks including the Great Barrier Reef exhibit
### Key Wildlife Regions
- Royal National Park – one quarter of Australian bird species have been recorded here
- The South Coast – Barren Grounds Nature Reserve is a bird observatory and environmental education venture established by Birds Australia. Montague Island Nature Reserve offers tours to visit this home to hundreds of Australian Fur Seals and Little Penguins
- The Outback – Mutawintji National Park contains the State’s only population of Yellow-footed Rock-wallabies, and Red Kangaroos are a common sight in Sturt National Park
- The Great Lakes – Myall Lakes National Park offers marine mammals tours and Grey Nurse Sharks are commonly seen off Seal Rocks

### Key Wildlife Habitats
- Eucalypt forests – mammal spotlighting and bushwalking
- Heathland – birdwatching
- Warm-temperate, subtropical, dry and coastal rainforests – mammal spotlighting and birdwatching
- Paperbark swamps and mangroves – koalas, flying foxes, birdwatching

### Wildlife Likely To Be Of Particular Interest To Tourists

#### Medium sized mammals
- Water Rats – commonly seen feeding at Myall Lakes National Park
- Flying foxes – a large colony of 50,000 live in the northern suburbs of Sydney and are easily viewed in the summer months from nearby suburbs

#### Large marsupials
- Kangaroos and wallabies – various species seen throughout the State

#### Birds
- Rockwarbler – this is the only endemic bird in New South Wales and often frequents rocky outcrops in parks near the Jenolan Caves
- Superb Lyrebird – one of the world’s largest songbirds is commonly seen in the Blue Mountains National Park
- Rainforest birds – high diversity in northern rainforests

#### Other
- Grasshoppers – there are four species that are endemic to the alpine regions, one actually has thermocolour (colour changing) ability
- Grey Nurse Sharks – commonly seen by scuba divers off Seal Rocks

### Key Distinguishing Features of Wildlife
- Best state to see a great variety of species of kangaroo and wallaby

### NORTHERN TERRITORY

### Major Mass Tourism Attractions
- Territory Wildlife Park – features open-moated enclosures of native and feral animals, freshwater walk-through aquarium, rainforest aviary and nocturnal house on more than 400 hectares
- Alice Springs Desert Park – features common and rare central Australian wildlife, a noctarium and free-flying birds of prey displays
- Crocodylus Park – guided tours including interpretive displays and external viewing platforms of large, live crocodiles
- Crocodile Farm – Australia’s largest crocodile farm with over 7,000 crocodiles
- Gows Reptile Farm – has the largest range of snakes in Australia (250 species)

### Key Wildlife Regions
- Katherine – Nitmiluk (Katherine Gorge) National Park is a great place for reptiles, flying foxes and butterflies
- The Red Centre – MacDonnell Ranges, Uluru (Ayres Rock) and Kata Tjutu (The Olgas) National Park
- The Top End – Kakadu National Park is world renowned for its wildlife, especially crocodiles and waterbirds and popular for camping, river cruises, spotlighting and 4WD tours; Fogg Dam Conservation Reserve is renowned especially for its wetland birds.

### Key Wildlife Habitats
- Wetlands and billabongs – popular habitats for crocodiles, birds, Barramundi and freshwater turtles
- Outback desert – home to reptiles, desert birds, hopping-mice and macropods

### Wildlife Likely To Be Of Particular Interest To Tourists

#### Birds
- Wetland birds – congregate in large numbers in wetlands and billabongs
- Magpie Geese – largest population in the world in Kakadu

#### Reptiles
- Crocodiles – the most heavily promoted wildlife species (for tourism); both freshwater and saltwater crocodiles are abundant; the ‘salties’ are the largest living reptile and are common throughout the waters of the Northern Territory
- Water Pythons – best seen at night at Fogg Dam with a powerful torch
- Frilled Lizard – quite common in the Northern Territory, but rarely seen outside the wet season
- Thorny Devil – a harmless brightly coloured desert dragon that loves eating ants but is well armed with hideous looking spikes or ‘thorns’
Ferals
- Buffalo – caused extensive damage to wetlands in the Kakadu area
- Wild pigs
- Horses – trample native vegetation and disturb waterholes

Key Distinguishing Features of Wildlife
- The Water Pythons and native rats of the Northern Territory have a combined biomass greater than that of wildlife on the Serengeti Plain in Africa
- Largest concentration of wetland birds in Australia, being a permanent home for one-third of all Australian bird species
- Greatest number of large feral animals, including horses, buffalo and camels

QUEENSLAND

Major Mass Wildlife Tourism Attractions
- Australia Zoo – home of the ‘Crocodile Hunter’ and the world’s oldest Galapagos Land Tortoise ‘Harriet’ (171yrs), collected by Charles Darwin in 1835
- Currumbin Wildlife Sanctuary – well known for its daily wild Rainbow Lorikeet feeding
- David Fleay Wildlife Park – claims to be Australia’s premier habitat and wildlife park
- Lone Pine Koala Sanctuary – claims to be the world’s first and largest koala sanctuary
- Underwater World – walk-through tunnel aquarium and a seal colony
- Reef HQ – this is the world’s largest living coral reef aquarium and supports 200 varieties of reef fish with a walk-through viewing tunnel
- Rainforest Habitat Wildlife Sanctuary – koala, wallaby and wetland walks, rainforest aviary, and crocodile area
- Tangalooma Wild Dolphin Resort – close encounters with wild dolphins
- Mon Repos Turtle Rookery – the largest sea turtle rookery on east coast

Key Wildlife Regions
- Great Barrier Reef – largest living organism in the world offers marine mammal tours, reef snorkelling/diving and reef cruises
- The Daintree Wet Tropics World Heritage Area – is one of the richest biodiversity regions in the country and offers spotlighting and 4WD tours. The rainforests in Mt Hypipamee National Park are home to seven species of possums
- Fraser Island – largest sand island in the world and excellent location to see Dingoes and Humpback Whales
- Hervey Bay – largest concentration of whales and whale watching in Australia and possibly the world

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- Fraser Island – largest sand island in the world and excellent location to see Dingoes and Humpback Whales
- Hervey Bay – largest concentration of whales and whale watching in Australia and possibly the world
### Key Distinguishing Features of Wildlife

- **Marine fauna**
  - Southern Right Whales – often viewed from the cliffs of the Great Australian Bight and other locations
  - Australian Sea-lions – Seal Bay, KI is the third largest colony in the world and the only place to see them at close range
  - New Zealand Fur Seals – large colonies can be seen at KI
  - Dolphins – can be seen in the Port River estuary
  - Great White Sharks – tourists can be lowered into the South Australian waters inside a steel cage to view these predators
  - Leafy Sea Dragons – off the coast near Adelaide is the most accessible location in Australia where divers can catch a glimpse of the dragon by snorkelling along weedy areas of the coastline

- **Small marsupials**
  - Kangaroo Island Dunnart – restricted to KI

- **Large marsupials**
  - Western Grey Kangaroo – including a KI subspecies
  - Yellow-footed Rock Wallaby – an icon species for SA; Flinders Ranges are one of the only places in Australia where they can be easily seen
  - Tammar Wallaby – virtually extinct on the mainland, but the KI subspecies is thriving

- **Reptiles**
  - Turtles – six of the seven species of sea turtle in the world live on the reef

- **Fish**
  - Reef fauna – more than 2,000 species of fish, 4,000 species of mollusc, 300 species of hard coral and numerous invertebrates

- **Key Wildlife Regions**
  - Kangaroo Island (KI) – free from introduced predators, the island is abundant with wildlife and has many of its own endemic subspecies
  - Great Australian Bight – over 4,000 km of rugged coastline featuring whales, sharks and seals
  - Flinders Ranges – the easiest location in Australia to see the Yellow-footed Rock-wallaby and home to large numbers of kangaroos
  - Lake Eyre – The world’s largest salt lake fills with wildflower blooms after heavy rain and attracts hundreds of thousands of wetland birds
  - The Coorong – Coorong National Park is one of Australia’s most important waterbird areas, especially for the Australian Pelican

- **Reptiles**
  - Turtles – six of the seven species of sea turtle in the world live on the reef

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### Key Wildlife Habitats

- Coastal waters – whale watching tours, shark cage dives, sea dragon dives, diving on rocky reefs
- Outback (especially Flinders and Gawler Ranges) – covers more than 80% of the state and offers kangaroos, Euros, reptiles
- Mallee/spinifex and woodlands – birdwatching and reptiles

### Wildlife Likely To Be Of Particular Interest To Tourists

- **Marine fauna**
  - Southern Right Whales – often viewed from the cliffs of the Great Australian Bight and other locations
  - Australian Sea-lions – Seal Bay, KI is the third largest colony in the world and the only place to see them at close range
  - New Zealand Fur Seals – large colonies can be seen at KI
  - Dolphins – can be seen in the Port River estuary
  - Great White Sharks – tourists can be lowered into the South Australian waters inside a steel cage to view these predators
  - Leafy Sea Dragons – off the coast near Adelaide is the most accessible location in Australia where divers can catch a glimpse of the dragon by snorkelling along weedy areas of the coastline

- **Small marsupials**
  - Kangaroo Island Dunnart – restricted to KI

- **Large marsupials**
  - Western Grey Kangaroo – including a KI subspecies
  - Yellow-footed Rock Wallaby – an icon species for SA; Flinders Ranges are one of the only places in Australia where they can be easily seen
  - Tammar Wallaby – virtually extinct on the mainland, but the KI subspecies is thriving

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### SOUTH AUSTRALIA

- **Major Mass Wildlife Tourism Attractions**
  - Adelaide Zoo – zoo featuring a simulation of the Kangaroo Island coastline with Little Penguins and a colony of Yellow-footed Rock-wallabies
  - Monarto Zoo – open range zoo featuring a number of threatened species
  - Cleland Wildlife Park – native wildlife live in five different walk-through environments
  - Seal Bay – boardwalk and guided tours offer access to a resident colony of over 600 Australian Fur Seals
  - Warrawong Sanctuary – fenced conservation area in which ferals have been removed and natives reintroduced
  - Naracoorte Caves – world class Bat Cave Video Centre where bat populations can be viewed via an infra-red camera system

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### Key Distinguishing Features of Wildlife

**Tasmania**
- **Largest concentration in Australia of Great White Sharks off the coast**
- **Kangaroo Island is free from foxes or rabbits and has many endemic subspecies of wildlife**
- **Coorong National Park is the largest permanent breeding site of Australian Pelicans in Australia**
- **High diversity of temperate fish, 80% of species are endemic to South Australia**

**Key Wildlife Regions**
- **Cradle Mountain-Lake St Clair National Park** – high diversity of mammals including approachable wallabies and wombats
- **Bicheno** – towering kelp forests and sponge gardens make this area popular with cold water divers
- **Asbestos Range National Park** – easy to see the Common Wombat and the Tasmanian Devil, huge numbers of kangaroos and wallabies
- **Southern Islands** – Maria Island is one of the best places to get a close-up view of some of Tasmania’s small to medium-sized marsupials, including the Forester Kangaroo. Bruny Island is the only location in which all 12 bird species endemic to Tasmania can be seen in one place

### Key Wildlife Habitats
- **Mountain ranges** – mammal spotlighting
- **Coastal waters** – snorkelling/diving, ocean cruises, marine mammal tours
- **Cool-temperate rainforest** – mammal spotlighting, bushwalking

### Wildlife Likely To Be Of Particular Interest To Tourists

**Medium sized marsupials**
- **Tasmanian Devil** – the largest carnivorous marsupial in Australia is found only in Tasmania
- **Common Wombat** – Asbestos Range National Park claims to be the best wombat watching location in Australia, as many wombats can be seen at once
- **Eastern Quoll** – now extinct on the mainland, this carnivorous marsupial is abundant throughout Tasmania
- **Eastern-barred Bandicoot** – now extinct on the mainland, this small guinea pig-like creature now survives in Tasmania due to the lack of predators

**Large marsupials**
- **Forester Kangaroo** – Tasmania’s only kangaroo, best seen on Maria Island

**Victoria**
- **Phillip Island – famous for its Penguin Parade and swim with seals**

### Key Distinguishing Features of Wildlife

**Large mammals**
- **Bennet’s Wallaby** – Tasmanian subspecies of the Red-necked Wallaby is very approachable in the Cradle Mountain area
- **Tasmanian Tiger (Thylacine)** – now apparently extinct after the last died in 1936, but ongoing folklore and claims of resightings

**Birds**
- **Migratory birds**
- **Forty-spotted Pardalote** – one of Australia’s rarest birds and a Tasmanian endemic, more than half of the remaining population lives on Bruny Island
- **Penguins** – Little Penguins, Royal Penguins and other species often frequent the shores of Bruny Island
- **Peregrine Falcon** – most accessible place to see these magnificent birds is from the Tasman Bridge in Hobart

### Key Wildlife Regions
- **Phillip Island** – famous for its Penguin Parade and swim with seals
- **Melbourne Zoo** – zoo featuring a walk-through Butterfly House
- **Healesville Sanctuary** – features raptor flight displays and platypus centre
- **Werribee Open Range Zoo** – huge natural enclosure featuring exotics from Africa and Asia
- **Phillip Island Penguin Parade** – commonly referred to as Victoria’s premier tourist attraction: watch the Little Penguins parade up the beach every night
- **Melbourne Aquarium** – features a transparent tunnel surrounded by sharks and giant stingrays and a 2.2 million litre Oceanarium
### Key Distinguishing Features of Wildlife

- Phillip Island has the largest concentration of Little Penguins in Australia
- Many marsupials endemic to Victoria live in the eastern and central forests
- High diversity of frogs in East Gippsland

### WESTERN AUSTRALIA

#### Major Mass Wildlife Attractions
- Perth Zoo – zoo with a strong conservation theme; has been referred to as WA’s number 1 tourist attraction
- Underwater World – marine aquarium with underwater viewing of fur seals and over 200 local marine species in a walk-through tunnel aquarium
- Armadale Reptile and Wildlife Centre – reptiles and rehabilitated Western Australian animals
- Dryandra Woodland – rare and threatened medium sized marsupials
- Monkey Mia Dolphin Resort – close encounters and feeding with wild dolphins

#### Key Wildlife Regions
- Shark Bay – wild dolphins encounters at Monkey Mia, also see dugongs, turtles, manta rays, tiger sharks
- Ningaloo Marine Park – diving with whale sharks and manta rays, reef snorkelling/diving, dugongs, turtles, dolphins, 220 species of coral, 500 species of fish
- The Kimberley – prime birdwatching region, crocodiles, bats, reptiles
- Wildflower regions – spectacular blooms every spring attract many birds
- The South-West – forests and woodlands support the highest diversity of marsupials in Western Australia, including Dryandra Woodland and Perup Ecology Centre

#### Key Wildlife Habitats
- Coastal waters – marine mammal tours, whale shark diving, reef snorkelling/diving
- Jarrah, Karri and Tingle forests – mammal spotlighting and viewing macropods and emus
- Wetlands – birdwatching tours
- Outback deserts – covers 85% of the state and offers reptiles, birds of prey, macropods, dingo

### Wildlife Likely To Be Of Particular Interest To Tourists

#### Small marsupials
- Long-footed Potoroo – discovered in East Gippsland forests in 1980

#### Medium sized marsupials
- Leadbeater’s Possum – presumed extinct until 1961, now found only in the eucalypt forests of the Central Highlands in Victoria

#### Birds
- Little Penguins – the world’s smallest penguin is the only penguin that breeds in Australia and is best seen at Phillip Island
- Short-tailed Shearwater (Mutton bird) – makes one of the longest migratory journeys of any other bird and in abundance on Mutton Bird Island just off the Great Ocean Road

#### Marine mammals
- Australian Fur Seals – said to be the most inquisitive of all Australian mammals, they are abundant and can be viewed at Seal Rocks; swim with seals tours in Port Phillip Bay
- Dolphins – especially in Port Phillip Bay
- Whale watching – mostly shore based

#### Invertebrates
- Bogong Moth – seen swarming in the thousands to the bright lights of the Sydney 2000 Olympics
- Giant Gippsland Earthworm – largest earthworm in the world and is only found in Gippsland, Victoria

### Key Wildlife Habitats

- Waterways and coastal bushland – birdwatching, river and lake cruises, camping
- Alpine highlands – bushwalking and mammal spotlighting
- Mallee and spinifex – mallee fowl, emus, macropods and birds common and only place in the state with Red Kangaroos
- Mountain Ash forests – the world’s tallest hardwood forest near Melbourne is popular for mammal spotlighting and bushwalking

### Wildlife Likely To Be Of Particular Interest To Tourists

#### Medium sized marsupials
- Numbat – found only in south-western Western Australia
- Quokka – very abundant and approachable on Rottnest Island, the only place where it lives in the wild
- Woylie (Brush-tailed Bettong) – the last remaining populations in Australia can be seen in forests at Perup and Dryandra Woodlands
**Key Distinguishing Features of Wildlife**

- **Boodie (Burrowing Bettong)** – extinct on the mainland, now survive only on islands off the West Australian coast and in conservation parks
- **Rock wallabies** – Yardie Creek
- **Red-tailed Phascogales** – spotlighting at Dryandra Woodlands offers the best chance of seeing this marsupial in Australia
- **Chuditch (Western Quoll)** – spotlighting at Perup Ecology Centre provides the best chance of seeing Western Australia’s largest predatory marsupial
- **Bilby** – now being introduced to the south-west

**Marine Fauna**

- **Whale Shark** – only state in Australia where you can swim with the largest fish in the sea
- **Dolphins** – close encounters at Monkey Mia and Bunbury
- **Turtles**
- **Sea lions** – in the Perth area
- **Manta Rays** – congregate in large numbers in the Ningaloo Marine Park at coral spawning times

**Birds**

- **Penguins** – readily seen at Penguin Island
- **Shore birds** – Broome attracts nearly one million birds each summer
- **Wetland birds** – attracted to the wildflower blooms every spring

**AUTHORS**

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