

Chapter 3

Zoo Tourism

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Introduction

Zoos are perhaps the oldest form of wildlife tourism; efforts to tame and keep wild animals in captivity are nearly as old as human society itself. The first documented examples were the animal collections associated with places of worship in Ancient Egypt around 2,500BC (Loisel, 1912). These were simply glorified 'menageries', a term used pejoratively to describe collections of captive animals kept solely for the purposes of display, religion, or for the aggrandisement of the owner (Rothfels, 2002). In ancient Egypt, the animals were kept primarily for their religious significance. Later, other ancient societies including the Greeks, Romans and Chinese also established menageries to display the wealth and prestige of the owners, and to provide for exotic hunting and entertainment (Mazur, 2001). The tradition of gathering and holding impressive animal collections by royal and noble families continued into the 18th century in different parts of the world (Hancocks, 2001).

The history of the modern zoo began in the late 18th and early 19th centuries with the formation of the first 'public zoos', open to all (Baratay and Hardomin-Fugier, 2002). The first of these new zoos was the Jardin des Plantes, opened in 1793 in Paris. It was followed by similar establishments in London (1828), Amsterdam (1843), Berlin (1844) and Central Park, New York (1862). These zoos represented a significant change, for in addition to public display they were established to support scientific endeavour and public education (Koebner, 1994). For instance London Zoo was based on the philosophical foundation of scientific advancement and didactic enlightenment (Hancocks, 2001). It was immediately popular, and soon became the most fashionable venue in London. The scientific principles on which it was founded and its setting in a large public open park with informal, naturalistic landscaping were to be the pattern of development for new zoos all over the world for the next hundred years.

However, by the 1960s, many zoos were in a parlous state: old fashioned, badly run and increasingly out of touch (Brambell, 1992). Their survival depended upon them becoming seen as an integral and relevant part of today's society, and in developed countries particularly, zoos began to respond to growing environmental and animal welfare concerns. As Knowles (2003, p.29) explains: 'The zoo person of the second half of the century became a conservationist and it was this new philosophy that was to drive the many changes that have occurred in the last decade'. These zoos now strive to become conservation centres, and in so doing, they have embraced three justifications and objectives for keeping wild animals in captivity: conservation, education and research (Serell, 1981; Cherfas, 1984; Broad and Weiler, 1998; Hanson, 2002). Thus the evolution of zoos from menagerie, through zoological garden to conservation centre, can be seen as an illustration of the history of the Western World, in which civilisation has slowly come to appreciate, value and conserve nature (Rothfels, 2002).

Box 3.1: London Zoo**Mission statement:**

To achieve and promote the worldwide conservation of animals and their habitats.

History:

Founded in 1828, occupies a 36 acre site (leased from the Crown) in Regent's Park, London.

Administered by the Zoological Society of London (ZSL), which also runs Whipsnade Wild Animal Park and the Institute of Zoology. ZSL is a registered charity.

London Zoo was based on the philosophical foundation of scientific advancement and didactic enlightenment (Hancocks, 2001). These principles and its setting in a large public open park with informal, naturalistic landscaping were to be the pattern for new zoos all over the world for the rest of the century.

However, by the 1970s, London Zoo appeared decrepit and old fashioned and in 1992 it was in such severe financial difficulties that appeared likely to close. Stringent measures were taken to improve efficiency and cut costs, (including substantially reducing the number of animals and staff) while public donations gave the zoo time for these changes to be implemented (Lyons, 1991).

Since then, a number of new projects have been completed: macaw aviary, children's zoo, pigmy hippo enclosure, and Millennium Conservation centre.

Market:

Attracts around one million visitors annually, and has a turnover of more than £10 million.

87% of visitors are from the UK, with 50% from London (C. Masters, pers. com.).

Attendances fell through the 1980s but have remained stable for the past few years.

Display:

The large and varied collection of animals concentrates on threatened species to whose survival the Zoo contributes by captive breeding, on species of educational value, and on those of particular interest to the public.

Many zoo buildings have architectural and historical merit (thirteen are listed by the National Trust). They span the whole history of the zoo from the Raven's Gate in 1829 to the Millennium Conservation Centre in 1999.

Conservation:

ZSL undertakes conservation projects worldwide including many *in situ*. This work is supported by the fees it earns, plus grants and donations. The largest project is the King Khalid Wildlife Research Centre in Saudi Arabia where two threatened species of gazelle are being captive-bred and re-introduced to the wild. This project employs 34 people.

ZSL also has an educational role: London Zoo takes in about 60,000 school students each year, it undertakes zoological and conservation research, it publishes scientific journals and holds scientific meetings, and maintains the UK's principal specialist zoological library.

Sources: Tisdale (1993); Bell (2001); ZSL (2003).

The discussion so far has addressed zoos without reference to their role in tourism. Zoos are unusual amongst wildlife tourism destinations in that, while the proportions may vary, most visitors to most zoos are local residents, not tourists (Hunter-Jones and Hayward, 1998). For instance, of the estimated 8 million people to visit Australian zoos each year, approximately 5 million (62.5%) were domestic with the remainder being from overseas (ABS, 1999). Swarbrooke (1995) and Mothershaw (1997) have provided similar evidence for the UK by reference to Chester Zoo, where most zoo

visitors were drawn from the local area or region, and where the zoo is consequently a vital component of the city's economy and sustainability.

Perhaps as a consequence of this, zoos in the past generally have not seen themselves as being in the tourism industry, but rather as an integral part of their local communities. This aspect is discussed more fully later in this chapter. However, as they have become more business oriented, zoos are now marketing themselves as wildlife tourism destinations. Today, zoos are organisations seeking to satisfy multiple stakeholders with limited resources, and consequently zoo managers must tackle a number of important challenges (Turley, 1999a). These include maintaining a satisfactory balance between running the zoo as a tourism business and a conservation organisation; generating sufficient finance and funding; effectively communicating their roles in order to attract an optimum number of visitors; managing the demands of the animal collection and attaining cultural status on the basis of their conservation work. To do this effectively will require zoos to be efficient, competitive businesses within the broader wildlife tourism market.

The zoo industry

There is a large number of zoos and wildlife parks throughout the world. In fact, because of the enormous variation amongst the institutions that are known as 'zoos', it is difficult to find a precise definition, which covers them all. However, as the World Zoo Conservation Strategy (IUDZG/CBSG (IUCN/SSC), 1993) explains, there are two characteristics that all such institutions have in common:

- Zoos possess and manage collections that primarily consist of wild (non-domesticated) animals, of one or more species, that are housed so that they are easier to see and to study than in nature.
- Zoos display at least a portion of this collection to the public for at least a significant part of the year, if not throughout the year.

Consequently, regardless of the composition of their collections, their official name (zoo, aquarium, sanctuary, fauna park etc.) and their type of ownership, all these zoological institutions will be known by the general term 'zoo' in this chapter. The various types of zoo and their animal collections are described in Box 3.2.

Box 3.2: Variation in zoos and their animal collections

The institutions collectively designated as 'zoos' vary greatly with respect to their animal collections. They may include:

- General collections consisting of representatives of all the vertebrate classes: mammals, birds, reptiles, amphibians and fish. Institutions such as these usually call themselves 'zoos'.
- Specialized bird collections. These may be called bird parks, waterfowl parks, parrot gardens etc.
- Specialized reptile collections (e.g. reptile parks, vivaria)
- Specialized marine mammal collections (e.g. aquaria, dolphinaria, marine zoos).
- Specialized fish collections. These may include aquatic and terrestrial vertebrates (e.g. aquaria).
- Specialized insect collections (e.g. insectaria, butterfly houses).
- Specialized collections of other mammal groups (e.g. primate zoos).

Source: IUDZG/CBSG (IUCN/SSC), 1993

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With such a diversity of facilities, it is very difficult to calculate the exact number of zoos throughout the world although it has been estimated that there are more than 10,000 (IUDZG/CBSG (IVCN/SSC), 1993). The International Zoo Yearbook provides an annual list of zoos of the world and the 2003 edition includes 922 zoos from 85 countries (Olney & Fiskén, 2003). However, this is by no means a comprehensive list, because the information is supplied voluntarily by the zoos and does not include many smaller institutions. For instance, the Australian listing includes just 17 zoos while there are an estimated 209 captive wildlife facilities in that country (K. Higginbottom, pers. comm.).

Nevertheless, such a list does demonstrate the extraordinary geographic range and diversity of zoos across the world. Each zoo is unique (Hutchins, 1988; Mellen, 1994) and they may be characterised in terms of size, location, management and marketing expertise, organisational structure, number and variety of species displayed (Shackley, 1996; Hunter-Jones and Hayward, 1998). They include institutions under private or public ownership, and exist in both developed and developing countries. Thus zoos are perhaps the most widespread and available form of wildlife tourism in the world being marketed across all cultures and socio-economic levels.

As such a significant segment of the tourism industry, zoos can make a considerable contribution to the economy of their local region, city or even nation. Through their business activities, zoos create employment, purchase goods, materials and services, earn foreign exchange through their visitation by overseas tourists, and generate operating surpluses which are usually reinvested in zoo development projects (Tribe, 2001). For instance, the Australian zoo industry with eight million paid admissions per year, has an annual turnover of some \$143 million, generates an operating surplus of \$16 million, and employs almost 2,000 people (ABS, 1998).

The majority of zoos are found in cities, where they have the potential to attract large numbers of visitors. These metropolitan zoos typically display a large number and diversity of species, in relatively small groups and enclosures (Ford, 1998). The modern trend for presenting animals in their natural physical and social environments has resulted in the development of safari parks and open-range zoos. These represent a minority of zoos, but are becoming increasingly popular (Ford, 1998). Typically located outside major cities, they are set on a larger area but attract fewer visitors than their city counterparts. They tend to display a greater number of individuals from fewer species, to simulate natural social groupings and behaviour.

The World Zoo Conservation Strategy (IUDZG/CBSG, 1993) reckons there to be approximately 1,200 'core' zoos in the world. These are so categorised because they are organised as members of recognised zoo associations, of which there are currently 50 throughout the world (Olney & Fiskén, 2003). The largest of these zoo associations and the regions they cover are shown in Box 3.3.

Box 3.3: Zoo associations around the world

The 1,200 'core' zoos of the world are organized in national and /or regional zoo associations. These associations include:

Africa

Regional association for all of Africa: PAAZAB (Pan African Association of Zoological Gardens, Aquaria and Botanical Gardens)

Asia

National associations in: China, India, Indonesia, Japan, Pakistan, Thailand

Regional association for South East Asia: SEAZA (South East Asian Zoo Association)

Regional association for South Asia: SAZARC (South Asia Association of Zoos)

Australasia

Regional association for Australia and New Zealand: ARAZPA (Australasian Regional association of Zoological Parks and Aquaria)

Europe

National associations in: Austria, Czechia/Slovakia, Denmark, France, Germany, Hungary, Italy, Netherlands, Poland, Spain, Sweden, Switzerland, United Kingdom

Regional association for all of Europe: EAZA (European Association of Zoos and Aquaria)

Latin America

National associations in: Brazil, Colombia, Guatemala, Mexico, Venezuela

Regional association for Meso America: AMAZOO (Association of Meso American Zoos)

North America

National association in: Canada

Regional association for the subcontinent: AZA (American Zoo and Aquarium Association)

Source: IUDZG/CBSG (IUCN/SSC), 1993; J. Wilken, ARAZPA, pers. comm., 7/7/03

The umbrella organisation for the world zoo community is the World Association of Zoos and Aquaria (WAZA), with about 200 institutional members, while another 1000 are linked through their membership in a regional or national Association member. All members of the WAZA Network are obliged to comply with its Code of Ethics and Animal Welfare. They agree to work together at a global level to build cooperative approaches to common needs and issues, to share information and knowledge, and represent the zoo community in other international bodies such as the World Conservation Union (IUCN). Consequently, the most accurate and complete information and data about the zoos of the world come from these 1200 'core' zoos.

Operating zoos is acknowledged as being a highly expensive business (van Oudstoorn, 1987; Wade, 1994), and the closer they come to the concept of a conservation centre, the costlier they become (Hediger, 1969). Consequently, zoos often have difficulty in generating the necessary annual revenue from visitor admissions to cover the substantial costs of housing and maintaining and staffing their collection (Turley, 1999a). Zoos in the UK that closed down during the 1990s did so largely because of a lack of sufficient visitors and revenue (British Broadcasting Corporation (BBC) Education, 1994). Even for well-established and popular zoos, levels of visitation (and hence revenue) can vary from year to year in response to a number of factors over which the zoo has little or no control (Mason, 2000). These may include the state of the economy (particularly the international tourism market), weather conditions (especially during school holidays) and increased competition from other tourist attractions. In addition, other extraordinary factors can also impinge severely on a zoo's ability to generate revenue and balance its budget. For instance, the Foot and Mouth Disease outbreak in the UK in 2001 cost their zoo industry AUD\$20 million (M. Robinson, pers. comm.) and was particularly severe in its effect on zoos that had to close their gates for its duration.

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The market

Zoos are a popular amongst the most Mexico City zoo Moscow 3.5 million Dutch zoos are (van Linge, 1992)

Consequently, in addition to gate receipts, zoos have increasingly used a number of other means of generating additional income (Turley, 1999a; Hancocks, 2001; Mazur, 2001). These include attracting sponsorship from local, national and international companies, membership schemes and season tickets (often through 'Friends of the Zoo' societies), animal adoptions and sponsorships and retailing and catering activities. More recently, many zoos have introduced after-hours or 'value-added' events to increase admissions incomes, such as after-hours and 'behind-the-scenes' tours, concerts, corporate evenings and private functions (Mazur, 2001). This is a trend which developed in the USA but which is now increasingly seen in zoos in other parts of the world (Turley, 1999a).

Another recent development that has impacted upon the zoo industry and its activities has been the trend towards 'economic rationalism'. This philosophy asserts that a prosperous economy depends on efficiency, and the greatest efficiency occurs when open competition in a free market determines outcomes (Mazur, 2001). The effect on zoos has been twofold. Firstly, public zoos have received less and less government support. These institutions are being told that they need to become more efficient and economically viable by reducing their dependence on 'government handouts' and more fully developing their commercial potential (Mazur, 2001). Secondly, the managerial values of private industry have been increasingly forced upon zoos. This has meant that the majority of new senior staff positions created for zoos have been in the fields of marketing, development and management (Wagner, 1987), and that these vacancies tend to be filled by business professionals rather than people with an animal or zoo background. This, according to Mazur (2001), has signalled a shift in values beyond simply occupational changes. Zoo leaders, she claims, are now more likely to see their organisation first as a business that must operate 'efficiently', and therefore to apply performance criteria, such as budgeting measures that assess accountability via cost – answerability and economic efficiency.

As Chris Larcombe, former Chief Executive Officer of the Zoological Board of Victoria and Director of Melbourne Zoo, explained at an Australasian regional zoo conference in 1995: 'We must come to terms with the increasing financial pressures on the operations of our properties. What we are talking about here is a sustainable base of economic support and leveraging of resources in order to continue to develop our properties.... But we will only be able to continue to deliver this potential if we have organisations of sustainable financial viability' (Larcombe, 1995, p.122).

However, while the desire to increase revenue, efficiency and sustainability is both necessary and desirable, the challenge for zoos is in how to achieve it without losing sight of their fundamental objectives (Hancocks, 2001). As van Linge (1992, p.117) says, 'animal management must never be made subordinate to the pleasure of the visitors'.

The market

Zoos are a popular and traditional part of wildlife tourism. In many countries, zoos are amongst the most popular destinations for a day out (van Linge, 1992). For instance Mexico City zoo receives more than 12 million visitors per year, Beijing 11 million, Moscow 3.5 million, San Diego 3.3 million and Tokyo 1.5 million. The nine major Dutch zoos are visited yearly by a combined total of approximately 6 million people (van Linge, 1992), with the majority being local residents.

The total number of people visiting zoos annually is even harder to estimate than the total number of zoos, and can only realistically be estimated for the 1,200 core zoos mentioned above; at least six hundred million visits are made to these zoos every year (IUDZG/CBBG (IUCN/SSC), 1993). This represents approximately ten per cent of the world's population, and provides a reasonable indication of the popularity and size of the captive wildlife market. In the USA, for instance, zoo attendances exceed all professional sports events combined (Hancocks, 2001), with almost 50% of the total population visiting zoos on an annual basis (IUDZG/CBBG (IUCN/SSC), 1993), and more than 90% of Americans having been at least once in their lifetime (Robinson, 1988). Chapter 9 discusses further information about zoo visitors.

The popularity of zoos across the world is shown in Table 3.1. Here the annual attendances recorded by regional and national zoo organisations and by the International Zoo Yearbook are given. This data comes from the 1,200 'core' zoos from Box 3.3.

Table 3.1: Zoo attendances around the world

Continent	Total (millions)
Africa	15
Asia	308
Australasia	6
Europe	125
Latin America	61
America	106
Estimated World Total	621 million

Source: IUDZG/CBSG (IUCN/SSC), 1993

Yet in spite of this popularity, zoos find themselves within an increasingly competitive market servicing an audience that is becoming more discerning (Hunter-Jones and Hayward, 1998). The past 20 years have seen unprecedented growth in the number of stand-alone visitor attractions, such as museums, heritage properties, farm parks (which display domestic animals), and theme parks. In many countries the number has more than doubled in this period (Stevens, 2000), and has included a wide range of innovative leisure products. Consequently, Hunter-Jones and Hayward (1998) suggest that the attractions market is in serious danger of becoming oversupplied.

Evidence suggests that in real terms, demand for traditional attractions such as zoos is actually now in decline (Stevens, 2000). For instance, in the U.K. visits to a constant sample of zoos rose by just 4% between 1976 and 1997, while during the same period visits to all other attractions rose by 34%. (British Tourism Authority (BTA) / English Tourist Board (ETB), 1998). A similar stagnation of visitor numbers has been found in Australian zoos (Tribe, 2001). Table 3.2, compares the annual attendance for a number of selected zoos for 1978 and 1998.

Table 3.2: Annual

Zoo
Copenhagen, Denmark
Parc Zoologique de Paris, France
London Zoo, U.K.
Moscow Zoo, Russia
San Diego Zoo, U.S.A.
Chicago Zoo (Brookfield), U.S.A.
Bombay Zoo, India
Tokyo Zoo, Japan
Johannesburg Zoo, South Africa
Melbourne Zoo, Australia

* Source: Olney, 1982; *

A number of factors include demographic changes, a main audience of older people (Stevens, 2000), and a 1995) limited regional (Hutchins and Co. Hunter-Jones and Co. zoos are now perceived effectively, they strive to gain a better

The zoo in the 21st century

Zoos can play an important economic and cultural role in the culture of a society. In some detail in the same elements as their place in our society. In this aspect zoos are different. In our culture, zoos have a role. Visitors can enjoy the animals they are 'perception of zoos both public scrutiny

Consistent with Studies from both experience, with and Caldwell, 1998 and 2001). This is supported by a majority of respondents close friends or relatives visitors. Less clear role of the modern

Table 3.2: Annual attendance for a number of selected zoos for 1978 and 1998

Zoo	1978 Attendance*	1998 Attendance**
Copenhagen, Denmark	907,139	1,056,907
Parc Zoologique de Paris, France	1,023,457	726,725
London Zoo, U.K.	1,338,000	994,500
Moscow Zoo, Russia	2,167,930	1,454,996
San Diego Zoo, U.S.A.	3,100,000	1,828,486
Chicago Zoo (Brookfield), U.S.A.	1,696,836	2,212,508
Bombay Zoo, India	3,875,000	1,993,911
Tokyo Zoo, Japan	7,217,350	3,175,908
Johannesburg Zoo, South Africa	481,903	430,000
Melbourne Zoo, Australia	728,356	951,772

* Source: Olney, 1982; **Source: Olney & Fiskien, 2003

A number of reasons for this wavering zoo popularity have been given. These include demographic changes resulting in an aging population, not traditionally the main audience of zoos (Block, 1991), changes in numbers of leisure consumption (Stevens, 2000), poor marketing techniques employed by zoos (Hutchins and Conway, 1995) limited rejuvenation of the role of the zoo (Block, 1991), lack of funding (Hutchins and Conway, 1995) and issues of animal welfare (Brown, 1992). However, Hunter-Jones and Hayward (1998) believe that the overriding reason is simply that zoos are now part of an increasingly competitive leisure market. To compete effectively, they argue, zoos must appreciate their own place in the tourism market and strive to gain a better understanding of the motivations and attitudes of their visitors.

The zoo in the community

Zoos can play an important role in the life of their local community. Beyond their economic and conservation contributions, zoos can also reflect and participate in the culture of a society. Mullan and Marvin (1999) have discussed this aspect of zoos in some detail in their book 'Zoo Culture'. They maintain that zoos have many of the same elements as art galleries and museums, particularly through their history and their place in our cultural traditions. However, they also argue that in one important aspect zoos are different: whereas art galleries and museums entered the realm of high culture, zoos have become essentially popular because they do not intimidate people; visitors can enjoy themselves without having to possess much knowledge about the animals they are viewing. This has led not just to a higher visitation rate, but also to a perception of zoos as being more 'entertaining', friendlier and more likely to attract both public scrutiny and support.

Consistent with this are the results of studies that have examined who visit zoos. Studies from both the US and from Europe have found that visiting zoos is a social experience, with few people visiting alone. (English Tourist Board; 1983, Andreck and Caldwell, 1994; Rajack and Warren, 1996; Holzer et al, 1998; Turley, 1999b, 2001). This is supported by similar findings in Australia (Tribe, 2003). The great majority of respondents in all these studies indicated that they were visiting with either close friends or relatives, children were often included and most tended to be frequent visitors. Less clear are the attitudes of these people both to their own visit, and to the role of the modern zoo.

The attitudes of zoo visitors

Despite the importance of zoos as tourist attractions, until recently there has been little research to investigate the nature, attitudes and motivations of zoo visitors. (Mason, 2000). The nature of the zoo as a recreational setting and the preference of visitors to be in social groups would imply that enjoyment is a primary motivating factor, and this is supported by a number of studies across many countries. For instance in a survey of visitors at Woodland Park Zoo Seattle, Fielder and Wheeler (1985) found that nearly three quarters considered the zoo to be about entertainment with 92 per cent visiting as a family or social group. Table 3.3 summarizes the results from four studies in the U.S., the U.K. and Australia that examined why people visited zoos in those countries.

Table 3.3: The motivations of zoo visitors

Country	Reason for Visiting	%	Reference
USA	Education for children	38	Kellert (1979)
	To do something with family/friends	26	
	Personally fascinated by wild animals	25	
	Animals are pretty to look at	11	
USA	Education/Relational	56	Andereck & Caldwell (1994)
	Education	21	
	Recreation/Novelty	11	
	Photography	11	
UK	To have a day out	64	English Tourist Board (1983)
	To treat the children	53	
	To watch animals and birds	22	
	For entertainment	13	
	For a change	13	
	To learn about animals and birds	7	
UK	For fun/Entertainment	39	Rajack & Warren (1996)
	Visit with friends	36	
	To see rare animals	5	
	Education	4	
Australia	Entertainment	63	Ford (1998)
	Education	37	
Australia	Spend time with friends and family	77	Tribe (2003)
	Be in a pleasant outdoor space	54	
	Learn about the animals	33	
	Escape pressures of daily life	31	
	Learn about wildlife conservation	25	

Note: in some studies, more than one option could be chosen. Hence percentages do not sum to 100%.

All these studies agree that while people visit zoos for a number of different reasons, paramount amongst them seems to be recreation (Woods, 1998). In addition, Turley (1999b, 2001) has found children to be particularly significant in the decision: they both facilitate and in their absence inhibit, zoo visiting, with their presence increasing the enjoyment of the visit. Similar findings have come from the U.S. (Holzer et al, 1998) where it was also found that adults who visited zoos as children were more likely to revisit later in life, and to show them greater commitment and support.

However, while such research may indicate why people like zoos, the reasons for not visiting have been seldom considered (Hunter-Jones and Hayward, 1998). A major concern still appears to be the perception of captivity and captive conditions (Mason,

2000). For instance visitors to U.K. zoos in captive conditions, whilst captivity was a reason

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Table 3.4: Visitor

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2000). For instance, Turley (1999b) conducted a small national survey of latent visitors to U.K. zoos in which 40% associated traditional zoos with bars and unnatural conditions, whilst over one third (35%) indicated that not liking to see animals in captivity was a reason for not visiting.

Perhaps of even greater significance for zoo managers is the fact that conservation does not appear to be a major motivation for zoo visitors. This was shown consistently in the studies summarized in Box 5, and is supported by Turley (1999b) who found that of the three key objectives pursued by zoos (recreation, education and conservation), conservation had the least influence on the desire to visit. However, although zoo visitors appear to be influenced mainly by motives of enjoyment, many also believe that zoos do have a key role to play in conservation and education. Of those questioned at Woodland Park, Seattle, 68% claimed that they considered the purpose of the zoo to be primarily educational (Fielder and Wheeler, 1985). This is supported by the studies of Australian zoos by Mazur (1995) and Ford (1995) who also found that the great majority of visitors expected to learn about environmental issues at the zoo. The results of three recent studies that have examined public perceptions of the roles of zoos are summarized in Table 3.4.

Table 3.4: Visitor perceptions of the roles of zoos

Country	Role	% (Ranked "Very Important")	Reference
UK	Conservation	74	Rajack & Warren (1996)
	Research	49	
	Education	42	
	Entertainment	7	
Australia	Education	68	Ford (1998)
	Research	23	
	Entertainment	22	
	Display	21	
Australia	Educate public	61	Tribe (2003)
	Breed endangered species	52	
	Educate school children	43	
	Support wildlife conservation	41	
	Provide a pleasant day out	39	
	Research	17	
	Entertainment	8	

Note: More than one option could be chosen and hence percentages do not equal 100.

Thus zoos seem to be faced with a contradictory situation: people visit them mainly for recreation, but they believe that their main role is actually in conservation. This dilemma has important implications for zoo management in their search for more revenue: can conservation attract visitors? Will it make money for the zoo, or merely remain a net cost? Turley (1999a) suggests that conservation may provide people with a justification for visiting the zoo, and therefore does influence attendance level indirectly. However, there is no evidence to support this yet. Conversely, as Mazur (2001) points out, it is not known if visitors will actually go to a zoo less if more conservation programs are implemented and promoted.

Such unanswered questions point to a need for more research in this area. So far most has been short term and marketing based (Mazur, 2001), and there has been little deeper evaluation of visitor behaviour. This view is supported by Mason (2000) who believes that there is a great deal still to be understood about the nature of zoos as

tourist attractions, the characteristics of zoo visitors and visitor satisfaction. In particular their interpretation and understanding of the zoos' conservation, educational, scientific and entertainment roles need to be addressed as a part of this tourism research.

For an industry committed to supporting conservation, it is clear that more information is needed about the role of conservation in supporting the industry.

The wildlife

The total number of captive animals in the world's 1200 'core' zoos is estimated to be one million (IUDZG/CBSG (IUCN/SSC), 1993), with the majority comprising 3,000 vertebrate species. Thus, while the majority displays a broad range of species and includes mammals, birds and reptiles, some zoos specialize in the fauna of a particular region or habitat (such as marine parks or desert zoos) and others display only one or two classes of animal (such as bird parks or primate sanctuaries).

For any one zoo, the choice of what species to hold may depend on many factors including:

- Zoo legislation which may restrict what a zoo may hold, both for exotic and native species
- The cost of maintaining a particular species
- The conservation status of a species and the zoo's desire to contribute to a particular captive breeding program or conservation activity
- The marketability of the species in terms of its ability to attract visitors.
- The zoo's own stocking policy, or master plan for future development and the availability of suitable enclosure space, facilities and relevant expertise
- The availability of a species from another captive facility that may preclude a zoo from obtaining it (C. Larcombe, ZPGB VIC, pers. comm., 28/11/99).

The final collection may then be a mixture of common and endangered species, and may ultimately represent a compromise between what species the zoo would ideally like to exhibit, and the species that are actually available and appropriate.

The primary attraction of zoos is of course, their animals (Woods, 1998). However, while they are still places of recreation and entertainment, changes in public expectations and the zoo's own objectives mean that today there is far more scrutiny of the way in which their animals are being managed and utilised. In particular, this involves consideration of two important and related factors: the ethics of zoos and the role of zoos in conservation.

The ethics of zoos

Although zoos are popular places to visit, the relationship between the zoo and its public can still present problems. Not only do some people believe that zoos are basically cruel and evil places (Weir, 1989), but visitors often express negative attitudes towards the animals' captive environments and the way in which they are perceived to be treated (Nimon, 1990). Furthermore, Wolf and Tyitz (1981) found that most zoo visitors were primarily concerned for the comfort of the animals, and for their health and happiness. Such attitudes may then be reflected in zoo attendance levels. For instance Brown (1992), believes that the failure of UK zoos to attract more visitors through the 1980's was in part due to a growing concern for animal welfare.

Despite their conservation objectives, many people believe that zoos are unnecessary and that the Federation of Animal Welfare Societies (FAWS) believing that zoos are unnecessary (ANZCA) campaign strongly against the keeping of animals for human entertainment, such as the Society for the Protection of the Ethical Treatment of Animals (PETA) anti-zoo lobby (Baker, 1999).

Others are simply concerned that zoos be merely window displays. In the contrary, zoos are more efficient than any other method on the side.' In addition, the growth in animal welfare and the welfare of animals.

Thus zoos act on the belief that being with much spatial freedom or suitable (ANZCA) philosophically (Turley, 1999a). (2002) explains, 'free', a statement as menageries of amusement has (Turley, 1999a). that, for the most part, is something kept is something.

This combines zoos under close the Protection of Zoo Inquiry (Woods, 1998). many parts of the UK-based, the Although critical constructive recommendations for zoos in conservation.

In the ten years since been adopted by through a combination requires zoos to be developing countries from country to some basic provisions.

Despite their improvements in captive animal management and adoption of conservation objectives, zoos are still seen by some as being superficial, expensive, unnecessary and therefore indefensible. For instance, the Australian and New Zealand Federation of Animal Societies is opposed to keeping wild animals in captivity, believing that zoos in their present form provide stressful conditions and are unnecessary (ANZFAS, 1996). Similarly, the Born Free Foundation continues to campaign strongly in the UK and Europe for the abolition of 'the confinement of wild animals for human entertainment' (Hewitt, 2000), while in the U.S., organisations such as the Society for the Prevention of Cruelty to Animals (SPCA) and People for the Ethical Treatment of Animals (PETA) provide a consistent and vocal voice for the anti-zoo lobby (Baatey and Hardouin-Fugier, 2002).

Others are simply sceptical of the conservation claims of zoos, believing them to be merely window dressing. As Scott (2001) writes: 'Despite their protestations to the contrary, zoos are still menageries. The only difference is that their Public Relations are more efficient and some of them do a little serious captive breeding and research on the side.' In addition, according to Hutchins (2003) there is likely to be a continued growth in animal welfare and rights organizations, as well as concern by the public for the welfare of animals in captivity.

Thus zoos actually provoke two ethical considerations. Firstly some people hold the belief that because animals in the wild live in an environment of great complexity with much spatial and temporal variation, no captive environment can be appropriate or suitable (ANZFAS, 1996, Hancocks, 2001). To these people zoos are philosophically unacceptable, and cannot be justified on any grounds. As Hanson (2002) explains, this is an elaboration of the idea that 'wild animals ought to roam free', a statement about the authentic state of wilderness. Secondly, the history of zoos as menageries of animals in cramped conditions and maintained largely for human amusement has left a lasting impression on some people of poor animal welfare (Turley, 1999a). As Stevens and McAlister (2003, p. 97) explain: 'It is quite apparent that, for the most part until fairly recent times, the way in which wild animals were kept is something of which humankind should be embarrassed and ashamed.'

This combined with the fact that they are constantly in the public gaze, has brought zoos under close scrutiny over the past 20 years. In July 1994, the World Society for the Protection of Animals (WPSA) and the Born Free Foundation (BFF) issued *The Zoo Inquiry* (WPSA, 1994). Whilst anti-zoo movements have been alive and well in many parts of the world and particularly North America, because WPSA and BFF are UK-based, the major concentration of argument centred on UK and Irish zoos. Although critical of zoos, this document was significant in that it also made some constructive recommendations regarding animal welfare standards, and the role of zoos in conservation.

In the ten years since this report, many of these recommendations have actually been adopted by the zoo industry, at least in developed countries. This has come about through a combination of zoo legislation, and codes of practice. Zoo Legislation that requires zoos to be licensed and inspected now exists in most developed and many developing countries around the world (Cooper, 2003). Although their content varies from country to country and the terminology and its use are not uniform, there are some basic provisions that are common to all. These are outlined in Box 3.4.

Box 3.4: The basic elements and typical provisions of zoo legislation

Authorization is required which may be in the form of a permit or licence of registration. Licence procedures then require zoos to provide a wide range of information and records about their animals and the facilities provided for them. This allows the licensing authority to assess the resources available for animals, staff and visitors, and the compliance with the law and relevant standards. The information is usually verified by a zoo inspection, and licences have to be renewed annually. Standards are used to supplement zoo legislation, and comprise requirements for the management of a zoo and the care of its animals. They do not usually appear in the zoo legislation but may be made under it and are therefore more easily changed and updated. They may include provisions for: animal accommodation and facilities; special needs of particular species and displays; animal welfare; animal care and nutrition; veterinary attention and facilities; hygiene; emergency procedures; staff safety; training and facilities; visitor safety and facilities (Macdonald and Charlton, 2000). Monitoring via inspection of zoo premises is then conducted to ensure that the provisions of the licence and standards are being met. Enforcement of these provisions is effected through withdrawal of the zoo licence and penalties for non-compliance.

Source: Cooper (2003)

Some of the most recent legislation now requires zoos to justify their existence. For instance a European Union (E. U.) Directive requires zoos in member countries to have conservation objectives, and to address the behavioural needs of its animals (E.U, 1999). This Directive also provides for the partial closure of a zoo in the event of its failure to comply with conditions imposed in its licence.

Codes of Practice represent a form of industry self-regulation and have been developed over the past decade by a number of regional zoo associations to try to raise the standards of animal care and welfare in their member institutions. In some regions these codes are enforced by the terms of membership of the association itself, with expulsion as the penalty for non-compliance, while in others they are only morally enforced using self-regulation. More recently, these codes have been supplemented by a Code of Ethics developed by the World Association of Zoos and Aquaria (WAZA, 1999). Amongst other things, WAZA demands that members assist in achieving the conservation and survival of species and promote the interests of wildlife conservation and animal welfare. Members are further asked to act in accordance with all local, national and international laws, and to strive for the highest standards of operations. Stevens and McAlister (2003) in their review of the development of the WAZA Code of Ethics have recognized that writing it proved difficult. It had to accommodate both established zoos in developed countries, which required that the proposed code was sufficiently rigorous, and newer zoos in developing regions of the world, which had to be able to attain the requirements of the document. Nevertheless the authors (p. 101) also urge the zoo industry to treat the code seriously: 'It behoves all those involved in the zoo profession to adhere to a strict code of ethics. To do otherwise is to give more ammunition to those who say that zoos are a 'nineteenth century anachronism'.

The role of zoos in conservation

Modern zoos regard conservation as being one of their key objectives, and regard themselves as being 'conservation centres' rather than simply collections of captive wild animals. The actions required by them to dedicate their potential to conservation have been defined in the WZCS (IUDZG/CBSG (IUCN/SCC), 1993), while the Zoo Futures 2005 paper (WZO, 1995) guides zoos in implementing it. These documents

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Box 3.5: Jersey

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are currently being reviewed and updated by the WAZA, and are expected to be republished in 2004 (J. Wilken, pers. comm.).

The contribution of zoos to conservation is discussed in more detail in Chapter 6 of this book. However, their conservation actions can be summarised here as including:

- *Ex situ* Conservation Activities (the conservation of biological diversity outside their natural habitat) such as the maintenance of sustainable captive populations through the genetic management and captive breeding of their collections, conservation education (formal and informal), and research.
- *In situ* Conservation Activities particularly in developing countries, such as endangered species rescue, habitat protection and restoration, and the reintroduction to the wild of captive bred animals. Perhaps the best example of the contribution of an individual institution to *in situ* conservation is Jersey Zoo, as summarised in Box 3.5.

Box 3.5: Jersey Zoo**Mission Statement:**

To save species from extinction.

History:

Founded in 1959 by renowned author and naturalist Gerald Durrell on a 32-acre site on the British Channel Island of Jersey.

Its early precarious financial position led in 1963 to the establishment of the Jersey Wildlife Preservation Trust to run the zoo. This is now called the Durrell Wildlife Conservation Trust (DWCT) and is a registered charity.

This Trust also runs the International Training Centre (ITC), for Conservation and Captive Breeding of Endangered Species, and has established sister trusts in the USA and Canada.

Market:

Attracts around 180,000 visitors annually, and has a turnover of more than £5 million.

60% of visitors are from the UK, with an average age of 54.

Zoo attendances have fallen 46% over the past 10 years due largely to Jersey becoming less popular with British and European tourists: their average age has increased, their length of stay on the island has decreased (from 14 to 5 nights), and 60% are now on package holidays.

Consequently, the zoo runs at a loss, with almost half its operating costs being met from donations and bequests.

Increasingly, money for conservation initiatives is raised through the trusts and their 12,000 members.

Display:

Jersey Zoo has become a captive breeding centre for some of the world's most endangered species. Hence the collection focuses on wildlife that is endangered or that is involved in an *in situ* conservation project.

However, in recognition of the need to maintain visitation levels, the Zoo also has a number of 'box office' species, including gorillas, meerkats and flamingos. Similarly, they display species which are common, but which can serve to advertise an *in situ* field project to which the Trust is contributing.

Enclosures are designed to be naturalistic to allow animals to display their full range of natural behaviours and hence to encourage them to breed and maintain sustainable captive populations.

Jersey Zoo has eschewed the introduction of entertainments such as funfairs or children's

rides.

Conservation:

DWPT is extensively involved in a wide range of both *ex situ* and *in situ* conservation activities.

At Jersey, they have the endangered species breeding centre, and the International Training Centre, to which conservation professionals from around the world are recruited for training to ensure ongoing protection of species and habitats.

Internationally, the Trust is involved in a large number of collaborative *in situ* projects particularly in Mauritius, Madagascar, India, the Caribbean and Brazil. It has identified for itself a species-led niche within the international zoo and conservation community, with a strategy of developing viable conservation partnerships with local people and their governments.

The budget for *in situ* programmes is more than £1 million per year, which represents 23% of the gross income of the zoo and the Trust.

Sources: Bell (2001); DWCT (2001); J. Mallison, DWCT, pers. comm., 19/6/2002

While zoos invest considerable amounts of money in the pursuit of their conservation objectives, most have great difficulty finding additional resources to become involved in conservation programs (Mitchell, 1994). As Mallinson (2001) points out, in recent years the increase in personal mobility and choice of attractions for a day out have seen many zoos experience falling attendances which, in turn has affected their capacity to contribute to conservation.

To help combat this, Larcombe (1995) believes that zoos must not only contribute to conservation, but must also be seen to be doing so. As Bartos and Kelly (1998 p. 155) argue, 'a summary of measurable contributions by zoos in the areas of education, conservation, research and tourism is of critical importance in demonstrating their contribution to the whole community'. However, such suggestions assume that zoo visitors are interested in wildlife conservation, and will visit zoos to learn about it. Unfortunately there is little evidence to support this. As Mason (2000) points out, there is an urgent need for more zoo research to determine more clearly not only what the visitors want, but also how zoos can better combine their role in conservation with their commercial imperative.

Towards sustainable zoo tourism

Zoos are a popular and important part of wildlife tourism, and they can continue to capitalize on this popularity through the upgrade of existing facilities and the development of new displays and exhibits. However, rather than merely improving what they already have and do, it is likely that zoos of the future will require a more radical shift in the way that their managers, staff, and visitors, see them.

As Mazur and Clark (1996, p.19) conclude: 'While the zoo community should be congratulated for their efforts at modernising their institutions, increasing environmental degradation will ensure continued societal demands for more fundamental changes in zoos than what have transpired so far'. The opportunity and challenge for zoos today is to transform themselves from traditional static animal collections into true conservation centres, where their message is delivered more effectively through a combination of both entertainment and education (Conway, 1999). As Mazur and Clark (1996) point out, this will involve developing and implementing appropriate policies, economic and organisational procedures, and nurturing and encouraging zoo personnel in the achievement of change.

Such a zoo will seek to enter the market, address and balance ethical credibility

Commercial viability

In order to compete and implement a financial base will (Hutchins and S activities:

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Such a zoo will not be bound by its existing physical boundaries and activities, but will seek to entertain, involve and educate their visitors. In so doing, it will also address and balance its two potentially conflicting obstacles: commercial viability and ethical credibility (Mitchell, 1994).

Commercial viability

In order to compete effectively and improve their revenue base, zoos must develop and implement strong and innovative marketing strategies that provide a solid financial base while also supporting their conservation, education and scientific goals (Hutchins and Smith, 2003). This will involve a combination of the following activities:

- Gaining a better understanding of zoo visitor attitudes, expectations and levels of satisfaction (Rabb, 1999; Turley, 1999b; van der Ploeg, 1997), and a willingness to broaden their appeal and target other visitor groups such as the expanding seniors market (Turley, 1999b; 2001).
- Greater integration and development of other zoo facilities, such as the restaurant and souvenir shop. Traditionally, these have been seen as an adjunct to the zoo, secondary to the animal displays. However, they can be upgraded to become destinations in their own right, and hence another reason for revisiting the zoo. Changing patterns of leisure behaviour over the past ten years have resulted in the growth and demand for leisure shopping, eating and drinking as essential components of a day trip. According to Stevens (2000), shopping for pleasure has now become one of the most important out-of-home activities in the UK, while in the US; there is a close relationship between shopping and visiting attractions among overseas visitors.
- The development of more collaborative links and strategic alliances with other components of both business and government. In this way, zoos are more likely to develop new marketing opportunities, raise funding for their capital works projects, and contribute to and promote their contribution to wildlife conservation (Tribe, 2001).
- Zoos should begin to position themselves more strongly with the donor community in order to take advantage of unprecedented current levels of corporate and personal charitable giving (Hutchins and Smith 2003). However, to do so effectively, they must also be more businesslike in their operations, including tighter budgeting and financial reporting.
- Zoos can enhance the experience of their visitors by continuing to develop new and innovative exhibits (Middleton, 2001). As van Linghe (1992) explains, zoos can no longer rely solely on the presence of exotic animals to put over their educational message or to attract their share of visitors. Instead, zoos should seek to incorporate more naturalistic settings for their animals with interactive and interpretive displays and presentations that involve and excite the visitors (Hunter-Jones and Hayward, 1998). There may also be opportunities for themed displays, promoting a particular aspect of wildlife and conservation. Possibly these will be linked to other events occurring outside the zoo, either natural or human-made (Tribe, 2001). These displays can be constantly changing, creating an incentive for revisits to the zoo.
- Zoos can further bridge the gap between captive and free-range wildlife by developing greater links with *in situ* conservation activities and ecotourism

(Tribe, 2001). In fact, Mason (2000) argues that zoos can make a significant contribution within the ecotourism market by acting as a 'taster', providing the stimulus for visitors to make lengthy journeys to more distant locations to see wildlife in their natural settings.

Melbourne Zoo, a traditional, city zoo, has recently opened a new elephant exhibit that incorporates many of these new features. It is outlined in Box 3.6.

Box 3.6: Melbourne Zoo

Mission:

Our zoos will be world-leading centres for wildlife experience, education, conservation and research – on-site, off-site and on-line.

History:

Founded in 1857 it is the oldest zoo in Australia, and occupies a 50-acre site in Royal Park, Melbourne.

It was originally the Acclimatisation Society of Victoria, whose aim was to acclimatise and release useful and ornamental animals into the colony of Australia.

It is now administered by the Zoological Board of Victoria (ZBV), a statutory authority of the State Government, which also runs Healesville Sanctuary and Victoria's Open Range Zoo at Werribee.

Market:

Attracts around one million visitors annually, and has a turnover of more than A\$20 million.

99% of visitors are from Australia, with 95% from Victoria.

Attendances peaked in 1989 at 1.2 million. Since then they have been consistently around 900,000 until 2003 when they again topped 1 million.

The ZBV receives an annual grant from the Victorian state government of more than A\$9 million. to assist with operating its three zoos. In addition, in 2002 it received a one-off, three-year grant of A\$32 million for capital development across their three properties.

Display:

The collection comprises native and exotic wildlife, including both endangered and common species.

Melbourne Zoo has chosen a bioclimatic display strategy, in which animals and plants from a particular bioclimatic region of the world are displayed in one area (e.g. rainforest, savannah or eucalypt woodland). This contrasts with the traditional approach of all primates in one area, all reptiles in another etc.

The most recent development is Trail of the Elephants, opened in March 2003. This is a large, interactive exhibit focussing on Asian elephants, but which also includes an Asian village on the edge the tropical rainforest. . It occupies 10% of the total zoo site. The aim is to inform visitors not only about elephants but also about the environment in which they are found and the conflicts surrounding their conservation. It includes interactive displays, keeper talks, off-limits viewing, cultural displays, cafe, function room and merchandise outlets. Visitors can donate directly to *in situ* elephant conservation projects. In its first year it has increased zoo attendances by 26%.

Conservation:

Melbourne Zoo's conservation programs are focussed on Australian and South-east Asian species. This includes both *ex situ* (captive breeding and education) and *in situ* programs (reintroductions and habitat protection). More recently they have established a relationship with Flora and Fauna International (FFI) to support community-based programs in South-East Asia such as providing fresh water wells for villages and reducing competition between people and elephants.

It has a large education section with up to 10 teachers seeing more than 120,000 children per year.

Sources: ZBV (2002), J. Henke, Melb. Zoo, pers. comm., 25/9/03

Ethical credibility

Zoos are now seen as a means of education. Yet the zoo lobby (Turley 1999) has a suspicion that all this is a means of criticism.

Turley (1999) argues that zoos should attain credible standards of sustainability. This includes as well as wildlife

- They must be able to and have to show their animals in their natural habitat.
- Exhibitions should be public and allow visitors to see animals in their natural habitat.
- Expert advice should be sought to participate in conservation programs.
- Zoos should have a broad range of research and conservation programs. Smith (1999) argues that captive animals should be used to establish a relationship and so direct attention to monitoring and conservation. Hutchings (1999) argues that finally education should be achieved.

In this way, zoos can do so much more than just do education. They can become truly educational.

Acknowledgements

The author gratefully acknowledges the support and assistance of the following people in the collection and analysis of data.

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Ethical credibility

Zoos are now seeking credibility as scientific institutions devoted to conservation and education. Yet this must still be achieved against a backdrop of hostility from the anti-zoo lobby (Turley, 1999a). As Luoma (1987) explains, zoos must confront the suspicion that all the talk of conservation is no more than window dressing to subdue criticism.

Turley (1999a) sees acceptance of their conservation role as vital if zoos are to attain credible cultural status, and that this will be an important part of their sustainability. To achieve it they must be seen as proponents of good animal welfare as well as wildlife conservation. Appropriate actions may include:

- They must adopt, embrace and promote world-class standards of animal care and husbandry by ensuring that both the physical and psychological needs of their animals are fully met (Hutchins, 2001; 2003).
- Exhibits should be designed which are not only aesthetically pleasing to the public but also replicate critical aspects of their natural environment, thus allowing them to display their full range of normal behaviours.
- Expert veterinary care and nutrition should be provided, and zoos will participate in and follow the recommendations of cooperative breeding programs.
- Zoos should also be committed to strong conservation objectives through a broad range of activities. These may include public education, scientific research, development of relevant technologies, professional training, conservation planning and captive breeding for reintroduction (Hutchins and Smith, 2003). However, as Hutchins (2003) points out, simply sustaining captive populations of wild animals, whether they are endangered or not, should not by itself be considered conservation. Zoos of the future will need to establish stronger links with *in situ* conservation projects and organisations, and so become more involved with activities such as ecological restoration, the direct support of national parks and the reintroduction and post-release monitoring of wildlife to these areas (Mallinson, 1991, 2003; Conway, 1999; Hutchins, 1999).
- Finally, zoos must endeavour to use their strong public relations and educational skills to communicate clearly their mission, goals and achievements to the public and to relevant key decision makers.

In this way, zoos can balance the twin challenges of commerce and ethics, and in so doing develop a stronger revenue base, more effectively achieve their conservation objectives and attain credible, cultural status in the community. Zoo tourism may then become truly sustainable.

Acknowledgements

The author gratefully acknowledges the assistance of Ms Rosie Booth in collecting and analysing the information used in this chapter.

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Chapter 4

Hunting

Johannes Ba

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