

# 1 THE PURPOSE AND POPULARITY OF ZOOS

Walking in the Zoo, walking in the Zoo,  
The O.K. thing on Sunday is the walking in the Zoo.

Lyrics of a song sung by Alfred Vance (Victorian music-hall artist, 1867)



## Conservation Status Profile

Asian elephant  
*Elephas maximus*  
IUCN status: Endangered  
A2c  
CITES: Appendix I  
Population trend:  
Decreasing

## 4 History, organisation and regulation

---

### 1.1 INTRODUCTION

Zoo biology is a relatively new discipline. Prior to 1982 there was no academic journal specifically dedicated to the scientific study of zoo animals. The study of animal welfare and the biology of zoo animals is an increasingly important component of college and university courses, and the work of zoo keepers is becoming increasingly scientific. The purpose of this book is to provide an introduction to the biology of animals in zoos. In addition it considers other aspects of zoos which are important in understanding how zoos have evolved, how they function and their role in conservation. Before we can begin to study zoos we need to define what a zoo is.

### 1.2 WHAT IS A ZOO?

The term 'zoo' is an abbreviation of zoological gardens and was probably first used as an abbreviation for the Clifton Zoo in Bristol, England, in 1847. In 1867 a music-hall song called *Walking in the Zoo*, sung by Alfred Vance, popularised the use of the term.

In this book 'zoo' is taken to encompass a very wide range of institutions, reflecting the legal definition used within the European Union:

...“zoos” means all permanent establishments where animals of wild species are kept for exhibition to the public for 7 or more days a year...

Council Directive 1999/22/EC (Zoos Directive),  
Article 2

This definition encompasses traditional zoos, drive-through safari parks, aviaries, snake parks, insect collections, aquariums, birds of prey centres, and all manner of other animal collections which are open to the public, but excludes pet shops, circuses and laboratories that keep animals (Fig. 1.1). Other dictionary and legal definitions of a zoo are listed in Box 1.1.

#### 1.2.1 What's in a name

In the minds of many people, the term 'zoo' has a strong association with animals being kept in poor conditions in old-fashioned iron cages. Some zoos have adopted new names in an attempt to disassociate themselves from these outdated notions and to emphasise

their role in wildlife conservation and environmental education. Paignton Zoo has become *Paignton Zoo Environmental Park*, Jersey Zoo is now *Durrell* (named after its founder) and Marwell Zoo has been renamed *Marwell Wildlife*. However, many famous zoos show no sign of following this trend. Like traditional zoos, modern aquariums have begun to turn their attention to conservation. To reflect this, the New York Aquarium changed its name to the *Aquarium for Wildlife Conservation* in 1993.

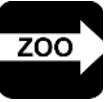
### 1.3 THE INCREASING PUBLIC INTEREST IN WILDLIFE

There is considerable evidence of an increase in public interest in wildlife, zoos and conservation. In the last 40 years there has been a spectacular increase in the membership of organisations concerned with the protection of wildlife and wild places (Table 1.1).

People who spend the majority of their lives in urban areas seek out opportunities to observe animals in the wild. In Liverpool, the Royal Society for the Protection of Birds (RSPB) organises cruises around the Mersey Estuary for its members and other bird-watchers (Fig. 1.2). Every year, during a few weeks in autumn and winter, over 60,000 people visit the colony of grey seals (*Halichoerus grypus*) at the Donna Nook National Nature Reserve in Lincolnshire, England, when they come ashore to have their pups (Fig. 1.3). During Easter 2010, some 45,000 people visited Lake Hornborga in Sweden to witness the annual return of over 12,000 migrating Eurasian cranes (*Grus grus*).

Before the ownership of televisions was widespread films such as *Where No Vultures Fly* (1951) – about one man's struggle to establish a national park in East Africa – and *Born Free* (1966) – the true story of Elsa the lioness and George and Joy Adamson – drew the attention of the cinema-going public to the plight of African wildlife. The stars of *Born Free*, Bill Travers and Virginia McKenna, went on to found the pressure group *Zoo Check* (see Section 6.2.2.3).

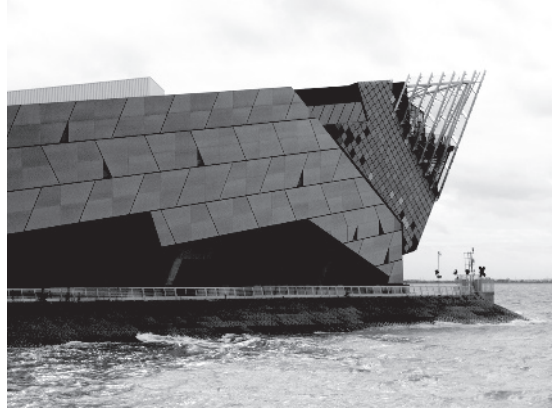
Nowadays, wildlife documentaries are increasingly popular among television viewers and, in recent years, there has been an increase in the number of TV programmes about the work of vets and zoo keepers. In 2001, a total of 2284 TV programmes were broadcast which had 'wildlife' in the title or in the description of the programme. In 2008 this had increased to 6983. Only 196 programmes with 'zoo' in the title or description



(a)



(b)



(c)



(d)



**Fig. 1.1** Examples of different types of zoos. (a) A traditional zoological gardens, Colombo Zoo, Sri Lanka. (b) A modern aquarium, *The Deep*, Hull, UK. (c) The Butterfly House, Lancaster, UK. (d) A safari park, West Midlands Safari Park, UK.

**Box 1.1** What is a zoo?  
– some dictionary and legal definitions.

Some dictionary definitions:

**The Concise Oxford Dictionary (1976)**

*Zoological garden – public garden or park with a collection of animals for exhibition or study.*

**Collins Dictionary and Thesaurus (2000)**

*Zoo – a place where live animals are kept, studied, bred, and exhibited to the public.*

Some legal definitions:

**European Union**

*Zoos Directive (Council Directive 1999/22/EC of 29 March 1999 relating to the keeping of wild animals in zoos)*

*Article 2: ... “zoos” means all permanent establishments where animals of wild species are kept for exhibition to the public for 7 or more days a year, with the exception of circuses, pet shops and establishments which Member States exempt from the requirements of this Directive on the grounds that they do not exhibit a significant number of animals or species to the public and that the exemption will not jeopardise the objectives of this Directive.*

**England**

*Zoo Licensing Act 1981, as amended by the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002 (SI 2002/3080)*

*Section 1(2): ... “zoo” means an establishment where wild animals ... are kept for exhibition to the public otherwise than for purposes of a circus ... and otherwise than in a pet shop.*

*(2A): This Act applies to any zoo to which members of the public have access, with or without charge for admission, on seven days or more in any period of twelve consecutive months.*

**United States of America**

*Animal Welfare Act 1966 (9 Code of Federal Regulations, Ch. 1)*

*Section 1.1: Zoo means any park, building, cage, enclosure, or other structure or premise in which a live animal or animals are kept for public exhibition or viewing, regardless of compensation.*

*Arizona State, USA (Arizona Revised Statutes, 17-101)*

*Section A. 23: “Zoo” means a commercial facility open to the public where the principal business is holding wildlife in captivity for exhibition purposes.*

**Australia**

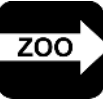
*New South Wales, Zoological Parks Board Act 1973*

*Section 4(1): ... “zoological park” means a zoological garden, aquarium or similar institution in which animals are kept or displayed for conservation, scientific, educational, cultural or recreational purposes.*

**India**

*Wildlife (Protection) Act 1972*

*Section 2(39): “Zoo” means an establishment, whether stationary or mobile, where captive animals are kept for exhibition to the public but does not include a circus and an establishment of a licensed dealer in captive animals.*

**Table 1.1** Membership of selected conservation organisations.

Organisation	Membership 1971	Membership 2010
Royal Society for the Protection of Birds (RSPB)	98,000	> 1,000,000
WWF (UK)	12,000	168,417
WWF (Worldwide)	Unknown	c.5,000,000
Sierra Club	Unknown	1,300,000
Greenpeace	30,000 (1981)	2,900,000 (2007)
Wildlife Trusts (formerly the Royal Society for Nature Conservation)	64,000	791,000
Friends of the Earth	1,000	100,000

Sources: Church (1995), RSPB (2010), WWF (2010), Sierra Club (2010), Wildlife Trusts (2010) and FOE (2010).

**Fig. 1.2** A bird-watching trip on the River Mersey, Liverpool, organised by the Royal Society for the Protection of Birds.

were shown in 2001, but by 2008 this had increased to 2119. Although many of these programmes were episodes of series and many will have been repeated on different channels – the number of which increases relentlessly – nevertheless there has been a spectacular increase in the amount of broadcast time devoted to

this type of programme, and this must reflect a greater public interest (Table 1.2). Twelve million people watched the BBC's *Planet Earth* series, narrated by David Attenborough, and it received the highest audience appreciation score of any British programme on TV in 2006 (BBC, 2007).

**Biography 1.1****Sir David Attenborough (1926–)**

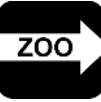
David Attenborough is a naturalist, author and broadcaster whose name is synonymous with the production of high quality wildlife documentaries. His highly acclaimed BBC series include *The Life of Mammals*, *The Life of Birds*, *Life in the Undergrowth*, *Planet Earth*, *The Blue Planet*, *Life in the Freezer*, *Life in Cold Blood* and *Planet Earth*. Although Attenborough does not generally film captive animals, some scenes, such as one of a polar bear inside its den, were recorded in a zoo because of the technical difficulties this would create in the wild. Attenborough's work has undoubtedly been extremely important in increasing awareness of conservation issues worldwide.



**Fig. 1.3** The grey seal (*Halichoerus grypus*) colony at Donna Nook, Lincolnshire, UK. Inset: Adult grey seal.

**Table 1.2** Examples of recent TV programmes about zoos.

Series/Title	Zoo/Subject	TV channel
<i>Animal Arrivals</i>	Various zoos	Animal Planet
<i>Animal Cops Houston</i>	Roadside zoo USA	Animal Planet
<i>Animal Rescue Squad</i>	Various zoo items	Fiver
<i>Chaos at the Zoo</i>	A small zoo near Tenby, Wales	SC4
<i>Chimp Diaries</i>	Mona Foundation Sanctuary, Spain	Adventure One
<i>Crocodile Hunter</i>	Australia Zoo	Animal Planet
<i>E-Vets: The Interns</i>	Alameda East Veterinary Hospital, USA	Animal Planet
<i>Hero Animals</i>	Gorillas, Jersey Zoo	Five
<i>Kabul Zoo Rescue</i>	Kabul Zoo, Afghanistan	Adventure One
<i>Little Zoo That Could</i>	Alabama Gulf Zoo	Animal Planet
<i>Michaela's Zoo Babies</i>	Various UK zoos	Fiver
<i>Our Child the Gorilla</i>	St Martin la Plaine Zoo, France	Animal Planet
<i>Panda Is Born</i>	America's National Zoo, Pandas	Animal Planet
<i>Safari Park</i>	West Midlands Safari Park	Animal Planet
<i>The Keepers</i>	San Diego Zoo, USA	Animal Planet
<i>The Zoo</i>	Auckland Zoo, New Zealand	Sky Real Lives
<i>The Zoo UK</i>	Bristol Zoo, UK	Sky Three
<i>Trent's Wildcat Adventures</i>	A zoo keeper travels to South Africa	Adventure One
<i>Zoo Days</i>	Colchester Zoo and Chester Zoo, UK	Five
<i>Zoo Story</i>	Paignton Zoo, UK	Sky One Mix
<i>Zoo Tales</i>	Taronga Park and Western Plains Zoo, Australia	Adventure One
<i>Zoo Vet at Large</i>	Zoo vet Matt Brash	Sky Real Lives



**Table 1.3** Visits made in 2008 to selected visitor attractions in membership with the Association of Leading Visitor Attractions.

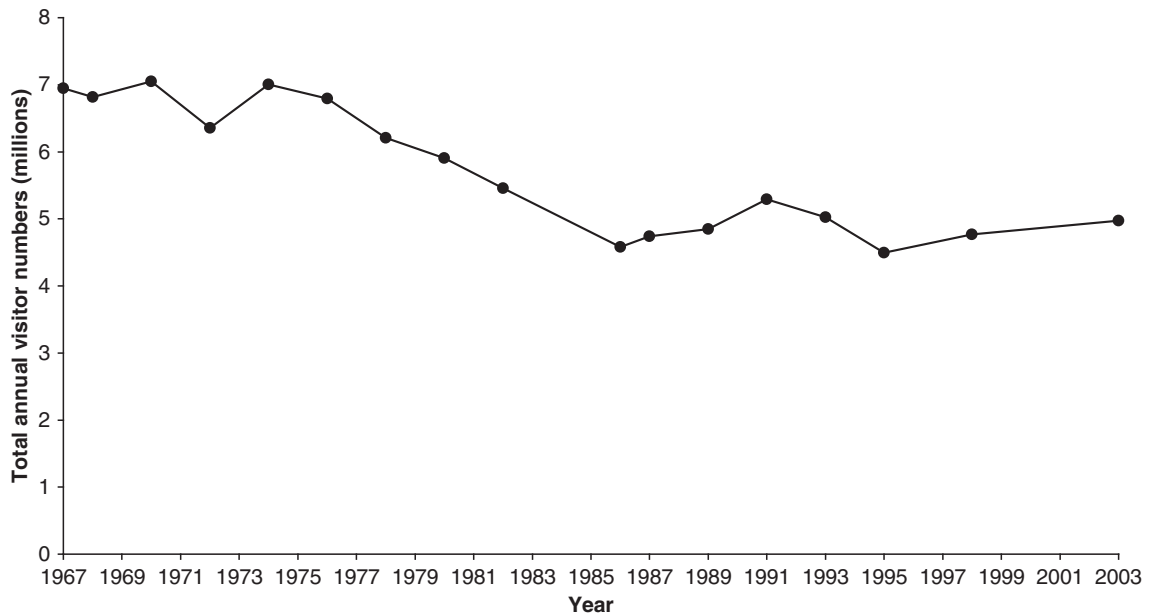
Attraction	Visitor numbers	Rank
British Museum	5,932,897	1
Natural History Museum	3,698,500	4
Chester Zoo	1,373,459	14
Kew Gardens	1,306,401	15
Eden Project	1,093,510	18
ZSL London Zoo	1,039,030	20
ZSL Whipsnade Zoo	468,669	42

Many UK zoos are not members of this organisation and will therefore not appear in the statistics.  
 Source: ALVA (2009).

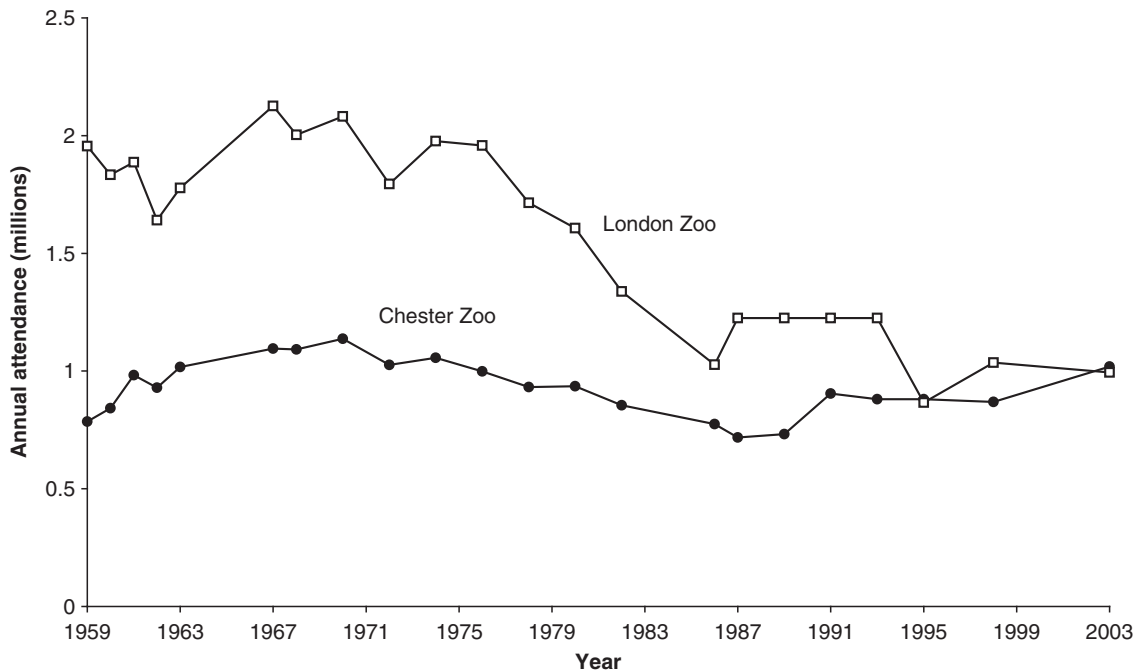
In the UK, zoos are among the most popular visitor attractions (Table 1.3) and visitor numbers in UK zoos – following a decline in the 1970s – have increased in recent years (Fig. 1.4). The World Association of Zoos and Aquariums (WAZA) estimates that 600 million people visit zoos each year (Olney, 2005) and many

institutions attract very large numbers. There is considerable variation in changes in visitor attendance at zoos with time. London Zoo suffered a dramatic decline in visitors from over two million in 1970 to around 866,000 in 1995 and almost had to close. By 2008 visitor numbers had risen to over 1.1 million. Chester Zoo experienced a less dramatic decline through the 1970s and now regularly receives over a million visitors each year (Fig. 1.5). In 2008, San Diego Zoo (California, USA) had over 3.3 million visitors, Cologne Zoo (Germany) had almost 1.5 million visitors, Colombo Zoo (Sri Lanka) had almost 1.4 million visitors and Chester Zoo (UK) was visited by over 1.3 million people (Fisken, 2010).

The American Association of Zoos and Aquariums estimates that its member institutions have over 175 million visitors each year (AZA, 2010a). Visitors are primarily women/mothers aged 25–35 years, and two out of three adults who visit a zoo or aquarium do so with a child. However, demographic changes in the developed countries of the world mean that zoos are faced with declining numbers of children, and therefore adults with young families, that are the mainstay



**Fig. 1.4** Visitor attendance at 11 UK zoos (1967–2003). (Source: Rees, unpublished data. The zoos surveyed were the Welsh Mountain Zoo, Twycross, Paignton, Dudley, Jersey, Edinburgh, Bristol, London, Chester, Belfast and Whipsnade. Data were extracted from the *International Zoo Yearbook* volumes for the period.)



**Fig. 1.5** Visitor attendance at London Zoo and Chester Zoo (1959–2003). (Source: Rees, unpublished data. Based on data extracted from the *International Zoo Yearbook* volumes for the period.)

of zoo visitor populations. In their place zoos have an opportunity to attract older visitors, and changing their focus away from child-friendly attractions and towards the interests of the older visitor will be a major challenge (Turley, 2001).

Although there is great public interest in wildlife, unfortunately this does not tend to influence voting decisions. In a survey of 1503 adults in the UK conducted immediately before the 2010 general election only 5% considered protecting the natural environment to be 'very important' in influencing their voting decision, way behind the economy (32%), health care (26%) and education (23%) (Ipsos MORI, 2010).

#### 1.4 WHO OWNS ZOOS?

Some zoos are owned privately by individuals, while others are owned by multi-national entertainment companies. Some zoos are charities, some are run as businesses, primarily for profit, while others are run by

national governments or by municipal authorities (Table 1.4).

Until 2007, the singer Michael Jackson had a private zoo at his Neverland Ranch, where he kept lions, tigers, giraffes, monkeys, orangutans, flamingos, snakes, a crocodile, an elephant and a chimpanzee called 'Bubbles'.

The drugs baron Pablo Escobar had a private zoo consisting of hundreds of exotic animals at his ranch, Hacienda Napoles, near Medellin in Colombia. When the zoo was seized by the state after he was killed by police, many of the animals died of hunger. Hippopotamuses escaped and were eventually shot.

Some privately owned zoos are open to the public, others are not. Knowsley Safari Park in England is open to the public but is owned by Lord Derby. Many well-established and famous zoos began as the privately owned ventures of individuals and have evolved into institutions of international importance, for example Gerald Durrell founded *Durrell* in Jersey, and George Mottershead founded Chester Zoo in England.



**Table 1.4** The ownership of selected zoos.

Zoo	Location	Status/Ownership
Colombo Zoo	Sri Lanka	National government
St Louis Zoo	USA	Government with aid from non-profit trust
San Francisco Zoological Gardens	USA	Municipality with aid from zoological society
San Diego Zoo	USA	Non-profit corporation, administered by zoological society
Moscow Zoo	Russia	Municipality
Parc Zoologique to Paris	France	National government
Twycross Zoo	UK	Charitable trust
Burgers Zoo	Netherlands	Private
Banham Zoo	UK	Private limited company
Blackpool Zoo	UK	Spanish leisure company
Blue Planet Aquarium	UK	Private limited company

Zoos begin for all sorts of reasons. In his *Guide to British Zoos*, Schomberg (1970) describes Banham Zoo as follows:

This is a small collection of monkeys and an aviary started by Mr H. Goymour and opened in February 1968. The purpose of the collection is to interest customers who come to buy farm produce at Grove Farm ... it is certainly a novel method of attracting business.

Some zoos in the UK were started by private collectors (Paignton Zoo), pet shop owners (Twycross), nobility (Harewood Bird Garden, Lions of Longleat, Woburn Park), businessmen (Chessington Zoo), market gardeners (Norton Petsenta), farmers (Ilfracombe Zoo Park), animal dealers (Weyhill Zoo Park) and circus owners (Southampton Zoo, Plymouth Zoo). Others were opened by zoological societies (London, Glasgow, Edinburgh), private companies (Marineland Oceanarium and Aquarium, Flamingo Park), or were originally municipal zoos (Belfast Zoo, Newquay Zoo). Some of these institutions no longer exist, while others have become important zoos, in some cases under new names.

Zoos have become big business in recent years. *Parques Reunidos* is the second largest operator of leisure parks in Europe. The company owns 68 parks, including 13 'zoo and nature parks':

- L'Oceanogràfic, Valencia, Spain – the largest marine park in Europe
- Zoo Aquarium de Madrid, Spain – a zoo, aquarium, dolphinarium and aviary

- Faunia, Spain – a nature theme park which includes the biggest polar ecosystem in Europe
- Selwo Aventura, Spain – a nature theme park
- Selwo Marina, Spain – a marine park with a South American theme, including seals, sea lions, penguins and a dolphinarium
- Delfinario Costa Daurada, Spain – a dolphinarium and sea-lion exhibit
- Mar del Plata Aquarium, Argentina – a marine park containing fish, penguins, sea lions and dolphins
- Marineland – the largest marine park in France, containing sea lions, dolphins and killer whales
- Aquarium of the Lakes, England – an aquarium in the Lake District of England
- Blackpool Zoo, England – a traditional zoo with a dinosaur park
- Bournemouth Oceanarium, England – a coastal aquarium
- Silver Springs, Florida, USA – a nature theme park constructed around natural springs and exhibiting mostly native species
- Sea Life Park, Oahu, Hawai'i – a marine park containing sea lions, dolphins, sea turtles, penguins and sharks.

The Merlin Entertainments Group owns Chessington World of Adventures in England (which includes a zoo) and the chain of 26 Sea Life Centres in England, Belgium, Finland, France, Germany, the Netherlands, Ireland, Denmark, Scotland, Spain, Portugal, Italy and the USA. Some zoos and aquariums are charities. Others are operated as a business but have established charities to support their conservation work. South Lakes Wild Animal Park (UK) is a business but includes

in its admission price a donation to its charity, the Wildlife Protection Foundation. This allows it to reclaim tax paid by visitors from the UK government under the Gift Aid scheme.

### 1.5 WHAT ARE ZOOS FOR?

Many western zoos have their origin in zoological societies that were established with an educational and scientific purpose in mind. The Bristol, Clifton and West of England Zoological Society was founded in 1835. At the meeting which established the Society, a local physician, Dr Henry Riley, proposed:

...that this meeting being persuaded that a Zoological Society in Bristol and Clifton will tend to promote the diffusion of knowledge by facilitating observations of the habits, form and structure of the animal kingdom as well as affording rational amusement and recreation to the visitors of the neighbourhood do determine that a Society be accordingly established.

Warin and Warin (1985)

With the rise of the animal welfare movement and increasing concern for the environment in general, and the loss of biodiversity in particular, zoos have moved the focus of their activity towards conservation. The potential role of zoos in wildlife conservation has been recognised for at least 60 years (Delacour, 1947) and since the 1960s zoos have considered the conservation of endangered and threatened species as one of their most important functions (Mench and Kreger, 1996).

In 1986 the American Association of Zoological Parks and Aquariums (AAZPA) – now the American Zoo and Aquarium Association (AZA) – described the purpose of zoos as research, education, recreation and conservation, especially captive breeding (AAZPA, 1986). However, evidence for a significant education role for zoos is equivocal (Kellert, 1984; Jamieson, 1986; Marcellini and Jenssen, 1988; Spotte and Clark, 2004; Bickert and Meier, 2005) and many of their scientific contributions are largely unrelated to conservation *per se* (Rees, 2005a, 2005b). By the 1990s some commentators were questioning the value of breeding programmes (e.g. Varner and Monroe, 1991), arguing that money would be better spent on *in-situ* conservation efforts.

Reintroductions of zoo-bred animals have a very limited impact and many of the successful projects zoos quote were undertaken many years ago (Bertram, 2004). Stanley Price and Fa (2007) have concluded that zoos are not keeping the priority species for reintroduction, nor are species kept in adequate numbers as sources for reintroduction.

Wehnelt and Wilkinson (2005) have suggested that zoos have now moved the focus of their activity away from captive breeding and reintroduction and towards helping species *in-situ*, including the raising of funds to support these efforts (e.g. Smith and Hutchins, 2000; Christie, 2007). However, zoo mission statements rarely reflect this (Rees, 2005c), and a recent study of 136 North American zoos found that only 14% mentioned the support of global, national or local conservation programmes as one of their functions (Patrick *et al.*, 2007). The original World Zoo Conservation Strategy (IUDZG, 1993) made no mention of fund-raising as a function of zoos. However, its successor, the World Zoo and Aquarium Conservation Strategy, states that 'cooperative breeding programmes serve many purposes ... [including] ... providing fund-raising material...' (Olney, 2005).

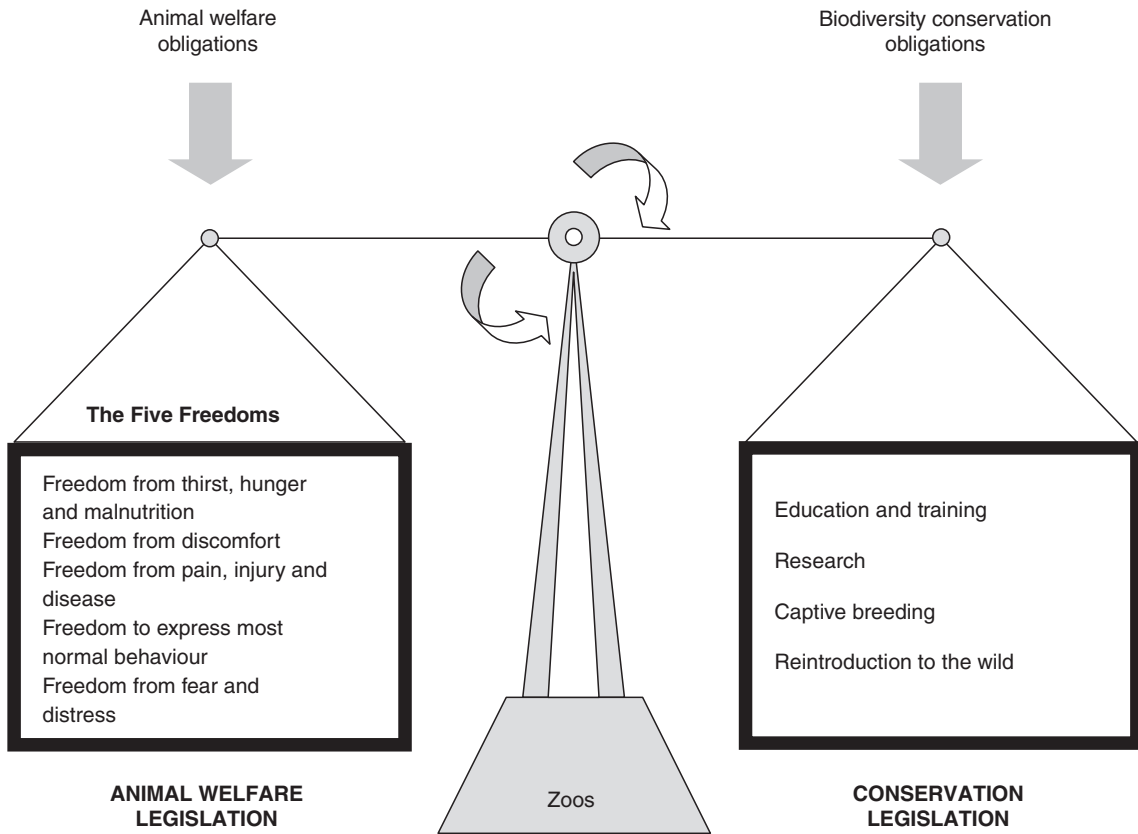
Modern zoos have legal and moral obligations to care for the animals they keep and the species to which they belong. These obligations form the basis of much of the content of this book, and include the provision of:

- suitable housing
- an environment free from stress
- a high level of veterinary care
- the opportunity to express normal behaviour.

In addition zoos should engage in the *ex-situ* conservation of biodiversity – an obligation placed on Parties to the UN Convention on Biological Diversity (see Section 5.3.1.1). This may be defined as 'keeping components of biodiversity alive away from their original habitat or natural environment' (Heywood, 1995). A zoo's conservation activities include:

- captive breeding and reintroduction to the wild
- education
- record keeping
- information exchange
- research
- *in-situ* conservation.

Zoos need to balance their welfare obligations to the animals they keep while maintaining a conservation role (Fig. 1.6). These themes are explored in more detail below.



**Fig. 1.6** Balancing the animal welfare and biodiversity conservation obligations of zoos.

**1.6 ZOO MISSION STATEMENTS – WHAT DO ZOOS SAY THEY DO?**

What do zoos say they do? Many zoos have mission statements and these tell us something about what they think they do, or at least what they aspire to do. A historical perspective on the changing role of zoos can be gained by examining how their mission statements have changed over time.

Until relatively recently many zoos referred to their role in captive breeding in their mission statements. In some zoos this was still the case long after their management was downplaying this particular role (Rees, 2005c). Bristol Zoo still retains a reference to breeding in its mission statement:

Bristol Zoo Gardens maintains and defends biodiversity through breeding endangered species,

conserving threatened species and habitats and promoting a wider understanding of the natural world. [2008]

However, Chester Zoo’s mission has changed a number of times since 1995, and no longer specifically refers to breeding animals:

...to promote conservation by breeding of rare and endangered animals and by educational, recreational and scientific activities. [1995–96]

...to support and promote conservation by breeding rare and endangered animals, by excellent animal welfare, high quality public service, recreation, education and science. [1997]

...to support and promote conservation by breeding threatened species, by excellent animal

**Box 1.2** Zoo mission statements.

**Zoological Society of London, UK (2008)**

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

**National Marine Aquarium, Plymouth, UK (2008)**

*To inspire everyone to enjoy, learn and care about our oceans through amazing, memorable experiences.*

**Dublin Zoo, Ireland (2008)**

*To work in partnership with zoos world-wide to make a significant contribution to the conservation of the endangered species on Earth.*

**Smithsonian National Zoological Park, USA (2008)**

*We are the Nation's Zoo, demonstrating leadership in animal care, science, education and sustainability. We provide the highest quality animal care. We advance research and scientific knowledge in conserving wildlife. We teach and inspire people to protect wildlife, natural resources and habitats. We practice conservation leadership in all we do.*

**Zoological Society of San Diego, USA (2008)**

*The Zoological Society of San Diego is a conservation, education, and recreation organisation dedicated to the reproduction, protection, and exhibition of animals, plants, and their habitats.*

**Minnesota Zoo, USA (2008)**

*Our mission is to create a conservation culture by incorporating conservation into the everyday fabric of our activities and programs.*

**National Zoological Gardens, Colombo, Sri Lanka (2008)**

*Resourceful conservation of animals by means of learning, achieved through the exhibition of species which were adopted with loving care.*

**Singapore Zoo (2008)**

*Our mission is to preserve biodiversity and to undertake public education, research and collaboration as well as maintain and update the exhibits in all our parks in the most humane, naturalistic and yet efficient manner.*

**Taronga Zoo, Sydney, Australia (2006)**

*We will demonstrate a meaningful and urgent commitment to wildlife, our natural environment and the pursuit of excellence in our conservation, recreation and scientific endeavours.*

**Zoos Victoria (Healesville Sanctuary, Melbourne Zoo and Werribee Open Range Zoo), Australia (2008)**

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

welfare, high quality public service, recreation, education and science. [1998–2003]

...to be a major force in conserving biodiversity worldwide. [Since 2004]

Early references to the role of zoos often mentioned the advancement of the study of zoology and the promotion of interest in animals. Modern mission statements usually refer to a role in education and conservation, but, as may be seen from the list in Box 1.2, this is not always the case. The original pur-



pose of the Royal Zoological Society of Scotland, as stated in its Charter, was:

...to advance the study of zoology and foster and develop amongst the people an interest in and knowledge of animal life. [1913]

Its current mission is:

...to inspire and excite our visitors with the wonder of living animals, and so to promote the conservation of threatened species and habitats. [2008]

Edinburgh Zoo has a separate *educational* mission statement:

...to inspire in our visitors an understanding of the value, the complexity and the fragility of the natural world by fully utilising the educational potential of our unique variety of living animals. [2008]

## 1.7 BIOPHILIA, HUMAN WELL-BEING AND ZOOS

Edward Wilson has defined 'biophilia' as 'the innately emotional affiliation of human beings to other living organisms' (Wilson, 1993). He believes that a desire to be close to other living things is an essential biological need; an element of human nature which is part of our genetic makeup. It has been suggested that zoos help people to fulfil this natural desire to feel more connected to nature (Davey, 2005). It is clearly important that zoos create places that people want to visit, because without an income from visitors most zoos could not exist.

Being close to nature may be important to human well-being. Studies have shown that interactions between animals and people can have positive health benefits. Physical contact with non-threatening animals has been shown to reduce blood pressure, respiration rate and heart rate (Cusack and Smith, 1984).

Watching fish in an aquarium also appears to lower blood pressure (Kamberg, 1989).

## 1.8 ZOO ENTHUSIASTS

Some people collect stamps, others collect zoo memorabilia, including old zoo guides, tickets, postcards and souvenirs. Many people enjoy visiting zoos and may make such visits an integral part of a holiday. A number of books have been written to provide information about good zoos, including *The Good Zoo Guide* (Ironmonger, 1992), which describes UK zoos but is now out of date, and *America's Best Zoos* (Nyhuis and Wassner, 2008). *The Good Zoo Guide* now exists as a website: *The Good Zoo Guide Online* ([www.goodzoos.com](http://www.goodzoos.com)).

### *The Bartlett Society*

The Bartlett Society is a group of enthusiasts who collect, study, preserve and record as much as possible of the history of wild animal keeping in zoos and elsewhere. It is named after Abraham Dee Bartlett, Superintendent of London Zoo from 1859 until his death in 1897.

Among other things, members of the Society publish a list of *First and Early Breeding Records for Wild Animals in the UK and Eire*.

### *The Independent Zoo Enthusiasts Society (IZES)*

The Independent Zoo Enthusiasts Society was founded in 1995. It exists to foster interest in all good zoos and to counter misinformation about zoos. It has produced *The IZES Guide to British Zoos & Aquariums* (Brown, 2009) and has a number of other publications.

### *ZooChat*

ZooChat is an online community of zoo and animal conservation enthusiasts. Its website hosts a number of special interest forums, a zoo photo gallery, information on zoo webcams, and maps and satellite images of many zoo locations.

### Biography 1.2

#### Edward O. Wilson (1929–)

Professor Wilson is a world authority on the biology of ants, established the study of island biogeography and is an influential proponent of biodiversity conservation. He developed the controversial science of socio-biology: the study of the biological basis for all social behaviour. Wilson is Professor of Entomology at Harvard University and has won the US National Medal of Science and many awards for his writing, including the Pulitzer Prize twice, for his books *The Ants* and *On Human Nature*.

### 1.9 FURTHER READING AND RESOURCES

Many zoo websites contain information about their ownership and mission statements. The websites of

major zoo associations such as the British and Irish Association of Zoos and Aquariums (BIAZA), the European Association of Zoos and Aquaria (EAZA) and WAZA also provide a great deal of general information about the purpose of zoos.

### 1.10 EXERCISES

- 1 Using zoo mission statements, discuss the changing role of zoos.
- 2 Is it more beneficial to conservation for a zoo to be operated as a business or as a charity?
- 3 Does visiting a zoo fulfil a basic biological need?
- 4 What evidence exists that people are increasingly becoming interested in wildlife and conservation?
- 5 Are wildlife documentaries a substitute for zoos?