# Part I

# Introduction

# 1 Reconsidering primate tourism as a conservation tool: an introduction to the issues

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## Introduction

This book aims to assess the conservation effects of nature tourism. In particular, our focus is on tourism to visit nonhuman primates and their habitats. Although humans are also primates, for convenience, we refer to nonhuman primates as "primates" and nature tourism to visit them as "primate tourism."

Using nature tourism as a conservation tool is not new. It has been advocated since the 1800s, from the view that nature tourism is an impact-free activity that will lead visitors to value nature and help fund its protection (Honey, 1999/2008). Hopes have been especially high for nature tourism that aspires to "ecotourism," broadly referring to responsible travel to natural areas that conserves the environment and improves the well-being of local people (e.g. Ceballos-Lascurain, 2000; Honey, 1999/2008). It is now well known that even the most ecologically responsible nature tourism is not always the impact-free activity envisioned and it has often failed to deliver on its conservation promises, especially to the conservation of the wildlife and natural areas visited (Higham, 2007). Evidence now shows that adverse effects of nature tourism are widespread (Butynski, 2001; Higham 2007; Knight & Cole, 1995). One result is an increase in calls for evaluative research on whether nature tourism is generating conservation benefits for the wildlife and natural areas visited, what conservation costs it incurs, and whether its benefits to their conservation outweigh its costs (e.g. Higham, 2007).

In this context, primate tourism merits attention. First, it has proven to be very popular and lucrative, largely because of primates' biological and behavioral similarities to humans (Honey, 1999/2008; Kinnaird & O'Brien, 1996; Lanyero, 2011; Wollenberg *et al.*, 2011). Now a major form of the human–primate interface, it is considered one of the most important issues facing primatology in the twenty-first century (Fuentes *et al.*, 2007; Paterson & Wallis, 2005). Second, the same similarities that generate high tourist interest often generate threats to the primates visited, notably in the form of habitat competition or disease transmission. Of the primate species surviving today, 55% are at risk of extinction (IUCN, 2013), so primate conservation is increasingly of great concern. Third, primate tourism takes many forms,

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ranging from safari-like tracking adventures into remote areas to drop-in day visits to see primates living in their natural habitat but "ready-to-view" at temples, monkey parks, or rehabilitation sites. An overview of primate tourism, then, offers insights into tourism effects that are shared across primates as well as those specific to particular primate taxa, sites, or forms of tourism, and into the causal factors involved.

As with nature tourism in general, empirical evaluations of primate tourism's effects on primate conservation were relatively limited until recently. Our goal in this book is to work to improve this situation by (1) presenting empirical assessments of the impacts of primate tourism on primate conservation on a sample of the world's primates, (2) weighing, to the extent possible, its conservation costs against its conservation benefits, and (3) developing recommendations for improving the net benefits of primate tourism to primate conservation. This chapter sets the stage with overviews of primate traits important in tourism, primate tourism's history, broad issues in assessing tourism's impacts, and this book's contents.

## Why primates

Although primate tourism may share many patterns found in other nature tourism, it may also have distinctive features. Primates are mammals, and distinguished within the mammals by a collection of ecological, biological, and behavioral traits that include their habitat (primarily tropical to subtropical forest and savanna), diet, anatomy, life histories (relatively long lifespans, slow reproduction, slow ontogeny), sociality, large brains, high potential for independent and social learning, and high behavioral plasticity. These traits contribute to primate tourism's popularity with tourists and to some of its typical consequences.

- Primates' tropical–subtropical concentration leads to high sympatry and competition with humans for habitat (Fuentes, 2006).
- Physiological and dietary similarities result in a high risk of humans' infecting primates with human diseases. Some human diseases have devastated entire populations of great apes that are threatened with extinction (Huijbregts *et al.,* 2003; Leroy *et al*., 2004).
- Primates' high learning potential, long lifespans, slow ontogeny, and social lifestyles combine to produce powerful learning capacities. Primates can learn how to interact with humans through tourists and refine their knowledge and skills over many years. One important result can be intensifying their involvement with humans, which has increased their crop- and garbage-raiding, aggressiveness, and vulnerability to poachers (Banks *et al.*, 2003; Fuentes, 2006; Kemnitz *et al.*, 2002; Knight, 2009a; Unwin & Smith, 2010). A second is that tourism effects can spread beyond the individual primates that learned them to conspecifics, via social learning. A third is that tourism's effects on the primates visited can change substantially over time. Problems that develop slowly have sometimes remained undetected – and unmanaged – for years. Examples are baboons developing

adult-onset diabetes due to prolonged garbage eating and some primate species becoming dangerously aggressive and violent toward humans due to long-term provisioning for tourism (Banks *et al.*, 2003; Kemnitz *et al.*, 2002; Knight, 2009a; Zhao & Deng, 1992).

- Most remaining primate habitat is in developing countries (Fuentes, 2006), which influences accessibility to tourists, infrastructure, local residents' interest in participating in primate tourism and opportunities to do so, governmental perspectives, and instabilities that affect tourism (economic, socio-political, environmental).

Primates also vary greatly in size, from tiny mouse lemurs to massive gorillas, and in lifestyle, from semi-solitary to highly social. In diet, most are primarily plant eaters but some are insectivores or generalists. They vary in mating and reproduction patterns, intelligence, sensitivities, and aggressiveness. Most inhabit the tropics or subtropics, but a few inhabit temperate zones. Primates are distributed around the globe, so they are subject to a wide variety of human cultural, political, and economic contexts. All of these factors combine to further diversify primate tourism's characteristics. Primate tourism itself varies in form, from small group primate tracking that achieves some of the criteria for ecotourism to mass tourism based on staged primate viewing at scheduled times and places. Additional primate viewing occurs in "safari" drive-through experiences in Africa, where a variety of large terrestrial mammals (including some primate species) provide a less focused but more inclusive tourism experience. Accordingly, the effects of primate tourism may vary considerably across primate species and sites.

An overview of primate tourism stands to be useful in identifying effects that are common to the order as well as those that are species- and site-specific. The risk of infecting primates with human disease is common, but its severity can vary according to the primate species, type of disease, or site location. Likewise, the effects of provisioning can vary with the primate species involved and site-specific management. Identifying shared and distinctive effects should facilitate identification of causal factors and problem mitigation.

## The development of primate tourism

Primate tourism has at least two historical roots: safari-like adventures and primate provisioning linked with long-term human–primate sympatry (Butynski & Kalina, 1998; Fuentes, 2006, 2010). Safari-like treks to find and track wildlife targeted spectacular primates such as the great apes, often to shoot them as trophies or capture them for western zoos. Primate safaris shifted to viewing as visitor interest shifted to protecting wildlife. Viewing provisioned primates developed out of the practice of local peoples' regularly feeding sympatric primates, either for religious or cultural reasons (e.g. protected monkeys near Buddhist or Hindu temples: Fuentes *et al.*, 2005, 2007; Zhao, 2005) or to deter crop-raiding (e.g. Barbary and Japanese macaques: Fuentes *et al.*, 2007; Unwin & Smith, 2010; Kurita, this volume).

Provisioning for religious reasons greatly facilitated primate tourism; macaque tourist sites throughout Asia, for example, are often near Hindu and Buddhist temples (Fuentes *et al.*, 2007).

Modern primate tourism emerged in the 1950s as interest rose in viewing wild primates. It developed around the two viewing formats already used in wildlife tourism: provisioning primates to draw them to tourist areas and habituating them to human presence within their normal ranges to facilitate tracking them. Provisioning fosters habituation but also concentrates primates at specific places and times, so tourists can view them easily, up close, and on schedule (Knight, 2009a). Early examples are viewing provisioned Japanese macaques at Japan's Takasakiyama monkey park (1953: Yamagiwa, 2010), tracking mountain gorillas in Uganda's Mgahinga Game Reserve (1955: Butynski & Kalina, 1998), and viewing provisioned Barbary macaques on Gibraltar (1960: Fuentes *et al.*, 2007).

Primate tourism quickly proved popular. Primate conservation was not prominent among its early aims in either form. Income appeared to be the main motive in early tourism to track eastern lowland gorillas, based on the large tourist groups and poor organization reported (Fawcett *et al.*, 2004; Weber, 1993). Sightseeing, educating Japanese people about Japanese macaques, offering visitors opportunities to "play" with the monkeys by feeding them, and reducing crop-raiding were among the initial aims of Japan's monkey parks in offering macaque viewing at scheduled feedings (Knight, 2005; Kurita, this volume).

Provisioning- and habituation-based primate tourism tend to involve different species and audiences, partly because of their roots. Provisioning-based tourism focuses on primates that fare relatively well in human contexts, notably macaques, and makes viewing wild primates as easy as viewing captives, so it is likely to attract visitors who may be more focused on the social, recreational, and entertainment aspects of their visit than the educational and conservation ones (Parker & Ballantyne, 2012) and to resemble mass more than ecotourism. Habituation-based tourism tends to involve primates living in large expanses of natural habitat relatively remote from humans (e.g. apes, prosimians, proboscis monkeys) and trekking into primates' natural habitat, so it is more akin to ecotourism. Some primate-viewing opportunities also arise in broader habituation-based drive-through "safaris" to see large African mammals (e.g. game drives through the Serengeti National Park). Although primates are rarely the focus of such tourism, most of these locations include primate species that add to the overall experience. A large troop of baboons never fails to attract the attention of tourist vehicles.

By the 1970s, primate tourism was increasing in popularity. For instance, by 1972, 40 free-ranging Japanese monkey parks had opened in Japan after the first opened in the 1950s (Kurita *et al.*, this volume). With the growth of modern primatology and awareness that populations of some primate species were shrinking rapidly, primate conservationists and researchers began promoting and developing primate tourism as a strategy for securing support and funds for their protection. Most famous is regulated mountain gorilla tracking, which the Mountain Gorilla Project (now the International Gorilla Conservation Program, IGCP) launched in 1979 as

a conservation measure to help save mountain gorillas from extinction (Vedder & Weber, 1990). Provisioning-based tourism to visit rehabilitant orangutans returning to forest life was launched around the same time to support wild orangutan conservation by educating visitors and generating conservation funds; it focused on rehabilitants to protect vulnerable wild populations from the added stresses of tourism (Aveling & Mitchell, 1982; Borner, 1976; Frey, 1978).

Some primate tourism sites experienced problems and took steps to alleviate them. Provisioning and habituation both contributed to these problems by bringing primates within nuisance range as well as within viewing range (Knight, 2009a). Problems for the primates visited and their habitat were prominent where tourism was based on provisioning and tourist volume was high (e.g. Japanese macaques, rehabilitant orangutans). At one Japanese macaque tourism site, there was a serious risk of tourists spreading human diseases to the macaques because they fed the macaques and came too close to them. These tourist behaviors also caused dangerous human-directed theft and aggression, and overprovisioning; the overprovisioning caused macaque overpopulation which increased social competition, crop-raiding, and natural habitat damage (Kurita *et al.*, 2008). Tourism with rehabilitant orangutans generated similar problems and further undermined the rehabilitation process by encouraging rehabilitants' dependency on humans (Frey, 1978; MacKinnon, 1977; Rijksen, 1978, 1982; Rijksen & Rijksen-Graatsma, 1975). In both cases, tourist management changes were recommended; some were instituted.

The 1980s and 1990s saw a dramatic growth in primate tourism (e.g. Fuentes *et al.*, 2007; Hartup, 1994; Nakamura & Nishida, 2009). Tourist numbers increased at existing primate sites, new primate sites were opened for tourism, and primate-viewing options expanded to include boats and blinds (e.g. Fuentes *et al.*, 2007; Klailova, Hodgkinson, & Lee, 2010; Knight, 2009a; Macfie & Williamson, 2010; Mugisha, 2008; Nishida & Nakamura, 2008). Its growth followed worldwide trends in tourism (Higham, 2007), but was also inspired by the conservation success of mountain gorilla tourism. Rwanda's gorilla tourism was credited with saving mountain gorillas from the brink of extinction in the 1980s by increasing their importance, protecting them and their national park, and generating substantial revenues for the country and local people (Harcourt & Stewart, 2007; Macfie & Williamson, 2010).

Conservation became more common as a rationale for primate tourism. Researchers continued to be instrumental in promoting and developing conservation-oriented tourism with wild primates (e.g. Nishida & Nakamura, 2008; Russell, 1995; Wright & Andriamihaja, 2002, 2003). Governments of several primate-habitat countries developed tourism for the income it generates and promoted their primates as tourist attractions, partly to fund their country's nature conservation. Rwanda made mountain gorillas a national symbol and featured them on its passports, visas, and bank notes (Williamson, 2001). Uganda started mountain gorilla and chimpanzee tourism (Lloyd, 2002; Moyini, 2000). Madagascar launched its national park system, with nature tourism as a substantial source of financial support and lemurs as

its main attraction (Wollenberg *et al.*, 2011; Wright & Andriamihaja, 2002, 2003). Malaysia used orangutans to head its 1990 tourism campaign and was developing and promoting orangutan tourism facilities by the late 1990s (Bennett, 1998; Kaplan & Rogers, 2000). The importance of incorporating local communities into nature conservation also grew, and primate tourism offered a means of alleviating local poverty and providing financial and other incentives for protecting nearby natural areas (Archabald & Naughton-Treves, 2001; Hodgkinson, 2009; Horwich & Lyon, 1987).

Concerns about primate tourism's adverse effects also grew. The rise in concerns probably reflected increased tourism pressures that intensified the human–primate interface, pressures to prioritize economic benefits, the gradual buildup of slow-developing problems, and difficulties in instituting effective tourist controls (see Figure 1.1). Problems recognized include infecting the primates visited with human diseases, aggravating versus alleviating primate–human conflict (crop-raiding, attacks), artificially distorting the primates' reproduction and social dynamics, altering other facets of their behavior, and undermining rehabilitation. Mountain gorilla tourism came under criticism as a conservation tool, notably because of tourists' stressing the gorillas they visited and potentially infecting them with human diseases (Butynski & Kalina, 1998; Homsy, 1999; Palacios *et al.*, 2011). Malaysian resorts marketed tourism to visit captive orangutans they labeled "rehabilitants," apparently capitalizing on the caché of conservation for its income-generating potential (Brend, 2001). Lack of or ineffective tourist controls and tourist education were considered largely responsible for the persistence or intensification of the problems with rehabilitant orangutan tourism identified in the 1970s (Rijksen & Meijaard, 1999; Sajuthi *et al.*, 1991). Such concerns sparked empirical studies of the effects of primate tourism on the primates visited and their habitat (e.g. Cochrane, 1998; de la Torre *et al.*, 1999, 2000; Lloyd, 2002; Russell, 1995; Zhao & Deng, 1992).

Growing concerns over the potential for primate tourism to have adverse effects also spurred efforts to mitigate them. For example, an intensive mountain gorilla vaccination program was undertaken after the gorillas suffered an outbreak of measles to which gorilla tourism could have contributed (Hastings *et al.*, 1991). Persistent problems with rehabilitant orangutan tourism motivated the Indonesian government to order its orangutan rehabilitation projects to stop tourist operations (Rijksen & Meijaard, 1999). To reduce its Japanese macaques' soaring population size and attacks on humans, Japan's Takasakiyama monkey park reduced its official provisions (1965) and prohibited visitor feeding (1993) (Kurita *et al.*, 2008). Some of these changes were effective, others were not. Better managed provisioning eventually reduced the macaque population size and attacks on humans (Kurita, this volume; Kurita *et al.*, 2008). The move to stop rehabilitant orangutan tourism in Indonesia failed: all sites that have been offering rehabilitant orangutan tourism since the 1970s continue to do so.

Whether primate tourism benefited primate conservation eventually came into question. Some mountain gorilla experts concluded that the conservation benefits of mountain gorilla tourism outweighed its costs (Harcourt, 2001; Williamson, 2001)

**Figure 1.1a** Unsafe tourist viewing practices. A baboon attempts to open a car door along a road in Cape Town, South Africa, as tourists look on. Baboons ranging in this area are over-habituated and readily raid any tourist vehicles that stop for closer viewing. In the following Figure 1.1b, a tourist sits within 5 m of a chimpanzee at Gombe National Park, Tanzania. In both situations, humans are not maintaining a safe distance from the primates. (© J. Wallis.)

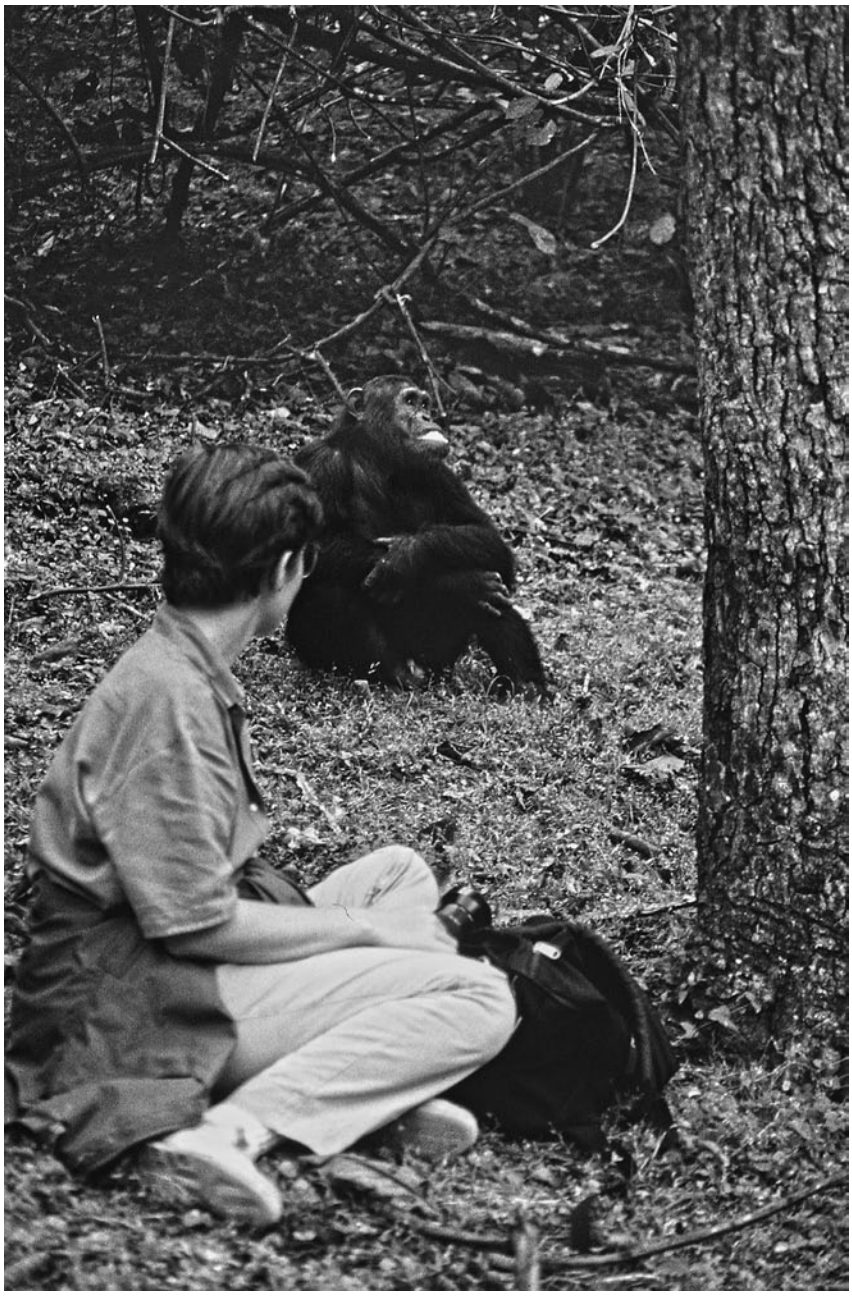

Figure 1.1b