



CHAPTER 8



The Status of Captive Apes

Introduction

As a result of human population growth and the attendant loss of natural habitats and wildlife, people will increasingly encounter apes only in captive settings. The contexts of these settings influence how viewers perceive the conservation status of apes (Leighty *et al.*, 2015).

Apes in range states are held in a variety of captive settings: they are kept in private homes; publicly displayed as tourist attractions, in zoos, safari parks and by individuals; and taken in by specialized, non-profit care facilities. The latter facilities, which are dedicated to providing care for orphaned, confiscated and injured apes, are known as sanctuaries, rescue centers or rehabilitation centers. While rescue and rehabilitation centers typically focus on short-term care

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and treatment of injured animals, sanctuaries provide long-term or lifetime care (CITES, 2010a; Durham, 2015). Some zoos also hold orphaned or confiscated apes; since the provision of such care is not their primary function, however, zoos are not discussed in this study.

This chapter comprises two main sections. The first considers the history and context of range state sanctuaries, focusing on 56 such facilities identified by the authors. It examines the outlook for sanctuary apes and explores the opportunities and challenges for these sanctuaries in view of current and emerging threats. Unless otherwise cited, information is based on the authors' knowledge and observations; accounts and data provided by sanctuary practitioners and external experts; and unpublished data, as well as details provided on official and facility websites.¹ The key findings of this sanctuary review include the following:

- Conditions at range state sanctuaries vary widely. Many have exemplary programs, but few facilities have been independently inspected and accredited to verify their performance against welfare and care standards.
- Suitable habitat for reintroduction and translocation is increasingly limited, meaning that most of the thousands of apes already in sanctuaries and the thousands more still in need of captive care will spend their lives in captivity. If reintroduction or translocation is possible, careful site selection, proper rehabilitation, candidate selection and post-release monitoring are critical to prevent significant adverse effects on the welfare and conservation of both wild and rehabilitant apes.
- Overcrowding and resultant poor welfare lower the quality of life for sanctuary apes. Careful consideration is needed to determine whether and when new apes can be accepted without diminishing

welfare standards for existing and new residents.

- In the absence of legal consequences for perpetrators of wildlife crimes, rescues and even confiscations do nothing to deter further illegal hunting of wild apes; in fact, they may contribute to illegal ape poaching and trade.
- Increased collaboration and collective efforts by sanctuaries, conservation-focused non-governmental organizations (NGOs), governments, industry and other parties are needed to address the habitat destruction, poaching and human–wildlife conflict that drive apes into sanctuaries.
- Sanctuaries can improve welfare and conservation impacts by: undergoing independent inspection, accreditation and evaluation against robust welfare and conservation standards; accepting external scientific review of reintroduction or translocation methodologies; committing to intake policies that support welfare standards, contribute to law enforcement and prevent corruption; and increasing engagement to address the root causes that lead apes to need captive care.

Section II updates captive ape population statistics and discusses the regulatory landscape affecting captive apes. The key findings of the statistics update are:

- While the United States is starting to witness a transfer of chimpanzees from laboratories to sanctuaries, the slow pace is of concern, in part because of the number of older chimpanzees.
- Ensuring transparency regarding the number, location and welfare of apes is an ongoing challenge. In the United States, the government recently removed considerable amounts of previously available data from online databases, raising concerns about accountability.

- Regulatory changes and actions by federal agencies in one country sometimes have an unexpected impact on sanctuaries within and beyond that jurisdiction. A recent case in point concerns a permit application for exportation of chimpanzees from the United States to the United Kingdom. The move raised issues regarding the international impact of the U.S. Endangered Species Act, the management of captive apes within Europe and the illegal international trade in wild animals—all of which affect sanctuaries and their missions.

I. Beyond Capacity: Sanctuaries and the Status of Captive Apes in Shrinking Natural Habitats

Background

History and Scope of Range State Sanctuaries

Ape sanctuaries have been operational in range states for several decades. They are a response to the specialized care needs of apes who have been confiscated from poachers or from the illegal trade, held as pets or retired from unsuitable zoos. The authors identified 56 range state sanctuaries that care for apes, based on personal knowledge, expert accounts, and online descriptions and photos. Most of these sanctuaries were founded and are run by dedicated individuals or NGOs with an interest in improving ape welfare and contributing to ape conservation. Eight of the 56 facilities (14%) are currently government-owned.

Many ape sanctuaries have evolved from an initial focus on individual rescues to a broader scope that includes local conservation and community projects, contributions to the understanding of species behavior, and the provision of behavioral enrichment

and care centered on quality of life. A 2011–12 survey of 22 Pan African Sanctuary Alliance (PASA) centers—including three facilities that do not care for apes—demonstrated the breadth of sanctuary projects beyond ape rescue and welfare. Most PASA sanctuaries conducted conservation education programs: 86% were organizing on-site activities and 82% were running off-site conservation education. Cumulatively, these programs reached an average of 19,730 people per sanctuary per year. Most educational messaging was around wildlife laws and biodiversity (Ferrie *et al.*, 2014).

Other activities conducted by PASA sanctuaries included:

- staff development, including support to attend alliance workshops (at 86% of all surveyed facilities) and exchange with overseas zoos and sanctuaries (32%);
- supporting or assisting in the construction of roads, bridges and boreholes (46%) and health clinics and sanitation facilities (27%);
- supporting schools or education centers (87%) and community centers (27%);
- local grant programs or enterprise development assistance (36%);
- population and habitat viability analysis and other censuses (64%);
- research on ecology (55%) and social behavior (46%);
- funding or staffing anti-poaching patrols (73%);
- regular monitoring of primate habitats (46%);
- conducting anti-logging patrols (14%); and
- tree-planting (59%) (Ferrie *et al.*, 2014).

In addition to providing employment worth more than US\$1.3 million per year for 21 sanctuaries, PASA sanctuary contributions to local economies totaled an average

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of more than US\$78,000 annually (Ferrie *et al.*, 2014).

The authors' review of Asian ape sanctuary websites and interviews with Asian ape sanctuaries indicate a similarly broad scope of activities, with conservation programs including co-management of natural protected areas, acquisition of ape habitat to be designated as protected areas and collaboration with private land owners to protect habitat corridors for apes (Durham, 2015; Durham and Phillipson, 2014).

Sanctuary Standards

Conditions at ape sanctuaries vary widely. Importantly, standards of welfare, health care and facility management have improved over the past few decades alongside the expansion of captive facility activities. Relevant guidelines are now available for both great apes and gibbons (Farmer *et al.*, 2009; GFAS, 2013a, 2013b; PASA, 2016a). Through alliances, networks and advisory groups, sanctuary collaboration among facility directors, staff and outside experts has had a positive influence on the development and implementation of standards and the depth of expertise in sanctuaries, as described in Box 8.1 (Ferrie *et al.*, 2014; K. Farmer, personal communication, 2016).

The Global Federation of Animal Sanctuaries (GFAS), the Orangutan Veterinary Advisory Group (OVAG), PASA and the Wild Animal Rescue Network (WARN) have contributed to sanctuaries' recognition of ape captive care and welfare standards. PASA was formed in 2000, prior to the existence of published standards for in situ care of captive African apes. The African primate sanctuary community and outside experts jointly led the development of PASA's standards for African apes and other primates (Farmer *et al.*, 2009). PASA also published manuals to guide primate health-care and conservation education practices (Cartwright, 2010; Unwin *et al.*, 2009). OVAG

Photo: Independent verification or accreditation of captive facility standards is critical to ensuring ape welfare in sanctuaries.
© Gorilla Rehabilitation and Conservation Education (GRACE) Center/Rick Barongi

publishes workshop reports with orang-utan health care and welfare protocols (Commitante *et al.*, 2015).

GFAS formed in 2007 and developed international welfare standards for both great apes and gibbons. The Federation offers independent inspections to verify or accredit facilities' adherence to these standards. GFAS accreditation involves a more rigorous screening than verification, including operational as well as welfare standards (GFAS, n.d.-c). WARN has been collaborating with GFAS to encourage its members to seek GFAS verification or accreditation (GFAS, personal communication, 2016). Many PASA members are also seeking GFAS accreditation or verification.

At the time of writing, only 13% of sanctuaries considered in this chapter had been inspected and confirmed as complying with GFAS standards. One WARN member ape sanctuary, International Animal Rescue (IAR) Ketapang, was accredited by GFAS, and six PASA member ape facilities—the Chimpanzee Conservation Center, the Fernan-Vaz Gorilla Project, Jeunes Animaux Confisqués au Katanga (J.A.C.K. – 'young animals confiscated in Katanga'), Centre de Réhabilitation des Primates de Lwiro (Lwiro Primate Rehabilitation Centre), Sanaga-Yong Chimpanzee Rescue Center and Sweetwaters Chimpanzee Sanctuary—were verified by GFAS (GFAS, n.d.-b).

Between 2000 and 2014, PASA conducted on-site inspections of 13 of its 19 ape sanctuaries. The Alliance's revised standards no longer mandate regular on-site independent inspection of member sanctuaries, instead requiring sanctuaries to complete a questionnaire every five years; follow-up inspections are undertaken if deemed necessary by PASA (PASA, 2016a). In contrast, GFAS requires on-site inspections for every sanctuary verification or accreditation (GFAS, n.d.-a).

Independent verification or accreditation of captive facility standards is critical to

ensuring ape welfare in sanctuaries. It is the only means for donors, governments, the public and partners to ensure that sanctuaries are meeting international welfare standards. While inspections reasonably focus on the essential questions of quality welfare and care, increased emphasis and clear standards around environmental practices,

BOX 8.1

The Role of Collaborations

Historically, it has not been easy for ape sanctuaries to communicate regularly with each other or with outside experts. Remote locations, a lack of Internet and phone connectivity, and an absence of travel funding can be barriers to communication. Collaborations among sanctuaries and with outside experts—including accredited zoos and zoo Species Survival Plan programs, field researchers, independent welfare experts and veterinarians—have helped to develop the capacity of sanctuary staff and interested experts. These collaborations continue to be an effective way to foster communication and learning.

Nearly three-fourths (71%) of the 56 sanctuaries considered in this chapter are part of collaborations—alliances, advisory groups or networks—and some participate in more than one. Sixteen are members of PASA; 9 are members of WARN; 10 have participated in OVAG; 5 are members of the Jakarta Animal Aid Network; and 3 are members of the Gabon Great Ape Alliance. One captive facility, a former zoo, is also a member of the South East Asian Zoos Association.

OVAG, PASA and WARN bring outside experts to sanctuaries and facilitate information exchange and reciprocal visits among facilities. These collaborations provide sanctuaries with access to experts on conservation education, strategic planning, reintroduction, and veterinary medicine and health care. Funding raised by alliances, networks and advisory groups has been used to pay for meeting space, accommodation and food to host sanctuary staff, travel costs for outside experts and travel of sanctuary staff to attend training.

conservation activities (including reintroduction) and collaboration in law enforcement efforts would improve verification and accreditation practices. The relevance of these issues to sanctuaries is discussed throughout the chapter. Developing and incorporating these standards could strengthen sanctuary and accreditation organization partnerships with conservation NGOs, governments, field researchers and donors.

Drivers of Intake at Ape Sanctuaries

Drivers and proximate reasons for apes' captive care needs differ across regions and range states. They include habitat loss and degradation, poaching and weak law enforcement.

National laws prohibit the hunting of and trade in apes in all range states.² With the exception of South Sudan, all ape range states are parties to CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 2016a). All apes are listed in CITES Appendix I, which bans international commercial trade in listed species (CITES, 2017). However, enforcement of these laws and of CITES is inconsistent and transgressions are common (Bennett, 2011; Campbell *et al.*, 2008; Cotula *et al.*, 2015; Imong *et al.*, 2016).

Weak law enforcement facilitates the poaching of wild apes. In Africa, illegal hunting for wild meat (meat from wild animals, often referred to as “bushmeat”) is a significant threat to apes in Angola, Cameroon, Central African Republic (CAR), the Democratic Republic of Congo (DRC), Equatorial Guinea, Ivory Coast, Liberia and the Republic of Congo (Fruth *et al.*, 2016; IUCN, 2014d; Maisels, Bergl and Williamson, 2016a; Plumptre *et al.*, 2010, 2015; Refisch and Koné, 2005). In some range states in Asia, including Bangladesh, India, Indonesia, Lao PDR and Viet Nam, orangutans and gibbons

are regularly poached for wild meat. In addition, the demand for ape body parts for use in traditional medicine leads to poaching of chimpanzees (*Pan troglodytes*) and gibbons in some range states (Campbell *et al.*, 2008; Davis *et al.*, 2013; Geissmann *et al.*, 2013; Lao MAF, 2011; Molur *et al.*, 2005; Moutinho *et al.*, 2015; Rawson *et al.*, 2011). Infants captured by poachers are often opportunistically sold as pets. Poachers target some gibbon species in particular for sale as pets or to zoos and safari parks (Campbell *et al.*, 2008; Geissmann *et al.*, 2008; Molur *et al.*, 2005; Nijman and Geissmann, 2008; Rawson *et al.*, 2011). If confiscated or abandoned, these illegally captured apes are often delivered to sanctuaries.

The killing or capture of apes is also common in the context of human–wildlife conflict (Davis *et al.*, 2013; Rawson *et al.*, 2011; Williamson *et al.*, 2014). Sanctuaries are often called on to remove wild apes threatened by these conflicts, and to translocate them to other natural habitat or place them in captive care. If the apes are not removed, they are often killed or captured, and the infants sold or kept as pets (Ancrenaz *et al.*, 2015a; Durham, 2015).

Both poaching and human–wildlife conflict are associated with habitat destruction and fragmentation, which are direct consequences of human activities such as logging and forest clearance for the expansion of industrial, subsistence and small-scale agriculture, livestock grazing, extractive industries and infrastructure (see Chapters 1–6).³ As their habitats shrink, these apes are exposed to a growing risk of being hunted, captured or killed. Examples of habitat destruction abound. Across Indonesia and Malaysia, forest conversions destroy and fragment ape habitats, often isolating apes in tiny patches of trees, where adults can easily be killed and their infants captured (Ancrenaz *et al.*, 2015a; Campbell *et al.*, 2008; Singleton *et al.*, 2016). In Indonesia in particular, fires set to clear land for agriculture

Photo: As their habitats shrink, apes are exposed to a growing risk of being hunted, captured or killed. © Jabruson 2017 (www.jabruson.photoshelter.com)

have exacerbated this habitat destruction (Tabuchi, 2016). In the DRC, chimpanzees, Grauer's gorillas (*Gorilla beringei graueri*) and mountain gorillas (*Gorilla b. beringei*) are imperiled by the illegal local charcoal trade and mining (Plumptre *et al.*, 2015; UNEP/CMS, 2009). Infrastructure such as roads provides access for poachers and a means to bring wild meat and live animals to market (Poulsen *et al.*, 2009). Roads threaten gibbons more than other apes, as these species rarely travel on the ground and can have difficulty crossing these barriers (Chan *et al.*, 2005).

Civil unrest presents threats to apes, particularly to chimpanzees, Grauer's gorillas and mountain gorillas, as they are subject to increased poaching and habitat destruction by displaced persons, armed militias and military forces (Plumptre *et al.*, 2015; UNEP/CMS, 2009). Several pet apes have been seized from military forces in the DRC over the past several years (Engel and Petropoulos, 2016).

As apes are increasingly captured or driven from their natural habitats, the demand for space in ape sanctuaries is certain to grow (Durham, 2015; Durham and Phillipson, 2014). Among the most at risk are Bornean orangutans (*Pongo pygmaeus*), as infrastructure-related projects are predicted to disrupt the vast majority of their habitat by 2030 (Gaveau *et al.*, 2013). Their situation is further compounded by climate change, which is projected to render much of their current habitat unsuitable (Grueter *et al.*, 2013; Struebig *et al.*, 2015). In fact, the catastrophic forest fires that are used to clear land for agriculture in orangutan range states play a role in exacerbating global warming and heightening the risk of larger, more frequent forest fires; as a consequence, more habitat is at risk of destruction and more orangutans are likely to sicken and need sanctuary care (Ancrenaz *et al.*, 2016; Tabuchi, 2016). Concurrently, climate change may impact food availability for other apes,



such as the mountain gorillas (Grueter *et al.*, 2013; Struebig *et al.*, 2015).

Human population growth in ape range countries is also expected to cause increased demand for ape sanctuary capacity. Human populations in Angola, Burundi, the DRC, Tanzania and Uganda are projected to increase five-fold by 2100. Nine countries are projected to account for 50% of global human population growth between 2015 and 2050, among them five ape range countries: the DRC, India, Indonesia, Tanzania and Uganda



(UN, 2015). Since important ape populations occur outside of protected areas in these five countries and human population growth is sure to exacerbate illegal hunting and trade, apes will be placed at increasing risk (Indonesia MoF, 2009; IUCN, 2014d; Molur *et al.*, 2005; Plumptre *et al.*, 2010).

While improved enforcement of ape protection laws is urgently needed, it is also likely to increase demands on ape sanctuaries. In some African range states, better enforcement has entailed an increase in

seizures and rescues, a trend that tends to persist unless law enforcement effectively deters poachers from further illegal activity (K. Farmer and D. Cox, personal communication, 2012). Meanwhile, international media coverage of CITES and wildlife laws has increased pressure on range states to enforce bans on hunting CITES-listed species, including apes (see Box 8.2). Ideally, such scrutiny will result in improved law enforcement and better protection of wild ape populations.

BOX 8.2

The Illegal Trade in Apes

The fact that the Chimpanzee Conservation Center and the Centre de Réhabilitation des Primates de Lwiro recently took in three chimpanzees confiscated from international trade indicates that trafficking in African apes continues, even if in relatively low numbers.

A recent study shows demand for wild-caught apes in Peninsular Malaysia and Thailand, two regions where apes continue to be acquired by zoos and for wildlife attractions such as safari parks, tourist photo props and performances (Beastall and Bouhuys, 2016; see Table 8.1). Interviews of facility staff indicate that most of the apes whose origin was known had been caught in the wild. The researchers found that Thai facilities held non-native apes in numbers far exceeding those recorded as legal imports, including a gorilla and gibbons for whom there were no legal import records. Zoo studbooks in Peninsular Malaysia and Thailand list dozens of orangutans as wild-caught or of unknown origin, although some wild-caught individuals arrived as a result of enforcement actions (Beastall and Bouhuys, 2016). The data indicate that illegal trade in Asian apes remains a concern and needs to be addressed through legislation, improved enforcement and public awareness campaigns.

Although prohibition of hunting and trade in apes is universal across range states, legal protections for apes vary widely. CITES depends on national laws for implementation. CITES has four requirements for each state party's national legislation:

1. designation of at least one management authority and one scientific authority;
2. prohibition of trade in species in violation of the Convention;
3. ability to penalize such trade; and
4. confiscation of specimens illegally traded or possessed (CITES, 2010b).

Only 10 of the 26 ape range states have laws that satisfy all four requirements: Cambodia, Cameroon, the DRC, Equatorial Guinea, Indonesia, Malaysia, Nigeria, Senegal, Thailand (see below) and Viet Nam. The remaining 16 range states do not meet the four requirements. Eight range states have laws meeting one to three of the four requirements: Bangladesh, Burundi, Gabon, Guinea, India, Mali, the Republic of Congo and Tanzania. Eight range states—Angola, Guinea-Bissau, Ivory Coast, Lao People's Democratic Republic (Lao PDR), Liberia, Myanmar, Sierra Leone and Uganda—do not have legislation meeting any of the four requirements. Required legislation is in development in all 16 of the above-listed range states (CITES, 2016a). Once passed and promulgated, this legislation is expected to improve the states' ability to confiscate illegally held apes and prosecute perpetrators. These steps, in turn, are certain to increase the number of apes in need of sanctuary care—and thus the demand for additional sanctuary capacity.

Notably, states can meet CITES requirements for national legislation while still providing insufficient protection for apes, as is the case in Thailand. A recent analysis of Thai wildlife laws highlights several significant shortcomings that imperil apes. The law currently places the burden of proof on the government to demonstrate that wildlife was obtained illegally, rather than requiring those possessing wildlife to prove they obtained it legally. In addition, current criminal penalties for illegally held or traded wildlife may not provide sufficient deterrence against wildlife crime. The study authors propose detailed recommendations for improving a draft amendment to Thailand's Wild Animal Preservation and Protection Act, B.E. 2535 of 1992, which is under consideration (Moore, Prompinchompoo and Beastall, 2016).

In Indonesia, the government is considering revisions to its Law for Conservation of Living Resources and Ecosystems, Law No. 5 of 1990, following government recognition that wildlife hunting and trade cases have typically resulted in short prison sentences (under one year) and fines of less than 100 million rupiah (US\$7,500) (Jong, 2016).

Another issue undermining ape protection laws is fraudulent international trade of apes under CITES, often with the use of captive-bred source codes for wild-caught apes (CITES, 2014). Such fraud was particularly associated with trade cases from Guinea between 1999 and 2012. Guinea has no captive breeding facilities for apes; claims of captive-bred apes from this state are thus inevitably fraudulent, and the animals involved can be assumed to be wild-caught (CITES, 2012). CITES Trade Database records show that 122 chimpanzees and 10 gorillas were traded by Guinea as captive-bred (CITES, n.d.).

In 2016, the Conference of the Parties to CITES responded by approving a mechanism for CITES to review, investigate and enforce prohibitions on fraudulent uses of captive breeding codes (CITES, 2016b). This effort is intended to prevent further laundering of wild-caught animals.

While the illegal trade in apes persists and presents a threat to these species, it is typically a byproduct of illegal hunting, involving the opportunistic sale of infants for additional income. Among the threats to apes, the illegal trade is thus of a lower order of magnitude than the key drivers of population declines, namely habitat loss and fragmentation, illegal hunting and human–wildlife conflict, all of which can facilitate the capture and sale of apes.

The trade poses a proportionally greater threat to some gibbon species, however. Gibbon species that are specifically targeted are Kloss's gibbon (*Hylobates klossii*), the lar gibbon (*Hylobates lar*), Müller's gibbon (*Hylobates muelleri*), the Bornean gray gibbon (*Hylobates funereus*), the southern yellow-cheeked crested gibbon (*Nomascus gabriellae*) and the siamang (*Symphalangus syndactylus*) (Brockelman and Geissmann, 2008; Geissmann and Nijman, 2008a, 2008b; Geissmann *et al.*, 2008; Nijman and Geissmann, 2008; Whittaker and Geissmann, 2008).

TABLE 8.1**Apes in Peninsular Malaysian and Thai Zoos and Wildlife Attractions, 2016**

Ape species	Number of apes in zoos and wildlife attractions		
	Peninsular Malaysia	Thailand	Total
Chimpanzee (subspecies unknown)	14	36	50
Western lowland gorilla	–	1	1
Bornean orangutan	31	–	31
Sumatran orangutan	2	–	2
Orangutan (species unknown)	1	51	52
Agile gibbon	5	2	7
Lar gibbon	37	107	144
Moloch gibbon	1	–	1
Müller's gibbon (subspecies unknown)	1	–	1
Pileated gibbon	–	34	34
<i>Hylobates</i> gibbon (species unknown)	–	2	2
<i>Nomascus</i> gibbon (species unknown)	–	14	14
Siamang	7	3	10
Total	99	250	349

Notes: The agile gibbon, lar gibbon and siamang are native to Peninsular Malaysia and Thailand. The pileated gibbon is native to Thailand.

Data source: Beastall and Bouhuys (2016)

Apes in Range State Sanctuaries

Origins of Apes in Range State Sanctuaries

Most apes arrive at sanctuaries as a result of illegal wild meat hunting, habitat destruction and fragmentation, human–wildlife conflict or after they are abandoned by or rescued from individuals who kept them as pets. Far fewer apes are in sanctuaries because they were confiscated from the international wildlife trade.

Data from the Indonesian ape sanctuary IAR Ketapang show that 43% of its rescues were illegally held as pets, 31% came from oil palm plantations and 12% were found in local community agricultural landscapes, while only 1% were liberated from the inter-

national illegal wildlife trade (Durham, 2015). Similarly, in PASA range state sanctuaries, most apes became residents as a result of human actions within national borders, as opposed to the international trade. In the DRC, the Centre de Réhabilitation des Primates de Lwiro received 16 chimpanzees in 2015–16; all originated in the DRC. One was confiscated in Rwanda, after having been transported there by poachers (I. Vélez del Burgo, personal communication, 2016).

The number of trade-related confiscations is somewhat higher in Guinea, which has been a hotspot of international trade in African apes (CITES, 2014). One Guinean ape sanctuary, the Chimpanzee Conservation Center, accepted seven chimpanzees in 2015–16; the group included six who were native to Guinea and two confiscated from

the international trade. The sanctuary took in one orphaned chimpanzee from Senegal, where there are no sanctuary facilities (C. Colin, personal communication, 2016).

The prevalence of hunting and local trade as proximate causes for the intake of apes in range state sanctuaries corroborates data showing that habitat destruction, poaching for wild meat and traditional medicine, and killing related to human–wildlife conflicts remain the most pressing threats to the

majority of wild ape species (Brockelman and Geissmann, 2008; Campbell *et al.*, 2008; Davis *et al.*, 2013; Indonesia MoF, 2009; IUCN, 2014d; Plumptre *et al.*, 2015).

Status and Outlook for Apes in Range State Sanctuaries

Table 8.2 lists range states with ape sanctuaries and the species they hold. Except for Bangladesh and Myanmar, Asian ape range

TABLE 8.2

Captive Center Capacity in Ape Range States, 2016

	Ape range countries with sanctuaries	Species accepted
Africa	Cameroon	Central chimpanzee, Nigeria–Cameroon chimpanzee, Cross River gorilla, western lowland gorilla
	DRC	Bonobo, central chimpanzee, eastern chimpanzee, Grauer's gorilla
	Gabon	Central chimpanzee, western lowland gorilla
	Guinea	Western chimpanzee
	Liberia (facility in development)	Western chimpanzee
	Nigeria	Nigeria–Cameroon chimpanzee
	Republic of Congo	Central chimpanzee, western lowland gorilla
	Sierra Leone	Western chimpanzee
	Uganda	Eastern chimpanzee
Asia	Cambodia	Native gibbon species
	China (Hong Kong)	Lar gibbon, pileated gibbon
	India	Western hoolock
	Indonesia	Bornean orangutan, Sumatran orangutan, agile gibbon, Bornean white-bearded gibbon, Kloss's gibbon, moloch gibbon, Müller's gibbon, siamang
	Lao PDR	Northern and southern white-cheeked crested gibbon, other native gibbon species
	Malaysia	Bornean orangutan
	Thailand	Lar gibbon, pileated gibbon, other native gibbon species
	Viet Nam	Pileated gibbon, northern white-cheeked crested gibbon, northern yellow-cheeked crested gibbon, southern yellow-cheeked crested gibbon, other native gibbon species

Data sources: Wildlife Impact (2015, 2016); online and unpublished facility accounts, reviewed by the authors

states have sanctuaries that hold apes (Wildlife Impact, 2016). The rescue center at Kadoorie Farm & Botanic Garden in Hong Kong is not currently known to hold gibbons, but it is equipped to rescue and quarantine them (KFBG, n.d.).

Nine African ape range states—Cameroon, the DRC, Gabon, Guinea, Liberia, Nigeria, the Republic of Congo, Sierra Leone and Uganda—have sanctuaries that hold apes (Wildlife Impact, 2015, 2016). More than half of the African ape range countries—namely Angola, Burundi, CAR, Equatorial Guinea, Ghana, Guinea-Bissau, Mali, Rwanda, Senegal, South Sudan and Tanzania—do not have sanctuaries that are currently equipped to care for apes (Wildlife Impact, 2015, 2016). Ivory Coast does not have a sanctuary, but the Abidjan Zoo has accepted chimpanzees in need of rescue. In 2014 it was at full capacity due to high rates of intake, including of pet chimpanzees left at the zoo during the Ebola crisis (R. Champion, personal communication, 2014).

The number of apes in need far exceeds existing captive facility capacity. Many facilities are full and others have space for very limited numbers of additional apes. More than 6,000 gibbons and between 25 and 126 African apes are estimated to be illegally held in range countries (Durham, 2015; Wildlife Impact, 2015). These numbers exclude the 66 chimpanzees abandoned by the New York Blood Center in Liberia (Gorman, 2015a; see below). An estimate for orangutans was not available.

Many range state sanctuaries have the ultimate aim of reintroducing apes back into their natural habitats. In practice, however, reintroduction is not always feasible, as it may be inconsistent with conservation aims. As noted by Durham (2015), the reality is that many apes entering captive settings will become lifetime residents. Even apes at transit centers or other short-term facilities often spend many years, or the remainder

of their lives, in these facilities. Many sanctuaries would need to invest heavily in infrastructure and staff to take on additional lifetime residents. Overall, overcrowding issues in sanctuaries are likely to worsen given the number of apes in need, apes' long life spans and current intake practices. Even now, sanctuaries would not be able to accommodate or provide minimum acceptable welfare standards to the thousands of apes held illegally, nor the newly captured ones.

Some countries without designated rescue centers have shown a reluctance to confiscate unlawfully held or traded live animals (André *et al.*, 2008; Teleki, 2001). In personal communication with the authors in November 2016, zoologist Tamar Ron and Maiombe National Park administrator José Bizi describe recent ape confiscations in Angola, a gorilla and chimpanzee range state that lacks sanctuaries:

- Of five infant chimpanzees and two infant gorillas confiscated by the Maiombe National Park in the past two years or so, only one chimpanzee has survived. That one is being taken care of, together with a number of other chimpanzees of different ages, in a private facility of a person who has been trying to save infant chimpanzees and gorillas over several decades, with his own means, but unfortunately succeeds in providing them only with very substandard, inadequate conditions.
- The [Maiombe National] Park staff does not have adequate capacity, means and conditions to take care of confiscated apes over time. There are no adequate facilities in the country, and the transfer to facilities elsewhere would also require resources that are not available. In addition to the abovementioned private initiative, there is an unknown number (estimated at several dozens) of chimpanzees of different ages held privately, mostly in Cabinda and Luanda,

Photo: Ape translocation or the release of captive animals into natural habitats can pose significant risks to the health and welfare of released and wild ape populations, other wildlife, ecosystems and human populations.

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IAR Indonesia

all in quite inadequate and at times appalling conditions. The government has expressed strong interest in establishing an ape sanctuary as part of its strategic wildlife crime action effort, but would require substantial outside support to fund development, running costs and staff capacity building, and to create the enabling conditions required for this ambitious endeavor.

The creation of new sanctuaries might appear an obvious solution. In practice, however, they are very expensive and difficult to establish, requiring both specialized expertise and a commitment for the lifetime of long-lived, cost- and care-intensive rescued apes. Few are willing or able to take on this challenge, especially in range countries with great need but with high levels of civil unrest or other challenges.



Further, the relationship between sanctuary presence or absence and the need for ape rescues remains unclear, particularly as ape seizures continue in states that have long had sanctuaries, such as Cameroon, DRC and Indonesia. Numerous factors influence seizures and intake of apes by sanctuaries, including the presence and effectiveness of law enforcement, corruption, public awareness of laws and their

consequences, poverty and food availability, access to employment and livelihoods, the accessibility and ease of capture of wild ape populations, and demand for and access to markets for wild meat, ape body parts and live apes.

Certainly, the presence of sanctuaries in range states makes ape confiscation more practicable, in part because they can play a key role in facilitating law enforcement (Farmer, 2002; Teleki, 2001). Sanctuaries, particularly those accredited as maintaining high standards of care, also enable improved welfare, lifelong care and, potentially, reintroduction for rescued apes (Trayford and Farmer, 2013). Thorough analysis of need and feasibility, along with collaboration among organizations, individuals and governments, may be a more sustainable path to sanctuary development than the ad hoc approach often used to date. Integrating sanctuaries into broader efforts to address habitat destruction, ape killing and capture, and other factors that lead apes to require care would further improve sanctuary effectiveness.

Reintroduction and Translocation

Suitable Habitat in Range States

Suitable habitat is rapidly disappearing across ape range states (Funwi-Gaba *et al.*, 2014; Williamson *et al.*, 2014). Despite diminishing populations of wild apes, the size and carrying capacity of existing suitable habitat currently make it impossible to release all the captive apes in range states. In some areas there may simply be no suitable habitats that are not already occupied by viable populations of conspecifics or that do not first require forest restoration, protected area designation, sustained anti-poaching enforcement or other long-term conservation efforts.



“Where reintroduction or translocation are feasible options, monitoring of progress and impacts is essential to determine whether a project is achieving measures of conservation success.”

Given the rapid rate of orangutan habitat conversion, experts have long concluded that suitable habitats that still support orangutans are already populated at or beyond carrying capacity (A. Russon, personal communication, 2016). The situation is similar for gibbons in Kalimantan, Indonesia, as discussed in the previous volume of *State of the Apes* (Durham, 2015). Cross River gorillas (*Gorilla gorilla diehli*) are limited by the extent of human encroachment and habitat use within their range (Imong *et al.*, 2014a). Under these circumstances, even habitat restoration is unlikely to enable gorilla reintroduction, as these human populations and activities would create risks for humans as well as released apes.

Reintroduction and Translocation Benefits and Risks

The release of captive animals into natural habitats can pose significant risks to the health and welfare of released and wild ape populations, other wildlife, ecosystems and human populations (IUCN/SSC, 2013). Nevertheless, reintroduction and translocation are the only ways to re-establish species in habitats from which they have been extirpated.

Used with appropriate precaution in suitable circumstances, reintroduction and translocation can thus be valuable tools. They can add genetic diversity, boost population numbers and provide a focus for species and habitat protection (IUCN/SSC, 2013). Another commonly recognized conservation value of release projects is an increased presence of both enforcement authorities (rangers or ecoguards) and wildlife monitors (including translocation project staff), which deters poaching and other illegal activities at the release site (Humble *et al.* 2011). Released animals can also act as a catalyst for ecosystem conservation (Humble *et al.*, 2011; King, Chamberlan and Courage, 2012).

Nevertheless, reintroduction and translocation can create myriad risks. One is the risk of spreading disease to conspecifics, other wildlife and humans, which can potentially undermine any positive conservation impacts (Beck *et al.*, 2007; Campbell, Cheyne and Rawson, 2015; IUCN/SSC, 2013; Jakob-Hoff *et al.*, 2014; Schaumberg *et al.*, 2012; Unwin *et al.*, 2012). Further, wild populations generally fill suitable habitats to carrying capacity unless conditions prevent their success (Moehrenschrager *et al.*, 2013). As a consequence, captive apes are often released into areas that are already inhabited by conspecifics and where conditions—such as hunting or deforestation—limit the size of wild populations.

Studies of wild chimpanzees and bonobos (*Pan paniscus*) indicate that individuals released into populations of wild conspecifics reduce the reproductive success of wild females (Wrangham, 2013). Other research suggests that male chimpanzees should not be released into wild chimpanzee ranges, as they are likely to be attacked or killed by wild conspecifics. Data from chimpanzee releases in the Republic of Congo, for instance, show that many released males were killed by wild conspecifics (Goossens *et al.*, 2005). For ex-captive female orangutans who have been translocated to habitats with wild orangutans, establishing a home range is extremely difficult because they are ostracized by resident females, who do not recognize them as part of their social network (M. Ancrenaz, personal communication, 2016). Indeed, the social pressure imposed on translocated animals by resident individuals is huge; it generates stressful situations that can be long-lasting and that may explain why many translocations fail (M. Ancrenaz, personal communication, 2016). Superimposing individuals onto viable conspecific populations is thus not sound conservation or welfare strategy, as it can diminish space and resources for wild apes while compromising the welfare of released apes.

Numerous factors determine appropriate reintroduction and translocation candidates, including sex ratios and social groupings among wild conspecifics, behavioral health and socialization, age, temperament, cognition and learning issues, human bonding and human-focused behaviors (Bashaw, Gullot and Gill, 2010; Russon, 2009). Not all individuals who do well in captivity are good release candidates. Once apes are past infancy, human-focused behaviors and human bonding pose serious safety risks and problems for individual welfare and successful release (Campbell *et al.*, 2015; Riedler, Millesi and Pratje, 2010; Russon, Smith and Adams, 2016). Indeed, overly habituated apes are more likely to approach, harass or even attack humans, thereby increasing their own risk of being killed or captured (Macfie and Williamson, 2010; Russon, 2009).

As part of the feasibility assessment required by IUCN guidelines, reintroduction and translocation should be compared with other conservation measures to determine the most effective actions for species and habitat protection under the circumstances (Beck *et al.*, 2007; Campbell *et al.*, 2015; IUCN/SSC, 2013; Wilson *et al.*, 2014). Wilson *et al.* (2014) found reintroduction and translocation to be significantly more costly and labor-intensive than other habitat conservation measures.

Where reintroduction or translocation are feasible options, monitoring of progress and impacts is essential to determine whether a project is achieving measures of conservation success, whether animals are surviving and adapting under differing seasonal conditions and whether breeding success is leading to population viability (Guy, Curnoe and Banks, 2014; Osterberg *et al.*, 2014). Long-term monitoring also enables identification of animals who might need additional support through provisioning or even removal back to a captive setting (Farmer, Jamart and Goossens, 2010; Humle

and Farmer, 2015). Although some reintroductions and translocations are carefully researched, monitored and documented, many are not, and overall there is little transparency regarding issues and outcomes (Guy *et al.*, 2014). Unmonitored projects can overlook ape deaths and harm to wild conspecifics, released apes and humans. Conversely, even among well-monitored projects, some may intentionally avoid reporting on adverse outcomes for fear of losing funding or public trust.

Funders and governments can promote scientific evaluation and rigor in ape reintroductions and translocations by requesting or funding external scientific review of methodologies. Governments can also promote effective reintroduction and translocation efforts by providing administrative support, building law enforcement and monitoring capacity, and enabling habitat protections.

Captive Facility Sector Impact: Benefits and Risks to Ape Conservation and Welfare

Benefits to Ape Conservation and Welfare

The rising acceptance of GFAS verification and accreditation and increasing interest of funders in demonstrated impacts, coupled with the sincere desire of most sanctuaries to improve welfare and address conservation issues affecting apes, provide an environment ripe for positive change. Several sanctuaries are pursuing exemplary welfare standards, good governance and conservation programming that complement sanctuary operations. Some sanctuaries that have historically been run by expatriates have recently handed over leadership to local successors. Others are actively working to find and train local management-level staff. Many sanctuaries do an exceptional job of rescuing and caring for apes, while also providing opportunities for

learning about rehabilitation, care and disease. Sanctuary education and outreach work is generally seen as filling an important role, particularly as sanctuaries are permanent fixtures in local communities.

Furthermore, as holders of rare ape species, range state sanctuaries are uniquely placed to be ambassadors for these species. Many people may never have seen these animals before, and seeing them rescued and in good care in a conservation-related context could make a compelling case for their protection.

Importantly, most of the 56 sanctuaries considered in this chapter participate in some form of anti-poaching patrol or ape tracking. Researchers have found that sensitization, community involvement and the presence of researchers and trackers or rangers can help deter ape poaching (Steinmetz *et al.*, 2014; Sunderland-Groves *et al.*, 2011; Tagg *et al.*, 2015). Deterring poaching by prosecuting poachers is also expected to have a positive impact on ape protection, particularly when coupled with sanctuary care of captive apes. If anti-poaching efforts—such as education, the removal of snares and traps, and anti-poaching or tracking patrols—can decrease capture and deter poachers, there is hope of protecting apes in their natural habitats.

Sixteen African sanctuaries reviewed for this chapter disseminate public information on how their work benefits local communities. Two of them offer micro-credit schemes and ten have alternative livelihood programs, including artisan activities. Some of the sanctuaries provide local communities with services such as education development, medical care and infrastructure, as well as training or technical expertise in areas such as farming and livestock husbandry. Training for sanctuary staff, including in veterinary care, education and community development, has led to significant improvements in the skill levels—and thus the employability—of many staff members.

Challenges to Ape Conservation and Welfare

Standards and Quality of Care and Welfare

The quality of care and welfare in ape sanctuaries ranges from much-lauded accredited or verified facilities, to those that are known to be operating well below PASA or GFAS standards, and even to some that ape experts deem totally unacceptable by any standard. Many facilities have acceptable standards for short-term care but are not suitable for lifetime care for apes.

Issues at sanctuaries that operate below acceptable standards include overcrowding or insufficient suitable space; a lack of behavioral enrichment; and unsuitable social settings, such as solitary housing for social ape species and unsafe facilities from which apes can break out or where they can come into contact with visitors. Several sanctuaries allow some public contact with apes, increasing the risk of disease transmission for both visitors and apes and serious safety risks for humans (Macfie and Williamson, 2010). Further, this approach may perpetuate the concept that apes are suitable as pets.

Few sanctuaries across ape habitat regions have been independently inspected or accredited. Of the 56 sanctuaries considered in this chapter, only 7 (13%) have been inspected and accredited or verified as meeting GFAS standards. This number may understate ape facility engagement with independent inspection, as it does not include sanctuaries that are seeking GFAS verification or accreditation. Yet even when the latter group of sanctuaries is taken into account, it remains clear that an increase in independent inspection and verification of sanctuary standards is needed.

Government accountability in implementing animal welfare and captive care standards could also be improved. Both promulgating and enforcing national laws

on welfare tied to GFAS standards would help to ensure good care and welfare for apes in all types of captive facilities.

Photos Depicting Contact with Apes

Studies by Leighty *et al.* (2015) and Ross *et al.* (2008) demonstrate that photos depicting apes in contact with humans promote the perception that these animals are good pets, and that they are not endangered.

A review of publicly available images on websites, Facebook and Twitter from 22 African ape sanctuaries from 2013 to 2015 shows that 19 sanctuaries (86%) publicly displayed photos of humans in direct contact with (touching) apes. Sixteen sanctuaries (73%) had Facebook photos showing this type of contact with primates. These 16 facilities posted 247 such photos between January 1 2013 and November 25 2015. Written context for these photos, such as explanations of veterinary care or rehabilitation, was present less than 70% of the time (Sherman, Brent and Farmer, 2016).

Photos of people hugging apes without safety gear (masks or gloves) elicited comments such as “Awwhh, I want one! They are so adorable!!” (Sherman *et al.*, 2016). Photos of new infants, particularly very young captive-born infants, being held and fed by humans drew similar responses, such as “I want!” (Sherman *et al.*, 2016).

These photos fuel arguments that sanctuary media messages may reinforce interest in apes as pets. Many sanctuaries have rules prohibiting volunteers and visitors from posting photos of themselves in contact with resident apes. Sanctuaries need to pay equally close attention to social media reactions to sanctuary-posted photos and should scrupulously avoid posting photos of staff interacting with apes in any manner that could create the impression of apes as pets.

Sanctuary Capacity

Breeding is a serious issue in many range state sanctuaries. Some sanctuaries purposefully breed apes, while others have what facility

Photo: Demand for sanctuary space puts significant pressure on facilities—many of which are underfunded, understaffed and operating in difficult settings.

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“Apes born in range state sanctuaries occupy valuable space needed for victims of poaching and habitat destruction.”

managers consider “accidental births.” Captive births were confirmed at ten African ape sanctuaries between 2014 and 2016. Seven of these ten posted about the births on social media—on their websites, Facebook or Twitter—and in some cases used the births to fundraise. A review of social media posts from January 1 2013 to November 25 2015, shows at least 19 births at these seven sanctuaries (Wildlife Impact, 2015). Left unchecked, this level of breeding will overwhelm sanctuaries or at least necessitate significant expenses for facility expansion. Good information on preventing accidental births and technical assistance on contraception are readily available from zoo partners and veterinarians.

There is no conservation argument for the breeding of apes at range state sanctuaries, but there are clear arguments against it. Ape conservation action plans do not recommend captive breeding in range state sanctuaries, except in the context of the reintroduction of agile gibbons (*Hylobates agilis*) and in case of emergency management scenarios for Hainan black-crested gibbons (*Nomascus hainanus*).⁴

Apes born in sanctuaries occupy valuable space needed for victims of poaching and habitat destruction. Models of PASA chimpanzee sanctuary capacity show that even occasional sanctuary births have large impacts over time as they cause the total population and costs to swell (Faust *et al.*, 2011). These effects are of particular concern given the continued influx of confiscated apes and limited facility space. Current sanctuary populations already far exceed numbers that could be released. Similarly, there is no welfare argument for breeding apes in range state sanctuaries, many of which successfully manage non-breeding populations.

Demand for sanctuary space puts significant pressure on facilities—many of which are underfunded, understaffed and operating in difficult settings—to make painful choices. It is an unfortunate reality

that sanctuaries cannot always rescue additional apes without diminishing the welfare of existing residents.

Sanctuaries should clearly define their maximum carrying capacity based on good welfare standards for resident apes, and then develop intake policies designed to maintain those standards. As part of their decision-making process, sanctuaries need a realistic understanding of their options to expand capacity, if any, and information on the capacities of other captive facilities with appropriate standards, ideally within the subspecies habitat region.

In the absence of such alternatives, a policy on euthanasia should be developed, as long as it is legal in the country. Such a policy can be designed to define circumstances under which a sanctuary may make a choice to end suffering and prevent consigning an ape to a poor-quality life. Ending a life is never easy and never without opponents; however, an ape in poorly operated and overcrowded facilities can suffer from increased aggression, increased stress (resulting in lower immunity and increased illness), poor diet and abnormal behavior, while also causing greater physical harm to low-ranking members of the group. Conversely, there can be social and conservation costs to euthanizing otherwise healthy apes, particularly if it perpetuates public perceptions that apes are less valuable alive than dead.

In these difficult circumstances, an important consideration is that apes and other native wildlife are the responsibility of the state, not of sanctuaries. Sanctuaries, together with conservation and welfare groups, need to ensure that governments are aware of the situations driving wild apes to need captive care, and to hold the state responsible for the ultimate outcomes for those apes. Periodic independent inspections and evaluations would also help sanctuaries assess viable options and make evidence-based decisions. Such analyses could be quite useful in helping sanctuaries ensure that

their strategic focus contributes to concrete welfare and conservation objectives.

Intake Policies

Sanctuary intake policies differ primarily in whether they require confiscation and legal action to accept animals. Confiscation can denote anything from legal action and prosecution to a piece of paper saying the animal was confiscated—without consequences for the perpetrator. Some sanctuaries take only confiscated animals, while others accept all apes, regardless of how they were acquired. Some sanctuaries claim they must take every ape delivered by the government. Others have successfully negotiated agreements with governments to require law enforcement procedures as prerequisites for each new intake, or they have protocols to identify solutions for animals they do not have space to accept.

Unless sanctuaries address such intake-related concerns with governments, they may only perpetuate the failure of wildlife law enforcement. While intake issues can grow thorny and divisive in the difficult operating environments of range state sanctuaries—which are often compounded by corruption, as discussed below—they are nonetheless crucially important in defining sanctuary purpose and assessing the impact on ape conservation and welfare.

Community surveys undertaken in the Republic of Congo and Kalimantan, the Indonesian portion of Borneo, demonstrate that public awareness of apes' legally protected status is generally widespread. Surveys found that 90% of respondents in Congo and 73% of respondents in Kalimantan knew that apes were protected under national laws (Cox *et al.*, 2014; Meijaard *et al.*, 2011). In Kalimantan this knowledge was associated with a reduction in the killing of orangutans (Meijaard *et al.*, 2011).

These findings have two key implications for sanctuaries. First, public awareness of apes' protected status and the legal

consequences of hunting or buying apes is critical in addressing poaching and local markets that sell ape meat and apes as pets. Sanctuaries can therefore play a valuable role in raising public awareness through targeted education campaigns.

Second, sanctuaries should generally not accept apes if they have not been legally confiscated or if there is no possibility for legal consequences for buyers or poachers, such as prosecution, fines or incarceration. In the absence of confiscation and legal consequences, buyers are likely to purchase another ape. However, if the person or persons who sold or bought the ape are arrested and sentenced, and the money is recovered, then the law has been enforced and a deterrent message has been sent to poachers, traffickers and buyers. To give the law teeth, the government must publicize the consequences of holding and selling apes and ensure that convicted offenders serve out their full sentences.

Unless their intake policies are tied to legal consequences, sanctuaries may undermine ape conservation efforts by implying that it is acceptable to buy, transport and house apes. Moreover, if they do nothing to promote the enforcement of wildlife legislation in cases where it is clear that government officials are ignoring the law or involved in the illegal ape trade, sanctuaries are essentially allowing the government to flout the law, thereby perpetuating the trade.

Tying the intake of animals to appropriate legal consequences is a protocol that the Eco Activists for Governance and Law Enforcement (EAGLE) Network, a coalition of law enforcement and conservation NGOs in Africa, has long urged sanctuaries to follow. The protocol is also in line with the procedures used by the Humane Society of the United States (HSUS) in rescuing illegally held animals. Prior to undertaking any such rescues, the HSUS works directly with law enforcement to ensure the perpetrators will be held accountable under the law

“To give the laws teeth, governments must publicize the consequences of holding and selling apes and ensure that offenders are convicted and serve out their full sentences.”

and to prevent them from simply acquiring other animals and repeating their transgressions (K. Nienstedt, personal communication, 2016). While an analogous process in developing countries is clearly more challenging, the international community could do more to support governments, sanctuaries and NGOs in their efforts to increase transparency, reduce corruption and improve law enforcement effectiveness. Together, these changes would help to encourage sanctuaries to tie rescues to legal consequences.

Sanctuaries are rarely involved in prosecutorial aspects of wildlife law, but they can play a significant role in supporting enforcement through partnerships and outreach activities, as discussed below. Some sanctuaries are demonstrating good practice by ensuring that every animal they receive has a legal history that can be traced, thereby assisting law enforcement in holding suspects accountable and creating a deterrent for people who are considering wildlife crime.

Government Relations and Law Enforcement: A Path for Improved Transparency, Accountability and Deterrence

Historically, NGOs have carried the burden of supporting welfare-oriented projects such as building and maintaining animal sanctuaries to allow for the disposition and care of illegally held wildlife confiscated by governments. Many sanctuaries and related NGOs have come to accept that government partners are unwilling to make financial contributions to ensure the welfare of confiscated animals, and that they limit their involvement to allowing such facilities to operate within their boundaries. If governments value this capacity for humane care of confiscated wildlife, however, then they themselves should increasingly accept more of the financial burden involved in this costly process. To that end, sanctuaries should be taking stock of their role in the long-term

conservation of apes and drawing up a division of responsibilities and financial commitments among all parties, including governments, in a written agreement.

Sanctuaries may benefit from being more assertive in requesting financial and operational support from government partners. Governments that authorize the establish-



ment of ape sanctuaries have historically neglected to assume these important responsibilities, although this step is ultimately needed to ensure the appropriate placement and long-term humane care of these animals. Moreover, range state governments have largely failed to enforce laws pertaining to illegal activities that support the live

animal trade, resulting in near-total impunity for poachers, wildlife traders and influential individuals who participate in or facilitate the trade in protected species (Lawson and Vines, 2014; TRAFFIC, 2008; WWF and Dalberg, 2012). In this way, governments also fail to establish much-needed deterrents to wildlife crime. At the same time,

Photo: Sanctuaries, government partners and other stakeholders all must take additional action for the confiscation and rescue of apes to contribute to effective enforcement of wildlife legislation and to the maintenance of viable populations of great apes in the wild. © Jabruson 2017 (www.jabruson.photoshelter.com)



governments continue to appeal to the sympathetic nature of sanctuaries. By accepting the long-term financial burden that comes with caring for these animals, these facilities further remove government partners from any sense of responsibility. At the very least, a government's role as a partner in a sanctuary should include the capacity and willingness to ensure appropriate enforcement of wildlife laws.

The long-term financial burden on sanctuaries has become increasingly untenable as they become overcrowded. Moreover, acquiring necessary operational funds is becoming more difficult as the demand for sanctuary space continues to rise and funding sources become increasingly rare or competitive. Only when governments assume more responsibility and are obliged to become more involved will they begin to take a serious leadership role in enforcing national laws pertaining to protected species, as well as managing the operational and financial challenges faced by sanctuaries. This same scenario largely holds true for in situ conservation projects; however, governments have recently begun to assume some of the financial burden of implementing costly conservation activities, including law enforcement. Government partners may not become committed to conservation and welfare activities until they have made a considerable financial investment, which should simultaneously support programs that aim to reduce the number of apes in need of sanctuary care and provide better protection to wild ape populations.

Although it is difficult to gather data on instances of corruption due to their inherently clandestine nature, a wealth of anecdotal evidence suggests that high levels of corruption characterize most incidents through which apes are brought into captivity. In addition, multiple publications have linked poor governance and corruption with increases in illegal wildlife trafficking

(Bennett, 2015; Smith *et al.*, 2015). In some cases, sanctuaries have prioritized animal welfare concerns over adherence to ape protection laws by skirting processes aimed at formally registering intakes and attempting to bring offenders to justice. A typical form of corruption is the willingness of government agents to accept bribes not to arrest perpetrators or, more passively, simply to allow an animal to be released or “dumped” at sanctuaries without legal consequences (especially if the animal belongs to a government official, influential businessperson or other prominent individual).

Indeed, corruption enters the picture long before an ape ever reaches a sanctuary. Infant apes are very recognizable; they are not likely to make their way from a distant forest block to an urban center without attracting the attention of a host of residents and civil servants, including wildlife rangers, police officers, and military and customs officials. It is quite common for traffickers to bribe authorities in order to avoid arrest and to gain free passage to transport an ape. In many cases, apes end up with high-level individuals in the government, the military, business or the expat community. These individuals or companies are often immune to arrest due to their strong connections or because they paid bribes to escape prosecution. Once they begin to see an ape as a long-term financial burden or physical risk, they typically attempt to transfer the animal to a sanctuary. Given their resolute concern for individual apes, the sanctuaries have historically been open to accepting such burdens, with few questions asked. If this cycle of impunity, corruption and crime is to be addressed, governments, sanctuaries and conservation NGOs must no longer turn a blind eye.

Prosecution, sentencing and effective deterrence against future crime are fundamental to successful law enforcement. Deterrence is in place if an established

punishment for committing a crime is sufficient to discourage a potential offender from breaking the law. In corrupt legal systems, the deterrent effects are rarely sufficient, such that the motivation to break the law to obtain future benefits remains intact (Bennett, 2015). Prosecution and sentencing for wildlife crimes is still nascent in some ape range states, and even when perpetrators are convicted and incarcerated, they may simply pay bribes to be liberated (Martini, 2013; WWF and TRAFFIC, 2015; Wyatt and Ngoc Cao, 2015). In some cases, judicial personnel need training in the prosecution of crimes and the development of sentencing that will deter crime. To be effective, deterrents must also reflect national contexts. Punishments that would deter Indonesian villagers who might kill orangutans that raid their crops may not be effective to forestall wild meat traffickers in Africa. Prosecutors should establish deterrents that can be monitored and evaluated for effectiveness in their jurisdictional context. Those who break wildlife laws—be it companies, paid or traditional hunters, or pet traders—need to be prosecuted consistently, and their cases should be publicized to ensure deterrence.

By securing an appropriate and humane placement for animals confiscated by law enforcement officials, sanctuaries can play a vital role in contributing to in situ field conservation efforts. Conversely, if facilities accept animals from law enforcement officials based solely on a legal document that authorizes the transfer but lacks any information on the prosecution or sentencing of those responsible, they do little to deter future confiscations and may even serve to encourage the trade.

If sanctuaries are to play an important role in species conservation efforts, they must either be directly engaged in amplifying deterrence against future wildlife crime, or in assisting the government and other stakeholders in doing so. This does not imply

that sanctuaries should undertake this work alone. Rather, it is incumbent upon sanctuaries to accept protected wildlife on the condition of enforcement follow-up, and to ensure that such follow-up is indeed taking place. To that end, they may decide to work more closely with government partners, NGOs that specialize in law enforcement efforts or local and international NGOs that support wildlife conservation efforts.

Many sanctuaries conduct educational outreach programs aimed primarily at younger audiences in order to discourage them from considering the illegal hunting of and trade in wildlife as a future occupation or source of additional income. Increased collaboration with stakeholders that are more closely linked to forests where apes are poached—such as conservation NGOs, government partners, development workers and industry—could ensure that these educational activities are delivered to targeted audiences for a more positive impact. Many sanctuaries are located near urban centers, which are not typically areas in which poachers reside. However, urban areas tend to be home to wealthier individuals who finance the trade; these people are important targets who may be responsive to information about wildlife laws and related court prosecutions. Consequently, it may be worthwhile to enhance collaboration with conservationists and researchers who are close to the rural origins and the urban centers of the illegal trade chain.

Equally important is the ability of sanctuaries, conservation NGOs and all others engaged in conservation education and awareness raising to monitor the extent to which these activities help to achieve conservation objectives. To date, despite millions of dollars spent on these seemingly important themes, data that demonstrate the value of conservation education remain surprisingly scarce.

“If sanctuaries are to play an important role in species conservation efforts, they must either be directly engaged in amplifying deterrence against future wildlife crime, or in assisting the government and other stakeholders in doing so.”

“Sanctuaries could further advance ape conservation by becoming more active partners in broader conservation action and planning efforts.”

It is challenging to demonstrate that any single program or campaign has influenced behavior in a way that has led to a decrease in the illegal hunting of apes, or in the destruction of ape habitat and habitat connectivity. Pre- and post-education campaign surveys can reveal increases in awareness, but they do not prove changes in behavior (Carleton-Hug and Hug, 2010). Survey responses can also indicate that people are consciously keeping quiet about illegal or unpleasant activities, or that they have learned the “right” answers to survey questions (Nuno and St John, 2015; L. Pintea, personal communication, 2015).

To demonstrate that a change in behavior has led to a decrease in the demand for apes, data on the behavior of people who buy and sell wild meat and apes are needed. Sanctuaries need to show that they have reached appropriate demographic groups—those comprising individuals who are most likely to kill, sell or buy apes—and that these audiences have not only gained relevant knowledge, but also modified the behaviors that led to ape poaching. To halt ape poaching behaviors, government partners must also actively deter illegal hunting by conducting effective anti-poaching patrols, ensuring that wildlife laws are properly enforced, and visibly prosecuting and sentencing offenders.

In summary, sanctuaries, government partners and other stakeholders all must take additional action for the confiscation and rescue of apes to contribute to effective enforcement of wildlife legislation and to the maintenance of viable populations of great apes in the wild. These steps would require that:

- sanctuaries do not accept apes that have been illegally held unless there is official documentation demonstrating that the government agency responsible for the confiscation has conducted a thorough

investigation of the illegal act and has arrested, is actively seeking to arrest, or is planning to prosecute and sentence suspected individuals;

- sanctuary staff members request periodic meetings with the appropriate government enforcement agency to confirm that adequate follow-up of all ongoing cases with pending judgments has occurred or is in process;
- sanctuaries work in partnership with authorities and conservation organizations that pursue legal outcomes of wildlife cases to ensure that adequate sentencing guidelines exist and that sentences are indeed served by convicted perpetrators;
- governments enforce legal consequences consistently for all perpetrators of wildlife crime;
- sanctuaries periodically share critical data and intelligence information with partners that are strategically placed to help tackle the problem at the geographic origin of the confiscations, and to facilitate coordinated intervention efforts to prevent future poaching and trafficking incidents; and that
- sanctuaries regularly disseminate collected data to strategic conservation and advocacy partners and to media outlets, or to partners that specialize in public communications designed to deter audiences from involvement in the illegal ape trade.

Habitat Protection and Conservation Planning

Sanctuaries could further advance ape conservation by becoming more active partners in broader conservation action and planning efforts. At present, many sanctuaries do not work closely with conservation organizations, field researchers, businesses or governments on management planning for

ape habitats (Wildlife Impact, 2016). These plans determine the management of lands that are the source of many sanctuary apes. Significant populations of some apes—such as Bornean orangutans, western lowland gorillas (*Gorilla gorilla gorilla*) and central chimpanzees (*Pan troglodytes troglodytes*)—are mainly located outside of protected areas (Ancrenaz *et al.*, 2015b; IUCN, 2014d). The importance of working closely with conservation NGOs, field researchers, businesses and governments to engage the agriculture and logging industries and traditional land owners within ape habitats thus cannot be overstated.

Further, sanctuaries and NGOs should press governments to ensure that national laws provide adequate protections for critical ape habitats. It is legal in some range states to destroy ape habitats, and in some cases conservation laws protecting apes may be overridden or ignored in favor of commercial concessions (Rainer and Lanjouw, 2015; Tata *et al.*, 2014; E. Meijaard, personal communication, 2017). Sanctuaries that do not have the capacity or time to focus on these broader conservation issues could collaborate with or help promote the work of conservation partners to deliver in situ projects aimed at ensuring the long-term survival of wild apes in their natural habitats.

One particular area of concern regarding habitat conservation relates to how sanctuaries and private companies address wild-to-wild Asian ape translocations. In Borneo, some translocations have actually led to additional forest clearing (M. Ancrenaz, personal communication, 2016). Companies have been known to ask sanctuaries or governments to remove what they call “problem” orangutans living in small patches of forest in mosaic landscapes. If sanctuaries agree to remove the orangutans, industry actors tend to clear the patches because they no longer contain species of high conservation value (M. Ancrenaz, personal communication, 2016). In these situations, it is not

known whether the individual orangutans can adapt and survive after being translocated.

Scientists report that companies feel they have done a good thing and the issue is resolved once they contact a sanctuary to remove the “problem” ape (S. Cheyne, personal communication, 2016). While companies do take a positive step by notifying sanctuaries about apes, they typically lack awareness of the cost and long-term requirements of a translocated ape. Moreover, companies rarely contribute to translocation, post-release monitoring or long-term care costs. Many translocations simply displace a problem without addressing the reasons apes need to be translocated in the first place, such as poor land management by companies or plantation managers (S. Cheyne, personal communication, 2016).

Allowing industry actors to clear-cut forest patches within the landscape makes the overall landscape less and less suitable for orangutans and other wildlife. Research shows that where hunting is not an issue, orangutans can use oil palm and sustainably logged landscapes, but to do so they need corridors and forest patches (Ancrenaz *et al.*, 2015b; Wich *et al.*, 2012b). Once these small forest “islands” are removed, animals cannot use the landscape anymore and the population becomes extremely fragmented and not viable in the long term (M. Ancrenaz, personal communication, 2016). Sanctuaries, industry and governments need to collaborate on solutions that incorporate established oil palm plantations and logging concessions while also accommodating apes.

Efforts by sanctuaries, NGOs and industry are needed to promote sustainable management of these mosaic landscapes. Instead of removing individual animals at the expense of habitat for local wild apes, sanctuaries should encourage industries, government, and other stakeholders to focus on saving natural habitat—whatever size the patches—as a way to help support ape populations.

“Efforts by sanctuaries, NGOs and industry are needed to promote sustainable management of mosaic landscapes. Once small forest “islands” are removed, animals cannot use the landscape anymore.”



Photo: Efforts by sanctuaries, NGOs and industry are needed to promote sustainable management of mosaic landscapes—whatever size the patches. © HUTAN–Kinabatangan Orang-utan Conservation Project/Marc Ancrenaz

Sustainability and Funding

Relatively few grant programs support range state sanctuaries. Many sanctuaries struggle with funding shortfalls, particularly for basic operations (administration and salaries), animal care and facility needs. Funders increasingly expect grantees to provide empirical evidence to demonstrate whether and how they are impacting long-term survival of the species in the wild. This presents a particular hurdle for sanctuary applicants, who rarely collect the type

of data required to answer this question (Wildlife Impact, 2015).

Another issue is that many sanctuaries lack succession planning and are thus exposed to further sustainability risks. Since building management-level capacity of local staff to sustain sanctuaries in the long term is difficult and time-consuming, it is often overlooked. Ape sanctuaries, as well as many smaller conservation organizations, rarely undertake professionally led strategic planning, empirical monitoring of outcomes



or independent evaluation, even though these processes are essential to identifying successful actions and addressing shortfalls (Farmer, 2012; Ferraro and Pattanayak, 2006; MEA, 2005).

Transparency about governance and outcomes is likewise uncommon. Indeed, sanctuaries rarely document or share lessons learned from failure or near collapse of facilities with other actors in the sector, thus depriving the community of valuable insight and the chance to avoid known pit-

falls. Collapse of peer facilities can create enormous pressure on other national or regional sanctuaries to find space for the failing facility's animals, which could, in turn, overwhelm these sanctuaries' capacity to accept orphans.

Sanctuaries that struggle with a lack of sustainability or risk complete failure are not likely to be able to address the root problems of their instability without changing their management structures and activities. Sanctuaries can increase transparency

“Explosive human population growth, which is predicted in several African range states and in Indonesia, will exacerbate threats to wild apes and increase the need for confiscations of poached and trafficked apes.”

and share knowledge through captive facility alliances; they can also obtain fresh perspectives from outside experts, professionally led strategic planning, monitoring and independent evaluation. These processes can help sanctuaries to identify problems and potential solutions, focus efforts on project goals, inform good governance and sustainability, provide empirical evidence of impacts and guide the application of best practices. It is worth noting that planning, monitoring and evaluation require a continuous commitment, which can be difficult for sanctuaries in terms of time, funding and expertise. Funder recognition and support of these needs is thus important to their uptake, as is knowledge sharing and guidance from colleagues who have already gone through these processes.

Conclusion

Ape sanctuaries can be found in most ape range states in Asia, and in just under half of African range states. Collaborations have enabled information sharing and training among sanctuaries and with outside experts; they have also played a role in the evolution of these facilities into organizations with broad missions that encompass welfare, conservation and community development. Sanctuaries are currently under tremendous pressure to provide care for the many apes rescued from the wild meat trade, habitat destruction, human–wildlife conflict and the pet trade. Explosive human population growth, which is predicted in several African range states and in Indonesia, will exacerbate threats to wild apes and increase the need for confiscations of poached and trafficked apes.

Moreover, international attention on wildlife legislation is having a positive effect on promoting the enforcement of laws that forbid the capture of and trade in wild animals. With increased confiscations of apes, overcrowding and pressures on sanctuaries

are likely to build. Sanctuaries, governments, donors, conservation NGOs and other partners need to collaborate to identify sustainable ways to ensure high standards of captive care for confiscated wildlife while simultaneously improving the protection of wild apes and their habitats.

The reintroduction or translocation of apes is often touted as a solution to captive facility overcrowding and ape welfare needs. In fact, they are high-risk options that can endanger the conservation of wild apes and other wildlife, as well as the welfare of both the wild ape populations and the released apes. The ongoing destruction of forests renders both options increasingly difficult, as little suitable habitat remains that is not already home to wild apes. Feasibility studies, comparisons of available conservation tools and a good understanding of the local ecological, political and community landscape can help sanctuaries determine whether reintroduction or translocation is appropriate, or whether other conservation tools would cost less and save more lives. Sanctuary accreditation organizations, independent evaluators and donors can play an important role in creating accountability on adherence to IUCN reintroduction and translocation guidelines and best practices. Granting foundations in particular can drive positive change by suggesting, or requiring, an independent scientific review of reintroduction methodologies or asking to see feedback from such efforts.

A significant number of apes currently in sanctuaries or in need of rescue will not be releasable and are thus likely to need lifetime captive care. For many sanctuaries, securing operational funding is a significant hurdle, as are recruiting skilled staff and ensuring that facility space can provide high welfare standards for increasing numbers of residents. As confiscation numbers increase, these issues will be compounded. It is thus ever more critical that sanctuaries ensure that their rescue and conservation

activities are carefully coordinated, targeted and evaluated to facilitate law enforcement and to demonstrate progress in addressing the root causes driving apes to need sanctuary.

Sanctuaries that fail to hold authorities to account on the enforcement of wildlife law may further discourage effective enforcement, potentially exacerbating the illegal ape trade. Conversely, improved engagement with governments on confiscation and conservation planning and management activities, targeted education programs and partnerships with conservation NGOs offer diverse opportunities for sanctuaries to make a positive impact on these issues.

Many facilities have already taken the lead on these efforts. They adhere to transparent standards and accreditation, including non-breeding and no visitor–animal contact policies, demonstrated commitment to addressing the root causes of the need for sanctuary, the application of IUCN guidelines on reintroduction and translocation, and a willingness to undertake monitoring and independent evaluation. In so doing, they provide a pathway for all sanctuaries to demonstrate their successes, a critical step in attracting new funding and the support they require to improve ape welfare and conservation.

II. The Status of Captive Apes: A Statistical Update

The regulatory landscape continues to shift in a number of ways that impact how apes may be kept or used in captivity. Some of these changes have followed from legislation, petitions and other regulatory mechanisms, or activism (Durham, 2015). Other changes have stemmed from law enforcement or lawsuits. In Argentina, for example, a judge decreed that Cecilia, a chimpanzee living in isolation at a zoo, must be transferred to a specialized sanctuary in Brazil as a matter

of protecting her rights (Tello, 2016). By contrast, the enforcement of the U.S. Endangered Species Act was the key issue in a lawsuit against an unaccredited Alabama zoo that held a chimpanzee named Joe (USFWS, 2015). After the case was filed, Joe was moved to the private sanctuary Save the Chimps, in Florida, and the U.S. authorities subsequently ordered the zoo to close (Brulliard, 2016; Sharp, 2016).

Captive Apes in the United States, Japan and Europe

While changes in the law and in law enforcement are important, the benefits for apes are not always delivered swiftly (Durham and Phillipson, 2014, p. 300). In the United States, growing restrictions on breeding, invasive biomedical testing, use in entertainment, private ownership and trade have led to a drop in the number of chimpanzees used in various commercial endeavors. While these changes have been accompanied by an increase in the number in sanctuaries, however, controversy surrounds delays in the transfer of chimpanzees to these facilities (Fears, 2016; see Table 8.3 and Figure 8.1). Given the age and health status of many chimpanzees used commercially in laboratories and entertainment, such delays can mean that some individuals will die before they reach a sanctuary or shortly after arrival. The ethical imperative when it comes to regulations, actions and practices designed to enhance apes' quality of life is to remove barriers and disincentives to change so that the apes themselves benefit.

The size and operations of chimpanzee sanctuaries in the United States vary considerably. Some care for just a few chimpanzees alongside hundreds of other animals ranging from chickens to tigers (Fund for Animals, n.d.); others specialize in chimpanzees, holding anywhere from seven to more than 250 (see Table 8.4). As of October

“The ethical imperative when it comes to regulations, actions and practices designed to enhance apes' quality of life is to remove barriers and disincentives to change so that the apes themselves benefit.”

TABLE 8.3**Number of Chimpanzees in Different Forms of Captivity in the United States as of October 2016**

Captivity type	2011 ^a	2014 ^b	2016 ^c	% change 2011–16
Biomedical labs	962	794	658	-32
GFAS sanctuaries	522	525	556	7
Zoo accredited by the Association of Zoos and Aquariums (AZA)	261	258	259	-1
Exhibition*	106	196	111	5
Dealer or pet owner	60	52	37	-38
Entertainment	20	18	13	-35
Total	1,931	1,843	1,634	-15

Notes: * Exhibition comprises non-AZA zoos and other facilities that may or may not be open to the public. The category includes apes in sanctuaries that were not accredited by GFAS or members of the North American Primate Sanctuary Alliance.

Data sources: (a) Durham and Phillipson (2014); (b) Durham (2015); (c) ChimpCARE (n.d.)

2016, Chimp Haven, the sanctuary for federally owned chimpanzees, and Save the Chimps accounted for 76.4% of chimpanzees in accredited sanctuaries; the remaining eight sanctuaries were housing 141 individuals (23.6%). A new facility called Project Chimps opened in 2016 and had nine chimpanzees in residence by October of that year (Baeckler Davis, 2016). While it was not yet accredited, the organization

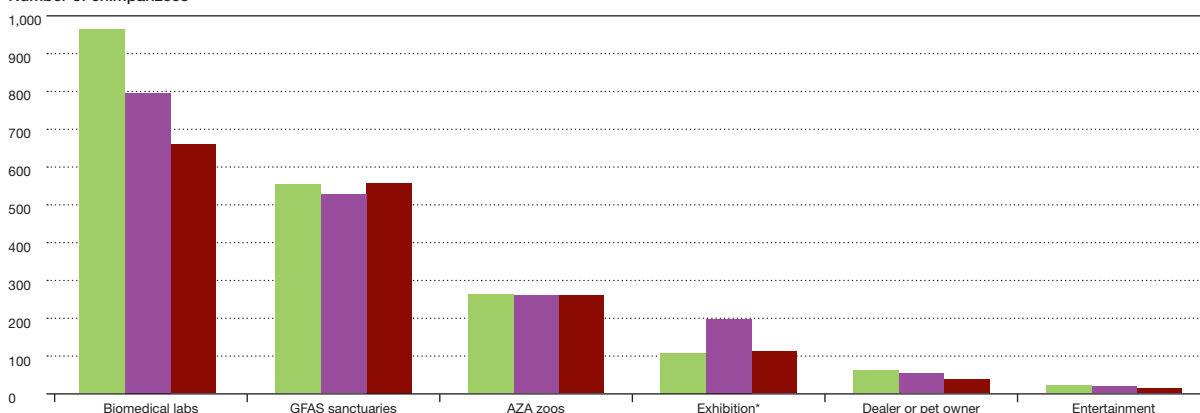
stated intentions to expand over a number of years to house more chimpanzees from a laboratory that is phasing out its operation (Milman, 2016).

In earlier volumes of *State of the Apes*, data extracted from U.S. government inspection reports were analyzed to determine (1) the number of apes in different forms of captivity, and (2) risks to ape welfare associated with violations of the Animal Welfare

FIGURE 8.1**Number of Chimpanzees in Different Forms of Captivity in the United States as of October 2016**

Key: ■ 2011 ■ 2014 ■ 2016

Number of chimpanzees



Notes: Exhibition comprises non-AZA zoos and other facilities that may or may not be open to the public. The category includes apes in sanctuaries that were not accredited by GFAS or members of the North American Primate Sanctuary Alliance.

Data sources: 2011: Durham and Phillipson (2014); 2014: Durham (2015); 2016: ChimpCARE (n.d.)

TABLE 8.4**Number of Chimpanzees in Selected U.S. Sanctuaries, October 2016**

Sanctuary name	Number of apes	% of total
Center for Great Apes	28	4.7
Chimp Haven	204	34.2
Chimpanzee Sanctuary Northwest	7	1.2
Chimps Inc.	7	1.2
Cleveland Amory Black Beauty Ranch	2	0.3
Primarily Primates	38	6.4
Primate Rescue Center	9	1.5
Project Chimps	9	1.5
Save the Chimps	252	42.2
Wildlife Waystation	41	6.9
Total	597	100.0

Data source: ChimpCARE (n.d.)

Act (Durham and Phillipson, 2014). In 2017, however, the U.S. Department of Agriculture removed the taxon field from database search options and stopped providing animal counts in its search results; as a result, it was not possible to update key information on captive apes in the United States for this volume. Subsequently, the agency purged even more data, including information about violations and enforcement actions under the Animal Welfare Act, a move that spurred broad criticism and legal action (Brulliard, 2017c; Wadman, 2017b; see Box 8.3). The fact that U.S. government authorities are no longer making certain data available online raises concerns about transparency and accountability.

In contrast to the recent changes in the United States, Japan has a program of full transparency whereby the name, age and location of every ape in the country is openly reported through the Great Ape Information

Network (GAIN, n.d.). Current ape figures for Japan are shown in Table 8.5.

Given that significant chunks of U.S. data have been made inaccessible, this update provides only figures for chimpanzees and other apes reported in captive breeding programs of the Species Survival Plans (SSPs) of the U.S. Association of Zoos and Aquariums. As shown in Figure 8.2, the numbers for most ape taxa in captivity in the United States have not changed dramatically since 2012, the year covered in the previous volume of *State of the Apes* (Durham, 2015). Data for gibbons exhibit a more conspicuous change:

BOX 8.3**Access Denied: The Disappearance of U.S. Animal Welfare Data**

In early 2017, the federal agency that oversees the U.S. Animal Welfare Act (AWA), the U.S. Department of Agriculture, abruptly removed public access to online data and official AWA compliance documents (Wadman, 2017b). The agency terminated access to the searchable database and electronic annual reports; it also cut access to inspection reports, which provide details on inspections that find full compliance, new and repeated instances of non-compliance and associated terms of the agency's citations, such as the period allowed for correction (Daly and Bale, 2017).

A number of stakeholders—from animal rights organizations and industry organizations for zoos and laboratories, to members of Congress—expressed concerns about the overall impact for transparency and public perception (Wadman, 2017a). While the agency restored a small number of the deleted records, lawsuits under the Freedom of Information Act (FOIA) and Administrative Procedures Act are pending (Wadman 2017a, 2017b). There is no clear resolution in sight and new concerns continued to surface as recently as August 2017 (Brulliard, 2017a).

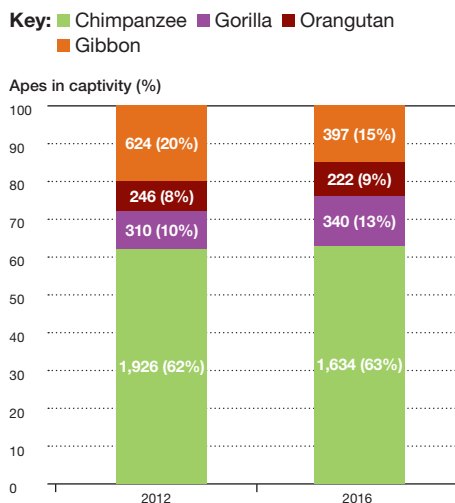
Although people may still file FOIA requests for records, responses are notoriously slow and the government may withhold or redact information, which can involve blacking out anywhere from a few characters (such as a name or dollar amount) to full pages (Winders, 2017). An attorney involved with a suit recently received nearly 1,800 pages that were entirely blacked out (Abel, 2017; Winders, 2017). Advocates for transparency have made efforts to fill the gap by posting records from archives on other websites (Chan, 2017).

As noted in this chapter, the number, species, locations and names of licensees who hold apes in captivity are no longer in the public database; such records were used in prior volumes of *State of the Apes* and were publicly available for several years prior (Brulliard, 2017a, 2017b). The impact on the figures provided in this volume are most significant for small apes, as they are more likely to be privately owned as household pets, or in private menageries and unaccredited roadside zoos.

numbers appear to have dropped from 624 to a significantly lower range of 374–97 (Gibbon SSP, unpublished data, 2016; Species360, 2016). However, while differences in taxonomy and species coverage in the cited sources may account for some of

FIGURE 8.2

Apes in Captivity in the United States, by Taxon, 2012 and 2016



Note: Gibbon figures include all gibbons and siamangs; chimpanzee figures include bonobos.

Data sources: Center for Great Apes (n.d.); ChimpCARE (n.d.); Durham (2015, Figure 8.3); Durham and Phillipson (2014, Table 10.6); Gibbon SSP, unpublished data (2016); Gorilla SSP (n.d.); Orangutan SSP (n.d.); Species360 (2016)

TABLE 8.5

Number of Apes in Captivity and Number of Facilities Housing Apes in Japan, October 2016

Taxon	Number of apes	Number of facilities
Bonobos	6	1
Chimpanzees	317	50
Gorillas	20	7
Orangutans	49	21
Gibbons	181	43
Total	573	64*

Note: * Some facilities hold more than one type of ape.

Data source: GAIN (n.d.)

the disparity, the drop largely reflects the lack of “private ownership” data for pets, roadside zoos and entertainment. This information was available on government databases at the time of the previous review, but that is no longer the case (see Box 8.3).

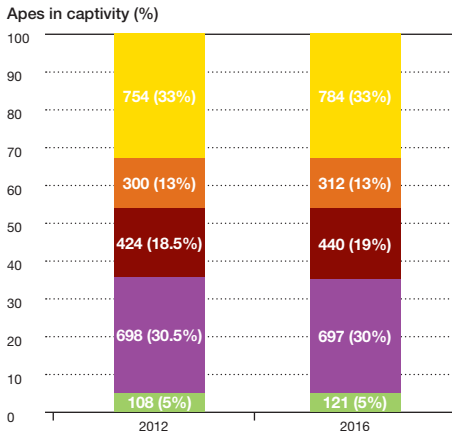
While the quality and coverage of information available about apes and their welfare remain of concern for specific forms of captivity and certain jurisdictions, steps are being made towards improving standards and practice. In 2015, for instance, the European Commission released a good practices document for zoo compliance (European Commission, 2015). In countries of the European Union, the vast majority of apes in captivity are found in zoos, subject to regulation under Directive 1999/22/EC (Council of the European Union, 1999).

The number of apes in European zoos is significant when compared to the U.S. (see above), South American (33 apes) and Australian figures (158 apes) (Species360, 2016). Figure 8.3 shows numbers and the proportion of apes in each group in European zoos. In total, the European data set contains information on 2,354 apes in 215 member institutions, whose holdings range from 1 to 65 apes per site. Gibbons were the most common taxon in the sample, followed by chimpanzees, gorillas, orangutans and bonobos. The number of solitary apes in the sample was small: 18 apes, or less than 1% of the total. Given their social needs and capabilities, all apes in captivity should be part of groups of compatible individuals.

A small, slowly declining number of apes and other primates are still used in circuses or other unsuitable settings in Europe, although Italy, Norway and Scotland are set to consider or implement bans (Banks, 2016; Born Free Foundation, 2016a, 2016b; Tyson, Draper and Turner, 2016). Other countries have opted for “white lists” of species that are approved for private ownership; these lists do not include apes, meaning that private individuals or companies

FIGURE 8.3**Apes in Selected European Zoos, by Taxon, 2012 and 2016**

Key: ■ Bonobo ■ Chimpanzee ■ Gorilla
■ Orangutan ■ Gibbon



Note: Figures are drawn from aggregate data presented in species-holding reports submitted to the International Species Information System, which was rebranded as Species360 in 2016. Some figures may reflect holdings from prior years.

Data sources: Durham (2015, Figure 8.1); Species360 (2016)

cannot legally own them (Durham and Phillipson, 2014).

Better science has also been a key to positive change. In response to data that revealed a significant proportion of hybrids (“generic” chimpanzees) in its captive breeding program, the European Association of Zoos and Aquaria (EAZA) decided to focus its ongoing efforts on the western and central subspecies (*Pan troglodytes verus* and *Pan t. troglodytes*), while instituting a breeding moratorium for other chimpanzees, including hybrids (Carlsen and de Jongh, 2015; Hvilsom *et al.*, 2013). Despite such progress, a number of challenges remain, including with respect to international cooperation on priorities and good practices for the care and welfare of apes in captivity.

The need for global cooperation is particularly apparent given how regulations and actions in one country or jurisdiction can have unexpected implications in another. A case in point involves the U.S. Fish and

Wildlife Service, which, following a regulatory decision by the U.S. National Institutes of Health to retire chimpanzees from medical labs, authorized the transfer of eight generic chimpanzees from the Yerkes National Primate Research Center in the United States to an unaccredited zoo in the United Kingdom, Wingham Wildlife Park. The agency appears to have granted the permit at least in part based on Yerkes’ pledge to make a donation to initiate a new project led by a British charity in Uganda, rather than any potential enhancement of the species through the transfer itself, as would be expected under the U.S. Endangered Species Act (Gorman, 2016). A number of organizations—including the United Nations Great Apes Survival Partnership and the Wildlife Conservation Society—had previously declined the donation offer from Yerkes (Bale, 2016).

A range of global stakeholders opposed the transfer during the protracted permitting process (Gorman, 2015b, 2016). The Pan African Sanctuary Alliance cited concerns regarding a precedent that would make fighting the commercial trade in apes even more difficult, especially with respect to illegal markets for infant apes (PASA, 2016b). The EAZA noted challenges related to zoo and sanctuary capacity in Europe, stating: “There are still many chimpanzees in Europe that need outplacement and not enough good places to put them” (Carlsen and de Jongh, 2015). A lawsuit to block the transfer eventually failed and seven chimpanzees (the eighth had died in the interim) were cleared for export to Wingham Wildlife Park in September 2016 (Gorman, 2016). As this case highlights, stakeholders have not yet reached consensus on priorities or on what constitutes good practice in the management of captive apes. Better international cooperation and articulation of scientifically and ethically sound practices would help to close regulatory loopholes, reduce risk and accelerate progress towards global protection.

Captive Apes in Range States and Surrounding Regions

Updated figures for sanctuaries in and near ape range states are presented in Tables 8.6 and 8.7. While figures for chimpanzees remained relatively stable overall, there were increases for both bonobos and gorillas relative to 2011 figures reported in the first volume of *State of the Apes* (Durham and Phillipson, 2014, tables 10.7, 10.8).

Another change is the inclusion of a Liberian facility that was recently reclassi-

fied as a sanctuary. From 1976 until 2007, it had served as a research laboratory for the New York Blood Center, carrying out invasive biomedical experiments on chimpanzees. As mentioned above, the Blood Center withdrew funding for the chimpanzee colony in 2015; the decision triggered public outcry for their care and the launch of an intensive fundraising effort (Gorman, 2015a). The fate of the surviving chimpanzees in Liberia has since improved, particularly now that the sanctuary is taking shape and the NGO Liberia Chimpanzee Rescue has been

TABLE 8.6

Number of Apes in African Sanctuaries, by Taxon and Country, 2011 vs. 2015

Country	Number of sanctuaries	Bonobos			Chimpanzees			Gorillas		
		2011	2015	% change	2011	2015	% change	2011	2015	% change
Cameroon	4				244	245	0	33	36	9
DRC*	6	55	72	31	85	104	22	30	18	-40
Gabon	3				20	20	0	9	45	400
Gambia	1				77	106	38			
Guinea	1				38	49	29			
Ivory Coast	1				n/a	1				
Kenya	1				44	39	-11			
Liberia	1				n/a	63				
Nigeria	1				28	30	7			
Republic of Congo	3				156	145	-7	5	28	460
Rwanda*	1				0	0	0	6	0	-100
Sierra Leone	1				101	75	-26			
South Africa	1				33	13	-61			
Uganda	1				45	48	7			
Zambia	1				120	126	5			
Total	27	55	72	31	1,071	1,065	-1	83	127	53

Note: Figures account for total sanctuary population inclusive of births, deaths, transfers and new arrivals. The dark shaded rows are not range states. * Some 2011 figures for DRC and Rwanda include counts from jointly ascribed transboundary operations. For details, see Durham and Phillipson (2014).

Data sources: Durham and Phillipson (2014); PASA (2015); Wanshel (2016)

launched to ensure their well-being (Palm, 2015). Another chimpanzee, the lone survivor of a group that the Blood Center reportedly abandoned on an island off the Ivory Coast in the early 1980s, is now receiving care funded by an organization, which is also attempting to secure international transfer since placement with Chimfunshi sanctuary in Zambia was denied in 2016 (Wanshel, 2016; T. Calvi, personal communication, 2016).

African zoos also hold apes, although far fewer than sanctuaries; 59 apes were reported for zoos on the continent: 33 chimpanzees, 5 gorillas, 20 gibbons and 1 orangutan (Species360, 2016). Sanctuaries and rescue centers thus account for more than 95.5% of all apes reported to be in captivity within Africa.

Range state sanctuaries in Africa have received a slow but steady trickle of new residents through rescue; in some cases, they have transferred or consolidated apes among themselves. In contrast, Asian sanctuaries have continued to experience a staggering demand for care. A recent analysis of data on great apes seized between 2005 and 2016 revealed that 67% of known cases were orangutans (GRASP, 2016).

The continuing challenges that face orangutan rescue centers are illustrated in the first volume of this series, in a case study on the Borneo Orangutan Survival Foundation (BOSF), which at that time had approximately 820 orangutans in its care (Durham and Phillipson, 2014, p. 303). Given that Indonesia's government aims to release all healthy orangutans, BOSF efforts have continued to focus on rehabilitation (Indonesia MoF, 2009). Since 2012, BOSF has reintroduced 234 orangutans—39 of them between January and November 2016; the organization was aiming to release another 250 by the end of 2017 (N. Hermanu, personal communication, 2016). At this writing, 667 orangutans were at BOSF facilities: 471 at Nyaru

Menteng and 196 at Samboja Lestari. About 150 of these apes were not in reintroduction training because of their health. Of the remainder, 114 were on pre-release islands and more than 400 had been deemed eligible for release—that is, healthy (N. Hermanu, personal communication, 2016).

In contrast, the GFAS-accredited sanctuary IAR Ketapang saw an increase in its orangutan numbers in 2016. The team released 18 orangutans that year, yet 28 were taken in, resulting in a total of 106 resident orangutans (K. Sánchez, personal communication, 2017). A similar pattern of growth was apparent for the gibbon- and siamang-focused sanctuary Kalaweit, which was featured in the second volume of *State of the Apes* (Durham, 2015). In 2014, Kalaweit reported that it had rescued 16 apes over the prior year, and that the number of residents had thus grown by 6%, to 254 (Durham, 2015, pp. 237–9). By August 2016, the apes in residence had increased to 293—a rise of 15%—not counting apes that had been released since 2014 (Kalaweit France, 2016).

As rescues and successful law enforcement efforts continue, the obligations associated with new arrivals are offsetting reintroduction efforts of Asian sanctuaries such as BOSF, IAR Ketapang and Kalaweit. Reintroduction is fraught with a series of complex challenges, as discussed above. Sanctuaries must juggle priorities such as field staffing, the garnering of representation at international stakeholder meetings and participation in land use planning, all while ensuring the health and welfare of apes in captivity and in their natural habitats. Table 8.7 lists the number of orangutans and gibbons in residence at sanctuaries and rescue centers in Asia in 2016.

In Asia, much like in Europe, a substantial proportion of captive apes resides in zoos. Excluding the data presented for Japan in Table 8.5, zoos that use Species360

TABLE 8.7**Number of Orangutans and Gibbons in Asian Sanctuaries, by Country, 2016**

Country	Orangutans	Gibbons
Cambodia		77
Indonesia	1,147	293
Malaysia	98	
Thailand	2	229
Viet Nam		45
Total	1,247	644

Notes: Figures may include pre-2016 holdings. Median used in instances where a range was reported. Figures account for total sanctuary population inclusive of births, deaths and new arrivals from rescue or transfer.

Data sources: Durham (2015); Highland Farm (n.d.); Kalaweit France (2016); OFI (n.d.); Orangutan Appeal UK (n.d.); Species360 (2016); personal communication: Gibbon Rehabilitation Project (2017); N. Hermanu (2016); M. Kenyon (2016); Orangutan Project (2017); E. Pollard (2016); K. Sánchez (2017)

for voluntary reporting housed 24 gorillas, 344 gibbons, approximately 200 chimpanzees and 130 orangutans (Species360, 2016).

Conclusion

Around the globe, thousands of apes are illegally hunted, traded and exploited for private or commercial ends. We may not know precisely what percentage of these apes are seized or found and then placed in captive care, but there is growing recognition that the sanctuaries that take them in face significant challenges and that these outcomes are insufficiently tracked at both the national and international levels (D'Cruze and Macdonald, 2016).

As states develop stronger legal and regulatory frameworks for ape protection, and as care practitioners continue to enhance their standards and capacity, the opportunities to reduce the harm and improve the quality of life for captive apes are certain to increase. Together with accredited zoos, the sanctuaries that provide care for rescued apes have an important role to play in driving these practices forward, not least by joining forces with strong partners.

If care is to be maintained and improved, ensuring that these facilities have resources and are recognized as essential stakeholders in policymaking and scientific research must be seen as high priorities. Given the sustained—and growing—demand for sanctuary space and services, sanctuaries will require reliable support and partnerships, so that they may focus on providing the same high standard of care for incoming apes as for existing residents.

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Endnotes

- 1 To protect the confidentiality of communication conducted for this research, this review refrains from citing certain sources that would reveal the identity and location of reviewed facilities.
- 2 For more information, see Ancrenaz *et al.* (2016); Campbell *et al.* (2015); Fruth *et al.* (2016); Humle *et al.* (2016); Maisels *et al.* (2016a); Plumptre, Robbins and Williamson (2016c) and Singleton *et al.* (2016). The Wildlife Conservation and National Parks Act predates South Sudan's independence but is still in force as a 2015 revision has yet to be enacted into law (CANS, 2013; A. Schenk, personal communication, 2017).
- 3 For details, see Ancrenaz *et al.* (2015b); Brou Yao *et al.* (2005); Campbell *et al.* (2008); Geissmann *et al.* (2013); Hockings and Humle (2009); Imong *et al.* (2014a); Indonesia MoF (2009); Lao MAF (2011); Molur *et al.* (2005); Rawson *et al.* (2011); SWD (2011); Turvey *et al.* (2015); White and Fa (2014); Wich *et al.* (2012b); Williamson *et al.* (2014).
- 4 For more information, see Campbell *et al.* (2008); Dunn *et al.* (2014); Geissmann *et al.* (2013); Gumal and Braken Tisen (2015); Indonesia MoF (2009); Lao MAF (2011); Lu and Tianxiao (2012); Maldonado and Fourrier (2015); Molur *et al.* (2005); Morgan *et al.* (2011); Plumptre *et al.* (2010); Rawson *et al.* (2011); SWD (2011); Turvey *et al.* (2015).
- 5 Wildlife Impact – <https://wildlifeimpact.org/>
- 6 WWF – http://wwf.panda.org/what_we_do/endangered_species/great_apes/apes_programme/
- 7 Save the Chimps – <http://www.savethechimps.org/>