Index

Angola 269, 273 animal abuse 106, 107, 108, 111 Animal Protection Index (API) scores 256, 257, 258, 259 animal rights see nonhuman rights anti-poaching patrols 30, 55, 56, 87, 88, 136-138, 139, 183, 191, 208, 229 anti-trafficking enforcement 55, 111-112, 113 Ape Populations, Environments and Surveys Abbott's grav gibbon (Hylobates abbotti) xvi, xx, (A.P.E.S.) Portal 2, 199-200, 206, 212, 217-218 xxiv-xxv, 30, 160-161, 215, 217, 276, 277, 281 apeAPP 138 Abundance Annex 2, 196, 200 Apes Seizure Database 6, 138, 182-183 acoustic monitoring 208, 209, 211, 229 Asia advertising and entertainment industries ape population estimates 200, 212, 213, 214, 215, 218, China 100-101 275-277 Europe 256-257 ape population trends 216-217 Thailand 111-114 body parts trade 10 United States 107-111, 259 captive apes 46, 260 see also portrayals of apes cross-border law enforcement 136, 191 advertising of apes/ape products 18-19, 164-175; distribution of apes xxiv-xxv see also social media food security/insecurity 81 advocacy and awareness campaigns international trafficking routes 7, 114, 165 awareness of laws 133, 134, 140, 192 offtake 78 Coalition to End Wildlife Trafficking online wildlife trade 18, 31, 119 Online 125-126 population trends 279, 280-281 cultural 64,65 sanctuaries and rescue centers 30, 44, 260 reducing ape use in entertainment wild meat consumption/trade 8, 10, 85 industry 107-111, 113-114 zoos 260 reducing demand 90, 92, 125-126, 128 see also specific country Wild for Life campaign 15 Association of South East Asian Nations (ASEAN) WildAid campaigns 265-268 112-113 see also behavior change; Great Apes Survival Wildlife Enforcement Network (ASEAN-WEN) Partnership (GRASP) 113, 136, 191 Africa Association of Zoos and Aquariums (AZA) 103, 110, 259 ape population estimates 200, 212, 213, 214, 218, autonomy 234, 235-238, 241, 247, 248 awareness-raising campaigns see advocacy and ape population trends 214, 216 awareness campaigns body parts trade 10, 39, 76-78, 88 captive apes 260-261 criminal networks 16, 165 B cross-border law enforcement 134, 135 distribution of apes xviii, xix, xxii-xxiii Bakonzo people, Uganda 64-65, 66 food security/insecurity 80-81, 82 Bakweri people, Cameroon 150 international trafficking routes 7, 85-86, 114, 165 Bangladesh 214, 276 offtake rates 77, 78-80 Banyoro people, Uganda 64-65, 66 sanctuaries and rescue centers 44, 260, 261 behavior change, human 14-16, 65, 91, 92, 93-94, taboos protecting apes 39 146, 225-227; see also advocacy and awareness wild meat consumption/trade 6, 8-9, 9-10, 72, 75, campaigns; demand reduction strategies 76-78, 85-86 biodiversity 61, 65, 67, 78-82, 84, 90, 145, 184, 186, 199 zoos 260 body parts trade see also specific country drivers 39, 52, 53-58 agile gibbon (Hylobates agilis) xx, xxiv-xxv, 30, 120, growing demand 53, 55, 58, 75

agriculture 35, 39, 70, 81, 89-90, 92, 93, 202, 203, 204, 271

impacts see impacts of killing/capture/trade

alternative livelihood initiatives 92, 94

air travel 8, 85-86

160-161, 215, 217, 276, 277, 280

international trade 55, 85	orangutan PHVAs 41
monetary values 54,55	pets, orangutans as 98, 114-118, 128
online trade 19	protected areas 33
scale of trade 10	sanctuaries and rescue centers 57,75-76,114-115,122
skulls 19, 52, 54, 57-58, 59, 88-89	taboos protecting apes 39, 87, 148, 150
supply chains 10	threat levels 3,5
tourism commodities 57–58,59	wild meat consumption/trade 34
uses of body parts 10, 39;	Brazil 92, 197, 232, 253, 257, 258
see also traditional medicine and rituals	Brunei 136, 276
bonobos (Pan paniscus)	Budongo Forest Reserve, Uganda 26
in captivity 256, 258, 260	Burundi 214, 269, 273
conservation status 213	Bwindi Impenetrable National Park, Uganda 37, 82, 91,
diet xxvi	146, 147, 148
distribution xviii, xix, xxii-xxiii	1.7 177 1.
habitat type and status xxv	
home and day range xxvii, xxviii	
international trade 4	C
live ape trade 4, 35, 46	Cambodia
nesting xxix	entertainment parks 113
offtake rates 89	gibbon population estimates 214, 276
overview xii	legal and regulatory environment
	checks and balances 175
population estimates 213, 214, 273	differential liability 166
population trend 216, 278	domestic laws 160, 163, 164
protective legislation 160–161	knowledge requirements and aggravating
reproduction xxix, xxx	circumstances 170,171
seed dispersal 42	legal classification of species 159
social organization xx, 29	listing status 162, 163, 169
threats to 202	penalties 168, 169, 172, 173
wild meat trade 76	sanctuaries and rescue centers 30
Bornean gray gibbon (Hylobates muelleri) xvi, xx,	camera traps 138, 139, 208, 209, 229
xxiv-xxv, 160-161, 215, 217, 276, 277, 280	Cameroon
Bornean orangutan (Pongo pygmaeus)	ape population estimates 273
body parts trade 57-58	behavior change, human 93–94
case studies 56-58, 59, 61-63	body parts trade 10, 54–55, 56, 72, 83, 88, 134, 135
conservation status 198-199, 200	commodity chain 73–74
diet xxvii	food security/insecurity 82
distribution xxiv-xxv	international criminal networks 55
offtake rates 32, 57, 75	international trafficking routes 7
overview xiv-xv	legal and regulatory environment
population estimates 6, 212, 213, 218	checks and balances 175
population trend 57, 216	counter-corruption efforts 134, 135
protective legislation 160–161	1
reproduction xxx	differential liability 166–167
in sanctuaries and rescue centers 57	domestic laws 161, 163
threats to 57, 203, 204	forms of law enforcement 14–15
see also specific subspecies	knowledge requirements and aggravating
Bornean white-bearded gibbon (<i>Hylobates albibarbis</i>)	circumstances 170, 171
xx, xxiv–xxv, 30, 160–161, 200, 214, 215, 217, 218,	penalties 166–167, 168, 172, 173
276, 280	live ape trade 134
Borneo	offtake rates 89
	sanctuaries and rescue centers 152–153, 261
body parts trade 57–58, 59	taboos 39, 56, 65
ecotourism 144	threats to apes 269
habitat loss/degradation 228	totems 56
international trafficking routes 7, 8	traditional medicine and rituals 72, 88
law enforcement 133	wild meat consumption/trade 6, 46, 56, 77, 80, 83

Cao Vit gibbon (Nomascus nasutus)	conflict with humans 35, 147
distribution xxi, xxiv-xxv	distribution xviii, xix
extinction threat 218	economic value 4, 46, 77, 84
population estimates xvi, 215, 276, 277	habitat type and status xxv-xxvi
population trend 216, 217, 280	home and day range xxvii, xxviii
protective legislation 160-161	infanticide xxx
social organization xxiii	live trade 4, 35, 46, 101, 102, 179
captive apes	nesting xxix, 206-207
Animal Protection Index (API) scores 256, 257, 258	offtake rates 6, 79, 89
in entertainment industries see advertising and	overview xii-xiii
entertainment industries	permit fraud 179
groups 255	as pets 114, 259
key findings 232–233	population estimates 212, 213, 214, 273–274
as pets see pets, apes as	population trends 216, 278
in research labs 242, 252, 254–255, 258, 259	portrayals of 121
rights see nonhuman rights; Nonhuman Rights	protective legislation 160–161
Project (NhRP)	reproduction xxix, xxx
in sanctuaries and rescue centers <i>see</i> sanctuaries	in research labs 242, 252, 254, 259
and rescue centers	in sanctuaries and rescue centers 258, 259
statistical update	seed dispersal 42
Africa 260–261	social organization xiii, xx, 29
Asia 260	status of captive 256, 257, 258, 259, 260, 261
conclusion 261-262	surveying 206, 209
data 255–256	taboos protecting 39, 66, 150
Europe 256	tool use 244–245
Latin America 257–258	use in advertising and entertainment industries
Oceania 258–260	107, 108–110, 111, 259
United States 258, 259	wild meat trade 9, 39, 76, 77, 225–227
welfare and well-being barriers 102-105	in zoos 102, 259
in zoos see zoos and wild animal parks	see also specific subspecies
capture-recapture survey methods 206, 208, 209, 229	China
Cecilia, chimpanzee 252	animal abuse 106
Center for Great Apes, Wauchula, Florida 251, 252	animal rights 105–106
Central Africa	apes in zoos and wild animal parks 98–106
corruption 87	body parts trade 85, 158
food security/insecurity 82	gibbon populations 200, 205, 216, 276
formal law vs. customary law 135	gibbons in myth and folklore 53
international trafficking routes 7, 8	legal and regulatory environment
legislation awareness 133	checks and balances 175
taboos 39	conflicting regimes 99
wild meat consumption/trade 9,75,80	differential liability 166
see also specific country	gaps 163
Central African Republic (CAR) 7, 36, 56, 80, 82, 183,	laws/regulations protecting apes 158, 161, 164
269, 273	listing status 162
central chimpanzee (Pan troglodytes troglodytes)	penalties 168, 172, 173
conservation status 213	leisure industry 99–101
distribution xix, xxii–xxiii	live ape trade 98–106
habitat type and status xxvi	permit fraud 179
population estimates xii, 213, 273, 274	spending power 99–100
population trend 216, 278	traditional medicine and rituals 53
threats to 202	"war on nature" 105
chimpanzees (Pan troglodytes)	wild meat trade 30–31, 87, 204
attributes and traits shared with humans 238–239	WildAid campaigns 265–268
body parts trade 39, 53, 54–55, 64–65, 85, 87, 88	wildlife markets 7, 8, 10
cognition and autonomy 234–235, 236, 237–240	civil law system 232, 234, 250–253

climate change 92, 203	structure 176-178
Coalition to End Wildlife Trafficking Online	Trade Database 182
119, 125–126	weaknesses and limitations 154, 177-178, 179, 191
common law system see Nonhuman Rights Project	wildlife trade database 12
(NhRP)	Convention on the Conservation of Migratory Species
community engagement	of Wild Animals (CMS) 183
aims and methods 16	corruption 6, 16, 17, 18, 87, 133, 134, 165–166, 179, 187, 223
alternative livelihood initiatives 91, 145-146	costs-benefits of conservation/poaching 142-150
cultural understanding 58-65	counter-corruption efforts 134, 135
ecotourism benefits 144-145	criminal networks 16-18, 155, 165-167, 173, 175, 187, 189;
incentive schemes 91	see also organized crime
indigenous knowledge 221	Cross River gorilla (Gorilla gorilla diehli)
integrated conservation and development	body parts trade 72
projects (ICDPs) 145–146	conservation status 213
land tenure and wildlife ownership rights 144,146	distribution xix, xxii-xxiii
for law enforcement	human pressure impacts 38
anti-snaring efforts 141-142	population estimates xiii, 38, 200, 212, 213, 273, 274
conservation benefits, increasing 143–146	population monitoring 139
conservation costs, decreasing 146–148	population trend 278
conservation vs. poaching costs-	taboos protecting 150
benefits 142–143, 146–150	threats to 202
governance and incentive structures 141–142	culture and religion
illegal activity benefits, decreasing 148	changes 34–35, 39, 55, 57
illegal activity costs, increasing 148, 150	culturally-sensitive research and conservation
integrated conservation and development	approaches 39, 48–49, 58–65
projects (ICDPs) 145–146	"culture," defining 51
intervention influences on costs-benefits 143	formal law vs. customary law 132, 133, 135
ranger recruitment 141	taboos 32, 34, 36, 39, 55, 56, 57, 66, 87, 148, 150
My Gorilla–My Community (MGMC)	totems 55, 56, 64, 66
program 93–94	traditional medicine and rituals see traditional
revenue-sharing programs 144–145, 146	medicine and rituals
see also advocacy and awareness campaigns;	Western approaches and terminology,
responses at source	re-evaluating 50–51, 59, 60
computer-generated imagery (CGI) 109, 110, 111	
Conference of the Parties (COP) 112, 113, 133, 177	
conservation framework, evidence-based	D
see evidence-based conservation	U
Conservation Measures Partnership 220	data sharing 224, 225, 227, 228
Convention on International Trade in Endangered	databases 6, 12, 101, 138, 139, 178, 182–183, 186, 188,
Species of Wild Fauna and Flora (CITES)	199–200, 224, 260
2018 report on apes 179, 182	Dayak peoples 56-58, 59, 148, 150
appendices xviii, 176–177	deforestation see habitat loss/degradation
collaborative efforts 191	demand reduction strategies 90-92, 94, 105, 110, 125,
data, importance of 201	128, 148, 192, 265–268
international regulation 13, 135, 154	Democratic Republic of Congo (DRC)
legal wildlife trade 97	ape population estimates 273
Monitoring the Illegal Killing of Elephants	armed conflict 87
(MIKE) 139	awareness-raising campaigns 140
penalties for wildlife crimes 133	body parts trade 84, 88
permits 177–179	evidence-based conservation case study 225–227
protecting apes 179–180	legal and regulatory environment
reporting systems 94	awareness-raising campaigns 140
Resolution 134 179, 182	cross-border law enforcement 135
scientific and management authority checks and	differential liability 166
balances 174–175	formal law vs. customary law 135

gaps 164	data, importance of 200-201
knowledge requirements and aggravating	data sharing 224, 227
circumstances 170, 171	development 220
laws/regulations protecting apes 161	evidence types 220–221
listing status 162	future survey directions 208-209
penalties 168, 172, 173	gibbons 218
militarized conservation 137	great apes 217-218
sanctuaries and rescue centers 261	horizon scanning 224, 228
taboos protecting apes 39	integration of evidence 224
wild meat consumption/trade 39,77–78, 80, 84	key findings 200
disease 12, 27, 28, 44–45, 201, 202, 204, 269–272	online communication options 228
distance sampling 205, 208, 209, 229	population and conservation status 212–217
distribution of apes xix-xxi, xxii-xxiii, xxiv-xxv	population size estimates 209–212
Dja Faunal Reserve, Cameroon 73–74, 77	research design 224, 225
drivers of wildlife crime 10–11, 82–90, 148, 149, 150, 151	research reviews 224
drones 138, 209, 229	research summaries 224
150, 209, 229	survey methods 199–200
	technological advances 229
	threats to apes 201–204
E	
eastern chimpanzee (Pan troglodytes schweinfurthii)	use for apes 221–223
xii, xix, xxii–xxiii, xxv, 36, 40–41, 213, 216, 273,	extinctions 70, 71, 75, 80, 89, 205
274, 278	
eastern gorilla (<i>Gorilla beringei</i>) xiii–xiv, xxv, xxvii,	
xxix, 160–161, 205; <i>see also</i> Grauer's gorilla	F
	Facebook 18, 19, 31, 119, 120, 126
(Gorilla beringei graueri); mountain gorilla	films and television, ape use in <i>see</i> advertising and
(Gorilla beringei beringei)	entertainment industries
eastern hoolock (<i>Hoolock leuconedys</i>) xv, xx, xxiv–xxv,	fines 143, 156, 158, 167, 168–169, 170, 171–173
27, 28, 200, 215, 217, 277, 280	food security/insecurity 80–82, 83–84, 89–90, 90–92
Ebola virus 44, 270	91-92
Eco Activists for Governance and Law Enforcement	Forest Stewardship Council (FSC) certification 139–14
(EAGLE) 13–14, 134, 180	forfeitures 167, 168–169
economies, ape-based 45–46	101101141140 10/, 100 10/
ecosystem impacts of ape loss 3, 28, 42–43, 80, 95	
ecotourism see tourism	
education 14, 85, 90, 98, 105–106, 108, 125–126, 148;	G
see also advocacy and awareness campaigns;	Gabon
behavior change, human	ape population estimates 274
Egypt 7, 114, 179	ape surveys 206
elephants 71, 72, 82, 84, 87, 112, 248–250, 267	attitudes towards gorillas, changing 55
entertainment industry see advertising and	ecotourism 55
entertainment industries	food security/insecurity 82
ENVIRONET 186	habitat loss/degradation 201
Equatorial Guinea 270, 273	international trafficking routes 7
ethical, legal, practical concerns 43-45	laws and law enforcement 133, 134
Europe 7, 8, 9–10, 85–86, 111, 114, 254, 256–257;	offtake rates 77
see also specific country	sanctuaries and rescue centers 261
evidence-based conservation	taboos 39
basics 218-220	threats to apes 270
benefits 220	totems 56
case study 225–227	Gaoligong/Skywalker hoolock (Hoolock tianxing)
challenges 220, 221-223	conservation status xv, 215
components 221	distribution xv, xx
conservation cycle 221	population estimates xv, 200, 214, 215, 276, 277
context-specific strategies 229	population trend 28, 31, 217, 280

genetic survey methods 206, 208, 209, 229	in sanctuaries and rescue centers 152-153
Ghana 75, 80, 214, 270, 274	seed dispersal 43
gibbons (Hylobatidae)	silverback, impact of killing 29, 41
body parts trade 53, 57, 59	social organization xiv, xx, xxi-xxiii, 29, 255
in captivity 101, 254, 256, 257, 258, 260	socioecology xviii
conservation status 200	surveying 206, 209
diet xxvii	taboos protecting 39
distribution xviii, xx-xxi, xxiv-xxv	wild meat trade 68-69,77
domestic laws protecting 160-161	see also specific species; specific subspecies
habitat type and status xxvi	GRACE (Gorilla Rehabilitation and Conservation
home and day range xxix	Education Center), DRC 36, 37, 79, 255
listing status 169–170	Grauer's gorilla (Gorilla beringei graueri)
live trade 8, 17, 30, 31, 32, 59–60, 115, 184–185	conservation status 213
in myths and folklore 53	distribution xix, xxii-xxiii
online trade 31, 32, 119–120	population estimates xiii, 213, 273
overview xv-xvii	population monitoring 139
as photo op props 7, 120, 121, 125	population trend 36, 37, 79, 200, 216, 278
population estimates 214, 215, 218, 276–277	threats to xiii, 79, 202
population trends 212, 216–217, 280–281	Ushiriki consortium, DRC 225-227
population viability analyses (PVAs) 41	wild meat trade 76
reproduction xxx	gray literature 220, 224
in sanctuaries and rescue centers 30, 31–32	Great Ape Information Network (GAIN) 255
seed dispersal 42	Great Ape Project 110, 257
social organization xx, xxiii, xxv	great apes see bonobos (Pan paniscus); chimpanzees
surveying 208, 209–211	(Pan troglodytes); gorillas (Gorilla spp.);
taboos protecting 57	orangutans (<i>Pongo</i> spp.)
threats to 30, 203–204	Great Apes Survival Partnership (GRASP) 6, 103, 138,
wild meat trade 30–31, 59, 69	154, 179, 182–183, 192, 201
see also specific genus; specific species	Guinea
Gishwati Forest, Rwanda 147	ape population estimates 274
Global Environment Facility 184, 186	body parts trade 88
Global Wildlife Conservation 138–139	corruption 134, 179
Gorilla Agreement 183	international trafficking routes 7
Gorilla Guardians 144	legal and regulatory environment
gorillas (<i>Gorilla</i> spp.)	checks and balances 175
•	differential liability 166
body parts trade 39, 85, 88, 134, 135, 190	•
in captivity 101, 102, 103, 114, 256, 257, 258, 259, 260	gaps 164
changing human attitudes towards 55	knowledge requirements and aggravating
conflict with humans 148 diet xxvi	circumstances 170, 171
*****	laws/regulations protecting apes 161, 164
distribution xix, xxii–xxiii	listing status 162
economic value 5	penalties 168, 172, 173
ecotourism 55, 144	live ape trade 101
home and day range xxvii-xxviii, xxviii-xxix	permit fraud 179
infanticide xxx	sanctuaries and rescue centers 261
integrated conservation and development projects	taboos 39
(ICDPs) 146	threats to apes 270
live trade 35, 46, 179	Guinea-Bissau 39, 87, 270, 274
nesting xxix	
offtake rates 79, 89	
outside protected areas 165	H
overview xiii–xiv	• •
population estimates 212, 213, 214, 273-274	habitat loss/degradation
population trends 216, 278	awareness-raising campaigns 122-124
reproduction xxix xxx	harrier to sustainable hunting 80-00

	causing population declines 38, 41, 54, 57, 203, 204, 216, 228	HUTAN Kinabatangan Orang-utan Conservation Programme, Borneo 144
	leading to human-wildlife conflict 28–29, 35, 75	Hylobates genus xvi, xviii, xx–xxi, xxiv–xxv, xxix, 119
	leading to intergroup conflicts 3	see also specific species
	rate of loss in Africa 90	see uiso specific species
	threat to apes 30, 33, 180, 200, 201, 202, 203,	
l	269–272	
	abitat type and status xxv-xxvi	inbreeding 80, 102-103
116	ainan gibbon (<i>Nomascus hainanus</i>) conservation status xvi, 215	incentive schemes 84, 91, 92, 94
	critically low population xvi, 31, 41, 200, 214, 215,	India 30, 234, 276
		indigenous knowledge 65, 221
	216, 276 distribution xxi, xxiv–xxv	Indonesia
	•	animal welfare, attitudes towards 116, 118
	population trend 217, 281	body parts trade 57
	protective legislation 160–161	gibbon population estimates 214, 276
	social organization xxiii	gibbons in myth and folklore 53
	appy, elephant 248	
	ercules and Leo, chimpanzees 236, 242, 243–244, 246	gibbons in rescue centers 30
H	iasl, chimpanzee 252–253	habitat loss/degradation 75 human-wildlife conflict 89, 147–148
,	historical records 205	
	ome and day range xxvii–xxix	international trafficking routes 7, 10
	polocks (Hoolock spp.) xv; see also specific species	legal and regulatory environment
	orizon scanning 224, 228	checks and balances 175
	ıman rights abuses 132, 136, 137, 138, 150	cross-border law enforcement 136
H	uman-Gorilla (HuGo) Conflict Resolution teams,	differential liability 166
	Uganda 148	gaps 164
hu	ıman-wildlife conflict	knowledge requirements and aggravating
	competition for resources 29, 75, 81, 115	circumstances 170
	disease transmission 44	laws/regulations protecting apes 161, 164
	impact on infant captures 115	legal classification of species 159
	leading to hunting 28–29, 32, 34–35, 115, 147–148,	listing status 162
	180, 201	penalties 133, 168, 172, 173
hu	anting/poaching	live ape trade 31, 34, 45–46, 75–76, 111, 113, 128
	ancient vs. modern 32-33, 57	online wildlife trade 19, 31, 119
	archaeological evidence of 25, 32–33, 70	orangutan population estimates 214, 275
	for food see wild meat consumption/trade	orangutans as pets 114-118, 133
	impacts see impacts of killing/capture/trade	sanctuaries and rescue centers 30, 57, 114-115, 124
	income from 74, 75, 77, 81, 84	156, 157
	killing adults to capture infants 29, 35, 36, 37, 43	threats to apes 203
	legal and regulatory environment study	tourism 57, 122, 124
	164–175	wild meat trade 75, 204
	link to extinctions 70,71,79–80	see also specific island
	link to human poverty 80–85	infanticide xxx, 41
	modernization impacts 25–26, 88	Instagram 18, 19, 31, 119, 120, 125–126
	offtake <i>see</i> offtake	integrated conservation and development projects
	opportunistic 32, 34, 57, 61, 72, 74	(ICDPs) 145–146
	of popular/named animals 15	International Consortium on Combating Wildlife
	as a result of human-wildlife conflict 28-29, 32,	Crime (ICCWC) 189, 190, 191, 192
	34–35, 115, 147–148, 180, 201	International Fund for Animal Welfare (IFAW)
	roads, impact of 34, 35, 39, 55, 139, 140	125–126
	scale of hunting pressure 30–38	International Gorilla Conservation Programme
	snaring 26-27, 30, 37, 42, 88, 141-142	(IGCP) 146, 148
	terminology 3, 24, 26	International Union for Conservation of Nature (IUCN)
	threat levels 180, 201, 203, 204	2018 report to CITES 179–180, 182
	trophy hunting 15	ape surveying guidance 209, 211

conservation status of apes 200	differential liability 167
FSC certification 139-140	gaps 164
human-wildlife conflict 148	knowledge requirements and aggravating
Primate Specialist Group 6	circumstances 171
Red List Categories and Criteria xviii, 27, 159, 201,	laws/regulations protecting apes 161
263–264	listing status 162, 163, 169
see also Ape Populations, Environments and	penalties 172, 173
Surveys (A.P.E.S.) Portal	penalties for wildlife crime 169
Internet see social media	Nam Kading National Protected Area study
INTERPOL (International Criminal Police	60, 63-64
Organization) 154, 155, 184-185, 187, 190, 191-192	traditional medicine and rituals 53
Ivory Coast	wild meat trade 30-31, 204
ape population estimates 274	Lar gibbon (Hylobates lar)
extinctions 80	conservation status 215
international trafficking routes 7	distribution xx, xxiv-xxv
legal and regulatory environment	extirpations 205
checks and balances 175	online trade 120
differential liability 167	population estimates 215, 276, 277
gaps 164	population trend 217, 280
knowledge requirements and aggravating	protective legislation 160-161
circumstances 171	in sanctuaries and rescue centers 30
laws/regulations protecting apes 160, 164	Last Great Ape Organization (LAGA) 16, 19, 134, 135
listing status 162	law enforcement see community engagement, for law
penalties 169, 172, 173	enforcement; legal and regulatory environment
sanctuaries and rescue centers 260-261	legal and regulatory environment
threats to apes 270	2018 report to CITES 179, 182
ivory trade 13, 16, 71, 72, 84, 87, 158, 265, 267	civil law system 232, 234, 250-253
	common law system see Nonhuman Rights
	Project (NhRP)
The second secon	international level 191–192
J	Agreement on the Conservation of Gorillas
Jane Goodall Institute 148, 227	and Their Habitats 183
Japan 254, 255, 260	CITES 176-182
Java 16, 17, 30, 31, 70, 115, 116	Convention on the Conservation of Migratory
Jimmy, chimpanzee 253	Species of Wild Animals (CMS) 183
•	International Consortium on Combating
	Wildlife Crime (ICCWC) i 189
K	INTERPOL 187
N	other collaborative initiatives 189-191
Kenya 7, 70, 135, 261	UN Convention on Biological Diversity (CBD)
Kiko, chimpanzee 241-242, 243-244, 246-247, 248	184, 186
Kimbi-Fungom National Park, Cameroon 54-55	United Nations Convention against
Kloss' gibbon (Hylobates klossii) xx, xxiv-xxv, 28, 30,	Transnational Organized Crime (UNTOC)
160–161, 215, 217, 276, 280	188–189
Kuwait 114, 115	United Nations Office on Drugs and Crime
	(UNDOC) 188
	World Customs Organization (WCO) 186-187
The second secon	national level
L	clarity and transparency 173-174
Lao People's Democratic Republic (Lao PDR)	community engagement see community
gibbon population estimates 277	engagement, for law enforcement
gibbons in myth and folklore 53	in-depth analyses 164–165
legal and regulatory environment	differential liability by offender status 165–167
checks and balances 175	effective legal frameworks 133, 135
cross-border law enforcement 136	enhancing 94–95

fines 171–173	link to wild meat trade 75, 180
formal law vs. customary law 132, 133, 135	mixed illegal shipments 16-17
importance 156, 157, 158	numbers 35
incentive schemes 91	online trade 18-19, 118-119
intent requirements and aggravating	overview 6-8
circumstances 170-171	for pets see pets, apes as
law, policy and enforcement 156	portrayal's influence on conservation 121–124
law enforcement partnerships 138–141	social media use and influence 31, 32, 118–119,
law enforcement study see Legal Atlas study	119–121, 125–126
law enforcement technology 138-139	tackling 125–126, 128
listing status 158–159, 162	terminology 3
militarized law enforcement 136–137, 138	threat levels 201
multiple laws covering offenses 158	transportation 8, 114, 115
penalties 167–170	uses of live apes 7, 30, 46
prison terms 173	logging 38, 92, 115, 139, 201, 203;
protection approaches 162–163	see also habitat loss/degradation
regulation along supply chain 163–164, 176	logging companies 139–141, 151
site-based law enforcement pros/cons 136–138	Lower Kinabatangan Wildlife Sanctuary, Borneo 141
strengthening law enforcement 135–136	Lusaka Agreement Task Force 135, 191
trend analysis 173–175	Lusaka Agreement Task Porce 135, 191
nonhuman rights see nonhuman rights;	
Nonhuman Rights Project (NhRP)	M
Legal Atlas study 154, 158, 165–175	Mahale Mountains National Park, Tanzania 40-41
Liberia	Malaysia 40 41
ape population estimates 274	body parts trade 10
legal and regulatory environment	gibbon population estimates 277
checks and balances 175	gibbons in rescue centers 30
cross-border law enforcement 135	international trafficking routes 7, 8, 115
differential liability 167	legal and regulatory environment
gaps 164	checks and balances 175
knowledge requirements and aggravating	cross-border law enforcement 136
circumstances 170, 171	differential liability 167
laws/regulations protecting apes 161, 164	enforcement coordination 174
listing status 162	gaps 163, 164
penalties 169, 172, 173	knowledge requirements and aggravating
sanctuaries and rescue centers 261	circumstances 171
threats to apes 271	laws/regulations protecting apes 161
totems 56	listing status 162
Limbe Wildlife Centre, Cameroon 152–153	penalties 169, 172, 173
listing status 158–159, 162, 169, 172	online wildlife trade 19, 31, 119–120
live ape trade	orangutan population estimates 275
advocacy and awareness campaigns 107-111,	sanctuaries and rescue centers 30,124
126–127, 128	size of ape population 214
China's zoos and wild animal parks 98-106	threats to apes 203
CITES permits 177–179	wild meat consumption 32, 33
criminal networks 8	wildlife tourism 124
destination countries 7, 114	Mali 214, 271, 274
economic values 4-5, 115	Mgahinga Forest Reserve, Uganda 146, 147
for entertainment industry see advertising and	Middle East 7, 8, 18–19, 85, 114
entertainment industries	mining 92, 139, 140, 202, 204, 225, 227
growing demand 75, 114, 192	Mishmi Hills hoolock (<i>Hoolock hoolock</i>
impacts see impacts of killing/capture/trade	mishmiensis) xv
incomes from 45–46	Moloch gibbon (<i>Hylobates moloch</i>) xx, xxiv–xxv, 28,
key findings 98	30, 41, 120, 160–161, 215, 217, 276, 280
killing adults to capture infants 20 25 26 27 42	money laundering 162, 166–167, 180

mountain gorilla (Gorilla beringei beringei)	laws/regulations protecting apes 160
civil conflict impacts 79	listing status 162
conflict with humans 37	penalties 169, 172, 173
conservation status 213	My Gorilla-My Community (MGMC)
diet xxvi	program 93-94
distribution xix	offtake rates 89
ecotourism 45, 91, 92, 144	online trade 19
home and day range xxviii	sanctuaries and rescue centers 261
live ape trade 36, 37	threats to apes 271
overview xiii-xiv	totems 56
population estimates xiii, 213, 273, 274	traditional medicine and rituals 72
population surveys 205, 208, 209	wild meat trade 6
population trend 216, 278	Nigeria-Cameroon chimpanzee (Pan troglodytes ellioti)
reproduction xxx	conservation status 213
snare-disabling knowledge 27	distribution xix, xxii-xxiii
social organization xxi, xxii-xxiii	habitat loss/degradation 35,54
threats to xiii, 202	population estimates xii–xiii, 6, 213, 273, 274
see also specific subspecies	population trend 216, 278
Müller's gibbon (<i>Hylobates muelleri</i>) xvi, xxi, xxiv–xxv,	threats to 202
30, 120, 160–161, 214, 215, 217, 276, 280	Nomascus genus xvi-xvii, xviii, xxi, xxiv-xxv, xxix, 30;
multilateral environmental agreements (MEAs) 190	see also specific species
My Gorilla-My Community (MGMC) program,	nonhuman rights
Nigeria 93-94	civil law system 250–253
Myanmar	common law system see Nonhuman Rights
civil conflict 214	Project (NhRP)
gibbon population estimates 277	personhood see personhood
legal and regulatory environment	"persons" and "things" dichotomy 231–232
checks and balances 175	public's changing views 105–106
cross-border law enforcement 136	at taxonomic level 254–255
differential liability 167	welfare vs. rights 232
knowledge requirements and aggravating	Nonhuman Rights Project (NhRP)
circumstances 171	aims and methods 232
laws/regulations protecting apes 160, 164	chimpanzee campaign
listing status 162	cognition and autonomy 237–240
penalties 169, 172, 173	legal strategy 234–237
online gibbon trade 31	New York State legal campaign 241–248
wild meat trade 31, 204	value and principles of US judges 240–241
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	elephant campaign 248–250
	personhood, establishing 233
N.I.	Northeast Bornean orangutan (Pongo pygmaeus
N	morio) xix, xxiv, 212, 213, 216, 275, 279
Nam Kading National Protected Area study 60, 63-64	northern white-cheeked crested gibbon (Nomascus
nesting xxix, 206–207, 209	leucogenys) xvi, xxi, xxiv-xxv, 160-161, 205, 215,
Nigeria	217, 277, 280
ape population estimates 274	northern yellow-cheeked crested gibbon
behavior change, human 93-94	(Nomascus annamensis)
body parts trade 10, 55, 72, 85	distribution xxi, xxiv-xxv
international trafficking routes 7	laws protecting 160–161, 162
legal and regulatory environment	live trade 169, 170
checks and balances 175	overview xvi
differential liability 167	population estimates 215, 276, 277
enforcement coordination 174	population trend 217, 280
gaps 164	Northwest Bornean orangutan (Pongo pygmaeus
knowledge requirements and aggravating	pygmaeus) xix, xxiv, 212, 213, 216, 275, 279
circumstances 171	
CITCUIIISTATICES 1/1	Nyungwe National Park, Rwanda 137

0	P
offtake	palm oil plantations 32, 33, 81, 115, 122–124, 203, 228
estimating rate 31-32, 57, 75-76, 77, 78, 89	pangolins 59, 85, 267
increase with modern hunting tools/technology	passive acoustic monitoring 208, 229
87, 88	penalties for wildlife crime 132, 133, 155, 156, 164, 165,
information, lack of and need for 28, 30, 31-32, 47,	166, 167–173, 189
59-60,72	People for the Ethical Treatment of Animals (PETA) 108
unsustainability of current rates 32, 34, 38-39, 57,	permits 8, 22, 114, 154, 174, 177–179
77, 78, 79–80, 89	personhood
Open Standards for the Practice of Conservation	non-humans 233–234
220, 224	"persons" and "things" dichotomy 231-232
Operation Cobra III (WCO) 186-187	USA - NhRP - chimpanzees 235, 236-237, 239-240,
Operation Thunderbird (INTERPOL) 187	241, 243, 244, 246–248
orangutans (Pongo spp.)	USA - NhRP - elephants 248-250
body parts trade 34, 39, 57, 58-59, 88-89	pets, apes as
British media portrayals 122–124	animal welfare, attitudes towards 116, 118
in captivity	demand 114, 204
as advertising/entertainment tools 107, 108,	demand reduction strategies 125
109, 110, 111–114	international trade 114
as pets 101-102, 116-118, 133	local vs. international trade 7
in zoos 101–102, 103, 105, 256, 257, 258,	misconceptions 118, 121
259, 260	numbers 258, 259, 260
diet xxvi-xxvii	online trade 31, 32, 118, 119–120
distribution xix, xxiv-xxv	prosecution of owners 133
habitat type and status xxv, xxvi	pileated gibbon (Hylobates pileatus) xxi, xxiv-xxv, 30,
home and day range xxviii	160–161, 214, 215, 217, 276, 277, 280
Husbandry Manual 103, 105	population and habitat viability assessments
live trade of 24–25, 176	(PHVAs) 41
ape victims 96-97	population estimates 213, 273-277
by criminal networks 16, 17	population trends 212, 214, 216-217, 278-281
global market values, annual 46	population viability analyses (PVAs) 38-39, 41
incomes from 45–46	portrayals of apes
Indonesian pet market 114-116	British media 122–124
international routes 7,8	entertainment parks 111–114
market values 115	films and television 107-111
value changes from forest to foreign buyer	influence on conservation action 121
5, 45–46	pet-owners' mindsets 116, 118
nonhuman rights 250-252	social media 120-121, 124
population estimates 212, 213, 214, 218, 275	prison terms 133, 165, 168–169, 173, 189
population trends 216, 279	Project ChimpCARE 110
reproduction xxix, xxx	protected areas 60, 63-64, 71, 78, 91-92, 136-138, 139,
in sanctuaries and rescue centers 44-45, 75-76,	142, 144–147
156, 157	
social organization xxiii, 29	
socioecology xviii	R
surveying 209	
taboos protecting 57, 148, 150	rangers 13, 14, 132, 136–138, 139, 141
threats to 203, 204	ray gill rakers 265, 267
translocation 44-45	Regional Intelligence Liaison Offices (RILOs) 186–187
wild meat, killed for 9, 32, 33, 34	reproduction xxix-xxx, 38, 40-41
see also specific species	Republic of Congo
organized crime 17–18, 133, 166, 188–189;	ape population estimates 274
see also criminal networks	international trafficking routes 7

legal and regulatory environment	siamang (Symphalangus syndactylus)
checks and balances 175	distribution xxi, xxiv-xxv
cross-border law enforcement 135	online trade 119, 120
differential liability 167	overview xvii
gaps 164	population estimates 214, 215, 276, 277
knowledge requirements and aggravating	population trend 217, 280
circumstances 171	protective legislation 160–161
laws/regulations protecting apes 161	in sanctuaries and rescue centers 30
penalties 169, 172, 173	Sierra Leone 39, 42, 261, 272, 274
sanctuaries 261	Singapore 7, 8, 111, 124, 136, 216
size of ape population 214	slavery 233, 236
threats to apes 271	SMART (Spatial Monitoring and Reporting Tool)
wild meat consumption 77–78	138, 139
rescue centers see sanctuaries and rescue centers	snaring 26–27, 30, 37, 42, 62, 63, 88, 141–142
research using apes 254-255, 259	social marketing 14–16, 92, 94, 118;
revenue-sharing programs 92, 144–145, 146	see also behavior change, human
rhino horn 13, 16, 158, 265, 267	social media
rights, nonhuman see nonhuman rights	awareness campaigns 125-126
roads 34, 35, 55, 139, 140	"closed" groups 120, 125
Russia 18–19, 113, 114, 257	Coalition to End Wildlife Trafficking Online
Rwanda	125–126
attitudes towards gorillas, changing 55	exposing animal abuse 106
ecotourism 13, 45, 144	gibbons as pets and props 119–121, 204
human–wildlife conflict 147	influence on conservation 121
legal and regulatory environment	influence on public attitudes 57, 106, 118, 123, 124
anti-poaching patrols 137	legal/regulatory gaps 163
checks and balances 175	platforms as hideouts for traffickers 118–119
cross-border law enforcement 135	social media companies responses to wildlife crime
differential liability 167	119, 125–126
gaps 163, 164	tourists' selfies with apes 120, 126–127
knowledge requirements and aggravating	wildlife trade 18–19, 30, 31, 32, 118–121
circumstances 171	socioecology xviii, xx-xxiii, xxv-xxx, 29, 219, 222
laws/regulations protecting apes 161	southern white-cheeked crested gibbon
listing status 162	(Nomascus siki) xvi, xxi, xxiv-xxv, 160-161, 169,
penalties 169, 172, 173 population estimates 274	215, 217, 277, 280
	southern yellow-cheeked crested gibbon
threats to apes 271 Volcanoes National Park 144	(Nomascus gabriellae) distribution xxi, xxiv–xxv
voicanoes national Park 144	
	laws protecting 160–161
	live trade 169,170
S	overview xvi
Sabah 32, 33, 39, 141	population estimates 215, 276, 277
sanctions 166, 167, 168	population trend 217, 280
sanctuaries and rescue centers	Southwest Bornean orangutan (Pongo pygmaeus
apes living in 30, 36, 43–44, 152–153, 260–261	wurmbii) xix, xxiv, 212, 213, 216, 275, 279
	Spain 254–255, 257
estimating offtake rates 31–32, 57, 75–76, 114–115	Sudan 7, 135
local engagement 141	Suiça, chimpanzee 253
in non-range states 257, 258, 259	Sumatra 28, 39, 41, 75–76, 115, 133, 228
surge in ape numbers 197, 233, 262	Sumatran orangutan (Pongo abelii)
Sandra, orangutan 250–252	diet xxvi
Sarawak 32,33	distribution xix, xxiv-xxv
seed dispersal 42-43	home and day range xxviii
Senegal 26, 88, 133, 271, 274	live ape trade 75
shark fin soup 265-268	overview xiv-xv

population estimates 212, 213, 214, 275	international trafficking routes 7,8
population trend 216, 279	live ape trade 111-113, 115, 119, 128
protective legislation 160-161	online wildlife trade 119
reproduction xxx	wild meat trade 31, 204
scale of hunting pressure 33-34	WildAid campaigns 265
threats to 203, 204	threats to apes 2, 30, 179–181, 200, 201–204, 269–272;
supply chain	see also body parts trade; hunting/poaching; live
body parts trade 10	ape trade; wild meat consumption/trade
regulation throughout 156, 158, 163-176	tigers 102
transportation methods 8	Tommy, chimpanzee 241, 242, 243–244, 246–247
value changes along 4-5	totems 55, 56, 64, 66
wild meat trade 8, 9, 73-74	tourism
surveys, ape 205–211, 217, 229	apes as photo op props 7, 31, 46, 120, 121, 124, 125,
7 . 1	126, 127, 204, 260
	awareness-raising campaigns 125, 128
T	body parts as souvenirs 57–58
Т	China's zoos and wild animal parks 98-106
taboos 32, 34–35, 36, 39, 55, 56, 57, 63, 66, 87, 148, 150	community engagement and behavior
Taiwan 102, 103, 265	change 13, 16, 45, 46, 55, 91, 92, 144–145, 146
Tanzania	false views of apes 124
ape population estimates 274	rescue centers 122
civil conflict 87	Thailand's entertainment parks 111–114
cross-border law enforcement 135	traditional medicine and rituals 39, 52, 53–58, 64–65,
legal and regulatory environment	72, 87, 88–89, 267
checks and balances 175	TRAFFIC network 12, 17, 31, 119, 125–126
differential liability 167	transect sampling/walking 206, 208, 209
gaps 164	translocation 44–45, 201, 262
knowledge requirements and aggravating	transnational organized crime (TOC) 17–18
circumstances 171	Turkey 7, 114, 257
laws/regulations protecting apes 161	141.40 / /, 114, 2)/
listing status 162	
penalties 169, 172, 173	11
monitoring studies 78	U
threats to apes 272	Uganda
totems 56	ape population estimates 274
Tapanuli orangutan (Pongo tapanuliensis)	Bwindi Impenetrable National Park 37, 91, 146, 147
discovery xiv	drivers of wildlife crime 82, 83, 148, 150, 151
distribution xiv, xix, xxiv-xxv, 33-34	ecotourism 13, 45, 91, 144–145
population estimates xiv, 200, 213, 214, 275	integrated conservation and development project
population trend 216, 279	(ICDP) 146
protective legislation 160–161	international trafficking routes 7
threats to xiv, 203, 204	land tenure rights, lack of 146
technological advances	legal and regulatory environment
for ape population surveying 206, 208–209, 229	checks and balances 175
for film-making 110	cross-border law enforcement 135
for hunting 33, 87–88	differential liability 167
for law enforcement 138–139	gaps 164
Thailand	knowledge requirements and aggravating
apes as photo op props 31, 120, 121, 126–127	circumstances 171
apes used in advertising and entertainment	laws/regulations protecting apes 160
industries 111–114	listing status 162
cross-border law enforcement 136	penalties 169, 172, 173
gibbon population estimates 214, 277	Uganda Wildlife Act 65
gibbons in myth and folklore 53	Mgahinga Forest Reserve 146
gibbons in rescue centers 30	revenue-sharing programs 144–145
5	01 · 0 · · · · · · · · · · · · · · · · ·

sanctuaries 261	enforcement agencies 174
technology 139	gaps 163, 164
threats to apes 272	knowledge requirements and aggravating
totems 56	circumstances 171
traditional medicine and rituals 53, 64-66	laws/regulations protecting apes 161
Ukraine 18-19, 257	listing status 159, 162, 163, 169-170
United Arab Emirates (UAE) 19, 114	penalties 133, 167, 169, 172, 173
United Kingdom (UK) 10, 122–124, 158, 233, 236,	live ape trade 59–60
254, 257	traditional medicine and rituals 53
United Nations (UN)	wild meat trade 31, 59, 204
Convention against Transnational Organized	WildAid campaigns 265, 267
Crime (UNTOC) 133, 173, 188–189	Virunga Massif, Africa 36, 37
Convention on Biological Diversity (CBD)	Virunga National Park, DRC 91, 137, 141
184, 186	Volcanoes National Park, Rwanda 144
Environment Programme (UNEP) 15	vulnerability of apes 28, 38-39, 40-42, 79, 88
Environment Programme World Conservation	, , , , , , , , , , , , , , , , , , ,
Monitoring Centre (UNEP-WCMC) 6, 178, 183	
Global Programme for Combating Wildlife and	VA/
Forest Crime 188	W
International Covenant on Civil and	wealth, human 81, 82, 83, 84, 85, 87, 95, 114
Political Rights 233	welfare, animal 232; see also nonhuman rights
International Trade Statistics Database	West Africa
(UN Comtrade) 12	body parts trade 10, 39
Office on Drugs and Crime (UNODC) 13, 133, 154,	criminal networks 16
188, 192	international trafficking routes 8
Universal Declaration of Human Rights 233	law enforcement 13–14
United States (USA)	wild meat trade 9,75,77
	see also specific country
advocacy and awareness campaigns 107-111	western black crested gibbon (Nomascus concolor)
apes used in advertising and entertainment	xvi, xxi, xxiii, xxiv–xxv, 160–161, 215, 217, 276,
industries 107–111, 121	277, 280
apes used in invasive research 254	western chimpanzee (Pan troglodytes versus)
API score 258	distribution xix, xxii–xxiii
ASEAN-WEN, support for 191	habitat type xxv
attitudes towards apes 121	outside protected areas 35
body parts trade 10, 85	population estimates xii, 213, 274
captive apes 258, 259	population trend xiii, 200, 216, 278
CBD unsigned by 184	
chimpanzees, market value of 107	population viability analysis (PVA) 38–39
nonhuman rights 254;	threats to apes 202
see also Nonhuman Rights Project (NhRP)	western gorilla (Gorilla gorilla) xiii-xiv, xxi-xxii,
wild meat trade 9, 58, 85	xxvi, xxvii, xxix, 68–69, 160–161, 205;
urbanization 81,91	see also Cross River gorilla (Gorilla gorilla diehli)
	western lowland gorilla (Gorilla gorilla gorilla)
	western hoolock (Hoolock hoolock) xv, xx, xxiv-xx
V	30, 52, 214, 215, 217, 276, 280
	western lowland gorilla (Gorilla gorilla gorilla)
value of global wildlife trade 12–13	conservation status 213
Viet Nam	distribution xix, xxii–xxiii
body parts trade 59	home and day range xxviii
gibbon population estimates 216, 277	hunting pressure, scale of 38,79
gibbons in rescue centers 30	outside protected areas 38
legal and regulatory environment	population estimates xiii, 38, 212, 213, 273, 274
checks and balances 175	population trend 216, 278
cross-border law enforcement 136	threats to 202
differential liability 167	wild meat and body parts trade 68-69, 76

```
wild animal parks see zoos and wild animal parks
Wild for Life campaign 15
wild meat consumption/trade
    barriers to sustainability 89-90
    body part choices 77
    commodity chains 73-74
    demand reduction strategies 90-92, 94
    disease transmission 44
    drivers 8, 10, 11, 58, 80-85, 91
    economic profits 46,77
    growing demand 30-31, 53, 58, 71, 75, 84
    historical context 32, 33, 70-71
    importance in poor/rural societies 68-69, 82
    income from 82
    increase in 87, 89
    international trade 85-86, 180
    link to live animal trade 75
    nutrients 80-81
    overview 8-10
    per capita consumption 77-78, 81
    species consumed 72
    supply chains 9, 10
    taboos against 32, 34, 36, 39, 56, 87, 150
    threat levels 180, 204
    wild meat as luxury item 84, 85, 111
    see also hunting/poaching
WildAid campaigns 265-268
wildlife trade, global 12-13
"wildlife trafficking," definition of 17
World Customs Organization (WCO) 154, 155, 178,
    184-185, 186-187, 189, 190, 191-192
World Wide Fund for Nature (WWF) 31, 125-126,
    138, 146
```

Z

Zambia 135, 261 zoos and wild animal parks in Africa 260 animal performances 106, 111 animal well-being 102-105, 128 in Asia 261 in China 98-106, 128, 179 CITES accreditation 182 in Europe 256 illegal acquisition of animals 101, 103, 111, 165 in Latin America 257 nonhuman rights see nonhuman rights; Nonhuman Rights Project (NhRP) in Oceania 259, 260 permit fraud 179 public attitudes 105-106 in the United States 258, 259; see also Nonhuman Rights Project (NhRP)