

PRIMATES IN PERIL

The World's 25 Most Endangered Primates 2012–2014



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Lucy A. Taylor, Federica Chiozza, Elizabeth A. Williamson and Janette Wallis**

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Front cover photos (clockwise from top left):

Madame Berthe's mouse lemur (*Microcebus berthae*) © John R. Zoanarivelo

Tonkin snub-nosed monkey (*Rhinopithecus avunculus*) © Tilo Nadler

Northern brown howler monkey (*Alouatta guariba guariba*) © John J. Tschirky

Roloway monkey (*Cercopithecus roloway*) © West African Primate Conservation Action (WAPCA)

Back cover photo:

Golden-headed langur or Cat Ba langur (*Trachypithecus poliocephalus poliocephalus*) © Tilo Nadler

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Acknowledgements

The 2012–2014 edition of the World's 25 Most Endangered Primates is, for the second time, presented in the form of species fact sheets. For this edition, we have summarized and updated the species profiles from the 2008–2010 and 2010–2012 editions of the World's 25 Most Endangered Primates for those species remaining on the list, and added additional profiles for the new species.

We would like to thank all of the contributing authors to the 2008–2010 version for their work, which forms the basis of the fact sheets in the new edition. Each profile from the 2008–2010 edition is cited on the fact sheets:

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The World's 25 Most Endangered Primates: 2012–2014

Here we report the seventh iteration of the biennial listing of a consensus of the 25 primate species considered to be among the most endangered worldwide and the most in need of conservation measures. The 2012–2014 list was drawn up during an open meeting held during the XXIV Congress of the International Primatological Society (IPS), Cancún, 14 August 2012. It is a joint effort by the IUCN/SSC Primate Specialist Group, the International Primatological Society, Conservation International, and the Bristol Conservation and Science Foundation.

The 2012–2014 list of the world's 25 most endangered primates has five species from Africa, six from Madagascar, nine from Asia, and five from the Neotropics (Table 1). In terms of individual countries, Madagascar tops the list with six species. Vietnam has five, Indonesia three, Brazil two, and China, Colombia, Côte d'Ivoire, the Democratic Republic of Congo, Ecuador, Equatorial Guinea, Ghana, Kenya, Peru, Sri Lanka, Tanzania and Venezuela each have one.

The changes made in this list compared to the previous iteration (2010–2012) were not because the situation of the nine species that were dropped (Table 2) has improved. In some cases, such as, for example, *Varecia variegata*, the situation has in fact worsened. By making these changes we intend rather to highlight other, closely related species enduring equally bleak prospects for their future survival. An exception may be the greater bamboo lemur, *Prolemur simus*, for which recent studies have confirmed a considerably larger distribution range and larger estimated population size than previously assumed. The severe threats to this species in eastern Madagascar remain, though.

Table 1. The World's 25 Most Endangered Primates 2012–2014

Africa		
<i>Galagoides rondoensis</i>	Rondo dwarf galago	Tanzania
<i>Cercopithecus roloway</i>	Roloway monkey	Côte d'Ivoire, Ghana
<i>Ptilocolobus pennantii pennantii</i>	Bioko red colobus	Equatorial Guinea (Bioko Is.)
<i>Ptilocolobus rufomitratus</i>	Tana River red colobus	Kenya
<i>Gorilla beringei graueri</i>	Grauer's gorilla	DRC
Madagascar		
<i>Microcebus berthae</i>	Madame Berthe's mouse lemur	Madagascar
<i>Eulemur flavifrons</i>	Sclater's black lemur	Madagascar
<i>Varecia rubra</i>	Red ruffed lemur	Madagascar
<i>Lepilemur septentrionalis</i>	Northern sportive lemur	Madagascar
<i>Propithecus candidus</i>	Silky sifaka	Madagascar
<i>Indri indri</i>	Indri	Madagascar
Asia		
<i>Tarsius pumilus</i>	Pygmy tarsier	Indonesia (Sulawesi)
<i>Nycticebus javanicus</i>	Javan slow loris	Indonesia (Java)
<i>Nasalis concolor</i>	Pig-tailed langur	Indonesia (Mentawai Is.)
<i>Trachypithecus delacouri</i>	Delacour's langur	Vietnam
<i>Trachypithecus poliocephalus</i>	Golden-headed or Cat Ba langur	Vietnam
<i>Semnopithecus vetulus nestor</i>	Western purple-faced langur	Sri Lanka
<i>Pygathrix cinerea</i>	Grey-shanked douc monkey	Vietnam
<i>Rhinopithecus avunculus</i>	Tonkin snub-nosed monkey	Vietnam
<i>Nomascus nasutus</i>	Cao-Vit or Eastern black-crested gibbon	China, Vietnam
Neotropics		
<i>Ateles hybridus</i>	Variegated spider monkey	Colombia, Venezuela
<i>Ateles fusciceps fusciceps</i>	Ecuadorian brown-headed spider monkey	Ecuador
<i>Cebus kaapori</i>	Ka'apor capuchin monkey	Brazil
<i>Callicebus oenanthe</i>	San Martín titi monkey	Peru
<i>Alouatta guariba guariba</i>	Northern brown howler monkey	Brazil

Nine primate species were added to the 2012–2014 list (Table 3). Seven of them were placed on the list of the world’s 25 most endangered primates for the first time. The Tana River red colobus and the Ecuadorian brown-headed spider monkey had already been on previous iterations of the list, but were subsequently removed in favor of other highly threatened species of the same genera. The 2012–2014 list now contains two members each of these genera, thus particularly highlighting the severe threats they are facing.

During the discussion of the 2012–2014 list at the XXIV Congress of IPS in Cancún in 2012, a number of other highly threatened primate species were considered for inclusion (Table 4). For all of these, the situation in the wild is as precarious as it is for those species that finally made it on the list.

Table 2. Primate species included on the 2010–2012 list that were removed from the 2012–2014 list.

Africa		
<i>Ptilocolobus epieni</i>	Niger Delta red colobus	Nigeria
Madagascar		
<i>Prolemur simus</i>	Greater bamboo lemur	Madagascar
<i>Varecia variegata</i>	Black-and-white ruffed lemur	Madagascar
Asia		
<i>Tarsius tumpara</i>	Siau Island tarsier	Indonesia (Siau Is.)
<i>Macaca silenus</i>	Lion-tailed macaque	India
<i>Pongo pygmaeus pygmaeus</i>	Northwest Bornean orangutan	Indonesia (West Kalimantan, Borneo), Malaysia (Sarawak)
Neotropics		
<i>Cebus flavius</i>	Blond capuchin monkey	Brazil
<i>Callicebus barbarabrownae</i>	Barbara Brown’s titi monkey	Brazil
<i>Oreonax flavicauda</i>	Peruvian yellow-tailed woolly monkey	Peru

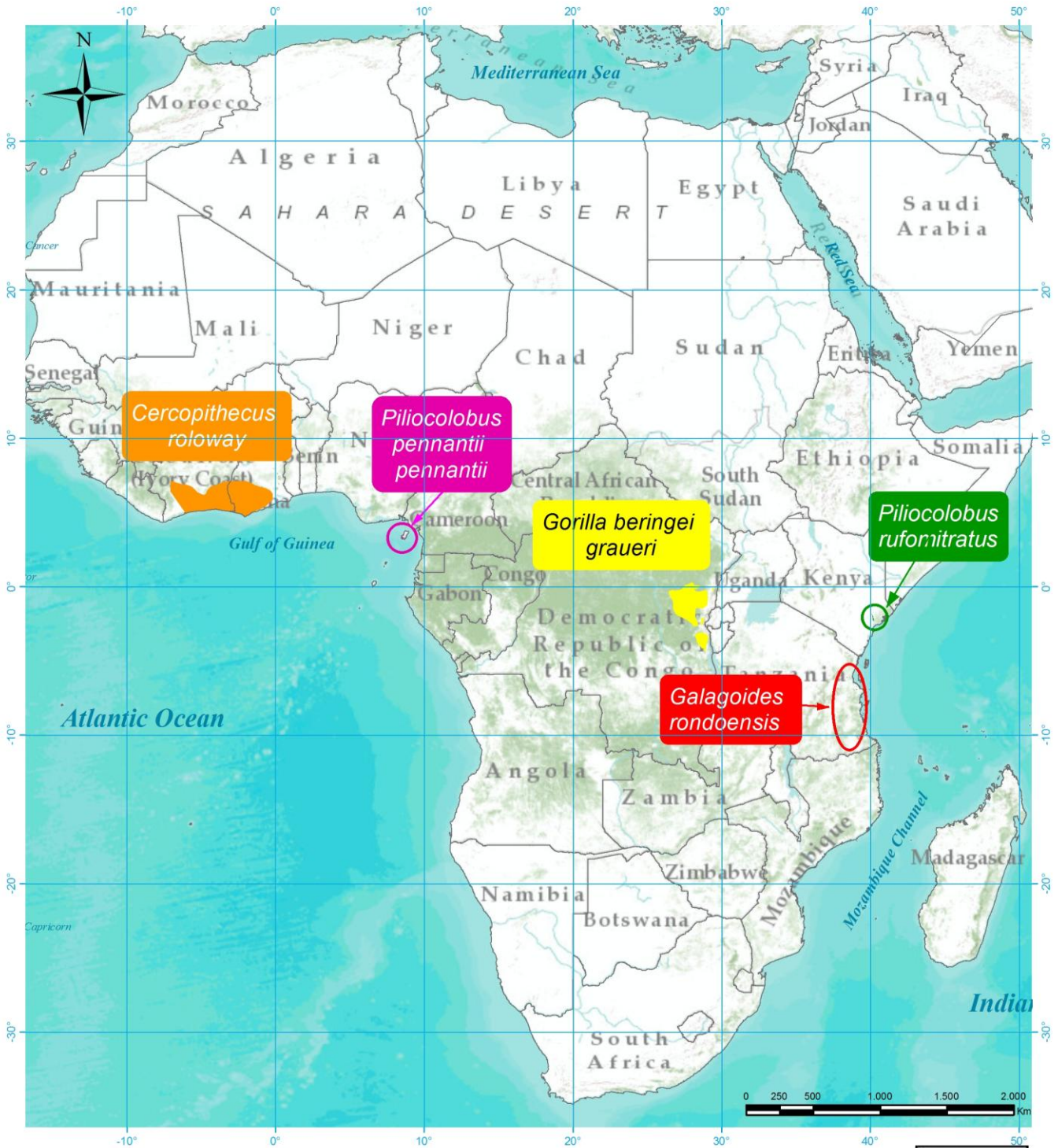
Table 3. Primate species that were added to the 2012–2014 list. The Tana River red colobus and the Ecuadorian brown-headed spider monkey were added to the list after previously being removed, and the other seven species are new to the list.

Africa		
<i>Ptilocolobus rufomitratu</i>	Tana River red colobus	Kenya
Madagascar		
<i>Microcebus berthae</i>	Madame Berthe’s mouse lemur	Madagascar
<i>Varecia rubra</i>	Red ruffed lemur	Madagascar
<i>Indri indri</i>	Indri	Madagascar
Asia		
<i>Tarsius pumilus</i>	Pygmy tarsier	Indonesia (Sulawesi)
Neotropics		
<i>Ateles fusciceps fusciceps</i>	Ecuadorian brown-headed spider monkey	Ecuador
<i>Cebus kaapori</i>	Ka’apor capuchin monkey	Brazil
<i>Callicebus oenanthe</i>	San Martin titi monkey	Peru
<i>Alouatta guariba guariba</i>	Northern brown howler monkey	Brazil

Table 4. Primate species considered during the discussion of the 2012–2014 list at the IPS Congress in Cancun that did not make it onto the list, but are equally highly threatened.

Africa		
<i>Piliocolobus preussi</i>	Preuss's red colobus	Cameroon, Nigeria
<i>Gorilla gorilla diehli</i>	Cross River gorilla	Nigeria, Cameroon
<i>Pan troglodytes ellioti</i>	Nigeria-Cameroon chimpanzee	Nigeria, Cameroon
Madagascar		
<i>Cheirogaleus sibreei</i>	Sibree's dwarf lemur	Madagascar
<i>Hapalemur alaotrensis</i>	Lac Alaotra bamboo lemur	Madagascar
<i>Eulemur cinereiceps</i>	White-collared brown lemur	Madagascar
<i>Propithecus perrieri</i>	Perrier's sifaka	Madagascar
Asia		
<i>Nasalis larvatus</i>	Proboscis monkey	Indonesia (Borneo)
<i>Presbytis comata</i>	Grizzled leaf monkey	Indonesia
<i>Rhinopithecus strykeri</i>	Myanmar snub-nosed monkey	Myanmar, China
<i>Nomascus hainanus</i>	Hainan black-crested gibbon	China (Hainan)
<i>Nomascus leucogenys</i>	Northern white-cheeked black-crested gibbon	Laos, Vietnam, China
Neotropics		
<i>Chiropotes satanas</i>	Black bearded saki	Brazil
<i>Leontopithecus caissara</i>	Black-headed lion tamarin	Brazil
<i>Saguinus bicolor</i>	Brazilian bare-faced tamarin	Brazil
<i>Callicebus caquetensis</i>	Caquetá titi monkey	Colombia

Africa



African Primates

- | | | | |
|---|--------------------------|---|----------------------------------|
|  | Cercopithecus roloway |  | Ptilocolobus pennantii pennantii |
|  | Galagoides rondoensis |  | Ptilocolobus rufomitratus |
|  | Gorilla beringei graueri | | |



Rondo dwarf galago

Galagoides rondoensis (Honest in Kingdon, 1997)

Tanzania

Top 25: 2006, 2008, 2010, 2012

Biology¹:

- Weighs ~60g²
- Distinct from other dwarf galagos in its bottle-brush-shaped tail, its reproductive anatomy, and its distinctive “double unit rolling call”²⁻⁴
- Mixed diet of insects and fruit
- Often feed close to the ground and move by vertical clinging and leaping in the shrubby understory
- Build daytime sleeping nests⁵
- Predation from owls and other nocturnal predators²
- Emerging evidence that the northern and southern populations may be phylogenetically distinct
- Sympatric with a number of other galagos

Range¹:

- Extremely limited and fragmented
- Range in a number of remnant patches of Eastern African Coastal Dry Forest in Tanzania^{2, 6}
 - Zaraninge forest (06°08'S, 38°38'E) in Sadaani National Park
 - Pande Game Reserve (GR) (06°42'S, 39°05'E),
 - Pugu/Kazimzumbwi (06°54'S, 39°05'E),
 - Rondo (10°08'S, 39°12'E),
 - Litipo (10°02'S, 39°29'E)
 - Ziwani (10°20'S, 40°18'E) forest reserves (FR)
 - Chitwa FR (09°57'S, 39°27'E)
 - Ruawa FR (09°44'S, 39°33'E)
- Total area known to occur does not exceed 101.6 km²^{1, 7, 8}
 - Pande GR: 2.4 km²,
 - Rondo FR: 25 km²,
 - Ziwani FR: 7.7 km²,
 - Pugu/Kazimzumbwi FR: 33.5 km²,
 - Litipo FR: 4 km²
 - Zaraninge forest: 20 km²,
 - Chitwa FR: 5 km²



Estimated population¹:

- Unknown
- Estimated density:
 - 3–6/ha at Pande Game Reserve⁹
 - 8/ha at Pugu Forest Reserve¹⁰
- Relative abundance from encounter rates
 - 3–10/hr at Pande Game Reserve and Pugu/Kazimzumbwi Forest Reserve^{9, 10}
 - 3.94/hr at Rondo Forest Reserve²

Threats¹:

- Very small and fragmented range in remnant forest patches
- Forest loss
 - Agricultural encroachment
 - Charcoal production
 - Logging

Justification for the Top 25:

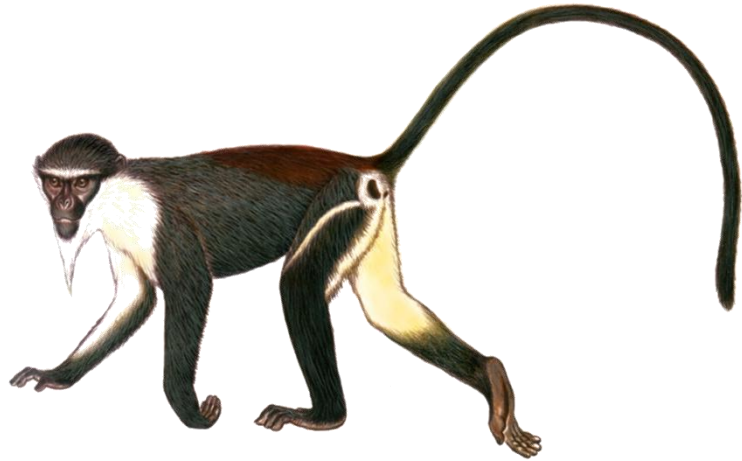
- Highly threatened by the logging of remaining small forest fragments

Roloway monkey

Cercopithecus roloway (Schreber, 1774)

Ghana and Côte d'Ivoire

Top 25: 2002, 2006, 2010, 2012



Biology¹¹:

- Closely related to *Cercopithecus diana*¹²
 - Distinguished from *C. diana* by its broad white brow line, long white beard and yellow thighs
 - *C. roloway* is more seriously threatened with extinction
 - Largely arboreal species¹³
 - Occurs in canopy of primary and old secondary lowland moist forest, and riverine and gallery forest¹³
 - Rare in degraded forest, but can survive in lightly logged forest where the canopy remains¹³
- 14 years ago found in the Yaya Forest Reserve, the Tanoé Forest adjacent to the Ehy Lagoon and the Parc National des Iles Ehotilé¹⁶⁻¹⁸
 - Now only found in the Tanoé forest^{18, 19}

Range¹¹:

- Found to the east of the Sassandra River in Côte d'Ivoire to the Pra River in Ghana¹³
- Considerable amount of primary habitat loss over the past ~30 years¹⁴
- Ghana
 - Steadily extirpated from both protected and unprotected areas and is nearing extinction
 - Several surveys have failed to find this species in any western reserves
 - Possibly exists in the Ankasa Conservation area¹⁵
- Côte d'Ivoire
 - Not known in any protected areas

Estimated population¹¹:

- Unknown
- Decline exceeding 50% (potentially exceeding 80%)¹⁴
- Numerous local extinctions

Threats¹¹:

- Hunting for the bushmeat trade
 - Relatively large size and value of its meat and skin makes it a preferred game species¹³
- Forest loss
 - Logging
 - Agriculture
 - Charcoal production²⁰
- Population fragmentation and isolation

Justification for the Top 25:

- Extirpation and continuing decline

Bioko red colobus

Piliocolobus pennantii pennantii (Waterhouse, 1838)

Equatorial Guinea (Bioko Island)

Top 25: 2004, 2006, 2010, 2012



Biology^{21, 22}:

- Previously four subspecies of *Piliocolobus pennantii* recognized: *P. p. pennantii*; *P. p. bouvieri*; *P. p. preussi*; and *P. p. epieni*
- Debated whether all should be elevated to species level
- *P. p. epieni* at least is considered elevated to species level
- *P. p. pennantii* is largely arboreal
- Found in lowland and mid-montane tropical moist forest and marsh forest
- Form groups of more than 30 animals
- Often found in polyspecific associations²³

Range^{21, 22}:

- Very restricted range on the island of Bioko, Equatorial Guinea
- Restricted mainly to the south-west of the island
- Range of less than 500km²²⁴⁻²⁶
- Confined to the Gran Caldera and Southern Highlands Scientific Reserve (510km²)
- Perhaps still at Pico Basile National Park (330km²)
- None of the ranges are well protected

Threats^{21, 22}:

- Heavy hunting
 - Most notably from the early 1980's when a commercial bushmeat market appeared in the town of Malabo²⁴
 - Bushmeat considered a 'luxury food'²⁶
- Limited range
- Habitat degradation
 - Especially sensitive to habitat degradation²⁷⁻²⁹

Estimated population^{21, 22}:

- Less than 5,000 individuals
- 45% decline in numbers between 1986 and 2006²⁶

Justification for the Top 25:

- Heavily hunted in a very restricted range

Tana River red colobus

*Piliocolobus rufomitratu*s (Peters, 1879)

Kenya

Top 25: 2002, 2004, 2006, 2008, 2012



Biology^{30, 31}:

- Previously *Procolobus rufomitratu*s *rufomitratu*s
- *Piliocolobus* separated from *Procolobus*³²
- Elevated to species level³²
- Inhabits gallery forest dominated by *Pachystela* and *Barringtonia*
- Not observed moving between habitat patches during the day
- Some movement at night which appears to be helping to ensure the continued survival of the groups in the seemingly isolated patches
- Broadly sympatric with *Cercocebus galeritus* and *Cercopithecus mitis albotorquatus*, and narrowly sympatric on the forest edges with *Papio cynocephalus ibleanus* and *Cercopithecus pygerythrus*

Range^{30, 31}:

- Found only on the levees of the lower Tana River in Kenya
- Total known range is 60 km from Kipende in the north to Mitipani in the south, where the Lamu–Garsen road enters the Tana River floodplain
- Restricted to ca. 34 patches of fragmented gallery forest, notably Guru South, Sifa East, Baomo South, Mnazini East, Bubesa West 1, Hewani South 2 forests³³
- All of these forests are small, ranging in size from <1 ha to c.500 ha.

Estimated population^{30, 31}:

- Estimated at 1,100–1,300, down from an estimated 1,200–1,800 in 1975³³⁻³⁵
- At least 86 groups occur in 34 forest patches^{32, 33}
- Mean group size has declined by about 50% since the 1970s

Threats^{30, 31}:

- Habitat loss, degradation and fragmentation³⁶
 - Forest clearance for agriculture
 - Fires eroding levee forests
 - Degradation due to livestock and wood collection
 - Selective felling of *Ficus* trees for canoes
- Habitat change
 - Drastic changes in vegetation due to dam construction, irrigation projects, and water diversion which changed the water table
- Hunting³⁷
- Parasites^{38, 39}

Justification for the Top 25:

- Small extent and increasingly smaller and more isolated patches of habitat

Grauer's gorilla

Gorilla beringei graueri (Matschie, 1914)

DRC

Top 25: 2010, 2012

Biology⁴⁰:

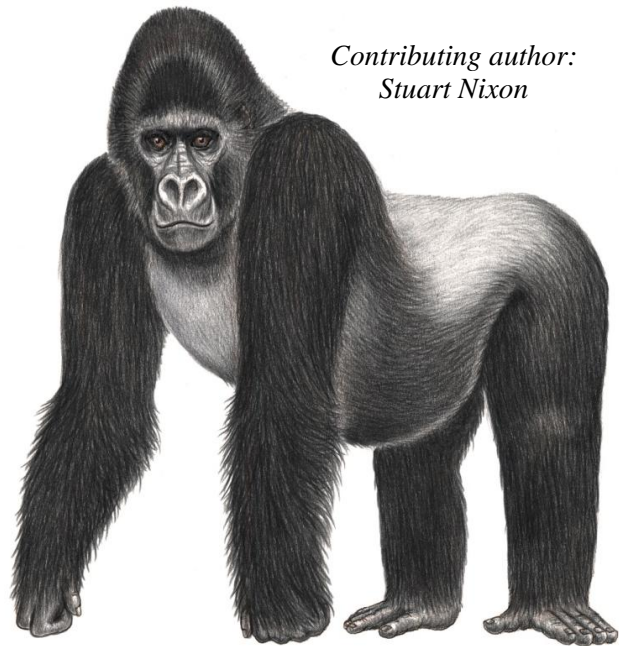
- One of two subspecies of eastern gorilla (*Gorilla beringei*)
- The largest, on average, subspecies of gorilla
- Inhabits lowland tropical rainforest habitat through transitional forests to Afromontane habitat of 600 to 2,900m asl
- Feeds mainly on herbaceous vegetation; fruit preferred when available
- Groups consist of 2–36 multi-aged individuals led by a single “silverback” male

Range⁴⁰:

- Endemic to eastern DRC
- Historical range ~52,000km²⁴¹
- Three broadly defined populations: Maïko-Tayna (Maïko National Park, Tayna Nature Reserve, Kisimba-Ikoba Nature Reserve and the Usala Forest), Kahuzi-Kasese (Kahuzi-Biega National Park (KBNP) lowland sector and adjacent forest) and the Itombwe Massif (Itombwe Natural Reserve)
- Isolated populations in the KBNP highland sector, Masisi and on Mt Tshiaberimu in Virunga National Park
- Habitat destruction and fragmentation widespread
- 52% reduction of suitable range since 1990⁴²

Estimated population⁴⁰:

- In 1995 estimated at 16,900 individuals^{43, 44}
- Many populations have disappeared during the last 30 years
- KBNP highland population dropped from ~270 in 1996 to only ~140 animals in 2000⁴⁵
- Preliminary surveys in KBNP lowlands indicate 75–80% decline since 1995⁴⁶
- Local extinctions on the north bank of the Lowa River and Masisi⁴⁷



Contributing author:
Stuart Nixon

- Southern Maïko populations exist in a region occupied by Simba rebels
- Northern Maïko populations remain unknown since 1992 due to lack of park infrastructure and the presence of militia
- Mt Tshiaberimu population dropped to 14 individuals in 2009
- Now estimated to number 2,000–10,000 individuals in 14 subpopulations⁴⁸

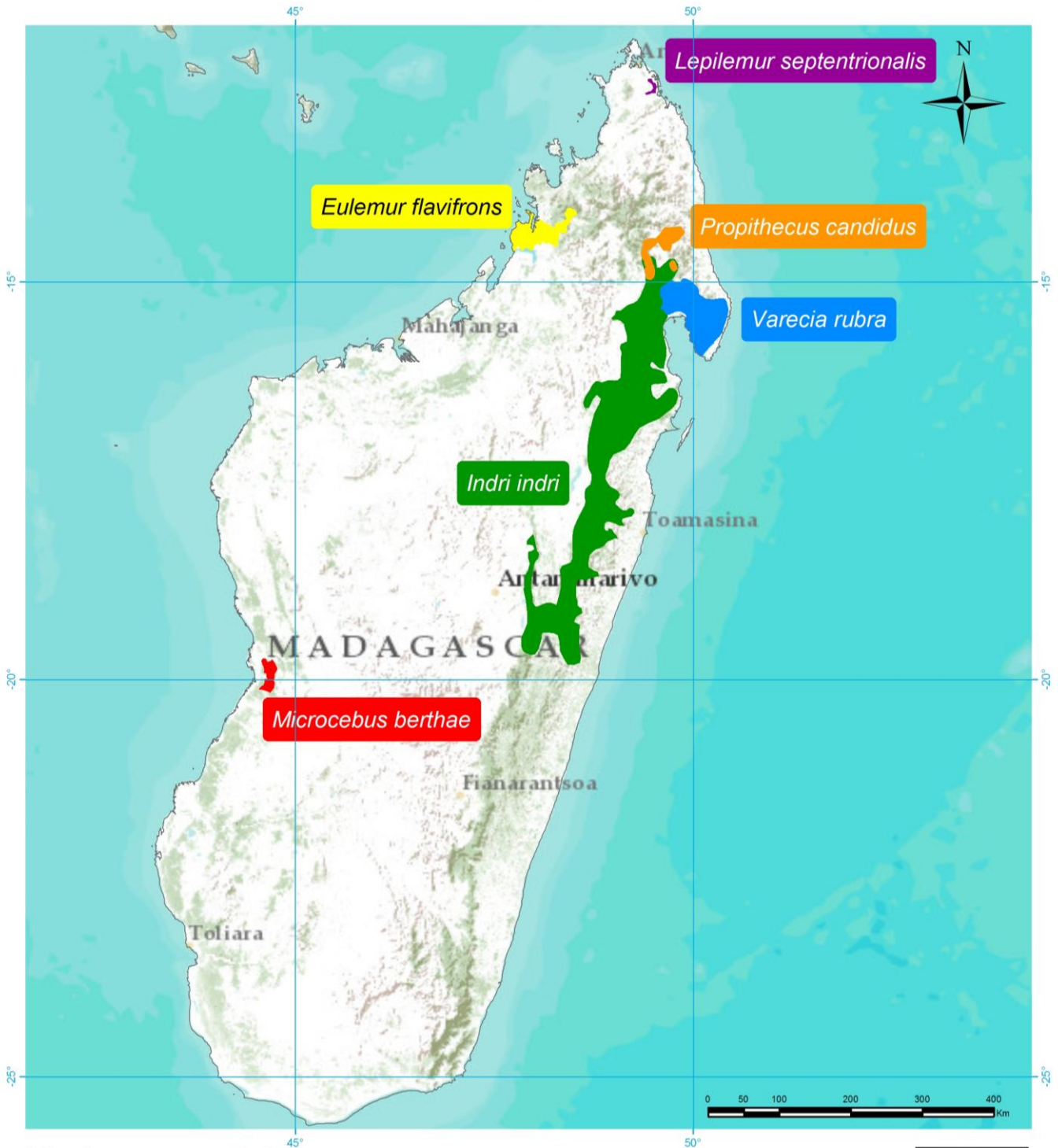
Threats⁴⁰:

- Massive forest loss and fragmentation
 - Agriculture
 - Pastoral activities
- Illegal mining
 - Bushmeat hunting
- Illegal capture of infants
- Ongoing political unrest and military activity
 - Bushmeat hunting^{43, 49-51}
- Continuous low-level extractive activities
 - Charcoal production
 - Bamboo harvesting
 - Wood cutting
- Future challenges may include concessions for timber, minerals and possible petroleum⁵²

Justification for the Top 25:

- Drastic and continuing population decline compounded by continuing civil unrest and widespread insecurity

Madagascar



Madagascar Primates

- | | |
|---|--|
|  Eulemur flavifrons |  Microcebus berthae |
|  Indri indri |  Propithecus candidus |
|  Lepilemur septentrionalis |  Varecia rubra |



Madame Berthe's mouse lemur

Microcebus berthae (Rasoloarison, Goodman & Ganzhorn, 2000)

Madagascar

Top 25: 2012



Biology⁵³:

- World's smallest primate (average 31g⁵⁴)
- Inhabits dry deciduous forest
- 0–150m asl
- Solitary forager characterized by extensively overlapping ranges⁵⁵
- Male ranges larger than females and more prone to seasonal fluctuation⁵⁵
- Daily torpor, but no prolonged torpor during the dry season
- Sympatric with the larger *Microcebus murinus* across some of the range^{56, 57}
- Avoids interspecific competition by spatial segregation, making distributions of both species patchy⁵⁷
- Feeds on fruit and gum⁵⁸
- Relies on sugary excretions from insects during the harsh dry season⁵⁸

Range⁵³:

- Menabe region in southwest Madagascar, south of the Tsiribihina River^{56, 57}
- Area $\leq 900\text{km}^2$
- Kirindy/CFPF forests and Ambadira
- Believed to also occur in the forests of Analabe, but the forest has been heavily degraded, so it is uncertain if it still occurs there⁵⁹
- Formerly occurred in the Andranomena Special Reserve, but it is not known if it still occurs there⁵⁷
- Range is severely fragmented
- Decline in the area and quality of habitat

Estimated population⁵³:

- <8,000 potentially breeding individuals⁵⁷
- Densities of 100/km² recorded in patches, which suggests high localized densities
- Overall generalized density ~30 individuals/km²⁵⁷
- None in captivity

Threats⁵³:

- Habitat loss and fragmentation
 - Illegal logging
 - Slash-and-burn agriculture

Justification for the Top 25:

- Small and severely fragmented range, which has seen a drastic decline in extent and quality of remaining habitat, especially since the illegal transfer of power in Madagascar in early 2009

Sclater's black lemur or Blue-eyed black lemur

Eulemur flavifrons (Gray, 1867)
Madagascar

Top 25: 2008, 2010, 2012

Biology⁶⁰:

- Rediscovered in 1983^{61, 62}
- Initially regarded as a subspecies of *E. macaco*
- Elevated to species level because of consistent morphological differences and pairwise genetic distances comparable to other *Eulemur* species pairs^{63, 64}
- Inhabits primary and secondary forest fragments^{61, 65-67}
- Home range size and use differs between primary and secondary forest fragments, indicating secondary forest is less suitable⁶⁸
- *E. flavifrons* has been recorded to consume 72 different plant species from 35 families, of which 52.3% were fruits and 47.7% were leaves
- Also feeds on flowers, insects, insect exudates and fungi⁶⁹
- Bimodal activity pattern⁷⁰
- Multi-male multi-female groups, ranging in size from 6 to 10 individuals, including 4 to 7 adults
- Both sexes disperse, but only males have been seen moving into a foreign social group
- The sex ratio at birth varies strongly between years and could be male-biased
- Births occur between late August and October, at the end of the dry season.
- During two successive birth seasons, infant mortality was 22.7%.

Range⁶⁰:

- Very small area of 2,700km² in northwest Madagascar, south of the Andranomalaza, north of the Maevarano, and west of the Sandrakota rivers^{61, 65-67}
- Transition zone between the humid Sambirano region in the north and the



western dry deciduous forest region in the south

- Largest remaining population in forest fragments on and adjacent to the Sahamalaza Peninsula⁷¹

Estimated population⁶⁰:

- In 1999, the estimated population of the Sahamalaza Peninsula was 450–2,300 wild individuals and had declined by 35.3% in three years⁷²
- Estimated total population, extrapolated from density^{73, 74} and area estimates, of 2,780–6,950 severely fragmented wild individuals
- 80% wild population reduction estimated and predicted over 35 years
- 30 captive individuals⁷⁵

Threats⁶⁰:

- Very small range
- Forest loss
 - Slash-and-burn agriculture
 - Selective logging
- Hunting and trapping
 - Bushmeat
 - Live capture for the pet trade^{72, 76}
 - Trap density of up to 570 traps/ km²⁷³

Justification for the Top 25:

- Highly fragmented population in very small range that is almost totally deforested

Red ruffed lemur

Varecia rubra (E. Geoffroy, 1812)

Madagascar

Top 25: 2012

Biology^{59, 77}:

- Diurnal
- Inhabits tropical moist lowland forests
- Apparent need for tall primary forest
 - Primarily inhabiting primary forest
 - Prefers high forest and is often observed in the crowns of large feeding trees
- Sea level to 1,200m asl
- Moves quadrupedally through the canopy, leaping occasionally
- Largely frugivorous (75–90%), with flowers, nectar and leaves
- Home range size: 23–58ha⁷⁸
- Multi-male, multi-female communities of 5–31 individuals⁷⁸
- Mating season May–July
- Births from September–early November
- Gestation period: 102 days
- Inter-birth interval: 2 years
- Mean litter size:
 - Wild: 2.11⁷⁹
 - Captivity: 2.22⁸⁰

Range⁷⁷:

- Very restricted range
- Masoala Peninsula and the region immediately north of the Bay of Antongil in northeastern Madagascar⁸¹
- 4000km²
- Antainambalana River appears to separate this species from *V. variegata*, but the western and northern limits of the red ruffed lemur's range remain unclear⁵⁹
- Westernmost distribution near the confluence of the Antainambalana and Sahantaha rivers⁸²



Estimated population^{59, 77}:

- Density estimates:
 - 31–53 individuals/km² in Andranobe⁸³
 - 21–23 individuals/km² in Ambatonakolahy⁸⁴
- Captive population of 590 in 2009

Threats⁷⁷:

- Habitat loss
 - Slash-and-burn agriculture
 - Human encroachment
 - Illegal logging
 - First lemur to disappear from degraded forest
- Hunting
 - Heavily hunted in its entire range

Justification for the Top 25:

- Small distribution range that is under severe threats of hunting and habitat loss

Northern sportive lemur

Lepilemur septentrionalis (Rumpler and Albignac, 1975)

Madagascar

Top 25: 2008, 2010, 2012



Biology⁸⁵:

- Originally described based on cytogenetic and morphometric characteristics⁸⁶
- Supported by more detailed studies since, especially molecular data⁸⁷⁻⁸⁹
- Small grayish-brown sportive lemur with not very prominent ears⁹⁰
- Nocturnal
- Sleeps in tree holes during the day
- Little known about its ecology and behavior

Range^{59, 85}:

- Strictly limited to a few small patches of dry forest in extreme northeastern Madagascar, just to the south of Antsiranana on the east coast
- Very small remnant forest patches:
 - Near the villages of Madirobe and Ankarongana in the Sahafary region
 - In the immediate vicinity of Andrahona, a small mountain about 30 km south of Antsiranana, east of Route Nationale 6
 - Sahafary (degraded forest patches in Western Sahafary, Sahafary East, Sahafary North, Andravina, Sahandrano, Andranomadiro, and Analalava) - about 100 individuals
- In 2012 probably only 19 individuals remaining in total

Threats^{59, 85}:

- Very small fragmented range
 - Most habitat already gone
 - Does not occur in protected areas
 - Uncertain if remaining fragments are of sufficient size to warrant protection
- Habitat destruction
 - For *Eucalyptus* plantations
 - Firewood collection
 - Charcoal burning
- Hunting
- Most restricted and least protected lemur

Estimated population^{59, 85}:

- Total population unknown, but very small
- A survey in 2007 provided the following estimates:
 - Andrahona (forest patches and gallery forests of Andrahona, Analajanana, and Analanjavavy) - 20 individuals
 - Ankarakataova (forests of Ankarakataova Be and Ankarakataova kely) - none found

Justification for the Top 25:

- Combination of small population, small range and rapidly decreasing suitable habitat, with high pressure from hunting

Silky sifaka

Propithecus candidus (Grandidier, 1871)

Madagascar

Top 25: 2000, 2002, 2004, 2006, 2008, 2010, 2012

Biology⁹¹:

- Large, white sifaka from northeastern Madagascar
- Recently raised to full species level^{59, 92, 93}
- This species does not occur with other sifakas and cannot be confused with other lemurs
- Found mainly in tropical montane forest
- Group size: 2–9
- Home ranges 34–47ha^{94, 95}
- Quarter of time travelling between foraging sites
- Folivorous and granivorous, consuming fruits, seeds and leaves from a large number of plant groups
- Mating occurs just a few days a year in November and January
- Young born in June or July⁹⁴
- Well-developed olfactory communication
- Scent-marking of territory
- Males gouge trees prior to scent-marking

Range⁹¹:

- Restricted range in northeastern Madagascar
- Includes the humid forest belt extending from Maroantsetra to the Andapa Basin and the Marojejy Massif
- Precise limits unknown
- Marojejy National Park is the northern limit of its known distribution and the forests of Makira and the Antainambalana River are regarded as the southern limit⁹⁶
- 300–1,875m elevation
- Patchy distribution and low densities
- Majority of the remaining population found in two protected areas: Marojejy National Park and Anjanaharibe-Sud Special Reserve



- A few groups have been found in the Makira Forest Protected Area at two sites: Andaparaty (central-east Makira) and Manandriana, 44 km to the northwest, adjacent to the Anjanaharibe-Sud Special Reserve).
- Also found in the Betaolana Corridor that connects Anjanaharibe-Sud and Marojejy, and the unprotected Tsaratanana Corridor to the northwest

Estimated population⁹¹:

- Less than 250 individuals⁹⁶
- Marojejy: 40 individuals/km² and 90 individuals/km²⁹⁷

Threats⁹¹:

- Habitat destruction
 - Slash-and-burn agriculture
 - Illegal logging of precious woods, including rosewood⁹⁶
 - Firewood
 - Occurs in and adjacent to protected areas they are found in⁹⁸⁻¹⁰⁰
- Hunted throughout range

Justification for the Top 25:

- Small fragmented population under extensive pressure from habitat destruction and hunting

Indri

Indri indri (Gmelin, 1788)

Madagascar

Top 25: 2012

Biology^{59, 101}:

- Largest extant species of lemur
- Vertical climber and leaper, with long hind limbs
- Identified by its eerie wailing song
- Male indri are slightly larger than females
- Males and females can also be distinguished by song
- Inhabits tropical moist lowland and montane forests
- Usually found at low elevations, but ranges up to 1,800m¹⁰²
- Lives in groups of 2–6 individuals, usually consisting of a monogamous adult pair
- Groups in fragmented habitats tend to be larger^{103, 104}
- Primarily feeds on immature leaves, with flowers, fruit, seeds and bark also consumed¹⁰⁵
- Descends from canopy every day to consume soil, which may help detoxify seeds consumed^{105, 106}
- Home range size 18ha in fragmented forest, up to ~40ha in pristine forest
- Reproduction is highly seasonal, with a single offspring born in May or June
- Birth interval: 2–3 years
- Reproductive maturity: 7–9 years¹⁰⁷

Range^{59, 101}:

- Eastern rainforests from Anjanaharibe-Sud in the north to Anosibe An'ala Classified Forest in the south
- Not found on the Masoala Peninsula or in the Marojejy National Park
- Subfossil evidence indicates that indri were once widespread across Madagascar



Estimated population¹⁰¹:

- Low population density
- 5.2–22.9 individuals/km²¹⁰⁶
- 50% reduction over the past 36 years

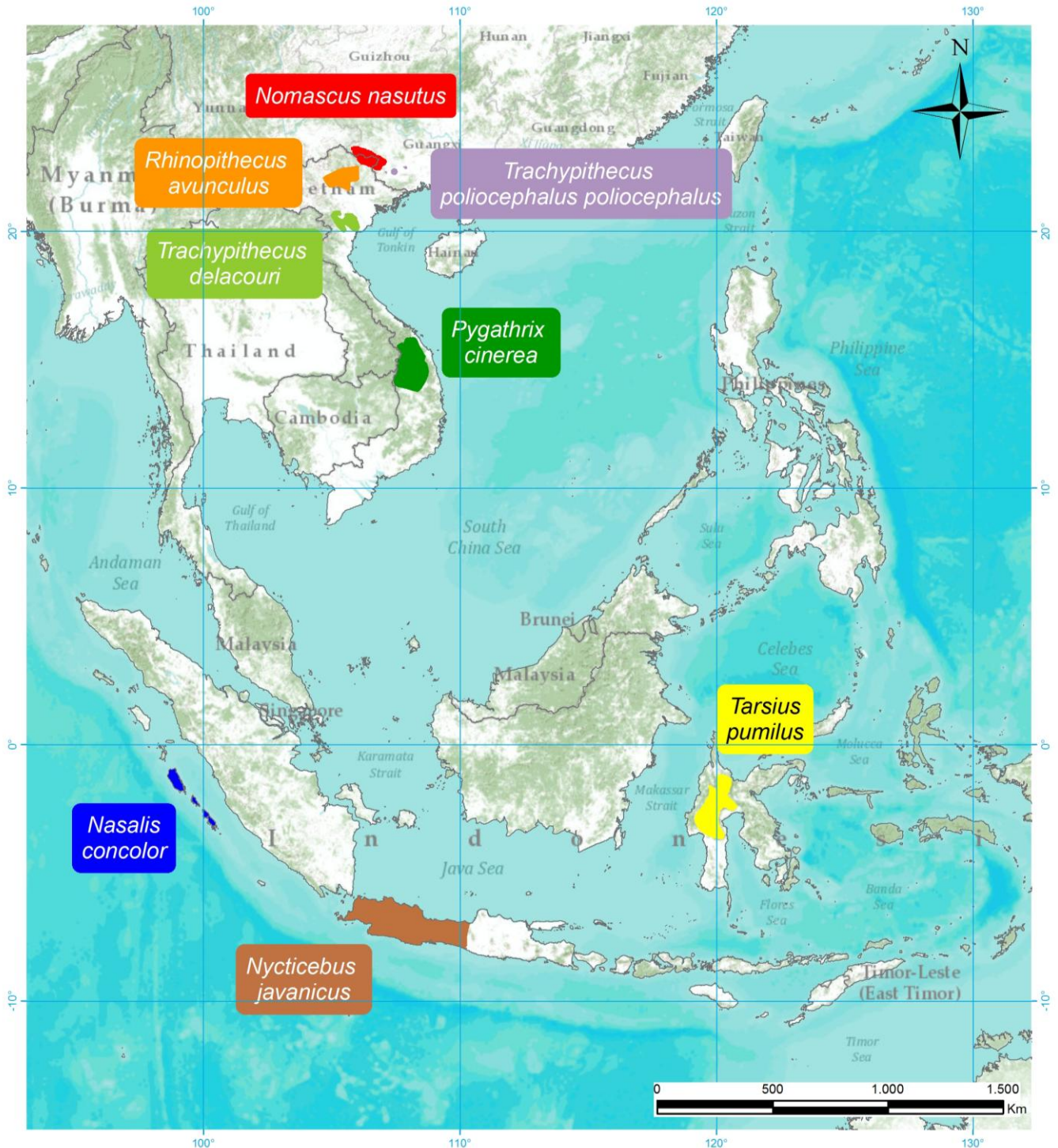
Threats¹⁰¹:

- Habitat loss
 - Forest loss for fuel and timber
 - Slash-and-burn agriculture
- Hunting
 - Previously considered a taboo, but now significant in some areas
 - Hunted for skins and meat
 - Unsustainable¹⁰⁸

Justification for the Top 25:

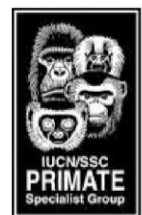
- High rate of habitat destruction and unsustainable hunting

Asia



Asian Primates

- | | |
|--|---|
| ■ <i>Nomascus nasutus</i> | ■ <i>Nasalis concolor</i> |
| ■ <i>Nycticebus javanicus</i> | ■ <i>Tarsius pumilus</i> |
| ■ <i>Pygathrix cinerea</i> | ■ <i>Trachypithecus delacouri</i> |
| ■ <i>Rhinopithecus avunculus</i> | ■ <i>Trachypithecus poliocephalus poliocephalus</i> |



Pygmy tarsier

Tarsius pumilus (Miller and Hollister, 1921)

Indonesia (Sulawesi)

Top 25: 2012

Biology^{109, 110}:

- Largely data-deficient
- Prior to 2008, known only from three specimens from 1916, 1930 and 2000^{111, 112}
- Thought to be extinct until the 2000 specimen was found dead in a rat trap
- In 2008, 3 individuals were captured and 1 additional individual was observed¹¹⁰
- Mean body mass: 50g, less than half of adult lowland tarsiers¹¹⁰
- Nocturnal
- Largely arboreal
- Lives in small groups
- Returns to the same sleeping tree each morning¹¹⁰
- Unlike lowland tarsiers, pygmy tarsier groups contain multiple adult males, and they rarely vocalize or scent-mark¹¹⁰
- Found at high altitudes (~1,800–2,200m asl)
- Adapted to colder, montane cloud forests¹¹²
- Arthropod based insectivorous diet

Range¹⁰⁹:

- Southern and central Sulawesi, Indonesia
- Specimen 1 (1916): 1,800 m from Rano Rano, in the mountains between Palu and Poso
- Specimen 2 (1930): 2,200 m on Mount Rantemario in South Sulawesi
- Specimen 3 (2000): 2,200 m on the flank of Mount Rorekatimbu¹¹¹
- 2008 capture: Lore Lindu National Park, Central Sulawesi¹¹⁰

Estimated population¹⁰⁹:

- Unknown
- 3 museum specimens
- 3 captured and 1 additional observation in 2008¹¹⁰



Threats¹⁰⁹:

- Habitat encroachment and destruction
 - Expanding human population
- Human conflict
 - Some areas of Central Sulawesi near known sites are conflict zones
 - Factional fighting has seen the dislocation of large human populations that are then resettled in refugee camps

Justification for the Top 25:

- Highly fragmented and isolated populations threatened by human encroachment and conflict

Javan slow loris

Nycticebus javanicus (Geoffroy, 1812)

Indonesia

Top 25: 2008, 2010, 2012

*Biology*¹¹³:

- Recognized as a species in 2006
- Nocturnal and arboreal
- Found in both primary and secondary forest¹¹⁴
- Requires arboreal connectivity between trees, via vines and lianas
- Feeds on sap, floral florescence, gum and insects¹¹⁴
- Found at elevations of 0–1,600m but more common at higher elevations¹¹⁴

*Range*¹¹³:

- Western and central Java, Indonesia
- Less than 10% of the original forest remains, most covering the higher slopes of the central mountains
- Less than 20% of suitable habitat remains
- 17% of the potential distribution is protected

*Estimated population*¹¹³:

- Unknown
- Very low population densities (0.02–0.20 animals/km²)¹¹³
- 5–10 km must be walked to see a single loris
- Small population of confiscated animals in rescue centers but 95%–100% mortality has been reported due to health conditions associated with captivity



*Threats*¹¹³:

- Habitat loss
 - Deforestation
 - After an area is cleared, lorises are collected as they remain clinging to the trees¹¹⁵
- Hunting
 - Traditional medicines
 - Pet trade^{116, 117}
 - Not always the intended target but are picked up when found
 - Numbers in animal markets exceed the ability for population numbers to recover
 - Front teeth removed at markets
 - Most lorises die of dental abscesses, pneumonia or malnutrition
 - Unable to eat preferred gum and exhibit important social behavior¹¹⁸
 - Confiscated animals unlikely to survive in the wild
- Roads and human disturbance^{119, 120}
- Intrinsic risk: slow-reproducing¹²¹

Justification for the Top 25:

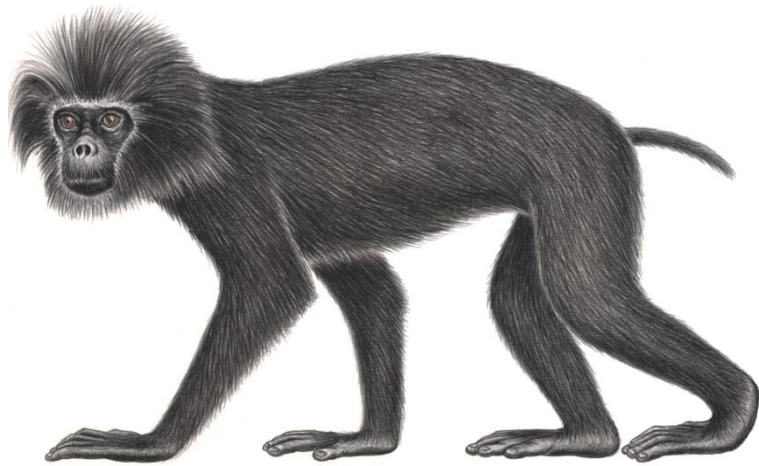
- Intensive hunting pressure

Simakobu or Pig-tailed snub-nosed langur

Nasalis concolor (Miller, 1903)

Indonesia

Top 25: 2002, 2004, 2006, 2008, 2010, 2012



Biology¹²²:

- Two subspecies:
 - *Nasalis concolor concolor* (Millar, 1903)
 - *Nasalis c. siberu* (Chasen and Kloss, 1927)
- Very little published on behavior and ecology
- Found in swamp forests and lowland rainforests and primary forests on hillsides¹²³⁻¹²⁵
- Diurnal¹²⁴
- Semi-terrestrial¹²⁴
- Almost equal time resting (46%) and feeding (44%) and less time moving (7%)¹²⁶
- Primarily folivorous¹²⁴
- Birth season from June to July¹²⁵

Range¹²²:

- Endemic to Indonesia
- Confined to the Mentawai Islands off the western coast of Sumatra¹²⁴
- *N. c. concolor*
 - Inhabits Sipora, North Pagai, and South Pagai Islands and several small islets off South Pagai
 - Remaining forest cover on the Pagai islands ~826km²¹²⁷
- *N. c. siberu*
 - Only on Siberut Island
 - 190,500ha Siberut National Park covers 47% of Siberut Island
 - Remaining 53% outside of protected areas

Estimated population¹²²:

- *N. c. concolor* two estimates: ~3,347 individuals on the Pagai islands¹²⁷ and 700–1,800 total population¹²⁸

- *N. c. siberu* ~6,000–15,000 in Siberut National Park
- Total population down from 26,000 in 1980
- Maximum decline of 75% in 20 years¹²⁴
- Population densities also reduced, indicating a 73–90% decline in 10 years¹²⁸⁻¹³⁰

Threats¹²²:

- Hunting
 - Preferred game species in some areas^{130, 131}
 - Hunting pressure increased with improved access and replacement of bows with air rifles¹²⁸
 - In 1987, estimated that twice as many individuals were hunted as were born in the Pagai islands¹²³
 - Pet trade
- Forest loss
 - Commercial logging^{124, 128} – particularly sensitive¹³⁰
 - Conversion to palm oil plantations and cash crops^{124, 128}
 - Human encroachment
 - Forest clearing and extraction by local people^{124, 128}

Justification for the Top 25:

- Heavy hunting and commercial logging

Delacour's langur

Trachypithecus delacouri (Osgood, 1932)

Vietnam

Top 25: 2000, 2002, 2004, 2006, 2008, 2010, 2012



Biology¹³²:

- Restricted to limestone karst forest habitat, with additional records of secondary forest in limestone areas^{133, 134}
- Up to 1,000m asl¹³⁵
- Caves thought to offer protection from predators and temperature extremes¹³⁶
- Diurnal and crepuscular
- Degree of terrestriality is habitat-dependent¹³⁵
- 60–80% of the diet consists of leaves, with 20–40% shoots, fruit, flowers and bark¹³⁵

- Two protected areas with important subpopulations showed a decline of 20% in 5 years from 2000 to 2004
- Four protected areas showed a dramatic decline during 2009¹³⁷
- Approximately 6 locations extirpated
- Current total population unknown, but likely to be a maximum of 250 wild individuals

Range¹³²:

- Very restricted area in north Vietnam
- 5,000km² between 20°–21°N and 105°–106°E
- Distribution closely related to the limestone mountain ranges in the provinces Ninh Binh, Thanh Hoa, Hoa Binh, and Ha Nam¹³³
- 17 isolated locations totaling less than 400–450km² (size estimates from 18 locations)^{136, 137}

Threats¹³²:

- Small population size
- Hunting
 - Traditional medicines
 - Meat
- Fragmentation
 - Only the largest population of 68–70 individuals is thought likely to survive^{136, 137}
 - Inbreeding may result in loss of genetic viability
- Minor threat: Forest loss and degradation
 - Illegal grazing of goats
 - Limestone quarrying^{138, 139}
- Potential threat: Tourism and associated development¹³⁵

Estimated population¹³²:

- 1999/2000 estimated 281–317¹³⁶
- 320 hunted individuals over 10 years, but actual number undoubtedly higher
- 60% of total population in isolated subpopulations with less than 20 individuals¹³³
- Largest subpopulation, in the only well guarded forest, has increased and totals ~68–70 individuals^{133, 138, 139}

Justification for the Top 25:

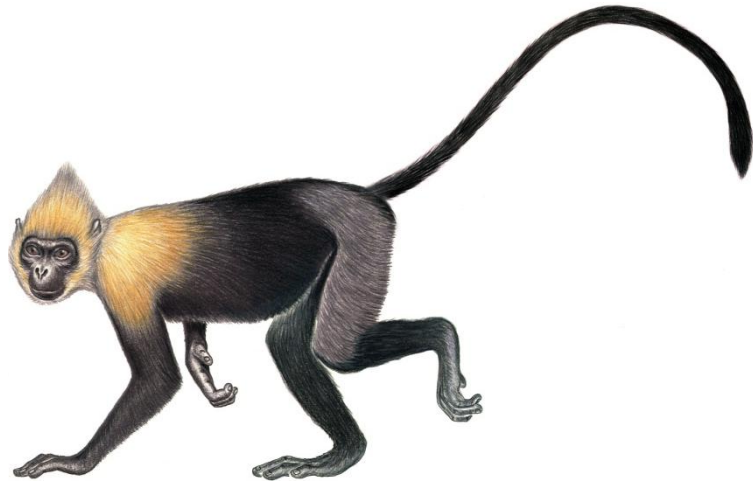
- Critically small, fragmented population under hunting pressure

Golden-headed langur or Cat Ba langur

Trachypithecus poliocephalus poliocephalus (Trouessart, 1911)

Vietnam

Top 25: 2000, 2002, 2004, 2006, 2008, 2010, 2012



Biology¹⁴⁰:

- Inhabits tropical moist forest on limestone karst hills
- 70–100m asl, possibly 0–200m¹⁴¹
- Six to seven taxa of the *T. francoisi* group share range
- Caves thought to offer protection from predators and temperature extremes, but are accessible by human hunters¹³⁶
- Diurnal
- Arboreal and terrestrial¹⁴²
- 60–80% of the diet consists of leaves, with 20–40% shoots, fruit, flowers and bark¹³⁵

Range¹⁴⁰:

- Confined to the island of Cat Ba in the Gulf of Tonkin, northeastern Vietnam
- Further restricted to ~100km² area of occupancy¹⁴³
- Mostly in Cat Ba National Park, which covers more than half of the main island¹⁴³
- Wildlife protection deficient
- Divided into seven isolated subpopulations due to habitat fragmentation¹⁴³

Estimated population¹⁴⁰:

- 60–70 individuals (64 in 2006¹⁴²)
- 3–4 all-female, non-reproducing groups¹⁴³
- Reproductive output low
- Stagnated at 1–2 offspring per year¹⁴³

Threats¹⁴⁰:

- Small population size
 - Fragmentation resulting in inbreeding in subpopulations, which could compromise genetic viability
 - Limited mate choice
 - Susceptible to natural or human disaster causing total extinction^{142, 143}
- Hunting
 - Traditional medicines
 - Bushmeat
 - Driven by increasingly attractive commercial gains
- Habitat disturbance and fragmentation
 - Increasing human population
 - Tourism and associated development
 - Rampant fires due to honey collectors^{142, 144}

Justification for the Top 25:

- Critically low population size and low reproductive output, with threats from hunting

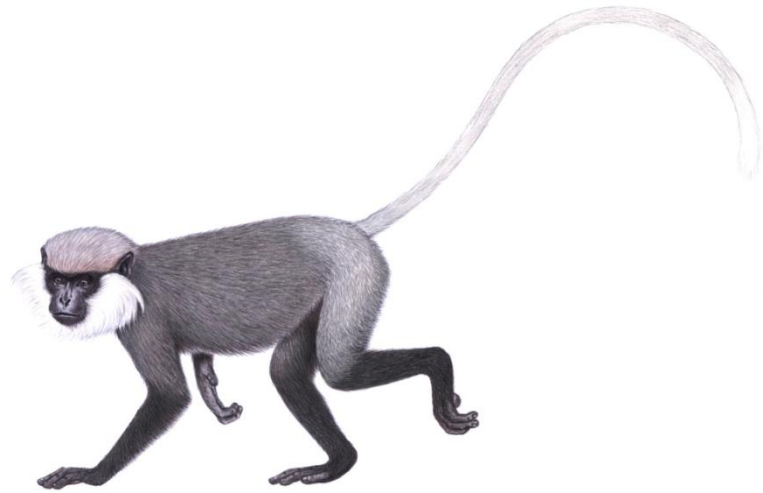
Western purple-faced langur

Semnopithecus vetulus nestor

(Bennett, 1833)

Sri Lanka

Top 25: 2004, 2006, 2008, 2010, 2012



Biology¹⁴⁵:

- Inhabits lowland tropical rainforest
- Refugee populations presently inhabit semi-urban and rural home gardens, rubber plantations and areas with adequate canopy cover¹⁴⁶
- Highly arboreal
- Fragmentation forces this species to the ground for which it is ill-adapted¹⁴⁷
- Folivorous
- Fragmentation and urbanization in most of this species' range has resulted in a diet mainly consisting of fruits from residential gardens¹⁴⁸
- Nutritional consequences of urban diet unclear, but feeding on fruits long-term may be detrimental as they are not adapted to a frugivorous diet and fruits tend to occur seasonally

Range¹⁴⁵:

- Western Sri Lanka, from the north of the Kalu Ganga as far north as the rainforest limit¹⁴⁹
- Ranges up to 1,000m asl¹⁴⁶
- Inhabits an area of high human density
- 81–90% of the entire historic range deforested and urbanized^{147, 150}
- Only recorded as present in 43% of eastern (n=23) and 78% in the western (n=27) halves of the historical range¹⁴⁷
- Population fragmentation and isolation
- Largest inhabited forests, with a total area of 21km², surround two reservoirs (Kalatuwawa and Labugama)¹⁴⁷

Estimated population¹⁴⁵:

- Unknown
- Believed to have undergone a decline of more than 80% over three generations¹⁵¹
- Extirpation¹⁵¹

Threats¹⁴⁵:

- Habitat loss and fragmentation^{152, 153}
 - Urbanization, including human settlement and infrastructure and industry
 - Agriculture, particularly crop plantations
 - Deforestation
- Dependent on gardens for survival
- Dangers from power lines and roads^{147, 151, 152}
- Dogs¹⁴⁷
- Occasional hunting
 - Pet trade
 - Persecution for crop-raiding¹⁵⁴
 - Local trade for meat, but not significant¹⁵²
 - Becoming more tolerant to humans which is putting them at increased risk¹⁵³

Justification for the Top 25:

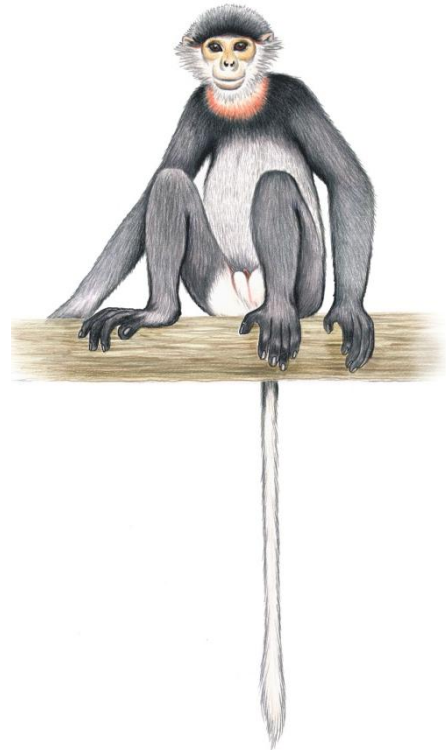
- Habitat loss, fragmentation and urbanization

Grey-shanked douc monkey

Pygathrix cinerea (Nadler, 1997)

Vietnam

Top 25: 2000, 2002, 2004, 2006, 2008, 2010, 2012



Biology¹⁵⁵:

- Mostly found in primary mountain evergreen forest¹⁵⁶
- Altitude of 900–1,400m asl
- Canopy cover of 80–90%¹⁵⁶

Range¹⁵⁵:

- Central Vietnam between 13°30' and 16°N
- Recorded in five provinces: Quang Nam, Quang Ngai, Kon Tum, Gia Lai, and Binh Dinh^{136, 156}
- Occurrence confirmed in eight protected sites: Song Thanh Nature Reserve, Ngoc Linh Nature Reserve, Ba To Cultural and Historical Site, An Toan Nature Reserve, Kon Cha Rang Nature Reserve, Kon Ka Kinh National Park, Mom Ray National Park and A Yun Pa Nature Reserve

Estimated population¹⁵⁵:

- 600–700 individuals¹⁵⁶
- Fragmented
- Some areas with assumed occurrence not yet surveyed¹⁵⁶
- Endangered Primate Rescue Center has begun a breeding program with confiscated animals

Threats¹⁵⁵:

- Hunting
 - Meat
 - Traditional medicine
 - Pets¹⁵⁶
 - Problem inside protected areas
 - Response to hunting is to hide motionless rather than fleeing, which makes them more susceptible¹³⁶

- Snares common
- Degraded habitats increase the risk of being caught in snares whilst travelling
- Hundreds of traps installed in trees frequently used by monkey groups
- Trapped animals are often severely injured or mutilated
- Less than one quarter of hunted animals are confiscated alive¹⁵⁵

- Forest loss
 - Agricultural expansion
 - Illegal logging
 - Firewood collection
 - Almost 10,000ha of forest are selectively logged every year in the central highlands¹⁵⁶

Justification for the Top 25:

- Intensive logging and hunting

Tonkin snub-nosed monkey

Rhinopithecus avunculus (Dollman, 1912)

Vietnam

Top 25: 2000, 2002, 2004, 2006, 2008, 2010, 2012

Biology¹⁵⁷:

- Described in 1912
- Collected on no more than two occasions over the next 50–60 years
- Presumed extinct
- Rediscovered in 1989
- Tropical evergreen forests associated with karst limestone hills and mountains^{158, 159}
- Largely restricted to primary forest¹⁶⁰
- 200–1,200m asl¹⁵⁸
- Selective feeder consuming young leaves, unripe fruits and seeds^{159, 160}
- Diurnal¹⁶¹
- Arboreal and terrestrial¹⁵⁹

Range¹⁵⁷:

- Northeastern Vietnam¹⁴⁹
- Historically occurred east of the Red River¹³⁶
- Due to widespread deforestation and intensive hunting, its distribution has become severely restricted¹³⁶
- Currently, five completely isolated localities known
- Small forest patches in Tuyen Quang, Bac Kan, Ha Giang and Thai Nguyen Provinces¹³⁶

Estimated population¹⁵⁷:

- Tat Ke sector¹⁵⁸
 - 1993: 72 individuals observed, 80 estimated¹⁶⁰
 - 2005: far lower densities, 17–22 estimated¹⁵⁸
- Ban Bung sector¹⁵⁸
 - 1993: 23 observed, 50 estimated¹⁶⁰
 - No verifiable information for 2005¹⁵⁸
- Cham Chu Nature Reserve
 - 1992: survey with locals estimated 20–40 individuals¹⁶²
 - 2001: 70 estimated¹⁶³



- 2006: No evidence, but local reports suggested 8–12
- TSM conservation area, Ha Giang Province
 - 2001: estimated 30–40 based on interviews¹⁶⁴
 - 2006: observed about 81 animals; estimated 90¹⁵⁸
- Tung Vai Commune of Quan Ba District close to the border with China
 - 60 individuals
- Total population: estimated around 200–250+ individuals throughout range^{157, 159}

Threats¹⁵⁷:

- Hunting pressure¹⁵⁹
 - Traditional medicines^{136, 158}
 - High pressure¹⁵⁸
 - Hydroelectric power project increases number of people and demand for meat^{136, 158}
 - Not shy and do not necessarily flee when encountered¹⁶¹
- Habitat degradation
 - Firewood
 - Timber exploitation
 - Shifting cultivation
 - Collection of non-timber forest products for commercial purposes
 - Roads¹⁵⁹

Justification for the Top 25:

- Critically small fragmented population under hunting pressure

Gibbons in Peril:

- Three species of gibbon were considered for this edition: *Nomascus hainanus*, *N. leucogenys* and *N. nasutus*
- *N. hainanus* was recently listed on the ZSL/IUCN list of 100 most threatened species (*Priceless or Worthless*), with just 23–25 individuals remaining
- For the *World's 25 Most Endangered Primates 2012–2014*, we have selected *N. nasutus* as a flagship species to highlight the plight of other gibbons

Cao-Vit or Eastern black-crested gibbon

Nomascus nasutus (Kunkel d'Herculais, 1884)

China, Vietnam

Top 25: 2008, 2010, 2012

Biology¹⁶⁵:

- Historically one of two subspecies, but both elevated to species level^{166, 167}
- Inhabits montane and limestone forests in a wet tropical monsoon climate¹⁶⁸
- 500–900m asl¹⁶⁸
- Primarily frivorous (86.6%), but also consumes leaves (4.7%), animal matter (0.5%) and undetermined food class (8.2%)^{169, 170}

Range¹⁶⁵:

- Historical range was east of the Red River in China and Vietnam
- Current range very restricted
- Sino-Vietnam border, northeastern Vietnam^{167, 171, 172}
 - 48km²
 - 22°55'N 106°30'E
 - Includes the northern Phong Nam-Ngoc Khe forests (about 30km²) of Trung Khanh District, Cao Bang Province, Vietnam
- Jingxi County, Guangxi Zhuang Autonomous Region, southeastern China^{167, 171, 172}
 - Area immediately adjacent to Vietnam
 - ~18km²

Estimated population¹⁶⁵:

- Feared extinct until a survey rediscovered a population in the limestone forest of Phong Nam-Ngoc Khe Communes^{171, 172}



- 2002: estimated 26 individuals in five groups^{171, 172}
- 2004: 37 individuals in eight groups¹⁷³
- Total population estimated at 110 individuals living in 18 groups¹⁷³

Threats¹⁶⁵:

- Habitat loss and disturbance
 - Cleared for cultivation
 - Pasture for livestock
 - Firewood collection
 - Charcoal production
 - Already restricted range¹⁷⁰
- Small population
 - Inbreeding effects
 - Poor mate choice
 - Human or natural disaster^{167, 170}
- Hunting¹⁷⁰

Justification for the Top 25:

- Small range and population size, with a large threat from habitat loss and disturbance

Neotropics



Neotropical Primates

- Alouatta guariba
- Callicebus oenanthe
- Ateles fusciceps
- Cebus kaapori
- Ateles hybridus



Variegated or Brown spider monkey

Ateles hybridus (I. Geoffroy, 1829)

Colombia, Venezuela

Top 25: 2004, 2006, 2008, 2010, 2012

Biology¹⁷⁴:

- Two subspecies:
 - *Ateles hybridus brunneus*
 - *A. h. hybridus*¹⁷⁵
- Large size
- Slow reproductive rate of a single offspring at 3–4-year intervals
- Spider monkeys are generally highly frugivorous (83%), but also eat young leaves and flowers¹⁷⁶
- They form groups of up to 20–30 individuals¹⁷⁶

Range¹⁷⁴:

- *A. h. brunneus*
 - Restricted to Colombia
 - Between the lower Ríos Cauca and Magdalena in the Departments of Bolívar, Antioquia and Caldas¹⁷⁷
 - Small geographic range where forest loss, degradation and fragmentation are widespread
 - Surrounded by human populations
 - 9% of potential range remains continuous forest
- *A. h. hybridus*
 - Right bank of the Río Magdalena extending into western Venezuela^{175, 178}
 - Extremely fragmented, with small populations

Estimated population¹⁷⁴:

- Unknown
- Low population densities
- *A. h. hybridus* extremely fragmented and there may be few populations of an adequate size to be viable in the mid- to long-term^{175, 177}



- Potential extirpation
- Held in captivity in zoos and rescue centers in Colombia

Threats¹⁷⁴:

- Habitat loss and increasing fragmentation
 - Agriculture and cattle
 - Human expansion
 - Land clearing
 - Logging
 - Conversion to secondary forest
 - Potential corridors at risk
- Hunting
 - *A. h. hybridus* a favourite game species in the Perijá Mountains¹⁷⁹
- Pet trade

Justification for the Top 25:

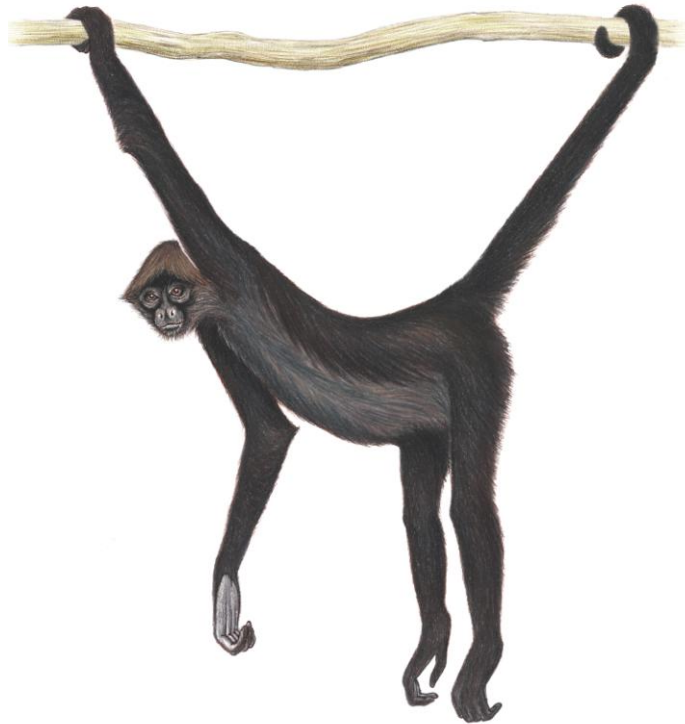
- High rate of habitat loss and hunting

Ecuadorian brown-headed spider monkey

Ateles fusciceps fusciceps (Gray, 1866)

Ecuador

Top 25: 2006, 2012



Biology¹⁸⁰:

- Tropical and subtropical human forests from 100 to 1,700m asl¹⁸¹
- Diurnal
- Strictly arboreal, preferring the uppermost levels of the canopy
- Group size of up to 35 individuals
- Diet consists mainly of ripe fruit (83%), but also flowers and a number of species of leaves¹⁸²
- Slow reproductive rate of one offspring at up to 3-year intervals¹⁸³

Range^{22, 180}:

- Endemic to Ecuador in the north, west of the Andes, in the Province of Esmeraldas, and, at least historically it would seem, south as far as the Cordillera de Colonche
- Very small distribution, which is highly fragmented
- Two populations remaining:
 - North of the Rio Mira, in the “Reserva Etnica Awá” close to the Colombian border²²
 - To the south, largely within the limits of the “Reserva Ecológica Cotacachi-Cayapas” and the neighbouring forest (north), mainly in a private reserve: “Reserva Biológica Los Cedros”²²
- It has been suggested that *A. f. fusciceps* may be found in southern Colombia, continuous with the populations in Ecuador¹⁷⁸, but there is still no evidence to support this

Estimated population^{22, 180}:

- Unknown
- Population density of 1.2 individuals/km² in Cotacachi-Cayapas¹⁸⁴
- 80% decline due to habitat loss¹⁸⁵

Threats^{22, 180}:

- Habitat loss and fragmentation
 - High rate due to deforestation¹⁸⁵
- Hunting
 - Strong pressure¹⁸⁵

Justification for the Top 25:

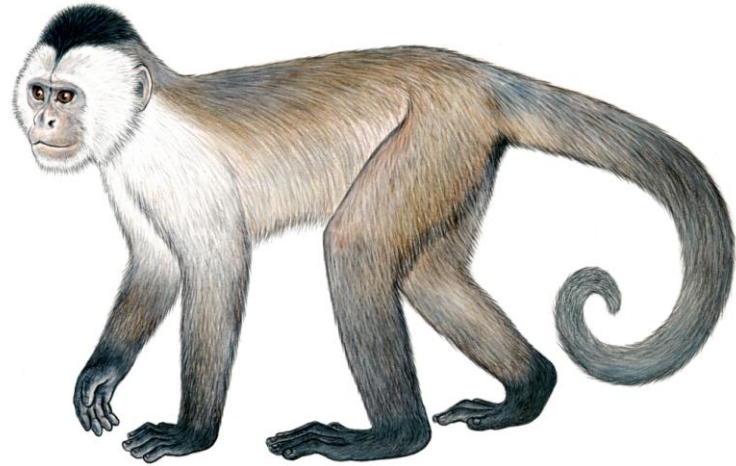
- Restricted distribution with high fragmentation, and small population size

Ka'apor capuchin monkey

Cebus kaapori (Queiroz, 1992)

Brazil

Top 25: 2012



Biology¹⁸⁶:

- Arboreal quadrupeds, typically found in the lower to mid-canopy and understorey¹⁸⁷⁻¹⁸⁹
- Undisturbed and slightly disturbed dense lowland Amazonian high forest
- Altitudes of 200m or less¹⁹⁰
- Can also be found in edge habitat in the transition with the Zona dos Cocais
- Frugivorous and insectivorous diet, they are manipulative and extractive scavengers
- Groups observed to be 1–7 individuals¹⁹¹
- Males disperse
- Both sexes take up linear hierarchies, the top ranking male being dominant over the top ranking female¹⁸⁷
- Sympatric with *Cebus apella*, causing inter-species competition¹⁹²

Range¹⁸⁶:

- Northwest Maranhão and northeast Pará in the Brazilian Amazon¹⁹⁰
- Ranging from east of the lower Rio Tocantins to the bank of the Rio Grajaú where it enters the Zona dos Cocais^{190, 191, 193-196}
- Now absent east of the Rio Grajaú¹⁹³

Estimated population¹⁸⁶:

- Unknown
- Drastic decline of at least 80% over the past three generations

- Estimated density:
 - 0.98 individuals/km² in the Gurupí Biological Reserve¹⁹²
 - 0.99 groups/10 km in the Fazenda Cauaxi in Paragominas¹⁹¹
- Three groups in 480km walked in the Gurupí Biological Reserve¹⁹⁷

Threats¹⁸⁶:

- Habitat loss
 - Forests in southern Pará and Maranhão have been extensively destroyed
 - Region with the highest human population density and the highest level of deforestation and habitat degradation in the entire Brazilian Amazon¹⁹¹
 - Occurs in only one protected area, which has lost half of its forest
 - Selective logging of trees providing fruit that are a significant part of the diet¹⁹⁷
- Hunting
- Pet trade¹⁹⁰

Justification for the Top 25:

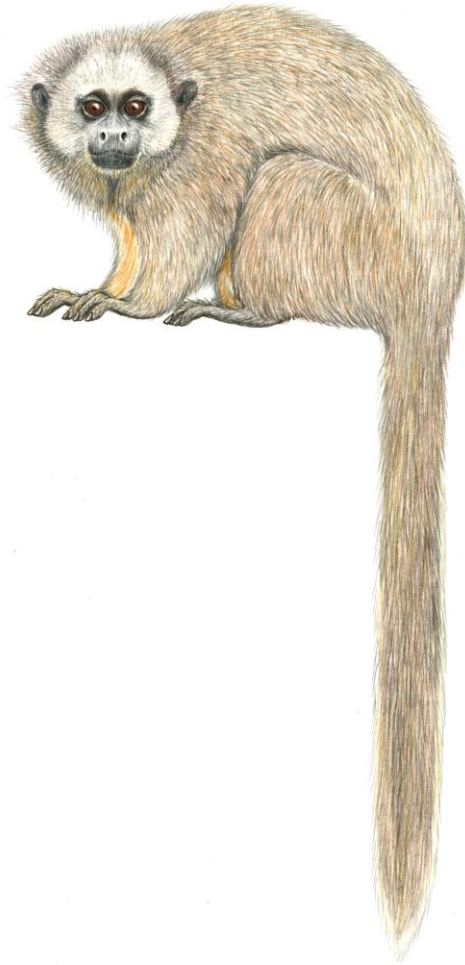
- Extreme threat from deforestation and hunting causing drastic population decline

San Martín titi monkey

Callicebus oenanthe (Thomas, 1924)

Peru

Top 25: 2012



Biology¹⁹⁸:

- Able to survive in a wide variety of habitats including, at least in the short term, in forest fragments^{199, 200}
- Monogamous
- Found in small family groups of two to six
- Females usually give birth to one offspring per year
- Diet consists primarily of insects and fruit
 - Liana species and fruits from the mistletoe family are particularly important
 - Insects form a larger portion of the diet than in most other titi monkey species²⁰¹

Range¹⁹⁸:

- Found in the upper Rio Mayo Valley, extending to the south into the Bajo Mayo and Huallaga central
- At least 60% of the original habitat has been lost²⁰²
- Additional surveys are required in all potential habitats in San Martín
- Not found in any protected areas

Estimated population¹⁹⁸:

- Estimated density of 1.4 individuals/ha
- Remaining populations extremely fragmented and in small groups
- Groups observed in fragments as small as 2ha¹⁹⁹
- Estimated decline of 80% over the last 25 years

Threats¹⁹⁸:

- Habitat loss and fragmentation^{200, 203}
 - Major agrarian program has attracted huge numbers of immigrants to the area

- This is largely the cultivation of rice and coffee
- Cattle ranching and selective logging also occur
- Rapid rates of deforestation have caused the loss of 40% of the forest over the last 20 years
- Construction of a two-lane asphalt road has further increased human activity in the area
- Also hunted for bushmeat^{200, 202, 203}, with pressure likely to increase as other game becomes scarce and forest fragmentation increases access.
- Popular as pets^{200, 202-204}

Justification for the Top 25:

- Massive deforestation of this species' preferred habitat resulting in a drastic population decline

Northern brown howler monkey

Alouatta guariba guariba
(Humboldt, 1812)

Brazil

Top 25: 2012



Biology^{205, 206}:

- Validity as a subspecies in question
- Inhabits lowland, submontane and montane forest
- Prehensile tail
- Communicates with howls which can be heard up to 2km away²⁰⁷
- Group size is usually four or five, but can be up to eleven
- Usually only one dominant male, occasionally two
- Quite small and broadly overlapping home ranges, of 5ha up to 45ha, depending on the type of habitat²⁰⁸
- Leaf-based diet
- The only New World primates to regularly include mature leaves in their diet, though younger leaves are preferred
- Molar teeth are particularly adapted for chewing leaves through shearing
- Mature fruit is also an important part of the diet

Estimated population^{205, 206}:

- Unlikely to be more than 250 mature individuals
- No subpopulation above 50 mature individuals is thought to exist

Threats^{205, 206}:

- Hunting
- Deforestation
 - Hunting is a larger threat as groups can survive in small forest fragments if they are not hunted
 - Selective logging
- Disease epidemics

Range^{205, 206}:

- Restricted to a small area north of the Rio Jequitinhonha

Justification for the Top 25:

- Very small population under a number of threats

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