

PRIMATES IN PERIL

The World's 25 Most Endangered Primates 2010–2012



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Variegated or Brown Spider Monkey (*Ateles hybridus*) © Andrés Link

Sclater's Black or Blue-eyed Black Lemur (*Eulemur flavifrons*) © Nora Schwitzer

Grauer's Gorilla (*Gorilla beringei graueri*) © Conservation International. Photo by Russell A. Mittermeier

Siau Island Tarsier (*Tarsius tumpara*) © Jeff Deehan

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Acknowledgements

The 2010–2012 edition of the World’s 25 Most Endangered Primates is, for the first time, presented in the form of species fact sheets. For this edition, we have summarized and updated the species profiles from the 2008–2010 edition 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 for 2008-2010** for their work on the previous edition, which forms the basis of the fact sheets in the new edition. Each profile from the 2008-2010 edition is cited on the new fact sheets:

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The World's 25 Most Endangered Primates: 2010–2012

Here we report the sixth 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 2010–2012 list was drawn up during an open meeting held during the XXIII Congress of the International Primatological Society (IPS), Kyoto, 16 September 2010. It is a joint effort by the IUCN/SSC Primate Specialist Group, the International Primatological Society, and Conservation International.

The 2010–2012 list of the world's 25 most endangered primates has five species from Africa, five from Madagascar, 11 from Asia and four from the Neotropics (Table 1). In terms of individual countries, Madagascar and Vietnam top the list, with five species each. Indonesia has four, Brazil two, and China, Colombia, Côte d'Ivoire, the Democratic Republic of Congo, Equatorial Guinea, Ghana, India, Malaysia, Nigeria, Peru, Sri Lanka, Tanzania and Venezuela each have one.

The changes made in this list compared to the previous iteration (2008–2010) were not because the situation of the seven species that were dropped (Table 2) has improved. In some cases, such as, for example, *Eulemur cinereiceps*, 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.

Table 1. The World's 25 Most Endangered Primates 2010-2012

Africa		
<i>Galagoides rondoensis</i>	Rondo dwarf galago	Tanzania
<i>Cercopithecus diana roloway</i>	Roloway monkey	Côte d'Ivoire, Ghana
<i>Ptilocolobus pennantii pennantii</i>	Bioko red colobus	Equatorial Guinea (Bioko Is.)
<i>Ptilocolobus epieni</i>	Niger delta red colobus	Nigeria
<i>Gorilla beringei graueri</i>	Grauer's gorilla	DRC
Madagascar		
<i>Prolemur simus</i>	Greater bamboo lemur	Madagascar
<i>Eulemur flavifrons</i>	Sclater's lemur	Madagascar
<i>Varecia variegata</i>	Black-and-white ruffed lemur	Madagascar
<i>Lepilemur septentrionalis</i>	Northern sportive lemur	Madagascar
<i>Propithecus candidus</i>	Silky sifaka	Madagascar
Asia		
<i>Tarsius tumpara</i>	Siau Island tarsier	Indonesia (Siau Is.)
<i>Nycticebus javanicus</i>	Javan slow loris	Indonesia (Java)
<i>Macaca silenus</i>	Lion-tailed macaque	India
<i>Simias concolor</i>	Simakobu or pig-tailed snub-nosed langur	Indonesia (Mentawai Is.)
<i>Trachypithecus delacouri</i>	Delacour's langur	Vietnam
<i>Trachypithecus poliocephalus 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	Vietnam
<i>Rhinopithecus avunculus</i>	Tonkin snub-nosed monkey	Vietnam
<i>Nomascus nasutus</i>	Cao-Vit or eastern black-crested gibbon	China, Vietnam
<i>Pongo pygmaeus pygmaeus</i>	Northwest Bornean orangutan	Indonesia (West Kalimantan, Borneo), Malaysia (Sarawak)
Neotropics		
<i>Ateles hybridus</i>	Variiegated spider monkey	Colombia, Venezuela
<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

Seven primate species were added to the 2010–2012 list (Table 3). Six of them were placed on the list of the world’s 25 most endangered primates for the first time. The Bioko red colobus had already been on the list from 2004 to 2008, but was removed in favor of the Niger Delta red colobus in 2008. The 2010–2012 list now contains both these species, which have very small ranges and are heavily hunted.

During the discussion of the 2010–2012 list at the XXIII Congress of IPS in Kyoto in 2010, 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 2008–2010 list that were removed from the 2010–2012 list.

Africa		
<i>Ptilocolobus rufomitatus</i>	Tana river red colobus	Kenya
<i>Rungwecebus kipunji</i>	Kipunji	Tanzania
<i>Gorilla gorilla diehli</i>	Cross river gorilla	Nigeria, Cameroon
Madagascar		
<i>Eulemur cinereiceps</i>	Grey-headed lemur	Madagascar
Asia		
<i>Hoolock hoolock</i>	Western hoolock gibbon	Bangladesh, India, Myanmar
<i>Pongo abelii</i>	Sumatran orangutan	Indonesia
Neotropics		
<i>Saguinus oedipus</i>	Cotton-top tamarin	Colombia

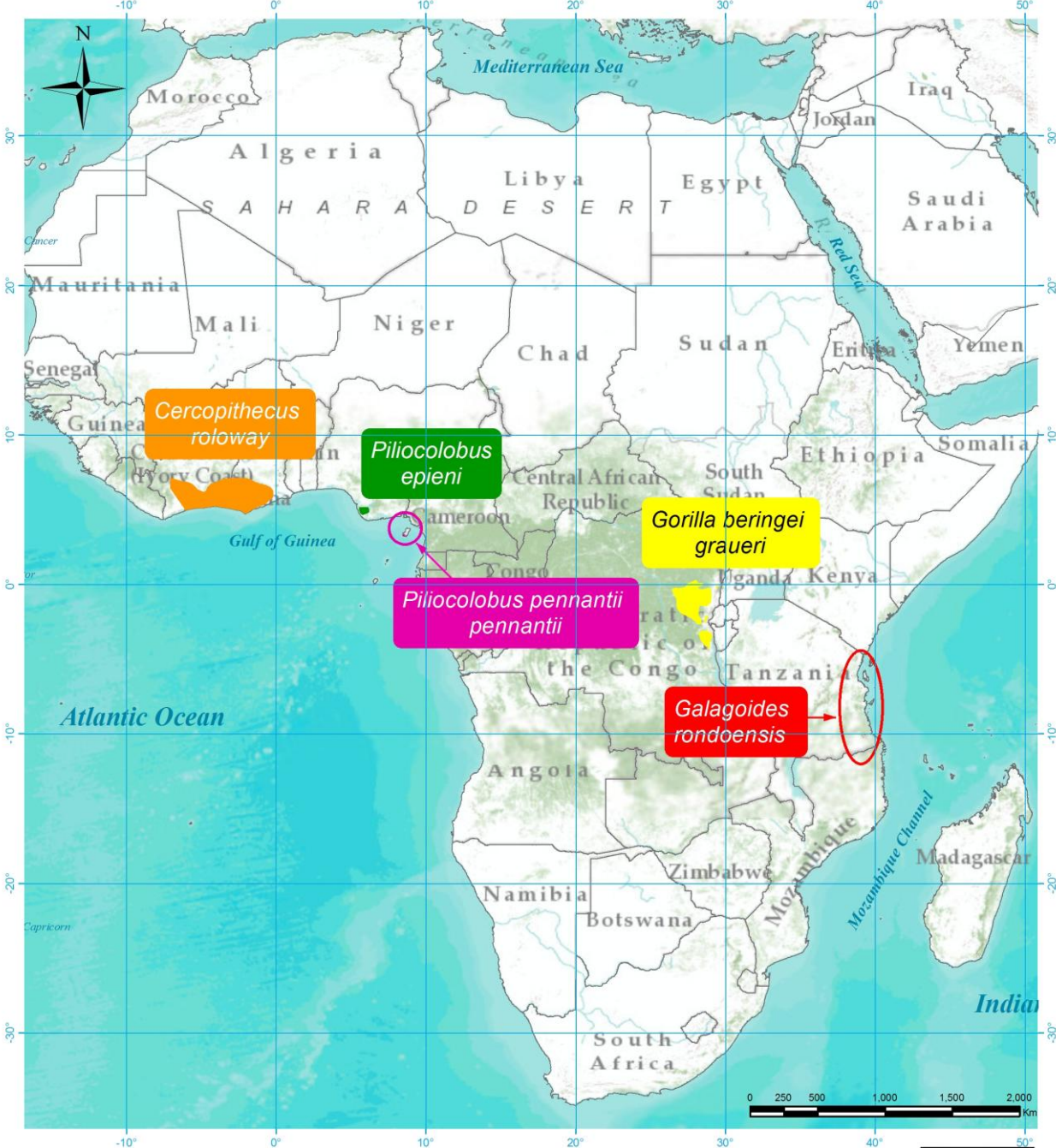
Table 3. Primate species that were placed on the list for the first time in 2010–2012. The Bioko red colobus was taken back on after it had been removed from the 2008–2010 list.

Africa		
<i>Ptilocolobus pennantii pennantii</i>	Bioko red colobus	Equatorial Guinea (Bioko Is.)
<i>Gorilla beringei graueri</i>	Grauer’s gorilla	DRC
Madagascar		
<i>Varecia variegata</i>	Black-and-white ruffed lemur	Madagascar
Asia		
<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

Table 4. Primate species considered during the discussion of the 2010–2012 list at the IPS Congress in Kyoto that did not make it onto the list, but are equally highly threatened.

Africa		
<i>Pan troglodytes ellioti</i>	Nigeria-Cameroon chimpanzee	Nigeria, Cameroon
Madagascar		
<i>Cheirogaleus sibreei</i>	Sibree's dwarf lemur	Madagascar
<i>Propithecus perrieri</i>	Perrier's sifaka	Madagascar
Asia		
<i>Macaca fascicularis umbrosa</i>	Nicobar long-tailed macaque	Union Territory of Andaman and Nicobar Islands, India
<i>Semnopithecus ajax</i>	Dark-armed Himalayan langur	India
<i>Semnopithecus vetulus monticola</i>	Highland purple-faced langur	Sri Lanka
<i>Rhinopithecus brelichi</i>	Guizhou snub-nosed monkeys	China
<i>Nomascus annamensis</i>	Northern buff-cheeked gibbon	Laos, Cambodia, Vietnam
<i>Nomascus siki</i>	Southern white-cheeked crested gibbon	Laos, Vietnam
Neotropics		
<i>Callicebus caquetensis</i>	Caquetá titi monkey	Colombia
<i>Chiropotes satanas</i>	Black saki	Brazil

Africa



African Primates

- Cercopithecus roloway*
- Piliocolobus epieni*
- Galagoides rondoensis*
- Gorilla beringei graueri*
- Piliocolobus pennantii pennantii*



Rondo dwarf galago

Galagoides rondoensis (Honest in Kingdon, 1997)

Tanzania

Top 25: 2006, 2008, 2010

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:

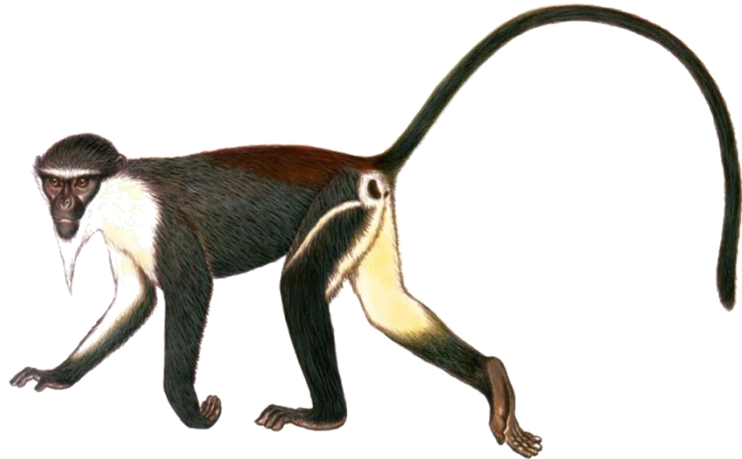
- Highly threatened by the logging of remaining small forest fragments

Roloway guenon

Cercopithecus diana roloway
(Schreber, 1774)

Ghana and Côte d'Ivoire

Top 25: 2002, 2006, 2010



Biology¹¹:

- Subspecies of *Cercopithecus diana*¹²
- Distinguished from *C. diana diana* by its broad white brow line, long white beard and yellow thighs
- Of the two subspecies, *C. d. 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

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

- 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}

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



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

Niger delta red colobus

Piliocolobus epieni (Grubb and Powell, 1999)

Niger Delta, Nigeria

Top 25: 2008, 2010



Biology³⁰:

- Only became known to science in 1993³¹
- Only one field study of this species
- Studies of vocalizations and DNA suggest that *epieni* is not closely related to its closest geographic relatives, the Bioko red colobus (*P. p. pennantii*; see previous page) or Preuss's red colobus (*Piliocolobus preussi*)
- Regarded as a distinct species³²
- Occurs in marsh forest of the Central Delta, which has a year round high water table³³
- Clumped distribution of food species in the marsh forest is suggested as a key factor for restricting the range of this species³³
- Important food sources, especially *Hallea ledermannii*, are being felled at a high rate by artisanal loggers

Range³⁰:

- Limited range in the Niger Delta, Nigeria
- Forcados River and Bomadi Creek in the northwest, the Sagbama, Osiana and Apoi Creeks in the east, and the mangrove belt to the south
- No formal protected areas in the Niger Delta

Estimated population³⁰:

- Unknown
- More than 80% decline in population over the past three generations³⁴

- Locally common at the time of its discovery in 1993, especially in forests near the town of Gbanraun, but it was beginning to come under intense pressure from degradation of its habitat and commercial hunting³³

Threats³⁰:

- Very small range (~1,500km²)
- Habitat degradation
- Commercial bushmeat hunting
- Logging
- Change in hydrological regime of marsh forest due to construction of canals for the oil industry

Justification for the Top 25:

- Very small range in an unprotected area

Grauer's gorilla

Gorilla beringei graueri (Matschie, 1914)
DRC

Top 25: 2010

Biology³⁵:

- One of two subspecies of Eastern gorilla (*Gorilla beringei*)
- The largest, on average, species of gorilla
- Lowland rainforest habitat through transitional forests to Afromontane habitat of 600 to 2900m elevation
- Mainly feed on herbaceous vegetation, with some fruit
- Groups consist of 2-36 multi-aged individuals led by a "silverback" male

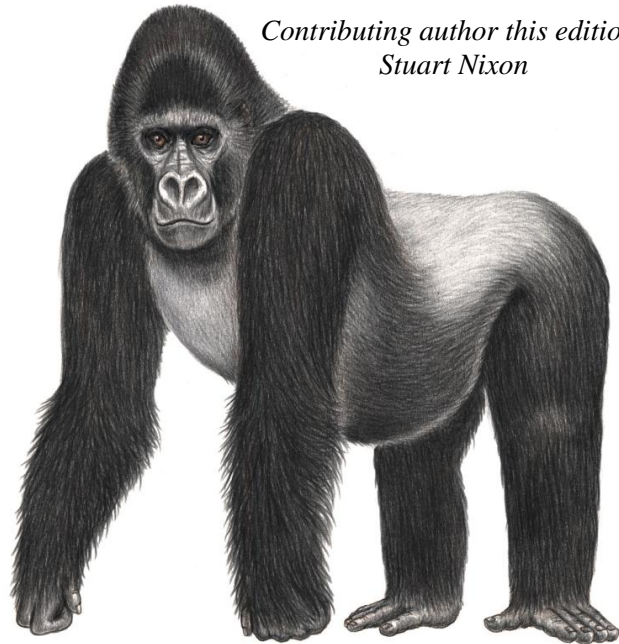
Range³⁵:

- Endemic to eastern DRC
- Historical range ~52,000km²³⁶
- 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 lowland sector and adjacent forest), and the Itombwe Massif (Itombwe Natural Reserve)
- Isolated populations in Masisi and the Kahuzi-Biega highland sector, and on Mt Tshiaberimu in Virunga National Park
- Habitat continues to become fragmented and discontinuous
- Current occupancy ~21,600km²
- Habitat reduction of 25% from 1959³⁶

Estimated population³⁵:

- In 1995 estimated at 16,900 individuals^{37, 38}
- Dramatic decline in the last decade
- Many populations have disappeared during the last 30 years
- In Kahuzi-Biega National Park highlands the population dropped from ~270 in 1996 to only ~140 animals in 2000³⁹
- Local extinctions on the north bank of the Lowa River and Masisi⁴⁰
- Preliminary surveys in Kahuzi-Biega National Park lowlands indicate 75-80% decline since 1995

Contributing author this edition:
Stuart Nixon



- Southern Maïko populations exist in a region occupied by Simba rebels
- Northern Maïko population status remain unknown since 1992 due to lack of park infrastructure and the presence of militia
- 14 individuals remain on Mt Tshiaberimu in Virunga National Park in a isolated area of 60km²
- Current total numbers unknown due to insecurity in much of the range

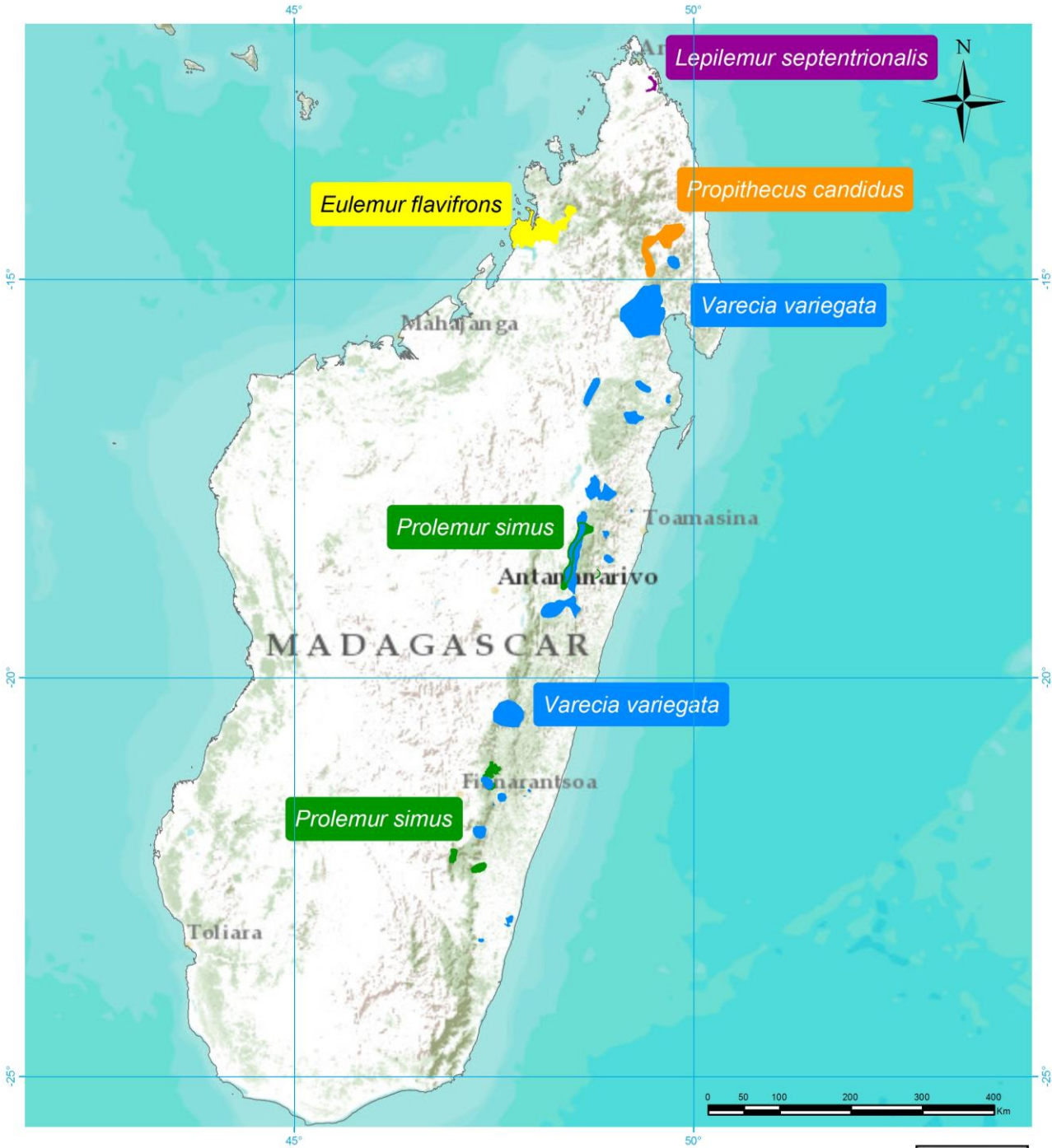
Threats³⁵:

- Massive forest loss and fragmentation
 - Agriculture
 - Pastoral activities
- Illegal mining
 - Bushmeat hunting
- Illegal capture of infants
- Ongoing political unrest and military activity
 - Bushmeat hunting^{37, 41-43}
- Continuous low-level extractive activities
 - Charcoal production
 - Bamboo harvesting
 - Wood cutting
- Future challenges may include concessions for timber, minerals and possible petroleum⁴⁴

Justification for the Top 25:

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

Madagascar



Madagascar Primates

- Eulemur flavifrons
- Propithecus candidus
- Lepilemur septentrionalis
- Varecia variegata
- Prolemur simus



Greater bamboo lemur

Prolemur simus (Gray, 1871)

Madagascar

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

Biology⁴⁵:

- Monospecific genus⁴⁶
- Cathemeral
- Gregarious, with group sizes up to 28 individuals^{47, 48}
- Only male-dominant species of lemur known^{47, 48}
- Large home range size of 60-97ha⁴⁷⁻⁴⁹
- Feeds almost exclusively on giant bamboo (*Cathariostachys madagascariensis*)⁴⁷⁻⁵⁰
- Adaptations of teeth and jaws to manipulate bamboo⁵¹

Range⁴⁵:

- Historically widespread throughout Madagascar⁵²
- Today occupies 1-4% of its former range, with a patchy distribution
- Confirmed to occur in 12 sites in eastern rainforests
- National parks: Ranomafana (Miaranony, Talatakely, and Ambatolahy Dimy) and Andringitra (Manambolo, possibly Korokoto, and Camp 2)
- Unprotected, degraded forests: Kianjavato, Morafeno, Karianga (near Vondrozo), Mahasoa, and Evendra (near Ivato)^{49, 53-57}
- Other: Forests of Torotorofotsy in the region of Andasibe-Mantadia^{50, 58}
- Genetically isolated ranges with critically low numbers⁵³

Estimated population⁴⁵:

- 100-160 wild individuals spread across the 12 sites⁵³
- 22 captive individuals⁵³



Threats⁴⁵:

- Small, isolated populations
- Habitat loss and fragmentation
 - Slash-and-burn agriculture
 - Mining
 - Illegal logging
 - Cutting of bamboo
- Hunting with sling-shots^{50, 54, 59}
- Reduced availability of drinking water due to climatic change⁵³
- Intrinsic: extreme dietary specialization and dependency on giant bamboo⁵³

Justification for the Top 25:

- Isolated populations with critically low numbers of individuals

Sclater's black lemur or Blue-eyed black lemur

Eulemur flavifrons (Gray, 1867)

Madagascar

Top 25: 2008, 2010

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 2,700 km² 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 2780-6950 severely fragmented wild individuals
- 80% wild population reduction during 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

Black-and-white ruffed lemur

Varecia variegata (Kerr, 1792)

Madagascar

Top 25: 2010

Biology⁷⁷:

- 3 subspecies:
 - *Varecia variegata editorum*
 - *V. v. subcincta*
 - *V. v. variegata*
- Distinguished by coat pattern
- Lowland to mid-altitude rain forests
- Large home range size in primary forest, with tall trees
- Almost exclusively frugivorous^{78, 79}
- Group size and structure varies
- Females give birth to 2–3 young
- Young left in nest when young, then carried in the mothers' mouth
- Ruffed lemurs are the only primates that build nests exclusively for the birth and rearing of infants⁸⁰

Range⁷⁷:

- Very patchy distribution in lowland to mid-altitude rain forests (sea level to 1,350m) in eastern Madagascar
- *V. v. editorum*:
 - Southernmost species
 - Mantadia southwards to Manombo Special Reserve
 - Range overlaps with *V. v. variegata* and intermediate forms exist⁴⁶
- *V. v. subcincta*
 - Northernmost subspecies
 - Antainambalana River in the north down to the Anove River, including part of Makira, Mananara-Nord, Atialanankorendrina, and Marotandrano
 - 1930's introduced to Nosy Mangabe in the Bay of Antongil⁸¹
 - Patchy distribution except for Nosy Mangabe⁸²
- *V. v. variegata*
 - South of the Anove River, from about Ambatovaky south to about Betampona and Zahamena National Park (including Ambatovaky)



Estimated population⁷⁷:

- Unknown
- Population densities from 0.4–2.5/km² in Manombo, to 10-15 individuals/km² in Antanamalaza, and 29-43 individuals/km² on Nosy Mangabe⁸³
- Captive population:
 - *V. v. editorum*: 0
 - *V. v. subcincta*: 38
 - *V. v. variegata*: 770⁸⁰

Threats⁷⁷:

- Forest loss
 - Slash-and-burn agriculture
 - Logging
 - Mining
- Hunting
 - Large bodied and diurnal; thus one of the most heavily hunted of all lemur species
 - In Makira, they are one of the most expensive and desired meats⁸⁴
 - One of the first lemurs to disappear where humans encroach

Justification for the Top 25:

- Large population decline and habitat fragmentation

Northern sportive lemur

Lepilemur septentrionalis (Rumpler and Albignac, 1975)

Madagascar

Top 25: 2008, 2010



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^{80, 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

Threats^{80, 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^{80, 85}:

- Total population unknown
- Probably only 100-150 individuals remaining
- 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

Biology⁹¹:

- Large, white sifaka from northeastern Madagascar
- Recently raised to full species level^{80, 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 north-west, adjacent to the Anjanaharibe-Sud Special Reserve).
- Also found in the Betaolana Corridor that connects Anjanaharibe-Sud and Marojejy, the unprotected Tsaratanana Corridor to the north-west

Estimated population⁹¹:

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

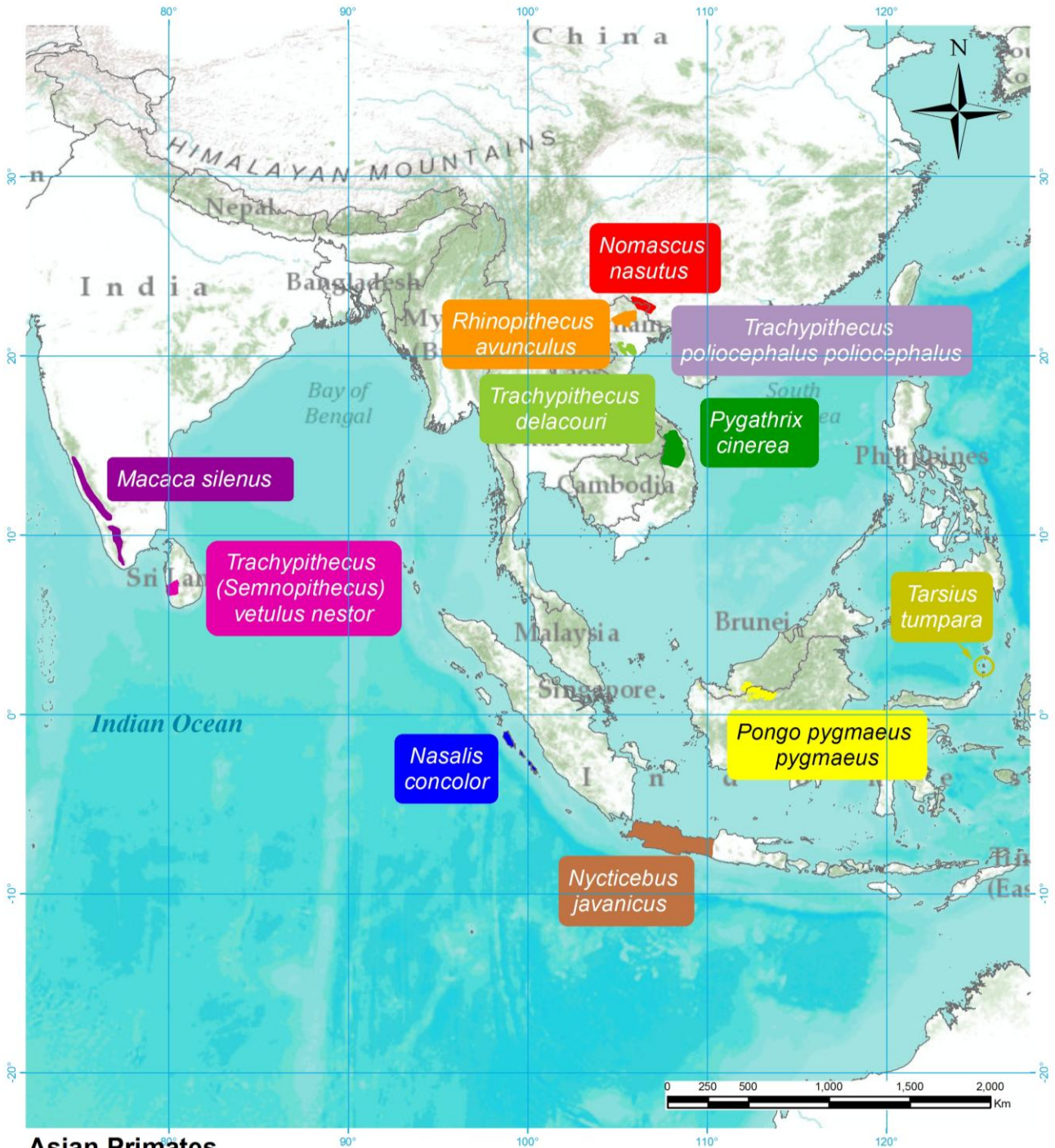
Threats⁹¹:

- Habitat destruction
 - Slash-and-burn agriculture
 - Illegal logging of precious woods, including rosewood⁹⁶
 - Firewood
 - Occurs in and adjacent to protected areas they are found⁹⁸⁻¹⁰⁰
- Hunted throughout range

Justification for the Top 25:

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

Asia



Asian Primates

- | | |
|--|--|
| <i>Macaca silenus</i> | <i>Nasalis concolor</i> |
| <i>Nomascus nasutus</i> | <i>Tarsius tumpara</i> |
| <i>Nycticebus javanicus</i> | <i>Trachypithecus delacouri</i> |
| <i>Pongo pygmaeus pygmaeus</i> | <i>Trachypithecus poliocephalus poliocephalus</i> |
| <i>Pygathrix cinerea</i> | <i>Trachypithecus (Semnopithecus) vetulus nestor</i> |
| <i>Rhinopithecus avunculus</i> | |



Siau Island tarsier

Tarsius tumpara (Shekelle, Groves, Merker and Supriatna 2008)

Indonesia

Top 25: 2006, 2008

Biology¹⁰¹:

- Phylogenetically linked to the Eastern Tarsiers, from the Sulawesi biogeographic region
- Expected to be found in primary (although none now within the range), secondary and mangrove forests
- Also found in forest gardens and a variety of other habitats with shrubby cover, with varying degrees of human disturbance
- Diet of small bodied arthropods, with some small vertebrates¹⁰²

Range¹⁰¹:

- Siau island, Indonesia
- Geographic range: ~125km²¹⁰³
 - Less than 100km² with the cone of the active volcano excluded¹⁰²
- Occupancy range: ~19.4km²¹⁰³
- Conceivable that they are also present on some very small islands in close proximity to Siau¹⁰²
- No primary habitat remaining
- Only found in two places so far
 - Shores of a small freshwater pond at the extreme southern end of the island
 - steep cliff face along the east coast road where it runs next to the ocean¹⁰¹
- Reported to also be high on the flanks of Mount Karengetang, near Cladera

Estimated population¹⁰¹:

- Estimated 1,358-12,470 individuals¹⁰³
- Locals report considerable declines in numbers
- Extirpation from areas they were once common 10 years ago¹⁰²



Threats¹⁰¹:

- Very small range¹⁰³
- Heavy hunting
 - High human density (311 people per km²)
 - Regularly consume tarsiers for snack food¹⁰³
- Mount Karengetang, a massive highly active volcano, dominates 50% of the range¹⁰³
- No protected areas in the range¹⁰³⁻¹⁰⁵
- Captive propagation programs have failed for other tarsiers, leaving no *ex situ* conservation options¹⁰⁶

Justification for the Top 25:

- Extremely small volcanic range, conversion of habitat for human use and hunting

Javan slow loris

Nycticebus javanicus (É. Geoffroy, 1812)

Indonesia

Top 25: 2008, 2010

*Biology*¹⁰⁷:

- Recognized as a species by the IUCN in 2006
- Nocturnal and arboreal
- Found in both primary and secondary forest¹⁰⁸
- Requires arboreal connectivity between trees, via vines and lianas
- Feeds on sap, floral florescence, gum and insects¹⁰⁸
- Found at elevations of 0-1,600m but more common at higher elevations¹⁰⁸

*Range*¹⁰⁷:

- 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*¹⁰⁷:

- Unknown
- Very low population densities (0.02-0.20 animals/km²)¹⁰⁷
- 5-10km 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*¹⁰⁷:

- Habitat loss
 - Deforestation
 - After an area is cleared, lorises are collected as they remain clinging to the trees¹⁰⁹
- Hunting
 - Traditional medicines
 - Pet trade^{110, 111}
 - 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 behavior¹¹³
 - Confiscated animals unlikely to survive in the wild
- Roads and human disturbance^{114, 115}
- Intrinsic risk: slow locomotion and slow-reproducing¹¹²

Justification for the Top 25:

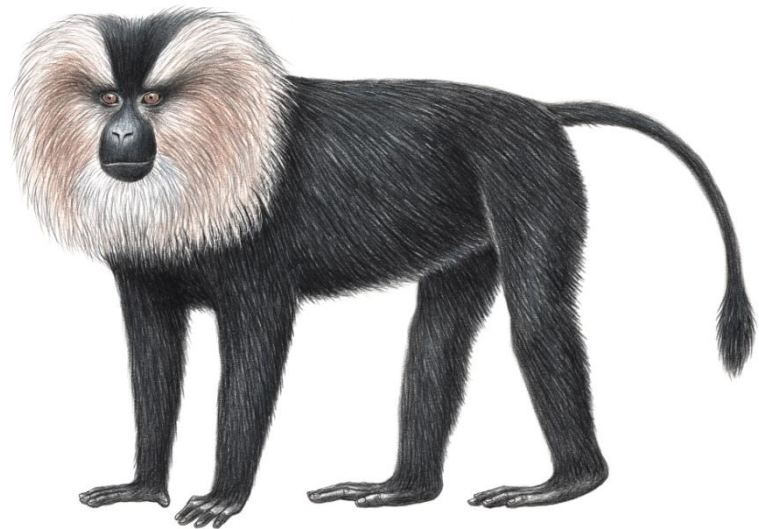
- Intensive hunting pressure

Lion-tailed macaque

Macaca silenus (Linnaeus, 1758)

India

Top 25: 2010



*Biology*¹¹⁶:

- Arboreal
- Preference for the upper canopy of primary tropical rainforest¹¹⁷
- Also found in monsoon forest in hilly country, disturbed forest and fruit tree plantations
- Omnivorous, primarily frugivorous and insectivorous
- Seasonal breeder associated with the fruiting season, which is dictated by the monsoonal climate¹¹⁸
- First birth: ~80 months
- Inter-birth interval: ~34.3 months
- Generation length: ~ 13 years

*Range*¹¹⁶:

- Endemic to the Western Ghats hill ranges in southwestern India from the Kalakkadu Hills (8°25'N) north to Anshi Ghat (14°55'N)¹¹⁹
- 100 to 1,800m asl¹²⁰
- Large range, but occupancy small and severely fragmented¹²⁰

*Estimated population*¹¹⁶:

- Less than 4,000 individuals, with less than 2,500 mature individuals¹²⁰
- 47 isolated subpopulations in seven different locations
- Subpopulations are small and isolated from one another
- No subpopulation with more than 250 mature individuals

- Population trend declining in forest fragments and stable in protected areas¹²⁰

*Threats*¹¹⁶:

- Habitat loss and fragmentation
 - Logging
 - Creation of exotic plantations
 - Degradation¹²¹
 - Change of land usage
 - Fragmentation resulting in inbreeding in subpopulations, which is compromising genetic viability¹²²
- Hunting
 - Subsistence and non-subsistence¹²²
 - Primate meat a preferred food¹²²
 - Pet trade¹²⁰
 - “Medicinal” usage
- Intrinsic threats: large inter-birth interval, seasonal resource availability and female competition for mating

Justification for the Top 25:

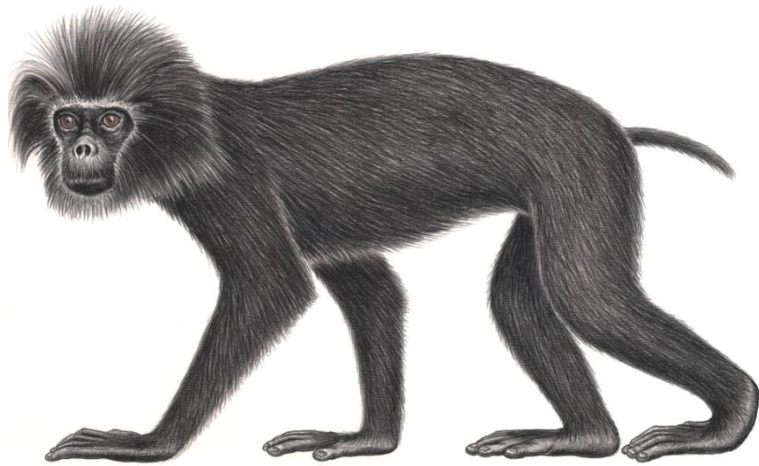
- Habitat fragmentation compromising genetic viability, with hunting as a secondary threat

Simakobu or Pig-tailed snub-nosed langur

Simias concolor (Miller, 1903)

Indonesia

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



Biology¹²³:

- Monotypic genus with two subspecies:
 - *Simias concolor concolor* (Millar, 1903)
 - *Simias c. siberu* (Chasen and Kloss, 1927)
- Very little published on behavior and ecology
- Found in swamp forests and lowland rainforests and primary forests on hillsides¹²⁴⁻¹²⁶
- Diurnal¹²⁵
- Semi-terrestrial¹²⁵
- Almost equal time resting (46%) and feeding (44%) and less time moving (7%)¹²⁷
- Primarily folivorous¹²⁵
- Birth season from June to July¹²⁶

Range¹²³:

- Endemic to Indonesia
- Confined to the Mentawai Islands off the western coast of Sumatra¹²⁵
- *S. c. concolor*
 - Inhabits Sipora, North Pagai, and South Pagai Islands and several small islets off South Pagai
 - Remaining forest cover on the Pagai islands ~826km²¹²⁸
- *S. c. siberu*
 - Only on Siberut Island
 - 190,500ha Siberut National Park covers 47% of Siberut island
 - Remaining 53% outside of protected areas

Estimated population¹²³:

- *S. c. concolor* two estimates: ~3,347 individuals on the Pagai islands¹²⁸ and 700-1,800 total population¹²⁹

- *S. c. siberu* ~6,000-15,000 *S. c. siberu* within Siberut National Park
- Total population down from 26,000 in 1980
- Maximum decline of 75% in 20 years¹²⁵
- Population densities also reduced indicating a 73-90% decline in 10 years¹²⁹⁻¹³¹

Threats¹²³:

- Hunting
 - Preferred game species in some areas^{131, 132}
 - Hunting pressure increased with improved access and replacement of bows with air rifles¹²⁹
 - In 1987, estimated that twice as many individuals were hunted as were born in the Pagai islands¹²⁴
 - Pet trade
- Forest loss
 - Commercial logging^{125, 129} – particularly sensitive¹³¹
 - Conversion to palm oil plantations and cash crops^{125, 129}
 - Human encroachment
 - Forest clearing and extraction by local people^{125, 129}

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



Biology¹³³:

- Restricted to limestone karst forest habitat, with additional records of secondary forest in limestone areas^{134, 135}
- Up to 1,000m asl¹³⁶
- Caves thought to offer protection from predators and temperature extremes¹³⁷
- Diurnal and crepuscular
- Degree of terrestriality is habitat-dependent¹³⁶
- 60-80% of the diet consists of leaves, with 20-40% shoots, fruit, flowers and bark¹³⁶

- 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 2009¹³⁸
- Approximately 6 locations extirpated
- Current total population unknown, but likely to be a maximum of 250 wild individuals

Range¹³³:

- Very restricted area in north Vietnam
- 5,000 km² 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 Nam¹³⁴
- 17 isolated locations totaling less than 400-450 km² (size estimates from 18 locations)^{137, 138}

Threats¹³³:

- Small population size
- Hunting
 - Traditional medicines
 - Meat
- Fragmentation
 - Only the largest population of 68-70 individuals is thought likely to survive^{137, 138}
 - Inbreeding may result in loss of genetic viability
- Minor threat: Forest loss and degradation
 - Illegal grazing of goats
 - Limestone quarrying^{139, 140}
- Potential threat: Tourism and associated development¹³⁶

Estimated population¹³³:

- 1999/2000 estimated 281-317¹³⁷
- 320 hunted individuals over 10 years, but actual number undoubtedly higher
- 60% of total population in isolated subpopulations with less than 20 individuals¹³⁴
- Largest subpopulation, in the only well guarded forest, has increased and totals ~68-70 individuals^{134, 139, 140}

Justification for the Top 25:

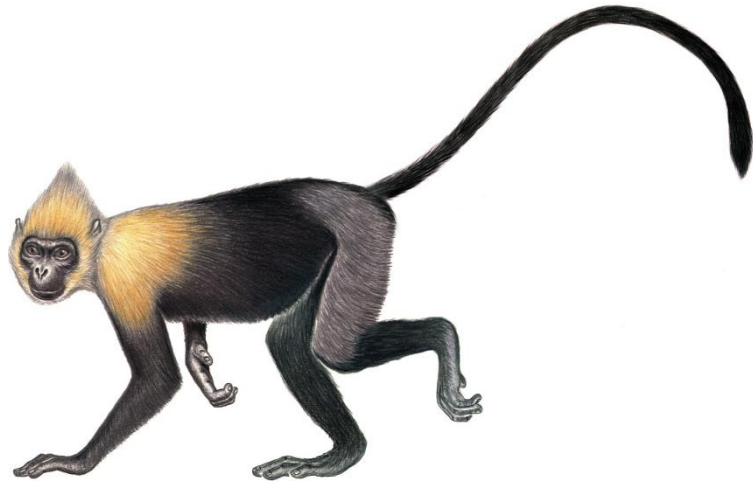
- Critically small, fragmented population under hunting pressure

Golden-headed langur or Cat Ba langur

Trachypithecus poliocephalus poliocephalus (Trouessart, 1911)

Vietnam

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



Biology¹⁴¹:

- Inhabits tropical moist forest on limestone karst hills
- 70-100m asl, possibly 0-200m¹⁴²
- 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 hunters¹³⁷
- Diurnal
- Arboreal and terrestrial¹⁴³
- 60-80% of the diet consists of leaves, with 20-40% shoots, fruit, flowers and bark¹³⁶

Range¹⁴¹:

- Confined to the Island of Cat Ba in the Gulf of Tonkin, northeastern Vietnam
- Further restricted to ~100km² area of occupy¹⁴⁴
- Mostly in Cat Ba National Park, which covers more than half of the main island¹⁴⁴
- Wildlife protection deficient
- Divided into seven isolated subpopulations due to habitat fragmentation¹⁴⁴

Estimated population¹⁴¹:

- 60-70 individuals (64 in 2006¹⁴³)
- 3-4 all female, non-reproducing groups¹⁴⁴
- Reproductive output low
- Stagnated at 1-2 offspring per year¹⁴⁴

Threats¹⁴¹:

- 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^{143, 144}
- 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^{143 145}

Justification for the Top 25:

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

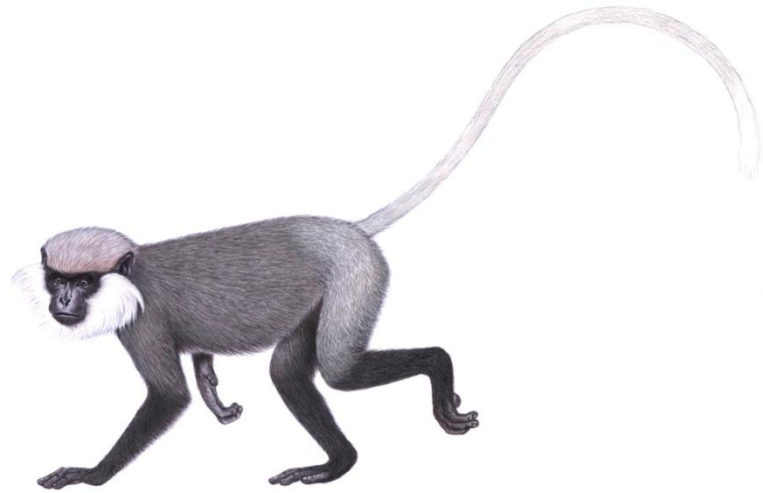
Western purple-faced langur

Semnopithecus vetulus nestor

(Bennett, 1833)

Sri Lanka

Top 25: 2004, 2006, 2008, 2010



Biology¹⁴⁶:

- Inhabits lowland tropical rainforest
- Refugee populations presently inhabit semi-urban and rural home gardens, rubber plantations and areas with adequate canopy cover¹²⁰
- 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

Range¹⁴⁶:

- Western Sri Lanka, from the north of the Kalu Ganga as far north as the rainforest limit⁴⁶
- Ranges up to 1,000m asl¹²⁰
- Inhabits an area of high human density
- 81-90% of the entire historic range deforested and urbanized^{147, 149}
- 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 21 km², surround two reservoirs (Kalatuwawa and Labugama)¹⁴⁷

Estimated population¹⁴⁶:

- Unknown
- Believed to have undergone a decline of more than 80% over three generations¹⁵⁰
- Extirpation¹⁵⁰

Threats¹⁴⁶:

- Habitat loss and fragmentation^{151, 152}
 - 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, 150, 151}
- Dogs¹⁴⁷
- Occasional hunting
 - Pet trade
 - Persecution for crop-raiding¹⁵³
 - Local trade for meat, but not significant¹⁵¹
 - Becoming more tolerant to humans which is putting them at increased risk¹⁵²

Justification for the Top 25:

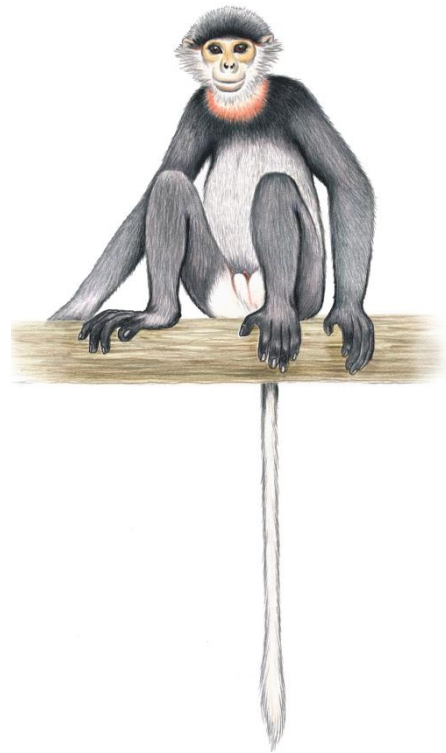
- Habitat loss, fragmentation and urbanization

Grey-shanked douc monkey

Pygathrix cinerea (Nadler, 1997)

Vietnam

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



Biology¹⁵⁴:

- Mostly found in primary mountain evergreen forest¹⁵⁵
- Altitude of 900-1,400m asl
- Canopy cover of 80-90%¹⁵⁵

Range¹⁵⁴:

- Central Vietnam between 13°30' and 16°N
- Recorded in five provinces: Quang Nam, Quang Ngai, Kon Tum, Gia Lai, and Binh Dinh^{137, 155}
- 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 population¹⁵⁴:

- 600-700 individuals¹⁵⁵
- Fragmented
- Some areas with assumed occurrence not yet surveyed¹⁵⁵
- Endangered Primate Rescue Center has begun a breeding program with confiscated animals

Threats¹⁵⁴:

- Hunting
 - Meat
 - Traditional medicine
 - Pets¹⁵⁵
 - Problem inside protected areas
 - Response to hunting is to hide motionless rather than fleeing, which makes them more susceptible¹³⁷

- Snares common
- Degraded habitats increases the risk of being caught in a snare 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 alive¹⁵⁴
- Forest loss
 - Agricultural expansion
 - Illegal logging
 - Firewood collection
 - Almost 10,000ha of forest are selectively logged every year in the Central highlands¹⁵⁵

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

Biology¹⁵⁶:

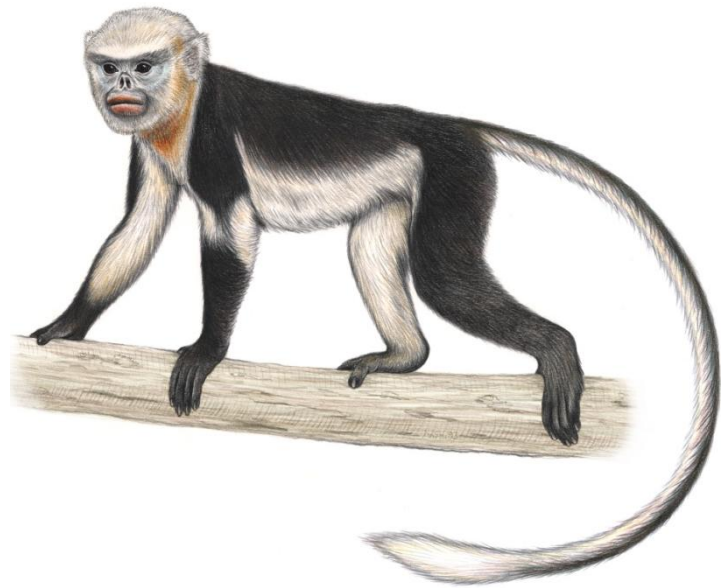
- Described in 1912
- Collected on no more than two occasions over the next 50-60 years
- Presumed extinct
- Rediscovered in 1989
- Tropical evergreen forests associated with karst limestone hills and mountains^{157, 158}
- Largely restricted to primary forest¹⁵⁹
- 200-1,200m asl¹⁵⁷
- Selective feeder consuming young leaves, unripe fruits and seeds^{158, 159}
- Diurnal¹⁶⁰
- Arboreal and terrestrial¹⁵⁸

Range¹⁵⁶:

- Northeastern Vietnam⁴⁶
- Historically occurred east of the Red River¹³⁷
- Due to widespread deforestation and intensive hunting, its distribution has become severely restricted¹³⁷
- Currently, five completely isolated localities known
- Small forest patches in Tuyen Quang, Bac Kan, Ha Giang and Thai Nguyen Provinces¹³⁷

Estimated population¹⁵⁶:

- Tat Ke sector¹⁵⁷
 - 1993: 72 individuals observed, 80 estimated¹⁵⁹
 - 2005: far lower densities, 17–22 estimated¹⁵⁷
- Ban Bung sector¹⁵⁷
 - 1993: 23 observed, 50 estimated¹⁵⁹
 - No verifiable information for 2005¹⁵⁷
- Cham Chu Nature Reserve
 - 1992: survey with locals estimated 20-40 individuals¹⁶¹
 - 2001: 70 estimated¹⁶²



- 2006: No evidence, but local reports suggested 8-12
- TSM conservation area, Ha Giang Province.
 - 2001: estimated 30-40 based on interviews¹⁶³
 - 2006: observed about 81 animals; estimated 90¹⁵⁷
- Tung Vai Commune of Quan Ba District close to the border with China
 - 60 individuals
- Total population: estimated around 200-250+ individuals throughout range^{156, 158}

Threats¹⁵⁶:

- Hunting pressure¹⁵⁸
 - Traditional medicines^{137, 157}
 - High pressure¹⁵⁷
 - Hydroelectric power project increases number of people and demand for meat^{137, 157}
 - Not shy and do not necessarily flee when encountered¹⁶⁰
- Habitat degradation
 - Firewood
 - Timber exploitation
 - Shifting cultivation
 - Collection of non-timber forest products for commercial purposes
 - Roads¹⁵⁸

Justification for the Top 25:

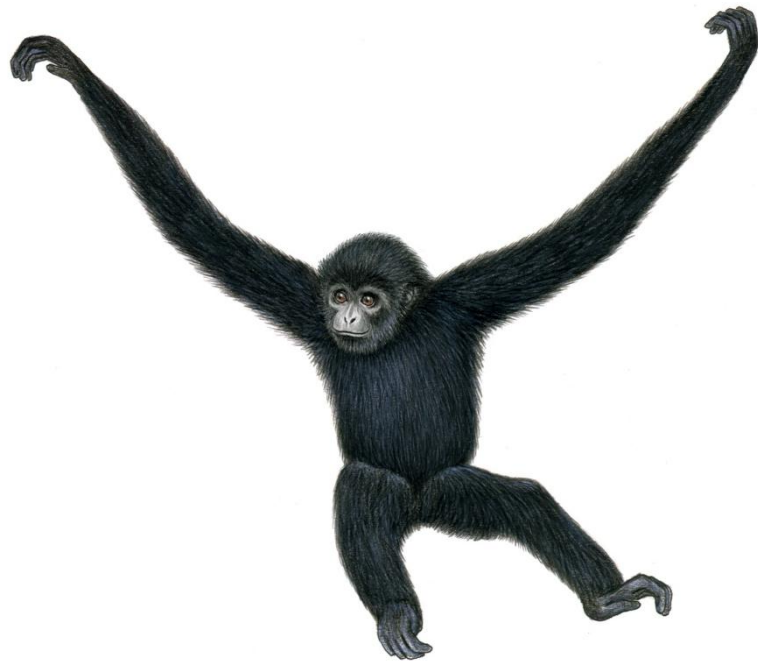
- Critically small fragmented population under hunting pressure

Cao-Vit or Eastern black crested gibbon

Nomascus nasutus (Kunkel d'Herculais, 1884)

China, Vietnam

Top 25: 2008, 2010



Biology¹⁶⁴:

- Historically one of two subspecies, but both elevated to species level^{165, 166}
- Inhabits montane and limestone forests in a wet tropical monsoon climate¹⁶⁷
- 500–900 m asl¹⁶⁷
- Primarily frivorous (86.6%), with leaves (4.7%), animal matter (0.5%) and undetermined food class (8.2%)^{168, 169}

Range¹⁶⁴:

- Historical range was east of the Red River in China and Vietnam
- Current range very restricted
- Sino-Vietnam border, northeastern Vietnam^{166, 170, 171}
 - 48 km²
 - 22°55'N 106°30'E
 - Includes the northern Phong Nam-Ngoc Khe forests (about 30 km²) of Trung Khanh District, Cao Bang Province, Vietnam
- Jingxi County, Guangxi Zhuang Autonomous Region, southeastern China^{166, 170, 171}
 - Area immediately adjacent to Vietnam
 - ~18 km²

Estimated population¹⁶⁴:

- Feared extinct until a survey rediscovered a population in the limestone forest of Phong Nam-Ngoc Khe Communes^{170, 171}

- 2002: estimated 26 individuals in five groups^{170, 171}
- 2004: 37 individuals in eight groups¹⁷²
- Total population estimated at 110 individuals living in 18 groups¹⁷²

Threats¹⁶⁴:

- Habitat loss and disturbance
 - Cleared for cultivation
 - Pasture for livestock
 - Firewood collection
 - Charcoal-production
 - Already restricted range¹⁶⁹
- Small population
 - Inbreeding effects
 - Poor-mate choice
 - Human or natural disaster^{166, 169}
- Hunting¹⁶⁹

Justification for the Top 25:

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

Northwest Bornean orangutan

Pongo pygmaeus pygmaeus (Linnaeus, 1970)
Indonesia (West Kalimantan, Borneo),
Malaysia (Sarawak)
Top 25: 2010

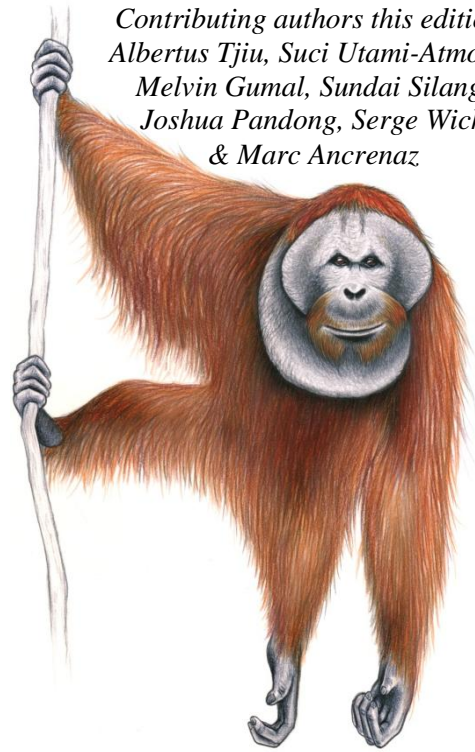
Biology:

- Three subspecies of *Pongo pygmaeus* can be split into geographical groups that diverged quite recently¹⁷³
- *P. p. pygmaeus* most endangered subspecies
- Semi-solitary, but complex social networks
- Males disperse further than females at maturity¹⁷⁴
- 500 plant species recorded in the diet
- 60% fruit in the diet, with leaves, bark, flowers and insects^{174, 175}
- Relatively low abundance in Bornean forests from 0.5-4.0 individuals/km²¹⁷⁶
- Females reach maturity at 10-15 years and reproduce every six to eight years¹⁷⁵

Range:

- Endemic to the island of Borneo
- Present in two Malaysian states: Sabah and Sarawak
- Northern West Kalimantan (Indonesia) from north of the Kapuas River to southern Sarawak (Malaysia)^{173, 177}
- Present in three of the four Indonesian Provinces of Kalimantan.
- Core populations centred in four conservation areas: Batang Ai National Park and Lanjak Entimau Wildlife Sanctuary (BALE) in Sarawak-Malaysia and Betung Kerihun National Park (BKNP) also Danau Sentarum National Park (DSNP) in West Kalimantan-Indonesia^{175, 176, 178}
- Patchy distribution

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& Marc Ancrenaz



Estimated population:

- Most recent estimate: 3,000-4,000 individuals spread over of 7,500km² of habitat
- Estimated decline of over 50% of the population¹⁷⁵
- Estimated to be less than 14% of the size in the recent past
- Sharp decline in recent decades due to human activities and development^{174, 176}

Threats:

- Deforestation and degradation
 - Illegal logging
 - Forest fires
 - Land clearing
 - Agriculture
 - Palm oil plantations
- Hunting
 - Bushmeat
 - Pet trade
- Fragmentation

Justification for the Top 25:

- Rapid and continuing decline in population numbers

Neotropics



Neotropical Primates

- Ateles hybridus*
- Cebus flavius*
- Callicebus barbarabrownae*
- Oreonax flavicauda*



Variegated or Brown spider monkey

Ateles hybridus (I. Geoffroy, 1829)

Colombia, Venezuela

Top 25: 2004, 2006, 2008, 2010

Biology¹⁷⁹:

- Two subspecies:
 - *Ateles hybridus brunneus*
 - *A. h. hybridus*¹⁸⁰
- 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 flowers¹⁸¹
- They form groups of up to 20-30 individuals¹⁸¹

Range¹⁷⁹:

- *A. h. brunneus*
 - Restricted to Colombia
 - Between the lower Ríos Cauca and Magdalena in the Departments of Bolívar, Antioquia and Caldas¹⁸²
 - 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^{180, 183}
 - Extremely fragmented, with small populations

Estimated population¹⁷⁹:

- 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^{180, 182}



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

Threats¹⁷⁹:

- 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 Mountains¹⁸⁴
- Pet trade

Justification for the Top 25:

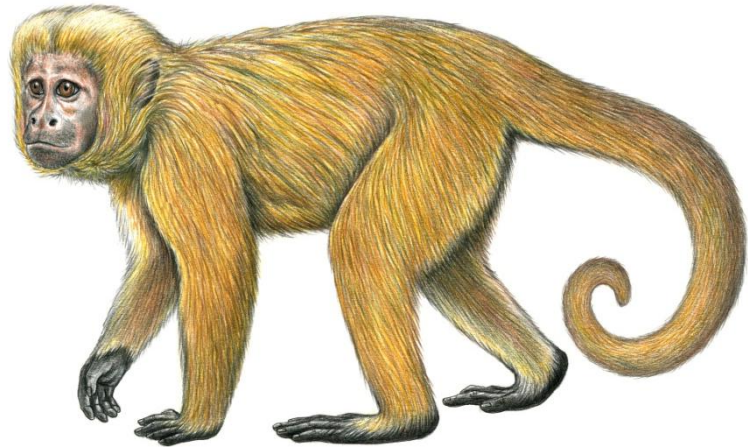
- High rate of habitat loss and hunting

Blond capuchin monkey

Cebus flavius (Schreber, 1774)

Brazil

Top 25: 2010



Biology¹⁸⁵:

- Recently proposed that robust capuchins should be placed in a separate genus, *Sapajus*, instead of *Cebus*^{186, 187}
- Lowland coastal rain forest and *Montrichardia linina* swamp, secondary forest and semi-deciduous seasonal forest¹⁸⁸
- Arboreal quadrupeds
- Typically found in the lower to mid-canopy and understory¹⁸⁹⁻¹⁹¹
- Omnivorous; primarily frugivore-insectivores consuming a variety of fruits, seeds, arthropods, frogs, nestlings, but also stems, flowers and leaves and occasionally small mammals
- Typical group size: 18¹⁸⁸
- Number of females exceed males
- Males disperse
- Both sexes have linear hierarchies with the top ranking male at the top¹⁹⁰

Range¹⁸⁵:

- Coastal region of northeast Brazil
- Alagoas, Paraíba and Pernambuco^{188, 192}
- Not recorded in protected areas, but protected areas are within the range

Estimated population¹⁸⁵:

- Remaining populations extremely fragmented
 - ~ 24 subpopulations
 - ~ Average 15 individuals
- Estimated 180 wild individuals¹⁸⁵

Threats¹⁸⁵:

- Hunting
 - Bushmeat
 - Pet trade
- Habitat loss and fragmentations
 - Coastal development
 - Sugar cane

Justification for the Top 25:

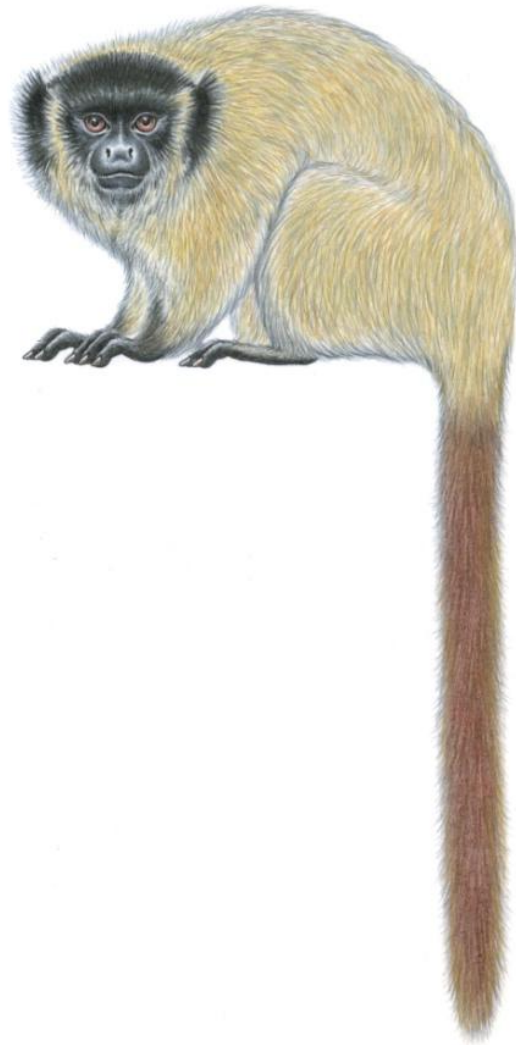
- Extremely small population under intensive threat from hunting and habitat loss and fragmentation

Barbara Brown's titi monkey

Callicebus barbarabrownae (Hershkovitz, 1990)

Brazil

Top 25: 2010



Biology¹⁹³:

- Occurs in caatinga (dry tropical thorn scrub and deciduous forest), with a preference for dense arboreal caatinga, and highland coastal rainforest^{194, 195}
- Live in family groups of 2-4 individuals (adult pairs and up to two offspring)¹⁹⁵
- No available data on ecology

Range¹⁹³:

- Over 55 sites in the states of Bahia and Sergipe, Brazil^{194, 196, 197}
- Three main regions: Agreste, Lamarão and north of the Chapada Diamantina
- Also recorded in the caatinga of moister uplands northeast of Araci and further north as far as the Salitre river
- Occurrence covers ~291,438km² at altitudes of 241-908m, but occupancy is ~2,636km²^{194, 195}
- ~90% of all records are between 37° and 41°W and 09° and 13°S^{194, 195}
- Not found in any protected areas¹⁹⁵

Estimated population¹⁹³:

- Minimum estimate of 260 individuals^{194, 195}
- Potentially less than 250 mature individuals in the wild
- Decreasing population trend
- Severely fragmented in small subpopulations, with none exceeding 50 mature individuals
- Extirpation from many areas¹⁹⁵

Threats¹⁹³:

- Severely fragmented small subpopulations
 - Genetic and demographic risks
- Habitat loss and fragmentation
 - Agriculture, particularly beans and maize
 - Cattle ranching
 - Continuing urbanization¹⁹⁵
- Dangers from roads and power lines
- Predation by domestic pets¹⁹⁵
- Potential moderate threats include hunting and the pet trade^{193, 198}

Justification for the Top 25:

- Severely fragmented small population

Peruvian yellow-tailed woolly monkey

Oreonax flavicauda (Humboldt, 1812)

Peru

Top 25: 2000, 2006, 2008, 2010

Biology¹⁹⁹:

- Taxonomy debated
- Historically recognized as:
 - *Simia flavicauda* (first description)
 - *Lagothrix (Oreonax) hendeii* (described again)²⁰⁰; revised the same year to *Oreonax hendeii*²⁰¹
 - *Lagothrix flavicauda* (found to be the same species)²⁰²
- Currently recognized as *Oreonax flavicauda*⁴⁶
- Validity of *Oreonax* is debated^{203, 204}, but a more comprehensive reassessment is required
- Only persists in primary premontane, montane and cloud forest between 1,500 and 2,700m asl^{205, 206 207}
- Multi-male/multi-female groups of 5-18 individuals²⁰⁸
- Eats a variety of fruits, flowers, leaves, lichens, leaf bases of bromeliads, epiphyte roots and bulbs, and possibly insects^{206, 209, 210}
- Sensitive to habitat alterations²⁰⁵

Range¹⁹⁹:

- Endemic to Peru, but only found in a small area of the Tropical Andes
- Historically, the distribution of the species may have included regions of Amazonas, San Martín, Huánuco, Loreto and La Libertad²¹¹
- Now restricted to two regions
 - Amazonia (western part)
 - San Martín (eastern part)^{205, 207}

Estimated population¹⁹⁹:

- Unknown
- Recorded in low densities



Threats¹⁹⁹:

- Habitat loss and fragmentation
 - Colonization projects and road building
 - Selective logging
 - Deforestation
 - Mining^{205, 207, 208, 210}
- Hunting
 - Large size and trusting nature makes them susceptible
 - Subsistence by native communities
 - Trophy hunting
 - Pet trade²⁰⁵
- Known from four protected areas. However:
 - 1996-2001 >6,000 ha of the Alto Mayo Protected Forest was cleared and the habitat is considered fragmented²⁰⁵
 - Illegal logging, hunting and a substantial human population
 - Río Abiseo National Park is protected because of its inaccessibility, but only protects 852 km² of suitable habitat

Justification for the Top 25:

- Highly threatened with habitat loss, fragmentation and hunting, even in protected areas

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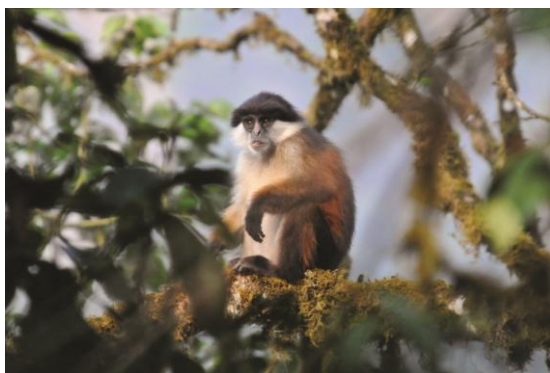
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*Juvenile Bioko red colobus
Piliocolobus pennantii pennantii*
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