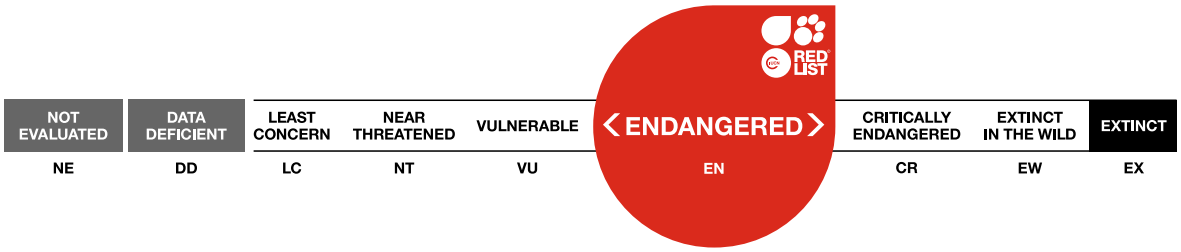
The IUCN Red List of Threatened Species™
ISSN 2307-8235 (online)
IUCN 2020: T18256A92661680
Scope(s): Global
Language: English

Piliocolobus tephrosceles, Ashy Red Colobus

Assessment by: Struhsaker, T.T. & Ting, N.



View on www.iucnredlist.org

Citation: Struhsaker, T.T. & Ting, N. 2020. *Piliocolobus tephrosceles*. *The IUCN Red List of Threatened Species* 2020: e.T18256A92661680. https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T18256A92661680.en

Copyright: © 2020 International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale, reposting or other commercial purposes is prohibited without prior written permission from the copyright holder. For further details see Terms of Use.

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership. The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.

If you see any errors or have any questions or suggestions on what is shown in this document, please provide us with feedback so that we can correct or extend the information provided.

Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Primates	Cercopithecidae

Scientific Name: *Piliocolobus tephrosceles* (Elliot, 1907)

Synonym(s):

- *Colobus tephrosceles* Elliot, 1907
- *Procolobus badius* ssp. *tephrosceles* (Elliot, 1907)
- *Procolobus pennantii* ssp. *tephrosceles* (Elliot, 1907)
- *Procolobus rufomitratus* ssp. *tephrosceles* (Elliot, 1907)
- *Tropicolobus gudoviusi* Matschie, 1914

Common Name(s):

- English: Ashy Red Colobus, Uganda Red Colobus
- French: Colobe d'Ouganda
- Spanish; Castilian: Colobo Rojo de Tanzania

Taxonomic Source(s):

Mittermeier, R.A., Rylands, A.B. and Wilson D.E. 2013. *Handbook of the Mammals of the World: Volume 3 Primates*. Lynx Edicions, Barcelona.

Taxonomic Notes:

Modern taxonomic arrangements of the colobus monkeys either distinguish the red colobus monkeys and the Olive Colobus as separate genera, *Piliocolobus* and *Procolobus*, respectively (e.g., Groves 2001, 2005, 2007; Roos *et al*. 2011; Kingdon 2015), or consider them to belong to one genus *Procolobus*, with two subgenera (*Procolobus* for the Olive Colobus and *Piliocolobus* for the red colobus) (Oates *et al*. 1994, Grubb *et al*. 2003, 2013; Oates 2011). Ting (2008) placed all the red colobus as subspecies of *Procolobus* (*Piliocolobus*) *badius*. The 2008 IUCN Red List assessments followed the taxonomy of Grubb *et al*. (2003).

The arrangement of two genera in Groves (2001, 2005, 2007) is followed here: a monotypic *Procolobus* de Rochebrune, 1887 (Olive Colobus) and polytypic *Piliocolobus* de Rochebrune, 1887 (red colobus).

Kingdon (1997, 2015), following Colyn (1991), treated *oustaleti* as the Central African Red Colobus, with *parmentieri*, *foai*, *langi*, *lulindicus*, *ellioti*, *semlikiensis* and *tephrosceles* as subspecies. Grubb *et al*. (2003) considered *tephrosceles* be a subspecies but did not assign it to a species. Considering vocalizations and pelage colour patterns, Grubb *et al*. (2013) placed *tephrosceles* as a subspecies of *rufomitratus*, along with *ellioti*, *foai*, *langi*, *lulindicus*, *parmentieri*, *oustaleti* and *tholloni*.

Groves (2007) treated *tephrosceles* as a monotypic species, with *gudoviusi* Matschie as a junior synonym. For the purpose of this assessment, we follow Groves (2007) in treating *tephrosceles* as a monotypic species.

Assessment Information

© The IUCN Red List of Threatened Species: Piliocolobus tephrosceles – published in 2020.
https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T18256A92661680.en

Red List Category & Criteria: Endangered A4bc ver 3.1

Year Published: 2020

Date Assessed: December 3, 2019

Justification:

Piliocolobus tephrosceles is listed as Endangered under criterion A4bc. A decline exceeding 50% of the population is estimated for a time period that includes both the past and future (three generations; 30 years) based on past reduced density and encounter rates, reduction in area of occupancy, and reduction in habitat quality, and the threats have not ceased. Red colobus monkeys are poorly adapted to habitat degradation and their populations have been completely extirpated from several forests outside protected areas due to habitat degradation and loss. If as expected these processes continue, then all populations outside protected areas will likely be lost in the near future. Furthermore, substantial population declines have been documented in some parts of Kibale National Park and Gombe Stream National Park due to predation by Chimpanzees, with up to 89% declines recorded in group encounter rates. The vast majority of *Piliocolobus tephrosceles* reside in one location – Kibale National Park. Given that it's survival depends on a single location, the future of this taxon is tenuous, especially as there is already a high level of predation by Chimpanzees in some parts of this park.

Previously Published Red List Assessments

2016 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T18256A92660998.en

2008 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T18256A7913316.en

1996 – Not Evaluated (NE)

1994 – Vulnerable (V)

1990 – Vulnerable (V)

1988 – Vulnerable (V)

1986 – Insufficiently Known (K)

Geographic Range

Range Description:

Piliocolobus tephrosceles is present on the eastern border of the Rift Valley in western Uganda and western Tanzania (Struhsaker and Grubb 2013). Five distinct subpopulations are known in western Uganda in Kibale National Park, and in western Tanzania in Biharamulo on the southwestern shores of Lake Victoria, in Gombe Stream and Mahale Mountains national parks on the eastern shores of Lake Tanganyika, and on the Ufipa Plateau (Mbizi and Misheta) (Rodgers *et al*. 1984). However, recent surveys in Misheta found little forest of any consequence left in the area, and the Red Colobus population there has is probably been extirpated (Davenport *et al*. 2007). A subpopulation subsequently recorded in a

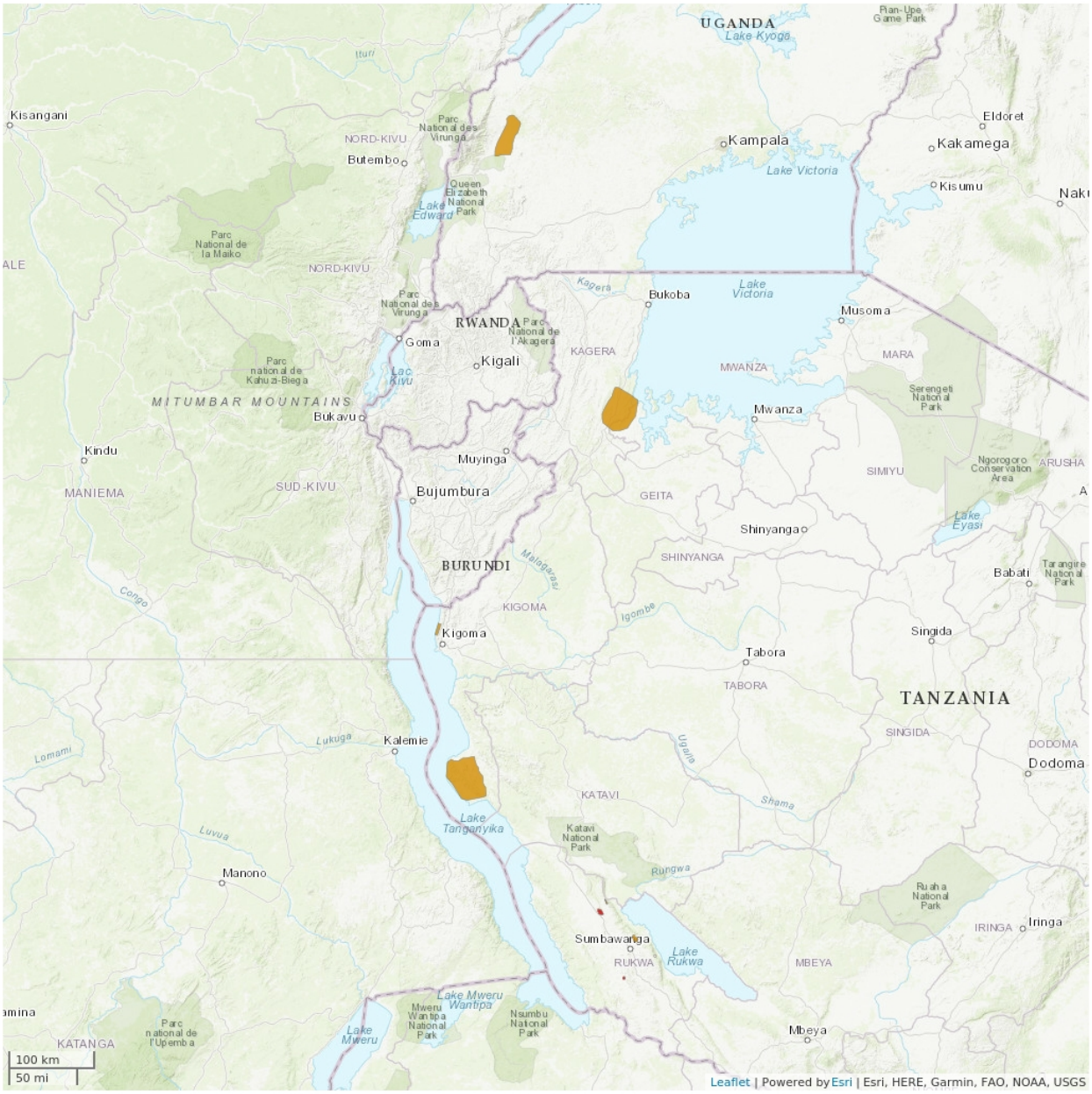
forest patch near the village of Nsangu (post the surveys by Rodgers *et al*. 1984) is probably also now extinct (Davenport *et al*. 2007). Davenport *et al*. (2007) reported a new and previously unrecorded population of *P. tephrosceles* in Mbuzi forest. They also surveyed the Chala forest, which was in poor condition; no primates were seen, although it is not known if Red Colobus ever existed there. This species may be present in Burundi, Rwanda and eastern parts of the Democratic Republic of Congo, but its presence has not been confirmed.

Country Occurrence:

Native, Extant (resident): Tanzania, United Republic of; Uganda

Native, Presence Uncertain: Burundi; Congo, The Democratic Republic of the; Rwanda

Distribution Map



Legend

- EXTANT (RESIDENT)
- EXTINCT
- EXTINCT & ORIGIN UNCERTAIN

Compiled by:

Red Colobus (Piliocolobus) Conservation Action Plan, 2020–2025 2020

The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

Population

Piliocolobus tephrosceles numbers at least 20,000 animals, with the largest and most viable population in Kibale National Park in Uganda estimated at ≥17,000 (Struhsaker 2005). Approximately 60% of the Kibale National Park represents suitable habitat for red colobus and published density estimates in this habitat range from 93 to 313 individuals/km² (Struhsaker 2005). Although Kibale would appear to have a healthy and viable population, long-term studies in two areas of the park indicate statistically significant declines in Ashy Red Colobus numbers. In one of them—the Ngogo study area—census data spanning nearly 33 years indicate an 89% decline in group encounter rates (Lwanga *et al*. 2011), mainly due to predation by Chimpanzees (*Pan troglodytes*). A similar long-term study focusing on the effects of logging and spanning 28 years at the Kanyawara study site, also in Kibale, indicated a 40% decline in Ashy Red Colobus numbers in old growth and protected forest, as well as in nearby selectively logged forest (Chapman *et al*. 2000). Red Colobus density in forest fragments on the western boundary of Kibale averaged 2.1 animals per hectare and ranged from 0 to 8.33 animals/ha (Chapman *et al*. 2006). However, a more recent assessment found that many of those fragments have either been eliminated or degraded by human activities and that the Red Colobus populations in them declined by 83% between 2000 and 2010 (Chapman *et al*. 2013).

Ashy Red Colobus numbers in Gombe Stream National Park also seem to have declined due to predation by Chimpanzees. Red Colobus group sizes have declined by nearly 50% over a 25-year period (Stanford 1998) and 16–40% of them are killed each year by Chimpanzees (Wrangham and Bergmann-Riss 1990).
Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

This species occurs in a wide variety of forest types, including riverine and gallery forest, forest-miombo savanna mosaic, old-growth lowland, mid-altitude, and montane moist rain forest, degraded secondary forests, and raphia palm swamps (Struhsaker 2010, Struhsaker and Grubb 2013).

In Kibale, *P. tephrosceles* is most abundant in moist, old-growth, evergreen forest with emergent trees reaching 50 m in height (Struhsaker 2010, Struhsaker and Grubb 2013, and references therein). It can persist in lightly logged forest as long as important food trees remain (Lee *et al*. 1988). Groups of *P. tephrosceles* average about 45–50 individuals in Kibale, and 55–59 individuals in Gombe (Struhsaker 2010, Struhsaker and Grubb 2013, and references therein). The mean group size recorded in Mbizi was 41 and in Mbuzi, 34 (Davenport *et al*. 2007).

Systems: Terrestrial

Use and Trade

Bushmeat consumption is not common, although it does occur. Furthermore, Ashy Red Colobus are occasionally hunted opportunistically to feed dogs.

Threats (see Appendix for additional information)

The main threat to *P. tephrosceles* is habitat loss through selective logging of mature forest for timber, conversion to agricultural land, the production of charcoal, and forest fires. To some degree, hunting for

© The IUCN Red List of Threatened Species: Piliocolobus tephrosceles – published in 2020.
https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T18256A92661680.en

meat and skins remains a threat (e.g., around Mbizi; Davenport *et al*. 2007). The taxon also appears to be heavily predated by Chimpanzees. At Ngogo in Kibale National Park, the Colobus Monkeys live with the largest community of Chimpanzees recorded anywhere, which form huge hunting parties that result in the highest hunting success rate known for any large vertebrate predator (Struhsaker 2010). The population in Gombe Stream National Park appears to be seriously threatened with extinction because of predation by Chimpanzees and because of the very small size (*ca* 80 km²) and isolation of Gombe (Struhsaker 2005).

Conservation Actions (see Appendix for additional information)

This taxon is listed on Appendix I of CITES and on Class B of the African Convention on the Conservation of Nature and Natural Resources.

It is present in the Gombe Stream and Mahale Mountains national parks in Tanzania. It is also present in the 766-km² Kibale Forest National Park in Uganda, which may contain the only viable subpopulation; hunting by humans is virtually non-existent in this park (Struhsaker 2005). Long-term monitoring of the Ngogo subpopulation is required, as well as a comprehensive, long-term monitoring programme for the colobus throughout Kibale, as Kibale is the last hope for conservation of this taxon.

The southernmost population in the Mbizi forest should be protected, as this is the only remaining montane forest of any size in Ufipa, and the only source of water for Sumbawanga's growing human population. There is also a need for immediate intervention if Mbuzi is not to be lost completely following the recent fate of both the Misheta and Nsangu forests. The forest patch is very small, isolated and has no protected status or management (Davenport *et al*. 2007).

The first conservation action plan for red colobus monkeys will be published in 2020. This plan identifies priority areas for conservation and recommends range-wide and taxon-based actions to prevent red colobus extinctions. The range-wide conservation priorities include actions that aim to improve government investment in wildlife conservation, expand and improve protected areas, determine taxon-specific distribution and abundance, engage with local human populations and involve them in conservation activities, remove barriers that prevent local access to human healthcare and family planning, and raise awareness of the plight of red colobus.

Credits

Assessor(s): Struhsaker, T.T. & Ting, N.

Reviewer(s): Williamson, E.A.

Contributor(s): Rylands, A.B.

Authority/Authorities: IUCN SSC Primate Specialist Group

Bibliography

Chapman, C.A., Balcomb, S.R., Gillespie, T.R., Skorupa, JP. and Struhsaker, T.T. 2000. Long-term effects of logging on African primate communities: A 28-year comparison from Kibale National Park, Uganda. *Conservation Biology* 14: 207–217.

Chapman, C.A., Ghai, R., Jacob, A., Koojo, S.M., Reyna-Hurtado, R., Rothman, J.M., Twinomugisha, D., Wasserman, M. D. and Goldberg, T.L. 2013. *Going, going, gone: a 15-year history of the decline of primates in forest fragments near Kibale National Park, Uganda.* Springer, New York.

Chapman, C.A., Wasserman, M.D., Gillespie, T.R., Speirs, M.L., Lawes, M.J., Saj, T.L. and Ziegler, T.E. 2006. Do nutrition, parasitism, and stress have synergistic effects on red colobus populations living in forest fragments? *American Journal of Physical Anthropology* 131: 525–534.

Colyn, M. M. 1991. L'importance zoogeographique du Bassin du Fleuve Zaire pour la speciation: le cas des Primates simiens. *Koninklijk Museum voor Midden-Afrika* 264: 1-250.

Davenport, T.R.B., Mpunga, N.E. and Machaga, S.J. 2007. Census and Conservation Assessment of the Red Colobus (*Procolobus rufomitratus tephrosceles*) on the Ufipa Plateau, Southwest Tanzania: Newly-discovered, Threatened and Extinct Populations. *Primate Conservation* 22: 97-105.

Groves C.P. 2001. *Primate Taxonomy*. Smithsonian Institution Press, Washington, DC, USA.

Groves, C.P. 2005. Order Primates. In: D.E. Wilson and D.M. Reeder (eds), *Mammal Species of the World*, pp. 111-184. The Johns Hopkins University Press, Baltimore, Maryland, USA.

Groves, C.P. 2007. The taxonomic diversity of the Colobinae of Africa. *Journal of Anthropological Sciences* 85: 7-34.

Grubb, P., Butynski, T.M., Oates, J.F., Bearder, S.K., Disotell, T.R., Groves, C.P. and Struhsaker, T.T. 2003. Assessment of the diversity of African primates. *International Journal of Primatology* 24(6): 1301-1357.

Grubb, P., Struhsaker, T.T. and Siex, K.S. 2013. Subgenus *Piliocolobus* Red Colobus Monkeys. In: T.M. Butynski, J. Kingdon and J. Kalina (eds), *The Mammals of Africa. Volume II: Primates*, pp. 125–128. Bloomsbury Publishing, London.

IUCN. 2020. The IUCN Red List of Threatened Species. Version 2020-1. Available at: www.iucnredlist.org. (Accessed: 19 March 2020).

Kingdon, J. 1997. *The Kingdon Field Guide to African Mammals*. Academic Press, San Diego, California, USA.

Kingdon, J. 2015. *The Kingdon Field Guide to African Mammals*. Bloomsbury, London.

Lee, P.C., Thornback, J. and Bennett, E.L. 1988. *Threatened Primates of Africa. The IUCN Red Data Book.* IUCN, Gland, Switzerland and Cambridge, UK.

Lwanga, J.S., Struhsaker, T.T., Struhsaker,P.J., Butynski, T.M., and Mitani, J.C. 2011. Primate population dynamics over 32.9 years at Ngogo, Kibale National Park, Uganda. *American Journal of Primatology* 73: 997-1011.

Mitani, J.C., Struhsaker, T.T. and Lwanga, J.S. 2000. Primate community dynamics in old growth forest over 23.5 years at Ngogo, Kibale National Park, Uganda: Implications for conservation and census methods. *International Journal of Primatology* 21: 269–286.

Oates, J.F. 2011. *Primates of West Africa: A Field Guide and Natural History*. Conservation International,

Arlington, VA.

Oates, J.F., Davies, A.G. and Delson, E. 1994. The diversity of living colobines. In: Davies, A.G. and Oates, J.F. (eds), *Colobine Monkey: Their Ecology, Behavior and Evolution*, pp. 45–73. Cambridge University Press, Cambridge.

Pacifici, M., Santini, L., Di Marco, M., Baisero, D., Francucci, L., Grottolo Marasini, G., Visconti, P. and Rondinini, C. 2013. Generation length for mammals. *Nature Conservation* 5: 87–94.

Rodgers, W.A., Struhsaker, T.T. and West, C.C. 1984. Observation on the red colobus (*Colobus badius tephrosceles*) of Mbisi Forest, south-west Tanzania. *African Journal of Ecology* 22: 87–194.

Roos, C. Zinner, D., Kubatko, L.S., Schwarz, C., Yang, M., Meyer, D., Nash, S.D., Xing, J., Batzer, M.A, Brameier, M., Leendertz, F.H., Ziegler, T., Perwitasari-Farajallah, D., Nadler, T., Walter, L. and Osterholz, M. 2011. Nuclear versus mitochondrial DNA: evidence for hybridization in colobine monkeys. *BMC Evol. Biol* 11: 77.

Stanford, C.B. 1998. *Chimpanzee and Red Colobus: The Ecology of Predator and Prey*. Harvard University Press, Cambridge, UK.

Struhsaker, T.T. 2005. Conservation of Red Colobus and their habitats. *International Journal of Primatology* 26(3): 525-538.

Struhsaker, T.T. 2010. *The Red Colobus Monkeys: Variation in Demography, Behavior, and Ecology of Endangered Species*. Oxford University Press, New York.

Struhsaker, T.T. and Grubb, P. 2013. *Procolobus rufomitratus* Eastern Red Colobus. In: T.M. Butynski, J. Kingdon and J. Kalina (eds), *The Mammals of Africa. Volume II: Primates*, pp. 142-147. Bloomsbury Publishing, London.

Ting, N. 2008. Mitochondrial relationships and divergence dates of the African colobines: evidence of Miocene origins for the living colobus monkeys. *Journal of Human Evolution* 55: 312-325.

Wrangham, R.W. and Bergmann-Riss, E.L. 1990. Rates of predation on mammals by Gombe chimpanzees, 1972–1975. *Primates* 38: 157-170.

Citation

Struhsaker, T.T. & Ting, N. 2020. *Piliocolobus tephrosceles*. *The IUCN Red List of Threatened Species* 2020: e.T18256A92661680. https://dx.doi.org/10.2305/IUCN.UK.2020-1.RLTS.T18256A92661680.en

Disclaimer

To make use of this information, please check the Terms of Use.

External Resources

For Supplementary Material, and for Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.5. Forest - Subtropical/Tropical Dry	Resident	Suitable	Yes
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	Resident	Suitable	Yes
1. Forest -> 1.8. Forest - Subtropical/Tropical Swamp	Resident	Suitable	Yes
2. Savanna -> 2.1. Savanna - Dry	Resident	Suitable	No

Use and Trade

(http://www.iucnredlist.org/technical-documents/classification-schemes)

End Use	Local	National	International
Food - human	No	Yes	Yes

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	Negligible declines	Low impact: 4
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		

5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.3. Unintentional effects: (subsistence/small scale) [harvest]	Ongoing	Majority (50-90%)	Negligible declines	Low impact: 5
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Pan troglodytes)	Ongoing	Majority (50-90%)	Rapid declines	Medium impact: 7
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: Yes
In-place land/water protection
Conservation sites identified: Yes, over entire range
Percentage of population protected by PAs: 91-100
Occurs in at least one protected area: Yes
In-place education
Included in international legislation: Yes
Subject to any international management / trade controls: Yes

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action Needed
1. Land/water protection -> 1.1. Site/area protection
2. Land/water management -> 2.1. Site/area management
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed
1. Research -> 1.1. Taxonomy
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km²): 3847
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): No
Estimated extent of occurrence (EOO) (km²): 21100
Continuing decline in extent of occurrence (EOO): Yes
Extreme fluctuations in extent of occurrence (EOO): No
Lower elevation limit (m): 1,100
Upper elevation limit (m): 2,200
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 10
Movement patterns: Not a Migrant

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.