

Bioko Red Colobus

Piliocolobus pennantii pennantii (Waterhouse, 1838)

Bioko Island, Equatorial Guinea
(2004, 2006, 2010, 2012)

Drew T. Cronin, Gail W. Hearn & John F. Oates



Bioko red colobus (*Piliocolobus pennantii pennantii*)
(Illustration: Stephen D. Nash)

Pennant's red colobus monkey *Piliocolobus pennantii* is presently regarded by the IUCN Red List as comprising three subspecies: *P. pennantii pennantii* of Bioko, *P. p. epieni* of the Niger Delta, and *P. p. bouvieri* of the Congo Republic. Some accounts give full species status to all three of these monkeys (Groves 2007; Oates 2011; Groves and Ting 2013). *P. p. pennantii* is currently classified as Endangered (Oates and Struhsaker 2008).

Piliocolobus pennantii pennantii may once have occurred over most of Bioko, but it is now probably limited to an area of less than 300 km² within the Gran Caldera and a 510 km² range in the Southern Highlands Scientific Reserve (GCSH) (Cronin *et al.* 2013). Low numbers of *P. p. pennantii* may have persisted through the 1980s in Pico Basile National Park (330 km²) (Gonzalez Kirchner 1994), but there have been no confirmed historical or current sightings in the area. Another isolated population was believed to exist in the southeastern extent of the GCSH; however, recent surveys did not uncover any evidence of this monkey and it is probably extirpated in that area (Cronin 2013).

P. p. pennantii is threatened by bushmeat hunting, most notably since the early 1980s when a commercial bushmeat market appeared in the town of Malabo (Butynski and Koster 1994). Following the discovery of offshore oil in 1996, and the subsequent expansion of Equatorial Guinea's economy, rising urban demand led to increased numbers of primate carcasses in the bushmeat market (Morra *et al.* 2009; Cronin 2013). In November 2007, a primate hunting ban was enacted on Bioko, but it lacked any realistic enforcement and contributed to a spike in the numbers of monkeys in the market. Between October 1997 and September 2010, a total of 1,754 *P. p. pennantii* were observed for sale in the market (Cronin 2013). The rate of occurrence of *P. p. pennantii* carcasses in the market though, has been consistently less than more common primates on Bioko, suggesting that its restricted range is passively protecting the remaining population from significant hunting.

The average price paid in the Malabo market for an adult *P. p. pennantii* in 2008 was about US\$50 (D. T.

Cronin, unpubl. data). This is well over twice the cost of the readily available, high quality whole chicken and beef at the same market. Similar high prices are paid on Bioko for all seven species of monkeys and for both species of duikers. Mainland carcasses are now also regularly shipped to Malabo for sale suggesting that transport costs are covered by the high profits relative to those in Nigeria, Cameroon, or Rio Muni (Morra *et al.* 2009). Bushmeat on Bioko is, obviously, now a 'luxury food' (Hearn *et al.* 2006). The continued high flow of primates, duikers and other wildlife into the Malabo bushmeat market indicates that neither of the protected areas is receiving adequate management and that existing hunting laws lack enforcement from the government of Equatorial Guinea.

Of the other two subspecies of *P. pennantii*, Bouvier's red colobus *P. p. bouvieri* of east-central Republic of Congo has not been observed alive by scientists for at least 25 years, raising concerns that it may be extinct (Oates 1996; Struhsaker 2005). The habitat of the Niger Delta red colobus *P. p. epieni* in southern Nigeria has been severely degraded by logging, the surviving monkeys face ever-increasing hunting pressure, and there is no protected area within its range (Oates 2011).

Red colobus monkeys are probably more threatened than any other taxonomic group of primates in Africa (Oates 1996; Struhsaker 2005, 2011), and the status of the western African forms is especially precarious. Preuss's red colobus *P. preussi* of western Cameroon and southeastern Nigeria is Critically Endangered (Oates *et al.* 2008) as a result of relentless hunting, and Miss Waldron's red colobus *P. badius waldroni* of eastern Côte d'Ivoire and western Ghana is now almost certainly extinct (Oates 2011). All remaining West African red colobus populations and their habitats therefore require rigorous protection. Such protection would also greatly assist the conservation of many sympatric threatened primate taxa. On Bioko this would include the Bioko Preuss's monkey *Cercopithecus preussi insularis*, the Bioko red-eared monkey *C. erythrotis erythrotis*, the Golden-bellied crowned monkey *C. pogonias pogonias*, the Bioko greater white-nosed monkey *C. nictitans martini*, the Bioko black colobus *C. satanas satanas*, and the Bioko drill *Mandrillus leucophaeus poensis*. Protection of *P. pennantii epieni* and *P. preussi* and their habitats on the mainland would benefit populations of Nigeria-Cameroon chimpanzees *Pan troglodytes ellioti*, Ebo Forest gorillas *Gorilla gorilla* subsp., Cameroon

Preuss's monkey *Cercopithecus preussi preussi*, Nigerian white-throated guenon *Cercopithecus erythrogaster pococki*, Mainland drill *Mandrillus leucophaeus poensis* and Red-capped mangabey *Cercocebus torquatus*.

References

- Butynski, T. M. and S. H. Koster. 1994. Distribution and conservation status of primates in Bioko Island, Equatorial Guinea. *Biodiversity and Conservation* 3: 893–909.
- Cronin, D. T. 2013. The Impact of Bushmeat Hunting on the Primates of Bioko Island, Equatorial Guinea. Department of Biology. Drexel University, Philadelphia, PA.
- Cronin, D. T., C. Riaco and G. W. Hearn. 2013. Survey of threatened monkeys in the Iladyi River Valley Region, Southeastern Bioko Island, Equatorial Guinea. *African Primates* 8: 1–8.
- González Kirchner, J. P. 1994. *Ecología y Conservación de los Primates de Guinea Ecuatorial*. Ceiba Ediciones, Cantabria, Spain.
- Groves, C. P. 2007. The taxonomic diversity of the Colobinae of Africa. *Journal of Anthropological Sciences* 85: 7–34.
- Groves, C. P. and N. Ting. 2013. Pennant's red colobus *Piliocolobus pennantii*. In: *Handbook of the Mammals of the World. Volume 3. Primates*, R. A. Mittermeier, A. B. Rylands and D. E. Wilson (eds.), pp.707–708. Lynx Edicions, Barcelona.
- Hearn, G., W. A. Morra and T. M. Butynski. 2006. Monkeys in Trouble: The Rapidly Deteriorating Conservation Status of the Monkeys on Bioko Island, Equatorial Guinea. Report, Bioko Biodiversity Protection Program, Glenside, Pennsylvania.
- Morra, W., G. Hearn, and A. J. Buck. 2009. The market for bushmeat: *Colobus satanas* on Bioko Island. *Ecological Economics* 68: 2619–2626.
- Oates, J. F. 2011. *Primates of West Africa: A Field Guide and Natural History*. Conservation International, Arlington, VA.

Oates, J. F. 1996. *African Primates: Status Survey and Conservation Action Plan*. Revised edition. IUCN, Gland, Switzerland.

Oates, J. F. and T. T. Struhsaker. 2008. *Procolobus pennantii* ssp. *pennantii*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Accessed on 17 March 2014.

Oates, J. F., T. T. Struhsaker, B. Morgan, J. Linder and N. Ting. 2008. *Procolobus preussi*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Accessed 17 March 2014.

Struhsaker, T. T. 2005. The conservation of red colobus and their habitats. *International Journal of Primatology* 26: 525–538.

Struhsaker, T. T. 2011. *The Red Colobus Monkeys: Variation in Demography, Behavior, and Ecology of Endangered Species*. Oxford University Press, Oxford.