The IUCN Red List of Threatened Species™
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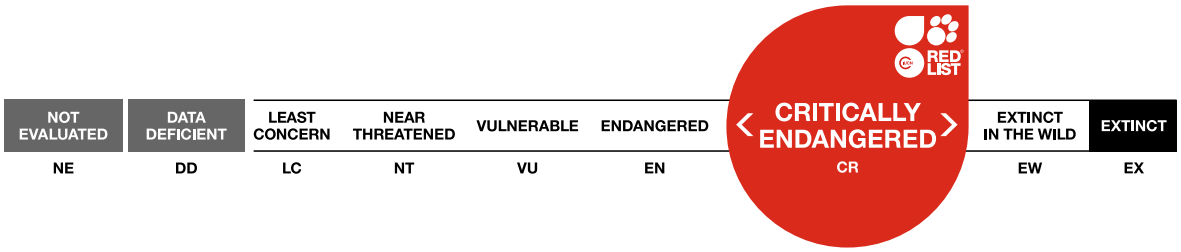
Scope(s): Global
Language: English

Macaca sinica ssp. opisthomelas, Highland Toque Macaque

Assessment by: Dittus, W. & Gamage, S.N.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Primates	Cercopithecidae

Scientific Name: *Macaca sinica ssp. opisthomelas* Osman Hill, 1942

Parent Species: See *Macaca sinica*

Common Name(s):

- English: Highland Toque Macaque

Taxonomic Notes:

The Primate SG taxonomic list no longer recognises this taxon. It was reassessed in the CAMP South Asia workshop in 2003 as EN with the statement that "Brandon-Jones *et al*. (2001) do not list this subspecies and dismiss its existence as an intermediary type between *Macaca sinica aurifrons* and *M. s. sinica.*" The opinion was based on limited museum specimen by Fooden (1969 Hill (1942) first described this subspecies and it has since then been confirmed as a morphologically distinct apical type in the field (not intermediary between the other two subspecies) by a number of biologists active in Sri Lanka (Phillips, 1935, 1980; Eisenberg and KcKay, 1970; Dittus, 1977; Pethiyagoda, 2012; Dittus 2013; Yapa and Ratnavira, 2013). It is critical to the conservation of this important subspecies that it is recognised because its montane habitat is the most threatened of Sri Lankan primate environments (Dittus 1977; Wikramanayake and Gunatilleke, 2002; Jayasuriya *et al*., 2006; Wijesundara, S. (2012); Gamage *et al*. 2015).

Assessment Information

Red List Category & Criteria: Critically Endangered A2cd+4cd; B1ab(ii,iii,v)+2ab(ii,iii,v) ver 3.1

Year Published: 2020

Date Assessed: November 24, 2015

Justification:

Since the last century, habitat loss (to coffee and tea plantations) of more than 85% has occurred, and habitat loss continues due to encroachment on natural forest areas for agriculture (small holder vegetable plots and commercial scale dairy farming). For example, it is estimated that less than 30 km² of montane forest remain in 2015, and even these remnants are being degraded owed to unabated fuel wood collection and forest death (Gamage *et al*. 2015, Jayasuriya *et al.* 2006, Wijesundera 2012). This endemic species has no legal protection and is treated as a pest. Mismanagement by some government authorities is an additional serious threat because they have trapped released into unsuitable area where their survival is at risk (Dittus, 2012 b). Current policy prohibits such activity by the Sri Lanka Department of Wildlife Conservation (Dr. Tharaka Prasad, Sri Lanka Department of Wildlife Conservation, pers. comm). Nevertheless, macaques continue to be persecuted as pests in most communities. It had been suggested earlier (Molur *et al*. 2003, p 199) that this subspecies deserves "Critically Endangered" status. Updated data regarding reductions in extent of occurrence (EOO) and area of occupancy (AOO), in particular through field observations by Saman Gamage 2005-2015, plus

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new threats (Dittus 2012, a,b,) justifies the current assessment of this subspecies as Critically Endangered.

Previously Published Red List Assessments

2008 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T39800A10267694.en

2000 – Endangered (EN)

Geographic Range

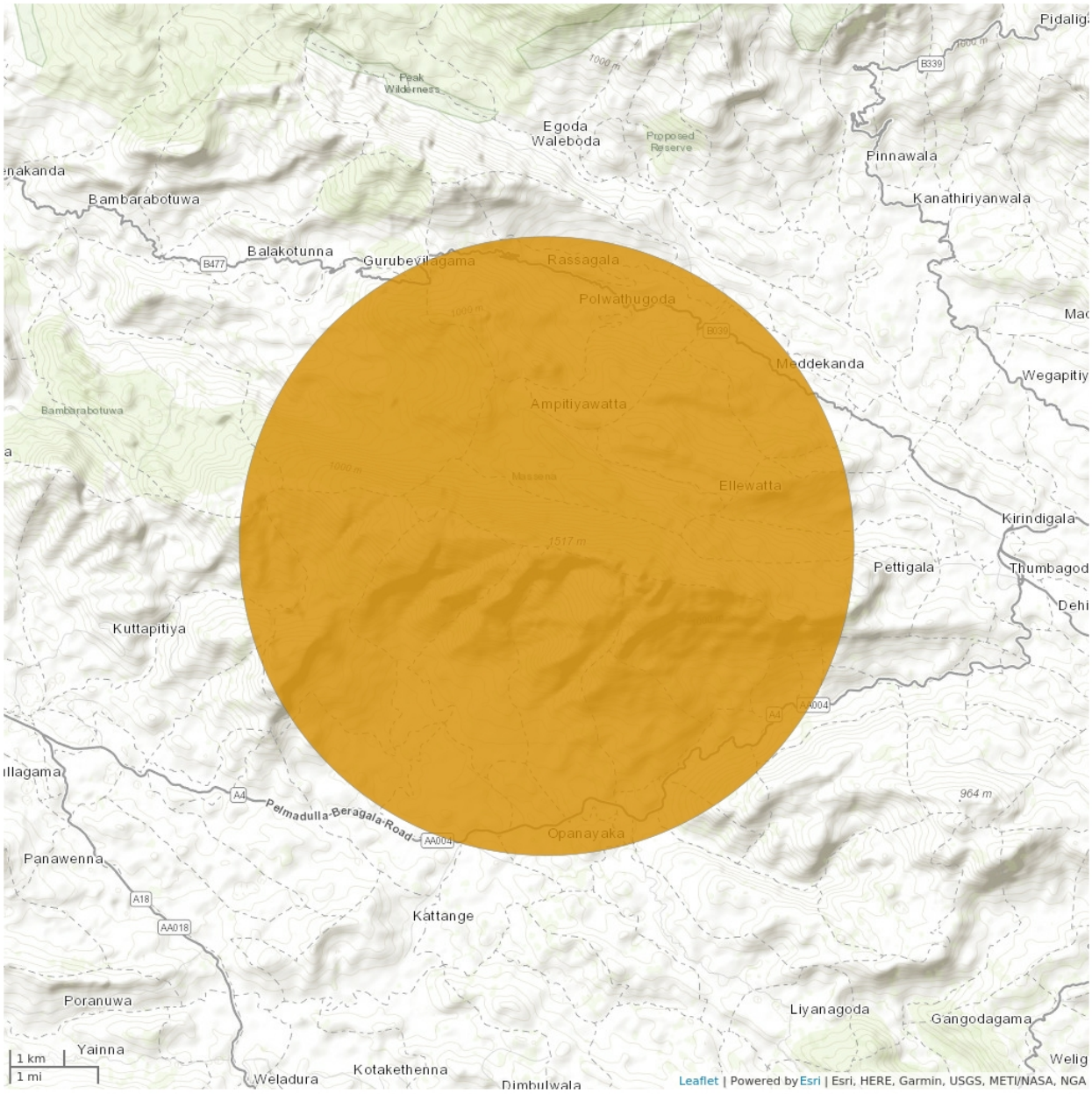
Range Description:

The subspecies is restricted to the high elevation wet zone in Sri Lanka, above 1,600 m. It is highly restricted with the extent of occurrence (EOO) being around 80-95 km² and the area of occupancy (AOO) less than 10 km².

Country Occurrence:

Native, Extant (resident): Sri Lanka

Distribution Map



Legend

EXTANT (RESIDENT)

Compiled by:

IUCN (International Union for Conservation of Nature) 2020

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

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Population

The species is restricted to a very small area in fewer than eight, severely fragmented locations.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Macaca sinica opisthomelas occurs in montane tropical rainforest above 1,600 m altitude.

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

The taxon is trapped for the pet trade.

Threats (see Appendix for additional information)

Since 2000, habitat loss (to coffee and tea plantations) of more than 85% has occurred. Habitat loss continues due to encroachment on natural forest areas for agriculture (small holder vegetable plots and commercial scale dairy farming). For example, it is estimated that less than 30 km² of montane forest remain in 2015, and even these remnants are being degraded owed to unabated fuel wood collection and forest die back (Gamage *et al*. 2015, Jayasuriya *et al.* 2006, Wijesundera,2012). This endemic species has no legal protection and is treated as a pest. Mismanagement by some government authorities is an additional serious threat because they have trapped released into unsuitable area where their survival is at risk (Dittus 2012 b). Current policy prohibits such activity by the Sri Lanka Department of Wildlife. Nevertheless, macaques continue to be persecuted as pests in most communities. It had been suggested earlier (Molur *et al*. 2003, p 199) that this subspecies deserves “Critically Endangered” status. Updated data regarding reductions in extent of occurrence (EOO) and area of occupancy (AOO), in particular through field observations by Saman Gamage 2005-2015, plus new threats to the taxon (Dittus 2012 a,b,) justifies the present assessment of this subspecies as Critically Endangered.

Conservation Actions (see Appendix for additional information)

*Macaca sinica opisthomelas*em style="font-weight: bold;"> occurs in the Peak Wilderness Area (high elevations) and the Hakgala Strict Natural Reserve that serve as credible protected areas for the macaque. The location of the type specimen in the Horton Plains (Hill, 1942) is an error (Pethiyagoda, 2012) and more than 50 years of observations by numerous biologists confirm the absence of the macaques from the vast expanses of the Horton Plains National Park; a few camera trap observations exist from the edges of the park (Kittle and Watson, personal communication). Therefore, the HPNP cannot be considered as a credible protected area for the macaque, this being a revision of earlier assessments (e.g., Molur *et al*. 2013). Notwithstanding, the macaques may make excursions into the lower altitude slopes of the park, mostly to feed on garbage or crops, and they do reside permanently in forested steep ravines just below the boundaries of the park. It is recommended that these ravines be included inside the park boundaries to offer more protection to the macaques (Dittus pers. comm.)

Credits

https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T39800A17985750.en

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Reviewer(s): Molur, S. & Mittermeier, R.A.

Authority/Authorities: IUCN SSC Primate Specialist Group

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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 -> 1.9. Forest - Subtropical/Tropical Moist Montane	Resident	Suitable	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.1. Intentional use: (subsistence/small scale) [harvest]	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.2. Species disturbance		

Conservation Actions in Place

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

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No

Conservation Action in Place
Systematic monitoring scheme: No
In-place land/water protection
Conservation sites identified: No
Area based regional management plan: No
Occurs in at least one protected area: Yes
Invasive species control or prevention: No
In-place species management
Harvest management plan: No
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No
In-place education
Subject to recent education and awareness programmes: No
Included in international legislation: No
Subject to any international management / trade controls: No

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 -> 3.2. Species recovery
3. Species management -> 3.4. Ex-situ conservation -> 3.4.1. Captive breeding/artificial propagation
4. Education & awareness -> 4.1. Formal education
4. Education & awareness -> 4.3. Awareness & communications
5. Law & policy -> 5.1. Legislation -> 5.1.2. National level

Research Needed

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology

Research Needed
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
2. Conservation Planning -> 2.1. Species Action/Recovery Plan
2. Conservation Planning -> 2.2. Area-based Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km²): 9-10
Continuing decline in area of occupancy (AOO): Yes
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km²): 80-95
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): Unknown
Number of Locations: 7
Continuing decline in number of locations: Unknown
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 1,600
Upper elevation limit (m): 2,100
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: Unknown
Population severely fragmented: Yes
Continuing decline in subpopulations: Unknown
Extreme fluctuations in subpopulations: Unknown
All individuals in one subpopulation: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 12-13

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.