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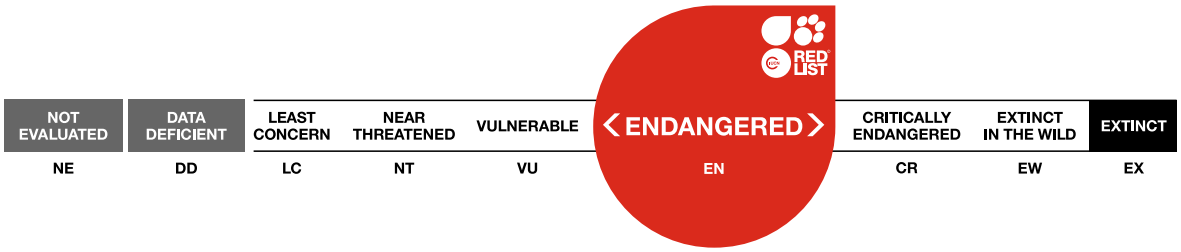
Scope(s): Global
Language: English

Macaca fascicularis ssp. fascicularis, Common Long-tailed Macaque

Amendment version

Assessment by: Hansen, M.F. *et al.*



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Primates	Cercopithecidae

Scientific Name: *Macaca fascicularis ssp. fascicularis* (Raffles, 1821)

Synonym(s):

- *Macaca fascicularis* ssp. *philippensis* (I. Geoffroy, 1843)

Parent Species: See *Macaca fascicularis*

Common Name(s):

- English: Common Long-tailed Macaque, Crab-eating Macaque

Taxonomic Notes:

There is an ongoing discussion whether the *Macaca fascicularis philippinensis* is a junior synonym of *M. f. fascicularis*.

Please refer to the taxonomic text in the species-level assessment for more information.

Assessment Information

Red List Category & Criteria: Endangered A3cd ver 3.1

Year Published: 2022

Date Assessed: March 7, 2022

Justification:

This subspecies is the most widespread of the *fascicularis* subspecies and is almost comparable to the species in both population, distribution, threats and conservation actions needed. We therefore refer the reader to the assessment of *Macaca fascicularis* (which extensively documents these threats) and assess this subspecies Endangered on the basis of Criterion A, as we do the species. This subspecies is persecuted due to negative interactions with humans throughout its range, and this is a cause for concern. The subspecies is threatened by high demand for the national and international trade, with hunting and trapping occurring due to human-macaque conflict and for subsistence food, among other reasons.

Additional to the hunting and persecution that this subspecies faces, we must also factor in the significantly changing landscape of Southeast Asia that continues to be deforested, reshaped, and degraded (Sodhi *et al.* 2004). Furthermore, there is a general lack of protection of this subspecies across their range, despite there being laws in place to protect them in several habitat-countries.

Much like studies of the Bonnet Macaque (a similar species) indicated steep declines in populations due to persecution and commensal populations being sinks over the last few decades, this is also suspected to have undergone declines of at least 40% throughout its range over the last three generations (33

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years), also due to heavy hunting pressure for meat, sport and trophies. The threats facing this subspecies are unlikely to decline and are known to be increasing. As such, we suspect that the population will decline at a rate that is likely to surpass 50% over the next three generations. This taxa is therefore assessed as Endangered under Criterion A.

Previously Published Red List Assessments

2022 – Endangered (EN)
https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T195351957A195354093.en

Geographic Range

Range Description:

This subspecies has the widest distribution of all *Macaca fascicularis* subspecies. *Macaca fascicularis fascicularis* occurs in Brunei, Cambodia, Indonesia (Kalimantan, Sumatra, Java, Bali, and most but not all offshore islands), southern Lao PDR, Malaysia (Peninsular Malaysia, Sabah and Sarawak), Philippines, Singapore, eastern and southern Thailand (and offshore islands), and southern Viet Nam. It has probably been artificially introduced in the Nusa Penida-Timor Island chain.

The extent of occurrence and habitat quality have declined for this subspecies in the past three generations (Global Forest Watch 2020) and will likely continue to decline into the future.

Country Occurrence:

Native, Extant (resident): Brunei Darussalam; Cambodia; Indonesia (Bali, Jawa, Kalimantan, Lesser Sunda Is., Sumatera); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sabah, Sarawak); Philippines; Singapore; Thailand; Viet Nam

Distribution Map

Legend

EXTANT (RESIDENT)

Compiled by:

IUCN (International Union for Conservation of Nature) 2022

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

Due to a number of threats, a population decline of at least 40% is suspected over the past three generations, and it is suspected that this population decline will increase and surpass 50% over the next three generations. Additional information is provided below and elsewhere in this profile.

Although the subspecies is considered adaptable and can be found in a range of degraded habitats, populations are decreasing in several parts of its range (Kyes *et al.* 2011, Lee 2011, Hansen *et al.* 2019). For example, there are reports of significant local declines and even complete disappearances in Cambodia (Lee 2011), Lao PDR (pers. obs. Phaivanh Phiapalath, 2021). A survey of suitable habitats and meat markets in Cambodia in 2008 found no long-tailed macaques (Lee 2011), and another survey in Java, Indonesia in 2009 similarly found no long-tailed macaques in suitable forests (Kyes *et al.* 2011). The actual population size in Lao PDR is now down to 300-500 individuals for the entire country (CITES, 2022); this is a decline of 90% if we go by the mean published in 2011 by San and Hamada.

Furthermore, in an area that is regularly monitored in Cambodia, populations have declined by 50% over the last ten years (Nuttal *et al.* 2021). In another area of Cambodia, the encounter rate of long-tailed macaque detection by camera traps, also saw a reduction, and this from just 2013-2014 (Suzuki *et al.* 2017).

The taxon shows a similar trend to that of *Macaca radiata* (Bonnet Macaque) in southern India, where habitat loss, negative interactions and increased movement of the groups from forests to human habitations over the decades have caused steep declines in the populations (Singh 2019).

Hansen *et al.* (2019, 2021) note that the species' synanthropy makes it appear more common than it is, with very much lower densities in natural habitats and even widespread but disregarded localized or regional extirpation, e.g., in Cambodia (Kyes *et al*. 2011, Lee 2011, Hansen *et al*. 2019), and probably in other countries.

Given that this subspecies occupies almost all of the range of the species, please refer to the species assessment for further information.

Current Population Trend: Decreasing

Habitat and Ecology **(see Appendix for additional information)**

The subspecies is extremely adaptable and can be found in a range of habitats, including primary and secondary forests, mangroves, swamp forests, and areas influenced by agriculture and human settlement adjacent to forests (Fooden 1995, Fuentes *et al.* 2005, Malaivijitnond *et al.* 2005, Gumert *et al.* 2011). The subspecies has been reported as occurring at elevations of up to 1,000 m on Java, Borneo, and Sumatra, and up to 1,800 m in the Philippines (Heaney *et al*. 1998). On the mainland, it generally occurs at lower elevations: up to 700 m in Thailand. This taxon is semi-terrestrial, diurnal, and omnivorous (Yeager 1996, Fuentes *et al.* 2011, Sha and Hanya 2013, Ilham *et al.* 2017).

Systems: Terrestrial

Use and Trade

The subspecies is collected for biomedical research and pet trade (Shepherd 2020, Hansen *et al.* 2021). Please refer to the species assessment for a full overview of threats.

Threats (see Appendix for additional information)

This subspecies is severely affected by collection for the biomedical research and pet trade (Shepherd 2020, Hansen *et al.* 2021). From 2008 to 2019, at least 450,000 live long-tailed macaques (mainly *M. f. fascicularis*), and over 700,000 "specimens" from an unknown number of individuals were part of the biomedical trade, with over 50,000 termed as wild-caught (CITES Trade Database 2021; see Hansen *et al.* 2021). During the pandemic, the pattern of the international trade has changed substantially, with China banning export of long-tailed macaques (The Globe and Mail 2020). This has left habitat-countries, who do not have the same amount of captive long-tailed macaques as China, to supply the ever-growing demand, further exerting pressure on wild populations (Hansen *et al*. 2022).

The international trade in long-tailed macaques is a multi-billion dollar industry (Hansen *et al.* 2022), and this has only increased during the COVID-19 pandemic. The average price internationally has quadrupled from 2019 (Hansen *et al.* 2022) to 2022. This threatens the taxa's survival.

Habitat loss due to expansion of plantations, agriculture and urban development has also resulted in declining populations and increasing human-macaque interactions. In areas where there is food provisioning to macaques by humans, such as at tourist spots and other urban settings near forests, human-macaque conflicts occur. As a consequence, macaques are often negatively affected, such as by culling to resolve conflicts (see Hansen *et al.* 2021). Macaques also risk becoming injured or roadkills when they are drawn to the roads by human food or by the need to travel between fragmented habitats (Kasmuri *et al.* 2020).

Please refer to the species assessment for a full overview of the threats this subspecies is currently facing.

Conservation Actions (see Appendix for additional information)

The species (including its subspecies) is included in Appendix II of CITES. In Myanmar, it is a "normally" protected species. It is protected in Appendix 2B on Decree 32 (2006) in Viet Nam. It is protected in Malaysia under Schedule 1 in the Wildlife Conservation (Amendment of Schedule) Order 2012. It occurs in many protected areas throughout its range and is relatively common in captivity (M. Richardson pers. comm.).

There is a need for further survey work to assess the current population and taxonomic status of the various island forms, including the ones in Indonesia and Philippines.

Please refer to the species assessment for conservation actions needed.

Credits

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Disclaimer

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	-	Suitable	Yes
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	-	Suitable	Yes
1. Forest -> 1.7. Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level	-	Suitable	Yes
1. Forest -> 1.8. Forest - Subtropical/Tropical Swamp	-	Suitable	Yes
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	-	Suitable	Yes
2. Savanna -> 2.1. Savanna - Dry	-	Marginal	-
2. Savanna -> 2.2. Savanna - Moist	-	Marginal	-
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Marginal	-
3. Shrubland -> 3.6. Shrubland - Subtropical/Tropical Moist	-	Marginal	-
3. Shrubland -> 3.7. Shrubland - Subtropical/Tropical High Altitude	-	Marginal	-
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	-	Marginal	-
4. Grassland -> 4.6. Grassland - Subtropical/Tropical Seasonally Wet/Flooded	-	Marginal	-
4. Grassland -> 4.7. Grassland - Subtropical/Tropical High Altitude	-	Marginal	-
5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	-	Suitable	Yes
5. Wetlands (inland) -> 5.2. Wetlands (inland) - Seasonal/Intermittent/Irregular Rivers/Streams/Creeks	-	Marginal	-
5. Wetlands (inland) -> 5.3. Wetlands (inland) - Shrub Dominated Wetlands	-	Marginal	-
5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	-	Suitable	Yes
5. Wetlands (inland) -> 5.9. Wetlands (inland) - Freshwater Springs and Oases	-	Marginal	-
7. Caves and Subterranean Habitats (non-aquatic) -> 7.1. Caves and Subterranean Habitats (non-aquatic) - Caves	-	Marginal	-
12. Marine Intertidal -> 12.1. Marine Intertidal - Rocky Shoreline	-	Marginal	-
12. Marine Intertidal -> 12.2. Marine Intertidal - Sandy Shoreline and/or Beaches, Sand Bars, Spits, Etc	-	Marginal	-

Habitat	Season	Suitability	Major Importance?
12. Marine Intertidal -> 12.3. Marine Intertidal - Shingle and/or Pebble Shoreline and/or Beaches	-	Marginal	-
12. Marine Intertidal -> 12.4. Marine Intertidal - Mud Flats and Salt Flats	-	Marginal	-
12. Marine Intertidal -> 12.7. Marine Intertidal - Mangrove Submerged Roots	-	Suitable	Yes
14. Artificial/Terrestrial -> 14.1. Artificial/Terrestrial - Arable Land	-	Marginal	-
14. Artificial/Terrestrial -> 14.2. Artificial/Terrestrial - Pastureland	-	Marginal	-
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	-	Marginal	-
14. Artificial/Terrestrial -> 14.4. Artificial/Terrestrial - Rural Gardens	-	Marginal	-
14. Artificial/Terrestrial -> 14.5. Artificial/Terrestrial - Urban Areas	-	Marginal	-
14. Artificial/Terrestrial -> 14.6. Artificial/Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	-	Marginal	-
16. Introduced vegetation	-	-	-

Use and Trade

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

End Use	Local	National	International
3. Medicine - human & veterinary	No	No	Yes
13. Pets/display animals, horticulture	Yes	Yes	No
14. Research	No	No	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5

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
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	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		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.1. Nomadic grazing	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.4. Marine & freshwater aquaculture -> 2.4.1. Subsistence/artisinal aquaculture	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
2. Agriculture & aquaculture -> 2.4. Marine & freshwater aquaculture -> 2.4.2. Industrial aquaculture	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
3. Energy production & mining -> 3.3. Renewable energy	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
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 2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Ongoing	Whole (>90%)	Rapid declines	High impact: 8
	Stresses:	2. Species Stresses -> 2.1. Species mortality 2. Species Stresses -> 2.2. Species disturbance		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
10. Geological events -> 10.2. Earthquakes/tsunamis	Ongoing	Minority (<50%)	Causing/could cause fluctuations	Low impact: 5

11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5
11. Climate change & severe weather -> 11.5. Other impacts	Ongoing	Minority (<50%)	Slow, significant declines	Low impact: 5

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
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: Not Applicable
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: 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
3. Species management -> 3.1. Species management -> 3.1.2. Trade management
3. Species management -> 3.2. Species recovery

Conservation Action Needed
4. Education & awareness -> 4.2. Training
4. Education & awareness -> 4.3. Awareness & communications
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.1. International level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-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
1. Research -> 1.4. Harvest, use & livelihoods
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
2. Conservation Planning -> 2.2. Area-based Management Plan
2. Conservation Planning -> 2.3. Harvest & Trade Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends
3. Monitoring -> 3.3. Trade trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Continuing decline in extent of occurrence (EOO): Yes
Lower elevation limit (m): 0
Upper elevation limit (m): 2,250
Population
Population severely fragmented: No
Continuing decline in subpopulations: Yes
All individuals in one subpopulation: No

https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T195351957A221668305.en

Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 13.9

Amendment

Amendment reason: This amended assessment was created to correct two of the Assessor names ("Trinh, T." should have been "Trinh, T.T.H." and "Paramasiwam, S." should have been "Paramasivam, S.". The distribution map has also been corrected. The distribution map has also been corrected.

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: ABQ BioPark; Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; Missouri Botanical Garden; NatureServe; Re:wild; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.