GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Macaca fascicularis***

Macaca fascicularis 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Primates	Cercopithecidae

Common name crab-eating macaque (English), long-tailed macaque (English)

Synonym *Macaca irus* , F. (Cuvier, 1818)

Similar species

Summary Macaca fascicularis (crab-eating macaque) are native to south-east Asia and have been introduced into Mauritius, Palau (Angaur Island), Hong Kong and parts of Indonesia (Tinjil Island and Papua). They are considered to be invasive, or potentially invasive, throughout their introduced range and management may be needed to prevent them from becoming invasive in areas such as Papua and Tinjil. They are opportunistic mammals and reach higher densities in degraded forest areas, including habitats disturbed by humans. They have few natural predators in their introduced ranges. Macaca fascicularis impact native biodiversity by consuming native plants and competing with birds for fruit and seed resources. In addition, they facilitate the dispersal of seeds of exotic plants. Macaca fascicularis may also impact on the commercial sector through their consuming of agriculturally important plant species and damaging of crops.

view this species on IUCN Red List

Species Description
Upper parts dark brown with light golden brown tips, under parts light grey; tail dark grey/brown and equal to head and body length. Crown hairs directed backwards; sometimes forming short crest on mid-line. Skin is black on feet and ears, muzzle light greyish pink. Eyelids often with prominent white markings, white spots sometimes seen on ears. No perineal swelling. Males 3.5kg - 8.3kg; Females 2.5kg - 5.7kg.

Notes
Natural predators of crab-eating macaques (*Macaca fascicularis*) include large carnivores (panthers and sun-bears in Java), snakes and possibly large raptors. Some primate taxonomists consider *M. fascicularis* to be more of a species group or superspecies, as it has a complex relationship with other species such as *M. mulatto*, *M. cyclopis*, and *M. fuscata*.

Lifecycle Stages
Gestation 167 days. Lactation 14-18 months. Duration of oestrus 11 days. Females become sexually mature at 4. Live up to 25 years on average; up to 37 years in captivity. Sex ratios within troops usually biased towards females.

Uses
In their natural range, crab-eating macaques (*Macaca fascicularis*) are occasionally used as a food source for some indigenous forest dwelling peoples. In Mauritius, they are sold to the pharmaceutical industry with a value of approximately US$1500 per individual, and in Angaur, Palau they are sold as pets.

Habitat Description
Crab-eating macaques (*Macaca fascicularis*) inhabit a wide range of habitats including riverine, secondary and primary forest, forest periphery, mangrove and nipa swamp, coastal forest, and urban and agricultural settings, in both their natural and introduced range. They have a preference for secondary habitats which have been disturbed by human activity and are highly adaptive to new environments. Occur from sea level to 1200m and can travel at least 1828m in their natural range.

Reproduction
Placental. Sexual. Polyoestrous. May breed at any time of year. They typically give birth to single young, rarely twins, every two years.

Nutrition
Herbivorous: Fruit and seeds make up 60 - 90% of the dietry intake of macaques. They will also eat leaves, flowers, roots and bark.
Carnivorous: They prey on vertebrates (including bird chicks and nesting female birds) and invertebrates.
Omnivorous: In Mauritius they have been recorded eating bird eggs.

General Impacts
Crab-eating macaques (*Macaca fascicularis*) may negatively impact biodiversity by eating the eggs and chicks of endangered forest birds. They compete with native birds for resources such as native fruits. They may aggravate the negative effects of exotic plant species by consuming their fruits and aiding dispersal of their seeds. Macaques feed on sugar cane and other crops, affecting agriculture and livelihoods, and can be aggressive towards humans. Macaques may carry potentially fatal human diseases, including B-virus.

Management Info
Preventative measures: Plantations of Japanese red cedar (*Cryptomeria japonica*) appear to provide protection to native birds (and eggs) from the predation and scavenging of macaques. Quarantine measures need to be more effective in places such as Papua (Indonesia) to prevent the range expansion of the current population.
Physical: In Mauritius live-trapping has been carried out for export and research. Socio-religious reasons may mean this solution is not appropriate. Animals may become trap-shy. Local communities in Papua and Palau have hunted macaques with some success.
Biological: The immuno-vaccine Porcine Zona Pellucida (PZP) (which causes infertility in females) is currently being trialled in Hong Kong to investigate its use as a population control.

Pathway
Introduced by acclimatisation societies.

Principal source: Kemp, N.J. and Burnett, J.B. (2003). Final Report: A biodiversity risk assessment and recommendations for risk management of Long-tailed Macaques (*Macaca fascicularis*) in New Guinea. December 2003. Washington, DC: Indo-Pacific Conservation Alliance.

Compiler: Steve Carter, Ecologist, Wildlife Disease Ecology Team, Central Science Laboratory UK & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Neville Kemp, Indo-Pacific Conservation Alliance.

Pubblication date: 2007-01-11

ALIEN RANGE

[1] HONG KONG **[1]** INDONESIA

[1] MAURITIUS

[1] PALAU

Red List assessed species 7: EX = 1; EN = 4; VU = 2;

Coffea myrtifolia **EN**
Foudia rubra **EN**
Lophopsittacus mauritianus **EX**
Psittacula eques **EN**
Falco punctatus **VU**
Hypsipetes olivaceus **VU**
Nesoenas mayeri **EN**

BIBLIOGRAPHY

14 references found for **Macaca fascicularis**

Managment information

Bertram, B. and Ginsberg, J. 1994. Monkeys in Mauritius: Potential for Humane Control (Confidential report by the Zoological Society of London commissioned by the RSPCA): 25.
Summary: Confidential report summarising the problems posed by crab-eating macaques on Mauritius and the feasibility of humane population control.

Bomford, M., 2003. Risk Assessment for the Import and Keeping of Exotic Vertebrates in Australia. Bureau of Rural Sciences, Canberra.
Summary: Available from: http://www.feral.org.au/wp-content/uploads/2010/03/PC12803.pdf [Accessed August 19 2010]

Bright, P. and Carter, S. 1999. Exotic Vegetation as a Refuge From Predation for Endangered Mauritian Birds. British Ecological Society.

Carter, S.P. and Bright, P.W. 2002. Habitat Refuges as Alternatives to Predator Control for the Conservation of Endangered Mauritian Birds. In Veitch, C.R. and Clout, M.N. (eds.) *Turning the Tide: the Eradication of Invasive Species*: 71 - 78. IUCN SSC Invasive Species Specialist Group: Switzerland and Cambridge.
Summary: Eradication case study in Turning the tide: the eradication of invasive species.

Courchamp, F., Chapuis, J-L. and Pascal, M. 2002. Mammal Invaders on Islands: Impact, Control, and Control Impact, *Biological Reviews 78*: 347 - 383.
Summary: General paper on mammal invaders to islands and the effect they can have on endemic fauna. General information on management strategies

deRuiter, J.R. 1992. Capturing Wild Long-tailed Macaques (*Macaca fascicularis*), *Folia Primatology 59*: 89 - 104.
Summary: Effective techniques for capturing macaques

IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4.
Summary: The IUCN Red List of Threatened Species provides taxonomic, conservation status and distribution information on taxa that have been globally evaluated using the IUCN Red List Categories and Criteria. This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those taxa that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). The IUCN Red List also includes information on taxa that are categorized as Extinct or Extinct in the Wild; on taxa that cannot be evaluated because of insufficient information (i.e. are Data Deficient); and on taxa that are either close to meeting the threatened thresholds or that would be threatened were it not for an ongoing taxon-specific conservation programme (i.e. are Near Threatened).
Available from: http://www.iucnredlist.org/ [Accessed 25 May 2011]

Kemp, N.J. and Burnett, J.B. 2003. A Biodiversity Risk Assessment and Recommendations for Risk Management of Long-tailed Macaques (*Macaca fascicularis*) in New Guinea (final report). Indo-Pacific Conservation Alliance: Washington.
Summary: A comprehensive source of information on characteristics, distribution, management, impacts and risk assessment of crab-eating Macaques (*Macaca fascicularis*).
Available from: http://www.indopacific.org/papuamacaques.pdf [Accessed 23 September, 2004]

General information

Cheke, A.S. 1987. An Ecological History of the Mascarene Islands, With Particular Reference to Extinctions and Introductions of Land Vertebrates. In Diamond, A.W., Cheke, A.S. and Elliot, H.F.I. (eds.) *Studies of Mascarene Island Birds, for the British Ornithologist s Union*. Cambridge University Press: Cambridge.
Summary: History of all land vertebrate introductions on Mascarene Islands, including *Macaca fascicularis* and its effect possible impact on endemic vertebrates.

ITIS (Integrated Taxonomic Information System), 2004. Online Database *Macaca fascicularis*
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=180098 [Accessed February 2008]

Kyes, R.C., Sajuthi, D., Iskandar, E., Iskandriati, D., Pamungkas, J., and Crockett, C.M. 1998. Management of a Natural Habitat Breeding Colony of Long-tailed Macaques, *Tropical Biodiversity 5* (2).
Summary: This paper contains information on the management of long-tailed macaques on Tinjil Island, Indonesia.

Sussman, R.W. and Tattersall, I. 1980. A Preliminary Study of the Crab-eating Macaque *Macaca fascicularis* in Mauritius, *The Maurutius Institute Bulletin 9* (1): 31 - 51.
Summary: General ecology of crab-eating macaques on Mauritius.

Sussman, R.W. and Tattersall, I. 1981. Behavior and Ecology of *Macaca fascicularis* in Mauritius: A Preliminary Study, *Primates 22*(2): 192 - 205.
Summary: General ecology of crab-eating macaques on Mauritius.

Sussman, R.W. and Tattersall, I. 1986. Distribution, Abundance, and Putative Ecological Strategy of *Macaca fascicularis* on the Island of Mauritius, Southwestern Indian Ocean, *Folia primatologica 46*: 28 - 43.
Summary: Distribution, abundance, and putative ecological strategy of *Macaca fascicularis* on the Island of Mauritius, Southwestern Indian Ocean.