GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Herpestes javanicus***

Herpestes javanicus 简体中文 正體中文 **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Herpestidae

Common name newla (Hindi, India), small Indian mongoose (English), Kleiner Mungo (German), mangouste (French), mangus (Hindi), mweyba (Burmese), beji (Bengali)

Synonym

Similar species

Summary The small Indian mongoose (*Herpestes auropunctatus*) has been introduced to many islands worldwide for control of rats and snakes, mainly in tropical areas, but also to islands in the Adriatic Sea. Moreover, it has been introduced successfully in two continental areas: the northeast coast of South America and a Croatian peninsula. Mongooses are diurnal generalist carnivores that thrive in human-altered habitats. Predation by mongoose has had severe impacts on native biodiversity leading to the decline and extirpation of native mammals, birds, reptiles, and amphibians. At least seven species of native vertebrates, including mammals, birds, reptiles, and amphibians, have almost disappeared on Amami-oshima Island since the introduction of the mongoose in 1979. In addition, mongoose carries human and animal diseases, including rabies and human Leptospira bacterium.

view this species on IUCN Red List

Species Description
The small Indian mongoose has a slender body is with short legs. The head is elongated with a pointed muzzle. The tail is robustly muscular at the base and tapers gradually throughout its length. Length of head and body is 509 to 671mm. Ears are short and project only slightly beyond the fur. Feet have five toes with long sharp non-retractile claws. Hair is short. Both sexes have an extensible anal pad with ducted glands lateral to the anus. Fur is soft, pale to dark brown flecked with golden spots. Underside is paler than rest of body. Eyes are amber/brown but are blue green in young animals. There is distinct sexual dimorphism. Females range in length from 509 to 578mm with a mean of 540mm. Body mass at sexual maturity ranges from 305 to 662 g with a mean of 434g. Males have a wider head and more robust body ranging in length from 544 to 671mm with a mean of 591mm (Nellis, 1989).

Notes
\"The genus *Herpestes* contains 10 species (Nowak 1999) and is considered the oldest genus within the order Carnivora, dating back approximately 30 million years (Hinton & Dunn 1967). The native distribution of the small Indian mongoose [*Herpestes auropunctatus* (Hodgson 1836)] stretches from Iraq in the west to Myanmar in the east, and from northern Pakistan southwards throughout the Indian subcontinent. East of Myanmar (near the Salween River), the small Indian mongoose is replaced by the Javan mongoose, *Herpestes javanicus* (E. Geoffroy Saint-Hilaire, 1818), which recently has been recognized as\r\na separate species (G. Veron, personal communication). The small Indian mongoose (but not the Javan mongoose) has been introduced to many islands worldwide for control of rats and snakes, mainly in tropical areas, but also to islands in the Adriatic Sea. Moreover, it has been introduced successfully in two continental areas: the northeast coast of South America (Husson 1960) and a Croatian peninsula (Tvrtkovic & Krystufek 1990; Krystufek & Tvrtkovic 1992). Almost all introduced populations arose from very small numbers of founding individuals, and the introduction history is often well documented\" (from Thulin *et al* 2006)

Lifecycle Stages
Gestation 42-50 days, weaning 5 weeks, sexual maturity 10 months, total life expectancy in wild animals 3-4 years.

Uses
The small Indian mongoose was introduced as a biocontrol agent to control rats in cane fields but not particularly effective and the enormous cost to native species far outweighed any benefit.

Habitat Description
The small Indian mongoose is reported to prefer dry habitats and this is supported by the observation that trap success falls to zero in rainy weather in most cases. Habitat preferences in the native range have not been investigated but it seems the species prefers grassland and secondary growth to dense forest. Mongooses are also found around human habitation. Studies on Caribbean islands have shown a clear preference for dry natural areas are preferred over rainy areas. Mongooses reach dense population on Hawai'I and in this case they begin to exploit wet areas (Hays and Conant, 2007). In Mauritius tended to be found in rocky areas, riparian habitats and mature forest over scrub, long grass (sugar cane plantations), short grass and paths (Roy *et al*. 2002). In Puerto Rico male mongooses from the rain forest areas were larger than those in dry forests (Vilella, 1998).

Reproduction
Placental, sexual. Breeds two or three times a year, no real season, though there are breeding peaks. Two litters of three youngs per female per year. Females can breed from the age of 10 months.

Nutrition
Small Indian mongoose are generalist carnivores that thrive in human-altered habitats. Diet has not been investigated in the native range but a large number of studies have investigated diet in areas where the species has been introduced. Small Indian mongoose diet normally consists of mammals, birds, herpetofauna, invertebrates and plant material. Proportions of these dietary items vary according to availability and location of the study. Some populations are largely insectivorous; others may eat a diet largely consisting of fruit for part of the year (Hays and Conant, 2007). This high level of dietary flexibility has contributed to the small Indian mongoose's success as an invasive species.

General Impacts
The small Indian mongoose has had a major impact on native species in the areas where it has been introduced. In most cases the native wildlife in these areas evolved in the absence of predatory mammals so they are particularly threatened by mongoose predation. Species considered to have been driven extinct through mongoose predation are the barred-wing rail (see *Nesoclopeus poecilopterus* in IUCN Red List of Threatened Species) in Fiji (Hays and Conant, 2007). The Critically Endangered (CR)' and 'Possibly Extinct' Jamaica petrel (see *Pterodroma caribbaea* in IUCN Red List of Threatened Species) suffered drastic decline in numbers in the 19th century presumably due to predation by mongoose (capable of taking incubating adults) and rats (BirdLife International 2004). Mongooses have also been implicated in the decline of many other bird, reptile and mammal species. Mongooses also eat invertebrates but the impact of this predation on invertebrate populations has not been studied.
\r\nIn the Caribbean, mongooses prey on the 'Critically Endangered (CR)' hawksbill turtle (see *Eretmochelys imbricata* in IUCN Red List of Threatened Species) eggs in fragmented beach habitat (Leighton *et al* 2008, 2009, 2010, 2011) . Trapping around vulnerable beaches led to much greater breeding success for the turtles (Coblentz and Coblentz, 1985).
Mongooses on Mauritius have been blamed for the extirpation of introduced game birds and the decline of endemic species such as the 'Endangered (EN)' pink pigeon (see *Nesoenas mayeri* in IUCN Red List of Threatened Species) (Roy *et al*. 2002).
At least seven species of native vertebrates, including mammals, birds, reptiles, and amphibians, have almost disappeared on Amami-oshima Island since the introduction of the mongoose in 1979. The mongoose has been shown to have a strong negative effect on the 'Endangered (EN)' Amami rabbit (see *Pentalagus furnessi* in IUCN Red List of Threatened Species) (Watari *et al*. 2008).
In addition, mongoose are carriers of human and animal diseases, including rabies and human *Leptospira* bacterium.

Management Info
Physical: Trapping is commonly used to remove small Indian mongooses from sensitive areas. It is often very successful at removing animals in the short term. Unfortunately, trapping programmes need to be run almost constantly as mongooses re-colonise trapped areas very quickly (Roy *et al*. 2003; Hays and Conant, 2007). Fencing has been proposed as a possible control method in Mauritius but predator proof fences are expensive and inflexible should the area that needs to be protected change (Roy *et al*. 2002).
Chemical: Diphacinone anticoagulant poison has been used to control mongooses in Hawai'I (Hays *et al*. 2007). The use of this toxin has been considered in Mauritius but poisoning methods would have to be adapted to prevent poisoning of non-target species (Roy *et al*. 2002).
Integrated management: There is concern in Mauritius that removing mongooses without also removing cats and rats will be disastrous for native species because it may lead to increased rat and cat populations (Roy *et al*. 2002).

Pathway
Introduced for biological control of rats and snakes in agricultural habitats, from which the animals spread throughout local areas within decades.

Principal source:

Compiler: IUCN SSC Invasive Species Specialist Group
Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

Review: Dr. Sugoto Roy (Coordinator); Hebridean Mink Project. Central Science Laboratory Sand Hutton, York UK

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ALIEN RANGE

[1] ANTIGUA AND BARBUDA
[1] BERMUDA
[1] COMOROS
[1] CROATIA
[1] DOMINICAN REPUBLIC
[1] FRENCH GUIANA
[2] GUADELOUPE
[1] HAITI
[1] INDONESIA
[2] JAPAN
[1] MAURITIUS
[1] PUERTO RICO
[1] SAINT LUCIA
[1] SAINT VINCENT AND THE GRENADINES
[1] TRINIDAD AND TOBAGO
[2] VIRGIN ISLANDS, BRITISH
[1] BAHAMAS
[1] COLOMBIA
[1] COSTA RICA
[1] CUBA
[2] FIJI
[1] GRENADA
[1] GUYANA
[1] HONDURAS
[1] JAMAICA
[1] MARTINIQUE
[1] PANAMA
[1] SAINT KITTS AND NEVIS
[1] SAINT MARTIN (FRENCH PART)
[1] SURINAME
[1] UNITED STATES
[2] VIRGIN ISLANDS, U.S.

Red List assessed species 11: CR = 3; EN = 1; LC = 7;

Emoia nigra **LC**
Eretmochelys imbricata **CR**
Geotrygon mystacea **LC**
Porphyrio porphyrio **LC**
Porzana tabuensis **LC**
Rallus longirostris **LC**
Emoia trossula **EN**
Gallirallus philippensis **LC**
Hypsirhynchus ater **CR**
Porzana cinerea **LC**
Pterodroma phaeopygia **CR**

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