



Common Name: Small Indian Mongoose, Indian Mongoose, Javan Mongoose

Scientific Name: *Herpestes auropunctatus* (Hodgson, 1836) **Synonyms:** *Herpestes javanicus* (Geoffroy, 1818)

Classification:

Phylum or Division: Chordata

Class: Mammalia

Order: Carnivora

Family: Herpestidae

Subfamily: Herpestinae

Identification: The small Indian mongoose is a small, slender animal with short legs and small rounded ears located on the side of its head. It has soft short fur, usually pale to dark brown with golden flecks, but may vary seasonally and individually. It has a pale underside and a bushy tail, which is at least two thirds the length of its body. Head and body length is from 25 cm to 41 cm. Eyes are amber/brown in adults, blue/green in juveniles. Adult weight is between 60 to 1200 grams. Males tend to be slightly larger than females. *H.auropunctatus* is small in size compared to other mongoose species.

Original Distribution: Afghanistan, Bangladesh, Bhutan, Burma, Cambodia, China, India, Indonesia, Iran, Malaysia, Nepal, Pakistan, Thailand, Vietnam.

Current Distribution: Found on the islands of Hawaii, Maui, Molokai and Oahu. So far, it has been successfully kept out of Kauai.

Site and Date of Introduction: Established in Antigua, Anguilla, Caribbean, Comores, Costa Rica, Cuba, Dominican Republic, Fiji, Hawaii (1883), Jamaica (1872), Japan, Mauritius, Puerto Rico, Surinam, West Indies (1870's), and the island of Korcula in the Mediterranean, and other tropical regions.

Mode(s) of Introduction: Introduced to islands for biological control of rats and snakes in agricultural (sugarcane) habitats, from which the animals have quickly spread throughout the surrounding areas.

Reason(s) Why it has Become Established: Small Indian mongooses are generalist feeders, agile and have the ability to adapt to new surroundings. Most islands lack predators and native species have not evolved anti predator tactics, providing a safe environment and an easy food base for mongooses. *H.auropunctatus* has both a high rate of reproduction (breeds two or three times a year, litters of three) and a young age of first reproduction (females can breed at the age of 10 weeks). A female can produce up to 36 individuals in a typical four year life span.

Ecological Role: Not much is known about the ecology of this species in its native ranges. *H.auropunctatus* is solitary, lives in burrows and is diurnal. It feeds on a wide variety of small vertebrates, eggs and young of larger vertebrates (e.g. sea turtle eggs), large invertebrates and occasionally, fruits and vegetation. The small Indian mongoose has well developed carnassial teeth used to tear flesh. Its feet have four or five digits each with long non retractile claws, which are adapted for digging up invertebrates. The small Indian mongoose is a voracious

and opportunistic predator of a variety of native species and live stock on islands where it has been introduced.

Benefit(s): Controls the Asiatic rat and snakes in agricultural areas.

Threat(s): *H.auropunctatus* is a predator of birds (especially ground nesters), small mammals and reptiles (especially snakes and iguanas). Its impact on invertebrates is not known. It is a vector and reservoir of rabies and leptospirosis in Puerto Rico and other islands and causes economic losses to game species and the poultry industry. *H.auropunctatus* has already caused at least 7 amphibian and reptile extinctions in Puerto Rico and other islands in the West Indies. The Indian mongoose has been linked with either the proximate or ultimate cause of extinction in five endemic vertebrates in Jamaica: one lizard -- Giant galliwasp (*Celestrus occiduus*), one snake -- Black racer (*Alsophis ater*), two birds -- Jamaican Poor-will (*Siphonorhis americanus*) and Jamaican Petrel (*Pterodroma caribbaea*), and one rodent -- Jamaican rice rat (*Oryzomys antillurum*).

Control Level Diagnosis: Highest Priority. The IUCN lists the small Indian mongoose as one of the top 100 world's worst invaders. Most endemic island species are naturally vulnerable, occurring in small isolated populations and ranging over small areas. Based on the public health damages, killing of poultry, extinctions of amphibians, reptiles, and destruction of native birds, it is estimated that this mongoose is causing \$50 million in damages each year in Puerto Rico and the Hawaiian Islands alone.

Control Method: Trapping has been used extensively on many nature reserves. Animals have also been shot or poisoned, using either drops of poison or baiting with poisoned carrion. The success of these control methods was not noted. Because of the widespread destruction to native fauna, it is currently illegal to import mongooses into the United States. Laws should discourage further human facilitated introductions on island or other non-native habitats. More studies need to be done on the ecology, population structure, density, distribution and rates of recolonization after population removal from selected areas of *H.auropunctatus* to develop models to evaluate the effectiveness of different management regimes. One such study was proposed for Mauritius, using methods such as mark and recapture, radio telemetry and dietary analysis.

Mongoose (*Herpestes javanicus*)

It is against Hawaii State law for any person to introduce, keep or breed any mongoose within the State except by permit from HDOA; permits are not issued for Kauai County or the island of Lanai. Fines for violations are between \$250 and \$1,000 for each mongoose introduced, kept or bred. HDOA Animal Industry Division Quarantine Rules HAR 142-92.

Description:

- Weasel-like animal that has a long, brownish body, short legs, and a tail that is as long as its body. Total length 65 cm
- Small ears, pointed nose
- Active during the daytime and sleep in dens at night
- Native to India, introduced to Hawaii Island in 1883 (via Jamaica, where it was also introduced), then introduced to Maui, Molokai, and Oahu; none were introduced on the island of Kauai. Mongoose were imported by the sugar industry to control rats in cane fields. This infamous mistake was made without any scientific testing or much knowledge about mongoose. Mongoose, which are active during the day, did not control the rats because the rats are primarily active at night. Mongoose have severe impacts on native species (e.g., birds), but these threats were apparently not considered before their introduction.

Harm:

- Predator of birds, small mammals, reptiles, insects, fruits and plants. The eggs and hatchlings of ground nesting birds like our state bird, the nene, and endangered sea turtles like the hawksbill sea turtle are especially at risk.
- Females can breed from the age of 10 months. Females have two or three litters of three pups each per year.
- Cost an estimated \$50 million in damages to the Hawaiian Islands and Puerto Rico annually.

In Hawaii:

- Kauai: One female mongoose was found dead along a road in 1976 near Kalaheo, and sightings have been reported all over the Garden Island. KISC encourages reports of sightings and is working to verify if there is a population. None have been captured yet.
- Oahu, Maui, Molokai, Big Island: Large, well-established populations.

