

Study on Marsh Mongoose (*Herpestes palustris*, Ghose) in the East Kolkata Wetland



The Marsh Mongoose (*Herpestes palustris*, Ghose) is the only species of the genus *Herpestes* which is endemic to India or more precisely to West Bengal. The species was first discovered from the marshy & swampy areas in eastern part of Kolkata in the year 1965 by Dr. R. K. Ghose. The species was fairly common in the area during that time. Later the species was recorded from Botanical Garden (Howrah), Diamond Harbour (South 24 Parganas), Suckchar (North 24 Parganas) by Ghane & Chaturvedi (1973), Agarwal (1992). The species is included in the Schedule II of Indian Wildlife Protection Act, 1972 as amended on 2002 & following IUCN criteria, C.A.M.P (1998), the species is considered as 'endangered'.

After 1965, large scale reclamation of the East Kolkata Wetland started for new satellite township, Bidhannagar (Salt Lake) and the process is still ongoing for Rajarhat Megacity Township. So a greater part of type locality (i.e. marshy land) of Marsh Mongoose has been already completely destroyed. For that reason Nature Environment & Wildlife Society initiated a one year study on September 2005 with the main objective to estimate the current trend of population of Marsh Mongoose in the East Kolkata Wetland & also to identity the present

threats. The secondary objective was to make photographic documentations of morphological difference between Marsh Mongoose (*Herpestes palustris*) & Small Indian Mongoose (*Herpestes javanicus*) which was previously named as *Herpestes auropunctatus*.



Marsh Mongoose (Black colour of the muzzle extended Upto the orbital zone)



Small Indian Mongoose (absence of the of the black colour upto orbital zone.

To initiate the study stuffed rolls of specimens collected by Zoological Survey of India were observed to understand the difference between Marsh Mongoose & Small Indian Mongoose. To understand the same the NEWS team had gone through “Fauna of West Bengal, Part-I” and the paper “A new species of Mongoose from West Bengal, India” by R. K. Ghose published in “Proceeding of Zoological Society of Calcutta, Vol-18, page 173-178 year 1965”. For readers’ interest here are some excerpts from that paper. “.....A small mongoose, superficially similar to *Herpestes auropunctatus*, Hogson but the coat is comparatively rough, the pelage more coarsely grizzled and muzzle characteristically black as in *Herpestes vitticollis* Bennett from South India and Ceylon”. “.....The skull is close to *H. auropunctatus* in respect of size, but slightly longer & stouter”. “..... The nearest relative of *H. palustris* appears to be *H. auropunctatus* with which it is sympatric. However the two species inhabit quite different ecological niches. Their similar morphological characters, sympatric, occurrence in different ecological conditions, dissimilar food habit & absence of hybridization; tend to indicate that *H. auropunctatus* & *H. palustris* are sibling species”.

Estimating the population trend:

As because these two species are sibling species, so trapping was must for identification. Trapping permission for 480 trap hours was given by the State Forest Department. Random trapping had been done using wire traps having partition. Chicks of country chickens are used as baits & put inside the smaller compartment of the trap. The traps are placed near the burrows of mongooses under the camouflage of leaves of water hyacinth. Field workers observe the traps from the distance of at least 20 ft. & use binocular whenever necessary. In every month six to eight days are spent for trapping purpose. The area of trapping was

mainly in North Salt lake Bhery areas and partially in Bhojerhat & Bhangar area. Interestingly the team observed that each and every trapped mongoose was *H. palustris*. So the inference was drawn that the entire mongoose population in the East Kolkata Wetland is constituted of Marsh Mongoose. For measuring the length & weight of Marsh Mongoose the trapped mongoose had been immobilized by Chloroform. Then the weight & length was measured. Before releasing it in its habitat the mongoose was marked with black hair dye to avoid measuring it again if trapped. On an average an adult female weighs 500 gm. to 625 gm., length from tip to tail 56 to 58 cm. body length 30 to 32 cm. and tail length 25 to 27 cm. Similarly an adult male weighs 625 to 900 gm., length from tip to tail 61 to 63 cm. body length 32 to 36 cm. and tail length 26 to 28 cm.



As because the whole population was of Marsh Mongoose only, so to estimate the trend of population the team had followed the burrow count method. For this purpose primarily the field observation had been done to determine the differences between the burrows of Large Bandicoot-Rat & Marsh Mongoose. In the burrow count method the team had selected a stretch & had closed the mouths of the burrows of Mongooses by clay particles in the late evening when it is sure that all the mongooses have entered into the burrows. Next day in the morning (7.30 to 8 a.m.) the team has again observed the same stretch for counting the numbers of burrows which are already opened. For example if 20 burrows are covered in the evening & 5 burrows are observed open in the morning then the least count of mongoose is five. As a result of this method practiced in the above mentioned areas, on an average in a stretch of half kilometer 11 to 13 Marsh Mongooses had been counted.

Habit & habitat: Lives around large but shallow water bodies fully or partially covered with thick growth of aquatic plants. Occupies burrows mainly along the slopes of water bodies. Diurnal, comes out of the burrow after few hours of sunrise. Follows a particular route for foraging. They prey mainly on fishes and aquatic snails (*Pola globosa*). To collect fishes they generally forage through the water hyacinth or any other aquatic plants bed without being submerged in the water, only the feet become wet. Mostly moves singly but occasionally found in troupe particularly in the afternoon. They return to the burrow just before the sunset. The NEWS team observed that the courtship and mating had started from

March 1st week and babies were born in the 1st week of June; the litter size was generally from 2 to 3.



Threats:

1. The species faces the main threat of habitat loss due to urbanisation and industrialization. Though the team notices a good number of them is still existing, yet as the species is endemic it has been considered as 'endangered' by IUCN.
2. A large portion of natural wetland of East Kolkata has been converted to fisheries for prawn cultivation, where the wetlands are mostly devoid of any aquatic vegetation, which is required for the foraging of Marsh Mongoose.
3. In most cases both the sides of the main canals in East Kolkata Wetlands have been concretized. But Marsh Mongooses mainly burrow along the slopes of waterbodies or canals.

Recommendations:

No species programme has so far been taken for the conservation of this species and its type habitat. It is immediately necessary and should be implemented involving the local people aware about the significance of the conservation of Marsh Mongoose, which is endemic to their area.