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HABITS, FOOD PREFERENCE AND FAMILY LIFE OF THE MARSH MONGOOSE (*HERPESTES PALUSTRIS* GHOSE, 1965) IN THE SALT LAKE SWAMPS NEAR CALCUTTA, WEST BENGAL

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INTRODUCTION

A new species of mongoose, *Herpestes palustris*, was described from Nalban bheri in the Salt lake swamps near Calcutta, West Bengal (Ghose, 1965). This endemic mongoose was later called as the Marsh mongoose and was thereafter reported only from the North and South 24 Parganas district of West Bengal (Ghose & Chaturvedi, 1972). Apart from only a couple of points on the habits of this mongoose in the original description, nothing was published on its biology or ecology in the next forty years. To find out something more on its habits, food preference and family life surveys of different areas of the Salt lake swamps were conducted during all the seasons in the year 2005.

STUDY AREA

The Salt lake swamps in the eastern fringe of Calcutta is a group of shallow sewage-fed fish culture ponds locally called bheries. The largest is Nalban bheri (152 hectares) adjoining which are Sukantanagar, Char Number, Sardar Singh, Chinta Singh, Goltala, Nantur and Captain bheries. These bheries are 1-2 metres in depth with few natural vegetation still left in the form of submerged or emergent (*Typha*) reeds. Floating vegetation in the form of water hyacinth (*Eichornia crassipes*) are kept lining the periphery to prevent theft of the cultured fishes. Sewage from Calcutta city is released into these wetlands through a series of channels and lock gates. This supplies the food necessary for the growth of fishes, the fries of which are released into these fish-culture bheries every year before the monsoon season, after their bottom have been leveled and the silt removed when most of these wetlands dry up in summer or the water is drained out. This sustainable use of the sewage-fed East Calcutta wetlands has earned the reputation as a Ramsar Site.

The shallow wetlands are lined by narrow mud banks on which grow grasses and a few stunted trees. These mud-banks are the haunts of the Marsh mongoose (*Herpestes palustris*).

METHODOLOGY

Throughout the year (2005) a systematic vigil was kept along the mud-banks in all the bheries mentioned above especially in the mornings and afternoons. Direct sightings of mongooses were made; their habits, activity pattern, feeding behaviour and family group structure were observed. Some burrows in which they dwelled were dug up to reveal the contents inside.

OBSERVATIONS

Habits and Activity Pattern :

The Marsh mongoose was found to be diurnal and more active during the early morning and late afternoon. During morning hours, it was active between 6–8 a.m. during summer and 7–10 a.m. during winter. During the afternoon it was active between 4–5 p.m. during summer and 3–5 p.m. during winter.

The Marsh mongoose was found to be very shy, generally keeping to the cover behind grasses and shrubs. It is quite cautious, running away into its burrow when approached. It lives inside burrows dug on the sides of the mud-banks near the water's edge. Its presence could be detected by the worn-out tracks left at the mouth of the burrow.

The burrows were mainly found in different secluded portions of the bheries, areas of the mud-banks less frequented by man. In a 50 meter secluded portion of the mud-bank between Sukantanagar and Char Number bheri, about 20 mongooses were found living closely in a number of burrows dug near to each other. Some had young ones which followed their mother when she emerged out of her burrow. When out for hunting the mongoose sat up on its haunches or stood up on its hind legs to take a good look around. This habit increased the area of vision of the very inquisitive animal.

Food Preference :

These mongooses were found to hunt during daytime, usually early in the mornings and in the late afternoons. The prey when caught were bitten and crunched to death and consumed. The food items mainly included bivalve molluscs like *Lamillidens marginalis* and gastropod molluscs like *Bellamya bengalensis*, *Lymnaea* spp. which were commonly found at the water's edge. The broken shells of these molluscs were seen lying scattered at the mouth of the burrows. Besides various aquatic Hemipteran bugs and Coleopteran. beetles, dragonfly nymphs, terrestrial grasshoppers, crickets, centipedes, crabs etc. are taken. The method of hunting was direct, open headlong attack.

However, they were never seen trying to capture fish. After the meal the mongooses were sometimes seen using one of the long claws of the forefeet to clean the teeth like a toothpick.

Family Life :

The Marsh mongoose seems to breed just after winter in the months of January-March when pairs could be easily seen. The male was often seen chasing the female along the mud-banks during this period. Although mating was not observed, it seems that most of the births took place just before the monsoon between April-June. The female has a litter of 2-3 young ones inside a burrow dug by herself at the base of a tree or in the mud-bank along the edge of the water. Sometimes she excavates and enlarges her own burrow before giving birth to the young ones.

The male takes no part in the care of the young but the mother guards and protects her cubs ferociously. She does not hesitate to attack Yellow Monitor lizards (*Varanus flavescens*) which try to attack and steal her cubs.

The cubs grow rapidly within 2-3 months and by August-September they are able to come out of the burrow for hunting with the mother. They feed on various terrestrial insects and small molluscs (*Lymnaea* spp) and soon become independent of their mother. Just after the monsoons, in September-October 2-3 cubs were often seen playing with each other during the evening period between 4-5 p.m. They nibble at each other's tail and run helter-skelter near the mouth of the burrow. They are very inquisitive animals and often approached very near to new objects like my camera without hesitation.

DISCUSSION

The Marsh mongoose (*Herpestes palustris*) was found to have quite similar habits as the Small Indian mongoose (*Herpestes auro-punctatus*) but is more active during the early mornings and late afternoons, whereas the Small Indian mongoose hunts throughout the day. The Marsh mongoose is also very shy and cautious like the Small Indian mongoose and lives in burrows in the ground. Its ecological niche is slightly different in that the burrows are on the mud-banks of the East Calcutta swamps near the water's edge. Like the Small Indian mongoose, the Marsh mongoose also has the habit of standing up on its hind legs for better vision.

In the original description of *H. palustris* the author reported that they fed on fishes and the pond snail (*Pila globosa*). However, the marsh mongoose was never seen trying to capture fish. No pond snails were seen or collected from the Salt lake swamps. On the contrary, they were seen biting and crunching bivalve shells (*Lamilledens marginalis*) and gastropod molluscs (*Bellamyia bengalensis*). In the original description of the species it was mentioned that the specimens had strong cusps in their molar teeth while their premolars were less pointed. This adaptation is more

suitable for crunching and grinding hard-shelled molluscs and crabs. They were also seen taking Giant water bugs and diving beetles which possess hard elytra and wing membranes.

The Marsh mongoose gives birth before the monsoon between April-June. This is probably because the cubs after being weaned, feed on small insects and molluscs which become abundant during the monsoon. In the original description it was also mentioned that a lactating female was collected in June. Like the Small Indian mongoose, the Marsh mongoose also has a litter of 2-3 inside a burrow. Only females take care of young ones protecting them fiercely against predators like monitor lizards.

DEDICATION & ACKNOWLEDGEMENTS

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