OBSERVATIONS ON THE FOOD HABITS AND DISTRIBUTION OF RATEL (*MELLIVORA CAPENSIS INDICA*) IN GIR, INDIA

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Introduction

One of the least known and seen mammals in Indian Protected Areas is Ratel (*Mellivora capensis indica*), also known as Honey badger. This species has a wide distribution, ranging across India, sub-Saharan Africa, Western Africa, Arabia and Middle East. In India it is mainly distributed in arid, semi-arid and moist deciduous areas (Prater, 1948). This paper presents findings based on observations on this animal in Gir Protected Area from the year 1998 to 2000.

Methodology

These observation are based on extensive field visits totalling 350 road transects which were undertaken during different seasons and time periods. Twenty foot transects (20 km) were carried out in riverbeds and banks for collecting evidences. Thirty-three radiating transects were laid for determining the species and composition of trees (Sale and Berkmuller, 1988). The seasons were categorised as Summer (March to June), Monsoon (July to October) and Winter (November to February). Time of the day was categorised as morning (5.00 to 8.00 hrs), day (8.00 to 17.00 hrs), evening (17.00 to 20.00 hrs) and night (20.00 to 5.00 hrs). A plaster cast of Ratel foot/pugmarks was made from a zoo specimen of Sakkarbaug zoo, Junagadh and its scats were also collected for proper identification in wild. Physical analysis of scats (% of species occurrence in all samples collected) was done by standard methods (Day, 1966; Mukherjee, 1992).

Observations and Results

During the study period a total of 13 direct sightings of Ratel (*Mellivora capensis*) in various parts of Gir Forests were made. The maximum observation time was for 10 minutes and minimum for 5 seconds. The maximum sightings were in winter in which 6 Ratel (46%), were sighted followed by monsoon (4) and summer (3). Majority of sightings were during night hours (22.00 hrs), where 7 animals (54%) were seen. These sightings took place in summer and winter seasons. Only one sighting each of the animal was recorded in early morning (6.30 hrs) and daytime (13.00 hrs) respectively. Two sightings were in evening hours (18.00 hrs). The Honey badger is largely active at dusk and during the night, but occasionally it may be active in daytime also. One sighting of 2 adults and an offspring in mid day (13.00 hrs), during monsoon season suggests that the animal is also active in daytime if temperature and climate is favourable. Indirect evidences of Ratel were found in the form of hair and pellets

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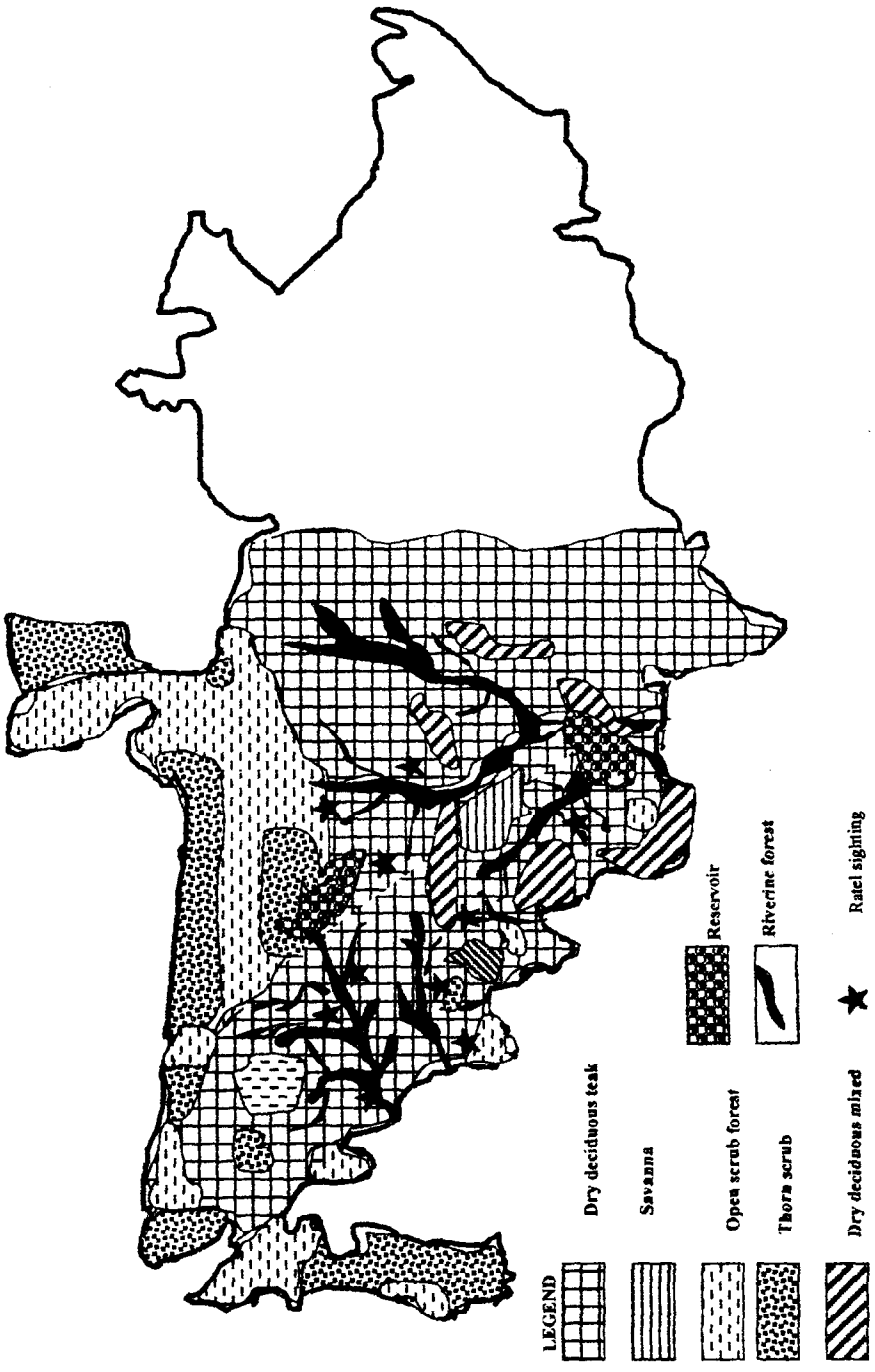


Fig. 1 Vegetation map of Gir Protected Area showing sightings of Ratel (*Mellivora capensis indica*)

(common latrines) (3 cases), digging in riverbeds with claw marks (127 cases) and hair in used burrows (31 cases). Sightings of Ratel revealed that it is basically a solitary animal, as sightings of single animal (80%) were recorded maximum. Once it was found in pair and in another instance a family of three animals was noted, one of which was offspring.

Habitat: Ratel prefers hilly, broken country especially along the banks of rivers or streams (Prater, 1948). In Gir, Ratel were mainly seen in riverine vegetation (58%). Ratel prefers to dig burrows near the banks avoiding direct contact with water. Burrows were identified as that of Ratel (n=31), due to presence of Ratel hair in it. It seems Ratels prefer foraging grounds keeping some distance away from its burrows. Based on the preponderance of burrows in the dry deciduous forest it could be inferred that Ratel prefers hilly and undulating terrain for making burrows but riverine areas are more preferred for foraging. This observation is further supported by the fact that the food material found in the scats is mostly found in the riverine forests, and also by the frequency of pugmarks found in the riverine areas and all common latrine sites.

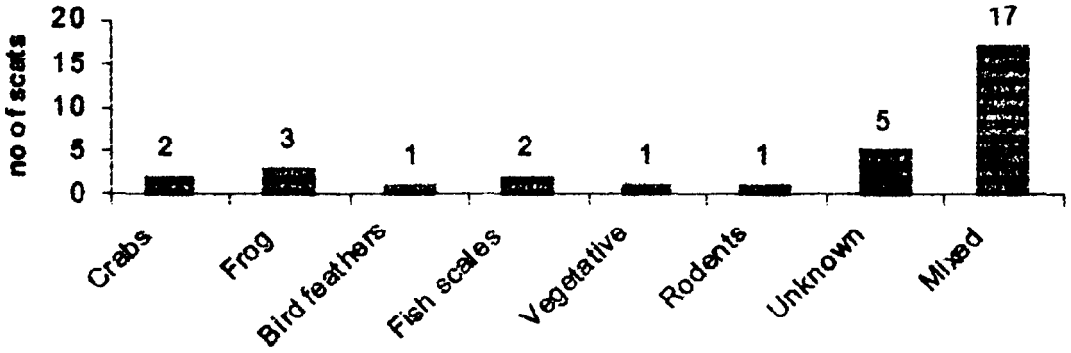
Food Habits : During investigation along riverbanks 3 small depressions containing droppings/scats of Ratel was found. Preliminary analysis of scats revealed remains of freshwater crabs, frogs, mollusc, fish, small rodents, bird feathers, insects' wings, seeds of Bor (*Zizyphus mauritiana*), and vegetative parts of other plants. Ratel has been seen digging out some rhizomes of a climber and eating it (Ibrahim, *Pers. Comm.*). Even a Python (*Python molurus*) was reported to be killed and devoured by Ratel (Pathak, *Pers. Comm.*) in Gir. It reveals that Ratel prefers variety of food in its dietary pattern and is an omnivore animal. No single evidence was recorded of Ratel feeding on remains of carcass killed by other animals. This animal is also known to climb trees in search of honey, but no sighting of this activity was done during the study. Many people reported that the animal regularly visited graves in the outskirts of Sasan village but we could not find any incidence of grave digging. Incidentally the Ratel is also locally known as 'Ghorkodio' which means 'Grave digger'. But it seems that the animal frequently visits farmlands in search of fruits and vegetables and farmers even blame it for crop damage (Ibrahim, *Pers. Comm.*).

During the study 32 scats were collected from 3 pits (may be common toilets). Physical verification of scats shows that size of scats varies 2 cm to 7 cm with average diameter of 0.75 cm. The colour of scats is in general black, but when bone pieces of fish, frogs and rodents are there it shows shining white pieces in black scat. Scats are not smooth as in case of porcupine and jungle cat but have broken edges. Scat analysis of Ratel reveals that the animal is omnivorous and prefers feeding on various small Vertebrates (Fig. 2). The majority of scats revealed a mixed composition of food (53.12%).

Discussion

In India the records of Ratel sightings in nature are scanty. The records available so far are by Champion (1934), who has given an account of sightings in Dehra Dun and Lansdowne. Similarly in Gir Protected Area, the recorded sightings of Ratel were lacking. Ratel prefers riverine habitat for foraging (54%). In comparison to Riverine burrows (42%) Ratel prefers

Fig. 2



Composition of scats of Ratel (n=32)

undulating dry deciduous patches (58%) as its shelter. Ratel prefers small vertebrates in its diet, mixed with fruits and tubers. Very little is known about social structure, repro-duction and territoriality. Although it was known from various sightings that the animal is primarily solitary (80%) but may be seen in pairs rarely. Honey badgers are reported to be nocturnal during summer, but switches to being mainly diurnal during the winter (Steve, 1997). During the year 2000, amazingly the research team and other forest staff of Gir recorded no sightings of the animal. It may be due to drought, which led to drying of most of the natural water streams in Gir Protected Area. To know the details about the social structure and ecology of secretive animal, radio collaring with long term monitoring of some wild specimens in India is suggested.

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SUMMARY

Ratel (*Mellivora capensis*) is a secretive animal and scanty information is available on this species. In Gir PA the recorded sightings of Ratel were very few. In this study an effort was made to determine its habitat use, dietary constituents. Ratel prefers riverine habitat for foraging (54%). In comparison to Riverine burrows (42%), Ratel prefers undulating dry deciduous patches (58%) as its shelter. Ratel prefers small vertebrates in its diet, in comparison to with fruits and tubers. Very little is known about social structure, reproduction and territoriality etc. Although it was known from various sightings that the animal is primarily solitary (80%) but may be seen in pairs rarely.

गीर वन, भारत में मधुकोकड़ (*मेल्लिवोरा कैपेंसिस इण्डिका*) की भोजन करने की आदतों और उसके वितरण सम्बन्धी कुछ प्रेक्षण

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साराशं

मधुकोकड़ (*मेल्लिवोरा कैपेंसिस*) बहुत छिपा-छिपा रहने वाला जानवर है और इस जाति के बारे में बहुत कम जानकारी मिलती हैं । गीर सुरक्षित क्षेत्र में इसे बहुत ही कम बार देखा और आलेखित किया गया है । प्रस्तुत अध्ययन में इसका प्राकृतावास उपयोग, भोजन संघटक निश्चित करने का प्रयास किया गया है । चारा प्राप्त करने के लिए मधुकोकड़ को नदीय प्राकृतावास (54%) अधिक पसन्द हैं । नदीय बिलों (42%) की तुलना में मधुकोकड़ को आश्रय के लिए ऊंचे-नीचे शुष्क पर्णपाती टुकड़े (58%) ज्यादा अच्छे लगते हैं । फलों और कन्दों के मुकाबले भोजन में इसे छोटे पृष्ठवंशी ज्यादा पसन्द हैं । इसकी सामाजिक संरचना, पुनरूत्पादन, क्षेत्रीयता आदि के बारे में बहुत कम ज्ञात है । हालांकि इसे कई जगहों पर देखा गया है किन्तु मूलत: यह एकाकी (80%) प्राणी है किन्तु कभी-कभी इसके जोड़े मिल सकते हैं ।

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