

FOOD HABIT OF THE LEOPARD CAT *PRIONAILURUS BENGALENSIS* (KERR, 1792) IN THE SUNDARBANS EAST WILDLIFE SANCTUARY, BANGLADESH

M. Monirul H. Khan

Wildlife Research Group, Department of Anatomy, University of Cambridge, Downing Street, Cambridge CB2 3DY, U.K.
Email: mmhkhan@hotmail.com

ABSTRACT

Food habit of the Leopard Cat *Prionailurus bengalensis* in the Sundarbans East Wildlife Sanctuary, Bangladesh, was studied on the basis of 21 scats and 12 kills collected between Sept. 2001 and Feb. 2003. The mean weight of a dry scat was 20.5g. Like in most of its global range, the Leopard Cat was found to prefer rats and mice (found in 52.4% of samples). Other food items were insects (28.6%), birds (23.8%), plant material (19%), agamids (4.8%) and crabs (4.8%).

KEYWORDS

Bangladesh, Food habit, Leopard Cat, *Prionailurus bengalensis*, Sundarbans

The Leopard Cat *Prionailurus bengalensis* has the broadest geographic distribution of all the Asian lesser cats (Sunquist & Sunquist, 2002). It is found in 21 Asian countries and varies so much in colouration and size that it was originally thought to be several different species and, therefore, given many different names, including Jerdon's Cat, Elliot's Cat, Sumatra Cat and Chinese Cat (Guggisberg, 1975; Sunquist & Sunquist, 2002). It occurs in a broad spectrum of habitats, from tropical rain forest to temperate broadleaf and, marginally, coniferous forest, as well as shrub forest and successional grasslands (Nowell & Jackson, 1996). There are eight species of wild cats found in Bangladesh (Khan, 1982, 1986) of which the Leopard Cat is one of the smallest species. The species has a wide distributional range in Bangladesh, but due to lack of information it is listed under the Data Deficient category in a national level assessment (IUCN Bangladesh, 2000). The present study aims to provide some information on the food habit of this elusive species.

STUDY AREA AND METHODS

The entire Sundarbans is an area of about 10,000km² in the Ganges-Brahmaputra Delta of Bangladesh and India, but roughly 60% of this forest lies in the southwest of Bangladesh and the rest 40% is in the southeast of the state of West Bengal, India (Figure 1). The monthly mean temperature normally varies from 23°C (during December-January) to 35°C (during May-June) and relative humidity from 70% to 80%. There are three wildlife sanctuaries in the Bangladesh Sundarbans that together form a UNESCO World Heritage Site which includes the Sundarbans East Wildlife Sanctuary (21°47'-22°03'N & 89°46'-89°55'E) (Figure 1). This area of 312km² is at the southeastern end and considered to be the richest part of the Sundarbans.

Leopard Cat scats were collected from the Sundarbans East WLS. Monthly field visits were conducted during September 2001 to February 2003. The Leopard Cat is the commonest lesser cat in the Sundarbans (Khan *in prep.*). Although there are Jungle cats (*Felis chaus*) and Fishing cats (*Prionailurus*

viverrinus) in the Sundarbans, Jungle cats are found mainly in fringe areas far away from Sundarbans East WLS and scat of the Fishing Cat is bigger than that of the Leopard Cat. Since most of the ground in the Sundarbans is soft, footprints near scats could be observed, which helped to identify Leopard Cat scats. The scat samples were collected, and dried when necessary, in the field. In the laboratory they were weighed using a Lark JPT-2 (range: 0.1-200 g) beam balance. Then each of the scats was washed and strained in order to separate and identify prey remains similar to the method followed by Hoogerwerf (1970), Inoue (1972), and, Rabinowitz (1990). Notes were also made of the remains (mainly feathers) of killed birds found in the field. Footprints were used to confirm that the kill was that of a Leopard Cat.

RESULTS AND DISCUSSION

Most of the scats were found in dry sandy areas, indicating that Leopard cats prefer to defecate in dry sandy areas. The mean weight of a dry scat was found to be 20.5g (n = 21, range = 4.1-59.3g, SD = 15.91668). Scat analysis showed that, rats and mice (Family: Muridae) found in 52.4% of the scat samples were the main prey of the Leopard Cat. Insects and birds were the second and third on the menu, which were in 28.6% and 23.8% of the scat samples respectively. Significant proportion (over half of the volume) of soil was found in one scat, but it was not considered as a food item. The frequency of occurrence (percentage of samples) of food items in scats of Leopard Cats in the Sundarbans East WLS is shown in Table 1.

Leopard Cats normally consume the entire kill, but in the case of birds, they leave out feathers. A total of 12 remains of birds, i.e. feathers, were found in the field, of which the Red Junglefowl (*Gallus gallus*) was the commonest. However, nothing could be concluded about the preference of bird species on the basis of kill remains because of small sample size. The number of kills of different species of birds is shown in Table 2.

There are a number of reports on the food habit of Leopard Cats

Table 1. Frequency of occurrence (percentage of samples) of food items in the scats of Leopard Cats in the Sundarbans East Wildlife Sanctuary of Bangladesh.

Food item	Freq. of occurrence (% of samples; n = 21)
Mammals (small; rats and mice)	52.4
Birds (small and medium)	23.8
Agamids	4.8
Crabs	4.8
Insects (grasshoppers, beetles, etc.)	28.6
Plant material (seeds, fruits, leaf blades, etc.)	19.0

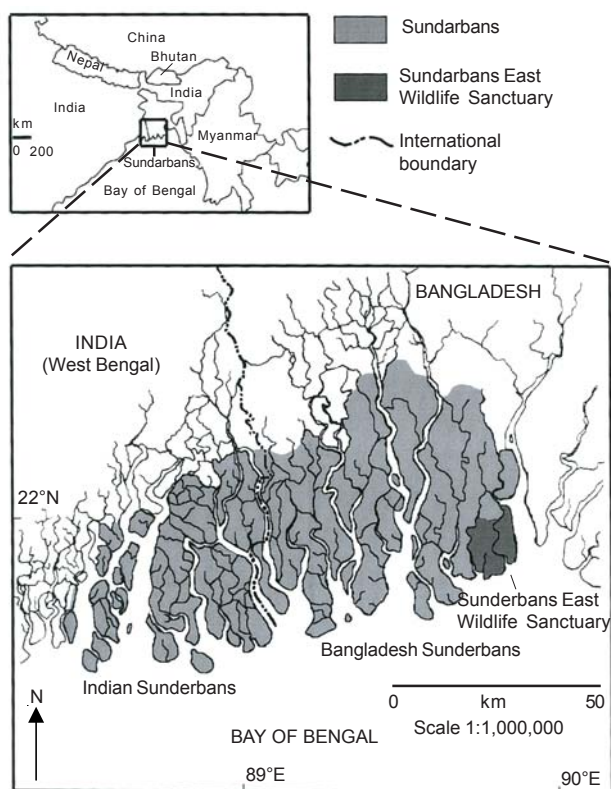


Figure 1. The Sunderbans of Bangladesh and India showing Sundarbans East Wildlife Sanctuary

in different parts of its global range, but there is no previous report from Bangladesh. In general, Leopard Cats feed on a variety of small prey, including mammals, lizards, amphibians, birds and insects (Sunquist & Sunquist, 2002). In Pakistan, the primary food item was found to be small birds, but they also fed on wood mice, flying squirrels, etc. (Roberts, 1977). In Java, Indonesia, the main prey were rats and mice, but a large number of leaves of one species of herb was also found in scats (Hoogerwerf, 1970). In Kaeng Krachan National Park, Thailand, although rats and mice were their main prey, tree shrews and hares were also found to be eaten (Grassman, 1998). In Huai Kha Khaeng Wildlife Sanctuary, Thailand, a total of 14 prey species were identified from the scats of Leopard Cats of which rats were the dominant prey (Rabinowitz, 1990). Rats were also found to be the dominant prey in Tsushima Island, Japan among moles, birds, amphibians and insects (Inoue, 1972). In contrast, rats and mice (most probably the commonest species was Long-tailed Tree Mouse *Vandeleuria oleracea*) were found to be the dominant prey in the Sundarbans East WLS, along with insects, birds, etc. (Table 3). In Tabin, Malaysia, small mammals were found to form 96% of the diet of Leopard Cats (Rajaratnam, 2000), whereas in the Sundarbans East WLS, small mammals formed 52.4% of the diet (Table 3).

Table 2. Number of kills (remains) of different species of birds by Leopard Cats in the Sundarbans East Wildlife Sanctuary of Bangladesh

Bird species	Scientific name	No. of kills
Red Jungle fowl	<i>Gallus gallus</i>	5
Green-billed malkoha	<i>Phaenicophaeus tristis</i>	3
Large-tailed nightjar	<i>Caprimulgus macrurus</i>	3
Mangrove pitta	<i>Pitta megarhyncha</i>	1

Table 3. A comparison of the food habit of leopard Cats in Huai Kha Khaeng Wildlife Sanctuary (Thailand), Tsushima Island (Japan) and Sundarbans East Wildlife Sanctuary (Bangladesh)

Food item	Freq of occurrence (% of samples) in scats		
	1	2	3
Small mammals	93.9	89.0	52.4
Birds	1.9	41.7	23.8
Reptiles	9.6	3.8	4.8
Amphibians	0	10.0	0
Fish	0	6.5	0
Crab	1.9	0	4.8
Insects	0	43.9	28.6
Plant material	48	92.6	19.0

1 - Huai Kha Khaeng (n = 52) (Rabinowitz, 1990); 2 - Tsushima Island (n = 230) (Inoue, 1972); 3 - Sundarbans East (n = 21) (this study)

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