Conservation Initiatives - 2

A Plea for Malabar Civet

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THE MALABAR CIVET is endemic to the Western Ghats and extremely rare. It is listed as a priority species for conservation by the Viverrid and Mustelid Specialist Group (Schreiber *et al.* 1989). In 1978 the IUCN declared that the Malabar civet was 'possibly extinct', and it is now one of the two Critically Endangered species of the Western Ghats (IUCN 1996). It is the only civet in Schedule I of the Indian Wildlife (Protection) Act, 1972. The Malabar civet is as large as the large Indian civet with a body length of about 125 cm including tail (40 cm). Body weight is probably about 8 kg. The fur is grey or tawny with a crest of black hair or bristles on the back from the neck to the tail tip and large black spots on the flanks which do not form any pattern. The large size, the crest of black hair on the back and the absence of a pattern in the black spots on the flanks distinguish it from the small Indian civet.

Concern about this species began early this century as several expeditions failed to obtain specimens (Pocock 1939). The last and perhaps the only live specimen of the Malabar civet in zoo was at the Thiruvananthapuram zoo in 1929. In 1987, after a gap of 58 years, two skins of recently killed animals were obtained by the Zoological Survey of India, Calicut, confirming the existence of a species long suspected extinct (Kurup 1987). Ayurvedic physicians in Kerala reared the Malabar civets till a few decades back to obtain 'civetine', an extract from the scent gland, which was used in medicine and as an aromatic.

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There is little information on the ecology of the species and no consistency among the available reports. Hutton (1949) claimed that the Malabar civet was a fairly common animal in the evergreen forests, while others claimed that it occurred in the lowland forests and was nowhere common (Jerdon 1874). Most of the past records of the species are from the coastal tracts of the Western Ghats (Jerdon 1874, Pocock 1939, Prater 1971), from Kanyakumari in the extreme south to Honnavar in Karnataka State in the north. There are only two reports of its occurrence in the higher elevations of the Western Ghats, in the High Wavy mountains (Hutton 1949) and in Kudremukh (Karanth 1986). But for these reports, the Malabar civet has remained more or less unknown to the scientific community and has attracted little attention.

DISTRIBUTION AND ECOLOGY

During a preliminary survey of the species in May 1990 (Ashraf *et al.* 1993) in around Nilambur in northern Kerala from where two skins had been obtained in 1987, two more skins of recently killed animals were obtained from an area dominated by cashew and rubber plantations. Ashraf *et al.* (op. cit) concluded that in northern Kerala the Malabar civet was confined to disturbed thickets in cashew and rubber plantations and to highly degraded lowland forests. They also found that these habitats were disappearing fast. Moreover, hunting pressure in these remnant forests and cashew plantations was another major threat.

A second survey of the species was conducted in northern parts of Kerala and Dakshin Kannada district in Karnataka during January to June 1992 (Rai & Kumar 1993). This study began with a three-month survey in Nilambur and surrounding areas using camera traps, night surveys, and interviews with local people. This was followed by a 3-month survey in northern Kerala and Karnataka, consisting of interviews with local people and night surveys. The Malabar civet was neither seen nor photographed during the study. The Malabar civet was reported to be mainly nocturnal when they move into valleys to forage, but retreat to the scrub forests and cashew plantations by day. Cashew affords a fair amount of cover as it has good undergrowth. The four specimens obtained since 1987 were all from Malappuram district (Poongode, Elayur and Wandoor), from cashew plantations; so also were most of the reports of Malabar civet from Nilambur. But the recent spate of conversion of cashew to rubber plantations is threatening these populations. Rubber plantations are devoid of undergrowth and are thus unsuitable for Malabar civets. Another major threat to Malabar civet in the study area was hunting for meat.

The Malabar civet moves into valleys to forage in night but prefers forests and cashew plantations in the day time. Lack of undergrowth in the rubber plantations make them unsuitable for Malabar civet.

The survey covered the lowland forests along the foothills of the Western Ghats, from Nilambur in the south up to Agnashini valley in Karnataka in the north (Fig. 1). In addition, forests in the elevated areas of Western Ghats in the districts of Chikmagalur and Shimoga in Karnataka state were also surveyed since a possible sighting of the Malabar civet had been reported (Karanth 1986).

In Kerala, the most positive response came from Kannavam forest range (Kannur district), especially in Kannavam colony. Many of the Kurichiar tribals whom we interviewed had heard of the Malabar civet, locally called *'kannan chandu'*. Most had not seen one however, hunting being the major cause of their increasing rarity. The area had good moist deciduous forests with riparian zones in spite of being heavily inhabited. If the Malabar civet occurs in this area, the nearly 8500 ha. of moist deciduous forest offers a refuge for the species. In Kasargod district, where the forests are extremely fragmented, only some old hunters recognised the species, known locally as *'malé meru'*. Intensive local inquiries in several areas in and around the Wynad Wildlife Sanctuary, from where the species had been reported several decades ago (Jerdon 1874), did not elicit any positive information. We suspect, therefore, that the Malabar civet does not exist here and that it never did.

In Karnataka, the districts of Dakshin Kannada, Uttar Kannada, Chikmagalur (Kudremukh National Park) and Shimoga (Sharavathy Wildlife Sanctuary) were surveyed. In Dakshin Kannada, Puttur and the adjoining Sullya range have small pockets of well preserved lowland forest. Reports of the species were received from a few hunters, though none were of recent sightings. Neria Estate and Naravi Reserve Forest have more extensive lowland forests with lower hunting and other biotic pressures. Naravi, situated at the foothills of the Western Ghats, adjoins Kudremukh National Park. Similar reports of the species were also obtained from the lowland forests in Someshwara Wildlife Sanctuary (88 sq.km) and Mookambika Wildlife Sanctuary (247 sq.km). In Uttar Kannada District, which has a very good lowland forest cover, we received no reports of the Malabar civet. Nonetheless, we believe that the possibility of its occurring here is high. Agnashini valley to the north of Honnavar has extensive moist forests. The valley leads to the Doddamane Ghats, a prime evergreen forest habitat. The extensive lowland forests and a low human density combine to make this a potential area for Malabar civet, with a good population. Surveys in higher elevation forests in the districts of Chickmagalur and Shimoga did not yield positive response. It is thus very unlikely that

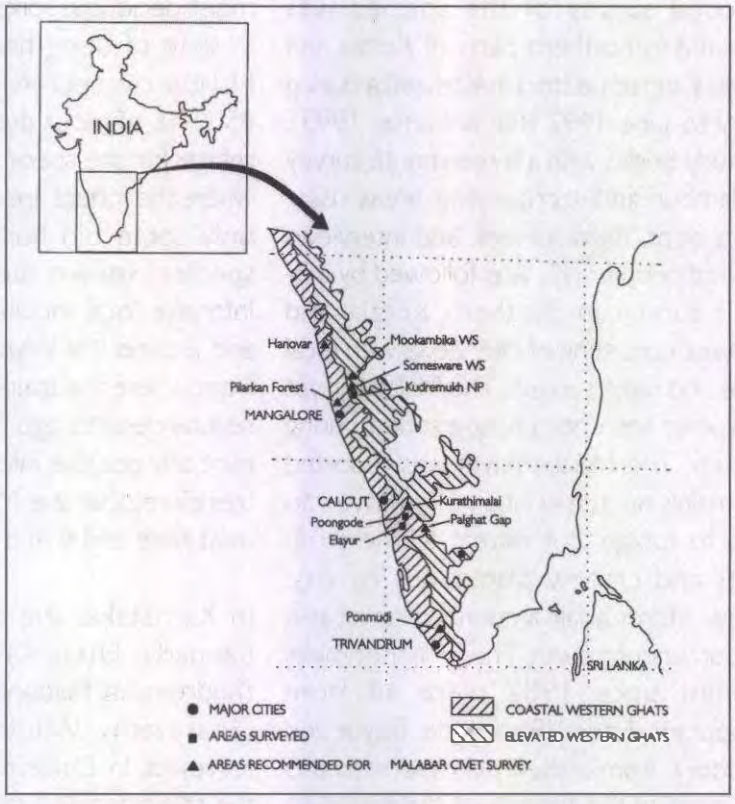

Fig. 1. Western Ghats showing survey sites for Malabar civet.

The typical habitat of Malabar civet is the lowland swamp and riparian forests in the coastal plains province of the Western Ghats.

the Malabar civet occurs in the higher elevation of the Western Ghats in Karnataka.

Thus the two surveys that we conducted, based primarily on carefully collected secondary information, reveal that the Malabar civet is confined to the lowland forests and cashew plantations, along the foothills of the Western Ghats. The distribution range was earlier recorded as extending in the north up to Honnavar in Uttar Kannada (Jerdon 1874), but might extend up to Agnashini in north of Honnavar.

We strongly believe that the typical habitat of Malabar civet is the lowland swamp and riparian forests in the coastal plains province of the Western Ghats zone (*i.e.* 5A) as defined by Rodgers & Panwar (1988). This is equivalent to the swamp forests, Group 4C, of Champion & Seth (1968). As stressed by Rodgers & Panwar (*op. cit*), this is not recognized as a biogeographic unit by many conservationists, probably because it has been almost totally lost. Small patches of this habitat remain, which have been identified and proposed to be included in the protected area network (Rodgers & Panwar *op.cit*). These include forest patches in Honnavar and Pilarkhan in Karnataka, and Chirikala, Kurathimala and Ponmudi areas in south Kerala.

The conservation status of the Malabar civet has to be viewed in the background of the almost total loss of its primary habitat. It is very likely that the existing populations through its entire present range are relic populations in sub-optimal habitats along the foothills and lower slopes of the Western Ghats. Lowland riparian forests form a significant component of the present habitat. In the last few decades there has been extensive loss of even these sub-optimal habitats to human settlements and cashew and rubber plantations. Hunting has exacerbated the situation even further. This, we presume, is the situation prevailing through most of Kerala, with relic populations mostly confined to private lands where they are declining rapidly. The notable exception is the lowland forests in Kannavam Range. It is very likely that lowland forests near Ponmudi, Cherikala and Kurathimala might also harbor populations. Loss of forests along the foothills of the Western Ghats has been less extensive in Karnataka, especially in Naravi, Someswara Wildlife Sanctuary, Mookambika Wildlife Sanctuary and Agnashini valley. Hunting is also less intense. It is, however, very likely that the lowland swamp and riparian forests, the primary habitat of the Malabar civet, was never very extensive in Karnataka compared to Kerala. This is because rainfall decrease

and more importantly, the number of dry days increase with increasing latitude along the Western Ghats (Pascal 1988). It is very likely therefore that coastal plains of Karnataka supported a smaller population of Malabar civet than Kerala, to begin with. The relic populations in Karnataka, though better protected, is likely to occur in low density. Thus, ironically, the best relic populations which were in Kerala have been mostly lost in the last few decades and continue to be lost, while marginal relic populations in Karnataka are better protected.

It is not possible even to speculate on the present population size or density. Being much larger than most other civets and with habitat requirements that are more specific, we can expect the density of the Malabar civet to be considerably lower than that of the other civets. Moreover, since they occur now mostly in sub-optimal habitats the density would be even lower. The conservation of Malabar civet, which occurs in very low density in highly fragmented sub-optional habitats where hunting is prevalent, is thus a very challenging task.

CONSERVATION REQUIREMENTS

1. Greater protection of the remaining populations: The lack of awareness of the status of Malabar civet among the public and the lower level staff of the Forest Department has been the major reason for the prevalence of hunting. We recommend (a) a publicity campaign in the foothills of the Western Ghats in the districts of Wynad, Malappuram and Kannur to educate the general public on the status of the Malabar civet; and (b) greater attention to take cognizance of hunting of Malabar civet through better education of the lower level staff of the forest department.

2. Greater protection of the habitat: The significance of lowland swamp and riparian forests in Kerala and Karnataka as ideal habitats of the Malabar civet need to be recognised. We recommend that measures might be taken to protect the remaining lowland forests from degradation and further loss. This is especially applicable to areas like Kannavam, Kottiyoor, Naravi, Someswara and Mookambika Wildlife Sanctuaries and Agnashini valley. Similarly lowland forests in Pilarkhan in Karnataka, and Chirikala, Kurathimala and Ponmudi in Kerala might be of significance. The importance of these areas as the only remnants of the lowland swamp and riparian forests has already been pointed by Rodgers & Panwar (1988).

3. Ecological studies: The total lack of scientific information on the ecology and life history of the species is the single major handicap in its conservation. Ecological studies, including radio-telemetry, need to be carried out in at least three places: (a) In private lands in northern Kerala (e.g. Nilambur area) since this would help us identify their daytime refuge and nocturnal foraging areas and assess whether these populations can be salvaged. (b) Kannavam Reserve Forest: this probably is the only population in Kerala with a long-term future and a good understanding of its ecology in the area is necessary for appropriate management measures. (c) Someswara - Mookambika area: this area has considerable extent of relatively undisturbed lowland forests. A sound knowledge of the ecology of the species in these forests is therefore necessary.

4. Captive breeding colony: We need to establish a captive breeding colony to meet the following objectives:

a) Basic data on biology, life history and reproductive behaviour could be collected from a well maintained captive colony, which would be invaluable for *in situ* and *ex situ* conservation.

b) *Ex situ* conservation would buffer against a potential loss of the species in the wild, until it is proved to be safe in the wild.

c) Should it become necessary, captive breeding for the specific objective of reintroduction could be initiated.

Animals for the establishment of a captive colony could be obtained from private lands and reserve forests in Nilambur and Kannavam areas, where the population is rapidly declining due to hunting and habitat loss. Most of these populations, especially those in private lands, have no long-term future. Considering the very low density of the species, trapping effort has to be intensive and sustained. If enough animals are caught some could be radio collared for ecological study and the others could be used for founding the captive colony.

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