

REPORT

A PRELIMINARY SURVEY OF OTTERS ON THE MALABAR COAST AND THE ADJOINING HILL RESERVOIRS AND STREAMS

V NAGULU, V. VASUDEVA RAO, C. SRINIVASULU and J.V. RAMANA RAO

Wildlife Biology Section, Department of Zoology, Osmanai University, Hyderabad - 500 007, India

INTRODUCTION

The status of otters on the Malabar coast and the adjacent hill reservoirs and streams of Western Ghats in Kerala is still unknown due to negligible scientific investigations carried out in this region and meagre data are available. Whatever is known on otters from this region is basically from observations in the past (JERDON, 1867) and personal communications from the present day wildlife researchers in Kerala (NAGULU, 1996). The report on the status of otters in southern India presented by one of us (first author) at the recently held IUCN/SSC Otter Specialist Group Meeting in Bangkok points out the present status of otters in southern Indian highlighting the fact that the habitats of Kerala are important because of high probability of the occurrence of all three otter species (*Lutra lutra*, *Lutra perspicillata*, *Aonyx cinerea*).

Keeping in view the unavailability of data on the status of otters on the Malabar Coast and the adjacent hilly reservoirs of the Western Ghats, unreliability of the past records and need to assess the present day status, a short-term survey has been conducted in the months of May and June, 1996. The present paper deals with the results of the survey.

STUDY AREA

One of the smallest (1.3% of the total area of India) and most beautiful states in southern India, the state of Kerala is sandwiched between the Western Ghats on the east and the Arabian Sea on the west. Vegetation includes wavy palms throughout the coastline and lush green moist deciduous forests on the Ghats. The Ghats act as barriers to the monsoon, which ensure steady and heavy rainfall twice a year. The valleys of the Ghats and heavy downpour results in springing up of about forty rivers, which in turn contributes to the vast number of reservoirs of the state and extensive backwaters.

METHODOLOGY and RESULTS

The survey was divided in two parts. In the first part the coastal stretch was covered while in the second part the streams and reservoirs of the hills were covered. All areas with past records and those which were reported to be inhabited by otter species were visited and observations as well as interviews were conducted. Otter presence was recorded by direct and indirect evidences.

A mail survey carried out before the present survey started revealed that all three species of otters can be found in Kerala although in restricted patches unlike presumed earlier as widespread (Fig. 1). Unlike in the past, otters were not reported from Tellicherry and Calicut

as has been presumed by CHERIAN (in NAGULU, 1996). Table 1 depicts the status of otters and the habitat features of sites covered during the present survey.

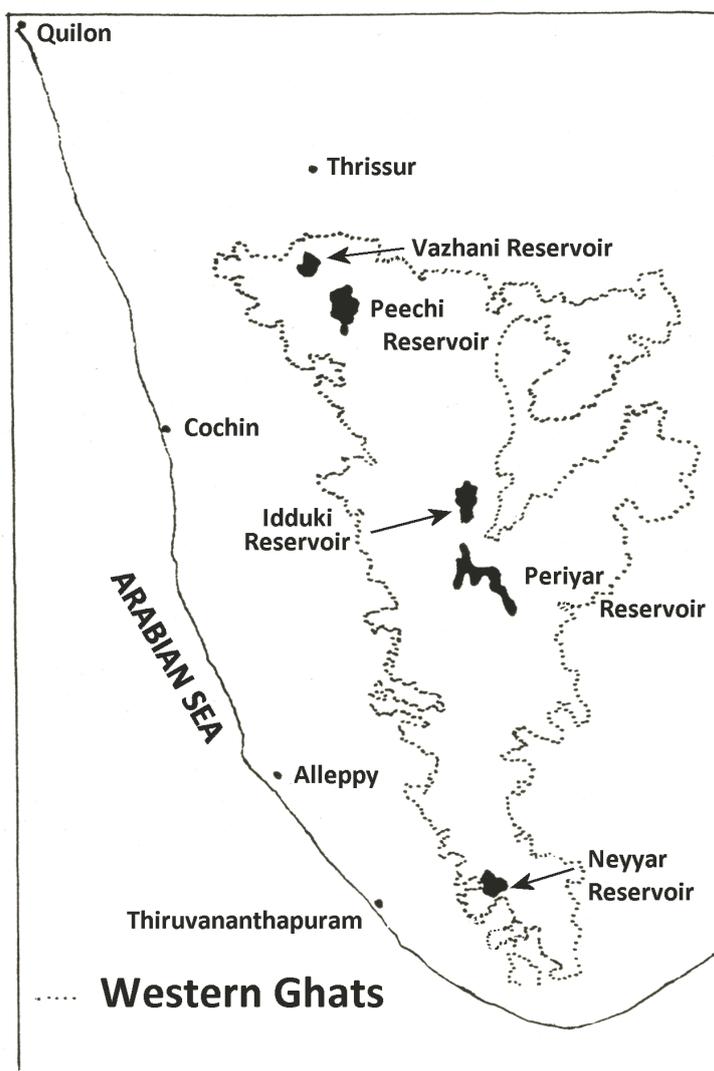


Figure 1. Map showing the study area in Kerala, India.

Table 1: Status of otters and habitat features of the study area		
Study site	Status	Habitat features
Ernakulam Lagoon	present*	backwaters and the islands have profuse but patchy growth of mangrove vegetation
Neyyar Reservoir	absent	rocky terrain with numerous brooks, adjacent area meadow like
Peechi reservoir	present	undulating terrain with dense forest cover on the adjacent hills
Vazhani Reservoir	absent	undulating terrain, the adjacent hills and lack sufficient forest cover
Periyar Reservoir	present	hilly terrain with dense forest cover interrupted by grassy patches
Idduki Reservoir	absent	undulating and rocky terrain

* Sightings have become rarer

On the west coast of Kerala otter were reported but only from a few localities compared to past records. Positive sighting reports from the coastal area comes from one locality - Ernakulam Lagoon. At this site the Vembanad Lake opens into the Arabian Sea near Kochi. The backwaters of Ernakulam Lagoon is ideal for *Lutra lutra*. Our talks with local fisherman revealed that otters have been seen in the past regularly, but that sightings have become rarer in recent times. Sis. Margaret Mary of St. Theresa's College, Ernakulam, supports the probability of the occurrence in this region. Central Marine Fisheries Research Institute (CMFRI), Ernakulam, has specimens of this species in their collection. Otters were reported to follow fishing boats and trawlers coming from the sea frequently during dawn and dusk. However, our survey spanning three days covering the entire backwater stretch of Ernakulam Lagoon yielded not a single piece of evidence for the occurrence of this species. Still, we feel that the mangrove vegetation of the islands in this lagoon are suitable otter habitats.

Among the numerous mountain reservoirs and hill streams otter presence was reported from Peechi-Vazhani and Periyar-Idukki complexes which form a contiguous stretch of dense forests which cover almost one third of the total geographical area of the state.

The team visited Neyyar, Peechi, Vazhani, Periyar and Idduki Reservoirs during the present survey. Neyyar Reservoir is located about 36 km east of Tiruvananthapuram, the capital of Kerala on Neyyar River. The area of the reservoir is 14.32 km² and the adjoining wilderness forms the Neyyar Wildlife Sanctuary (8°17' - 8°52'N and 76°40' - 77°17'E) which is about 1 km west of Neyyar dam. The terrain is rugged with rushing brooks, flat meadows and gentle to steep slopes ranging from 90 m- 1868m. The temperature varies from 16° - 35°, with an average rainfall of 3,000mm. Although the terrain and the reservoir showed promising habitat for otters, not a single piece of evidence was found in this region.

Peechi Reservoir, formed due to a dam built on Manali River, has a waterspread area of 14 km². The terrain is undulating and the elevation varies from 45 - 850m. The annual rainfall is about 300 mm. The boat drivers and guards of Forest Departments surveillance team reported otters (*Aonyx cinerea*) being found in groups of 2-24 individuals in the vicinity of the reservoir. A single individual of *Lutra perspicillata* was sighted while boating in the reservoir.

Vazhani Reservoir, a small reservoir with a mean area of 4 km² formed due to accumulation of runoff water in the valleys damned at Vazhani is situated near the Peechi Reservoir, but the terrain and environment do not show promising otter habitat.

Periyar Reservoir was created in 1895 by building a dam across the River Periyar. The topography is hilly with dense evergreen, semi-evergreen and mostly deciduous forests with extensive stretches of savannah grasslands on the upper slopes of the hills. *Lutra perspicillata* is reported to occur in this reservoir in good numbers and are seen occasionally in groups of 2-38 individuals. The team recorded only a single individual in the reservoir while surveying in the boat. The staff at the Periyar Tiger Reserve mentioned that the animals are seen in good numbers only after dusk, when local fishermen complete the laying of their fishing nets.

Idukki Reservoir is a resultant of the Idukki arch dam on the Periyar which resulted together with two dams at the Kulamavu and Cheruthony in a reservoir of 33 km². The topography of the surrounding areas is undulating with lofty peaks and precipitous slopes and the elevation varies from 450m - 746 m. Although the habitat promises presence of otters, no sightings were reported in the last few years, and the survey too yielded negative results.

Officials of the Forest Department agreed with the statement regarding the occurrence of clawless otters (*Aonyx cinerea*) on the high hill ranges in Kerala adjoining the Indira Gandhi National Park (Annamalai Wildlife Sanctuary), of Tamil Nadu, where the clawless otter commonly occurs.

Based on the finding of the preliminary survey, the authors state that all three species of otters (*Lutra lutra*, *Lutra perspicillata*, *Aonyx cinerea*) are definitely found in Kerala, but their distribution is sparse and patchy. An intensive survey is required to categorise the status of the otters on the Malabar Coast and the adjoining hill reservoirs and streams.

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