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SHORT COMMUNICATIONS

CONSERVATION OF ELEPHANTS IN IDUKKI WILDLIFE SANCTUARY, KERALA

T.R. Vinod,
Wildlife Institute of India, P.O. Box # 18,
Dehra Dun, 248 001, India.
and
Jacob V. Cheeran
College of Forestry, Vellanikkara,
Trichur, 680 654, Kerala, India.

INTRODUCTION

Idukki Wildlife sanctuary lying in the Idukki District of Kerala falls within the Western Ghats. The area comes under the Nagarmpara Reserve Forest and forms the cathcment area of Idukki Hydel Project. The Sanctuary consists of evergreen, semi evergreen, moist deciduous and savanna types of forests. Diversity of floral and faunal life forms, some of which have locally disappeared, makes it an extremely critical area for conservation at State and National levels. The area has a rich elephant population. This communication deals with the present status and conservation of elephants in the area.

Of the four major elephant populations occurring in India, the south Indian population (c. 6000-8000) is the second largest, after the north-eastern population (c. 9000-12000), and is distributed in the forests of the Western Ghat Hills in the states of Karanataka, Tamil Nadu and Kerala (Daniel, 1986). The Kerala Forest Department in 1993, estimated about 4200 elephants in Kerala. Elephants in Kerala exist as seven populations, six of which are in ecological continuity with adjacent elephant habtitas of either Tamil Nadu or Karnakata (Easa. 1989). The Idukki population is isolated from other populations.

IDUKKI ELEPHANT POPULATION

The Idukki population is the most disturbed elephant population in Kerala. The area, once contiguous with the Periyar and Malayattur forests, is presently isolated due to the construction of three dams namely Idukki Arch dam, Cheruthoni dam and Kulamavu dam as part of Idukki Hydroelectric Project and large scale encroachments. The capital of Idukki district, Painavu, is very close to the Sanctuary. Plantations, human settlements, roads and other developmental programmes further restricted the movements of elephants to a smaller area.

Studies on the impact of river valley projects on wildlife of Indukki Sanctuary were made by Nair and Balasubramanyan (1985) and they reported a population of about 75 elephants in the area. Present population of Idukiki elephants is estimated to be 72 (Vinod, 1994), Among them were 4 adult males, 61 adult females, 4 juveniles and calves. The ecological density of elephants in the area was 1.6 animals/km^2 where as crude density was about 0.9 animal /km^2 The density of elephants in Indukki Wildlife Sanctuary is higher than for other Asian elephants habitats (Eisenberg and Lockhart, 1972: Olivier, 1978: Ishwaran, 1984: Santiapilla *et al*, 1984; Sukumar, 1985 and Easa, 1989) Eisenberg and Sendensticker (1976) have opined that in suitable South - east Asian habitats, density of elephants could range from 0.1 to 1.0 elephant/km^2. The present estimation is well within this limit. The most commonly observed groupings were of 1,2,3,4 and 7 elephants. This pattern of smaller herds is a characteristic of highly disturbed populations. Eisenberg and Lockhart (1972) reported a pattern similar to that of Idukki in elephant populations of Sri Lanka.

CONSERVATIONS STATUS

This is the only isolated elephant population in Kerala where the habitat has shurnk considerably. There are large scale encroachments along the border of the sanctuary, especially around Memari area. The occurrence of fire is a regular phemenon in summer months. The plantation activities carried out by the Social Forestry wing inside the Sanctuary during 1993-94 was a major cause of habitat degradation. The activities of large number of labourers, improper selection of species to be planted and the application of chemical fertilizers were some of the reasons for habitat degradation. The consumption of fertilizers by elephants might have caused some health problems. With more and more grassland areas being taking up for plantation, the elephants were forced to become pocketed in and around Vagavanam and other evergreen patches.

FUTURE NEEDS

Studies on feeding habits by elephants revealed that grazing was predominant in the area (Vinod, 1994). So the existing grasslands should be protected. There is an urgent need to stop all the operations inside the Sanctuary. The area should be kept intact for atleast 10 years. A detailed study on the genetic characters of the animal is needed to assess the risk of inbreeding and other stochastic events associated with small isolated population. Further, for proper protection and viability of these small population of elephants, it is essential to link up Idukki sanctuary with the adjoining elephant habitats.

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