

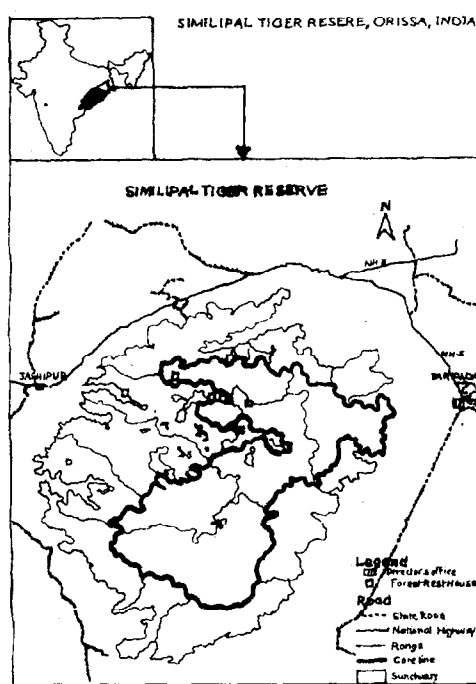
(II)

**REPORT ON DEATH OF A MUGGER *CROCODYLUS PALUSTRIS*
IN WILD INSIDE SIMILIPAL TIGER RESERVE, ORISSA, INDIA**

Out of the 21 species of Crocodilians presently existing in the warm sub-tropical and tropical region of the world in Indian sub-continent only three species are found (Singh 1999). they are the Gharial (*Gavialis gangeticus*), the Saltwater or Estuarine crocodile (*Crocodylus porosus*) and the Mugger (*Crocodylus palustris*). Fortunately, all these three species are found in Orissa itself. The Gharial is found in the Mahanadi, the Saltwater crocodile is found in Bhitarkanika Sanctuary and the Mugger is found in river systems of Similipal Tiger Reserve.

The Similipal is a densely forested hill-range in the heart of the District of Mayurbhanj in Orissa (India) lying close to the eastern-most end of the Eastern Ghats. Located in the Mahanadian Bio-geographical region and within the biotic province, Chhotanagpur Plateau, it spreads over an area of 2,750 km². The whole of the Similipal hill range comes under Similipal Tiger Reserve and is located between 20° 17' to 22° 10' N latitude and 85° 57' to 86° 47' E longitude (Fig.1). Because of the uniqueness of its flora, fauna, forests, landscape, tribes and waterfalls, Similipal has been declared as a Biosphere Reserve since 1994. The highest mountain is the peak of Khairiburu which is 1,168 m amsl. Similipal is the richest watershed in the State of Orissa giving rise to many perennial rivers like the Rudhabalanga, Khadkei, Khairi, Bhandan, West Deo, Salandi, East Deo, Sanjo and Palpala.

Fig. 1



Location map of study area

Results of a survey for mugger conducted in November-December, 1979 indicated that the mugger had virtually become extinct in the Similipal Tiger Reserve area (Anon., 1999). Though the exact reasons for the extinction of mugger from Similipal were not clear, the survey cites adverse factors like :

- (i) fishing by using explosives and nylonnets,
- (ii) use of DDT and other insecticides with an intention to control malaria,

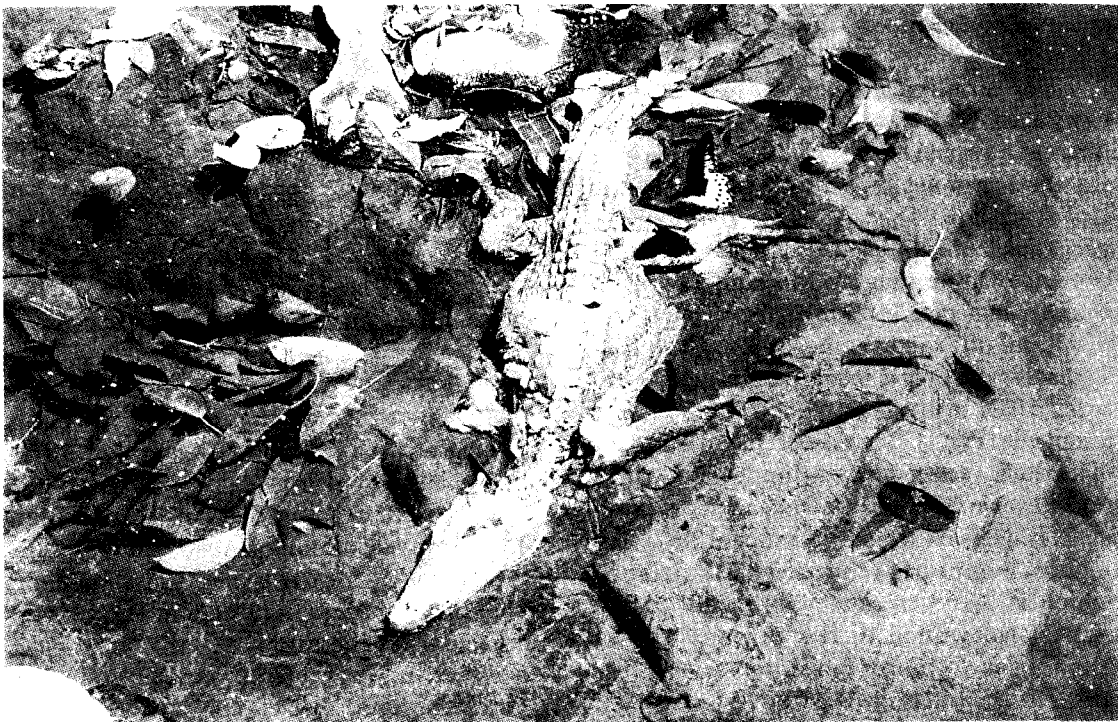
- (iii) fire in the river banks forming nesting sites, and
- (iv) natural affects of activities such as predation and or exhuming of mugger nests by wild board and monitor lizard.

Mugger management project in Similipal was started thereafter at Ramatirtha near Jashipur to maintain viable population of mugger in Similipal, conduct management-oriented research, provide muggers for re-stocking elsewhere under the financial support from UNDP, FAO, Govt. of India and Govt. of Orissa. The initial stocks of 150 young muggers were brought from Tamil Nadu and six of

them were retained for captive breeding at Ramatirtha. Over the years 788 corcodiles have been released to the river systems of Similipal. Survey of muggers in Similipal were conducted during 1999, 2000, 2003 and 2004 and their numbers were 71, 97, 52, and 83 respectively which are far less than the number of crocodiles released. The numbers in the wild are less than the numerous released and the reason may be due to struggle for existence, competition for food and inter-fighting among the muggers.

During the survey of mugger during March, 2004, a dead mugger was found in the Ransa-Kabatghai road in the Khairi

Fig. 2



Dead mugger in the river Khairi

river (altitude, 800m) on 10.3.2004. The dead specimen was found lying on a rocky surface in the stagnant water. The body was spoiled and not easy to handle (Fig. 2). The length of the mugger was 75 cm confirming to be a sub-adult one. The death of the mugger in Similipal Tiger Reserve at an altitude of 800m is intriguing. Though mugger is the most adaptable of the three Crocodilians and has been encountered up to 400m in crystal clear hill streams, sewage treatment ponds, cold deep rivers in the Himalayan foothills

(Whitaker and Andrews, 2003). In Similipal Tiger Reserve they are seen surviving at a height of 800m. A wound was noticed in the skull near the eye of the dead mugger. It is probable that the mugger died during fighting with another mugger. Further research on ecology of muggers, their natality, mortality and survivability should be conducted so as to know the exact reason why the mugger population in Similipal got extinct in 1979 and inspite of release of 788 muggers in the streams of Similipal there are now only 83 in wild.

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