

the virus which has created havoc across geographical boundaries and age groups. The Government should take the necessary steps during such outbreaks and a precautionary measure should be implemented for CHIKV screening in blood banks. The impact and feasibility of CHIKV in organ transplantation is yet to be understood. In the absence of a preventive vaccine for CHIKV and to further prevent any such CHIKV epidemics in the near future, establishment of a system for continuous surveillance of the

disease seems to be the only possible solution.

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Indian Gharial (*Gavialis gangeticus*) on the verge of extinction

Reptiles evolved on the earth some 200 million years ago. Fossil records show that they evolved in different ways and were semi-aquatic in habit, with characteristics similar to mammals and birds. Crocodiles find a place in ancient folklore: Egyptians worshipped a god named Sobek, who had a human body and crocodile head.

The Indian Gharial (*Gavialis gangeticus*) is the oldest crocodylian and the sole survivor of an evolutionary line called archosauromorpha. The name 'Gharial' originated from a 'ghara' or earthen pot on their head¹.

The Gharials, once abundant in river systems of the Indian subcontinent with its range extending throughout the Gangetic Plains, Indus river in Pakistan, northern Nepal and Bhutan, East Burma and southern Orissa², are reportedly extinct in Burma and Pakistan³. The Indian Gharial is now confined to India, Nepal and Bangladesh, in scattered and isolated populations.

The late 1970s saw a drastic decline in the Gharial population and distribution. In 1975, the Crocodile Conservation Project was initiated by the Government of India/UNDP, FAO in Uttar Pradesh, for the conservation of the Gharial. The project involved two phases – captive breeding and rehabilitation. Gharial eggs were collected from the wild, incubated and the resultant hatchlings were released into the wild. At times, 90% of incubation of the eggs was done *in situ* in wild nests and then the eggs were transported to hatcheries at rehabilitation centres for complete incubation.

The National Chambal Sanctuary (25°30'–26°52'N and 76°28'–79°00'E) was founded over Chambal river in

1978–79 under the Crocodile Conservation Project for the protection of Indian Gharial. This is the only wetland sanctuary in India for the conservation and management of crocodiles⁴. An alluvial belt of eroded banks, sandy islets, peninsulas and deep sand banks of Chambal formed an ideal habitat for the Gharials for basking and nesting⁵.

Apart from the National Chambal Sanctuary, Orissa also forms a good habitat for the Gharials. In fact, Orissa is the only state in India to have all three species of Indian crocodiles, viz. mugger or marsh crocodile (*Crocodylus palustris*), the saltwater or estuarine crocodile (*Crocodylus porosus*) and Gharial (*Gavialis gangeticus*). But the once abundant Gharial population in three major river systems of Orissa, viz. Mahanadi, Brahmani and Baitarani, showed a steady decline and by 1975 a small population of juvenile and adult Gharials survived only in the Mahanadi.

Many factors, individually or in combination, were responsible for the drastic decline of the Gharial population in the Indian subcontinent. Loss of habitat owing to construction of reservoirs and dams, lack of stringent laws, trapping in fishing nets and erroneous superstitions have made them one of the most vulnerable reptiles. Superstitions are part of the South Asian tradition, but some of them harm wildlife. A common belief of a local tribe called 'Tharu' of Nepal associated with the Gharial is that the 'ghara' kept under the pillow of pregnant women relieved her of her labour pain⁶. Another belief is that incense sticks made of 'ghara' when burnt in fields acted as a pesticide. In addition, the 'Tharu' community believes that Gharial

eggs have medicinal value. All these superstitions have led to their decline in Nepal.

Gharials in Nepal were listed as 'Endangered' in the *IUCN Red Data Book* of 1975. The 2007 *IUCN Red Data* list of threatened species places the Indian Gharial in the 'Critically Endangered' category⁷; and if the present rate of decline continues, the Indian Gharial will soon become extinct.

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