



First Confirmed Record of the Mugger Crocodile (*Crocodylus palustris*) from the Purna River, Tapi District, Gujarat

Dhruv B. Chaudhari¹, Arvind Chaudhari², Imran Vaidh³, and Hiren J. Patel^{4*}

¹304, Shaival Apartment, near State bank of India, Sutharvad, Mandvi – 394160, Surat, Gujarat, India

²Vyara range, Tapi - 394655, Gujarat, India

³Valod, At & Po: Mordevi, Valod – 394660, Gujarat, India

⁴Department of Zoology, The Maharaja Sayajirao University of Baroda, Vadodara-390002, Gujarat, India (hirenp9408@gmail.com [corresponding author]; <https://orcid.org/0000-0002-1781-3265>)

The Marsh Crocodile or Mugger (*Crocodylus palustris*) is India’s most widely spread crocodylian species (De Silva and Lenin 2010). While Muggers have gone extinct in Bhutan and Myanmar, India holds a relatively large population of Muggers distributed over 50 different locations in small and isolated pockets (Choudhury and De Silva 2013). The species occurs in freshwater habitats, including rivers, lakes, reservoirs, hill streams, village ponds, and man-made tanks. Muggers are threatened by habitat destruction due to agricultural and industrial expansion, entanglement and drowning in fishing equipment, egg predation by humans, and illegal poaching for skin, meat, and body parts in medi-

cine (Whitaker 1987; Bustard 1999). Although the Mugger faces a threat of habitat destruction, constant legal intervention/protection and conservation programs have helped in conserving the species (De Silva and Lenin 2010) and it is legally protected under Schedule I in the Indian Wildlife (Protection) Act 1972 and categorized as Vulnerable by the IUCN (Choudhury and De Silva 2013).

In India, Gujarat is the westernmost state with many large freshwater bodies which the Mugger can inhabit (Vijaykumar et al. 1999; Vyas 2008; Vyas 2010). During the early 20th century, Muggers were very common all over Gujarat (Acharya 1949; Vijaykumar 1997). Good popula-



Fig. 1. A Mugger Crocodile (*Crocodylus palustris*) basking on the bank of the River Purna near Mordevi Village, Tapi District, Gujarat, India. Photograph by Arvind Chaudhari.

tions occurred in major rivers such as the Narmada, Tapi, Mahi, and Vatrak (Acharya 1949; Vyas 2013). Earlier, a small population of Muggers was reported in the northern region of Gujarat, including the Banas and Sabarmati Rivers along with some village tanks of the area (McCann 1938) in Kheda District (Acharya 1949; Vijaykumar et al. 1999). Although, in recent years there have been scattered sightings of the species from various parts of Gujarat (Vyas 2008), the present status of the Mugger in Gujarat is not entirely known. In the current study, we report the sighting of a Mugger (*Crocodylus palustris*) from the River Purna. Purna is one of the major perennial rivers in Gujarat. The river has its origins in the Saputara Hills in The Dangs District of the state. The Purna River has a drainage area of 2,431 km², and it travels 180 km before flowing into the Arabian Sea. The Zankhri River is the main tributary of the Purna River. The mean annual rainfall ranges from 2,000 to 7,500mm.

On 15 January 2022, we visited Mordevi Village, located in Valod Tehsil of Tapi District in Gujarat, India. At around 1210 h, while surveying the area, we sighted a Mugger Crocodile, about 3 m in length (Fig. 1), basking on the bank of the River Purna (21.0396°N, 73.21485°E; Fig. 2). We had never sighted the species here before, but according to the village Sarpanch, this Mugger was seen basking near the river bank from 1000 h. More so, on asking the locals about the last sighting of the animal the locals said they had been observing the same individual for the last four years, and it has never harmed anybody. Adding a mythological angle to it, villagers believe that the Mugger is a vehicle for the goddess Khodiyar Mata whose temple is nearby the bank and who protects the village from evil. We further surveyed the site for more crocodiles but only sighted this one individual to date.

The presence of Muggers had not been reported from the earlier studies in this region (Vyas 2000; Vyas 2007a; Vyas b, 2015; Patel et al. 2018; Patel and Vyas 2019). This will

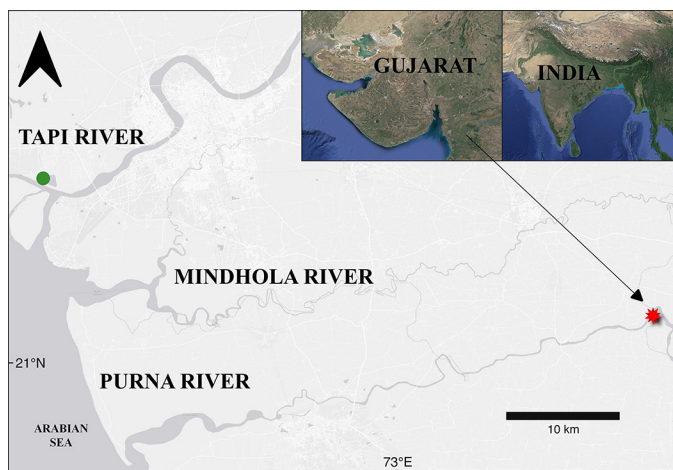


Fig. 2. Map showing the location of the sighting of a Mugger Crocodile (*Crocodylus palustris*) on the bank of the River Purna near Mordevi Village, Tapi District, Gujarat, India, and the nearest previously known population on the Tapi River.

be the first report of a Mugger sighting in this area of the Purna River. However, it begs the question of how and where the animal originated. In this case, we offer two possibilities: First, it is possible that the animal was relocated in the river by the Forest Department, government organizations, or NGOs involved in wildlife rescue and protection, but this is thought to be unlikely. Second, crocodiles have been reported in the Tapi River near Hazira (Vyas 2008) approximately 30 miles from the current sighting; there is a possibility that individuals may have migrated from the river mouth and settled in the Purna River.

In India, the Mugger crocodile is recovering from the brink of extinction, mainly through the conservation efforts of various Forest departments, NGOs, and locals (Vyas 2008). In the present scenario, the species population is increasing in many Indian states. Studying the distribution of the species and assessing the threats to its survival will help to develop better conservation practices for Muggers in Gujarat.

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