



INCIDENTAL CAPTURE OF LEATHERBACK SEA TURTLE OFF BHARADKHOL, MAHARASHTRA, INDIA

HARSHAL KARVE[#], MANAS MANJREKAR, NARAYANAN VASUDEVAN & NEENU SOMARAJ

The Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra (Mangrove Foundation), Mumbai, Maharashtra, India

[#]harshal.karve@gmail.com

Maharashtra has a 720km long coastline which harbors a rich marine biodiversity, including the five species of sea turtles known to inhabit the coastal waters of India (Hatkar *et al.*, 2019). However, leatherback turtles (*Dermochelys coriacea*) have rarely been reported and lack photographic evidence to validate presence of the species. The leatherback turtle is listed as vulnerable by the International Union for Conservation of Nature (IUCN) (Wallace *et al.*, 2013) and is a Schedule-1 species protected under the Wildlife (Protection) Act, 1972 (WPA, 1972) of India. The leatherback turtle is locally known as 'Kurma' in Maharashtra (Sanaye & Pawar, 2009). It is highly migratory, spends most of its life offshore, and feeds on scyphozoa (Dodge *et al.*, 2011). Within the wider region, leatherback sea turtles nest at Bird's Head Peninsula, West Papua (Indonesia), Andaman and Nicobar Islands (India), Godavaya (Sri Lanka)

and KwaZulu-Natal (South Africa) (Shanker, 2004).

Very little information is available about the occurrence of the leatherback turtle on the west coast of India. Ten to fifteen years ago, two nests of leatherback turtles were recorded each in Sindhudurg and Raigad districts in the state of Maharashtra (Giri, 2001). However, no authenticated record of the nesting was available. A stranding of a leatherback turtle was recorded from the beach of Devbag, Maharashtra, in 1985 (Karbhari, 1985) but again no photographic record was available of the event. A leatherback turtle (no photos for validation but morphometric measurements support the species identification) was entangled in a gill net off Vizhinjam, Kerala, in 2008 and was released back to the sea (Anil *et al.*, 2009).

The Mangrove Cell (Maharashtra Forest Department)



Figure 1. Leatherback sea turtle being released from fishing net off Bharadkhol, Maharashtra. (Photo credit: Vishnudas Vaghe & Sadanand Choghale)

and the Fisheries Department of Maharashtra started a compensation scheme in December 2018, under which fishers who cut or otherwise damage their fishing gear to release a marine animal protected under WPA 1972 were given monetary compensation. Several awareness and outreach workshops were carried out in the coastal districts of Maharashtra by the Mangrove Cell to popularise the said scheme and to build a network of fishers to collect secondary data of endangered marine animals. Subsequently, this record of a leatherback sea turtle was shared by a fisher based in Bharadkhol (18.15° N, 72.83° E), a small coastal village in the Raigad district. The turtle was caught in a gill net on 25th May 2018 and was released back to the sea safely by fishers cutting the net. This is the first photographic record (Figure 1) of a leatherback sea turtle from Maharashtra. Using ImageJ software, the estimated length of the turtle was ~1.2m. More needs to be known about the occurrence of leatherback sea turtles off the Maharashtra coastline, and could be gathered from similar reports from fishers or a research study.

ACKNOWLEDGEMENTS

We are thankful to Visnudas Vaghe and Sadanand Choghale (Bharadkhol fishermen) for documenting the release of the turtle and Mr. Mohan Upadhye, livelihood specialist with Mangrove Foundation, for building the network of fishers.

Literature cited:

- Anil, M.K., H.J. Kingsly, B. Raju, K.K. Suresh & R.M. George. 2009. Note on the leatherback turtle *Dermochelys coriacea* (Vandelli, 1761) rescued at Vizhinjam, Kerala. *Marine Fisheries Information Service, Technical and Extension Series* 200: 23.
- Dodge, K.L., J.M. Logan & M.E. Lutcavage. 2011. Foraging ecology of leatherback sea turtles in the Western North Atlantic determined through multi-tissue stable isotope analyses. *Marine Biology* 158: 2813-2824.
- Giri, V. 2001. Survey of marine turtles along the coast of Maharashtra and Goa. *Kachhapa* 4: 16-18.
- Hatkar, P., D. Vinhenkar & D. Kansara. 2019. Rescue and rehabilitation of loggerhead sea turtles *Caretta caretta* from Dahanu Coast, Maharashtra, India. *Marine Turtle Newsletter* 156: 26-29.
- Karbhari, J.P. 1985. Leatherback turtle caught off Devbag near Malvan. *Marine Fisheries Information Service, Technical and Extension Series* 64: 23.
- Sanaye, S.V. & H.B. Pawar. 2009. Sea turtle conservation in Sindhudurg district of Maharashtra. *Indian Ocean Turtle Newsletter* 9: 3-4.
- Shanker, K. 2004. Marine turtle status and conservation in the Indian Ocean. *FAO Fisheries Report* 738: 85-134.
- Wallace, B.P., M. Tiwari & M. Girondot. 2013. *Dermochelys coriacea*. *The IUCN Red List of Threatened Species* 2013: e.T6494A43526147. <https://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T6494A43526147.en>. Accessed on April 19, 2020.

SILKY SHARK FEEDING ON A JUVENILE GREEN TURTLE IN OFFSHORE WATERS OF PAKISTAN, NORTHERN ARABIAN SEA

MUHAMMAD MOAZZAM^{1,#} & HAMID BADAR OSMANY²

¹WWF-Pakistan, Karachi, Pakistan

²Marine Fisheries Department, Government of Pakistan, Karachi, Pakistan

#mmoazzamkhan@gmail.com

Turtles play an important role in coastal and offshore ecosystems as they feed on organisms such as jellyfish, crustaceans, mollusks, and seaweed (Bjorndal, 1997). They, on the other hand, are preyed upon by a number of animals and form an important part of their diet (Hirth, 1971; Stancyk, 1981; Witzell, 1987). Sharks are among the major predators of sea turtles (Cabrera-Chavez-Costa *et al.*, 2010; Hammerschlag *et al.*, 2015; Estupiñán-Montaño *et al.*, 2018). For example, Heithaus

(2001) and Simpfendorfer *et al.* (2001) found that turtles are an important component in the diet of tiger sharks (*Galeocerdo cuvier*). However, less information has been published on the diet or feeding habits of the silky shark (*Carcharius falciformis*). Cabrera-Chavez-Costa *et al.* (2010) reported that silky sharks in the Gulf of Mexico (Atlantic Ocean) mainly preyed on teleost fish and in the Gulf of Tehuantepec (Pacific Ocean) on the crab *Portunus xanthusii affinis*. Galvan *et al.* (1989)