

RESEARCH NOTES

(I)

FIRST RECORD OF FEEDING TRAILS OF DUGONG IN GULF OF KACHCHH (GoK), GUJARAT

Dugong (*Dugong dugon*) is a marine herbivorous mammal which belongs to the order Sirenia. It is the only living representative of the family Dugongidae. As per the IUCN Red List of Threatened Species (2011), it is a 'Vulnerable' animal.

In India, it is known to occur on the East Coast of India; especially in Gulf of Mannar and Palk Bay in Tamil Nadu (Jones, 1967; James, 1974; Lal Mohan, 1976; Frazier and Mundkur, 1990). On the West Coast, the only surviving population seems to exist in the Gulf of Kachchh (Lal Mohan, 1963; Frazier and Mundkur, 1990). Moreover, it is also known to occur in the area of Andaman and Nicobar Islands (Das, 1996; Das and Dey, 1999).

Gujarat Ecological Education and Research (GEER) Foundation, carried out country wide surveys on Dugong from October 2006 to August 2010. This note reports dugong feeding trails in large seagrass beds in Gulf of Kachchh (GoK). This is the first report of dugong feeding trails have with photograph in Gujarat state (Pandey *et al.*, 2010).

Dugongs generally frequent in coastal waters, where they can feed up to the depth of 33m (Lee long and Coles, 1997). As far as foraging is concerned, this Sirenian is known to depend on seagrass beds to forage on a variety of seagrass species. Dugongs uproot whole seagrass plants when they are accessible, but can also feed only on leaves when the whole plant cannot be uprooted (Anderson, 1982; Marsh *et al.*, 1982, 1999). *Halodule* spp. and *Halophila* spp. are its preferred seagrass species (Marsh *et al.*, 2002). While foraging, dugongs have habit of cropping along serpentine feeding paths in seagrass beds that are known as feeding trails (Preen, 1995).

Large seagrass bed was noticed in the area of Pirotan Island (22°34'40.4"N, 69°59'07.3"E) in GoK during field investigations on May 7, 2009. The seagrass bed was constituted of two species, namely *Halophila ovalis* and *Halodule uninervis*. During qualitative assessment of seagrass beds, serpentine configurations were noticed at a few places. At that time, it was difficult to decide whether they were formed due to dragging of a boat by some local fishermen or due to the feeding activity of dugong. Therefore, digital pictures were clicked for further study and discussions with experts at



A feeding trail of dugong

Feeding trails of dugong in seagrass bed
At Pirotan Island, Gulf of Kachchh, Gujarat

GEER Foundation, Gandhinagar. The pictures were examined critically and discussed about the field conditions concerned literature was consulted on other aspects of dugong foraging behaviour. Subsequently, Digital pictures were also sent to a dugong expert, Helene Marsh (James Cook University, Australia) and for her opinion Marsh opined that the serpentine configurations certainly looked like feeding trails of dugong. At later stage, the pictures were also shared with a leading dugong researcher (Elrika D'souza) working in Andaman and Nicobar Islands, India, who too, supported the view that the serpentine formations in photographs should be 'dugong feeding trails'.

Thus, the present study has provided the first indirect evidence of occurrence of dugong in the Gulf of Kachchh, Gujarat.

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Yashpal Anand, Ketan Tatu and C.N. Pandey¹

GEER Foundation, Gandhi Nagar (Gujarat)
Email: yashaanand@gmail.com

¹Presently Addl. Principal Chief Conservation of Forests (D & M), Gujarat