

First report of occurrence of fouling diatom *Licmophora flabellata* from the Gulf of Mannar

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Fouling diatoms are important biofoulers on the structure made for fish culture and other aquatic activities. *Licmophora* species are a common constituent of marine, littoral, micro-epiphytic communities and generally found colonizing filamentous red, brown and green macroalgae, submerged in rock pools throughout the littoral zone. During February 2019, staff working in the sea cage farm were complaining of itching. Upon closer scrutiny bushy arborecent colony of *Pennaria disticha*, which is a stinging hydroid were found on the cage nets. *Pennaria disticha* can sting human and cause irritation. *P. disticha* is native species of Atlantic and considered as invasive in other ecosystem. Heavy fouling of this epiphytic hydroid was recorded on the cage nets for the first time. Further microscopic studies of this stinging hydroid

at the laboratory revealed the presence of fouling diatom *Licmophora flabellata* (Fig.1) on its surfaces. Research on fouling diatom on the Indian coast started with Mishra (1956) reporting six species along the west coast. In the east coast of India only two species *L. ehrenbergii*, *L. abbreviata* from Visakhapatnam, Koodankulam coast and Pulicat Lake have been reported. Though the *L. flabellata* has been reported from west coast earlier no report of its occurrence along the east coast so far published. *Licmophora flabellata* is pennate diatom and the type species of this genus. The species diversity of the *Licmophora* genus from Indian waters stands at 12 species (Table.1). However many more species may be yet unrecorded as the global diversity of *Licmophora* genus exceed 90 species.



Fig.1 *Licmophora flabellata*

Table.1 Species diversity of genus *Licmophora* reported from India

Species	Reported area
<i>Licmophora abbreviata</i> C. Agardh, 1831	Gujarat (Bhadreshwar, Narara & Poshitra), Kerala (Bekal), Goa (Mandovi-Zuari estuary), Cochin, Vishakapatnam, Porbander, Koodankulam Coast (Gulf of Mannar)
<i>Licmophora anglica</i> (Kützing) Grunow	Mandovi estuary
<i>Licmophora bharadwajai</i> Misra, 1956	Dwaraka
<i>Licmophora communis</i> (Heiberg) Grunow, 1881	Dwarka
<i>Licmophora dalmatica</i> (Kützing) Grunow, 1867	Mandovi estuary
<i>Licmophora ehrenbergii</i> (Kützing) Grunow, 1867	Cochin, Mandovi estuary, Pulicat lake
<i>Licmophora flabellata</i> (Grev.)C. Agardh, 1831	Gujarat (Narara & Poshitra), Cochin, Mandovi estuary, Dwarka, Gulf of Mannar (present study)
<i>Licmophora gracilis</i> (Ehrenberg) Grunow, 1867	Gujarat (Bhadreshwar), Goa (Zuari estuary), Mangalore (Netravati-Gurupura estuary), Cochin
<i>Licmophora grandis</i> (Kützing) Grunow	Porbandar
<i>Licmophora juergensii</i> C. Agardh, 1831	Goa (Zuari estuary & Mandovi estuary), Cochin
<i>Licmophora lyngbyei</i> (Kützing) Grunow	Mandovi estuary
<i>Licmophora paradoxa</i> (Lyngbye) C. Agardh	Goa (Zuari and Mandovi estuary), Kerala (Bekal), Cochin, Dwarka