

# Green tide and fish mortality along Calicut coast

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Intense greenish brown coloured bloom was noticed in the Arabian Sea along the Calicut coast, on 27.09.2011, which lasted up to 17.10.2011 (Fig. 1). The blooming organism was identified as the “green tide” forming alga, *Chattonella marina* (Subrahmanyam) Hara & Chihara, 1982. Fresh samples when observed under microscope which exhibited active movement aided by flagella and had many bright green disc shaped chromatophores distributed throughout the cell (Fig. 2). The samples when preserved in formalin, formed a jelly like mass.

This green tide was associated with large scale mortality of fish fingerlings of *Otolithus* sp.,



Fig. 1. *Chattonella marina* bloom observed along Calicut coast



Fig. 2. *Chattonella marina* (20 x)

*Cynoglossus* sp., *Liza* sp. and the mole crab *Emerita asiatica* from the second day onwards. The mortality was assumed to be due to the clogging of gills. During the bloom period the intertidal water appeared stagnant, viscous and had a soup like consistency. The water samples registered very low oxygen values ( $1.899 \text{ ml l}^{-1}$ ) during morning hours,

but recovered subsequently to  $4.275 \text{ ml l}^{-1}$  during the afternoon. During the bloom period the tide levels were very low (0.01 to 0.08 m) in the evenings. Fourteen days after the incidence of the bloom, large number of shells of bivalves viz., *Perna viridis*, *Mactra violacea*, *Donax scrotum* and *Donax cuneatus* were found cast ashore (Fig. 3).



Fig. 3. Bivalve shells along the beach following the bloom