

BLOOMING OF MICROALGAE KILLS CORAL REEFS IN GULF OF MANNAR

Relevant for: Geography | Topic: Islands & Coral Reefs, changes therein and in Flora & Fauna and the Effects of such changes

Dead coral reefs in Shingle Island after the recent blooming of microalgae. | Photo Credit: [handout e mail](#)

Scientists found dead *Noctiluca scintillans* along the shore in the Mandapam region when they conducted the survey.

The absence of secondary algae in the reef areas of Shingle Island confirmed the recent death of these coral colonies due to the smothering effect of the microalgae while settling, they said.

Acropora, *Montipora*, *Pocillopora*, *Porites*, *Favia*, *Favites* and *Goniastrea* were the worst affected coral genera, they said.

“Mortality was high in *Acropora* and *Montipora* colonies in Shingle Island, while the *Acropora* colony was less affected in Krusadai Island,” they observed.

The impact of the bloom was less in the nearby Krusadai Island, the scientists said. Out of 120 colonies observed at the depth of 0.5-4 metres, only 12 colonies of sizes 10-20 cm were found dead on the shoreward side of the island, they said.

A greenish settlement was seen on coral colonies and other benthic communities including macro algae, coralline algae and sponges, the scientists said. “Because of this disturbance, corals started secreting excessive mucus, causing mucus sheathing,” a scientist added.

Mucus sheathing was also found around Pullivasal, Poomarichan, Manoliputti, Manoli and Hare islands in the Mandapam group but the intensity was comparatively less, Mr. Patterson said, citing the survey. Coral reefs in the Kilakarai region had suffered bleaching when a similar severe bloom was witnessed in October 2008, he added.

During the recent survey, the scientists also found the dissolved oxygen content in the reef area in Shingle and Krusadai islands to be between 1 and 2 ml/l and it was between 3 and 4 ml/l in the other islands of the Mandapam group, he said. As the decomposed microalgae cells released toxic ammonia gas, the chances of ciliate propagation which killed fish eggs were high, he said and suggested regular monitoring. The SDMRI, on its part, had taken up continuous monitoring of reef areas and environmental parameters, he said.

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