

Mass mortality of the sea urchin *Diadema mexicanum* in La Entrega at Bahias de Huatulco, Western Mexico

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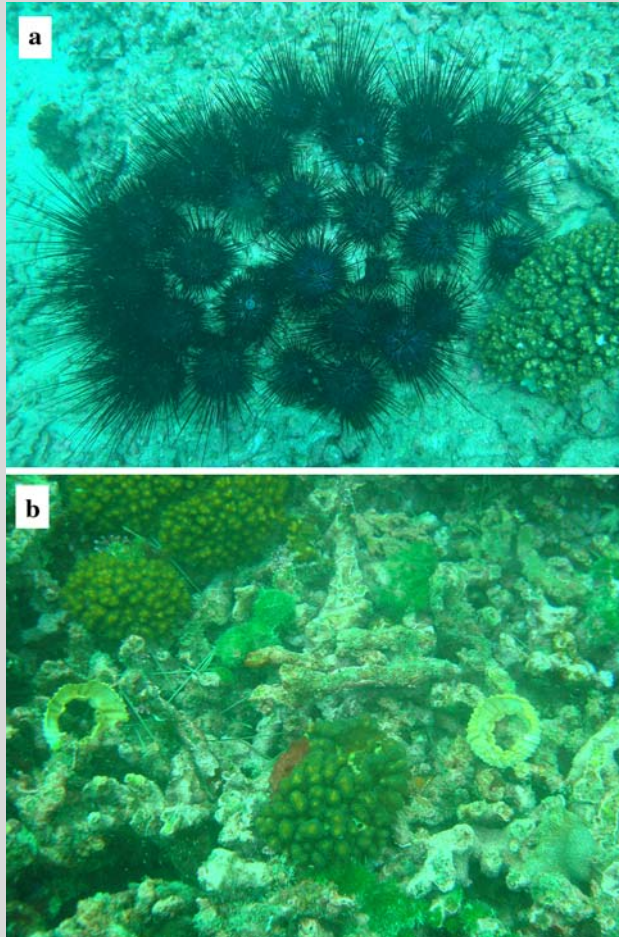


Fig. 1 Underwater pictures showing (a) an aggregation of *Diadema mexicanum* in La Entrega and (b) loose spines and bare tests after the mass mortality event at the same site

The sea urchin species *Diadema mexicanum* is a common inhabitant of the Bahias de Huatulco, an important reef area on the Pacific coast of Mexico (Reyes-Bonilla 2003). Until May 2009 the density of the sea urchins remained relatively constant through time since monitoring began in the 1990s, the highest being found at La Entrega (4–7 ind. m⁻²) (Benítez-Villalobos et al. 2008) where up to 100 aggregated individuals were observed (Fig. 1a). During the last monitoring (13 May 2009), ten 10 m × 2 m belt transects were laid over the reef (4–12 m deep), and numbers of sea urchins were recorded. Not a single individual was observed in the entire reef area (around 320 × 230 m) and surrounding rocky bottom. However, there were a high number of loose spines and hundreds of bare tests scattered over the reef (Fig. 1b), there was evidence of a mass mortality event in the sea urchin population. Observations during further monitoring suggested disease as the cause; individuals of *Diadema mexicanum* possessing spines with mucous attached, showing injuries around the peristomial area and “bald” areas on the test were recorded in other reef communities as far as 80 km away. The observed signs are similar to those described by Bak et al. (1984) during the mass mortality event of *D. antillarum* that occurred in the 1980s throughout the geographical range of this species in the western Atlantic (Lessios et al. 1984).

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Reef sites

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