

Holothuria scabra tegument blister under fresh water influence, south-west of Madagascar

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In July 2015 – after more than one year of sandfish growth in Indian Ocean Trepang S.A. sea pens in the south of Toliara, Madagascar – *Holothuria scabra* with podia blisters were found on the sediment. These animals, which weigh about 100 g, have been seen in sea pens that are crossed by a fresh water stream every day during outgoing tides. This disease seems to be provoked by the stress of fresh water excess (less than 30 ppm salinity), mixed with relatively low temperatures during the cold season in Madagascar, from May to September (the pictures below were shot in July 2015). The normal crawl movement, feeding and burying of the animals look to be disturbed given that we have not seen these animals buried.

The blisters are mostly bulging on the dorsal part of the animals. Blisters have the same firmness as a normal tegument. Even under pressure, blisters do not leak or explode. When animals with blisters are put in quarantine in an area with 35 ppm salinity, they fully recover. Figure 1 shows four different views of *H. scabra* with blisters from July 2015.



Figure 1. Four sandfish specimens with blisters. A) profile view; B) top view; C) top view on sediment; D) top view.

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