

Reproductive cycle of the sea cucumber *Holothuria (Platyperona) sanctori* (Holothuroidea: Echinodermata) in the southwestern Mediterranean Sea: interpopulation variability

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This study is a first contribution on the reproductive biology of *Holothuria (Platyperona) sanctori* from the Algerian coastline in the southwestern Mediterranean. Sampling was conducted at two sites in central Algeria, one (Ain Taggou-rait, w. Tipasa) where there is little anthropogenic influence and another (Tamentefoust, w. Alger) where there are two major sources of pollution from Oued el Harrach and Oued el Hamiz effluents which contain particulate organic matter. Significant differences in sea cucumber reproduction were observed between the two sites. This could be due to the difference in organic matter noted in the sediment of the two study sites. However, temporal similarities of the gonad index (GI) and the sexual maturity stages suggest that the reproductive cycle of *H. (P.) sanctori* is annual with the main spawning event taking place from June to October. Spawning is of high intensity in the Bay of Bou Ismail (Ain Taggou-rait) and spread out over time in the Bay of Algiers (Tamentefoust), reflecting an environment sufficiently rich in food to insure reproduction. We also show that gonad maturation of males and females was synchronized. Temperature is the most likely factor influencing the reproductive cycle and spawning. At the study sites, *H. (P.) sanctori* had a winter sexual resting phase, followed by maturation during spring, before spawning in summer. However, there was a slight lag to the start of spawning at the two study sites.

Keywords: holothurians; Aspidochirotida; reproduction; spawning; environmental factors; Algerian basin

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