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Abstract

Oogenesis and Ovarian Development in *Sepia officinalis* from the Western Algerian Coasts, Oran Bay

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Abstract

Background and Aim: The common cuttlefish, *Sepia officinalis* (L., 1758), is a marine cephalopod found along the Algerian coast. Locally, very few scientific studies have been conducted on this benthic resource. While it is necessary to dispose detailed scientific information on its biology for a better management of its stock. The study aims to provide information on the spawning season, oogenesis and discuss the reproductive strategies of the female's cuttlefish in the Western coast of Algeria.

Method: A total of 328 females cuttlefish (*Sepia officinalis*), were sampled between January and December 2013 from the Western coast of Algeria from Oran. The gonadosomatic index (GSI) was calculated monthly. The study of oogenesis of the cuttlefish (*Sepia officinalis*) was conducted on basis of histological observations of the ovaries.

Results: Dorsal mantle lengths (DML) of females sampled specimens ranged between 6.5 and 23.8 cm with an average of 12.71 ± 2.55 cm. Monthly values of the gonadosomatic index (GSI) suggest that the spawning period of this species occurs between February and April, with a maximal GSI of 6.22% in March. Histological analysis of the ovary of the common cuttlefish has shown that the sexual cycle of this species represented five stages, divided into two essential phases: the previtellogenesis (or follicular phase) and the vitellogenesis (or phase of synthesis).

Conclusion: In conclusion, these results are essential for the planning, management and development of fishing for this species.

Keywords: *Sepia officinalis*, Spawning period, Oogenesis, GSI, Western Algeria coast

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