

## **Ostracod assemblages as a tool for documenting dynamics in marginal semi-closed marine environments: a case study from Late Quaternary sediments of Saronikos Gulf (Attica, central Greece)**

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The Saronikos Gulf is a semi-enclosed embayment situated in the west-central region of the Aegean Sea in the eastern Mediterranean, and covers a total surface area of 1,117 km<sup>2</sup>. It is a neotectonic basin, divided by a very shallow north–south-oriented platform into a western and an eastern part. The western basin has depths exceeding 400 m, the eastern basin depths around 100 and 200 m. Furthermore, Elefsis Bay, situated to the north, is separated from the gulf by two shallow sills. This complex bottom morphology greatly influences the regional water circulation pattern.

The Saronikos Gulf draws the attention of marine science because it constitutes the natural marine gateway of the city of Athens and the Piraeus harbor and receives the treated wastes of ~4 million people.

A sedimentary record spanning more than 16935±50 calyr BP was recovered at N 37.52'23.38" E 23.15'40", water depth 140 m, in the western basin of the gulf. A total of 50 samples from a 260 cm core were quantitatively and qualitatively analyzed for micropalaeontological study in order to reconstruct palaeoenvironmental conditions. In the framework of this study, ostracod assemblages were used to trace changes in the depositional environment of the investigated core.

Two main ostracod assemblages alternate along the core, indicating a gradual transition from a shallow marine infralittoral to an outer infralittoral-inner -circalittoral environment. A mesohaline shallow marine assemblage, mainly with *Leptocythere lagunae*, *Leptocythere rara*, and *Callistocythere* sp., is dominant for the largest part of the core (from 260 to about 50cm). At the upper part a deeper marine assemblage prevails, mainly with *Callistocythere crispata*, *Acanthocythereis hystrix*, *Pterygocythereis jonesii* and *Bairdia* sp.

The pattern of the environmental change that took place in Saronikos Gulf during Late Quaternary is comparable with the one established by Tsourou et al. (2015) for Southern Evoikos Gulf, suggesting that similar regional forces affected the two gulfs during the studied period.

Tsourou, Th., Drinia, H. & G. Anastasakis (2015). Ostracod assemblages from Holocene middle shelf deposits of southern Evoikos Gulf (central Aegean Sea, Greece) and their palaeoenvironmental implications. *Micropaleontology*, 61(1-2): 85-99.