

Spatio-temporal amphipods diversity of the suprabenthic community from the western part of the Bay of Seine (English Channel)

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The suprabenthos corresponds to organisms that migrate at night in the lower water layers and are in the sediment during the day. Among the suprabenthic peracarids, amphipods were frequently the most diversified while mysids were the most abundant group. During two-years of study of the prawn *Palaemon serratus* larvae, to state of the complete cycle of this species along the Normandy coast (English Channel), the suprabenthic fauna appeared particularly rich in shallow waters (10 m) of the Bay of Veys. The suprabenthos was collected using a suprabenthic sledge filtering the water at 0.10-0.40 m above the sea bottom. The sledge was equipped with a WP2 plankton net (0.5 mm mesh size) with a flow meter at its centre to measure the volume of water filtered, allowing the standardization of abundance for 100 m³. For all surveys, three replicates were monthly collected for a sampling duration of 15 mn at a speed of 1.5 knots from February 2021 to January 2022 and seasonally from March 2022 to January 2023. A total of 53 species was recorded, among them eight species (*Periocolodes longimanus*, *Tryphosa nana*, *Megaluropus agilis*, *Nototropis guttatus*, *Apherusa bispinosa*, *Synchelidium maculatum*, *Bathyporeia elegans* and *Phtisica marina*) showed an occurrence ≥ 50 % of the total samples. The amphipod diversity varied from 0 in September 2021 to 28 in June 2022. The most abundant species were *Apherusa bispinosa* (67.7 % of the total abundance), *Periocolodes longimanus* (7.5 %), *Nototropis guttatus* (4.3 %) and *Synchelidium maculatum* (4.1 %). Moreover, the fauna showed very high monthly and pluriannual changes in relation with reproductive pelagic phases with very high abundances during peaks such as *Periocolodes longimanus* and *Synchelidium maculatum* in March 2021 and March 2022, *Apherusa bispinosa* in June 2021, following by low abundances in the successive samples. Most of the *Ampelisca spinipes* collected were pelagic males as in June 2021.

Keywords: suprabenthos; ecosystem; bay of Veys; seasonal changes