

Amphipods and benthic biocoenosis on the Coasts of Alboraya-Albuixech (Spain, Gulf of Valencia, Western Mediterranean)

A. MARTI, I.-M. GINER and A.-M. GARCIA-CARRASCOSA

Invertebrates and Marine Biology, Laboratory, Department of Animal and Cellular Biology and Parasitology, Faculty of Biology, University of Valencia, 46100 Burjassot, Valencia (Spain)

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The studied zone, north of Valencia city, corresponds to a typical sandy coast ecosystem of 5 km length. This area is suffering an important anthropic pressure (residual waters flows, fisheries, and urban, industrial, touristic and agricultural activities) which originates a general regression. Harbours and breakwaters, are the hard substrates that can be found there.

GINER (1989) studied the infralittoral biocoenosis distribution based on the molluscan fauna, and MARTI (1989) using information from amphipod fauna contributes to a better characterization of these biocoenosis in the area.

Different methods have been used to take samples of the different types of biocoenosis such as scoop net, Aberdeen double side anchor dredge, Agassiz trawl and scraped surfaces 25x25 cm, from 21 stations (15 from soft substrates and 6 from hard ones). The location of these stations were chosen on purpose to define the whole conditions of the studied area.

RESULTS.

SUPRALITTORAL ZONE.

* LDL biocoenosis:

It can be found along the shoreline. The sediment is formed by a mixture of pebbles and fine sand, on which masses of several types of organic debris and *Posidonia oceanica* rhizome fibrils are located. This biocoenosis is characterized by the existence of high density populations of *Orchestia platensis* together with sporadic specimens of *Talorchestia deshayesii*.

* AP biocoenosis:

Species mentioned by LEDOYER (1968), BELLAN-SANTINI & LEDOYER (1973) from shallow algae populations and from high polluted areas as *Jassa marmorata*, *Corophium acutum*, *C. insidiosum*, *Caprella aquilibra* and *Elasmopus rapax* have been located on artificial rocky substrates at the study area. Among all of them, the last species characterizes the *Mytilus galloprovincialis* and *Corallina elongata* facies, and it is only found in those facies at the studied area.

INFRALITTORAL ZONE.

* SFHN biocoenosis:

It has a very slow specific richness, with only dispersed individuals from nearby biocoenosis, *Corophium sextonae*, *Harpinia pectinata*, *Siphonocoetes sabatieri* and *Urothoe poseidonis* can be found. It may be due to the sensitivity of this group to highly polluted waters, pointed out by DAVIN (1981), and to the artificial structures settled --harbours, breakwaters, urban effluents-- which also alter the hidrological and sedimentary factors.

* SFBC biocoenosis:

It reaches 9-10 m depth where the upper limit of the *P. oceanica* meadows is settled. The existence of *Periculodes longimanus*, *Pariambus typicus*, *Ampelisca brevicornis*, *Leucothoe incisa*, *Microprotopus maculatus* and *Urothoe poseidonis* helps to the precise characterization of this biocoenosis.

High densities of *Siphonocoetes sabatieri* and *Gammarus crinicornis*, typical species from low salinity environments, are found in some sectors of this biocoenosis under the influence of fresh-waters flows. Fluctuations in the populations of these species can be observed, and there is a substitution from *S. sabatieri* to *G. crinicornis* in winter probably due to the variability of the hidrological and sedimentary factors and to the opportunist nature of them.

* *Posidonia oceanica* meadows:

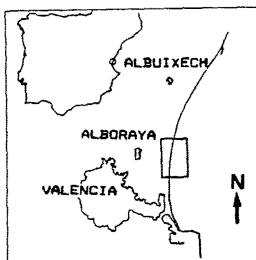
It shows a high regression degree (1 or 2 shoots/m² to -10 m) buried by sandy sediment where dense *Caulerpa prolifera* patches are developed. This biocoenosis is characterized in the sampled area by *Ericthonius punctatus*, *Maera inaequipes*, *Orchomene humilis* and by *Leucothoe richiardi* which are found in the meadow and in the enclaves of biological sciaphilic concreted algae and porifera. All these species have been already mentioned in the rhizome terraces of *P. oceanica* (CHEVREUX, 1910; HARMELIN, 1964; LEDOYER, 1962; LEDOYER, 1968).

* SGCF biocoenosis:

It is found in big pot-holes and channels in the *P. oceanica* meadows. The existence of *Monoculodes carinatus*, *Pontocrates arenarius*, *Ceradocus semiserratus*, *Guernea coalita* y *Socarnes erythroptalmus*, characterizes this biocoenosis perfectly.

* Enclaves of circalittoral biological concreted masses:

They are developed on the dead rhizome terraces of *P. oceanica*. These enclaves are identified by the presence of *Iphimedia serratipes*, *Lysianassa pilicornis* and *Pseudoprotella phasma*, typical species of circalittoral zone and coralligenous bottoms, and also by the exclusive localization of an unidentified species of *Maera*.



Map of the studied zone

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