

REMARKS ON CRUSTACEANS AMPHIPODS OF THE PO RIVER DELTA (9)

Giovanni DIVIACCO

Istituto di Anatomia Comparata - Università di Genova - Italia

SUMMARY - During a two years research in two lagoons of the Po river delta ten species of Crustaceans Amphipods have been recorded; most of them prefer the zones under sea influence. During the first year, characterized by a very high flow of the Po, only three species had been recorded.

RÉSUMÉ - Au bout de deux ans de recherches dans deux lagunes du delta du fleuve Pô on a répertorié dix espèces de Crustacés Amphipodes, dont la plupart préfèrent les zones les mieux vivifiées. Pendant la première année, caractérisée par un débit du Pô supérieur à la normale, on avait récolté seulement trois espèces.

During a two years research on the hard substratum benthos in two lagoons of the Po river delta (Sacca del Canarin and Sacca di Scardovari) by means of cement asbestos panels and drawings of samples on various materials (stones, reeds, *Mercierella* reefs) ten species of Crustaceans Amphipods have been found: *Leptocheirus pilosus* Zaddach, *Corophium acherusicum* Costa, *C. insidiosum* Crawford, *C. orientale* Shellemberg, *Echinogammarus pungens* (Milne Edwards), *Echinogammarus* sp., *Gammarus aequicauda* (Martynov), *G. cf. crinicornis* Stock, *Melita palmata* (Montagu), *Jassa* sp.

The environment is prevalently mesohaline, with oligo- or polyhaline zones, on the grounds of the Po river or of sea influence; depth rarely exceeds 1,5 m and a considerable water stratification is present. For further information see RELINI & Coll. (1978, 1980).

In the first year (January - December 1977) I collected in the four stations examined *L. pilosus* and *Echinogammarus* sp.p.; on the panels I have not observed a preferential distribution of the former species or of the other ones, while in the samples *Echinogammarus* prevailed in the inner parts, less salty, and *Leptocheirus* in the part near to the sea. The area which was directly influenced by the fresh waters was however the more adverse for the Amphipods, here found almost exclusively in summer.

In the second year (January - December 1978), probably for the great

er number of stations and for the increase of salinity ensuing from minor flow of the Po, also the other species have been recorded.

I have found *L. pilosus*, *Echinogammarus* sp.p., *Gammarus* sp.p., *Corophium* sp.p. in all the stations, but the first seems to prefer mesohaline waters, the Gammaridae oligohaline waters (northern part of Sacca del Canarin) and the Corophiidae those polyhaline of the Sacca di Scardovari. The species of Aoridae and Corophiidae, all tubicolous, did not present overlapped distributions, probably for competitive phenomena.

M. palmata was recorded only in the stations near to the sea, and an undeterminable specimen of the genus *Jassa* in the less salty station. This record is unusual, because generally the species of *Jassa* are bound more to coast or harbour environments than lagoon ones, but a salinity increase occurred in the summer could have enabled some specimens to reach the North part of the Sacca del Canarin. It is rather strange, however, that this species is absent in the other stations.

In a research on the Po river delta PARISI (1973) reports, among the Amphipods, *Corophium volutator* (Pallas) and *Gammarus locusta* (Lin.), in reality not present in the Mediterranean sea; the adriatic species must be probably ascribed to *C. orientale*, *G. aequicauda* and *G. crinicornis*; Parisi also thinks that more than one species of Gammaridae are present.

Further studies to specify the distribution and the ecology of these Crustaceans and particularly of Gammaridae are in progress.

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(^o) Research supported by a contract between the Genoa University and ENEL-CRTN.