BIODIVADR: A REFERENCE DATASET ON DIVERSITY OF SOFT BOTTOM MACROBENTHOS

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Abstract
An extensive field study was done in July 2003 to provide a quantitative description of spatial patterns of benthic assemblages in the North Western Adriatic Sea; 288 samples were collected over an area of 240 km^2. Overall, 115.670 specimens belonging to 209 taxa were identified. The most abbundat taxa were Crustacea (43%), Polychaeta (31%) and Mollusca (21%), while other taxa accounted for about 4% of the total abundance. Four new records of polychaete species, 2 for the Adriatic and 2 for the Mediterranean Sea, were reported. A new species of spionidae was described
Keywords : Adriatic Sea, Biodiversity.

Vatova's [1] classic paper on Adriatic soft bottom macro-zoobenthos has so far provided the baseline for studies investigating patterns of distribution of benthic assemblages in the Adriatic Sea. This work, was aimed at providing a comprehensive regional-scale description of the Adriatic benthic fauna. Following the approach developed by Petersen [2], Vatova [1] classified Northern and Central Adriatic benthic assemblages in "zoocoenoses". Several Authors have re-analysed Vatova data, re-interpreting them in terms of "biocoenoses"[3-6] or using multivariate statistical tools [7]. Results of cluster analises reported by Di Dato et al [7] did not support the "zoocoenosis"identified by Vatova, suggetsing that they derive from a subjective interpretation.
In June 2003 an extensive field study was done to provide a quantitative description of spatial patterns of benthic assemblages in the North Western Adriatic Sea. The aim of the study was to estimate variability of assemblages at different spatial scales. A hierarchical nested design, including spatial scales from hundreds of metres to tens of kilometres, was developed. The sampling area was of about 240 km^2, delimited by 44.5617 and 44.1254 latitude North, and by the 10 and 30 meters depth contours. To implement the hierarchical sampling design the study area was devided in strata, locations, areas and sites (Fig1). At each sampling site 4 replicated grab samples were collected with a 0.1 m^2 Van Veen grab. Overall 288 samples were collected and processed, obtaining an everage sapling density of 1.2 per km^2. This large sampling effort allowed the construction of an updated list of macrozoobenthos in the North Western Adriatic.

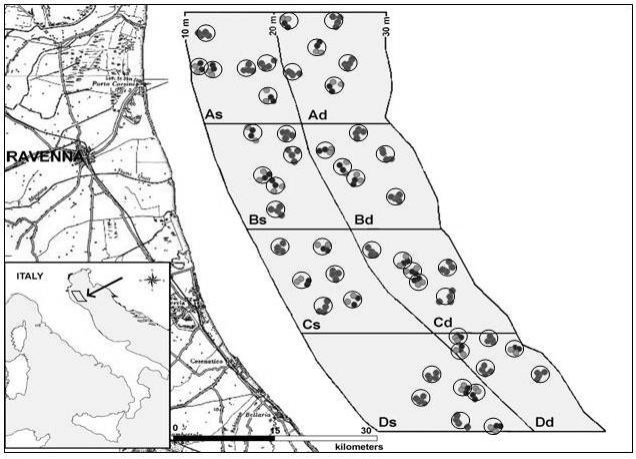

Fig. 1. Sampling area with the desciption of the structure of the sampling design.

Overall 115.670 specimens belonging to 209 taxa have been identified. The most abbundat taxa were Crustacea (43%), Polychaeta (31%) and Mollusca (21%), wile other taxa were relatively rare. The Amphipod *Ampelisca* spp, accounted for 41.8% of the total abbundance. The most abbundant polychaete specie were *Lumbrineris* spp (4.6%), *Levinsenia* (*Levinsenia*) *gracilis* (3.6%), *Sternaspis scutata* (2.9%), *Polydora flava* (2.9%) and *Paraonis fulgens* (2.1%). Two new records of polychaete species for the Adriatic Sea (*Paraonis fulgens* (Levinsen, 1883), *Harmothoë andreapolis* (McIntosh, 1874)); together with 2 new records for the Mediterranean Sea (*Ampharete finmarchica* (Sars, 1866) and *Atherospio disthica* (Mackie & Duff, 1986)) were reported. A new species beloning to the Family Spionidae so far named *Laonice cf. cirrata* was found. Most abbundan molluscs were *Corbula gibba* (2.3%), *Abra nitida* (2.1%) and *Mysella bidentata* (1.7%). Moreover, high densities of the arcid bivalve *Andara demiri*, an invasive species firstly recorded in the Adriatic Sea in the year 2000, were observed.

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