Nematofauna in North Adriatic offshore sediments

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In the Adriatic offshore sediments, the free-living nematofauna assemblages remained scarcely known until now, and their structural compositions were not studied comparatively.

To overcome the gap, in September and October 1991 the nematofauna had been sampled at six offshore stations characterized by silty-sand (stations SJ-005, 007, 107), and by silty clay or clayed-silt sediment, enriched by sandy fractions (station SJ-101, 103, 108) (Fig.1). According to TIETJEN (1977), sediments composed by different ratio of silt and clay components (64-75%), were classed as mud. The sediment was sampled by SCUBA divers by means of plastic hand corers, 3.5 cm inner diameter. Three replicate per station were taken, and processed according to standard methods (VIDAKOVIC, 1987). For taxonomic purposes, 200 specimens per station were studied.

In muddy sediments, 15 free-living species were noted at each station. At stations characterized by silty-sand 30-36 species were identified. The QS at muddy group of station varied from 67 to 73 %, and at silty-sand from 59-70 %, respectively. Between the stations of different sediment types, the similarity calculated was only 31-54 %.

At all stations, a significant dominance of few species were noted. At muddy stations, 7 species (abundance > 5 %) share by 20-33 % in species composition, and 78-87 % in nematofauna density. At silty-sand group of stations, in total 14 abundant species were identified, but their dominance was less expressive, and they were more evenly distributed among the codominant species. A joint mark of nematofauna assemblages at particular sediment type, i.e. mud or sand, was an expressive dominance of only three species at silt-clay bottoms, and a relatively high abundance of eight species at silty sand bottoms. In general, our results are in accordance with conclusions of TIETJEN (1977), and notes of VIDAKOVIC (pers.com.) on nematofauna composition species at similar types of sediment in coastal areas.

At muddy stations, an expressive dominance of non-selective deposit-feeders (1B) was established. This group prevailed at silty-sand stations too, except at station SJ-007, at which a dominance of epigrowth-feeders (2A) was noted. In silty-sand sediment, however, a relatively high share of omnivorous and predatory (2B) species was find out.

Consequently, because of low participation of 2A category at silty-sand stations SJ-005 and 107, the predominance of 2B species over them, and some peculiar features of meiofauna and nematofauna species compositions, it seems that, besides the sediment granulometry, the eutrophication conditions involving in the area in past decade, also could play an decisive role in determining the nematodes assemblages compositions.

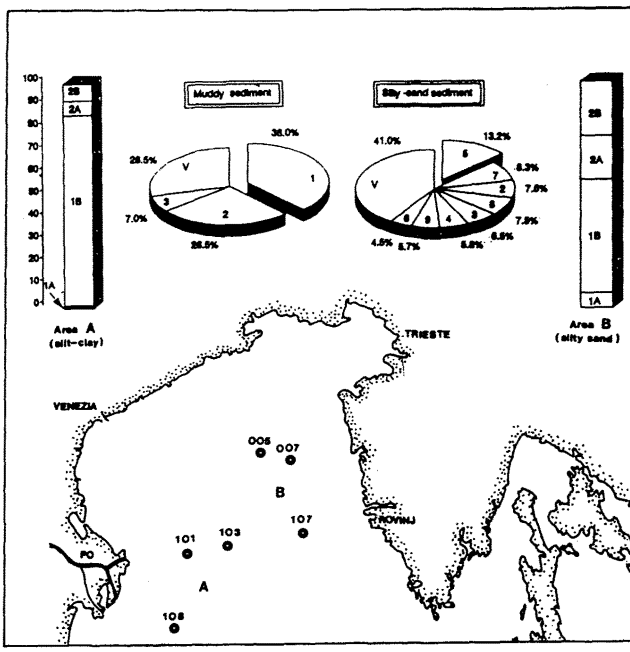

Fig. 1. Nematofauna composition. Species 1- *Dorylaimopsis mediterranea*, 2- *Sabatieria proabyssalis*, 3- *Actarjania* sp., 4-*Rhabdodemania mediterranea*, 5- *Pomponema multipapillatum*, 6- *Halichoanolaimus dolichurus*, 7- *Hopperia* sp., 8- *Axonolaimus* sp. 9.- *Sphaerolaimus dispar*, V- other species (abundance < 5%).

REFERENCES

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