

BATHYMETRIC DISTRIBUTION OF HYDROMEDUSAE (CNIDARIA) AT ONE
STATION IN THE SOUTHERN ADRIATIC

by

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Abstract

Hydromedusae were collected at one station in the Southern Adriatic between July 1967 and June 1968. The plankton samples were obtained at six depths from surface to the depth of 1000 meters. The vertical distribution showed concentration of hydromedusae primarily in the upper 200 meters layer.

Résumé

Sur une station de l'Adriatique méridionale on a effectué des pêches planctoniques du juillet 1967 au juin 1968, dans 6 couches entre la surface et 1000 mètres de la profondeur. La répartition bathymétrique montre une concentration des hydroméduses de 200 mètres de la profondeur jusqu'à la surface.

The first information about hydromedusae in the Southern Adriatic appeared in 1912 (NEPPI, 1912), but there are no data about vertical distribution of hydromedusae until recently (HURE, 1955, 1961).

The station was located 20 miles SSW from Dubrovnik over the depth of 1100 meter. Plankton was collected monthly with IOSN closing net, 100 cm diameter, 250 microns mesh size, in vertical hauls at six levels: 1000-600, 600-400, 400-300, 300-200, 200-100, and 100-0 meter. In December and January there were no samples.

The hydrographic conditions were typical for the Southern Adriatic Sea. Temperature in upper layers showed fluctuations dependant on the atmospheric influences. Below 100 meter temperature has typical deep-sea characteristics of the Mediterranean ($13,6^{\circ}\text{C}$ - $15,0^{\circ}\text{C}$). The salinity was very high and approached values of the Eastern Mediterranean Sea ($38,0\%$ - $38,9\%$).

A total of 18 species and 871 specimens was obtained in the vertical distribution from the deepest layers to the surface. Throughout the year the orders of hydromedusae were provided as follows:

Order / Month	VII	VIII	IX	X	XI	II	III	IV	V	VI
Anthomedusae	3	7	4	6	4	0	0	0	3	7
Leptomedusae	0	0	0	0	0	0	0	5	10	7
Trachymedusae	114	59	104	66	66	53	20	89	56	68
Narcomedusae	17	9	10	16	13	7	9	9	15	15

The hydromedusae fauna is mainly composed of trachymedusae and narcomedusae, which occurred throughout the whole year, while other two orders were present occasionally.

Vertical distribution showed typical concentration of hydromedusae in upper layers with slight tendency to occupy lower layers by narcomedusae. In layer 100-0 meter trachymedusae were represented in 96%, but with increasing of depth the percent of trachymedusae decreases to 33%. The second group in quantity was narcomedusae. It showed the opposite spreading out, i.e. with increasing of depth the percent of narcomedusae also increased. Only one per cent was found in the layer of 100-0 meter while in the layer of 1000-600 meters 61%. Anthomedusae were present in all depths, while leptomedusae showed the distribution only up to 400 meters, but neither anthomedusae nor leptomedusae had importance in the sense of quantity (Fig. 1).

Four species are eurybathic: Rhysomedusa pomponina, Persa incolorata, Sminthea eurygaster and Solmundella bitentaculata; three species were found at intermediate levels (300-400 m): Thamnostoma dibalia, Bythotiara murrayi and Octophialucium funerarium and only Solmissus albescens was found always at deeper layers (400-1000 m). All other species were found at upper levels (0-300 m): Euphysa aurata, Zanclaea costata, Laodicea undulata, Obelia spp. Phialidium hemisphaericum, Eirene viridula, Liriope tetraphylla, Aglaura hemistoma, Rhopalonema velatum and Solmaris leucostyla.

References

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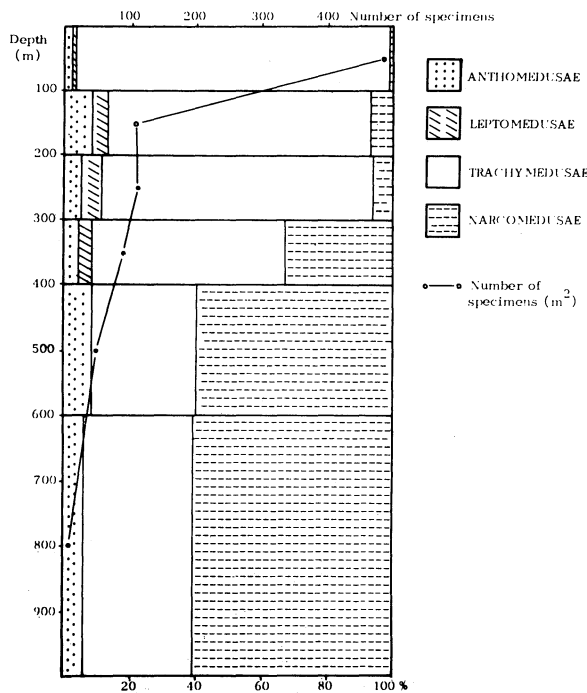


Fig. 1. Bathymetric distribution of orders of Hydromedusae in the Southern Adriatic. Percents and the total number of specimens