

ON THE HYDROGRAPHY IN THE BAY OF NAPLES (1)

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ABSTRACT

From november 1961 to october 1962 hydrographical observations were undertaken at seven different stations in the bay of Naples (fig. 1).

Concerning the distribution of temperature and salinity in this area our primary knowledge is mainly based on Wendicke and Hapgood. The investigations of the former were restricted to the summer months of june to august, but Hapgood carried out monthly investigations throughout a whole year at certain stations.

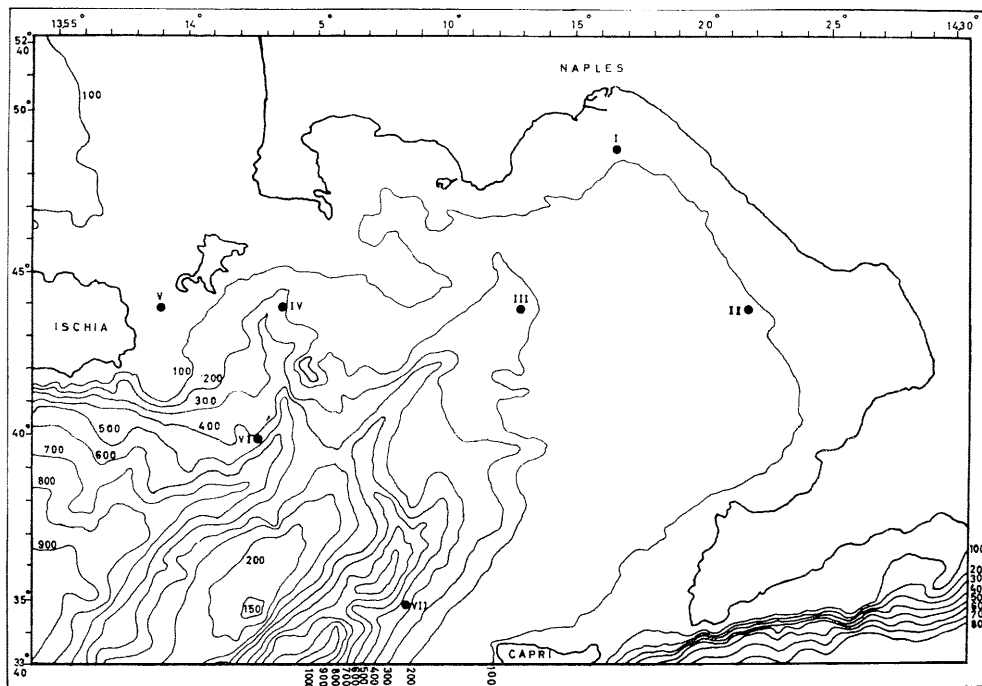


FIG. 1. — *Area of investigations and network of stations.*

The present observations are also repeated every month and a comparison with the data collected by Hapgood is therefore possible.

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The temperature as well as the salinity seem to differ only slightly from station to station. Such a uniformity is understandable since the area is wide open to the sea and only small amounts of fresh water are received from the land. Mean values, therefore, are computed taking all the stations together to study the vertical distribution of temperature and salinity and their alterations from one month to another.

During the summer months there is a rapid decrease of temperature from the surface to about 75 m. Below this level there is a slight increase to about 150 m. The salinity first decreases slightly from the surface to a depth of 20-30 m and then increases further down. The existence of a thin upper water layer with a somewhat higher salinity is the rule for the summer condition. The layering starts in early spring and ends in late autumn.

During the winter months a vertical mixing takes place, apparently reaching to a depth of about 100-200 m. The mixing is caused by wind, surface currents and cooling during the night.

Below the surface layer one finds water which corresponds to the intermediate water, in the Mediterranean (S. VERDRUP *et al*).

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