

RECENT FINDINGS OF A MARINE CLADOCERAN,  
*PENILIA AVIROSTRIS* DANA  
 IN THE SOUTH TYRRHENIAN SEA, AND THEIR  
 ECOLOGICAL VALUE

by Norberto DELLA CROCE

SUMMARY

The A. was entrusted to collect plankton samples during the hydrographical expeditions carried out in the south Tyrrhenian Sea for the international Geophysic Year <sup>(1)</sup>.

Series of samples on traverses described below and at the same stations as the hydrographical ones were collected.

n° 6 : from Capo Palinuro to Capo Sferracavallo

n° 7 : from Isola dei Cavoli to Isola di Levanzo

n° 8 : from Isola di Levanzo to Punta Licosa

These preliminary results concern *Penilia avirostris* DANA, a marine cladoceran found in the samples collected at the most southern stations of the traverse number seven during the first expedition (1-10 July 1957) and off the Campanian shores on the traverse number six during the second one (17-25 September 1957).

Station	Date	Hour	Position		<i>Penilia avirostris</i> per cub. m.
30	6-VII-1957	1015 P.M.	38°11'N	11°51'E	7
31	7-VII-1957	0225 A.M.	38°06'N	12°03'E	2
32	7-VII-1957	0415 A.M.	38°05'N	12°06'E	44
33	7-VII-1957	0745 A.M.	38°03'N	12°10'E	100
34	7-VII-1957	0920 A.M.	38°02'N	12°12'E	6
35	7-VII-1957	1045 A.M.	38°01'N	12°16'E	124
36	7-VII-1957	0235 P.M.	38°11'N	12°31'E	36
5	25-IX-1957	0800 A.M.	40°04'N	14°45'E	3
3	25-IX-1957	1130 A.M.	40°01'N	14°59'E	4

The two situations are separately discussed. The area of the first findings is compared to the surrounding ones by studying their planktonic populations from the qualitative and quantitative viewpoints (their day-time migrations were also considered), and their peculiarities as

<sup>(1)</sup> The biological program sponsored by the Oceanographic Subcommittee of the « Consiglio Nazionale delle Ricerche » for the I.G.Y. had been made operative by the « Istituto Nazionale di Studi Talassografici ».

shown by the geographical positions, the width of the continental shelf and the temperature-salinity diagrams at different depths (surface, -10 m, -20 m).

The A. is of opinion that such findings are correlated with the penetration into the tyrrhenian basin of atlantic waters already mixed with the mediterranean ones, according to the surface circulation of the western Mediterranean Sea.

The other findings are briefly discussed in relation to the currents of the tyrrhenian basin. It has been noted that in localities (Naples, Algiers) where *P. avirostris* has already established itself, its population density decreases at the end of summer. At that time the litoral current reaches through the tyrrhenian waters the Ligurian Sea.

The A. points out that findings of this cladoceran more North than Naples in the Tyrrhenian Sea and in the waters of the italian and french Riviera have been reported to occur during autumn. The A. believes that *P. avirostris* for its ecological and biological characteristics could be considered a plankton indicator of valuable meaning in biological oceanography.

*Institute of Zoology, University of Genoa.*