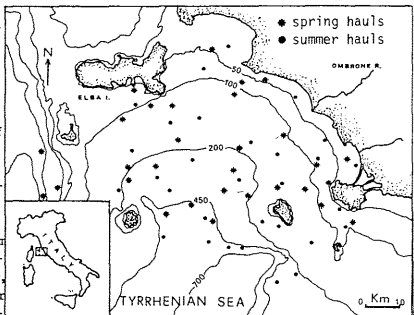


OBSERVATIONS ABOUT CEPHALOPOD DISTRIBUTION IN THE NORTHERN TYRRHENIAN SEA

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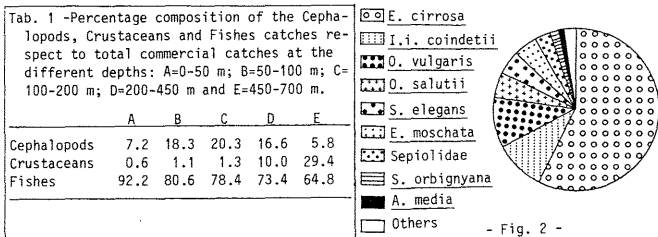
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The species collected and studied all come from a trawl-survey made in 1985 during two seasonal samplings carried out within the research programme: "Evaluation of the demersal resources" financed by the Ministero Marina Mercantile. Samples were collected in the area of the Northern Tyrrhenian Sea shown in Fig.1. We followed the procedure of a stratified random sampling. Each of the 60 hauls consisted of a one hour of effective trawl carried out during day-light hours. In total, 261 Kg. of Cephalopods were hauled, i.e. 17.4% of the total commercial catches, distributed as shown in Tab.1. These data confirm the values found in previous investigations in the same area (1), whilst they are slightly inferior to those reported by other authors for the Eastern Ligurian Sea (2,3).

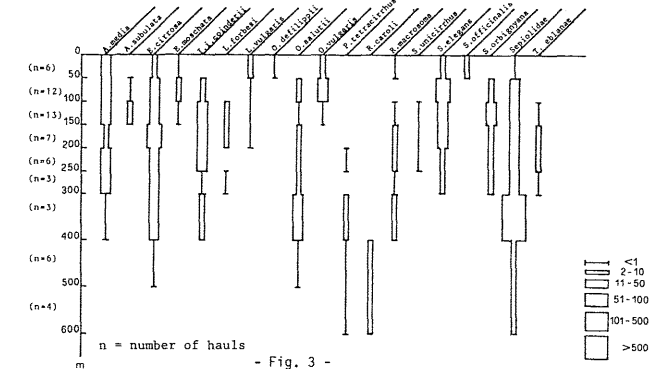


- Fig. 1 -

The contribution of the most abundant commercial species to the total distribution is given in Fig.2. It is evident that *Eledone cirrosa* represents the most significant catch (57%) in the whole area. A more accurate qualitative analysis is shown in Fig.3. The depth distribution of the collected Cephalopods was effected employing the following intervals: 50m from 0 to 300m, 100m from 300 to 600m. For each interval we have calculated the average number of individuals per hour of trawling (see the key in Fig.3). The maximum density, as far as the number of specimens and the number of species are concerned, seems localized between 100 to 300m. *Eledone cirrosa* is widespread throughout the area, occurring with reasonable frequency from 50 to 400m. Fig.4 shows the percentage distribution of the average number (a) and the average weight (b) per hour, at every

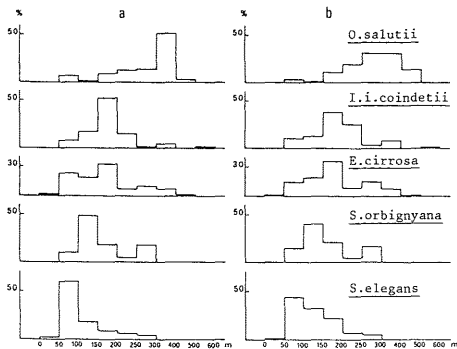


- Fig. 2 -



- Fig. 3 -

depth interval, of five species. In this preliminary analysis we have examined all the data, without distinguishing between spring and summer, so that the contribution made by the young specimens is not shown. In part, however, it is their presence which causes the difference in the magnitude of the highest readings represented in the two graphs. We are collecting new data, in order to carry out a more detailed analysis, especially to clarify the seasonal behaviour of the gathered species.



- Fig. 4 -

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ABRALIA VERANYI WITHIN THE NORTHERN PART OF THE PELAGIAN SEA

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The genus *Abralia*, together with *Enoploteutis*, *Abraliopsis* and *Watasenia*, belongs to the subfamily Enoploteuthinae (Roper et al., 1969) which includes mesopelagic species inhabiting primarily tropical and subtropical waters. Within the genus, only *A. veranyi* is known to live in the Mediterranean Sea (Naef, 1923; Torchio, 1968; Lumare, 1970). In the Northern part of the Pelagian Sea\*, nevertheless, *A. veranyi* has never been noticed, even if Arena and Li Greci (1973) found it in the area to the North-West of the Egadi; Bonnet observed it in the Libian-Tunisian waters (Najai, S. pers. com.) and Mangold refers to it as quite common along the Algerian coasts and in the Straits of Messina (Mangold, K., pers. com.).

Two specimens of *A. veranyi* (A; B, table 1) were identified during examination of the cephalopods taken during the first trawl-survey carried on by our Institute within the Northern part of the Pelagian Sea (fig. 1, darkened area), (Research Program "T.R.A.W.L."). These specimens were caught in the area situated east of the Island of Pantelleria (stations A and B fig. 1) at a depth of about 460 and 530 m, respectively. Biometric parameters were collected (on preserved material)\*\* and are reported in table 1. Only one specimen has been dissected: the other has been kept entire and it is available in our collection (labelled: I.T.P.P.-ABRVER MV02). The *A. veranyi* dissected was a male at the full-maturity stage.

Enoploteuthid squids are deep-water animals not easily fishable, hence, at present, not commercially exploited, except for *Watasenia scintillans*, regularly fished in Japan (Burgess, 1982). Trawls used by Sicilian fishermen have a small vertical opening (GFCM, 1982) which makes them not very efficient to catch the mesopelagic species. Trawls used during our Trawl-surveys are of this type. Moreover all the small-size squids (like *Allotheutis* spp., young of *Loligo* spp. and *Illex*, ecc.), generally externally damaged by trawling, are included in the same commercial category, "Mollame bianca".

Due to the good conditions of the two specimens of *A. veranyi* found, one may suppose that they were caught during the end of the haul, maybe when the trawl was hauled. We can therefore assume that the scarcity of *A. veranyi* within the Northern part of the Pelagian Sea could be due to its "unavailability" to the trawls used, rather than to an actual numeric scarcity.

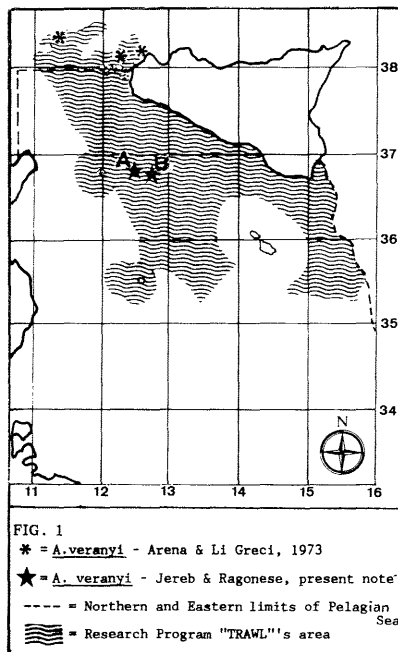


FIG. 1  
 \* = *A. veranyi* - Arena & Li Greci, 1973  
 ★ = *A. veranyi* - Jeréb & Ragonesse, present note  
 --- = Northern and Eastern limits of Pelagian Sea  
 [shaded area] = Research Program "TRAWL"'s area

BIOMETRICS PARAMETERS	SPECIMENS	
	A	B
Mantle Length (mm)	35	30
Total Length (mm)	118	/
Fin Length (mm)	35	20
Fin Width (mm)	26	21
Hectocotylus	-	+
Total Weight (gr.)	4,2	2,5
Sex	F	M

TABLE 1  
 All the parameters were obtained following Roper & Voss, 1983.

Our best thanks to Mr. Pietro Rizzo (I.T.P.P., Technician) for having realized fig.1.

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\* We define as "Pelagian Sea" the wide area included within the Southern Sicilian coast, the North-Western Tunisian coastline, the Skerki Bank, the Sicilian Maltese shelf and the Libian coast (AA.VV., 1979: "Géologie Méditerranéenne" ANN. UNIV. PROVENCE, TOMO VI n°1)

\*\* Material preserved in 75% alcohol, after fixation in 8% buffered formalin.