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The status of flying squid populations (Cephalopoda, Ommastrephinae) in the Mediterranean sea is still unclear and needs systematic revision (MANGOLD & BOLETZKY, 1988).

To date, the orangeback (*Ommastrephes pteropus* Steenstrup, 1855) and neon-webbed squid (*O. bartrami*) can be quoted in Mediterranean check list us (CLARKE, 1966; ROPER *et al.*, 1984; MANGOLD & BOLETZKY, 1988) following the general agreement that the other previously recognized species (*O. caroli*) represented just the adult form of the latter species (ZUEV *et al.*, 1975; BELLO, 1986; NESIS, 1987).

*O. bartrami* is an oceanic, active swimmer, fast growing (Tmax=1-3 years), large sized (ML max =700 mm) squid with a circumglobal antitropical distribution (ROELEVELD, 1982; DUNNING & BRANDT, 1985).

In the adult, the presence of the enlarged ventral protective membrane in arm III (which might be characteristic of females; ROPER, pers. comm.) allows an immediate identification.

The first documented record in the Mediterranean Sea seems to be the floating dead specimen, reported as *Stenoteuthis bartrami*, observed at Banyuls sur Mer, France (LOZANO REY, 1905 in MORALES, 1958). In Italian waters, even though the occurrence of neon webbed flying squid has been reported for a long time (ISSEL, 1922 in CLARKE, 1966; BELLO, 1986 and others), its presence has been considered implicitly, sporadic and rare and often as a consequence of stray specimens.

Interviews with sicilian fishermen (Central Mediterranean sea) who report about repeated occurrence of "huge" squid trawled or entangled, has led to the conviction that such a species could be more common than previously believed and the finding of a large landed specimen (RAGONESE & JEREB, 1990) has supported this assumption.

In this note, morphometric data and indexes (as a percentage of ML) relative to three new specimens (females) caught by "spadara" (ML= 597 mm), jigging (ML=525 mm) and coastal trammel net (ML=137 mm) respectively, in the Southern Tyrrhenian sea, are reported (Tab.).

The large females had spermatophoric residuals in the buccal pocket and showed scars on the antero-dorsal portion of the mantle which might be a consequence of mating (cf. MANGOLD, 1989).

The main difficulties in getting specimens of these large oceanic squid are due to the fact that no large scale jigging is operating in Italy (RAGONESE & BIANCHINI, 1990), no specific trammel net fishing is carried out in Italy up to date, and because swordfish and scomberoid drift nets (the so called "spadara") are characterized by relatively large mesh size. Moreover the misidentification of the young specimens of *O. bartrami* with the other, more common, *Todarodes sagittatus*, is very frequent.

In this context the records presented above together with other very recent reports (BIAGI, 1990) especially of young specimens (RELINI, 1990), support the opinion that a well established population does exist in the Tyrrhenian sea and, probably, in the whole Mediterranean Sea.

CODE	TL	TW(gr)	ML	MWI	PLI	FWI	HLI	HWI	EDI	TtLI	ALI			
											I	II	III	IV
A	1652	9412	613	39	44	77	21	22	9	146	50	64	60	61
B1	1563	7540	597	32	42	74	20	26	9	137	50	62	68	72
B2	1498	5260	525	37	43	71	27	22	8	165	59	71	74	70
C	387	185	137	/	45	32	24	20	6	137	40	46	52	61

Tab.- Morphometric data for the four specimens of *O. bartrami* (length in mm; indexes as percentage of ML according to ROPER & VOSS, 1983). "Code" indicates the source of specimens: squid caught by "spadara" (A); in RAGONESE & JEREB 1990), by jigging (B1-B2) and by a trammel net (C). Measurements on C made after fixation.

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Tetraodontidae, named puffers or swell-fishes after their ability to inflate the body, are circumtropical, littoral, medium sized fish present throughout the oceans (SHIPP, 1974).

Although some puffers are highly valued as a food delicacy, especially in Western Pacific (VIETMEYER, 1984), they can be deadly poisonous, due to their capacity to produce tetrodotoxin (HOAR & RANDALL, 1969).

Among the four species reported for the Mediterranean Sea *Ephippium guttiferum*, *Lagocephalus lagocephalus*, *L.spadicus* and *Sphoeroides cutaneus* (FREDJ & MAURIN, 1987), the latter represents the most recent acquisition.

Recorded for the first time in the western basin (OLIVER, 1981), segnalations relative to the presence of this species followed one another, both in the western (e.g. CRESPO *et al.*, 1986) and in the central basin (e.g. VACCHI & CAU, 1986) of the Mediterranean; up to date *S. cutaneus* is not reported, for the eastern basin (FREDJ & MAURIN, 1987).

As far as concerning the Sicilian Channel, Mazara trawl fishermen were interviewed in order to get informations about the occurrence and abundance of this puffer and to gather some specimens for morphological studies. Furthermore, data collected during experimental trawl surveys from spring 1985 (see LEVI, 1990 for details on the program) were consulted.

These informations allow us to give a picture of the situation:

- a) mazarese fishermen know *S. cutaneus* and caught it frequently (50-250 m depth range) in the southern side of the Sicilian Channel;
- b) more than 100 specimens were received by fishermen (just a small fraction of a larger but unknown total catch);
- c) first catches occurred about 60 n.m. north off Tripoli (n° 1 in Fig.);

d) further records are in agreement with a northward dispersal, also supported by experimental surveys (puffers began to occur in the catches only from spring '90; see Fig.).

Since this species is discarded by fishermen and the wide size-range observed (10-40 cm; TL), it is likely that *S. cutaneus* in the Sicilian Channel is more abundant and earlier established than supposed on the base of literature available (VACCHI & CAU, 1986). Present data support the introduction from Atlantic Ocean of the species which probably reached the Sicilian Channel following the southern north-east path current (Fig.).

Furthermore, the above picture might be the consequence of an "explosive" spreading of the species in the Central Mediterranean Sea, an hypothesis supported by recent records in Ligurian (FIORENTINO & ZANIBONI, 1990), Ionian (A. TURSI, pers. com.) and Adriatic Sea (C. PICCINETTI, pers. com.).

If the above picture and the "explosive" nature of spreading will be confirmed by further data, scientific and public communities must concern about the unforeseeable but worrying impact on the other demersal species and on the fisheries themselves since it is likely that more of the discarded puffers could survive.



Fig.- Records of *S. cutaneus* in the Mediterranean Sea (\*; 1 to 9 for the Sicilian Channel). Sources: 1 and 3 - interviews with mazarese fishermen; 2 - VACCHI & CAU (1986); 5 and 9 - spring '90 (IX trawl); 4, 6 and 8 - fall '90 (XI trawl); 7 - summer '91 (XIV trawl). Arrows indicate the main currents patterns.

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