

Occurrence of the unihorn octopus *Scaergus unicolor* in the Sicilian Channel.
III : Description of features

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The unihorn octopus *Scaergus unicolor* Orbigny, 1840, occurs more frequently in the Sicilian Channel (Central Mediterranean Sea: JEREB & RAGONESE, 1990) than in other areas of the Mediterranean (MANGOLD & BOLETZKY, 1987) where the species was firstly described and is considered endemic (MANGOLD & BOLETZKY, 1988).

At Mazara, this species is well commercialized even though its economic value remains inferior to that of other octopuses (JEREB & RAGONESE, 1990; RAGONESE & JEREB, 1990). Local fisherman call it "purpu ricciu" ("curly octopus") due to its main characteristic feature, i.e. the presence of round cutaneous papillae (or warts) all over the mantle.

Systematically, however, the species differs from all other octopuses for the typical hectocotylus (with a large deep-spoon shaped ligula) and a very long diverticulum of the penis.

In this note the descriptive features of adult specimens of both sexes for the Sicilian Channel population are reported for the first time. The gonadic apparatus in different developmental stages is also described in both males and females.

Observation come from experimental trawl surveys carried on by our Institute (see LEVI, 1990, research program TRAWL, for further details) combined with ancillary information collected among local fishermen.

In both male and female specimens the characteristic papillae are very prominent on the dorsal mantle surface, where they seems to form linear ridges. They are almost undistinguishable on the ventral surface, which appears smooth and has a rather uniform whitish color even in the live animals. The dorsal mantle coloration is very variable, going from reddish brown with golden-yellow reflection and greenish blue iridescenze to green blue dominant tones with reddish brown spots.

The mantle is oblong and compact, with a distinguishing peripheral ridge that encircles the lateral edge, dividing the dorsal from the ventral surface and forming the characteristic lateral pallial fold (VOSS, 1951; SANCHEZ and ALVAREZ, 1988).

The head is narrower than the body, with slightly prominent eyes and a bifid cirrus over each eye. The arms are subequal except the III left one in adult male, which is shorter and bears the extocotylus (but see JEREB *et al.*, 1989, about some anomalies observed).

These morphological characteristic and the coloration observed, agree with other descriptions of the genus which is considered to be monospecific (ROBSON, 1929; VOSS, 1951; MANGOLD & BOLETZKY, 1987; SANCHEZ & ALVAREZ, 1988).

Some differences are detectable in the habitus of the two sexes : females exhibit a more delicate structure than males, with a narrower and a more elongate mantle, thinner arms and much smaller proximal suckers.

The enlarged proximal suckers in adult males which characterize also three other Mediterranean octopuses, namely *Octopus vulgaris*, *O. macropus* and *O. salutti*, seem, to have a significant role in reproductive behaviour (MANGOLD & PORTMANN, 1964), being displayed in front of the female as a clear sign that the other sex is present.

The gonadic apparatus generally conforms to the octopus-like scheme. In immature males the testis is more or less bulky, with a scarcely visible spermatophoric gland and Needham's sac; the penis and its diverticulum are very thin and translucent. The maturing testis is bulkier with the spermatophoric gland already evident as well as Needham's sac. However, only few, scarcely-formed spermatophores are present; the penis and its diverticulum are thicker and opaque. At the fully mature stage the testis is very bulky, the spermatophoric gland is fully developed and Needham's sac contains well developed spermatophores (up to 12-14 with a length range of 30-52 mm) which can also be found in the diverticulum and in the penis.

Immature females have a hemispheric milk-white ovary; the proximal part of the oviducts is thin, filiform and almost transparent, and the oviducal glands are very small; the distal oviduc parts are slightly thicker. The maturing ovary occupies a large portion of the pallial cavity (overlapping the oviducal glands when the mantle cavity is open), and it is light straw-coloured, with the eggs (2.25 mm long) visible through the transparent ovarian membrane.

No morphological variation was observed between *Scaergus unicolor* specimens coming from the different "subareas" investigated. This is in good agreement with the existence of a "unit" population of the unihorn octopus in the Sicilian Channel.

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