

NOTE

Contribution to the study of the morphology of the teeth of the nursehound *Scyliorhinus stellaris* (Chondrichthyes: Scyliorhinidae)*

A. SOLDI, J. DULČIĆ and P. CETINIĆ

Institute of Oceanography and Fisheries, Šetalište Ivana Meštrovića 63, P.O.Box 500, 21000 Split, Croatia.
E-mail: soldo@izor.hr

SUMMARY: The first description of the dental formula and the number of teeth of *Scyliorhinus stellaris* are presented in this paper based on careful examination of teeth from 54 specimens (37 males and 17 females) collected in the eastern central Adriatic.

Key words: *Scyliorhinus stellaris*, teeth, dental formula.

Tortonese (1956) presented a poor description of teeth of the nursehound, *Scyliorhinus stellaris* (Linnaeus, 1758), and according to him they are the same as the teeth of *Scyliorhinus canicula* (Linnaeus, 1758). Bini (1967) gave similar description, which was also inaccurate; he misinterpreted that they were like the teeth of the other two species of the family Scyliorhinidae found in the Adriatic: *Scyliorhinus canicula* and *Galeus melastomus*, Rafinesque, 1810. According to Bini's description, all three species have numerous teeth with one long primary cusp and with one or two smaller ones at its each side. Gubanov *et al.* (1986) and Fischer *et al.* (1987) gave a description of teeth similar to those of previous authors, without mentioning dental formula. The aim of this paper is to present new data about dental formula

and the teeth of *S. stellaris*, allowing easier species identification within the family.

The nursehound is a benthic species distributed along the Atlantic coasts from Morocco northward to the Shetlands (rare) and southern Scandinavia, and in the Mediterranean (Quéro, 1984). It is a common inshore and offshore shark found at depths from 1 or 2 m to at least 125 m, but is more common in depths of 20 to 63 m. It often occurs on rough or even rocky bottoms or that with algal cover. In the Mediterranean, it is apparently fond of corraline algal covered bottom (Compagno, 1984). It has a varied diet of large invertebrates and small fishes. The species maximum size is 190 cm (150 cm in Mediterranean), the average size is between 40 and 50 cm (Fischer *et al.*, 1987).

A careful examination was made of the teeth (after Herman *et al.*, 1990) of 54 specimens (37 males and 17 females) collected during trawl fishery

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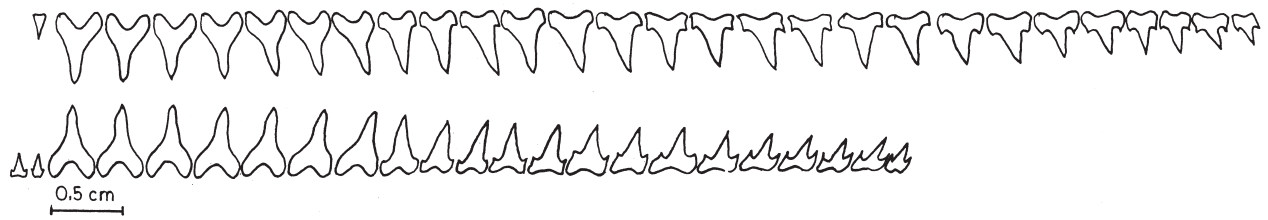


FIG. 1. – Upper and lower left jaw of *Scyliorhinus stellaris*.

or from fish markets in the eastern central Adriatic. From these animals the dental formula for the species is established as:

$$\frac{22 - 27 - 0 - 2 - 22 - 27}{18 - 21 - 2 - 4 - 18 - 21}$$

which means that the *S. stellaris* has 22 to 27 teeth on the left side of the upper jaw, 0 to two teeth in the centre of jaw, 22 to 27 teeth on the right side of the upper jaw, while in lower jaw there are 18 to 21 teeth on the left side, 2 to 4 teeth in the centre, and 18 to 21 teeth on the right side of the lower jaw. This is the first description of the dental formula and number of teeth for this species.

S. stellaris demonstrates monognathic heterodonty (terms used by Herman *et al.*, 1990) which means it has similar tooth morphology in upper and lower jaws, but different morphology within a jaw (Fig. 1). The teeth in both jaws are arranged in 4 to 6 rows. Anterior teeth in upper jaw have one narrow cusp, and their height is two times greater than wide. Tooth edges are smooth. Each tooth has the “Y” shape (Fig. 2). Posterior teeth have two small secondary basal cusplets, at first poorly developed, but toward the end of jaw are becoming greater and more expressed in relation to primary cusp (Fig. 1). The teeth in upper jaw are at first symmetric, but toward the end of jaw they become more oblique and smaller. Height in relation to width is also becoming smaller (Fig. 1). Symphyseal or central teeth are significantly smaller, their edges are smooth and without secondary basal cusplets. The teeth in lower jaw are similar to those in upper, with the exception of the symphyseal teeth which are quite similar in size to symphyseal teeth of the upper jaw, with the difference that they have two small secondary basal cusplets. Those cusplets are more expressed on teeth that are closer to the connection point of the left and right lower jaws.

A weak sexual heterodonty, within family Scyliorhinidae, is sometimes present by a slightly higher principal cusp and more cusplets for females (Herman *et al.*, 1990), but for *S. stellaris* this feature

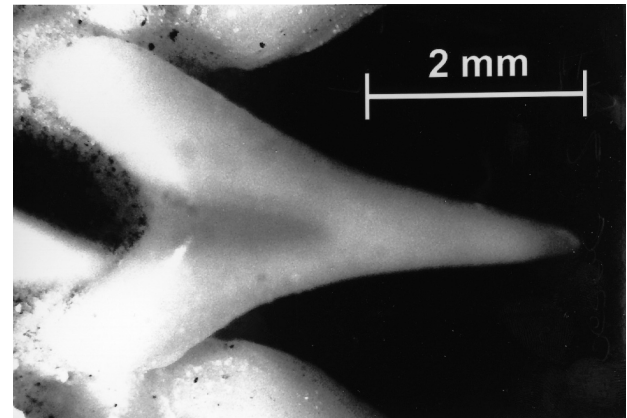


FIG. 2. – Anterior tooth in upper right jaw of *Scyliorhinus stellaris*.

was not observed. Within the family Scyliorhinidae, the genus *Scyliorhinus*, *Poroderma*, and *Cephaloscyllium* form a group characterized by short massive principal cusp. The species within genus *Scyliorhinus* can be distinguished by poorly developed cusplets (Herman *et al.*, 1990) as observed comparing the teeth of *S. stellaris* with the teeth of *S. canicula* (Soldo, 1996).

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