

First record of the Armoured searobin *Peristedion cataphractum* (Linnaeus, 1758) (Scorpaenoidei: Peristediidae) from the northwestern coast of Algeria

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African Armoured searobin, Peristedion cataphractum, (Peristediidae), is recorded for the first time from the Algerian Northwest coast of the Mediterranean Sea, Oran (35°50'N, 0°31'W) at 30-40 depth. Only two specimens were captured. Fish individuals were identified and morphometric measurements were recorded.

Key words: Armed gurnard; Fishing; Mediterranean Sea; Malarmat; Trawls fishing

INTRODUCTION

Peristedion cataphractum, the African armoured searobin, is a medium-sized, gregarious, demersal fish distributed in the Northeast, Eastern central and Southeast Atlantic coasts, in the Mediterranean and Black Seas (BOTTARI *et al.*, 2010; FROESE & PAULY, 2019). The armored searobins (Peristediidae) occur preferably on muddy bottoms of the shelf and upper slope, 30-700m, occasionally deeper (848m) (BAUCHOT & PRAS, 1980; MYTILINEOU *et al.*, 2004). Their body is encased in four rows of spinous scutes on each side of the body and the wide snout is extended by a pair of flattened bony extensions (TEAGUE, 1961). They are often taken in trawl catches from deep waters and are very rarely used as food.

The genus *Peristedion* comprises twenty-three species distributed throughout the world in tropical and temperate seas (JAWAD & AL-BADRI, 2004). Linnaeus (1758) originally described *Peristedion cataphractum* as *Trigla cataphracta*.

LACÉPÈDE (1802) described the same species as *Peristedion malarmat* and *Peristedion chabrontera*, both of which are considered to be synonyms (BLANC & HUREAU, 1973). However, *Peristedion chabrontera* is not an original description but a new combination of *Trigla chabrontera* (OSBECK, 1770), a binomial name that also appeared in (WALBAUM, 1792) and (BONNATERRE, 1788). Close to triglids (to which the species was included for a long time), the armoured searobin is now assigned to the family Peristediidae, given the heavy scales covering almost all the body, the long “rostra” (two expansions of the preorbital bones forming a sort of shovel), only two free rays in the pectoral fins, tufts of mandibular tactile barbels, and the lack of tongue (BOTTARI *et al.*, 2010). Presently, the family Peristediidae belongs to the suborder Scorpaenoidei according to VAN DER LAAN (2020).

The presence of *Peristedion cataphractum* is reported in the northwestern coast of Algeria for the first time. The aim of the present study

was to report the record and to contribute with some morphometric parameters of this poorly investigated species.

MATERIAL AND METHODS

During fishing with a trawler on 26 December 2019 by 1.5-2 km north of Kristel village, Oran, Northwest of Algeria (35°50'N, 0°31'W), two specimens of *Peristedion cataphractum* (212.4 mm and 181.6 mm TL) were captured at a depth of 30-40 m (Fig. 1). The specimen was photographed with a Coolpix Nikon P610 and then fixed in 5% Formalin Buffer and cataloged in the Aquatic Animal Collection of the Department of Ecology and Environment (KHELISEAROB). Measurements were realized using Digimizer Image Analysis Software (version 5.4.3, MedCalc, Ostend, Belgium) and followed Teague (1961). Body proportions are in percent of standard length (SL) and head length (HL).



Fig. 1. Dorsal, ventral and lateral views of *Peristedion cataphractum* captured from the Northwest coast of Algeria, Oran, Dec 2019 (KHELISEAROB, 197.1 mm SL)

RESULTS AND DISCUSSION

Tables 1 and 2 show results of morphometric measurements of the two specimens of *P. cataphractum*. The two specimens were of different sizes where one of them was much greater than the other (60.9 g and 46.4 g, respectively). The variations of the different studied characters according to the length of the body and the

Table 1. Proportional measurements in percent of standard length for the two specimens of *P. cataphractum*

Body measurements	Specimen 1	Specimen 2
Standard length (mm)	166.5	197.1
Head length	42.0	42.3
Body depth at first dorsal spine	15.4	17.8
Body depth at anal-fin origin	13.5	14.9
Body width at pectoral-fin origin	16.3	18.1
Maximum head width	19.8	21.2
Length of pectoral-fin ray	17.9	20.5
Length of pelvic fin	23.4	24.5
Length of caudal fin	15.1	15.3

length of the head depend on the type of habitat (JONSSON & JONSSON, 2001). However, the shape of the jaw is not changed depending on the type of habitat (MUSCHICK *et al.*, 2011). This observation is due to the fact that in this species, there may be a sexual dimorphism regarding the size and shape of the caudal fin (KELLS & CARPENTER, 2011). The growth rate is high (70-60 mm

Table 2. Proportional measurements in percent of head length for the two specimens of *P. cataphractum*

Body measurements	Specimen 1	Specimen 2
Barbel length	18.5	23.0
Snout length	36.3	43.9
Snout width	31.7	34.5
Orbital length	18.2	20.0
Orbital depth	12.4	13.5
Interorbital width	16.3	18.9
Rostral exsertion length	24.6	30.9
Width between rostral exsertions	18.2	19.1
Greatest width of rostral exsertion base	6.40	9.10
Width of rostral exsertion at middle	5.90	8.00
Width between tips of rostral exsertions	19.3	19.7
Distance between parietal spines	26.0	27.2
Nape length	21.6	25.0

per year) till 1.5-2 years of age, decreasing once sexual maturity is started and sexual maturity achieved between 190-210 mm of length, around 2-3 years of age (BOTTARI *et al.*, 2010). The growth pattern of the Mediterranean Sea robins might explain some of the most recurrent problem in growth estimation among which the discrepancy between the asymptotic and maximum ever recorded (or estimated) length (BOTTARI *et al.*, 2010). The overall color is highly variable, from pinkish or reddish.

According to Figure 1, *P. cataphractum* is characterized by an elongated body, with an octagonal and armored section, is covered with thorny scales. The body is enclosed by four rows of spinous scutes on each side. The head is large, bony, with many ridges and spines, its profile is concave. There are a number of fine barbels on the lower jaw. The two lowermost pectoral fin rays are separated. Dorsally dark red and ventrally clear red. The snout is broad and flattened dorsoventrally, flanked anteriorly by a pair of short and broad or long and slender rostral exertions. The snout with the rostral exertions of the first suborbital bones.

The incompletely closing jaws with teeth absent on the mandible. The tongue is usually absent, but when present rudimentary with tip bifurcated (ROBINS *et al.*, 1986). Dorsal fin with separate spinous and soft portions, consisting of 7 to 9 spines and 16 to 23 segmented soft rays; anal fin with 16 to 23 soft rays; pectoral fin short with joined rays and two free rays ventrally. It grows to a maximum length of 40 cm (QUIGLEY, 2005). In addition, no information is otherwise available on the length-weight relationships of *P. cataphractum* in the Mediterranean Sea.

The family Peristediidae, comprising about 36 species of armored searobins in five genera, inhabits the bottoms of the tropical and temperate waters of the world oceans in depths of about 50 to 800 m (KAWAI 2008). In the case of the African armored searobin, as well as for the other Mediterranean demersal resources, the absence of significant geographic barriers, the homeothermia of the water, the lack of information prior to the exploitation phase frequently makes little conclusive the experimen-

tal approach (BOTTARI *et al.*, 2011). The African armored searobin was historically considered as a common widespread finding and most recurrent catch on the grounds located off the North African coasts (BOURGOIS & FARINA, 1961; ARENA, 1985). On the other hand, *P. cataphractum* showed a narrow bathymetric distribution within the depth range surveyed and appeared only between 200 and 400 m along the Algerian basin (MORANTA *et al.*, 1998). Indeed, this species generally displayed a wide bathymetric distribution range throughout the continental shelf and the upper slope (MASSUTI *et al.*, 1996).

According to COLLOCA *et al.* (2019), this species has a decreasing trend in the western Mediterranean. It was also recorded by MAURIN (1962) from the Algerian coasts. However, the depth limits of local artisanal fishing and the fact that this is not a commercial species in the northern coast of Algeria, it is not surprising that it had never been reported before. *P. cataphractum* occurs in the Mediterranean Sea, but it is not endemic to it (FISCHER *et al.*, 1987; QUIGNARD & TOMASINI, 2000; BOTTARI *et al.*, 2010). It is found in all parts of the basin (POSS *et al.*, 2015) records include northeast Mediterranean Sea (MACHIAS *et al.*, 2001), Italian and Greek coasts (D'ONGHIA *et al.*, 2003; BOTTARI *et al.*, 2010), North Aegean Sea (FILIZ & BILGE, 2004), Balearic Islands (MORANTA *et al.*, 1998), Corsica, Sicily Strait, coasts of Morocco (MAURIN, 1962), Greek seas (PAPACONSTANTINO, 1988), east Mediterranean Sea (GOLANI *et al.*, 2006) and Marmara Sea (BILECENOGLU *et al.*, 2002). However, nothing exists on record about the morphometric of this species that can be used in the discussion.

Although the African armored searobin possessed a swim bladder and is able to swim in the water column (BINI, 1969), it likely prefers to stay and walk on the bottom with its free pectoral fin rays. It uses the rostrum to root in the sediment since infaunal organisms like Crustaceans and Mollusca were common dietary items (MYTILINEOU *et al.*, 2004). Moreover, the juveniles live in coastal waters before migrating to deeper waters (QUIGLEY, 2005).

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**Prvi nalaz turčina *Peristedion cataphractum* (Linnaeus, 1758)
(Scorpaenoidei: Peristediidae) uz sjeverozapadnu obalu Alžira**

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SAŽETAK

Turčin, *Peristedion cataphractum* (Peristediidae) po prvi put je zabilježen sa alžirske sjeverozapadne obale Sredozemnog mora, Oran (35°50'N, 0°31'W) na dubini 30-40 m.

Ulovjena su samo dva primjerka. Identificirane su jedinke riba i zabilježeni su prvi morfometrijski podaci. Identificirane su jedinke riba i zabilježeni su prvi morfometrijski podaci.

Ključne riječi: turčin; ribolov; Sredozemno more; Malarmat; kočarski ribolov