



Received: 15 May 2014  
Accepted: 16 Oct. 2014  
Editor: R. Causse

## First record and new depth range extension of the curled Picarel, *Centracanthus cirrus* (Sparidae) from the Sea of Marmara, Turkey

by

M. Levent ARTÜZ\* (1) & Nerdin KUBANÇ (2)

**Résumé.** – Premier signalement de *Centracanthus cirrus* (Sparidae) en mer de Marmara, Turquie.

Une femelle de Picarel guetteur, *Centracanthus cirrus* Rafinesque, 1810 (poids = 26,2 g; Ls = 11,6 cm), a été capturée à l'aide d'un chalut à perche le long des côtes d'Uçmakdere, au nord-ouest de la mer Marmara, à 1000 m de profondeur. Cette occurrence est considérée comme le premier enregistrement fiable de *Centracanthus cirrus* en mer de Marmara et démontre son adaptation aux habitats profonds.

**Key words.** – Sparidae - *Centracanthus cirrus* - Sea of Marmara - Depth range - First record.

*Centracanthus cirrus* Rafinesque, 1810 has a large distribution, in Eastern Atlantic from Mauritania (Mohamed Fall, unpubl. data) to Portugal and also along the Mediterranean coasts. More specifically, its presence was reported on Turkish coasts and in the Aegean Sea (Fischer, 1973; Tortonese, 1986; Fischer *et al.*, 1987; Mater and Meriç, 1996; Mater and Bilecenoğlu, 1999). Özaydın *et al.* (2000) described age and growth relationships in Northern Cyprus, Eastern Mediterranean Sea. However, there is no information about the presence of *C. cirrus* in the Sea of Marmara. We are reporting here the occurrence of *C. cirrus* off Uçmakdere, in the West part of the Sea of Marmara (Turkey), at 1,000 m depth (Fig. 1).

### MATERIAL STUDIED

One female specimen of *Centracanthus cirrus* was caught on 21 July 2012, next to the west shore of the Sea of Marmara (40°49.400'N; 027°29.133'E and 40°50.583'N; 027°29.333'E) 1,000 m depth, off Uçmakdere. The material was landed with twin (combo: 2 x 3.75 m) beam-trawl with 18 and 36 mm stretched mesh sizes at cod-ends. Haul were repeated with a 15 min duration and boat speed of 2 mph. Total hauled area was 1650 m<sup>2</sup>. The specimen (Fig. 2) was identified, measured, preserved and deposited in the fish collection of the SEI Foundation, MAREM (Marmara Environmental Monitoring) Project with the reference PEL-001-603.

### DESCRIPTION OF THE UÇMAKDERE SPECIMEN

Body elongate with a single long dorsal fin (Fig. 2). The snout is pointed, and the eyes are large. The mouth has a protractible upper jaw; mouth contains a series of rows of small villiform teeth.

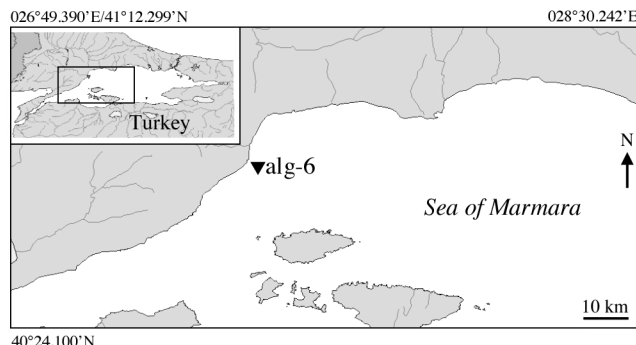


Figure 1. - Location map of capture of *Centracanthus cirrus* specimen in the Sea of Marmara, Turkey.



Figure 2. - *Centracanthus cirrus* caught from Sea of Marmara (Picture: M.L. Artüz).

Vomer toothless. Middle part of dorsal fin is low. Pectoral fins longer than pelvic fins. Reddish coloration dorsally; ventrally white.

Meristic formula: D, XIII 10; A, III 9; P 16; V, I 5. It has a complete and prominent, concave to dorsal direction, lateral line having 26 scales totally. Total weight, 26.2 g; standard length, 116 mm. Max body height, 46 mm (36.6% SL); head length, 26 mm (22.4% SL); eye diameter, 08.1 mm (31.1% HL); preorbital space 07.8 mm (30% HL); interorbital space, 07.4 mm (28.5% HL); Diagnostic features of the individual accord with previous descriptions of the species (Bini, 1968; Bauchot, 1987)

The ovary, 3.3 g in weight, immature Type II (macroscopically); gonads were typically ovarian in structure and colour, being tubular organs which were translucent and orange in colour), slightly depressed, occupying appr. 1/2 body cavity in its length.

### DISCUSSION

The spawning season of *C. cirrus* is in summer and breeding stock approaches the coast at this period (Tortonese, 1986). Also, Mytilineou *et al.* (2005) reported that this species lives usually at

(1) Sevinç-Erdal İnönü Foundation, Department of Marine Sciences, Anadoluhisarı Toplarönü No: 8, 34810, Istanbul, Turkey.

(2) Istanbul University, Faculty of Science, Department of Biology, 34118 Vezneciler, Istanbul, Turkey. [nerdin.kubanc@gmail.com]

\* Corresponding author [levent@artuz.com]

300-500 m depth range in Ionian Sea, Greece. The specimen presented here, an immature female, is the first documentation of the species in the Sea of Marmara and at 1,000 m depth, indicating a significant depth extension of their previously known distribution. This wide depth range extension could be explained by the specificity of the Marmara Sea: under the thermocline there are three different water layers distinctly separated from each other. The top layer with average depth of about 25 m originates from low salinity Black Sea water; the middle layer of water, below 25-30 m with high salinity, originated from Mediterranean. The third and unaffected mass of water, which occupies depth below 200 m, has a constant temperature of 14.2°C and salinity of 38.5‰, and no seasonal variations do occur (Artüz *et al.*, 2007).

It is premature to assess whether the present population is represented by only a few visitors exploring the new area, or is a well-established population so far undetected, probably due to the lack of ichthyological expeditions and fishery surveys at these depths.

**Acknowledgements.** – We gratefully acknowledge the Sevinç-Erdal İnönü Foundation, owner of the long-term project MAREM (Marmara Environmental Monitoring project). We also acknowledge the crew of the vessel *Oktay 4* for their help to collect the material. Thanks must also go to O. Bülent Artüz for assistance with programming, and especially for the electronic field support for the project.

## REFERENCES

- ARTÜZ M.L., OKAY I.A., MATER B., ARTÜZ O.B., GÜRSELER G. & OKAY N., 2007. - Scientific Aspects of the Sea of Marmara. 290 p. Union of Turkish Bar Associations publication. [In Turkish]
- BAUCHOT M.L., 1987. - Poissons osseux. *In: Fiches FAO d'Identification des Espèces pour les Besoins de la Pêche* (Rév. 1). Méditerranée et Mer Noire. Zone de Pêche 37. Vol. II (Fischer W., Bauchot M.L. & Schneider M., eds), pp. 891-1421. Rome: FAO & CEE.
- BINI G., 1968. - Atlante dei Pesci delle Coste italiane. Vol V. Osteitti: Perciformi (Percoidei). 175 p. Rome: Mondo Sommerso.
- FISCHER W. (ed.), 1973. - FAO Species Identification Sheets for Fishery Purposes: Mediterranean and Black Sea (Fishing area 37). 2 Vol. Food and Agriculture Organization of the United Nations. Fishery Resources Division.
- FISCHER W., BAUCHOT M.L. & SCHNEIDER M., 1987. - Fiches FAO d'Identification des Espèces pour les Besoins de la Pêche (Rév. 1). Méditerranée et Mer Noire. Zone de Pêche 37. Vol. I (Invertébrés) et II (Vertébrés). Vol. 1: pp. 1-760 ; Vol. II: pp. 761-1530. FAO: Rome.
- MATER S. & BILECENOĞLU M., 1999. - Marine Fishes of Turkey. *In: Genel Zoocoğrafya ve Türkiye Zoocoğrafyası* (Demirsoy A., ed.), pp. 790-808. Ankara: Meteksan Publications. [In Turkish]
- MATER S. & MERİÇ N., 1996. - Marine Fishes. *In: The Species List of Vertebrates in Turkey* (Kence A. & Bilgin C.C., eds), pp. 129-172. Ankara: Nurol Publications. [In Turkish]
- MYTILINEOU C., POLITOU C., PAPACONSTANTINOUC., KAVADAS S., D'ONGHIA G. & SION L., 2005. - Deep-water fish fauna in the Eastern Ionian Sea. *Belg. J. Zool.*, 135(2): 229.
- ÖZAYDIN O., BILECENOĞLU M. & KAYA M., 2000. - Age and growth of the Curled Picarel *Centracanthus cirrus* Rafinesque, 1810 (Osteichthyes: Centracanthidae) in Northern Cyprus, Eastern Mediterranean Sea. *Acta Adriat.*, 41(2): 35-42.
- TORTONESE E., 1986. - Centracanthidae. *In: Fishes of the North-Eastern Atlantic and the Mediterranean*. Vol. 2 (Whitehead P.J.P., Bauchot M.L., Hureau J.C., Nielsen J. & Tortonese E., eds), pp. 908-911. Paris: Unesco.