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How many specimens of the crested oarfish, *Lophotus lacepede* Giorna, 1809 (Pisces: Lophotidae), were caught in the Adriatic Sea?

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*In this paper the status of crested oarfish *Lophotus lacepede* Giorna, 1809 (Pisces: Lophotidae) is checked with precise information from records of this species in the Adriatic Sea. According to presented data it was concluded that just five confirmed records were noted in the Adriatic Sea. Finally, it should be noted that the crested oarfish is very rare species in the Adriatic Sea.*

Key words: crested oarfish, *Lophotus lacepede*, confirmed records, Adriatic Sea

INTRODUCTION

Lophotidae (crestfish) is a family comprising of ribbon-like fish reaching at least 200 cm in total length. A single species, *Lophotus lacepede* Giorna, 1809, inhabits the western Mediterranean, off Portugal, Madeira, the Canary Islands, also waters off South Africa (HEEMSTRA, 1986). It also occurs in the eastern Pacific (southern California) (PALMER, 1986) and western Atlantic (from Florida to Brazil) (ROBINS & RAY, 1986). It has also been reported from Australia (MAY & MAXWELL, 1986). Recently, LETOURNER *et al.* (2004) reported its occurrence

in the western Indian Ocean (Island Reunion). PALMER (1986) completely excluded its presence in the eastern Mediterranean and Adriatic. Even though JARDAS (1996) reported its extreme rarity in the Adriatic, he also noted that we are still unable to give definite answer to the question of whether crested oarfish caught in the Adriatic in fact live there or only occasionally sojourn.

Since the status of this species is still unclear, the aim of this paper is to check the status of the crested oarfish and to present precise information from records of this species in the Adriatic Sea.

MATERIAL AND METHODS

Lophotus lacepede

1 specimen, 683 mm SL (standard length) (Fig. 1A), deposited in the Natural History Museum of Vienna (record number: NMW 42601); locality: near Split (middle Adriatic) (Fig 2.3); 2 February 1906. The specimen was collected by Juraj Kolombatović and determined by Juraj Kolombatović and Franz Staindachner. Primarily it was determined as *Lophotes cepedianus* Cloquet, 1823.

1 specimen, 720 mm SL (standard length) (Fig. 1B), deposited in the Natural History Museum of Vienna (record number: NMW 2074); locality: near Zadar (middle Adriatic) (Fig. 2 (2)); date of collection: 9 April 1901. The specimen was collected by Juraj Kolombatović and determined by Juraj Kolombatović and Franz Staindachner. Primarily it was determined as *Lophotes cepedianus* Cloquet, 1823.

All measurements were done on preserved specimens. Main morphometric and meristic measurements (dorsal fin rays number, pectoral fin rays number, anal fin rays number, caudal fin rays number) were taken where it was possible. Records from published sources are also acknowledged in order to present the number of caught specimens of crested oarfish in the Adriatic Sea.

RESULTS AND DISCUSSION

Description

Body elongated, strongly compressed tapers to caudal fin. Anus located near posterior end of the body. Head with elevated occipital crest bearing anterior finrays of dorsal fin extending forward to level of mouth. Mouth opening small and weakly protrusible. Teeth conic and somewhat recurved in a single row of both jaws. Dorsal fin long-based and low. Anal fin very short located just in front of the caudal fin. Pectoral fins extending horizontally. Anterior finrays elongated. Pelvic fins absent. Caudal fin short, pointed and asymmetrical. Body covered with tiny cycloid scales.

Specimen NMW 42601

Body measurements (in mm) are as follows: standard length 683; head length 91.4; postorbital length 31.4; eye diameter 33.8 mm; interorbital distance 22.8; preanal length 642, pectoral fin length 43.2. Caudal fin damaged. Meristic characters: D 264, A 17, P 15.

Specimen NMW 2074

Body measurements (in mm) are as follows: standard length 720; head length ca. 98; postorbital length 39.9; eye diameter 28.9 mm;



Fig. 1. Specimens of crested oarfish deposited in the Natural History Museum of Vienna: A) specimen NMW 42601, B) specimen NMW 2074

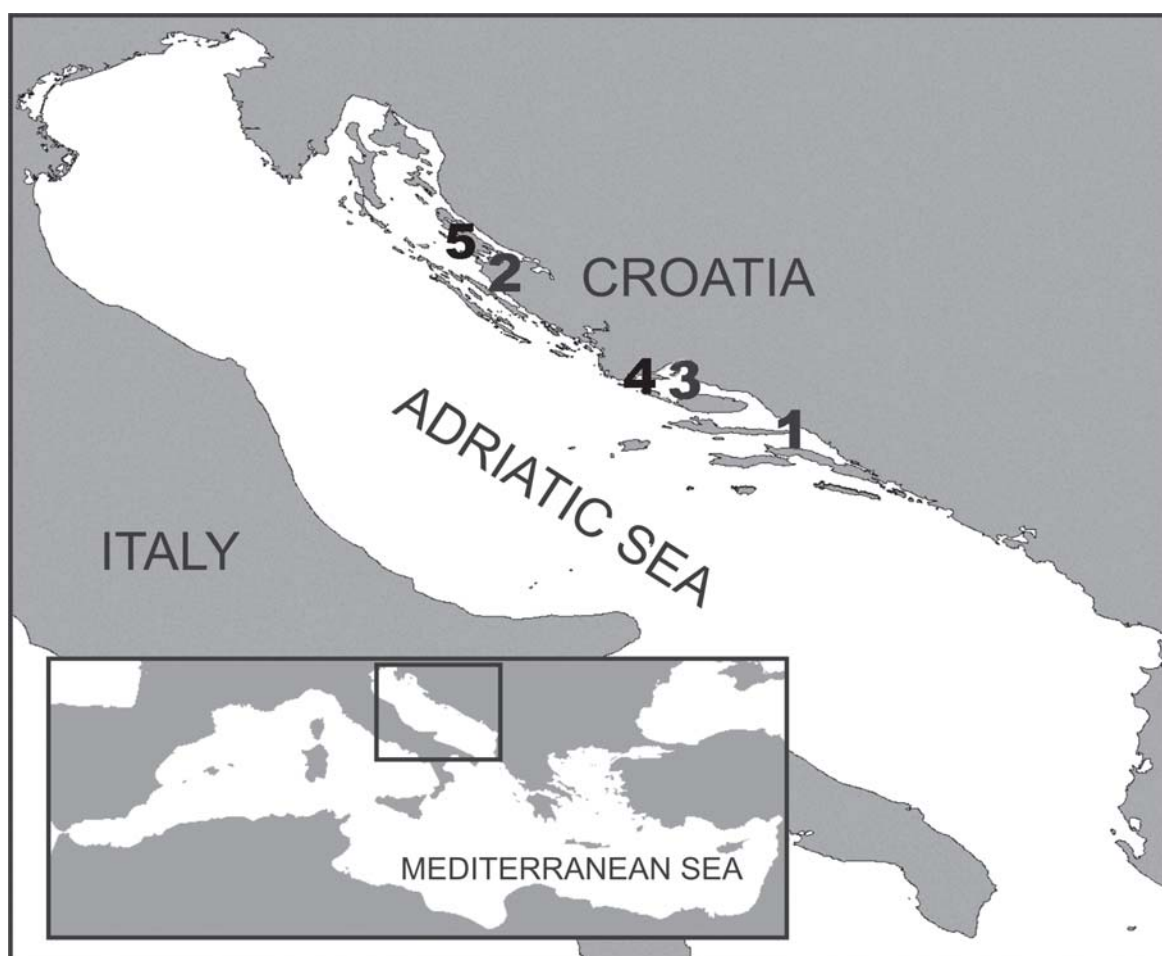


Fig. 2. Records of crested oarfish in the Adriatic following KOLOMBATOVIĆ (1890) (1); this study - specimen NMW 2074 (2); this study - specimen NMW 42601 (3); MOROVIĆ (1950) (4); DULČIĆ & SOLDI (in press) (5)

interorbital distance 21.0; preanal length 680. Caudal and pectoral fins damaged. Meristic characters: A 16, P 15.

All measurements are in agreement with data by RAGONESE *et al.* (1997) and BUSSOTTI *et al.* (1999). According to this we could add these two specimens to the list of recorded specimens of crested oarfish from the Adriatic Sea.

Lophotus lacepede is a poorly known, rare mesopelagic fish for the Mediterranean (PALMER, 1986). However, in the last 10 years at least four records were confirmed for the Mediterranean: the island of Ischia (Gulf of Naples, Tyrrhenian Sea) (BUSSOTTI *et al.*, 1999), south-east Sicily (RAGONESE *et al.*, 1997), south Italy (TRIPEPI *et al.*, 2004) and Gokova Bay (southern Aegean

sea) (BILECENOGLU *et al.*, 2001). BOTTERI was the first who put this species on the list of Adriatic fish species dating from 1854, but without any data on the date and location of capture and any measurements (BRUSINA, 1892). KOLOMBATOVIĆ (1890) reported the record of a specimen (total length=115 cm) on 7 June 1890 near Trpanj, Pelješac peninsula (southern Adriatic) (Fig. 2 (1)). Then there were records in 1901 near Zadar (Fig. 2 (2)), and in 1906 near Split (Fig. 2 (3)) (this study). The next record was near Trogir (middle Adriatic) on 13 February 1926 of a 100 cm specimen (MOROVIĆ, 1950) (Fig 2 (4)). The last record was near the Brušnjak islet (near the island of Pag, eastern Adriatic) in 2006 (total length=167.0 cm, mature ♂) (Fig. 2 (5)) (DULČIĆ & SOLDI, in press). According

to this data we can conclude that just five confirmed records were noted in the Adriatic Sea.

It should be pointed out that 'rarity' in fish is a subjective term varying with place, even over so small an area as the eastern Adriatic, and moreover is subject to change with our increasing knowledge of the fauna. The term rarity for some fish species is very relative, and even though some of them, according to their own biological characteristics are generally rare, this term practically describes the diversity of their quantitative geographic distribution. Some species are rare only in some parts of the Adriatic while others are abundant and common, some of them are rare for the Adriatic Sea but abundant in the Mediterranean Sea, and finally some of them are abundant in the Atlantic or the Red Sea but rare in the Mediterranean Sea and very rare or just accidental in the Adriatic Sea. According to MOROVIĆ (1973), the rarity

of certain fish species could be evaluated from records in the scientific literature. The same author proposed three possibilities regarding rarity. If the species is recorded fewer than five times, it should be treated as a very rare species. If there are up to ten records, then the species is considered to be rare, and finally fish species caught in certain areas and only in specific season should be treated as fairly rare. If we take this evaluation into consideration it could be noted that crested oarfish is a very rare species in the Adriatic Sea.

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REFERENCES

- BILECENOGLU, M., M. KAYA & E. IRMAK. 2001. A new mesopelagic fish for Turkish seas, *Lophotus lacepede* Giorna, 1809 (Pisces: Lophotidae). E.U. Su Urunleri Dergisi/E.U. Journal of Fisheries & Aquatic Sciences, 3/4: 537-539.
- BRUSINA, S. 1892. Due elenchi dei pesci della Dalmazia di M. Botteri coll' aggiunte di Heckel, Bellotti, Stalio ecc. e con introduzione di S. Brusina (The two fish lists from Dalmatia by M. Botteri and annexes by Heckel, Bellotti, Stalio etc. with Introduction by S. Brusina). Glasnik Hrvatskog naravoslovnog društva, 6: 109-151.
- BUSSOTTI, S., P. GUIDETTI & A. TERLIZZI. 1999. Stranding of *Lophotes lacepedei* (Giorna, 1809) and a young specimen of *Trachipterus trachipterus* (Gmelin, 1789) at Ischia Island (Gulf of Naples, western Mediterranean). Doriana, 322: 1-5.
- DULČIĆ, J. & A. SOLDI. in press. New finding of crested oarfish *Lophotus lacepede* (Lophotidae) in the Adriatic Sea. Cybium.
- HEEMSTRA, P.C. 1986. Lophotidae. Smiths' sea fishes. In: M.M. Smith and P.C. Heemstra (Editors). Springer-Verlag, Berlin, p. 402-403.
- JARDAS, I. 1996. Adriatic ichthyofauna (in Croatian). Školska knjiga, Zagreb, 664 pp.
- KOLOMBATOVIĆ, J. 1890. Notizie ittologiche (Ichthyologic news). Glasnik Hrvatskog naravoslovnog društva, 5: 167-168.
- LETOURNEUR, Y., P. CHABANET, P. DURVILLE, M. TAQUET, E. TEISSIER, M. PARMENTIER, J.-C. QUÉRO & K. POTHIN. 2004. An updated checklist of the marine fish fauna of Reunion Island, south-western Indian Ocean. Cybium, 28(3): 199-216.
- MAY, J.L. & J.G.H. MAXWELL. 1986. Trawl fish from temperate waters of Australia. CSIRO Division of Fisheries Research, Tasmania. 492 p.
- MOROVIĆ, D. 1950. The contribution to the Adriatic fisheries (in Croatian). Posebno izdanje Instituta za oceanografiju i ribarstvo, Split, 1: 106-107.
- MOROVIĆ, D. 1973. On the records of rare fish species (in Croatian). Pomorski zbornik, 12: 397-410.

- PALMER, G. 1986. Lophotidae. Fishes of the north-eastern Atlantic and the Mediterranean. In: P.J.P. Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen and E. Tortonese (Editors). Vol. 2. Paris: UNESCO, 734-735.
- RAGONESE, S., P. JEREB & U. MORARA. 1997. Su di un esemplare di pesce liocorno *Lophotus lacepedei* (Lampridiformes-Lophotidae) spiaggiato a Mazzara del Vallo (Sicilia Sud Occidentale) (About one specimen of crested oarfish *Lophotus lacepedei* (Lampridiformes-Lophotidae) found at Mazzara del Vallo (southwestern Sicily)). Biol. Mar. Medit., 4: 551-553.
- ROBINS C.R. & G.C. RAY. 1986. A field guide to Atlantic coast fishes of North America. Houghton Mifflin Company, Boston, U.S.A. 354 p.
- TRIPEPI, S., D. FERA & E. SPERONE. 2004. New finding of crested oarfish *Lophotus lacepedei* Giorna, 1809 (Lampridiformes, Lophotidae) in Southern Italy. J. Ichthyol./Vopr. Ikhtiol., 44(2): 212-215.

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Koliko je jedinki britke jedroglavke, *Lophotus lacepede* Giorna, 1809 (Pisces: Lophotidae), ulovljeno u Jadranu?

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SAŽETAK

U ovom radu je obavljena analiza broja ulovljenih jedinki britke jedroglavke *Lophotus lacepede* Giorna, 1809 (Pisces: Lophotidae) uz pregled točnih i potvrđenih nalaza ove vrste u Jadranu. Suglasno dobivenim rezultatima može se zaključiti da je do sada potvrđeno samo pet nalaza ove vrste u Jadranu. Na kraju, može se na osnovi broja potvrđenih nalaza utvrditi da je ova vrsta vrlo rijetka za Jadran.

Ključne riječi: britka jedroglavka, *Lophotus lacepede*, potvrđeni nalazi, Jadransko more