

New record of the Roche's snake blenny *Ophidion rochei* Müller, 1845 (*Ophidiidae*, *Ophidiiformes*) from the Syrian marine waters – Eastern Mediterranean Sea

R.M. Othman^{1*}, M.Y. Galiya², Z.A. Almajid³, W.I.Ghanem⁴

^{1,2,3}Department of Zoology, Faculty of Sciences, Tishreen University, Lattakia, Syria
⁴High Institute of Marine Research, Tishreen University, Lattakia, Syria

*Corresponding Author: ranimmohammadothman@tishreen.edu.sy, Tel.: +00-96388909175

Available online at: www.isroset.org

Received: 07/Jan/2020, Accepted: 20/Jan/2020, Online: 28/Feb/2020

Abstract— The recording and classification of the marine fish in Syria, includes in Syrian national program of Biodiversity, which was started since thirty years. In March 2019, a single individual of Cusk-eel fish species was caught with benthic trawl in the Ras Albasit, Syrian marine water. Collected species was studied and compared with available literature. This species was identified as a Roche's snake blenny, *Ophidion rochei* Müller 1845.

Keywords—Cusk – eel, *Ophidion rochei*, Syrian marine waters.

I. INTRODUCTION

Discovery of a new fish species in Syrian marine commercial fishing is a clear indication of the continued changes in the quality of fish caught in our marine environment as a result to the introduction or invasion of migratory fish species which have not been seen by fishing nets used locally [1].

The family Ophidiidae includes four subfamilies with 50 genera and about 258 species [2]; [3]. Eight genera and 65 species recorded under the subfamily Ophidiinae of which, twenty seven species recorded under the genus *Ophidion* L. [4]. Species of Ophidiidae inhabit tropical and temperate marine waters [5]. The genus *Ophidion* L. is represented in the Mediterranean and Black seas by two species: The first species *Ophidion barbatum* L., 1758 is present in the Northern Mediterranean, from Gibraltar to Palestine and in the Eastern Atlantic from Southern England to Senegal, while the second species *Ophidion rochei* Müller, 1845 is present in the Mediterranean and Black Seas [5] generally on sandy bottoms from in depth range few meters to 150 m [6]. The latter species is very close to the former one, and the only difference between both species is by the number of gill rakers [6]. [7] studied morphometric, meristic and anatomical differences between *O. barbatum* and *O. rochei*. While in 2014, [8] provided an updated checklist of the marine fishes of Turkey in which this species is mentioned.

The body of *O. rochei* is elongated, eel-shaped, lateralized. Its color is brownish dorsally, whitish ventrally with black edges of individual fins (dorsal, anal and caudal). This oviparous fish is benthic on the continental shelf in tropical and temperate waters reaching a maximum standard length

of 30 cm [5]. The cleithrum bones of the shoulder girdle continue in the form of delicate growths and are associated with the bones of the pelvic girdle and thanks to this, the fins which are made up of two finely shaped floral rays, fall under the chin and resemble on the outer side the chin barbals. High- sensitivity barbals are used in probing the bottom when crawling searching for food [9]. They are nocturnal carnivores that feed mainly upon Decapods and small Teleosts [10]. This species is often hiding on the bottom (usually sand) during the day and active during the night [6].

II. MATERIALS AND METHODS

A sample of *Ophidion rochei* (Cusk-eel) (Fig.1 A) was caught by benthic trawl in Ras Albasit (35°51'46 "N, 35°48'12 " E.) in March 2019 and brought to the laboratory (Higher Studies Laboratory in the Department of Zoology, Faculty of Sciences, Tishreen University) for further identification. Collected specimens were measured, weighted; gill rakers on the anterior gill arch were counted and numbered. The species was identified using the taxonomic keys of in references [11] and [5]. Fish specimens were preserved in formaldehyde [7%] (deposited at the Laboratory of Hydrobiology, Faculty of Sciences, Tishreen University, Lattakia, Syria).

III. RESULTS AND DISCUSSION

The morphometric and meristic characteristics of the specimens are shown in (Table 1). *Ophidion rochei* can be recognized from the other closely related species *O. barbatum* by the number of gill rakers (4 in *O. rochei* and 5-6 in *O. barbatum*) on the anterior gill arch (Fig.1

B&C) as addressed by [6] and agreed with what confirmed by [7];[5]; [12].

O. rochei has a wide distribution in the Eastern, Western, and Northeastern Mediterranean. This is the first record of *O. rochei* in the Syrian marine waters, based on the last updated list of recorded species from Syria [13].

Conclusion and Future Scope :

The Cusk-eel fish (*Ophidion rochei*) is recorded for the first time in the Syrian Marine Waters , which was caught by benthic trawl in March 2019. We found that *Ophidion rochei* was not previously registered in the Syrian list of marine fish species, so we want to document and publish it scientifically. This contributes to the study of the biodiversity of fish fauna in Syrian marine waters.

Figures and Tables:

Table 1: Morphometric measurements and meristic of *O. rochei* captured in the Syrian marine waters (2019) .

Morphometric measurements	Value
Total weight (g)	11.94
Total length (mm)	143
Standard length (mm)	141
Maximum body height (mm)	15
Head length (mm)	25
Snout length (mm)	6
Eye length (mm)	6
Barbel length (mm)	11
Number of gill raker on anterior gill arch	4

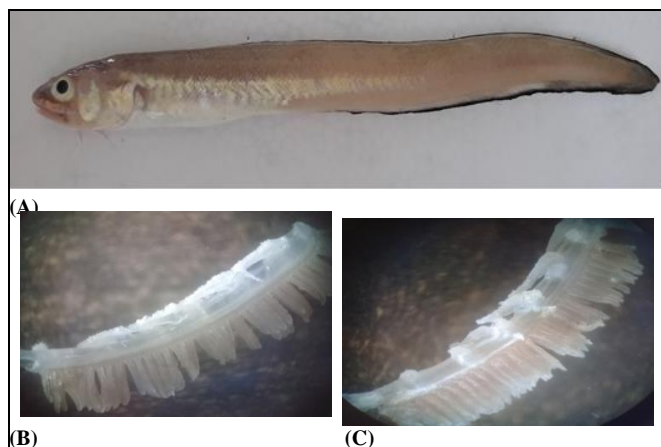


Figure 1, (A) Adult *O. rochei* , (B&C) The anterior gill arch showing the gill rakers.

ACKNOWLEDGMENT

The authors would like to thank Faculty of Sciences, Tishreen University, Lattakia, Syria for providing the financial and logistic supports to this work.

REFERENCES

- [1] M. Galiya. A new record of migrant fish (*Fistularia commersonii*, Ruppell, 1935) to Mediterranean Syrian Coast .Tishreen University Journal for Studies and Research– Basic Sciences Series, **25 (13),135–143, 2003.**
- [2] J. G. Nielsen, D. M.Cohen, D. F. Markle, D. F. & C. R. Robins, (1999). *FAO species catalogue, Ophidiiform fishes of the world (Order*

Ophidiiformes), An annotated and illustrated catalogue of pearlfishes, cusk-eels, brotulas and other ophidiiform fishes known to date. FAO Fisheries Synopsis (Vol. 18: pp.178), Rome, Food and Agriculture Organization of The United Nations, **1999.**

- [3] R. N.Lea, & C. R. Robins. *Four new species of the genus Ophidion (Pisces: Ophidiidae) from the Western Atlantic Ocean.* Univ. Kansas Mus. Nat. Hist Sci. Pap., **31,1–9, 2003.**
- [4] C. R. Robins, R. H. Robins, & M. E. Brown. *A revision of Lepophidium (Teleostei, Ophidiidae) with descriptions of eight new species.* Bull. Florida Mus. Nat. Hist., **51(1), 1–94, 2012 .**
- [5] J.G. Nielsen . *Ophidiidae.* In: Fishes of the North-eastern Atlantic and the Mediterranean , vol.3 ([13] P .J.P.Whitehead, M.- L. Bauchot, , J. C.Hureau, J. G. Nielsen & E. Tortonese, Eds), **1158–1166.** Paris: UNESCO, **1986.**
- [6] I.Jardas. *Jadranska ihtiofauna.* Zagreb: Školska knjiga . 1996.
- [7] M .Casadevall, J .Matallanas, M. Carrasson &M.Munõz. *Morphometric, meristic and anatomical differences between Ophidion barbatum L.; 1758 and Ophidion rochei Müller, 1854 (Pisces, Ophidiidae).* Publ. Espec. Inst. Esp. Oceanogr., **21, 45– 61, 1996.**
- [8] M. Bilecenoglu, M. Kaya, B.Cihangir, & Çiçek, E. *An updated checklist of the marine fishes of Turkey.* Turkish Journal of Zoology, **38, 901–929, 2014 .**
- [9] V. E.Sokolov, M. S. Gilarov, A. G.Bannikov, V. D. Ilichev, A.P. Kouziakin, S.P. Naoumov, & F.M. Pravdin, *Life Animals (Fishes),* Prosveshenii Press. **4 , pp.646, 1988 .**
- [10] E. Parmentier, G. Bouillac, B. Dragčević. J. Dulčić, & M.L.Fine, *Call properties and morphology of the sound – producing organ in Ophidion rochei (Ophidiidae).* Journal of Experimental Biology, **213, 3230 – 3236, 2010.**
- [11] J. Nelson, T. C. Grande, & M.V.H. Wilson. *Fishes of the world. Fifth edition.* United States of America, Wiley, 2016.
- [12] J. Dulčić, , S.Matic, M .Kraljevic, M.Franicevic, & L. Lipej. *New data on the cusk-eel, Ophidion rochei (Osteichthyes: Ophidiidae), from the Eastern Adriatic.* J. Mar. Biol. Ass. U.K., **82, 1045–1046, 2002.**
- [13] M. Ali, “An updated checklist of the marine fishes from Syria with emphasis on alien species . Mediterranean Marine Science, **19(2), 388–393, 2018.**

AUTHORS PROFILE

R.M.Othman, Master student in Hydrobiology, Faculty of sciences -Tishreen University (Lattakia- Syria).

I Published one article in journal: Mediterranean marine Science, it is also available online.

e-mail: ranimmohammadothman@tishreen.edu.sy



M. Y. Galiya , Ph.D Biology from Moscow, USSR , 1991, He is currently working as Professor in Department of Zoology, Faculty of Sciences, Tishreen University , Lattakia ,Syria. He Published several articles are available online. *e-mail:* galiyamo@scs-net.org



Z A Almajid , Associate Professor, Department of Zoology, Faculty of Sciences, Tishreen University , Lattakia ,Syria. *e-mail:* zouher.almajid@gmail.com



W. I. Ghanem ,researcher , High Institute of Marine Research, Tishreen University, Lattakia, Syria . *e-mail :* wassemFish@gmail.com

