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## Short Communication

# Stonefish *Synanceia verrucosa* Bloch & Schneider, 1801 (Actinopterygii: Synanceiidae): the first record in the Syrian coast and the fourth in the Mediterranean

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**Abstract:** Fish species introduction into the Mediterranean Sea is constantly increasing, and this is what worries biologists especially after the arrival of poisonous species. In this paper, *Synanceia verrucosa* is recorded for the first time in the Syrian marine waters, filling the gap of its distributions between north and south of the eastern Mediterranean.

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## Introduction

Synanceiidae family (Stonefishes) has nine genera and 36 species (Carpenter and Niem, 1999; Carpenter and De Angelis, 2016) characterizing by its warty skin and frightening shape. The stonefish of *Synanceia verrucosa* has a deadly poison in the bases of the fin spines and capable of burying itself in the sand to camouflage and grab prey. Before 2010, no individual was recorded in the Mediterranean Sea (Froese and Pauly, 2019) but, it was recorded from Palmakhim (Edelist et al., 2011), then from Iskenderun bay in 2012 at (Bilecenoglu, 2012) and for third time from Tyr coast in 2014 (Crocetta et al., 2015). It has not been recorded yet in the European and African coasts of the Mediterranean Sea (Bearez et al., 2017; El Sayed Haroun and Karachle, 2017; Froese and Pauly, 2019). In this paper, *S. verrucosa* is recorded for the first time in the Syrian marine waters, filling the gap of its distributions between north and south of the eastern Mediterranean.

## Materials and Methods

On 12 October 2019, during a field trip in the marine waters facing Lattakia city, Syria (35°31'5.97"N, 35°42'48.57"E), a specimen of *S. verrucosa* was collected using longline, with assistance of fishing

boat (9.5 m, 19HP). The specimen was identified according to Carpenter and Niem (1999), and the morphometric measurements (length to the nearest mm, weight to the nearest g) and meristic counts were recorded. The specimen was then photographed, preserved into 7% formaldehyde, and placed at the Biological Laboratory of the High Institute of Marine Research (Tishreen University - Lattakia, Syria) as a reference sample (unnumbered yet).

## Results and Discussions

A single specimen of stonefish, *S. verrucosa* Bloch & Schneider, 1801 was caught at ~15 m depth off Lattakia coast (Fig. 1). It has a large body and a warty skin. The mouth is upward with a deep pit behind and a smaller one below of eye. The pectoral, ventral and caudal fins are large and strong, with severe sharp spines, allowing them to move the sand and deposit the body. The body is completely covered with spots of various colours, especially light orange and brown. The meristic characters are D, XIII-7; A, III-6; P, 18; V, 6; C 11. The morphometric measurements are shown in Table 1.

*Synanceia verrucosa* is a tropical fish, spreads from the Red Sea and East Africa to French Polynesia, north to the Ryukyu and from Ogasawara islands, south to

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Figure 1. *Synanceia verrucosa*, caught on 12 October 2019 from the Syrian coast.

Queensland of Australia (Carpenter and Niem, 1999; Froese and Pauly, 2019; Eagderi et al., 2019). It had been recorded in the eastern part of the Mediterranean Sea, as a lessepsian fish species (Edelist et al., 2011; Bilecenoğlu, 2012). The specimen recorded in this study provides an evidence of changes in the Mediterranean environment (Ibrahim, 2009; Alshawy et al., 2019g, a; Hussein et al., 2019; Ibrahim et al., 2019a). This species had not been recorded in the Syrian marine waters (Alshawy et al., 2019c). *Synanceia verrucosa* possesses the poisonous spines that have a deadly effect on humans since it inhabits the swimming areas and thus imposing a threat to human life. In addition, presence of such species in these new environments is hazardous because of exploiting the available food and habitats (Katsanevakis et al., 2014; Alshawy et al., 2019e). The Mediterranean Sea had received a number of similar species in the recent years (Hallom et al., 2014; Alshawy et al., 2019e, b; Ibrahim et al., 2019b), and requires further studies to determine the resulting environmental, economic and health impacts. This necessitates building regional and international capacities for mutual cooperation (Vallerga et al., 2003; Drago et al., 2004; Hussein et al., 2011; Alshawy et al., 2019d) to develop plans of actions to mitigate the negative effects of these species in the

eastern Mediterranean (Hussein et al., 2011a, b, Alshawy et al., 2019f, Hussein et al., 2019).

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#### References

- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019a). First record of arrow bulleye, *Priacanthus sagittarius* Starnes, 1988 from the Syrian marine waters (Eastern Mediterranean). *FishTaxa*, 2: 21-24.
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019b). First Record of the Blacktip Cardinalfish *Apogon atradorsatus* Heller & Snodgrass, 1903 from Syrian Marine Waters (Eastern Mediterranean). *International Journal of Advanced Research in Science, Engineering and Technology*, 3: 8299-8302.
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019c). First record of the Broadbanded cardinalfish *Ostorhinchus fasciatus* white, (1790) from the Syrian marine waters (eastern Mediterranean). *International Journal of Agriculture and Environmental Science*, 6: 14-16.
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019d). First record of the flat needlefish *Ablennes hians*

- (Valenciennes, 1846) from Syrian marine waters (eastern Mediterranean). *Marine Biodiversity Records*, 12(15): 1-4
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019e). First record of the oceanic puffer *Lagocephalus lagocephalus* (Linnaeus, 1758) from the Syrian marine waters (eastern Mediterranean) *Marine Biodiversity Records*, 12(11): 1-4:
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019f). First record of the spotfin cardinal fish *Jaydia queketti* (Gilchrist, 1903) (Teleostei: Apogonidae) from the Syrian marine waters (Eastern Mediterranean). *Iranian Journal of Ichthyology*, 2: 138-142.
- Alshawy F., Ibrahim A., Hussein C., Lahlah M. (2019g). New distribution of the serpent eel *Ophisurus serpens* (Linnaeus, 1758) in Eastern Mediterranean: first record from the Syrian Marine Waters. *International Journal of Agriculture and Environmental Science*, 3: 50-52.
- Bearez P., Pruvost P., Feunteun E., Iglesias S., Francour P., Causse R., De Mazieres J., Terceirie S., Bailly N. (2017). Checklist of the marine fishes from metropolitan France. *Cybum*, 4: 351-371.
- Bilecenoğlu M. (2012). First sighting of the Red Sea originated stonefish (*Synanceia verrucosa*) from Turkey. *Coral Reefs*, 1: 76-82.
- Carpenter K.E., De Angelis N. (2016). The living marine resources of the Eastern Central Atlantic. Volume 4: Part 2, Bony Fishes (Tetradontiformes to Perciformes) and Sea Turtles. FAO. 1509 p.
- Carpenter K.E., Niem V.H. (1999). The living marine resources of the western central pacific volume 4 bony fishes part 2 (mugilidae to carangidae). FAO. 736 p.
- Crocetta F., Agius D., Balistreri P., Bariche M., Bayhan Y., Çakir M., Ciriaco S., Corsini-Foka M., Deidun A., El Zrelli R. (2015). New mediterranean biodiversity records (October 2015). *Mediterranean Marine Science*, 3: 682-702.
- Drago A., Aarup T., Abdelbaki A., Abuissa A., Awad H., Awad M.B., Beken C., Besiktepe S., Boargob A.F, Brundrit G., Capari M., Carlier A., Cermelj B., Casazza G., Civili F.S., Cohen Y., Christos T., Dahlin H., Dalla Costa M., Drakopoulos P., Flemming N.C., Font J.F., Gertman I., Harzallah A., Herrouin G., Ibrahim A., Kabbara N. (2004). MEDGOOS-Building a strong regional partnership for operational oceanography in the Mediterranean Rappports et proces verbaux des réunions-Commission internationale pour l'exploration scientifique de la mer Méditerranée. 158 p.
- Eagderi S., Fricke R., Esmaeili H.R., Jalili P. (2019). Annotated checklist of the fishes of the Persian Gulf: Diversity and conservation status. *Iranian Journal of Ichthyology*, 6(Suppl. 1): 1-171
- Edelist D., Spanier E., Golani D. (2011). Evidence for the occurrence of the Indo-Pacific stonefish, *Synanceia verrucosa* (Actinopterygii: Scorpaeniformes: Synanceiidae), in the Mediterranean Sea. *Acta Ichthyologica et Piscatoria*, 2: 129.
- El Sayed Haroun K.A., Karachle P.K. (2017). The Marine Ichthyofauna of Egypt. *Egyptian Journal of Aquatic Biology and Fisheries*, 3: 81-116.
- Froese R., Pauly D. (2019). Fishbase Available from: [www.fishbase.de](http://www.fishbase.de). Retrieved 15/10/ 2019.
- Hallom N., Ibrahim A., Galiya M. (2014). First record of the hen-like blenny *Aidablennius sphynx* (Blenniidae) from Syrian marine waters (eastern Mediterranean). *Marine Biodiversity Records*, 73: 2.
- Hussein C., Ibrahim A., Alshawy F. (2019). First record of Red cornetfish, *Fistularia petimba* Lacepède, 1803 (Actinopterygii: Fistulariidae) from the Syrian coast. *International Journal of Aquatic Biology*, 3: 175-179.
- Hussein C., Verdoit-Jarraya M., Pastor J., Ibrahim A., Saragoni G., Pelletier D, Mahévas S., Lenfant P. (2011a). Assessing the impact of artisanal and recreational fishing and protection on a white seabream (*Diplodus sargus sargus*) population in the north-western Mediterranean Sea using a simulation model. Part 1: Parameterization and simulations. *Fisheries Research*, 1: 163-173.
- Hussein C., Verdoit-Jarraya M., Pastor J., Ibrahim A., Saragoni G., Pelletier D., Mahévas S., Lenfant P. (2011b). Assessing the impact of artisanal and recreational fishing and protection on a white seabream (*Diplodus sargus sargus*) population in the north-western Mediterranean Sea, using a simulation model. Part 2: Sensitivity analysis and management measures. *Fisheries Research*, 1: 174-183.
- Hussein M., Courp T., Ibrahim A., Benkhelil J. (2011). Seasonal variability of hydrographical properties of the Syrian marine water. *Journal of Marine Systems*, 1: 30-44.
- Ibrahim A. (2009). National Overview on Vulnerability and Impacts of Climate Change on Marine and Coastal Biodiversity in Syria UNEP/MAP-RAC/SPA.
- Ibrahim A., Alshawy F., Hussein C., Lahlah M. (2019a). Confirmation record of the spot fin cardinal fish *Jaydia queketti* (Gilchrist, 1903) (Teleostei: Apogonidae) in

the Syrian marine waters. SSRG International Journal of Agriculture and Environmental Science, 4: 48-50.

Ibrahim A., Hussein C., Alshawy F. (2019b). New Distribution of *Pteragogus trispilus* Randall, 2013 (Actinopterygii: Labridae) in the Syrian Marine Waters (Eastern Mediterranean). SSRG International Journal of Agriculture and Environmental Science, 5: 24-26.

Katsanevakis S., Wallentinus I., Zenetos A., Leppäkoski E., Çınar M.E., Oztürk B., Grabowski M., Golani D., Cardoso A.C. (2014). Impacts of invasive alien marine species on ecosystem services and biodiversity: a pan-European review. Aquatic Invasions, 4: 391-423.

Vallerga S., Drago A., Aarup T., Abdelbaki A., Abuissa A., Awad H, Awad M., Beken C., Besiktepe S., Boargob A, 2003. MAMA—Towards a new paradigm for ocean monitoring in the Mediterranean. *Elsevier Oceanography Series*. Athens: Elsevier.