

received: 2020-04-20

DOI 10.19233/ASHN.2020.06

## A RECORD OF RARE SPINY BUTTERFLY RAY, *GYMNURA ALTAVELA* (LINNAEUS, 1758), IN THE AMVRAKIKOS GULF (GREECE)

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### ABSTRACT

*During the study of the coastal fish assemblage of the Amvrakikos Gulf with underwater visual census methods a specimen of spiny butterfly ray (*Gymnura altavela*) was sighted in the locality of Agios Georgios near Preveza on 12 June 2019. The specimen was observed and photographed on a sandy bottom at 9 m of depth.*

**Key words:** *Gymnura altavela*, critically endangered species, brackish environment, Greece

## SEGNALAZIONE DI UNA SPECIE RAIFORME RARA, *GYMNURA ALTAVELA* (LINNAEUS, 1758), NEL GOLFO DI AMVRAKIKOS (GRECIA)

### SINTESI

*Durante lo studio della comunità ittica costiera del Golfo di Amvrakikos, con metodi di censimento visivo subacqueo, un esemplare di altavela (*Gymnura altavela*) è stato avvistato nella località di Agios Georgios vicino a Preveza, il 12 giugno 2019. L'esemplare è stato osservato e fotografato su un fondale sabbioso a 9 m di profondità.*

**Parole chiave:** *Gymnura altavela*, specie in pericolo di estinzione, ambiente salmastro, Grecia

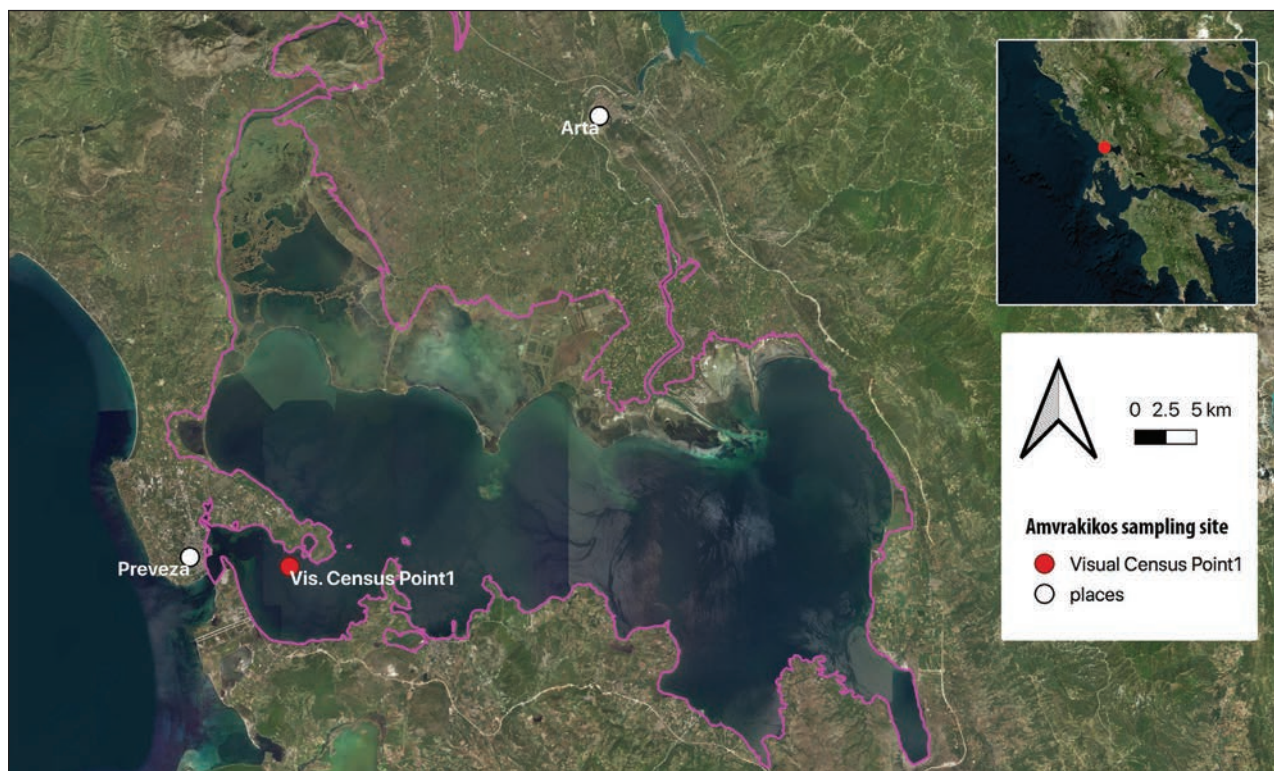
## INTRODUCTION

The spiny butterfly ray, *Gymnura altavela* (Linnaeus, 1758), is a demersal batoid species present on both sides of the Atlantic Ocean (McEachran & Capapé, 1984). In the western Atlantic it occurs from southern New England to Brazil, in the eastern part from Portugal to Angola with the Canary Islands and Madeira included. It is also present in the Mediterranean and Black Seas, where it has been recorded more or less everywhere, but it is still considered a very rare species. It is known to inhabit shallow marine and brackish waters (Weigman, 2016). Due to its rarity in the Mediterranean Sea it is considered a critically endangered species (Abdul Malak *et al.*, 2011). It was reported in the central Mediterranean Sea (El Kamel *et al.*, 2009), in the Adriatic Sea (Dulčić *et al.*, 2003) and in many areas of the eastern Mediterranean Sea (see Özgür Özbek *et al.*, 2016 and references therein). Recently, due to the findings of pregnant females of *G. altavela* carrying near-term embryos and small free-swimming specimens supposed to be neonates, Alkusaury *et al.* (2014) suggested that the area along the Syrian coast could be considered as a possible nursery area for *G. altavela*.

In this contribution we would like to share the information about the sighting of a specimen of spiny butterfly ray, *G. altavela*, observed in the Amvrakikos Gulf (western Greece) on 12 June 2019.

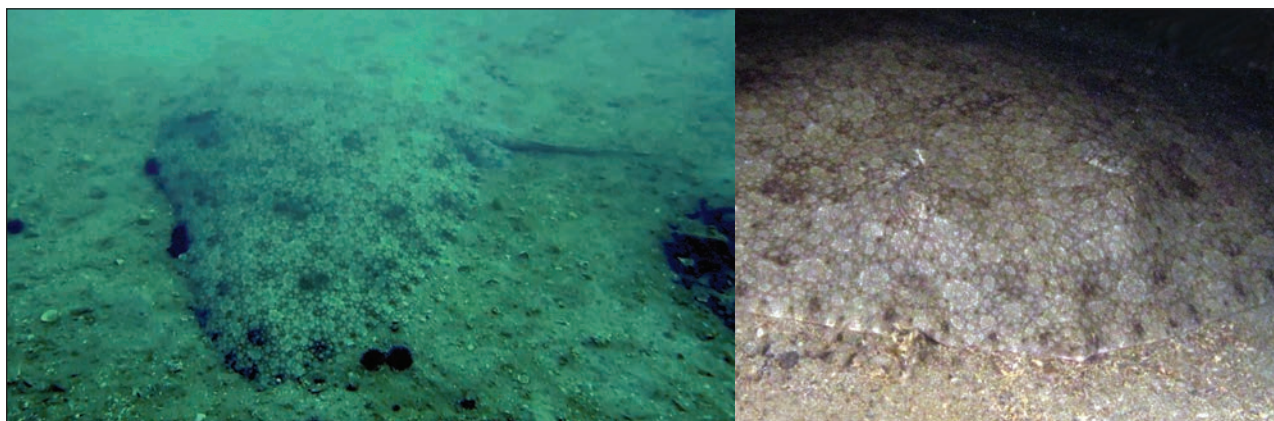
## MATERIAL AND METHODS

The selected study area was the Amvrakikos Gulf, which extends over 405 km<sup>2</sup>. It is a nearly enclosed gulf that maintains its connection with the Ionian Sea through a narrow channel. It is shallow, with a mean depth of 26 m and a maximum depth of 65 m (Rigas *et al.*, 2003). The embayment and its wetlands were proclaimed a National Park in 2008 (Zogaris & Dussling, 2010). The Amvrakikos Gulf is characterized by a eutrophic environment and near-brackish oceanographic conditions (Zogaris & Dussling, 2010). The coastal fish assemblage in the Amvrakikos Gulf was studied with the use of non-destructive underwater visual census methods. We used 25 m long and 5 m wide strip transects in three localities. A specimen of spiny butterfly ray was sighted on the transect in the locality of Agios Georgios near Preveza (20.802228 N; 38.957656 E) (Fig. 1) on 12 June 2019. It was observed on the sandy bottom at 9 m of depth. Photographs of the specimen were taken with a camera (Canon G7X Mk II) (Fig. 2).



**Fig. 1:** Map of the Amvrakikos Gulf (western Greece) with the locality where the specimen of *Gymnura altavela* was sighted.

**Sl. 1:** Zemljevid zaliva Amvrakikos (zahodna Grčija) z označeno lokaliteto, kjer so opazovali primerek skata vrste *Gymnura altavela*.



**Fig. 2:** The specimen of spiny butterfly ray photographed in the Amvrakikos Gulf, Greece, in June 2019. A – whole specimen, B – front view (Photo: S. Ciriaco).

**Sl. 2:** Primerek skata vrste *Gymnura altavela*, fotografiran 12. junija 2019 v zalivu Amvrakikos, Grčija. A – cel primerek, B – sprednji del primerka (Foto: S. Ciriaco).

## RESULTS AND DISCUSSION

The specimen was easily recognized due to the peculiar shape of the disk, twice as wide as it is long. The tail is very short, only  $\frac{1}{4}$  of the disk length, with one or two serrated spines. The snout is short and obtuse. The dorsal part is coloured with many dark and light spots, the ventral part is white. Juvenile and younger specimens have smooth skin (Bigelow & Schroeder, 1953). This is a large-sized batoid that can attain the maximum size of 1450 mm in disk width (Capapé, 1974).

The specimen of spiny butterfly ray was observed on a shallow sandy bottom. Although the visibility was low, we could estimate the disk width around 1100 mm. Also in other parts of the Mediterranean this species is associated with shallow areas (El Kamel *et al.*, 2009). In the Gulf of Antalya, where this species is still present, the highest mean abundance and biomass values were recorded at a 25 m depth and decreasing towards deeper areas (Özgür Özbek *et al.*, 2016). *Gymnura altavela* is known to be present in coastal and brackish areas, but also in euryhaline waters of lagoons (El Kamel *et al.*, 2009) and highly eutrophic estuaries (Silva & Vianna, 2018). The area of Amvrakikos Gulf where the specimen was sighted is

characterized by high eutrophication levels of pelagic compartments and a degradation of demersal ones, as already pointed out by Piroddi *et al.* (2016).

The specimen of *G. altavela* was found together with three large-sized specimens of the eagle ray, *Myliobatis aquila*. Other myliobatid rays had been observed in the Amvrakikos Gulf previously. Zogaris & Dussling (2010) reported on a sighting of twelve specimens of the bull ray (*Aetomylaeus bovinus*), two of them juvenile.

## ACKNOWLEDGMENTS

This research has been funded by MAVA Foundation within the project on MPAs and fisheries in the Mediterranean Sea, on commission of MedPAN. Sincere appreciation goes to all the management body personnel; the Management body and the President Prof. Constantin Koutsikopoulos were particularly active in supporting our work providing, in coordination with Mr. Dimitris Barelos, responsible of the managing body, two ornithological guides and three rangers for the support to the surveys along the coast. Authors wish to express their immense gratitude to prof. Lovrenc Lipej for his encouragement to publish the paper and for his help and support.



ZAPIS O POJAVLJANJU REDKEGA SKATA VRSTE *GYMNURA ALTAVELA* (LINNAEUS, 1758), V ZALIVU AMVRAKIKOS (GRČIJA)

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## POVZETEK

V okviru raziskav obrežne ribje združbe v zalivu Amvrakikos so z metodo podvodnih opazovalnih censovov 12. junija 2019 opazili primerek skata vrste *Gymnura altavela* pri lokaliteti Agios Georgios blizu Preveze (Grčija). Primerek so opazovali, fotografirali in posneli na peščenem dnu na globini 9 m.

**Ključne besede:** *Gymnura altavela*, kritično ogrožena vrsta, brakično okolje, Grčija

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