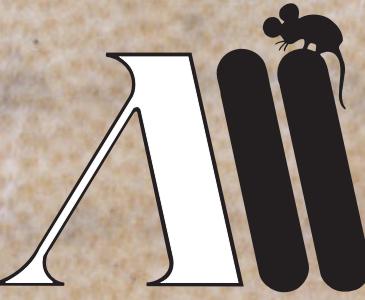


# ANNALES



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## VSEBINA / INDICE GENERALE / CONTENTS 2020(1)

SREDOZEMSKI MORSKI PSI  
SQUALI MEDITERRANEI  
MEDITERRANEAN SHARKS**Deniz ERGÜDEN, Deniz AYAS &  
Hakan KABASAKAL**

Provoked Non-Fatal Attacks to Divers by Sandbar Shark, *Carcharhinus plumbeus* (Carcharhiniformes: Carcharhinidae), Off Taşucu Coast (NE Mediterranean Sea, Turkey) ....  
*Izzvani napadi sivega morskega psa, Carcharhinus plumbeus* (Carcharhiniformes: Carcharhinidae), ob obali Taşucu (SV Sredozemsko morje, Turčija)

**Okan AKYOL, Tevfik CEYHAN &  
Christian CAPAPÉ**

Capture of a Bigeye Thresher Shark *Alopias superciliosus* (Alopiidae) in Turkish Waters (Eastern Mediterranean Sea) ..... 31  
*Ulov velikooke morske lisice*  
*Alopias superciliosus* (Alopiidae)  
*v turških vodah (vzhodno Sredozemsko morje)*

**IHTIOLOGIJA  
ITTOLOGIA  
ICHTHYOLOGY**

**Jeanne ZAOUALI, Sihem RAFRAFI-NOUIRA,  
Khadija OUNIFI-BEN AMOR, Mohamed  
MOURAD BEN AMOR & Christian CAPAPÉ**  
 Capture of a Large Great White Shark, *Carcharodon carcharias* (Lamnidae) from the Tunisian Coast (Central Mediterranean Sea): a Historical and Ichthyological Event .....  
*Ulov velikega primerka belega morskega volka, Carcharodon carcharias* (Lamnidae) ob tunizijski obali (osrednje Sredozemsko morje): zgodovinski in ihtiološki dogodek

**Saul CIRIACO, Marco SEGARICH,  
Carlo FRANZOSINI & Spiros KONSTAS**

A Record of Rare Spiny Butterfly Ray, *Gymnura altavela* (Linnaeus, 1758), in the Amvrakikos Gulf (Greece) ..... 39  
*Zapis o pojavljanju redkega skata vrste*  
*Gymnura altavela* (Linnaeus, 1758), v zalivu Amvrakikos (Grčija)

**Mohamed Mourad BEN AMOR, Marouène  
BDIOUI, Khadija OUNIFI-BEN AMOR &  
Christian CAPAPÉ**  
 Captures of Large Shark Species from the Northeastern Tunisian Coast (Central Mediterranean Sea) .....  
*Ulovi velikih morskih psov ob severovzhodni tunizijski obali (osrednje Sredozemsko morje)*

**Khaled RAHMANI, Fatiha KOUDACHE,  
Nasr Eddine Riad MOUEDDEN, Lotfi  
BENSAHLA TALET & Roger FLOWER**

Spawning Period, Size at First Sexual Maturity and Sex Ratio of the Atlantic Horse Mackerel *Trachurus trachurus* from Béni-Saf Bay (Western Coast of Algeria, Southwestern Mediterranean Sea) ..... 43  
*Obdobje drstenja, spolna zrelost in spolni delež šnjurov Trachurus trachurus iz zaliva Béni-Saf bay* (zahodna obala Alžirije, jugozahodno Sredozemsko morje)

**Fernando LOPEZ-MIRONES, Alessandro  
DE MADDALENA & Ricardo  
SAGARMINAGA VAN BUITEN**  
 On a Huge Shortfin Mako Shark *Isurus oxyrinchus* Rafinesque, 1810 (Chondrichthyes: Lamnidae) Observed at Cabrera Grande, Balearic Islands, Spain ..... 25  
*O opazovanju velikega primerka atlantskega maka Isurus oxyrinchus Rafinesque, 1810* (Chondrichthyes: Lamnidae) v bližini otoka Cabrera Grande, Balearsko otočje, Španija

**İnci TÜNEY-KIZILKAYA, Okan AKYOL &  
Aytaç ÖZGÜL**

On the Occurrence of *Pseudocaranx dentex* (Carangidae) in the Turkish Aegean Sea (Eastern Mediterranean Sea) ..... 53  
*O pojavljanju trnoboka Pseudocaranx dentex* (Carangidae) v turškem Egejskem morju (vzhodno Sredozemsko morje)

JADRANSKA MORSKA FLORA  
 FLORA MARINA ADRIATICA  
 ADRIATIC MARINE FLORA

**Claudio BATELLI & Neža GREGORIČ**

- First Report of an Aegagropilous Form of  
*Rytiphlaea tinctoria* from the Lagoon of  
 Strunjan (Gulf of Trieste, Northern Adriatic) ..... 61  
*Prvi zapis o pojavljanju vrste Rytiphlaea  
 tinctoria v kroglični obliki v Strunjanski  
 laguni (Tržaški zaliv, severni Jadran)*

**Sandra BRAČUN, Maximilian WAGNER,  
 Kristina M. SEFC & Stephan KOBLMÜLLER**

- Seasonal Growth Patterns of  
*Cymodocea nodosa* and  
 Diversity of its Epibionta in the  
 Northern Adriatic Sea) ..... 69  
*Sezonska rast kolenčaste cimodoceje  
 (Cymodocea nodosa) in pestrost njenih  
 epibiontov v severnem Jadranu*

BIOINVAZIJA

BIOINVASIONE

BIOINVASION

**Ahmet ÖKTENER & Sezginer TUNCER**

- Occurrence of *Gnathia* Larvae (Crustacea,  
 Isopoda, Gnathiidae) in Three Lessepsian  
 Fish Species in the Southern  
 Turkish Coast of the Aegean Sea ..... 87  
*Pojavljanje ličink vrste iz rodu Gnathia  
 (Crustacea, Isopoda, Gnathiidae)  
 pri treh lesepskih selivkah v južnih  
 turških vodah Egejskega morja*

**Raouia GHANEM & Jamila BEN SOUSSI**

- Additional Record of the Alien Crab *Actaeodes  
 tomentosus* (Brachyura: Xanthidae: Actaeinae)  
 from Tunisian Marine Waters ..... 99  
*Novi zapis o pojavljanju tujerodne  
 rakovice Actaeodes tomentosus  
 (Brachyura: Xanthidae: Actaeinae)  
 iz tunizijskih morskih vod*

**Sami MILI, Rym ENNOURI, Sihem  
 RAFRAFI-NOUIRA & Christian CAPAPÉ**

- Additional Record of Golani Round  
 Herring, *Etrumeus golani* (Osteichthyes:  
 Dussumieriidae) from Tunisian Waters with  
 Comments on its Distribution  
 in the Mediterranean Sea ..... 105  
*Nov zapis o pojavljanju vrste Etrumeus  
 golani (Osteichthyes: Dussumieriidae) iz  
 tunizijskih voda s komentarji o njeni  
 razširjenosti v Sredozemskem morju*

**ONESNAŽEVANJE OKOLJA  
 INQUINAMENTO DELL'AMBIENTE  
 ENVIRONMENTAL POLLUTION**

**Ouassima RIFFI, Jamila FLIOU, Ali AMECHROUQ,  
 Mohammed ELHOURRI, Mostafa EL IDRISI,  
 Fatimazahra BENADDI & Said CHAKIR**

- Research and Characterization of Determinants  
 Controlling the Accumulation of Certain Metals  
 in the Leaves of *Dysphania ambrosioides* ..... 113  
*Raziskava o dejavnikih, ki vplivajo na  
 kopiranje nekaterih kovin v listih  
 vrste Dysphania ambrosioides*

**DELO NAŠIH ZAVODOV IN DRUŠTEV  
 ATTIVITÀ DEI NOSTRI ISTITUTI E SOCIETÀ  
 ACTIVITIES BY OUR INSTITUTIONS AND  
 ASSOCIATIONS**

**Valentina TURK**

- Srečanje Znanosti o oceanih (Ocean Science  
 Meeting - OSM) ..... 123

**OCENE IN POROČILA  
 RECENSIONI E RELAZIONI  
 REVIEWS AND REPORTS**

**Milena MIČIĆ**

- Book review: A Miniature Ocean ..... 129

- Kazalo k slikam na ovtiku ..... 130  
*Index to images on the cover* ..... 130

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## 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 Özbeş 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, Alkusairy 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 smooths 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 Özbeğ 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.

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## ZAPIS O POJAVLJANJU REDKEGA SKATA VRSTE *GYNMURA 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 cenzusov 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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