

ANNALES



*Analisi za istrske in mediteranske študije
Annali di Studi istriani e mediterranei
Annals for Istrian and Mediterranean Studies
Series Historia Naturalis, 33, 2023, 2*



UDK 5

ISSN 1408-533X
e-ISSN 2591-1783



ANNALES

Anali za istrske in mediteranske študije
Annali di Studi istriani e mediterranei
Annals for Istrian and Mediterranean Studies

Series Historia Naturalis, 33, 2023, 2

KOPER 2023

**UREDNIŠKI ODBOR/
COMITATO DI REDAZIONE/
BOARD OF EDITORS:**

Alessandro Acquavita (IT), Nicola Bettoso (IT), Christian Capapé (FR), Darko Darovec, Dušan Devetak, Jakov Dulčić (HR), Serena Fonda Umani (IT), Andrej Gogala, Daniel Golani (IL), Danijel Ivajnšič, Mitja Kaligarič, Marcelo Kovačič (HR), Andrej Kranjc, Lovrenc Lipej, Vesna Mačić (ME), Alenka Malej, Patricija Mozetič, Martina Orlando-Bonaca, Michael Stachowitzsch (AT), Tom Turk, Al Vrezec

**Glavni urednik/Redattore capo/
Editor in chief:**

Darko Darovec

**Odgovorni urednik naravoslovja/
Redattore responsabile per le scienze
naturali/Natural Science Editor:**

Lovrenc Lipej

Urednica/Redattrice/Editor:

Martina Orlando-Bonaca

Prevajalci/Traduttori/Translators:

Martina Orlando-Bonaca (sl./it.)

**Oblikovalec/Progetto grafico/
Graphic design:**

Dušan Podgornik, Lovrenc Lipej

Tisk/Stampa/Print:

Založništvo PADRE d.o.o.

Izdajatelja/Editori/Published by:

Zgodovinsko društvo za južno Primorsko - Koper / **Società storica
del Litorale - Capodistria**[®]

Inštitut IRRIS za raziskave, razvoj in strategije družbe, kulture in okolja / **Institute IRRIS for Research, Development and Strategies
of Society, Culture and Environment / Istituto IRRIS di ricerca,
sviluppo e strategie della società, cultura e ambiente**[®]

**Sedež uredništva/Sede della redazione/
Address of Editorial Board:**

Nacionalni inštitut za biologijo, Morska biološka postaja Piran /
Istituto nazionale di biologia, Stazione di biologia marina di Pirano
/ National Institute of Biology, Marine Biology Station Piran
SI-6330 Piran /**Pirano**, Fornače/**Fornace** 41, tel.: +386 5 671 2900,
fax +386 5 671 2901;
e-mail: annales@mbss.org, **internet:** www.zdjp.si

Redakcija te številke je bila zaključena 23. 12. 2023.

**Sofinancirajo/Supporto finanziario/
Financially supported by:**

Javna agencija za raziskovalno dejavnost Republike Slovenije
(ARRS) in Mestna občina Koper

Annales - Series Historia Naturalis izhaja dvakrat letno.

Naklada/Tiratura/Circulation: 300 izvodov/copie/copies

Revija Annales, Series Historia Naturalis je vključena v naslednje podatkovne baze / **La rivista Annales, series Historia Naturalis è inserita nei seguenti data base / Articles appearing in this journal are abstracted and indexed in:** BIOSIS-Zoological Record (UK); Aquatic Sciences and Fisheries Abstracts (ASFA); Elsevier B.V.: SCOPUS (NL); Directory of Open Access Journals (DOAJ).

To delo je objavljeno pod licenco / **Quest'opera è distribuita con Licenza / This work is licensed under a** Creative Commons BY-NC 4.0.



Navodila avtorjem in vse znanstvene revije in članki so brezplačno dostopni na spletni strani <https://zdjp.si/en/p/annalesshn> / **The submission guidelines and all scientific journals and articles are available free of charge on the website <https://zdjp.si/en/p/annalesshn>** / **Le norme redazionali e tutti le riviste scientifiche e gli articoli sono disponibili gratuitamente sul sito <https://zdjp.si/en/p/annalesshn>**



VSEBINA / INDICE GENERALE / CONTENTS

SREDOZEMSKE HRUSTANČNICE
SQUALI E RAZZE MEDITERRANEE
MEDITERRANEAN SHARKS AND RAYS**Christian CAPAPÉ, Christian REYNAUD & Farid HEMIDA**

- The First Substantiated Records of Smoothback Angelshark *Squatina oculata* (Squatinidae) from the Algerian Coast (Southwestern Mediterranean Sea) 143
Prvi utemeljeni zapis o pojavljanju pegastega sklata Squatina oculata (Squatinidae) iz alžirske obale (jugozagahodno Sredozemsko morje)

Tanguy CARPAYE-TAILAMEE & Mattéo MAUREL

- Perspective on Great White Sharks (*Carcharodon carcharias*) in the Northwestern Mediterranean and Recommendations for Further Field Research 151
Pogled na velikega belega morskega volka (Carcharodon carcharias) v severozahodnem Sredozemlju in priporočila za nadaljnje terenske raziskave

Hakan KABASAKAL

- A Preliminary Social Media Survey of Sharks and Batoids Captured in North Aegean Sea Commercial Fisheries 165
Preliminarna raziskava o morskih psih in skatih, ujetih v komercialnem ribištvu severnega Egejskega morja na osnovi podatkov iz socialnih medijev

Farid HEMIDA, Christian REYNAUD & Christian CAPAPÉ

- On The Occurrence of Norwegian Skate, *Dipturus nidarosiensis* (Rajidae) on the Algerian Coast (Southwestern Mediterranean Sea) 187
O pojavljanju norveške raže, Dipturus nidarosiensis (Rajidae), ob alžirski obali (jugozagahodno Sredozemsko morje)

Alen SOLDO

- The First Record of Complete Albinism in Common Stingray *Dasyatis pastinaca* (Linnaeus, 1758) 193
Prvi zapis o najdbi popolnega albinističnega primerka navadnega morskega biča, Dasyatis pastinaca (Linnaeus, 1758)

Christian CAPAPÉ, Christian REYNAUD & Farid HEMIDA

- Capture of a Giant Round Fantail Stingray *Taeniurus grabatus* (Dasyatidae) from the Algerian Coast (Southwestern Mediterranean Sea) 199
Ulov okroglega morskega biča (Taeniurus grabatus) (Dasyatidae) iz alžirske obale (jugozagahodno Sredozemsko morje)

IHTIOFAVNA
ITTOFAUNA
ICHTHYOFAUNA**Nicola BETTOSO & Diego BORME**

- Recent Record of the Atlantic Pomfret *Brama brama* (Bonnaterre, 1788) (Scombriformes: Bramidae) in the Gulf of Trieste (Northern Adriatic Sea) 207
Recentni zapis o pojavljanju kostanjevke Brama brama (Bonnaterre, 1788) (Scombriformes: Bramidae) v Tržaškem zalivu (severno Jadransko morje)

Alan DEIDUN, Bruno ZAVA, Alessio MARRONE, Johann GALTIES, Arnold SCIBERRAS & Maria CORSINI-FOKA

- The Confirmed Occurrence of *Schedophilus medusophagus* (Cocco, 1839) and *Petromyzon marinus* Linnaeus, 1758 in Maltese Waters, Central Mediterranean 213
Potrjeno pojavljanje meduzojedca, Schedophilus medusophagus (Cocco, 1839), in morskega piškurja, Petromyzon marinus Linnaeus, 1758, v malteških vodah, osrednje Sredozemsko morje

Gianni INSACCO, Gildo GAVANELLI, Bruno ZAVA & Maria CORSINI-FOKA

- An Overlooked Finding of *Mola alexandrini* (Ranzani, 1839) in the Adriatic Sea 221
Spregledana najdba vrste Mola alexandrini (Ranzani, 1839) v Jadranskem morju

Borut MAVRIČ, Lovrenc LIPEJ, Jelena BELAMARIĆ, Dule BULAJA, Matea ŠPIK & Petar KRUŽIĆ

- Additional Data on the Bump-Head Sunfish, *Mola alexandrini* (Ranzani, 1839) in the Adriatic Sea 229
Dodatni podatki o pojavljanju grbastega morskega meseca, Mola alexandrini (Ranzani, 1839) v Jadranskem morju

Lana KHREMA, Amina ALNESSER, Adib SAAD & Christian CAPAPÉ

First Substantiated Record of Painted Eel *Echelus myrus* (Ophichthidae) from the Syrian Marine Waters (Eastern Mediterranean Sea) 235
Prvi utemeljeni zapis o pojavljanju pisane jegulje, Echelus myrus (Ophichthidae), iz morskih voda Sirije (vzhodno Sredozemsko morje)

BIOTSKA GLOBALIZACIJA
GLOBALIZZAZIONE BIOTICA
BIOTIC GLOBALIZATION

Deniz ERGUDEM, Deniz AYAS & Zafer KUŞATAN

The Presence of *Hippocampus fuscus* Rüppell, 1838, in the Northeastern Mediterranean Sea 243
Pojavljanje morskega konjička vrste Hippocampus fuscus Rüppell, 1838, v severovzhodnem Sredozemskem morju

Christian CAPAPÉ & Adib SAAD

Confirmed Occurrence of Pharaoh Cardinal Fish *Apogonichthyooides pharaonis* (Osteichthyes: Apogonidae) from the Syrian Coast (Eastern Mediterranean Sea) 249
Potrjeno pojavljanje faraonskega kraljička Apogonichthyooides pharaonis (Osteichthyes: Apogonidae) iz sirske obale (vzhodno Sredozemsko morje)

Deniz ERGUDEM, Deniz AYAS & Cemal TURAN

First Record of *Epinephelus areolatus* (Epinephelidae) from the South-Eastern Mediterranean, Turkey 255
Prvi zapis o pojavljanju rdečepikčaste kirnje Epinephelus areolatus (Epinephelidae) v jugovzhodnem Sredozemskem morju (Turčija)

FAVNA
FAUNA
FAUNA

Andrea LOMBARDO & Giuliana MARLETTA

First Record of the Marine Heterobranch *Spinoaglaja wildpretii* (Ortea, Bacallado & Moro, 2003) (Cephalaspidea: Aglajidae) in Sicily (Ionian Sea) with Notes on Its Biology and Ecology 263
Prvi zapis o pojavljanju morskega zaškrgarja vrste Spinoaglaja wildpretii (Ortea, Bacallado & Moro, 2003) (Cephalaspidea: Aglajidae) na Siciliji (Jonsko morje) z zapiski o njeni biologiji in ekologiji

Marco FANTIN, Saul CIRIACO, Lisa FARESI, Chiara SCRIGNER, Juri VECCHI, Domen TRKOV & Lovrenc LIPEJ

First Evidence of the Presence of *Okenia picoensis* Paz-Sedano, Ortigosa & Pola, 2017 (Gastropoda: Nudibranchia) in the Adriatic Sea 271
Prvi zapis o pojavljanju vrste gološkrgarja Okenia picoensis Paz-Sedano, Ortigosa & Pola, 2017 (Gastropoda: Nudibranchia) iz Jadranskega morja

FLORA**FLORA****FLORA****Amelio PEZZETTA & MARCO PAOLUCCI**

La flora di Lama dei Peligni (Abruzzo, Italia): aggiornamento sistematico e nuove segnalazioni 279
Flora občine Lama dei Peligni (Abruci, Italija): sistematična posodobitev in nove najdbe

MISCELLANEA**AI VREZEC**

Bird (Aves) Descriptions of Joannes Antonius Scopoli (1723-1788): General Overview 327
Opisi ptic (Aves) Joannesa Antonisa Scopolija (1723-1788): osnovni pregled

OCENE IN POROČILA

RECENSIONI E RELAZIONI
REVIEWS AND REPORTS

Mitja KALIGARIČ

Recenzija knjige: Podobe iz modrine 365

IN MEMORIAM**Elide CATALFAMO**

Ricordo del professor Guido Bressan 369

Kazalo k slikam na ovitku 371

Index to images on the cover 371

received: 2023-06-21

DOI 10.19233/ASHN.2023.29

THE PRESENCE OF *HIPPOCAMPUS FUSCUS* RÜPPELL, 1838, IN THE NORTHEASTERN MEDITERRANEAN SEA

Deniz ERGUDEN

Marine Science Department, Faculty of Marine Science and Technology, Iskenderun Technical University, 31220 Iskenderun, Hatay, Turkey
e-mail: derguden@gmail.com; deniz.erguden@iste.edu.tr

Deniz AYAS

Fishing and Seafood Processing Technology Department, Faculty of Fisheries, University of Mersin, Mersin, Turkey

Zafer KUŞATAN

Climate Change and Zero Waste Department, Mersin Metropolitan Municipality, Mersin, Turkey

ABSTRACT

In the present study, five specimens of seahorse Hippocampus fuscus Rüppell, 1838 are reported from the northeastern Mediterranean waters. The visual records were obtained during an underwater scuba survey conducted from 27 to 30 March 2007 and on 5 April 2007, in a depth range of 2-3 m in Mersin port (Mersin Bay, Turkey). This is the first occurrence of H. fuscus in the northeastern Mediterranean coast of Turkey, specifically in Mersin Bay, and the second record in Turkish Mediterranean waters. Furthermore, the presence of many adults and juveniles ($n > 10$) in the observations indicates that this species has established a population in the region that has adapted well to the environment. This study addresses a significant gap in the literature and will be helpful for scientists working on fisheries, as well as providing an important contribution to the forthcoming Red List assessment in the Mediterranean.

Keywords: seahorse, Syngnathidae, extension, Mersin Bay, Turkey

PRESENZA DI *HIPPOCAMPUS FUSCUS* RÜPPELL, 1838, NEL MAR MEDITERRANEO NORD-ORIENTALE

SINTESI

Nel presente studio vengono segnalati cinque esemplari di cavalluccio marino Hippocampus fuscus Rüppell, 1838 provenienti dalle acque del Mediterraneo nordorientale. Le registrazioni visive sono state ottenute durante un'indagine subacquea condotta dal 27 al 30 marzo 2007 e il 5 aprile 2007, ad una profondità di 2-3 m nel porto di Mersin (baia di Mersin, Turchia). Questo è il primo ritrovamento di H. fuscus lungo la costa mediterranea nord-orientale della Turchia, in particolare nella baia di Mersin, e la seconda segnalazione nelle acque turche del Mediterraneo. Inoltre, la presenza di numerosi adulti e giovani ($n > 10$) indica che questa specie ha stabilito nella regione una popolazione che si è ben adattata all'ambiente. Questo studio affronta una lacuna significativa nella letteratura e sarà utile per i ricercatori che lavorano nel settore della pesca, oltre a fornire un importante contributo alla prossima valutazione della Lista Rossa nel Mediterraneo.

Parole chiave: cavalluccio marino, Syngnathidae, estensione, baia di Mersin, Turchia

INTRODUCTION

The genus *Hippocampus* Rafinesque, 1810, is represented by three species in Mediterranean waters: the short-snouted seahorse *Hippocampus hippocampus* (Linnaeus, 1758), the long-snouted seahorse *Hippocampus guttulatus* (Cuvier, 1829), and the seahorse *Hippocampus fuscus* Rüppel, 1838 (Golani et al., 2006).

The seahorse *Hippocampus fuscus* is a member of the Syngnathidae family and is found in shallow coastal waters of the western Indian Ocean, Red Sea, and Mediterranean Sea (Golani & Fine, 2002; Lourie et al., 2016; Froese & Pauly, 2023).

The occurrence of *H. fuscus* in the Mediterranean basin was first reported from the Israeli coast (Golani & Fine, 2002), and only later recorded in Turkish Mediterranean waters (Gokoglu et al., 2004). Recently, Mahapatro et al. (2017) reported the presence of this species in the Bay of Bengal in the northeastern part of the Indian Ocean.

In Turkey, *Hippocampus fuscus* was first reported in the Bay of Antalya by Gokoglu et al. (2004). Subsequently, it was included in the

annotated checklist of fish of Turkey (Fricke et al., 2007). However, up to now, no specimens of *H. fuscus* were reported from the northeastern Mediterranean coast of Turkey (Mersin Bay).

In the present study, we report the presence of confirmed *H. fuscus* specimens from the northeastern Mediterranean coast of Turkey, specifically Mersin Bay. This study not only fills an important gap in the literature, but also demonstrates the spread of this species towards the northeastern Mediterranean coasts of Turkey.

MATERIAL AND METHODS

From 27 to 30 March 2007 and on 5 April 2007, two adult and three juvenile specimens of *H. fuscus* were observed at a depth of 2 to 3 m during a scuba dive in Mersin port (Mersin Bay) ($36^{\circ}47'11.2''$ N, $34^{\circ}37'58.3''$ E) (Fig. 1). The specimens were photographed and recorded using a video camera (Canon PowerShot G12) (Fig. 2). The morphological descriptions and coloration of *H. fuscus* agree with those presented by Lourie et al. (2004) and Golani & Fine (2002).

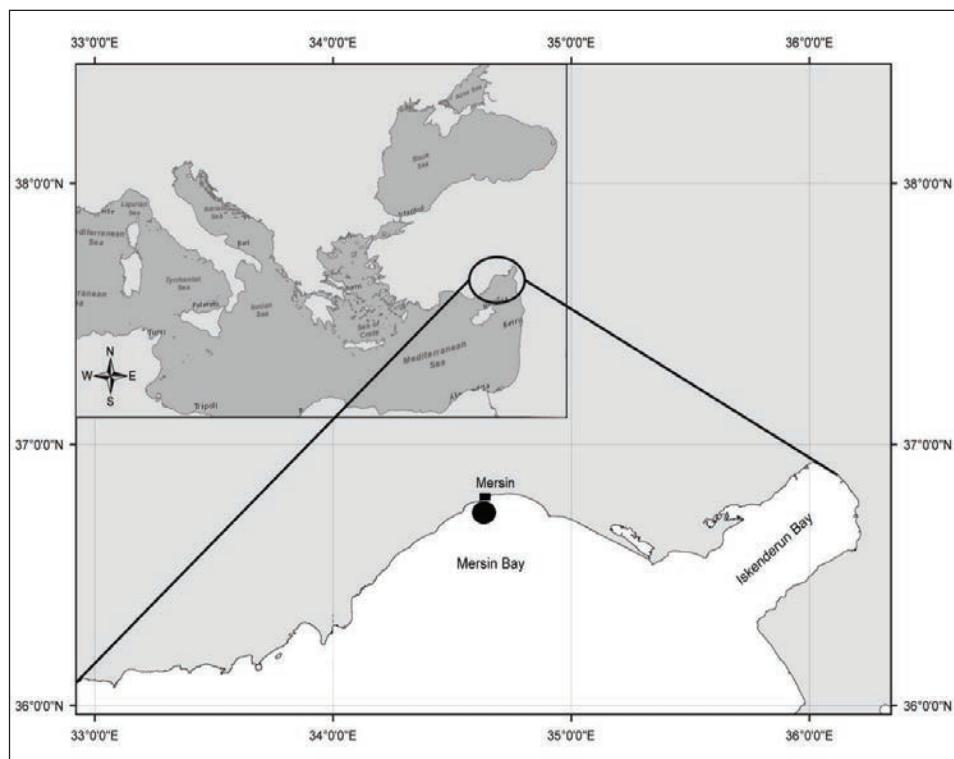


Fig. 1: Map indicating the capture site (•) of specimens of seahorse *Hippocampus fuscus* Rüppell, 1838 in Mersin Bay (northeastern Mediterranean).

Sl. 1: Zemljovid obravnavanega območja z označeno lokaliteto ulova primerkov morskega konjička vrste *Hippocampus fuscus* Rüppell, 1838 v zalivu Mersin (severovzhodno Sredozemsko morje).

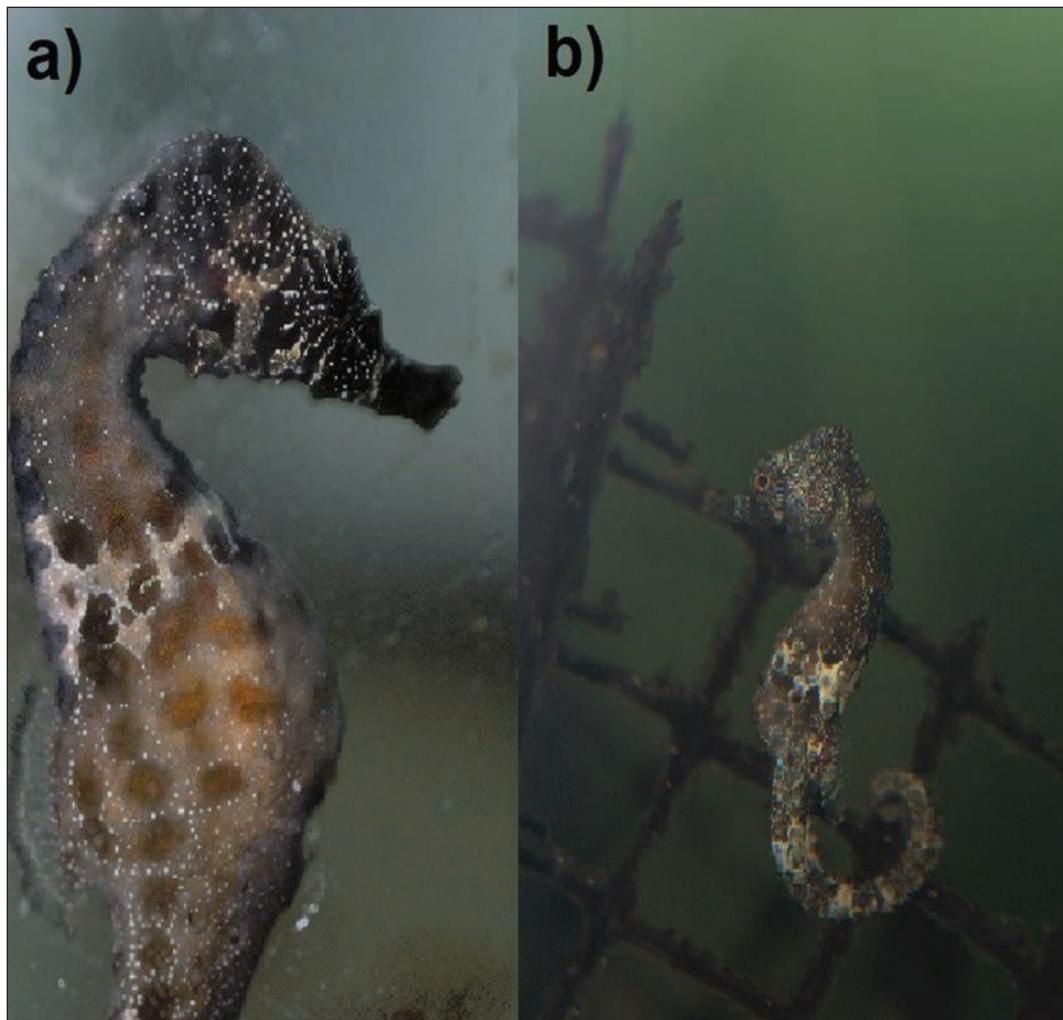


Fig. 2: Photographs of adult (a) and juvenile (b) specimens of *Hippocampus fuscus* from Mersin port, Turkey.

Sl. 2: Fotografiji odraslega (a) in juvenilnega primerka vrste *Hippocampus fuscus* iz zaliva Merein, Turčija.

RESULTS AND DISCUSSION

The following morphological features were observed in the two adult specimens: The bodies consisted of bony rings arranged in dermal plates and exhibited no spines. The total lengths of the specimens were 12.0 and 12.5 cm, respectively. The dorsal fin in each had 16/17 rays, the anal fin 4 rays, the pectoral fin 15/16 rays. The specimens had 11 trunk rings, 34/36 tail rings, their head lengths equalled 4.2 and 5.4 of their total lengths, respectively. The snouts were cylindrical in shape, and their lengths measured 2.4 and 2.5 times the head lengths, respectively. They each exhibited a prominent spine above the eyes. Their coronets were only slightly elevated and had tiny protrusions, and their heads were not larger than the bodies. There were no skin flaps on the heads.

Their body coloration varied from dark or pale brown to bright yellow and brown, featuring white spots on the trunk and head.

To date, three species of the genus *Hippocampus* have been known to inhabit the Mediterranean (Golani et al., 2006). Among these, *H. fuscus* is typically found in seagrass beds, particularly among stones and gravel, and often in the calm waters of harbors and bays (Golani et al., 2021). It feeds on zooplankton. In terms of physical appearance, male *H. fuscus* individuals have proportionally longer tails and shorter snouts compared to females (Vincent, 1990). The female lays eggs into the male's brood pouch located under its tail, where they remain for the entire gestation period (Breder & Rosen, 1966), which is approximately 14 days, but may vary depending on water temperature (Lourie et al., 1999).

H. fuscus usually occurs in the size range of 3 to 14 cm (Golani et al., 2021). The maximum recorded adult length for this species in the Mediterranean Sea is 14.4 cm (Golani & Fine, 2002). Individuals are commonly found at depths of 0–10 m (Foster & Vincent, 2004). In this study, seahorse specimens were discovered at a depth of 2–3 m, clinging to a rope. This depth range is in full agreement with the existing literature. Subsequent Scuba observations revealed an even greater abundance of seahorses.

The seahorse *H. fuscus* closely resembles the short-snouted seahorse *Hippocampus hippocampus* (Linnaeus, 1758), which also inhabits the Mediterranean Sea. However, in comparison, *H. fuscus* has a smaller body with a smoother surface, fewer tail rings, and a coronet that is not significantly raised above the arch of the neck. In contrast, *H. hippocampus* has more dorsal fin rays and fewer pectoral fins. Additionally, the snout length in the studied specimens of *H. fuscus* was approximately 2.5 times the head length, while for *H. hippocampus* it typically measures 2.8 times the head length. Compared to the third species of the genus *Hippocampus* present in the Mediterranean, *Hippocampus guttulatus*, *H. fuscus* lacks dorsal spines and dermal flaps on the head and neck (Golani et al., 2021).

H. fuscus is listed under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Froese & Pauly, 2023). According to CITES, all seahorse specimens in trade should have a minimum height of 10 cm (CITES II,

since 5.15.04). The main threats to this species are incidental capture in trawl fisheries, habitat degradation, and pollution. However, *H. fuscus* has not yet been considered for inclusion in the IUCN Red List category (IUCN, 2023).

Although Zenetos et al. (2008) mentioned in their study that *H. fuscus* is likely established in the Bay of Antalya, there was no information on its range expansion since it was first recorded and reported from this region in 2003. This current record is, therefore, the first suggestion of an eastward migration for *H. fuscus* in the Mediterranean coast of Turkey, and the first confirmation of the presence of *H. fuscus* in the northeastern Mediterranean coast of Turkey, specifically in Mersin Bay. Moreover, the presence of numerous adults and juveniles ($n > 10$) in the observations indicates that this species has established a population in this region and has successfully adapted to the environment.

CONCLUSIONS

There is limited information regarding changes in numbers and habitat status of seahorse species along Turkey's Mediterranean coast. Therefore, this study is very important for monitoring seahorse populations in the Mediterranean and determining and assessing their conservation status. Moreover, the findings of this study can provide valuable insight for decision-makers and fisheries managers. However, it is essential to emphasize the need for further monitoring and additional studies in this area.

POJAVLJANJE MORSKEGA KONJIČKA VRSTE *HIPPOCAMPUS FUSCUS* RÜPPELL, 1838, V SEVEROVZHODNEM SREDOZEMSKEM MORJU

Deniz ERGUDEN

Marine Science Department, Faculty of Marine Science and Technology, Iskenderun Technical University, 31220 Iskenderun, Hatay, Turkey
e-mail: derguden@gmail.com; deniz.erguden@iste.edu.tr

Deniz AYAS

Fishing and Seafood Processing Technology Department, Faculty of Fisheries, University of Mersin, Mersin, Turkey

Zafer KUŞATAN

Climate Change and Zero Waste Department, Mersin Metropolitan Municipality, Mersin, Turkey

POVZETEK

Avtorji poročajo o pojavljanju petih primerkov morskega konjička vrste *Hippocampus fuscus* Rüppell, 1838 v severovzhodnih sredozemskih vodah. Opazili so jih potapljači z avtonomno potapljaško opremo na podvodnih vzorčenjih med 27. in 30. marcem 2007 in 5. aprila 2007, opravljenih v globinskem pasu 2-3 m v pristanišču Mersin (zaliv Mersin, Turčija). To je prvi zapis o pojavljanju vrste *H. fuscus* v severovzhodnem Sredozemskem morju v Turčiji, natančneje v zalivu Mersin, in drugi zapis o pojavljanju v turških sredozemskih vodah. Poleg tega kaže pojavljanje velikega števila odraslih in mladostnih primerkov ($n > 10$), da se je vrsta v tem okolju že ustalila in na njega dobro prilagodila. Ta raziskava odpravlja veliko vrzel v strokovni literaturi in bo v pomoč strokovnjakom, ki se ukvarjajo z ribištrom, obenem pa bo pomembno prispevala k oceni v prihajajočem Rdečem seznamu v Sredozemlju.

Ključne besede: morski konjički, Syngnathidae, širjenje areala, zaliv Mersin, Turčija

REFERENCES

- Breder, C.M. & D.E. Rosen (1966):** Modes of reproduction in fishes. T.F.H. Publications: Neptune City, New Jersey, 941 pp.
- Fricke, R., M. Bilecenoglu & H.M. Sarı (2007):** Annotated checklist of fish and lamprey species of Turkey, including a Red List of threatened and declining species. Stuttgart. Beitr. Naturkund., Serie A (Biologie), 706, 1-169.
- Foster, S.J. & A.C.J. Vincent (2004):** Life history and ecology of seahorses: implications for conservation and management. J. Fish Biol., 65(1), 1-61.
- Froese, R. & D. Pauly (Eds.) (2023):** FishBase. World Wide Web electronic publication. www.fishbase.org. Version (02/2023) (Last accession: 27 May 2023).
- Gokoglu, M., T. Bodur & Y. Kaya (2004):** First records of *Hippocampus fuscus* and *Syngnathus rostellatus* (Osteichthyes: Syngnathidae) from the Anatolian coast (Mediterranean Sea). J. Mar. Biol. Assoc. UK., 84, 1093-1094.
- Golani, D. & M. Fine (2002):** On the occurrence of *Hippocampus fuscus* in the eastern Mediterranean. J. Fish Biol., 60, 764-766.
- Golani, D., B. Ozturk & N. Başusta (2006):** Fishes of the eastern Mediterranean. Publication. No. 24, Turkish Marine Research Foundation: Istanbul, Turkey, 260 pp.
- Golani, D., E. Azurro, J. Dulčić, E. Massuti & L. Orsi-Relini (2021):** Atlas of exotic fishes in the Mediterranean Sea. 2nd Edition. (F. Briand ed.). CIESM Publishers, Paris, Monaco, 365 pp.
- IUCN, (2023):** The IUCN Red List of Threatened Species. Version 2022-2. Available at: www.iucnredlist.org. (Last accession: 26 May 2023).
- Kuiter, R.H. (2000):** Seahorses, Pipefishes and their relatives: A comprehensive guide to Syngnathiformes. TMC, Chorleywood, 240 pp.
- Lourie, S.A., A.C.J. Vincent & H.J. Hall (1999):** Seahorses: an identification guide to the world's species and their conservation. Project Seahorse, London, 214 pp.
- Lourie, S.A., S.J. Foster, E.W.T. Cooper & A.C.J. Vincent (2004):** A guide to the identification of Seahorses. Project Seahorse and TRAFFIC North America. University of British Columbia and World Wildlife Fund, Washington D.C, 114 pp.
- Lourie, S.A., R.A. Pollom & S.J. Foster (2016):** A global revision of the seahorses *Hippocampus* Rafinesque 1810 (Actinopterygii: Syngnathiformes): taxonomy and biogeography with recommendations for further research. Zootaxa, 4146(1), 1-66.
- Mahapatro, D., R.K. Mishra & S. Panda (2017):** Range extension of a vulnerable Seahorse *Hippocampus fuscus* (Actinopterygii: Syngnathidae) on the northeastern Bay of Bengal coast. Mar. Biodiv. Rec., 10(6), 1-6.
- Vincent, A.C.J. (1990):** Reproductive ecology of seahorses. Ph.D. thesis, Cambridge University, Cambridge, UK. 101 pp.
- Zenetos, A., E. Meric, M. Verlaque, P. Galli, C.F. Boudouresque, A. Giangrande, M.E. Cinar & M. Bilecenoglu (2008):** Additions to the annotated list of marine alien biota in the Mediterranean with special emphasis on Foraminifera and Parasites. Medit. Mar. Sci., 9(1), 119-165.