

# ANNALES

*Anali za istrske in mediteranske študije*  
*Annali di Studi istriani e mediterranee*  
*Annals for Istrian and Mediterranean Studies*  
*Series Historia Naturalis, 33, 2023, 1*





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**Series Historia Naturalis, 33, 2023, 1**

ISSN 1408-533X  
e-ISSN 2591-1783

UDK 5

Letnik 33, leto 2023, številka 1

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Založništvo PADRE d.o.o.

**Izdajatelj/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®

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Redakcija te številke je bila zaključena 23. 06. 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/copiesRevija *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/>  
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THE FIRST WELL-DOCUMENTED RECORD OF MALTESE SKATE *LEUCORAJA MELITENSIS* (RAJIDAE) FROM THE ALGERIAN COAST  
(SOUTHWESTERN MEDITERRANEAN SEA)

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ABSTRACT

*The authors present a well-documented record of the first specimen of Maltese skate *Leucoraja melitensis* (Clark, 1926) ever to be reported from the coast of Algeria. According to data provided by the fishermen, it was an adult male measuring 253 mm in disc width, 232 mm in disc length and 455 mm in total length, and weighing 300 g approximately. Although the occurrence of this specimen is more likely attributable to migrations from other eastern Mediterranean areas such as the Tunisian coast, the possibility that it may indicate the presence of a viable population of *L. melitensis* in Algerian waters cannot be excluded.*

**Key words:** Rajidae, first record, migration, extension range, distribution, Algerian coast

PRIMO RITROVAMENTO DOCUMENTATO DI RAZZA MALTESE *LEUCORAJA MELITENSIS*  
(RAJIDAE) LUNGO LA COSTA ALGERINA (MEDITERRANEO SUD-OCCIDENTALE)

SINTESI

*Gli autori presentano un ritrovamento ben documentato del primo esemplare di razza maltese *Leucoraja melitensis* (Clark, 1926) mai segnalato lungo le coste dell'Algeria. Secondo i dati forniti dai pescatori, si trattava di un maschio adulto che misurava 253 mm di larghezza del disco, 232 mm di lunghezza del disco e 455 mm di lunghezza totale, con un peso di circa 300 g. Sebbene la presenza di questo esemplare sia più probabilmente attribuibile a migrazioni da altre aree del Mediterraneo orientale, come la costa tunisina, non si può escludere che possa indicare la presenza di una popolazione vitale di *L. melitensis* nelle acque algerine.*

**Parole chiave:** Rajidae, primo ritrovamento, migrazione, estensione dell'areale, distribuzione, costa algerina

## INTRODUCTION

The Maltese skate *Leucoraja melitensis* (Clark, 1926) is a species endemic to the Mediterranean Sea and its distribution seems to be restricted to the Sicilian Channel (Relini *et al.*, 2010; Dulvy & Walls, 2015). However, investigations carried out in the Aegean Sea allowed to collect some specimens (Damalas & Vassilopoulou, 2011), and Ferretti *et al.* (2013) noted that a single specimen had been recorded during a bottom trawl survey in this area in 2005.

The species used to be caught in relative abundance in Tunisian waters and the 674 specimens captured in this area between 1970 and 1975 provided the opportunity for a study of the reproductive biology of the species (Capapé, 1977). Investigations conducted by Mnasri (2008) in northern Tunisian area allowed for a collection of 7 specimens only. Captures of *L. melitensis* are extremely rare in southern Tunisian areas such as the Gulf of Gabès, probably due to the fact that the local fishing fleets operate outside its area of occurrence (Ennajar, 2002). More recently, Ben Amor (2018) recorded a juvenile specimen in northern Tunisia and noted a drastic decline of the species in this area, where it is already considered to be critically endangered.

Along the Algerian coast, *L. melitensis* is considered a rare species. Surveys regularly monitoring waters off the Algerian coast have allowed the collection of the *L. melitensis* specimen described in the present paper, which also provides comments on the distribution of the species in the area.

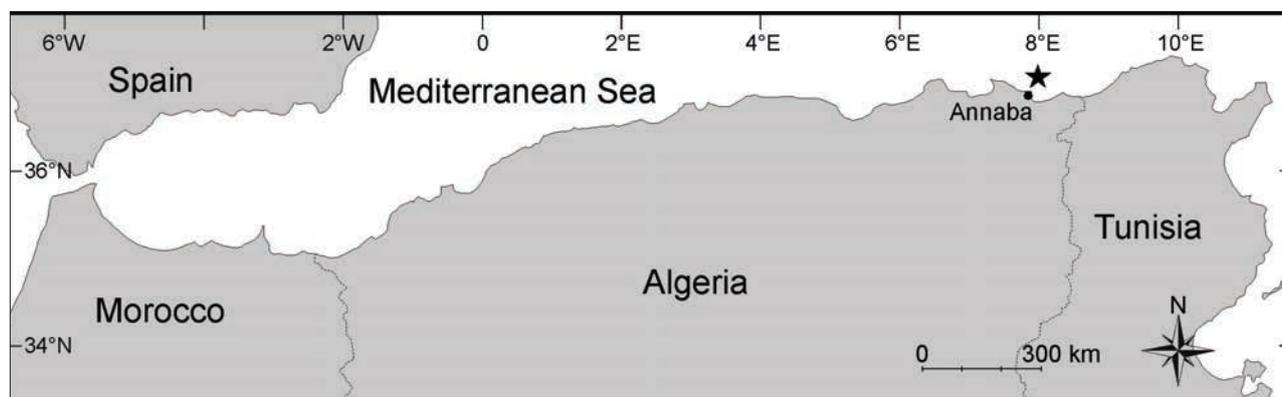
## MATERIAL AND METHODS

The present specimen of *L. melitensis* was caught by commercial trawl on 14 November 2016

off Annaba, a city located in the eastern Algerian coast, 37°06'10" N and 7°51'02" E (Fig. 1). It was captured at a depth of 337 m, on sandy/muddy bottom, together with scorpaenid, lophiid and rajid species, including several thornback skates *Raja clavata* Linnaeus, 1758 and a brown ray *R. miraletus* Linnaeus, 1758. After being measured and photographed, the specimen of rare Maltese skate was carefully examined and identified using the relevant literature (Serena *et al.*, 2020; Barone *et al.*, 2022). It was generally difficult to get morphometric measurements as the specimen was rapidly sold for local consumption together with other fish species.

## RESULTS AND DISCUSSION

The studied specimen of *L. melitensis* measured 253 mm in disc width, 232 mm in disc length and 455 mm in total length, and weighed 300 g approximately according to interviews with the fishermen. It was a very large specimen displaying well-developed, calcified, and rigid claspers, characteristic of adult males (Capapé, 1977). Tortonese (1956) found in the Italian waters a specimen measuring 383.9 mm TL, while the largest male and the largest female measured 222 and 228 mm DW, and 400 and 420 mm TL, respectively (Capapé, 1975). The present Algerian specimen was identified as *L. melitensis* via a combination of main morphological characters: dorsal surface almost rugose except in the centre of the disc, pelvic fins rather smooth, snout and tail with dense prickles; ventral surface smooth except for snout, disc margins and tail; two thorns in front and four around the inner margin of each eye, one on each shoulder, eight along the nape, a median series discontinuous from the central area of body



**Fig. 1:** Map of the Algerian coast indicating the capture site of *Leucoraja melitensis* off Annaba (black star).  
**Sl. 1:** Zemljevid alžirske obale z označeno lokaliteto ulova primerka vrste *Leucoraja melitensis* v vodah okoli Annabe (črna zvezdica).

to tail base; tail slender with a median groove in the anterior part, flanked by a parallel row of thorns on either side, no groove on the hind part of tail with three rows of thorns – a median and two lateral rows –, no thorns between the two dorsal fins; dorsal surface ochre to greyish-brown, with one large, darkish and vermiculated eye spot and three fainter dusky blotches on each pectoral fin (Fig. 2).

The general shape, morphometric measurements, meristic counts and coloration recorded in the present specimen are in total agreement with Clark (1926), Capapé (1975), Stehmann & Bürkel (1984), Serena (2005), Serena *et al.* (2010) and Last *et al.* (2016).

Previously, *L. melitensis* was reported from the Algerian coast in the historical book by Dieuzeide *et al.* (1953) concerning the local ichthyofauna. However, it appears that the two specimens reported by Dieuzeide *et al.* (1953, see page 105) were captured in the Skerki Bank and in the Gulf of Gabès, *i.e.*, in Tunisian and not Algerian waters. Even though the species was frequently cited in the latter region, no specimen was available for confirmation, and such occurrences can be considered as doubtful or even wrong.

Therefore, the finding of *L. melitensis* presented herein constitutes the first well-documented record of the species from the Algerian coast, which could be taken as indication of the species' presence in this area and consequently support its inclusion in the list of local ichthyofauna. On the other hand, the specimen could have migrated from Tunisian waters, where the species used to be caught in relative abundance, but is nowadays considered endangered. Recruitment from close eastern areas remains questionable, as does the



**Fig. 2.** The *Leucoraja melitensis* captured off the Algerian coast, scale bar = 50 mm.

**Sl. 2:** Primerek vrste *Leucoraja melitensis*, ujet ob alžirski obali, merilo = 50 mm.

presence of a viable population in Algerian waters, even if such a hypothesis cannot be totally ruled out. In the coast of Algeria, *L. melitensis* is probably just an occasional species.

## PRVI POTRJENI PRIMER O POJAVLJANJU SKATA VRSTE *LEUCORAJA MELITENSIS* (RAJIDAE) IZ ALŽIRSKE OBALE (JUGOZAHODNO SREDOZEMSKO MORJE)

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### POVZETEK

Avtorji poročajo o potrjenem primeru pojavljanja vrste *Leucoraja melitensis* (Clark, 1926) ob obali Alžirije. Na podlagi podatkov ribičev je šlo za odraslega samca, ki je meril 253 mm v premeru diska, 232 mm v dolžini diska in 455 mm v telesno dolžino ter tehtal približno 300 g. Čeprav avtorji pripisujejo pojav obravnavane vrste migraciji iz drugih vzhodnih sredozemskih predelov kot npr. tunizijske obale, dopuščajo možnost, da obstaja viabilna populacija v alžirskih vodah.

**Ključne besede:** Rajidae, prvi zapis, selitev, širjenje areala, razširjenost, alžirska obala

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