



**CONVENTION ON  
MIGRATORY  
SPECIES**

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Agenda Item 31.4

**PROPOSAL FOR THE INCLUSION OF  
THE LUSITANIAN COWNOSE RAY (*Rhinoptera marginata*)  
ON APPENDIX II AND THE MEDITERRANEAN SEA POPULATION OF THIS SPECIES  
ON APPENDIX I OF THE CONVENTION\***

Summary:

The Government of Israel has submitted the attached proposal for the inclusion of the Lusitanian Cownose Ray (*Rhinoptera marginata*) on Appendix II and the Mediterranean Sea population of the same species on Appendix I of CMS.

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**PROPOSAL FOR THE INCLUSION OF  
THE LUSITANIAN COWNOSE RAY (*Rhinoptera marginata*)  
ON APPENDIX II AND THE MEDITERRANEAN SEA POPULATION OF THIS SPECIES  
ON APPENDIX I OF THE CONVENTION**

**A. PROPOSAL**

Inclusion of the species *Rhinoptera marginata* on Appendix II, and the Mediterranean Sea population of the species on Appendix I.

**B. PROPONENT**

Israel

**C. SUPPORTING STATEMENT**

**1. Taxonomy**

- 1.1 Class Elasmobranchii
- 1.2 Order Myliobatiformes
- 1.3 Family Myliobatidae
- 1.4 Genus, species, including author and year (accepted name)  
*Rhinoptera marginata* (Geoffroy Saint-Hilaire, 1817)

1.5 Scientific synonyms (unaccepted names)

*Myliobatis marginata*  
*Rhinoptera peli*

1.6 Common names

English: Lusitanian cownose ray  
French: Mourine lusitanienne, Mourine échancrée  
Spanish: Gavilán lusitánico  
Italian: Rinottera

Photo of *Rhinoptera marginata* (from [www.fishi-pedia.com](http://www.fishi-pedia.com); no photographer named)



## 2. Overview

*Rhinoptera marginata* is a large (to 200 cm disc width) benthopelagic ray inhabiting the western coast of Africa (eastern Atlantic Ocean) as well as the coastal waters of the Mediterranean Sea.

This large ray has very low fecundity (one pup per year), a long generation period (27.5 years), and a relatively large size. These sensitive life history characteristics, combined with migratory schooling behavior in shallow, near-shore habitats, which leads to high catchability in intensive coastal fisheries, suggest that continued fishing pressure is very likely to be unsustainable.

Like other species of the genus *Rhinoptera*, the species in this proposal is also migratory. This has been noted especially from movement of large schools along the west African coast. In the Mediterranean Sea the species is considered rare, but recent observations of schools of *R. marginata* confirm its occurrence and schooling behavior there, too.

The species is threatened mainly by overfishing and habitat destruction. In addition, *Rhinoptera* are destructive to commercial oyster and clam beds, so persecution from aquaculture operators (human-wildlife conflict) poses an additional likely threat.

The most recent assessment of the conservation status of the species was the global level assessment for the IUCN Red List conducted in 2020, which categorized *R. marginata* as Critically Endangered - CR A2d (Jabado et al., 2021). In the Mediterranean Sea, they are widespread but not common, therefore the Mediterranean and European assessments for the IUCN Red List (Ferreti et. al., 2015, 2016) categorized *R. marginata* as Data Deficient – DD.

Based on susceptibility to fisheries, its schooling behavior, limited productivity, and noted declines in other large rays (e.g., eagle rays) in general across its range, it is suspected that the *R. marginata* has undergone a population reduction of >80% over the last three generation lengths (83 years) (Jabado et al., 2021).

An IUCN-CMS review on migratory sharks and rays, regarding members of the genus *Rhinoptera* (the cownose rays), suggested as follows:

"Collaborative management for these species is unknown – indeed there seem to be very few national management measures in place. CMS could help to instigate management cooperation for these threatened migratory rays." (IUCN Species Survival Commission's Shark Specialist Group, 2007).

## 3 Migrations

### 3.1 Kinds of movement, distance, the cyclical and predictable nature of the migration

Worldwide there are seven species of *Rhinoptera*, and there are many published reports on their migratory behavior, e.g. Clark, 1963; Schwartz, 1990; Ogburn, 2018.

*R. marginata* is well-known as a migratory species, with schools migrating along the coast of west Africa (IUCN Species Survival Commission's Shark Specialist Group, 2007), but there is little published data on these migrations in the scientific literature. Even less is documented in the scientific literature about their migratory behavior in the Mediterranean Sea (Tiraşin & Basuşta, pers. comm.).

It can be inferred that the schooling and migrations are related to seasonal breeding and parturition events (Tiraşin & Basuşta, 2018), as breeding appears to take place in June and parturition the following year in April-May (Government of France, 2023).

The species *R. marginata* was included in a CMS-commissioned study of migratory sharks and rays (IUCN Species Survival Commission's Shark Specialist Group, 2007), which was approved by the 14th Meeting of the CMS Scientific Council (Bonn, Germany, 14-17 March 2007). About the genus *Rhinoptera*, the study stated: "the cownose rays tend to swim almost continuously in groups or very large schools. Many species are considered to be seasonally migratory". Specifically, about *R. marginata* the review concluded: "Often forming large groups swimming near the surface, inferred migratory."

The 14th Meeting of the CMS Scientific Council, approved this review and also supported the conclusion of its' Taxonomic Working Group that *R. marginata* meets the criteria for listing in the CMS Appendices (UNEP/CMS/ScC14/Report, 2007).

### 3.2 Proportion of the population migrating, and why that is a significant proportion

Unknown.

## 4 Biological data (other than migration)

### 4.1 Distribution (current and historical)

Found in the eastern Atlantic Ocean (west Africa) from Portugal to northern Angola, and in the Mediterranean Sea. It is not present in the Black Sea and has not been recorded from Cape Verde and São Tomé and Príncipe.

Although commonly captured in various west African fisheries due to its abundance inshore, the species is considered generally rare but widespread in the Mediterranean Sea.

### 4.2 Population (estimates and trends)

No population estimates are available.

In the Mediterranean Sea, it is apparently rare across most of the western and central Mediterranean but more common in the eastern region (Levantine basin). Although considered generally rare in the Mediterranean Sea, there are occasionally published reports of aggregations, including a recent report from May 2023 of a large aggregation of hundreds of *R. marginata* near Hadera, Israel (Rinat, 2023).

Based on susceptibility to fisheries, its schooling behavior, limited productivity, and noted declines in other large rays (e.g., eagle rays) in general across its range, it is suspected that *R. marginata* has undergone a population reduction of >80% over the last three generation lengths (83 years) (Jabado et al., 2021).

### 4.3 Habitat (short description and trends)

*R. marginata* is a semipelagic or benthopelagic species, found in tropical to warm temperate coastal waters where it is relatively common in west Africa, but uncommon in the Mediterranean Sea. Gregarious, often forming large groups swimming near the surface, and occurring from shoreline to about 30 m depth, on soft bottoms, it is therefore exposed to being caught by nearshore fishing gear, mainly purse seines and gillnets, and occasionally by trawls. Its schooling behavior is a factor that enhances the risk of many individuals being caught in one single haul of trawls and gillnets.

#### 4.4 Biological characteristics

Large size, with disk width (DW): 50-102 cm (max 200 cm). Viviparous, usually with an annual litter of a single pup. Males estimated to mature at ~75 cm DW and females at ~80 cm DW.; size at birth inferred of about 22–24 cm DW. Disk is much broader than long. Head protruding from disk. Front of head distinctly concave. Deeply incised subrostral lobe. Snout is divided into two parts. Eyes and spiracles oriented sideways. Broad mouth. Slender tail with a single dorsal fin and one or more spines on its base. Color is brown greenish to bronze dorsal surface with white ventral surface.

Reproduction is lecithotrophic viviparous with annual litter size of one pup; breeding appears to take place in June and parturition the following year in April-May; size-at-birth of 23 cm DW (Valadou et al., 2006; Tiraşin & Basuşta, 2018). There is no information on this species' age-at-maturity and maximum age, hence, generation length was inferred based on that of *Rhinoptera bonasus*, inferred to be 14.3 years (Fisher et al., 2013). *R. marginata* has a much larger maximum size than *R. bonasus* (200 cm vs. 104 cm DW) and thus based on scaled-size, the generation length for *R. marginata* is inferred to be 27.5 years (Jabado et al., 2021).

#### 4.5 Role of the taxon in its ecosystem

Feeds on demersal invertebrates.

### 5. Conservation status and threats

#### 5.1 IUCN Red List Assessment (if available)

- Global assessment (Jabado et al., 2021): Critically Endangered - CR A2d
- Mediterranean assessment (Ferretti et al., 2016): Data Deficient DD
- Europe Assessment (Ferretti et al., 2015): Data Deficient DD

#### 5.2 Equivalent information relevant to conservation status assessment

None.

#### 5.3 Threats to the population (factors, intensity)

The main threats are fisheries and habitat degradation. It is difficult to quantify the extent of these factors on the species, but based on the intense levels of fisheries for sharks and rays throughout its range, and the concomitant decreases in most ray species, the threat level can be inferred as intense and increasing.

In the eastern Atlantic, there are intensive directed fisheries for sharks and rays, e.g. at Banc d'Arguin, Mauritania (Leurs, 2018). This species' schooling behavior makes them especially susceptible to overfishing as relatively large numbers can be caught in one haul.

Destructive fishing practices including intensive inshore and offshore trawling with increasing incursions into coastal areas, the use of explosives and chemicals in inshore areas, and the use of small-sized beach and purse seine nets in both nearshore and offshore regions, have contributed to depleted fish stocks across this region (Jabado et al., 2021). This region also has some of the highest levels of illegal, unreported, and unregulated (IUU) fishing in the world, and it is estimated that illegal catches exceed more than 40% of the reported legal catch (Pauly & Zeller, 2016).

In the Mediterranean Sea there are records of the species in fisheries by-catch, as well as the accidental capture of a single school of 129 individuals in 2013 in Türkiye (Tıraşın & Basuşta, 2018).

The shallow nearshore regions preferred by the species, are threatened by habitat loss and environmental degradation that can lead to indirect and sublethal sources of mortality. Coastal habitat destruction and degradation is ongoing across most areas due to conversion of coastal lagoons and mangrove deforestation for agriculture (e.g., rice and salt) and aquaculture (e.g., shrimp, fish culture, and fish production); extensive oil and gas exploration, drilling, and production; the effects of rapid urban expansion from growing coastal populations and unplanned tourism development; pollution (unregulated sewage effluents, agricultural runoff, hydrocarbon, and heavy metals); sedimentation and siltation; and changes to the hydrological cycle from the building of dams leading to dramatic levels of habitat loss evident across the region (Jabado et al., 2021).

#### 5.4 Threats connected especially with migrations

The species' schooling behavior in relatively shallow water makes it particularly susceptible to targeted fisheries and also to unintended capture, for example, over 30 dead *R. marginata* washed up on the shore in northern Israel in February 2023, apparently discarded as by-catch (YNET News, 2023)

Their schooling behavior makes them especially susceptible to capture of aggregations in a single haul, even accidentally, e.g. Tıraşın & Basuşta (2018) reported accidental capture of 129 individuals.

When an export market developed around 2007 with Spain, targeted artisanal fisheries for this species emerged. Fishers increasingly used drift nets to capture this species at known aggregations sites. Peak landings occurred between March and May, corresponding to the breeding season (Jabado et al., 2021).

#### 5.5 National and international utilization

Generally, meat is used locally, while fins are dried and then exported. For example, in Mauritania, *R. marginata* was caught as bycatch in the 1990s and early 2000s during the 'courbine' (*Argyrosomus regius*) fishing season and, like other species of sharks and rays, was processed salted and dried (M. Ducrocq, unpubl. data, 2020, cited in Jabado et al., 2021).

## 6. Protection status and species management

### 6.1 National protection status

All countries across the species' range have marine protected areas (MPA's) as well as legislation in place restricting certain fishing practices, based on gear, area, season, size, by-catch disposal, reporting requirements etc., and some of these rules may also relate to rays.

Fisheries taking *R. marginata* are generally poorly managed throughout large parts of the species' range and it is unlikely that fisheries pressure will decrease in the near future.

In Mauritania, elasmobranchs are allowed to be caught only 2 months a year, and the most-caught rays species is *R. marginata* (Leurs, 2018).

Only a few countries (such as Israel and Türkiye) have outright bans regarding fishing rays, and consider them as protected species. Apparently, no country has specific restrictions regarding *R. marginata*.

A number of range states have already prepared, or are developing, a National Plan of Action to conserve sharks and rays and manage their sustainability under the Food and Agriculture Organization of the United Nations (FAO) International Plan of Action for the Conservation and Management of Sharks (IPOA).

## 6.2 International protection status

None. Proposed for Annex II of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean of the Barcelona Convention (Government of France, 2023). This proposal will be decided upon at the 23rd Meeting of the Contracting Parties to the Barcelona Convention (COP 23), which will take place in December 2023 in Portoroz, Slovenia. This listing would concomitantly establish restrictions incumbent upon members of the General Fisheries Commission for the Mediterranean (GFCM)<sup>1</sup>; pursuant to Rec. GFCM/36/2012/1 (which is a binding regulation on GFCM member states), as listed species cannot be retained on board, trans-shipped, landed, transferred, stored, sold, displayed or offered for sale, and must be released unharmed and alive, to the extent possible.

## 6.3 Management measures

There are no known management measures in place for this species.

## 6.4 Habitat conservation

All the range states have marine protected areas (MPA's) with various levels of protection. There is variation in the effectiveness of enforcement of the conservation of these habitats. The Regional Marine Protected Areas Network in west Africa (RAMPAO) was set up in 2007 across six countries (Mauritania to Sierra Leone) to conserve representative samples of critical habitats and protect threatened species but many of these protected areas lack capacity, funding, infrastructure and governance for effective enforcement and conservation. Fishing for sharks and rays has been prohibited in the Parc National du Banc d'Arguin in Mauritania since 2003, but sharks and rays are still frequently landed as bycatch (M. Diop, unpubl. data, 2020, cited in Jabado et al., 2021). Gabon has recently expanded marine protected area coverage to 26% of their Exclusive Economic Zone; other countries such as the Republic of the Congo, and Côte d'Ivoire are still in the process of expanding their marine protected area networks (Jabado et al., 2021).

## 6.5 Population monitoring

None.

# 7. Effects of the proposed amendment

## 7.1 Anticipated benefits of the amendment

Hopefully, this listing will induce the regional fishing bodies in the range states to enforce better sustainability of the fishery and to reduce fishing pressure on this critically-endangered species.

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<sup>1</sup> The General Fisheries Commission for the Mediterranean (GFCM) is a regional fisheries management organization (RFMO) composed of 23 contracting parties: 19 Mediterranean states (Albania, Algeria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia); 3 Black Sea states (Romania, Bulgaria, Turkiye), the European Union; as well as 6 cooperating non-contracting parties (Bosnia and Herzegovina, Georgia, Jordan, Moldova, Saudi Arabia, Ukraine). <https://www.fao.org/gfcm/about/membership/en/>

Following listing in CMS Appendix II, *R. marginata* should also be listed in Annex 1 of the Memorandum of Understanding on the Conservation of Migratory Sharks (MOU-Sharks) under the CMS.

## 7.2 Potential risks of the amendment

None.

## 7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

Not relevant.

## 8. Range States

Albania; Algeria; Angola; Benin; Bosnia and Herzegovina; Cameroon; Congo; Cyprus; Côte d'Ivoire; Democratic Republic of the Congo; Egypt; Equatorial Guinea; France; Gabon; Gambia; Ghana; Greece; Guinea; Guinea-Bissau; Israel; Italy; Lebanon; Liberia; Libya; Mauritania; Monaco; Montenegro; Morocco; Nigeria; Portugal; Senegal; Sierra Leone; Slovenia; Syrian Arab Republic; Togo; Tunisia; Türkiye; United Kingdom (Gibraltar).

## 9. Consultations

The proponents wrote a letter of consultation which was sent out to all range states by the Secretariat. Responses are included as an annex to this proposal.

The proponents also consulted with the IUCN Shark Specialist Group, and with various experts from academia and from NGOs.

## 10. Additional remarks

## 11. References

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## ANNEX

Responses to the Secretariat's letter of consultation were received from Albania and the United Kingdom, as follows:

### 1. Albania

Regarding the first species *Glaucostegus cemiculus*, according to our national experts, it hasn't been observed in the Albanian territorial waters or its coast, even though we acknowledge that it is like other guitarfish species of the family *Rhinobatidae*, hold critically endangered status.

The same goes for *Rhinoptera marginata*, which is a very rare species, and it hasn't been seen or documented to exist in Albania.

So for the above species since we do not have any evidence of existence or information, we can't give any opinion whether to be or not to be listed.

Regarding *Aetomylaeus bovinus*, there is evidence to be seen in Albania, even that this species is critically endangered, during the period October – December. For this species we find useful its listing in respective appendices.

Klodiana Marika

### 2. United Kingdom

In brief, in the time available we have the following comments for your consideration:

- All three are Critically Endangered, which meets the status criterion for Appendix I, but there appears to be no information about their migrations- which would need to be included to demonstrate how the species meet the migratory criterion.
- It would be useful to include information on the benefits of the proposed listings, e.g. including combining the listing proposal with a Concerted Action.
- Lastly, we would have preferred to see the proposal documents themselves in addition to the letter- and would need to see these to come to any decision on supporting these proposals.

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