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MIGRATORY  
SPECIES**

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Agenda Item 31.4

**PROPOSAL FOR THE INCLUSION OF  
THE BLACKCHIN GUITARFISH (*Glaucostegus cemiculus*) 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 blackchin guitarfish (*Glaucostegus cemiculus*) on Appendix II and the Mediterranean Sea population of the same species on Appendix I of CMS.

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MEDITERRANEAN SEA POPULATION OF THIS SPECIES ON APPENDIX I OF THE  
CONVENTION**

**A. PROPOSAL**

Inclusion of the species *Glaucostegus cemiculus* 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 Chondrichthyes

1.2 Order Rhinopristiformes

1.3 Family Glaucostegidae

1.4 Genus, species, including author and year (accepted name): *Glaucostegus cemiculus* (Geoffroy Saint-Hilaire, 1817)

1.5 Scientific synonyms (unaccepted names)

Rhinobathos cemiculus

Rhinobatos cemiculus

Rhinobatos cemiculus rasmus

Rhinobatos congolensis

Rhinobatos rasmus

Rhinobatus cemiculus

Rhinobatus congolensis

Rhinobatus rasmus

1.6 Common names

English: Blackchin guitarfish

French: Guitarre De Mer Fousseuse

Spanish: Guitarra Barbanegra, Guitarró

**2. Overview**

The proposed species (*Glaucostegus cemiculus*) is a medium-sized (to 265 cm total length) shark-like ray, known from the eastern Atlantic Ocean, from the northern coast of Portugal to Angola, including the Mediterranean Sea. It occurs in coastal and continental shelf waters from close inshore to depths of approximately 80 m, on soft sandy and muddy bottoms where it feeds on benthic invertebrates.

Like other members of this family, *G. cemiculus* has low biological productivity and a long generation length (15 years), producing one annual litter (by live birth) of approximately 5 to 20 pups, with variation based on region and the size of the female.

The species was recently assessed by IUCN as Critically Endangered globally (Kyne & Jabado, 2019), since populations have undergone 90% reduction in 3 generations, and they have been extirpated from much of their historical range (especially from the Mediterranean Sea).

This species is sympatric throughout most of its range with another species of guitarfish, *Rhinobatos rhinobatos*, which was listed in the CMS Appendices in 2017, but the conservation status of the larger *G. cemiculus* is apparently even more dire.

Seasonal migration is well-known to be linked to the annual reproductive cycle, but like other species of rays and shark-like rays that are already listed in the CMS Appendices, it is poorly documented in the scientific literature. Females migrate to shallow waters to give birth, and this makes them especially vulnerable to near-shore fisheries.

The species is subject to intense targeted and untargeted fishing, especially illegal, unreported, and unregulated (IUU) artisanal fishing in west Africa. All members of this family are in high demand for their high-quality fins, which are exported to the far East. Meat is consumed locally.

### 3 Migrations

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

Many species of guitarfish have seasonal migration. They exhibit a clear pattern of movement based on their reproductive cycle, as they aggregate seasonally, with females visiting relatively quiet shallow waters for parturition. Males will follow later for mating. This predictable migration pattern allows fishers the ability to target adults during this critical phase of their life cycle. For example, the critically endangered Brazilian guitarfish *R. horkelli*, migrates to coastal waters with depths of less than 20 m from November to March to give birth (Pollom et al., 2020). This seasonal migration to shallow waters makes guitarfishes particularly vulnerable to gillnet and trawl fishing activities.

Along the coast of west Africa, regional fishers in Mauritania, Senegal, Guinea, Guinea-Bissau, and Sierra Leone synchronize fishing activities for guitarfish with this predictable migration pattern and reproductive behavior. Fishers target *G. cemiculus* and other species of guitarfish when they migrate to shallow waters for parturition (Newell, 2017).

In the eastern Mediterranean, fishers have reported regular annual observations of juvenile guitarfish between June to November for the last forty years (Azrieli et al., in review). A recent study on the Israeli shore, shows a clear trend of seasonal changes in abundance of *G. cemiculus*, with high abundance from mid-August through September, and numbers declining towards November (Azrieli et al., 2022). Apparently, where *G. cemiculus* and *R. rhinobatos* are sympatric, the latter stays in deeper waters than the former (Azrieli et al., 2022).

In the Banc d'Arguin National Park on the west coast of Mauritania (west Africa), there are clear seasonal differences in sex ratio and maturity of individuals in coastal waters, with both males and females leaving the coastal area when mature. Mature females returned in July for the end of their gestation period and mature males returned in September to breed (Valadou et al., 2006).

We could find no reliable data in the scientific literature to determine to what extent seasonal and predictable migratory patterns also cut across international boundaries. However, given the species' former range throughout the Mediterranean, and the seasonal migrations documented for *G. cemiculus* throughout west Africa, it would be highly likely that there are cyclical crossings of international borders with the species entering and leaving international waters. The species occurs in many areas where international borders are relatively close together, so it is clear that when the species moves from within the deeper (international) waters and eventually to the shallower nursery grounds, that the crossing of international borders is quite likely. Even without conclusive evidence of migrations that cross international borders, there is little doubt that international cooperation under CMS within the Mediterranean

Sea and along the west coast of Africa will benefit the conservation status of this critically endangered species.

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

Females, which apparently comprise about half the population, migrate to shallow waters for parturition (to give birth) during seasonal migrations. After parturition, males migrate from deeper to shallow waters for mating with females. This predictable seasonable migratory pattern makes the species very susceptible to declines from unregulated fishing.

## 4 Biological data (other than migration)

### 4.1 Distribution (current and historical)

In the Atlantic, *G. cemiculus* occurs from northern Portugal to Angola, and in the Mediterranean Sea it primarily occurs along the North African shore and the Eastern basin. *G. cemiculus* has a similar but more restricted range than *R. rhinobatos*.

In the 19th and early 20th centuries, *G. cemiculus* was common throughout the northern Mediterranean, but it is now rare in the northern and western Mediterranean Sea as it has been extirpated from former areas of its range (Last et al., 2016).

Currently, along the Mediterranean European shores it is reported in Italian waters, especially in the south, and around Balearic Islands of Spain, but is not reported in French waters. In the eastern Mediterranean basin, it was historically common from southeastern Turkiye to Israel, and in Egyptian waters, where it still occurs. Along the north African coast, it is present in Morocco and northern Tunisia (Newell, 2017).

### 4.2 Population (estimates and trends).

Unknown population size.

There is much information on vast reduction in the population size in recent decades, especially in west Africa. For example, Seidu et al. (2022) found that most (71 %) fishers in Ghana that were questioned, stated that catches of the two larger guitarfishes (*G. cemiculus* and *R. rhinobatos*) have declined by 80–90 % based on their recollection.

Between 1998-2003 this species was heavily targeted within the Banc d'Arguin, Mauritania. Catches of approximately 400 t per year were caught with specialized nets. During this period of targeted capture, size reduction became apparent. At the beginning of the fishery adults were caught, however the catch became composed primarily of immature individuals (M. Ducrocq pers. comm., 2006, cited in Notarbartolo di Sciara et al., 2017).

The recent IUCN Global Assessment concluded that *G. cemiculus* has undergone a >80% population reduction over the last three generations (45 years) due to actual levels of exploitation (Kyne & Jabado, 2019).

### 4.3 Habitat (short description and trends)

Sandy and muddy bottom habitat from the intertidal zone to about 80-100m.

### 4.4 Biological characteristics

Morphology: Benthic shark-like ray with a moderately depressed, elongated, shark-like body form, with pectoral fins barely enlarged, a subtriangular disk, two sub-equal, well-developed,

and well-separated dorsal fins, and an elongated, wedge-shaped snout. brown dorsal surface with a white underside and usually a blackish blotch on the snout, especially in juveniles. Their rostral ridges are narrowly separated and nearly join in the front (see fig. 1). Their anterior nasal lobes extend little if any and their posterior nasal flaps are narrow. Their spiracle has two well-developed folds of about the same size. They have no anal or dorsal spine and have thorns present around the inner margin of their orbits, between their spiracles, on their shoulders, and along the midline of their disc and tail (Newell, 2017).

Females mature later than males and grow larger, with female fecundity increasing with size (Capapé, & Zaouali, 1994). Reproduction is lecithotrophic viviparous with an annual reproductive cycle and litter sizes of 5-12 live pups found in Tunisia (Capapé, & Zaouali, 1994; Enajjar et al., 2012) and 16–24 in Senegal (Seck et al., 2004). Size at birth in Israel ranged between 23-36 cm, and weight ranged between 45-165 g (Azrieli et al., 2022). Age at maturity is 2.9 years in males and 5.1 years in females, with size at maturity 198 cm TL for females (Enajjar et al., 2012) but is likely higher given the species reaches a larger maximum size.

Maximum size is 265 cm total length (TL) and increases with age. Maximum size and maximum size at maturity were historically larger in west Africa than in the Mediterranean, but there are no longer recent catches of large individuals in west Africa.

Generation length was previously estimated at approximately 5-10 years (Notarbartolo di Sciara et al., 2016), but generation length has more recently been calculated as 15 years (Kyne & Jabado, 2019).

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

Consumes demersal invertebrates.

### 5. Conservation status and threats

#### 5.1 IUCN Red List Assessment

Global assessment (Kyne & Jabado, 2019): Critically Endangered - CR A2d

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

N/A

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

##### Overfishing

Fishing effort and the number of fishers has increased in recent decades in the SRFC region (west Africa), with demand for shark and ray products increasing over the same period due to the shark and ray fin trade (Diop & Dossa, 2011).

Newell (2017) concluded on the significant effect of overfishing of two species of migratory guitarfishes (*G. cemiculus* and *R. rhinobatos*) in west Africa:

"...due to widespread targeted fishing pressure, the reported fishery induced size reduction in many studied portions of these species ranges', and the migratory nature of the shark fisheries along the west African coast, we conclude that commercial overutilization is contributing significantly to the extinction risk of these species in this portion of their ranges'."

## Demand

The 'white' fins of shark-like rays (including sawfishes, wedgefishes, and giant guitarfishes) are considered the best quality fins for human consumption and are among the highest valued in the international shark fin trade (Last et al., 2016). The meat is of high quality and generally consumed locally. Fishing effort and the number of fishers has increased in recent decades across west Africa, with demand for shark and ray product increasing over the same period due to the shark fin trade. Sharks and rays, including *G. cemiculus*, are often targeted and now heavily exploited across the region by net and trawl fisheries leading to overfishing. Large regional fishing nations including Mauritania and Senegal have seen significant increases in fishing effort since the second half of the 20th century, with considerable artisanal and industrial fishing fleets operating in waters off west Africa (Sall et al., 2021).

## Other anthropogenic pressures

In addition to fishing pressure, the species' populations are susceptible to various local anthropogenic impacts. Since coastal areas are an important habitat for these species, anthropogenic activities along the coastline (such as infrastructure expansion, pollution, tourism, and aquatic activities) expose them to even greater risks (Bradai et al., 2012; Wosnick et al., 2018)

### 5.4 Threats connected especially with migrations

The seasonality of the migrations connected with the reproductive cycle in targeted fishing, is especially harmful as gravid females are relatively easy to catch in the shallower near-shore areas where they migrate for parturition, making the fishing especially unsustainable.

### 5.5 National and international utilization

The species is targeted in west Africa mainly for its' highly prized fins, which are exported to the Far East. Meat is apparently used locally. There are targeted fisheries for meat in some southern and east Mediterranean countries and it is also recorded occasionally as by-catch.

## 6. Protection status and species management

### 6.1 National protection status

Although all countries across its range have marine protected areas as well as legislation concerning fisheries activities (including gear restrictions, and no-trawling zones in coastal waters), fisheries taking *G. cemiculus* 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 guitarfishes make up one of the largest proportions of species caught there (Leurs, 2018).

Senegal has a size limit for *G. cemiculus*: males 106 cm, and females 100 cm.

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 *G. cemiculus*.

The USA has declared two species of guitarfishes, *G. cemiculus* and *R. rhinobatos*, as "Threatened" under a federal law, the Endangered Species Act (NOAA Fisheries, 2017). Even though these species do not occur in territorial waters of the USA, this listing combats illegal trade of the species to and within the USA, and it enables enforcement of illegal activities related to this species, perpetuated by citizens of the USA anywhere in the world.

## 6.2 International protection status

The sympatric critically-endangered species *R. rhinobatos* was listed in Appendix II of CMS at CoP12 in 2017, while its' Mediterranean Sea population was listed at that time in CMS Appendix I. Due to the similar threats and conservation status, *G. cemiculus* is now proposed for the same listings.

All species of the genus *Glaucostegus* spp. (which includes *G. cemiculus*), have been listed in Appendix II of the Convention on International Trade in Wild Species of Fauna and Flora (CITES) since 2019. Therefore, exports of live fish and all parts and derivatives, require a non-detriment finding (NDF) and a CITES Export Permit issued by the exporting country. Imports from outside territorial waters, require a CITES Import from the Sea Certificate.

*G. cemiculus* is listed on Annex II of the Specially Protected Areas and Biological Diversity Protocol for the Mediterranean (SPA/BD) under the Barcelona Convention. This listing concomitantly establishes restrictions incumbent upon members of the General Fisheries Commission for the Mediterranean (GFCM) ; pursuant to Rec. GFCM/36/2012/1 (which is a binding regulation on GFCM member states); the 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.

In the EU, sharks may be fished, but finning is illegal.

Based on the available information, these regulations are likely inadequate or not well enforced in key portions of this species' range and many of the fisheries that impact this species are not well monitored. Additionally, areas of this species' range are experiencing increasing human populations and increased degradation of the coastal zone, although the magnitude of this threat to this species is unknown at this time. Thus, the future threat posed by continued pressure from industrial and artisanal fishing likely contributes significantly to the extinction risk of *R. cemiculus*, and there are not regulations in place that are likely to reduce this threat and reverse the decline of this species. (Newell, 2017).

## 6.3 Management measures

None.

## 6.4 Habitat conservation

As a nearshore species, the species can benefit from shallow no-take regions such as marine protected areas, as long as enforcement is effective in these habitats, especially the shallow areas used as nursery grounds.

## 6.5 Population monitoring

Data on landings are recorded by the FAO and various regional fishery bodies, but these are notoriously inaccurate especially in areas where most of the catch is by artisanal fishers. In addition, the reports do not always accurately distinguish between catch data on similar species which are often lumped together.

Some observational and small tagging studies of the species have been done in situ, such as Azrieli et al. (2022), but apparently there has been no large-scale monitoring of this species.

## 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.

Following listing in CMS Appendix II, *G. cemiculus* 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 anticipated.

### 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; Cabo Verde; Cameroon; Congo; Croatia; 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; Malta; Mauritania; Monaco; Montenegro; Morocco; Nigeria; Portugal; Senegal; Sierra Leone; Slovenia; Spain; Syrian Arab Republic; Togo; Tunisia; Türkiye.

## 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.

Rhiannon Hudson-Jones  
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