

**ADDITIONAL DATA ON THE NARROW-BARRED SPANISH MACKEREL
(*SCOMBEROMORUS COMMERSION*, LACÉPÈDE, 1800)
IN LIBYA AND PALESTINE**

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SUMMARY

*The presence of the narrow-barred Spanish mackerel (*Scomberomorus commerson*) is clearly documented in the ICCAT Convention area and particularly in a large part of the Mediterranean Sea. Fishery data for the Mediterranean Sea have been available mostly in the last few decades and this paper is now providing additional recent data on this species in small-scale and recreational fisheries in Libya (including the central and eastern region) and in Palestine. We stress again the importance to have this species listed by ICCAT and included in the Manual for small tunas, taking into account its relevance for several fisheries in the ICCAT Convention area.*

RÉSUMÉ

*La présence du thazard rayé indo-pacifique (*Scomberomorus commerson*) est clairement documentée dans la zone de la Convention ICCAT et en particulier dans une grande partie de la mer Méditerranée. Les données de pêche pour la mer Méditerranée ont été disponibles principalement au cours des dernières décennies et cet article fournit maintenant des données supplémentaires récentes sur cette espèce dans les pêcheries artisanales et récréatives en Libye (y compris les régions centrale et orientale) et en Palestine. Nous soulignons à nouveau l'importance de l'inscription de cette espèce sur la liste de l'ICCAT et de son inclusion dans le Manuel des thonidés mineurs, compte tenu de son importance pour plusieurs pêcheries dans la zone de la Convention ICCAT.*

RESUMEN

*La presencia de el carite estriado Indo-Pacífico (*Scomberomorus commerson*) está claramente documentada en la zona del Convenio CICA y, en particular, en una gran parte del Mar Mediterráneo. Los datos de pesca para el Mar Mediterráneo han estado disponibles sobre todo en las últimas décadas y este documento proporciona ahora datos recientes adicionales sobre esta especie en la pesca artesanal y recreativa en Libia (incluyendo las regiones central y oriental) y en Palestina. Volvemos a insistir en la importancia de que esta especie sea incluida en la lista de CICA y en el Manual para pequeños túnidos, teniendo en cuenta su importancia para varias pesquerías de la zona del Convenio de CICA.*

KEYWORDS

*Narrow-barred Spanish mackerel, *Scomberomorus commerson*, Lessepsian species, non-indigenous species, fisheries, recreational fishery, small-scale fisheries, line fisheries, gillnet fishery, speargun fishery, Libya, Palestine, Mediterranean Sea*

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1. Introduction

The Narrow-barred Spanish mackerel (*Scomberomorus commerson*, Lacépède, 1800) is mostly an Indo-Pacific species, distributed throughout the eastern part of the Pacific Ocean and broadly in the Indian Ocean, including the Persian Gulf and the Red Sea. As concerns the ICCAT Convention area, a suspicious record of a vagrant individual exists from the island of St. Helena in the Southeast Atlantic (Collette and Nauen, 1983; Froese and Pauly, 2019), while its presence in other areas in the Atlantic Ocean is not scientifically documented, even if some FAO statistics reports some catches (Di Natale *et al.*, 2020).

According to Di Natale *et al.* (2009 and 2020), the Narrow-barred Spanish mackerel is also widely distributed in the eastern and southern Mediterranean Sea. This is a Lesseptian immigrant species that entered the Mediterranean from the Suez Canal long ago and it has been recorded in several countries.

The first record in the literature was in the Ligurian Sea as *Cybium commersoni* (Bonaparte, 1832-1841 and 1846), but this doubtful old record implies that the specimen entered the Mediterranean Sea from the Strait of Gibraltar, because the Suez Canal was still not existing. For this reason, this record was always considered as suspicious and Froese and Pauly (2019) consider it as a misidentification.

Therefore, the very first record of the species in the Mediterranean Sea is from Sicily (Doderlein, 1888), always as *Cybium commersoni*, and the specimen was found along the coast of Palermo just 19 years later the opening of the Suez Canal. This record shows the high migratory and adaptive capability of this species, which clearly crossed the eastern Mediterranean, the Ionian Sea, possibly the Strait of Messina, before finally reaching the southern Tyrrhenian Sea where it was fished.

In 2009, supported by the FAO, it was possible to carry out a general study on all the small tuna species in the Mediterranean, which included also the narrow-barred Spanish mackerel (*Scomberomorus commerson*), assembling together all the available information for the Mediterranean Sea (Di Natale *et al.*, 2009).

In very recent times, Di Natale *et al.* (2020) specifically updated the available information concerning the distribution and presence of the narrow-barred Spanish mackerel in the Mediterranean Sea. Now the species is widely distributed in all the southern and eastern part of the Mediterranean Sea (**Figure 1**) (Collette and Graves, 2019), becoming the most fished tuna species in countries like Lebanon. At the same time, it was very clear that updated information was missing from Libya, mostly for the central and eastern region, and also for Palestine.

This short paper would like to cover these gaps, using any recent information for better understanding the presence and abundance of the species within the current distribution area in the Mediterranean Sea.

2. Libya

The presence of *Scomberomorus commerson* in Libya is known in the area since at least 2005 (Shakman and Kinzelbach, 2007), and it could be also very common in Tripoli fishmarket (Di Natale *et al.*, 2020), as co-target species in pelagic longlines mostly targeting other large pelagic species.

There were few recent informations about the distribution of the narrow-barred Spanish mackerel along the Libyan coast, but Elbaarasi *et al.* (2019) reported that this species is frequent in the western region (Misrata and Tripoli), in the central region (Raslanouf and Sirte) and in the eastern region (Tobruk, Derna and Benghazi). This latest study did not take into account or even mentioned any previous literature for this species in Libya and did not provide any further information on the fishery.

In the past year, besides the well-known and clear difficulties, it was possible to collect more detailed evidences of the fisheries, mostly for the central and eastern region where the information was weaker. The data covered the period between 2008 and 2021, with 42.86% of the data concerning 2021.

All fisheries were carried out in coastal areas and catches were reported from Benghazi, Brega, Tobruk, Sirt Zwitina, Dherna, Al-Tamini and Misrata, mostly in winter and spring. The fishing gears used to catch the narrow-barred Spanish mackerel were those typical of small scale and recreational fisheries: set gillnets, troll lines, rod and reel and even spearguns.

Thanks to the good taste and quality of *Scomberomorus commerson*, the price on the local market is high (100 Libyan Dinars, equal to more than 18 euro/kg). The size classes of the catches made by small-scale and recreational fisheries are quite smaller compared to those obtained by the pelagic longlines, ranging from a minimum of 2 kg to a maximum of 20 kg (**Figure 2**, **Figure 3** and **Figure 4**).

3. Palestine

The information about the fishery of the narrow-barred Spanish mackerel in Palestine (Gaza Strip) is limited to old times (Hornell, 1935), even if it is supposed that the fishery for this species continued and remarkably increased over the years, but without any further scientific report. Only few years ago, a thesis (Abu Hamra, 2018), provided some additional information, reporting that the narrow-barred Spanish mackerel is regularly fished in the Gaza Strip, it has a good commercial value but variable prices, and its delicious flesh is commonly used as local food.

Even in this area it is not so easy to collect updated information, but it was possible to have some recent reliable information at the beginning of 2021 (in February and April).

According to the information, in Palestine there are yearly important catches, apparently most with set gillnets (monofilament) in coastal areas, and the species is quite frequent and even abundant (**Figure 5**), mostly in winter and spring time.

4. Conclusions

According to the additional informations provided in this paper, there are no doubts that *Scomberomorus commerson* fishery is important for several Mediterranean Countries and for many fishermen's communities, both as source of high-level proteins and for the local economy and markets.

It is also very clear that *Scomberomorus commerson* is well established and distributed in a large part of the eastern and central-southern Mediterranean Sea since more than one century. Therefore, it can be now considered not only as an original Lessepsian migrant species, but also as a native species, because the large majority of the individuals were clearly born in the Mediterranean Sea since many generations, and there are individuals of all size classes, from small juveniles (19 cm) to large adults (over 30-35 kg in western Libya, Egypt and Lebanon) (Di Natale *et al.*, 2020), while spawning has been scientifically documented by Abo-ElMagd (2019) in Egyptian waters. It is supposed that spawning may occur in most of the Mediterranean distribution range of the species.

Taking into account the statements and the proposals made by Di Natale *et al.* (2020) to ICCAT, that were also retained by the SCRS Small Tunas Species Group in 2020 and endorsed by ICCAT SCRS, it will be very useful if ICCAT will officially include *Scomberomorus commerson* (FAO code: COM) among the list of small tuna species for which it is mandatory to report fishery (Task 1) and biological data (Task 2) to ICCAT, for better understanding its relevance and hence its status. It would be also useful revising, with the help of the CPCs concerned, the available data on catch statistics (Task 1), which showed some discrepancies over the years from the same (FAO) data source.

It is also important to include *Scomberomorus commerson* in the new version of the ICCAT Manual, detailing the characteristics of the species useful for its identification, with the objective to better collect information also on the by-catch from the Mediterranean areas where it is still not so common or from where there are no data, particularly taking advantage of the national observers' work.

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Figure 1. Distribution map of the narrow-barred Spanish mackerel (*Scomberomorus commerson*) in the Mediterranean Sea (marked in clear green). The star indicates the very first record in Palermo (Sicily, Italy) in

1888, while the question marks indicates some doubtful records in the Ligurian Sea and the catches reported by Algeria to FAO from 1985 to 2005 (Di Natale *et al.*, 2020).



Figure 2. Catches of narrow-barred Spanish mackerel, *Scomberomorus commerson*, by small-scale fisheries in various Libyan sites: a) Benghazi; b) Tobruk; c) Derna; d) Misrata; e) Al Tamini; f) Misrata.



Figure 3. Catches of narrow-barred Spanish mackerel, *Scomberomorus commerson*, by small-scale and recreational fisheries in various Libyan sites: A) Benghazi; B) Brega; C) Sirt; D) Sirt; E) Zwitina (spearfishing); F) Tobruk.



Figure 4. A big individual of narrow-barred Spanish mackerel, *Scomberomorus commerson*, fished in Zwitina (Gulf of Sidra or Sirte, Libya) by a recreational fisherman.



Figure 5. Abundant catches of narrow-barred Spanish mackerel, *Scomberomorus commerson*, fished in Palestine (Gaza Strip) by small-scale gillnet fishery in February 2021 (left photo) and in April 2021 (central and right photos).