

## Mediterranean Marine Science

Vol 9, No 1 (2008)



### On the finding of the Indo-Pacific fish *Scomberomorus commerson* in Rhodes (Greece)

M. CORSINI-FOKA, S. KALOGIROU

doi: [10.12681/mms.147](https://doi.org/10.12681/mms.147)

#### To cite this article:

CORSINI-FOKA, M., & KALOGIROU, S. (2008). On the finding of the Indo-Pacific fish *Scomberomorus commerson* in Rhodes (Greece). *Mediterranean Marine Science*, 9(1), 167-172. <https://doi.org/10.12681/mms.147>

***Mediterranean Marine Science***  
Volume 9/1, 2008, 167-171

**On the finding of the Indo-Pacific fish *Scomberomorus commerson* in Rhodes (Greece)**

**M. CORSINI-FOKA and S. KALOGIROU**

Hydrobiological Station of Rhodes, Hellenic Center for Marine Research  
Cos Street, 85100 Rhodes, Greece

e-mail: mcorsini-foka@hsr-ncmr.gr

---

**Abstract**

*The occurrence of the Indo-Pacific fish Scomberomorus commerson was observed for the first time in the Hellenic waters of the SE Aegean Sea during the spring 2008. The record may represent a first indication of a population expansion of this alien species along the southern coasts of the Aegean Sea.*

**Keywords:** *Scomberomorus commerson*; Alien fishes; Lessepsian migration; Aegean Sea; Mediterranean Sea.

---

*Scomberomorus commerson* Lacepède, 1800 (Scombridae) is an inshore pelagic, highly migratory and schooling species (RANDALL, 1995), dwelling generally between 10 and 70 m depth, which mainly feeds on small schooling fishes and reaches 240 cm in fork length (FROESE & PAULY, 2008). The Narrow-barred Spanish mackerel is a tropical species, distributed in the Indo-Pacific from the Red Sea and South Africa to south-east Asia, north to China and Japan and south to Australia and has immigrated via the Suez Canal into the Levant Sea (GOLANI *et al.*, 2002). It is listed today among the "100 worst invasive species" of the Mediterranean (STREFTARIS & ZENETOS, 2006).

An adult specimen of *S. commerson*,

102 cm in total length, 7 kg in weight, was caught by set gillnet on the 31<sup>st</sup> of March 2008 at Lardos, along the south-eastern coasts of the island of Rhodes, at 12-14 m depth, on rocky bottom. Some of the fishes caught in the same net were the native *Epinephelus marginatus*, *Serranus scriba*, *S. cabrilla*, *Diplodus sargus*, *D. vulgaris*, *D. annularis*, *Dentex dentex*, *Pagrus pagrus*, *Scorpaena scrofa* and the allochthonous *Sargocentron rubrum*. Unfortunately, the finding was signalled after the specimen had been sold and its identification was based only on photos, following the descriptions and keys given by COLLETTE (1986a, b) and BAUCHOT (1987). The species is easily distinguished from its confamilial species from the evi-

dent dip of the lateral line under the middle of the second dorsal fin and from the presence of approximately 40 dark vertical and wavy bars on the trunk which sometimes break off into spots ventrally (Fig. 1a, b).

*S. commerson* is among the "older" alien colonizers of the Mediterranean, firstly recorded in Palestine (HORNELL,

1935), expanding successively its distribution along the coasts of Lebanon, Syria, Mediterranean coasts of Turkey, Egypt, Tunisia and Libya (GÜCÜ *et al.*, 1994; BASUSTA & ERDEM, 2000; GOLANI *et al.*, 2002; ÇINAR *et al.*, 2005; GALIL, 2006; BEN SOUSSI *et al.*, 2006) and achieving commercial importance (TORCU & MATER, 2000; GOLANI *et*



**Fig. 1 a, b:** The fresh specimen of *Scomberomorus commerson* captured at Lardos, Rhodes, on the 31st of March 2008 (Photos: M. Moschiou).

*al.*, 2006; BAKHOUM, 2007; SHAKMAN & KINZELBACH, 2007). In the SE Aegean Sea, occurrence of *S. commerson* has been reported in Turkish waters along the Asia Minor coasts, at the Gökova and Güllük bays where the species was considered as a new potential catch (BUHAN *et al.*, 1997; Gökova, ÖĞRETMEN *et al.*, 2005). According to ZAITSEV & ÖZTÜRK (2001) and BASUSTA (pers. comm.), it also occurs in the marine area of Izmir, along the Turkish coasts at the limit between the central and north Aegean Sea.

Although the above-mentioned Aegean marine areas of the Gökova and Güllük bays as well as Izmir are geographically neighbouring to the eastern Dodecanese islands, (Leros, Kalymnos, Cos, Rhodes) and Chios respectively, with obvious similar biotic and abiotic characteristics, the presence of *S. commerson* in Hellenic waters, and specifically along the coasts of Rhodes, is reported and ascertained here for the first time.

Taking into account the above-mentioned distribution of *S. commerson* along the Levantine coasts and the Anatolian coasts of the Aegean Sea and the fact that it has recently expanded its distribution along the African coasts, off Northern Tunisia, in the Central Mediterranean Sea (BEN SOUSSI *et al.*, 2006), the occurrence of the species in Rhodes waters, if supported by other captures (as recent observations of local fishermen leave us to suppose) should be the first indication of its expansion to the southern coastal waters of the Aegean Sea. Its spread could be facilitated by the migratory behaviour of the species and supported by factors like currents and water temperature. Moreover, a decreasing trend in its population due to over-exploitation in the adja-

cent Anatolian fishing grounds (OZ *et al.*, 2007) as well as food availability could be sufficient reasons for its colonization of a new, unexplored area.

This finding increases the number of Indo-Pacific fish species listed from Greek waters to 29, the majority of which are well-established (CORSINI-FOKA & ECONOMIDIS, 2007).

## Acknowledgements

The authors are grateful to Prof. Y. Zaitsev, National Academy of Sciences of Ukraine, for useful suggestions and to Prof. N. Basusta, Firat University, for valuable information on the *S. commerson* population in Turkish waters. They also thank the fishermen Ioannis and Michalis Moschiou for providing photos of *S. commerson* and information on its capture.

## References

- BAKHOUM, S. A., 2007. Diet overlap of immigrant narrow-barred Spanish mackerel *Scomberomorus commerson* (Lac., 1802) and the largehead ribbonfish *Trichiurus lepturus* (L., 1758) on the Egyptian Mediterranean coast. *Animal Biodiversity and Conservation*, 30 (2): 147-160.
- BASUSTA, N. & ERDEM, U., 2000. A study on the pelagic and demersal fishes of Iskenderun Bay. *Turkish Journal of Zoology*, 24: 1-19.
- BAUCHOT, M.-L., 1987. Poissons osseux. p. 891-1422. In: *Fiches FAO d'identification des espèces pour les besoins de la pêche. (Révision 1). Méditerranée et Mer Noire. Zone de pêche 37. Vol. 2: Vertébrés*, W. Fischer, M.-L. Bauchot & M. Schneider (Eds), Rome, FAO.

- BEN SOUISSI, J., GOLANI, D., MEJRI, H., ZAOULI, J. & CAPAPÉ, C., 2006. On the occurrence of *Scomberomorus commerson*, Lacepède 1800 (Osteichthyes: Scombridae) off Northern Tunisia (Central Mediterranean). *Cahiers de Biologie Marine*, 47 (2): 215-218.
- BUHAN, E., YILMAZ, H., MORKAN, Y., BÜKE, Y. & YÜKSEK, A., 1997. A new catch potential for Güllük bay and Gökova bay *Scomberomorus commerson* (Lacepède, 1800) (Pisces-Teleostei). *Mediterranean Fisheries Congress*, Izmir, 9-11 April 1997, 7 p. (in Turkish with English abstract).
- COLLETTE, B. B., 1986a. Scombridae. p. 981-998. In: *Fishes of the North-eastern Atlantic and the Mediterranean (FNAM)*, P. J. P. Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen & E. Tortonese (Eds), Vol. 2, Paris, UNESCO.
- COLLETTE, B. B., 1986b. Scombridae. p. 831-838. In: *Smiths' sea fishes*, M.M. Smith & P.C. Heemstra, Berlin (Eds), Springer-Verlag
- CORSINI-FOKA, M. & ECONOMIDIS, P. S., 2007. Allochthonous and vagrant ichthyofauna in Hellenic marine and estuarine waters. *Mediterranean Marine Science*, 8/1: 67-89.
- ÇINAR, M. E., BILECENOĞLU, M., ÖZTÜRK, B., KATAGAN, T. & AYSEL, V., 2005. Alien species on the coasts of Turkey. *Mediterranean Marine Science*, 6/2: 119-146.
- FROESE, R. & PAULY, D. (Eds.), 2008. FishBase. World Wide Web electronic publication. www.fishbase.org, version (02/2008).
- GALIL, B. S., 2006. The marine caravan - the Suez Canal and the Erythrean invasion. In: *Bridging Dividers. Maritime Canals as Invasion Corridors*, S. Gollasch, B. S. Galil & A. N. Cohen (Eds), Springer, Dordrecht. Monographiae Biologicae, 83: 207-300.
- GOLANI, D., ORSI-RELINI, D., L., MASSUTÍ, E. & QUIGNARD, J.-P., 2002. *CIESM Atlas of Exotic species in the Mediterranean. Fishes*. Volume 1, edited by F. Briand, Monaco. CIESM Publishers, 256 pp.
- GOLANI, D., ÖZTÜRK, B. & BASUSTA, N., 2006. *Fishes of the eastern Mediterranean*. Turkish Marine Research Foundation, Istanbul, Turkey, 259 pp.
- GÜCÜ, A. C., GINGEL, F., AVSAR, D. & UYSAL, N., 1994. Distribution and occurrence of Red Sea fish on the Turkish Mediterranean coast-northern Cilician basin. *Acta Adriatica*, 34 (1/2): 103-113.
- HORNELL, J., 1935. *Report on the Fisheries of Palestine*. Government of Palestine. Crown Agent for the Colonies, London. 106 pp.
- ÖGRETMEN, F., YILMAZ, F. & TORCU KOÇ, H., 2005. An investigation on the fish of Gökova Bay (Southern Aegean Sea). *Journal of Science and Technology of Balıkesir University*, 7 (2): 19-36.
- OZ, M. I., OKUŞ, E. & YÜKSEK, A., 2007. Notes on the Erythrean alien fish of Datça-Bozburun Peninsula. A specially protected area in the south-eastern Aegean Sea (Turkey). *Rapport Commission Internationale Mer Méditerranée*, 38: 563.
- RANDALL, J.E., 1995. *Coastal fish of Oman*. University of Hawaii Press, Honolulu, Hawaii, 439 pp.
- SHAKMAN, E. A. & KINZELBACH, R., 2007. Distribution and characterization of Lessepsian migrant fish along the coast of Libya. *Acta Ichthyologica et Piscatoria*, 37 (1): 7-15.

- STREFTARIS, N. & ZENETOS, A., 2006. Alien marine species in the Mediterranean – the 100 worst invasives and their impact. *Mediterranean Marine Science*, 7/1: 87-118.
- TORCU, H. & MATER, S., 2000. Lessepsian fishes spreading along the coasts of the Mediterranean and the Southern Aegean Sea of Turkey. *Turkish Journal of Zoology*, 24: 139-148.
- ZAİTSEV, Y. & ÖZTÜRK, B. (Eds.), 2001. *Exotic species in the Aegean, Marmara, Black, Azov and Caspian Seas*. Turkish Marine Research Foundation, Istanbul, Turkey, 265 pp.

*Published on line: June 2008*

