

## 7.2 Eastern Atlantic

### 7.2.1 Mediterranean Sea

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The Largetooth Sawfish (*Pristis pristis*) and the Smalltooth Sawfish (*P. pectinata*) have been previously included in a number of historical and recent regional faunal lists of the Mediterranean Sea (Tortonese 1956, Whitehead *et al.* 1984, Serena 2005). Yet the nature of the presence of sawfishes in this Sea is uncertain (Whitehead *et al.* 1984, Bilecenoğlu and Taşkavaka 1999). There are a few museum exhibits of uncertain provenance, and there have not been any recent captures or sightings from the area in the last 54 years. Consequently, both species have been regarded as occasional vagrant visitors entering the Mediterranean from the Atlantic Ocean or Red Sea. The available museum materials were regarded as possible acquisitions from curio markets selling material of non-Mediterranean origin.

There are at least 83 published records of sawfishes, and seven unpublished museum exhibits or personal observations that suggest the presence of *Pristis* spp. in the Mediterranean. Forty-six percent of these records were repeated observations already described in earlier original publications. Of the 21 museum exhibits, 10 were misidentifications, nine of which pointed to Indo-Pacific Ocean species such as the Green Sawfish (*P. zijsron*) and the Narrow Sawfish (*Anoxypristis cuspidata*).

Here, an overview of the available information on sawfishes recorded in the Mediterranean is provided, including accounts from antiquity (items belonging to or remaining from ancient times, as monuments, relics, or customs), the Middle Ages, and recent accounts from the modern scientific era. Sawfishes were occasionally mentioned in antiquity around 2400 - 1800 years ago, but these accounts lack quantitative, taxonomic and geographic detail, and in some cases, included obvious exaggeration (Diaper and Jones 1722, Bostock and Riley 1855, Romero 2012). Sawfishes were also included in medieval bestiaries, though these descriptions were essentially religious and mythological (White 2002).

There are records of sawfishes from scientific species catalogues from many areas of the Mediterranean in the 18th and 19th centuries. The earliest records of sawfishes in the Mediterranean come from southern Italy in 1573 (Robertis 1853), Malta (Forskål 1755) and southern France where in 1777, it was reported that small Smalltooth Sawfish could be taken from the coasts of Provence (Duhamel du Monceau 1777); Du Monceau personally preserved one of those juvenile sawfishes at home. Thirty years later, the French ichthyologist Risso echoed Duhamel

Du Monceau's observations adding that the last individual taken from the beaches of Nice (Provence) was a specimen of 1.5 m in length later identified by the local ichthyologist M. Audiberti (Risso 1810).

Numerous records pertaining to four species have been documented from seven Mediterranean countries since the 19th century. Fifty-eight percent of these records (30 publications) were of the Largetooth Sawfish (*P. pristis*, including two identified as *P. microdon*, and two as *P. perotteti*), 25% of the Smalltooth Sawfish, and 17% were referring to unspecified sawfishes (*Pristis* spp.). These records come mainly from western Mediterranean coasts, including France and Italy. Catch records were reported from eastern Languedoc, Provence, the Gulf of Naples, and the Adriatic Sea (Duhamel du Monceau 1777, Risso 1810, Robertis 1853, Šoljan 1948, Granier 1964). There are two accounts of the Smalltooth Sawfish from the eastern Mediterranean from the first half of the 20th century. Both were relatively recent (20th century), far away from the closest western records, and pertained to Smalltooth Sawfish, a species that might be easily confused with Green Sawfish, which unlike the Smalltooth Sawfish occurred in the Red Sea (Simpfendorfer 2013) connected to the Mediterranean through the Suez Canal since 1867.

While there is evidence that sawfishes might have occurred in the Mediterranean, the conservation significance of this information requires further investigation. While some have argued that there were breeding populations of Smalltooth and Largetooth Sawfish, others point out that average sea surface temperature of Mediterranean is considerably colder than that observed within the distribution of sawfishes mapped from anthropological and cultural histories (M. McDavitt unpublished data) making breeding populations unlikely.

This latter interpretation does not exclude the possibility that these species occurred in the Mediterranean as vagrants since they are known to occasionally roam far from their normal ranges (Chidlow 2007). No matter how these results are interpreted, no sawfish of either species have been recorded in the region for the past 54 years because of the declines in the species in the Eastern Central and Southeast Atlantic region (see Section 7.2.2) and intense fisheries in the Mediterranean (Airoldi and Beck 2007, Saidi and Bradaï 2009, Coll *et al.* 2010).

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First documented record of sawfish in the Mediterranean?  
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The oldest rostrum of a Mediterranean sawfish is displayed in the Sanctuary of Carmine Maggiore in Napoli. This is a relic of a supposedly 'miraculous event' that occurred in 1573 when a cargo vessel sailing from Napoli to Sicily was hit by a strong storm, and almost sunk off Messina (in the southern Tyrrhenian Sea; Collenuccio *et al.* 1591, Robertis 1853). The story tells that in the struggle to save the ship, the crew started to pray to the Virgin of Carmine for help. Eventually the storm eased, and the ship stopped taking on water, which allowed the seamen to save the vessel. Later they discovered that a large sawfish was stuck in a large gash of the keel preventing the water from entering the boat.

The crew did not know that it was a sawfish, but as a sign of devotion brought the unknown fish to shore and gave the rostrum, and a model of the galleon, to the Church of Carmine Maggiore - which then preserved and displayed the rostrum in a shrine. Three hundred years later, in 1853 the rostrum was brought to the attention of a local naturalist, O. G. Costa, Professor of Zoology and member of the Italian Royal Academy of Science, who identified the species as the Largetooth Sawfish (*Pristis pristis*).

Costa gave a detailed account of the rostrum morphometrics, estimating that the fish must have been about 3 m long (Robertis 1853). In his report he remarked that sawfishes were rare in the Mediterranean, possibly entering from the Atlantic to reproduce in calmer and more suitable waters for spawning and nursing. He added that sawfishes usually observed in the Mediterranean were not of notable dimensions, reporting two sawfishes that he had seen in the fish market of Trieste that were about 80 cm each, and two in a local market of about 50 kg each (Robertis 1853 Shrine to the 1573 sawfish rostrum preserved in the Sanctuary of Carmine Maggiore, Napoli).

