

SHORT COMMUNICATION

Recent record of *Odontaspis ferox* (Risso, 1810) in Northern Cyprus (Eastern Mediterranean Sea)

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Abstract

A female specimen of smalltooth sandtiger shark, *Odontaspis ferox* (Risso, 1810), was caught on April 24, 2018, near Yeni Erenköy, Northern Cyprus at 41 m in depth, by a local commercial fisher. The photos and necessary measurements of the specimen were taken immediately before being sold to a local fish restaurant in Cyprus. This catch is the largest reported *O. ferox* catch around Cyprus, with a total length of 430 cm.

Keywords: Smalltooth sandtiger shark, *Odontaspis ferox*, Lamniformes, elasmobranch, by-catch.

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Smalltooth sandtiger shark, *Odontaspis ferox* (Risso, 1810), belonging to family Odontaspidae is a shark species that is widely distributed in temperate and tropical waters (Nair and Zacharia 2001). This fish is mostly found at depths between 13-430 m near continental and insular shelves and also at upper slopes (Compagno 1984). The species is among the sharks which are accidentally caught in many Mediterranean regions (Fergusson *et al.* 2008), including Cyprus. Although the fish may occasionally survive the catch, they are nevertheless not released to the sea, as they can be sold to fish restaurants. As a result of the intensive fishing activities in the living depths of *O. ferox* and the low reproduction rates of the species, they are listed in the International Union for Conservation of Nature's Red List of Threatened Species (IUCN) as "Critically endangered" (Pollard *et al.* 2016).

According to Compagno (1984), *O. ferox* feeds on some bottom feeder organisms, such as squids, shrimps, and small bony fishes. The following features can be considered when defining the species. The upper part of the

body is medium-grey and the lower part is lighter in color. In young individuals, the tip of the dorsal fins shows black colorations. Some individuals may have dark red spots. Their snouts are conical and long. There are two rows of large upper front teeth on both sides of the mouth. The teeth usually contain 2 or 3 pairs of lateral arches. Tooth root lobes are narrow and arched from the bottom. Between lateral and upper anterior tooth rows, they have 3 to 5 rows of small intermediate teeth. The first dorsal fin is relatively larger when compared to the second dorsal fin, and it is located closer to pectoral-fin bases than pelvic fin bases. They have a long anal fin standing in an upright position.

A female specimen of *O. ferox* was caught on April 24, 2018, by a commercial fishing boat in the village of Yedikonuk in the Karpaz Peninsula, Northern Cyprus (Figure 1).

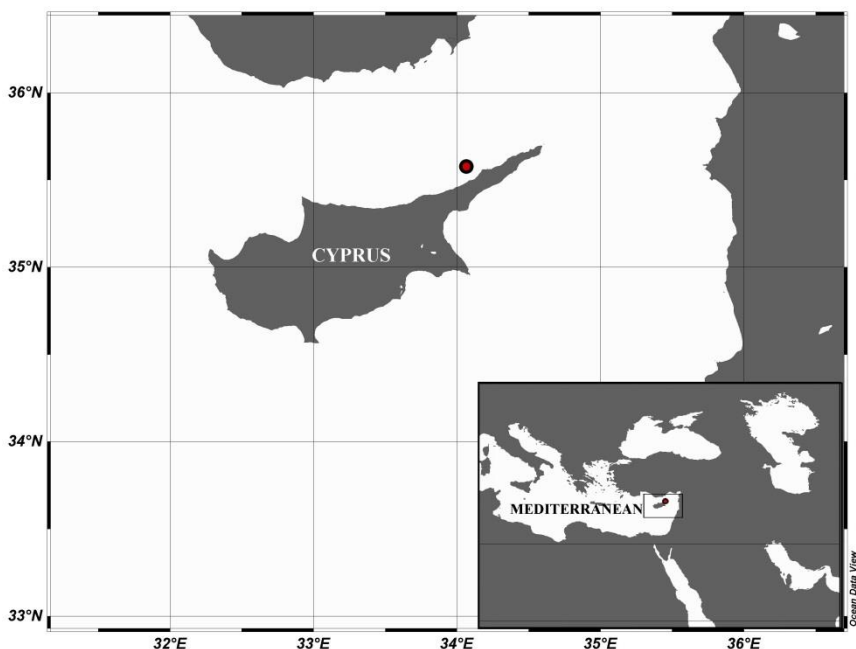


Figure 1. The approximate location where the specimen caught shown with a dot.

The individual was caught accidentally at 41 m depth, during the fishing operation targeting the greater amberjack (*Seriola dumerili*). After body measurements were taken by the fisher, the specimen was immediately sold to the nearest fish restaurant. The sample was identified with the help of photographs taken by the fisher according to information given in Compagno (1984).



Figure 2. The female specimen of *Odontaspis ferox* reported in this study

The female specimen was 430 cm in total length (TL), and approximately 500 kg in weight (Figure 2). Cartilaginous fish that are in danger in Turkish waters, including *O. ferox*, were presented at the Marfresh 2018 Symposium (Filiz *et al.* 2018). *O. ferox* has been added to the checklist of the marine fishes of Turkey by various researchers (Bilecenoglu *et. al* 2014; Kabasakal 2019). In the checklist made by Bilecenoglu *et al.* (2014), the distribution of the species in Turkish waters was limited to the Aegean Sea and the Mediterranean Sea. Recently, a female individual with a total length of 400 cm was caught by a fishing boat in the Gulf of Antalya (Kabasakal and Bayri 2019). The record of *O. ferox* in the Gulf of Antalya confirmed the presence of this species in Turkey and Eastern Mediterranean waters. It is also an indication that the reproductively mature adult individuals continue to be caught.

In the Mediterranean Sea, the records of the species are rare. The species was first reported in the Aegean and Eastern Mediterranean by Geldiay (1969). According to Fergusson *et al.* (2008), two reports of *O. ferox* catch were made in 2002 in Fethiye coasts, and 2004 in İzmir Bay. Both of them shows that the fish caught around 30m of depth. Both fish were around 2 m in length, and one

of them was just 34 kg in weight. In 2007, an individual of *O. ferox* weighing approximately 500 kg was caught at a depth of 600 m near Andros Island in the Aegean Sea (Damalas and Megalofonou 2012). In the same year, two more specimens of *O. ferox* were caught near the Rhodes Island in the Aegean Sea at a depth of 70 m, weighing 250 kg and 180 kg (Corsini-Foka 2009). In 1999, three specimens of *O. ferox* were reported from the depth between 100-250 m and with the lengths of 160-300 cm (Fergusson *et al.* 2008). It is known that mature males are between 200-250 cm, and mature females are between 300-350 cm. (Fergusson *et al.* 2008). The captured specimen in this study has 430 cm in total length, thus it can be regarded as a mature individual. It is also the largest specimen of *O. ferox* recorded near the shores of Cyprus and Turkey.

Table 1. Size comparison of *Odontaspis ferox* with previous records in Cyprus

Region	Year	Depth (m)	TL (cm)	Weight (kg)
¹ Larnaca	1999	250	300	150
¹ Limassol	1999	100	300	200
¹ Limassol	1999	100	160	N/A
² Y. Erenköy	2018	41	430	500

¹ (Fergusson *et al.* 2008), ² The present study

Table 1 illustrates the catch information of *O. ferox* recorded in Cyprus. The specimen reported in this study is currently the largest recorded catch in Cyprus. Also, this is an example recorded at the shallowest depth compared to other reports.

The records of *O. ferox* captured in the Aegean Sea are also shown in Table 2. The largest samples were recorded in Fethiye (Fergusson *et al.* 2008) and Antalya (Kabasakal and Bayrı 2019).

Table 2. Size comparison of *Odontaspis ferox* records in the Aegean Sea

Region	Year	Depth (m)	Sex	TL (cm)	Weight (kg)
¹ Fethiye	2001	N/A	N/A	400	N/A
¹ Fethiye	2002	N/A	N/A	200	N/A
¹ Urla	2004	30	Female	190	34
² Rodos Island	2007	70	Female	250	180
³ Antalya Bay	2019	100-120	Female	400	N/A

¹ (Fergusson *et al.* 2008), ² (Corsini-Foka, 2009), ³ (Kabasakal and Bayrı 2019)

Like most chondrichthyans, *O. ferox* considered critically endangered, thus capturing mature individuals threatens the survival of this species. For this

purpose, *O. ferox* should be banned from hunting by the help of relevant ministries in Turkey and Cyprus. Fishers should also be informed that the populations of these species are in danger.

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Kuzey Kıbrıs'ta (Doğu Akdeniz) *Odontaspis ferox* (Risso, 1810) ile ilgili son kayıt

Öz

Küçük Dişli Kumkaplan Köpekbalığı, *Odontaspis ferox* (Risso, 1810)'a ait bir adet dişi örnek, 24 Nisan 2018'de, Kuzey Kıbrıs'taki Yeni Erenköy yakınlarında, 41 m derinlikte, yerel bir ticari balıkçı tarafından yakalandı. Numunenin fotoğrafları ve gerekli ölçümleri, Kıbrıs'ta bir yerel balık restoranına satılmadan hemen önce alınmıştır. Bu av, toplam 430 cm uzunluğunda olup, Kıbrıs'ta yakalanıp bildirilen en büyük *O. ferox* 'dur.

Anahtar kelimeler: Küçükdişli kumkaplan köpekbalığı, *Odontaspis ferox*, Lamniformes, elasmobranch, hedef dışı av.

References

Bilecenoğlu, M., Kaya, M., Cihangir, B., Çiçek, E. (2014) An updated checklist of the marine fishes of Turkey. *Turkish Journal of Zoology* 38: 901-929.

Compagno, L.J.V. (1984) FAO Species Catalogue. Vol. 4. Sharks of the World. An Annotated and Illustrated Catalogue of Sharks Species Known to Date. Part 1. Hexanchiformes to Lamniformes.

Corsini-Foka, M. (2009). Uncommon fishes from Rhodes and nearby marine region (SE Aegean Sea, Greece). *Journal of Biological Research-Thessaloniki* 12: 125-133.

Damalas, D., Megalofonou, P. (2012) Occurrences of large sharks in the open waters of the southeastern Mediterranean Sea. *Journal of Natural History* 46(43-44): 2701-2723.

Fergusson, I.K., Graham, K.J., Compagno, L.J.V. (2008) Distribution, abundance and biology of the smalltooth sandtiger shark *Odontaspis ferox* (Risso, 1810) (Lamniformes: Odontaspidae). *Environmental Biology of Fishes* 81(2): 207-228.

Filiz. H., Yapıcı. S., Bilge. G. (2018) Threatened Cartilaginous fishes (Chondrichthyes) of the Turkish seas. In: International Marine & Freshwater Sciences Symposium Proceedings (MARFRESH2018) (eds., Özcan, G., Tarkan, A.S., Özcan, T.) Kemer-Antalya, Turkey, pp.113-116.

Geldiay, R. (1969) Important fishes found in the Bay of Izmir and their possible invasions. Ege Üniversitesi Fen Fakültesi Monografileri, İzmir (in Turkish).

Kabasakal, H. (2019) A Review of Shark Research in Turkish Waters. *ANNALES Ser Hist Nat* 29(1): 1-16.

Kabasakal, H., Bayrı, E. (2019) Notes on the occurrence of smalltooth sandtiger shark, *Odontaspis ferox* (Lamniformes: Odontaspidae) from Antalya Bay, eastern Mediterranean, Turkey. *Journal of the Black Sea/Medit Environ* 25(2): 166-171.

Nair, R.J., Zacharia, P.U. (2015) An introduction to the classification of elasmobranchs. Kochi: Central Marine Fisheries Research Institute. pp. 118-133.

Pollard, D.A., Gordon, I., Williams, S., Flaherty, A.A., Fergusson, I., Dicken, M., Graham, K. J. (2016). Smalltooth Sand Tiger *Odontaspis ferox*. IUCN Red List of Threatened Species Available at: <https://www.iucnredlist.org/species/41876/16527837> (Accessed 5 Sep. 2019).