

Project Update: April 2020

New records in Slovenia, Croatia, Bosnia and Herzegovina and Montenegro

By understanding the urgency of protection of the certain species after our media campaigns, lectures and workshop more and more fisherman and students are approaching us in order to offer their data, specimens and to help. Thus, by combining data from our field expeditions and that provided by local fishermen, we had records of the 13 species in the eastern Adriatic during the project so far. Findings will be added to our portal shortly and will be fully available for both scientific researchers and wider public interested in the sharks, skates and rays of the eastern Adriatic sea (Tab. 1).

Tab. 1. Elasmobranch species encountered through the project

#	English name	Species (latin) name	IUCN status		Country (es)
			CRO	MED	
1	Common smoothhound	<i>Mustelus mustelus</i> (L.),	NT	VU	CRO, BH
2	Blackspotted smoothhound	<i>Mustelus punctulatus</i> Risso, 1827	DD	VU	CRO, BH
3	Small-spotted catshark	<i>Scyliorhinus canicula</i> (L.)	LC	LC	CRO
4	Nursehound / BullHuss	<i>Scyliorhinus stellaris</i> (L.)	NT	NT	BH
5	Bluntnose sixgill shark	<i>Hexanchus griseus</i> Bonnaterre, 1788	VU	LC	CRO
6	Rough shark	<i>Oxynotus centrina</i> (L.)	EN	CR	CRO
7	Marbled electric ray	<i>Torpedo marmorata</i> Risso, 1810	LC	LC	CRO, BH
8	Common stingray	<i>Dasyatis pastinaca</i> (L.)	VU	VU	CRO, BH
9	Brown ray	<i>Raja miraletus</i> Linnaeus, 1758	LC	LC	CRO, BH
10	Thornback ray	<i>Raja clavata</i> Linnaeus, 1758	NT	NT	CRO
11	Bull ray	<i>Aetomylaeus bovinus</i> (Saint-Hilaire, 1817)	DD	CR	CRO
12	Common eagle ray	<i>Myliobatis aquila</i> (L.)	NT	VU	CRO, BH
13	White skate	<i>Rostroraja alba</i> Lacepède, 1803.	DD	EN	CRO

Possibly world's largest bluntnose sixgill shark, *Hexanchus griseus* Bonnaterre, 1788

At the end of 2019, the huge bluntnose sixgill shark was caught off the historic city of Sibenik located in central Dalmatia, on the coastline of the Adriatic Sea and could be the largest of its kind ever caught, as reported by CEN. The specimen was caught by local fishermen M. Salov and M. Sola and returned to the water, as required by law. As I was called to confirm the identification and discuss the condition of the animal (together with my colleague P. Ugarković), I have confirmed that it was a gravid female with weight probably over 600 kg. Fisherman Sola told Central European News (CEN) following:

“The shark was caught at a depth of 220 meters it was 5.7 meters long and weighs 700 kg (1,543 lbs). The shark was caught outside Rogoznica with a fishing boat in a net that is towed along the bottom of the sea.”

As an invited expert for Adriatic, my scientific opinion and conclusion was stated by CEN as follows:

„National Geographic marine biologist and oceanographer Andrej A. Gajić stated for Central European News (CEN): “The largest to date, scientifically published, measured 482 centimetres and weighed just under 600 kilogrammes (1,322 lbs). Profesor biologist Gajić added to CEN: “If there was an accurate measurement that indicated 570 centimetres and 700 kilogrammes, It certainly would be one of the largest recorded individuals in the world.”

Such an interesting and unexpected record in the middle Adriatic has attracted much media attention worldwide. Thus, the story was translated into English, Italian and many other languages. It went even to Japanese news (article attached). This is one of the first times that a shark sighting from the Adriatic attracted worldwide attention and is important for further awareness about the diversity, abundance and endangerment of sharks in the region.

Diseases development and monitoring

Until the middle of March 2020 we were still working hard on the laboratory analysis conducted on already dead by-catch samples from the eastern Adriatic, provided for the this project by various fishermen that attended our education and/or workshops. Conducted studies included macroscopic pathomorphology, histopathology and precise digital radiography. At this point I have focused on the most abundant species in order to compare data from different sublocalities and to assess the negative effects of various pollutants and habitat destruction to the current status of elasmobranch (sub)populations. This study will continue after the end of the emergency situation.

Together with my local partners, I have started basic monitoring of the landings of elasmobranchs both in selected fish markets and through the small-scale fisheries across Montenegro. In such way we primarily aim to obtain more data on the frequency and abundance of certain species, which currently lack data. Further details on the possible uses and threats, together with assessing health status will be obtained in further planned steps. Monitoring is currently stopped due to coronavirus pandemic, but suppose to continue as soon as this crisis passes.

New partners joined efforts towards unique regional protection

Beside an expedition to Cirkvenica, already planned by this project, together with the Pula Aquarium I am planning three new research expeditions in the waters of Istra, Mljet and Murter as part of the joint programme. These expeditions are currently being planned for the end of spring and summer 2020. As they focus on 17 target species of sharks, skates and rays, it should be a major contribution to the knowledge of the basic biology, abundance and possible nursery grounds in the eastern Adriatic sea.

At this point I am discussing possible cooperation with the National Environmental Agency of Albania and University of Tirana for next large project focusing on the

territorial waters of Albania. This is an extremely big step towards the unique legal protection of sharks, skates and rays in the eastern Adriatic sea, which is the primary goal of all my work and efforts in the past 5 years!



Smoothhound sharks, marbled electric rays, stingrays and brown rays are some of the most common elasmobranch species caught by gill nets. © Sharklab ADRIA.



Andrej and the rare blackspotted smoothhound, *Mustelus punctulatus* A. Risso, 1827, from the eastern Adriatic during precise digital radiography. © Sharklab ADRIA



Rare bull ray, *Aetomylaeus bovinus* (Saint-Hilaire, 1817), caught and released near Trpanj (off the Pelješac peninsula) in Croatia, reported to the project team by recreational angler R. Šupić.



Rare white skate, *Rostroraja alba* Lacepède, 1803, caught off Dubrovnik (northern Adriatic sea) encountered at local fishmarket in Split. © Splitska peškarija



Gravid female of Bultnose sixgill shark, *Hexanchus griseus* Bonnaterre, 1788, one of the world's largest specimens caught off Rogoznica, eastern Adriatic sea. © M. Šalov and M. Šola



Station number three, during the monitoring the small-scale fisheries in the southern coast of Montenegro. © Sharklab ADRIA