



ILLUSTRATION: NAHFIA JAHAN MONNI

Saving the Sawfish

What are scientists doing to save one of the most endangered fish in the world?

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Below the waters of the Bay of Bengal, roams a fish unlike anything you have seen before. With its long, somewhat bizarre-looking, saw-like rostrum, the Sawfish is a reminder of a prehistoric time, dating back to the Late Cretaceous period. The Sawfish roamed our seas when real, live dinosaurs walked our earth.

They are large, shark-like rays and usually inhabit warm, shallow, coastal waters, estuaries, and rivers. They can grow up to a whopping 22 feet in length and weigh up to 330 kgs. And over the years, this majestic creature has entirely disappeared from 21 countries, resulting in an international call for action. According to the International Union for Conservation of Nature (IUCN), the Sawfish is protected in only 16 out of the 92 countries that it is found in.

From social surveys with fishermen in the Bay of Bengal, observation of dried

fish markets and use of molecular techniques in the coast, in Bangladesh scientists have recently confirmed the existence of three out of the five species of Sawfish available in the world—Largetooth Sawfish, Narrow Sawfish and Green Sawfish. Scientific reports had previously claimed that four species of Sawfish are found in the waters of Bangladesh. Both Largetooth and the Green Sawfish are considered critically endangered while the Narrow Sawfish is listed as endangered by the IUCN Redlist.

The most recent was the discovery of the Green Sawfish in the Bay of Bengal. Scientists first collected the meat sample from one of the largest shark processing centres in Cox's Bazar. The shopkeepers believe the Sawfish was caught from the waters of Chittagong in 2016. Then followed a series of DNA tests, which revealed that the fish was, in fact, the critically endangered species.

This is the first record of Green Sawfish outside the species distribution mapped. Previously, the species had only been found in the Indo-west Pacific, from Africa to Australia, Taiwan, the Red Sea, the Gulf and some of the Indian Ocean islands.

The presence of such a large species, one that was once present all over the world, and one that is now either endangered or critically endangered, means that our waters are rich in biodiversity and can host a variety of life forms.

Unfortunately, like many other endangered species in Bangladesh, the Sawfish, too, is at risk of extinction.

WHERE ARE THE SAWFISHES?

"According to a survey of fishermen in the coastal areas of Bangladesh, the number of Sawfish encounters in the last two

understand the extent of Sawfish decline in the waters of Bangladesh.

According to IUCN's Global Sawfish Strategy, in Bangladesh and other Asian countries, dams are being built in many areas, which severely restrict the movement of the Sawfish.

"There is also a superstition among the villagers in the coastal areas in Bangladesh that the meat and different parts of Sawfish have medicinal properties. In fact, in some areas, parts of the Sawfish are bought for really high prices because of its perceived health benefits, such as curing cancer," says Alifa.

This superstition has resulted in creating a demand for the meat of Sawfish. So much so that the meat can be sold at a very high price of Tk 3,000 per kg, according to local traders.

When asked if the Sawfish really does have healing powers, Alifa is quick to dismiss it as a superstition that is not actually backed by any scientific study.

In Bangladesh, there are many key Sawfish habitats since there are many riverine and estuarine environments. The country also has the largest mangrove ecosystem in the world, the Sundarbans which is key Sawfish habitat, says Alifa. Owing to the construction of Rampal Power Plant and other industries around the Sundarbans, the entire ecosystem is under threat now. In other areas, too, the loss of habitats due to pollution and degradation is contributing to the decline of the Sawfish population.

Additionally, the main threat identified, according to a paper titled "Sawfish exploitation and status in Bangladesh", is overfishing in the bay, both by deep sea going vessels and artisanal trawlers. Even if there is no targeted Sawfish fishing in Bangladesh, the very fact that fishing has significantly increased in our bay means that there are more chances of them getting entangled in the nets. Once entangled, they are not released back into the waters. Instead they are collected by the fishermen who know that there is market demand for this fish. This practice of often illegal, unregulated and unreported fishing is termed as IUU and has been reiterated by other marine scientists as a major threat to marine life.

The species of Sawfish found and reported in Bangladesh—the Largetooth Sawfish, the Narrow Sawfish and the Green Sawfish—are protected under the Bangladesh's Wildlife Protection Act (2012) and they are also a CITES Appendix 1 species.

This is a point to note because Bangladesh is a signatory of CITES, which is an international convention, so by virtue of being a CITES species, it is automatically barred from being traded.

Once common across its range, this species is now limited to four subpopulations within the tropics. As with many shark and ray species, they have been exploited for their fins, but mostly for their unique toothed rostra. At least five parts of the Largetooth Sawfish are traded. Along with the fins and rostra, the rostral teeth, meat, some organs, and the skin are sought after as curios, ceremonial weapons, and for traditional medicine in China, Mexico, and Brazil.

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decades has seen a rapid decline, whereas in the late '90s they were abundantly found in the coastal areas," says Alifa B Haque, lecturer of zoology at the University of Dhaka.

Alifa has dedicated much of the last few years to building rapport with the local fishermen and traders to truly