



# AKE TKEÊ

A treasure of the amazonian coast

*english version*

APOIO



PATROCÍNIO



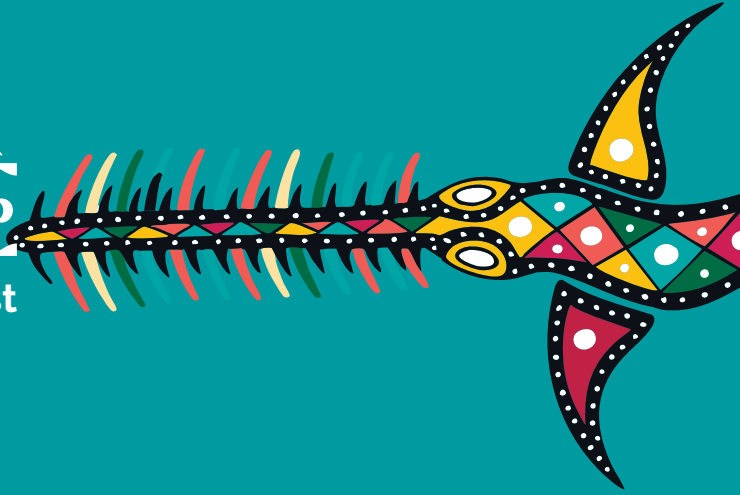
save our seas  
foundation



Shark  
Conservation  
Fund

# AHETXIÊ

A treasure of the amazonian coast

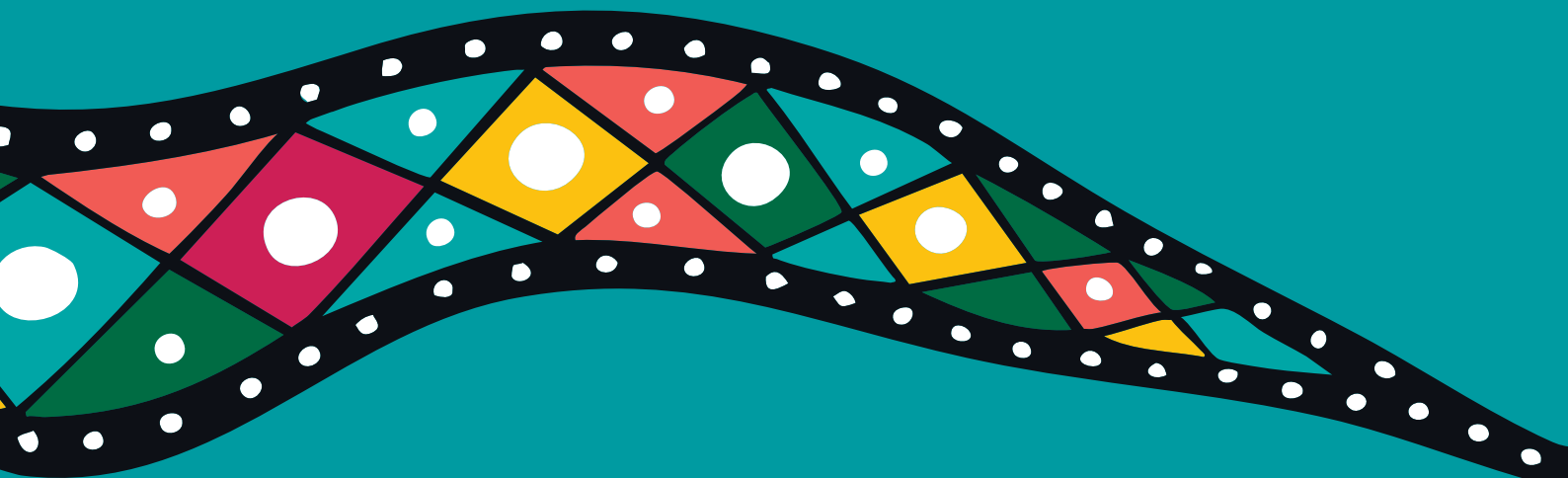


This exhibition concerns the sawfish, a ray quite different from those to which we are used – it resembles a shark, but with a distinctive muzzle in the shape of a saw.

Hitherto often seen in several parts of the world, today the sawfish is confined to two areas in the planet, one of them being the northern coast of Brazil – where what is probably its last refuge remaining in the Atlantic Ocean is located. The sawfish is also part of the collective imaginary of the Karipuna people, who identify it as the magical entity Ahetxiê.

The exhibition is part of Project Amazonian Coast Sawfish, funded by the Save Our Seas Foundation. Ichthyological curatorship is by its head researcher, Dr. Patricia Charvet; anthropological curatorship is by ethnologists Ana Manoela Karipuna and Suzana Primo dos Santos.

Artists Alexandre Huber, Jackson Alves dos Santos and Yermollay Caripouné have contributed with their artwork inspired by the sawfish.



# Bony and cartilaginous fish

Fish can be classified according to their skeleton being formed by either bones or cartilages. Bony fish are their vast majority: 22 thousand species living in salt-, brackish- and freshwater, among them Amazonian representatives such as the peacock bass, the tambaqui (or cachama), the bottlenose catfish and the arapaima. The other group, the cartilaginous fish, comprises only about 1,300 species and includes sharks, skates and rays, and the lesser-known ratfishes.

Differently from most bony fish, fertilisation (the union of sperms and eggs) in cartilaginous fish occurs inside the female's body. In some species, newborn cartilaginous fish emerge from capsule-shaped eggs. In others, like in the sawfish, the newborn come out of their mother fully formed, looking like a miniature version of their parents. Male individuals of cartilaginous fish have a structure called clasper in their pelvic fins to hold the female during fertilisation. não tem ferrão na cauda, mas se defende com a sua serra.





## Sawfish

Sawfishes are cartilaginous fishes, of which there are five species in the world, ascribed to the family Pristidae. They are rays with an extremely modified shape: a stretched out, sharklike body, and a typical long and flattened snout lined with sharp “teeth” on both left and right sides.

There are two species in the Amazonian coast: *Pristis pristis*, the common sawfish or largetooth sawfish (larger in size) and *Pristis pectinata*, the smalltooth sawfish (smaller and less common in the region). The largetooth sawfish can reach about 23ft in total length and until a couple of ago could be found in many areas of the Atlantic and Indo-Pacific Oceans, but is now restricted to two remaining populations—one in the Australian region and the other in part of Central America and north of South America. These populations are isolated from each other by distance and some genetic differences, and may someday be treated as representing distinct species, a fact still to be investigated and confirmed. The West Atlantic population extends from Mexico to the Brazilian northeastern state of Piauí, but their sightings are becoming scarce; its main refuge happens to be in the Amazonian coast of the states of Pará and Amapá.

There are still many gaps in our knowledge of sawfish biology. *Pristis pristis* is known to breed only every two years, and gestation takes about 5 months. Some 7 or 8 offspring come out straight from their mother's belly, measuring about 2½ to 3ft at birth and already able to swim and survive without parental care. Growth of the young is very slow – they only become full adults at the age of 8-10, when they measure about 9 to 10ft.



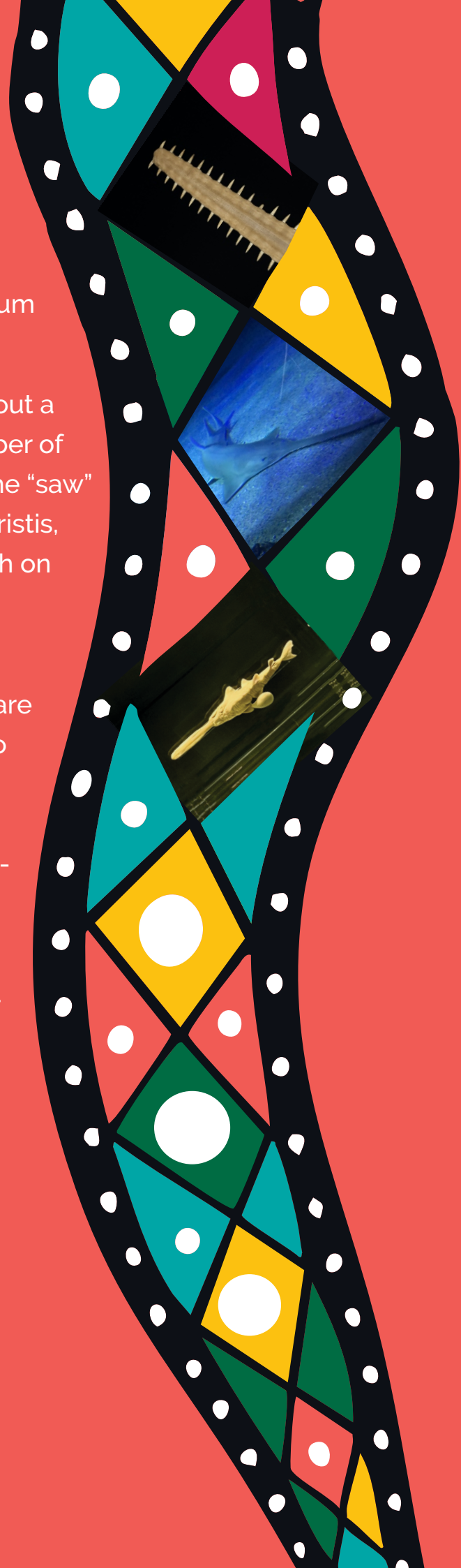
# The sawfish's "saw"

The sawfish is a ray with an extremely modified snout, forming the rostrum or "saw".

It is an extension that measures about a third of the total length of the fish. The number of rostral teeth (actually, modified scales) on the "saw" varies according to the species – in *Pristis pristis*, there are 14 to 24 evenly spaced rostral teeth on each side.

These rostral teeth should not be mistaken for the actual mouth teeth, which are used to grind the food. The "saw" is used to stun, wound and kill prey and to revolve the bottom of the watery environment in search of prey – bottom fish, shrimp, crabs -- to eat.

Sawfish embryos are born with a sheath around their "saw" that protects their mother during birth.



# Where do they live?

Sawfish are able to withstand various degrees of salinity in the water, and can be found in coastal marine (very salty), brackish (less salty) and even freshwater. But the favourite environment of many sawfish species is the mangrove and estuarine areas. They usually remain close to the bottom where they hunt for prey and rest: they mainly live in warm waters (72-90°F) of tropical regions.

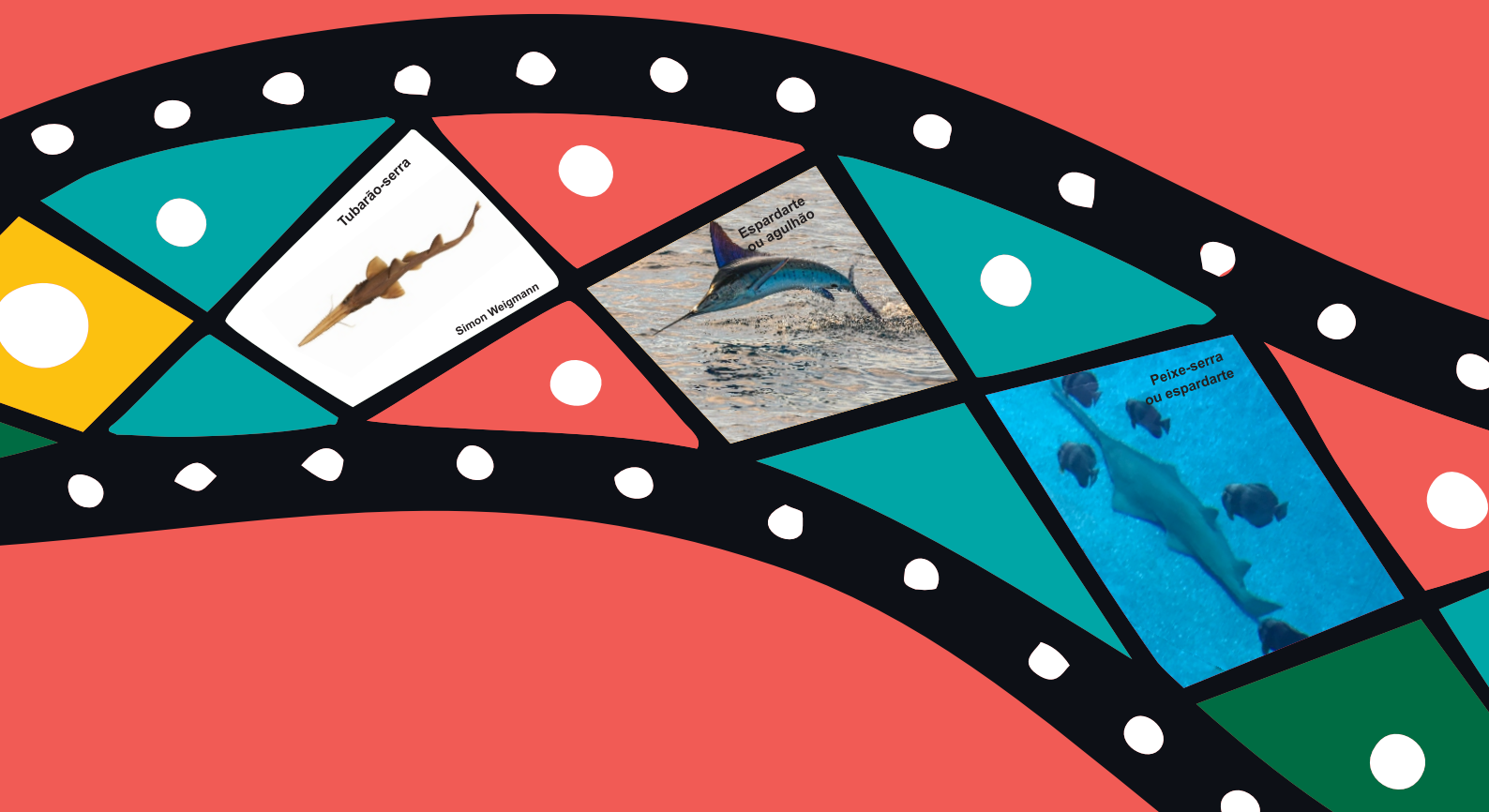
It is still not known for sure whether the Amazonian coast sawfish populations go through their entire biological cycle (birth – growth – reproduction), or at least part of it, in the great rivers of the region – although in the past they were often seen in rivermouths.

Newborn and young fry inhabit shallower waters (less than 30ft in depth) and find shelter in mangroves and coves to protect themselves against large predators such as sharks.



# The “others” saws

The sawfish should not be mistaken for an unrelated, yet quite a lookalike fish called sawshark (ten species of the family Pristiophoridae). Sawsharks are much smaller in size (barely 5ft long) and inhabit the deep coastal waters of the Pacific, Indian and North Atlantic Ocean: they have a pair of barbels (“whiskers”) on the snout and, like other sharks, have their gill slits on the sides and not on the underside as do skates and the sawfish.



# Why are sawfish endangered?

The longtooth sawfish was once an often sighted and reported species in the north and northeastern shores of Brazil, mainly in the Amazonian coast. However, it has been affected by excessive fishing effort, both intentional and incidental. Until the early 21st Century, landing of sawfish in local markets for the commercialisation of its flesh, fins, “saw” and rostral teeth. “Saws” were mostly exported abroad and sold as curios, interior decoration and for cockfighting practitioners – who would attach the sharp rostral teeth to the ankle of fighting roosters. Although cockfighting is officially banned in Brazil and many other countries for animal cruelty, it is still covertly practiced or even tolerated in some nation for cultural reasons. The belief that the “saw”, once toasted, ground and mixed in water could help curing asthma – though an unverified claim -- also contributed to the overfishing of sawfish. Furthermore, sawfish fins and flesh have been deceptively sold as being from sharks – as shark fins are a much valued dish in Chinese and Vietnamese cuisine.

There is also accidental fishing, when sawfish are unwittingly caught in fishing nets and the “saw” is entangled in the mesh: it is often impossible to remove the fish without killing it. This happens frequently in trawl fishing.

These factors, added to its low rate of population growth, led to a drastic decrease in sawfish numbers worldwide, and to local extinctions in certain regions. Many conservationist organisations consider sawfish as critically endangered species. Anyway, the fishing of sawfish is banned in all Brazil.







# Support the sawfish: a treasure of the amazonian coast

Research project Turning the Tide for Sawfish in the Amazonian Coast is financed by the Save Our Seas Foundation (<https://saveourseas.com/> ).

Project Largetooth Sawfish in the Amazonian Coast: Presence and Improving

Enforcement in this Twilight Zone is financed by the Shark Conservation Fund (<https://www.sharkconservationfund.org/> ). Both research projects have as their main goal to gather information on sawfish in the Northern region of the South Atlantic, to support monitoring enforcement to inhibit their illegal commercialisation and to increase people's knowledge on this fish.

**October 17** was chosen as the **International Sawfish Day** all over the world, a commemorative date to raise awareness on the importance of all sawfish species and the challenges faced by conservation efforts toward them.

If you have either seen or photographed a sawfish and wish to share your story, please send a message through [Instagram@amazoniancoastsawfish](mailto:Instagram@amazoniancoastsawfish), or WhatsApp (91)98892-1661.

If you have any material (old photographs, printed pictures, severed "saws", teeth or any other part of a sawfish) you could donate for research purposes, please contact or speak to a Goeldi Museum employee.

**Please help us protect the sawfish species in the amazonian coast.**



Shark  
Conservation  
Fund



@AMAZONIANCOASTSAWFISH



# The Karipuna and karuãna ahetxiê

The Karipuna are an indigenous people who today includes some 3,000 people, located in 28 villages along river Curipi, the lower Oyapock and Highway BR-156 in the Brazilian state of Amapá, near the French Guianan border. They have gone through many migrations caused by mergings, wars and alliances with other indigenous peoples. Around 1840, at the end of the Cabanagem revolt, the persecution against rebels led a Karipuna clan to migrate northwards, following the Amapá coast until reaching the mouth of river Oyapock. In that trip, the group was led by a shaman who sighted and communicated with the karuãnas, bewitched supernatural entities often associated with animals. At night, the shaman set his course through Warukamã, the Morning Star (planet Venus) and, during the day, he was guided by karuãna Ahetxiê (also called Paratá), the Sawfish. Reaching the mouth of river Oyapock, Ahetxiê left the convoy and the Karipuna entered river Uaçá toward its headwaters, in a journey in which, as they approached river Curipi, had to face a Great Serpent... but that is another story altogether.

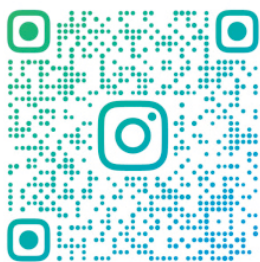
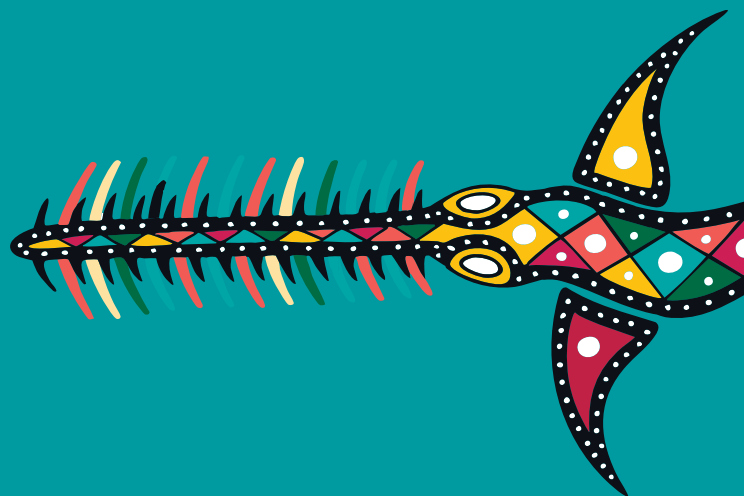
Today, under the October full moon, the Karipuna perform the turé, a thanksgiving celebration in honour of the karuãnas. In this festivity they make use, among other artifacts, of a 6½ ft long wooden stool in the shape of Ahetxiê, on which the guests sit as the shaman's aides, iahen, serve caxixi (or caxiri), a beverage made of fermented cassava.

Besides the Karipuna, there are many indigenous and traditional cultures worldwide who worship the sawfish as protective spirits or holy entities. They should be respected and protected.

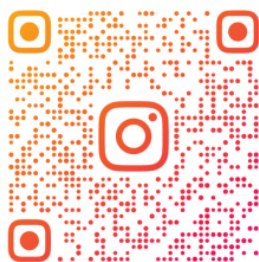


# A HE TXIÊ

A treasure of the amazonian coast



@HUBERARTEMARINHA



@JACKSON\_METALARTE



@CARIPOUNE\_YERMOLLAY

