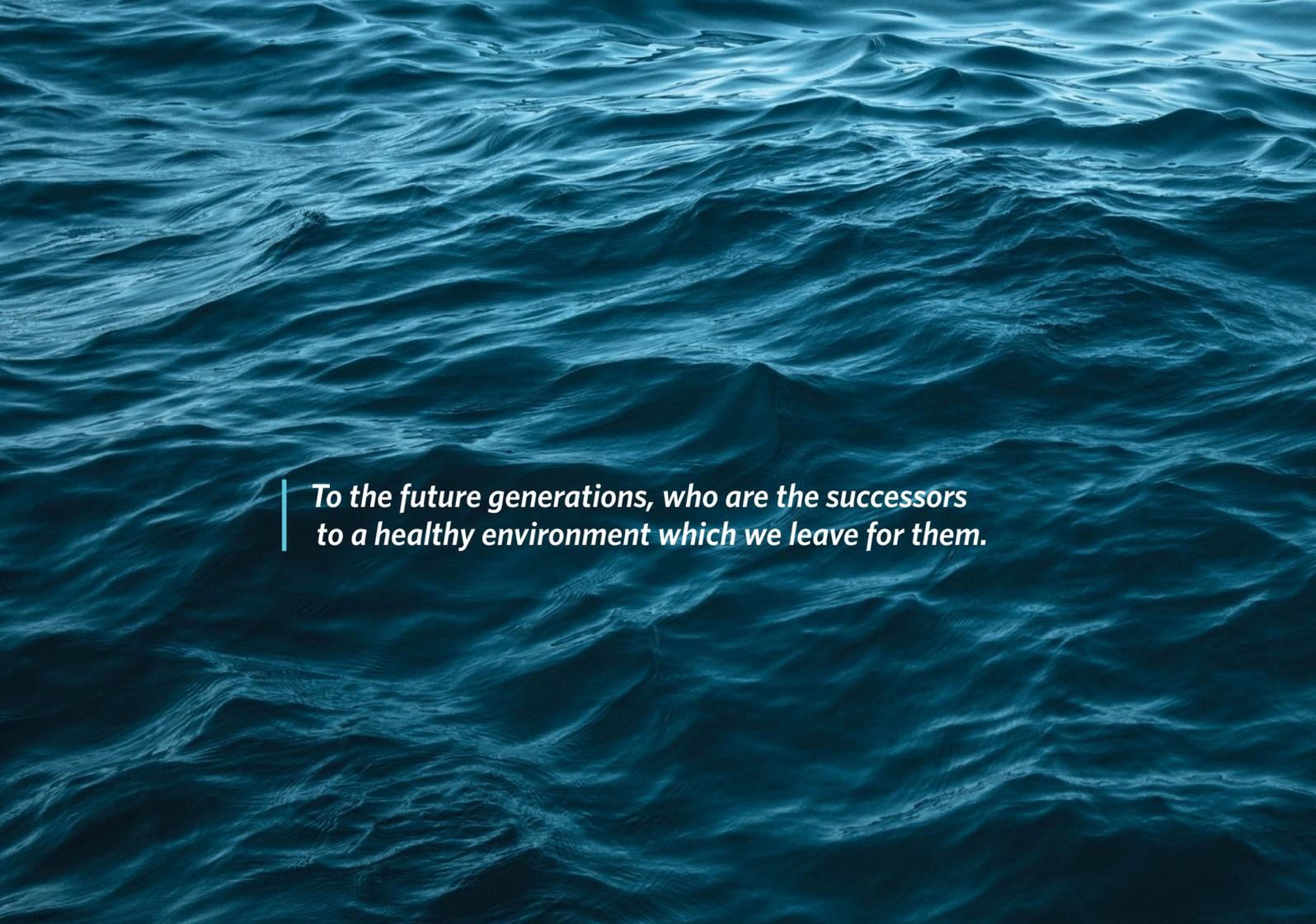


Picture Book of Some  
**Elasmobranchs**  
**& Billfishes**  
caught in Ghana



Hen Mpoano



*To the future generations, who are the successors  
to a healthy environment which we leave for them.*

# ***PICTURE BOOK OF SOME SPECIES OF ELASMOBRANCHS AND BILLFISHES CAUGHT IN GHANA***

Enhancing the Management and Conservation of Elasmobranchs (sharks, skates and rays) and Billfishes through improved fisheries data collection and characterization of knowledge on harvest and trade in Ghana.

**2018**



**Hɛn Mpoano**



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**Disclaimer:**

This picture book is designed as a communication material for fishermen and others with interest in Ghana's shark fishery. This publication is made possible by the generous support of NOAA. The contents are the responsibility of the authors and do not necessarily reflect the views of NOAA and the US Government.

*Cover Photo: Flying mobula ray (Credit: Carlos Aguilera)*

## *Acknowledgements*

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Working with fishermen requires patience and time to understand their perspective of issues and how those issues affect their livelihood – fishing. The over two decades of decline in the small pelagic sector of Ghana has taken its toll on fishermen and fishing communities, making them more resistant to change that they perceive as further limiting their use of the sea.

This project had its share of the above but we remain grateful to the cooperation we received from fishermen and fishmongers from Axim, Dixcove and Shama in Western Region of Ghana. They showed their willingness to work towards the conservation of large pelagics for the future of their children and communities.

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# *Introduction*

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This picture book catalogues some species of elasmobranchs and billfishes landed during the implementation of the project “Enhancing the Management and Conservation of Elasmobranchs (sharks, skates and rays) and Billfishes through improved fisheries data collection and characterization of knowledge on harvest and trade in Ghana”. Most of the pictures in this book are credited to Google images as the fishes landed during data collection were mutilated to ensure they fit into canoes. However, all species indicated are species landed in project communities: Axim, Dixcove and Shama by fishermen.

This book has been produced as a tool for education and communication with fishermen towards the conservation of elasmobranchs and billfishes in Ghana. It is design to provide fishermen and fishmongers with basic information on these species.



## Part I: *Elasmobranchs* .....

The term elasmobranch refers to the sharks, rays, and skates, which are cartilaginous fishes . These animals are some of the most fascinating creatures of the ocean. They have a skeleton made of cartilage, rather than bone and come in many sizes and shapes—from the giant whale shark and the huge manta ray to the dwarf lantern shark and the tiny short-nosed electric ray and from the odd-looking hammerhead sharks to the totally bizarre sawfish .

Elasmobranchs are mostly a marine taxon, but we know several species that live in freshwater environment. Elasmobranchs lack swim bladders and maintain buoyancy with oil that they store in their livers. Some deep-sea sharks are targeted by fisheries for liver oil, including the school, gulper and basking sharks. All three of these species have been assessed by the IUCN as vulnerable due to overfishing.

<https://www.thoughtco.com/what-is-an-elasmobranch-2291710>

<http://eol.org/pages/1857/overview>

<https://en.wikipedia.org/wiki/Elasmobranchii>

# *Bigeye Thresher-fin Shark*



**Scientific name:** *Alopias superciliosus*

**Fante name:** polley

**Conservation status:** Vulnerable

The bigeye thresher is found in temperate and tropical oceans worldwide. Thresher sharks are slow to mature; males mature at a length around 2.7-2.9 m (8.9-9.5 ft) and at an age of 9-10 years, while females mature at a length around 3.3-3.6 m (11-12 ft) and at an age of 12-14 years. They may live for 20 years or more. They are known to stun prey with their enormous tail.

**Did you know:** *A female bigeye thresher is estimated to produce only 20 young over her entire life*

# Blue Shark



**Scientific name:** *Prionace glauca*

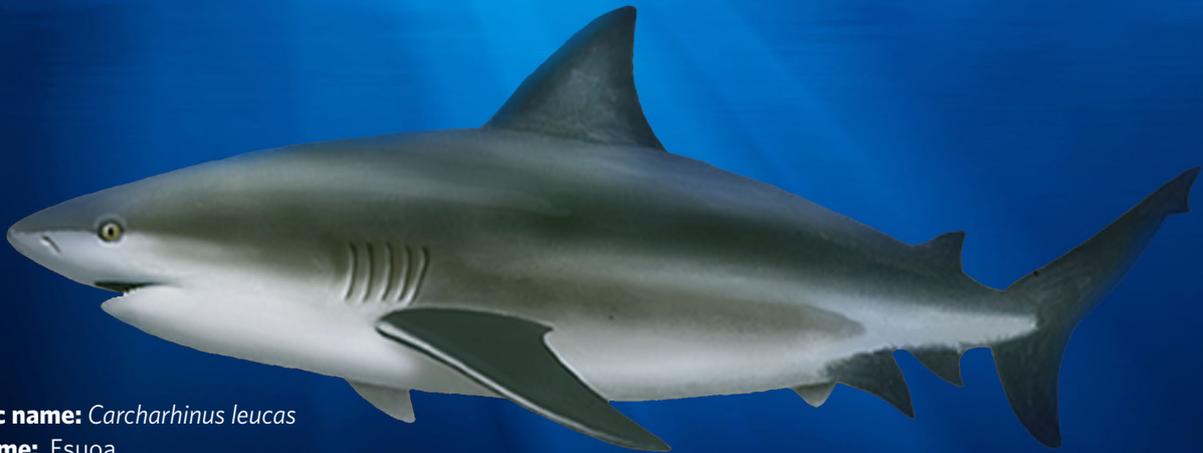
**Fante name:** Gogorow

**Conservation status:** Near Threatened

The blue shark inhabits deep waters in the world's temperate and tropical oceans. The gestation period is between nine and 12 months. Females mature at five to six years of age at a length of 1.82 to 2.82 m (6.0 to 9.3 ft) and males at four to five at 2.2 to 3.3 m (7.2 to 10.8 ft).

**Did you know:** Blue sharks give birth to live young ones and are noted for large litters of 4 to over 135 pups

# ***Bull Shark***



**Scientific name:** *Carcharhinus leucas*

**Fante name:** Esuoa

**Conservation status:** Near Threatened

The bull shark, also known as the Zambezi shark in Africa, and Lake Nicaragua shark in Nicaragua, is commonly found worldwide in warm, shallow waters along coasts and in rivers. The male bull shark is able to begin reproducing around the age of 15 years while the female cannot begin reproducing until the age of 18 years

**Did you know:** *Bull sharks can thrive in both salt and fresh water and can travel far up rivers.*

# Common Thresher-fin Shark



**Scientific name:** *Alopias vulpinus*

**Fante name:** Kakatsi Polley

**Conservation status:** Vulnerable

The common thresher-fin shark is found in tropical and cold-temperate waters worldwide. Males mature at 3.3 m (11 ft) and five years old, and females around 2.6–4.5 m (8.5–14.8 ft) and seven years old. They are known to stun prey with their enormous tail.

**Did you know:** *Common thresher-fin sharks are known to live to at least 15 years and their maximum lifespan has been estimated to be 45–50 years.*

# Scalloped Hammerhead Shark



**Scientific name:** *Sphyrna lewini*

**Fante name:** Anto

**Conservation status:** Endangered

The scallop hammerhead primarily lives in warm, temperate, and tropical coastal waters all around the globe. On average, males measure 1.5 to 1.8 m (4.9 to 5.9 ft) and weigh about 29 kg (64 lb) when they attain sexual maturity, whereas the larger females measure 2.5 m (8.2 ft) and weigh 80 kg (180 lb) on average at sexual maturity.

**Did you know:** *Scalloped hammerhead sharks have a homing behavior to navigate in the ocean. They move in the night and use the environment as a map, similar to a human reading a topographical map.*

# Short-fin Mako Shark



**Scientific name:** *Isurus oxyrinchus*

**Fante name:** Edu

**Conservation status:** Vulnerable

The shortfin mako inhabits offshore temperate and tropical seas worldwide. The shortfin mako shark is a fairly large species of shark. An average adult specimen measures around 3.2 m (10 ft) in length and weighs from 60-135 kg (132-298 lb). The females shortfin mako is typically larger than males. The shortfin mako shark feeds mainly upon cephalopods and bony fish including mackerels, tunas, bonitos, and swordfish, but it may also eat other sharks, porpoises, sea turtles, and seabirds.

**Did you know:** *The shortfin mako is on record as the fastest-swimming shark, capable of bursts of speed up to 18.8 metres per second (68 km/h)*

# Common Tiger Shark



**Scientific name:** *Galeocerdo cuvier*

**Fante name:** Ǝpo Eginamowa

**Conservation status:** Near Threatened

The tiger shark is a species shark found in many tropical and temperate waters, especially around central Pacific islands. It is a large macropredator, capable of attaining a length over 5 m (16 ft 5 in). Its name derives from the dark stripes down its body, which resemble a tiger's pattern but fade as the shark matures. Males reach sexual maturity at 2.3 to 2.9 m (7.5 to 9.5 ft) and females at 2.5 to 3.5 m (8.2 to 11.5 ft)

**Did you know:** *The skin of a tiger shark can typically range from blue to light green with a white or light-yellow underbelly*

# *Sand Tiger Shark*



**Scientific name:** *Carcharias taurus*

**Fante name:** Ewiabre

**Conservation status:** Endangered

The sand tiger shark inhabits subtropical and temperate waters worldwide. It inhabits the continental shelf, from sandy shorelines (hence the name sand tiger shark) and submerged reefs. Adult sand tigers range from 2 m (6.6 ft) to 3.2 m (10.5 ft) in length and 91 kg (200.6 lbs.) to 159 kg (350.5 lbs.) in weight.

**Did you know:** *Sand tiger sharks have the lowest reproductive rate known for sharks*

# Great White Shark



**Scientific name:** *Carcharodon carcharias*

**Fante:** Edu

## **Conservation status:**

The great white shark, commonly known as the great white or the white shark, is a species of large mackerel shark. It can be found in the coastal surface waters of all the major oceans. Adult male and female white shark ranges from: female: 4.5 - 6.4 m (Adult), Male: 3.5 - 4 m (Adult)

**Did you know:** *The biggest great white shark on record was 23 feet (7 m) long, weighing about 7,000 pounds (3200 kg).*

# *Manta ray*



**Scientific name:** *Manta alfredi*

**Fante:** Mbadεε

**Conservation status:** Vulnerable

Mantas are found in warm temperate, subtropical and tropical waters. There are two species and they are both are pelagic; *Manta birostris* migrates across open oceans, singly or in groups, while *M. alfredi* tends to be resident and coastal. They are filter feeders and eat large quantities of zooplankton (tiny sea animals), which they swallow with their open mouths as they swim

**Did you know:** *Manta ray gestation (pregnancy) lasts over a year and they give birth to live pups.*



## *Part II:* **Billfishes** .....

The term billfish refers to a group of predatory fish characterised by prominent bills, or rostra, and by their large size; some are longer than 4 m (13 ft). Billfish include sailfish, marlin and swordfish. They are apex predators which feed on a wide variety of smaller fish, shrimps, squids and octopus.

Billfish are pelagic (found at the surface) and move around a lot. They are found in all oceans, although they usually inhabit tropical and subtropical waters; swordfish are found in temperate waters, as well. Billfish use their long spears or sword-like upper beaks to slash at and stun prey during feeding. Their bills can also be used to spear prey and have been known to spear boats, probably accidentally, but they are not normally used in that way.

The largest billfish, the Atlantic blue marlin weighs up to 820 kg (1800 lbs.) and has been classified as a vulnerable

# Atlantic Sail Fish



**Scientific name:** *Istiophorus albicans*

**Fante:** Ekyinekyin

**Conservation status:** Least Concern

The Atlantic sailfish is a pelagic fish of tropical and temperate waters in the Atlantic Ocean. Atlantic sailfish hunt schooling fish, such as sardines, anchovies and mackerel although they also feed on crustaceans and cephalopods.

Generally, Sailfish do not grow more than 3 m (9.8 ft) in length and rare weigh over 90 kg (200 lb.). The sailfish reaches maturity between length 121 - 146 cm.

**Did you know:** *When feeding, the Atlantic sailfish will often herd shoals of fish into a tight group, known as a 'bait ball', using its dorsal fin and hunt with their bill.*

# Atlantic Blue Marlin



**Scientific name:** *Makaira nigricans*

**Fante:** Kwatwe

**Conservation status:** Threatened

Blue marlin is distributed throughout the tropical and subtropical waters of the Atlantic Ocean. A bluewater fish that spends the majority of its life in the open sea far from land. The blue marlin preys on a wide variety of marine organisms, mostly near the surface, often using its bill to stun or injure its prey. Females can grow up to four times the weight of males. The maximum published weight is 818 kg (1,803 lb) and length 5 m (16.4 ft)

**Did you know:** Atlantic blue marlin uses its bill to stun, injure, or kill while knifing through a school of fish or other prey, then returns to eat the injured or stunned fish.

# Atlantic White Marlin



**Scientific name:** *Kajikia albida*

**Fante:** Kwatwe

**Conservation status:** Endangered

White marlin, also known as marlin, and skilligalee is a species of billfish that lives in the epipelagic (near surface) zone of the tropical and subtropical Atlantic Ocean. They are near the top of the food chain and will consume any prey they can find that is manageable for their size. Schooling flyingfish, small tuna, dolphinfish and squid are the preferred prey of white marlin. Growth of white marlin is very rapid, with males reaching sexual maturity at only 153.2 cm Lower Jaw Fork Length and females becoming sexually mature at 189.9 cm Lower Jaw Fork Length

**Did you know:** White marlin female can lay 190,000 to 586,000 eggs and they live up to 15 or more years.

# Swordfish



**Scientific name:** *Xiphias gladius*

**Fante:** Ekyinekyin preko

**Conservation status:** Least Concern

Swordfish are found widely in tropical and temperate parts of the Atlantic, Pacific, and Indian Oceans, and can typically be found from near the surface to a depth of 550 m (1,800 ft). They are large, highly migratory, predatory fish characterized by a long, flat bill. Females are larger than males. They reach maturity at 4–5 years of age and the maximum age is believed to be at least 9 years.

**Did you know:** *Swordfish have special organs next to their eyes to heat their eyes and brains. The heating of the eyes greatly improves their vision, and consequently improves their ability to catch prey.*

Picture book of Some Elasmobranchs and Billfishes caught in Ghana  
**2018**