SEA TURTLES LIFE SEA FURTLES





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INDEX	
1 Origin - Evolution	P 1
2. Life cicle	P.3
3. Predators	P.4
4. Families and Anatomy	P.6
5. Species in the world	P.10
6. Type of food	P.14
7. Marine habitat	P.19
8. Ocean distribution	P.27
P. Social behavior	P.39
). Dangers and Threats	P.41
I. How to protect them?	P.44
2. Value and importance	P.43

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ORIGIN AND EVOLUTION

Sea Turtles are peaceful reptiles that have survived major catastrophes on the planet. It is estimated that they existed since more than 150 million years ago, outliving dinosaurs.

They had their origin on land, but they were evolving and adapting their bodies to the marine environment, making a real difference with other reptiles. Over time, their legs became flattened fins, in the shape of oars, which has allowed them to move easily through almost all oceans.



REPTILES

Sea turtles belong to the class REPTILIA OR REPTILES, as well as crocodiles, lizards, iguanas and snakes, which are characterized by having:

- > Body with scales
- > Shields or plates
- > Cold-blooded body
- > Reporduction by laying eggs
- > Pulmonary and cutaneous breathing.

These sea turtles are adapted to the aquatic habitat with a hydrodynamic body, which makes them very fast in their movement through the oceans.

Our lung breathing allows us to dive under the ocean...

ts life cycle is relatively simple. It begins with the mating of females and males in the water. Subsequently, the females migrate to the same nesting beaches where they were born. On these beaches, they lay between 50 and 200 eggs, depending on the species. Then after 45 to 75 days, the hatchlings are born, which then embark on a quick trip to the sea. It is estimated that only one out of 1,000 will survive from the juvenile state to maturity. It is believed that some species can live more than 100 years.

LIFE CYCLE



PREDATORS TERRESTRIAL HABITAT

In the terrestrial habitat, its main predators are birds, reptiles, crab, dogs and the hunting of man. In this habitat, the young run great dangers in their journey to the sea.

DEPREDADORES HABITAT ACUATICO

En el hábitat ACUATICO, sus principales depredadores son las grandes orcas, tiburones y lobos marinos, amenazando permanentemente a todas las especies.

> Estamos siempre atentas a escapar de los depredadores...

> > ValueOcean, Minibooks 5

FAMILIES AND SPECIES

Currently there are only two families that have survived natural catastrophes through time.

1 The DERMOCHELYIDAE family, has a single specie, the Leatherback or Baula turtle, which has a shell without plates or scales, covered by a thick layer of skin similar to leather.

2 The CHELONIIDAE family, has 6 to 7 species with a hard shell with shields or plates.

DERMOCHELYDAE CHELONIIDAE Our legs are real fins...

CHELONIIDAE FAMILY ANATOMY

The CHELONIIDAE family is represented by six species, whose main anatomical features are the following: hard, flat and smooth shell, covered with shields or scales, low bone weight and four legs in the shape of fins or oars.

Head Fin Shell **Central shields** Lateral shields **Marginal shields** Our family is remarkable by its shields...

DERMOCHELYIDAE ANATOMY FAMILY

he DERMOCHELYIDAE family is only represented by the specie Leatherback or Baula, whose main anatomical features are: Flexible and elongated shell with longitudinal keels, without shields or scales, covered by a thick layer of skin similar to leather. They have large fins that allow them to be excellent scuba divers.

> Our huge fins allow us to be excellent divers...

Keels

Shells are their main armor protection. According to the species, they have different forms. Hard-shelled turtles have round or elongated shapes. On the other hand, turtles with a soft shell have oval shapes. All the shells are adapted to facilitate the mobility of sea turtles

SHELLS



Scientists have identified between 7 to 8 species of sea turtles on the planet. Many of the species belong to the Cheloniidae family, which mainly inhabit the tropical waters of all the oceans and seas of the world.

> We swim through the warm waters of all the oceans...

(Dermochelys coriacea) It belongs to the Dermochelydae family. It has an elongated shell with 7 keels (180 cm long). Very large front fins and skin without scales. Its body has white spots. It weighs between 500 to 1600 kg.

LEATHERBACK

Risk category: IUCN Vulnerable (Eretmochelys imbricata) It belongs to the Cheloniidae family. It has an oval shell and overlapping shields (80 cm long). Pigmentation with amber and coffee streaks. It weighs between 80 to 90 kg.

HAWKSBILL

Risk category: IUCN Critical danger (Chelonia mydas) It belongs to the Cheloniidae family. It has an oval shell (120 cm long) and four costal shields. Adult color (brown, cream yellow, earth, green). Weight up to 230 kg.

GREEN

Risk category: IUCN Threatened (Caretta caretta) It belongs to the Cheloniidae family. It has a wide and thick shell with a hump on the back (105 cm long). Reddish brown color, It weight up to 180 kg.

LOGGERHEAD

Risk category: IUCN Vulnerable

LORA-

(Lepidochelys olivacea) It belongs to the Cheloniidae family. It has a shell wider than its length (72 cm). Olive green color, weight up to 50 kg.

OLIVE RIDLEY.

Risk category: IUCN Vulnerable (Lepidochelys kempii) It belongs to the Cheloniidae family. It has a shell wider than its length (72 cm). Creamy gray or grayish green dark color. Weight up to 50 kg.

Risk category: IUCN Threatened (Natator depressus) It belongs to the Cheloniidae family. It has a flattened shell.
(100 cm) and four pairs of rib shields. Olive green color. It weight up to 90 kg.

FLAT

Risk category: IUCN Unknow



The Olive Ridley turtle and the Lora turtle are the smallest species of sea turtles that inhabit the oceans. Meanwhile, the Leatherback turtle is the largest, reaching about 2 meters long.



TYPE OF FOOD

T hey feed on marine animals and plants. Depending on the species, they have different types of diets.

Some species are carnivorous and eat jellyfish, sponges, larvae, fish, snails, shrimps, crabs and many other marine invertebrates. Others are herbivores and eat algae and seagrass. There are also omnivorous species, who eat both plants and marine animals.

We use our powerful jaws to tear, chew and grind our rich food...

GREEN TURTLE DIET

The green turtle is herbivorous and feeds on algae and seagrass. It uses its finely sharpened jaws in the form of a "saw" to scrape and cut its food on the rocky substratum in shallow waters. Its main diet is green algae. They also eat plants known as "turtle grass" and some red algae.

We are always looking for nutritious sea vegetables...

HAWKSBILL TURTLE DIET

The HAWKSBILL turtle is omnivorous and feeds mainly on sponges. It also eats jellyfish, actinias, algae and other invertebrates. Its pointed jaw, allows it to extract its favorite food from the rocky cracks.

> They call us spongivores because we eat a lot of sponges...

LOGGERHEAD TURTLE DIET

The LOGGERHEAD turtle is carnivorous and eats all kinds of marine animals, preferably hard-body invertebrates, such as: snails, clams, crabs, cirripede crustaceans, sponges and sea urchins.

> We crush the hard food with or powerful jaws...

LEATHERBACK TURTLE DIET

The LEATHERBACK turtle is carnivorous and feeds on marine animals with a soft and gelatinous body, which it catches with its jaws in the shape of a hook or "W". Its main diet is jellyfish. Sometimes it also eat squids, sea urchins, small fish and crustaceans.

Our main diet is the gelatinous and transparent jellyfish...

MARINE HABITAT

Sea turtles move through different habitats according to the stage in which they are found in their life cycle. In their stage of hatchlings they move from the terrestrial habitat (beaches) to the marine habitat, swimming among floating algae (Sargassum). In their juvenile stage, they live in shallow waters. In their adult stage, they nest, grow and eat in different types of terrestrial and aquatic habitat, such as: nesting beaches, coral reefs, water columns, cracks, rocky bottoms, pasty bottoms and sandy shallow water and slimy substrates.

We use different habitat during our long life...

NESTING HABITAT

We have a great sense of direction, we always nest in the same beach where we were born.

In its adult stage, all species of turtles renest and lay their eggs on the same beach where they were born. Here, they build their nests, digging the sand to form cavities that reach depths between 50 and 60 cm.

HATCHLING HABITAT

In its hatchling stage, its habitat is the shallow sandy beaches. All the young leave their nests at almost the same time and quickly embark on a race along the beach to the sea, escaping from their numerous terrestrial predators.

> We embark on a fast and dangerous trek to the sea...

RESTING HABITAT

Green turtles tend to seek heat by swimming near the surface of the sea. They go out to sunbathe and rest on sandy, sunny beaches, where seals and albatrosses can sometimes be seen together.

> We love visiting the sandly beaches to sunbathe and relax...

On the coral reefs, we find our favorite food...

CORAL REEF HABITAT

Some sea turtles live on coral reefs. This habitat is characterized by having a great variety of species, which constitute a rich source of food for marine fauna. Here it is common to find the Hawksbill Turtle, which feeds on sponges and other marine invertebrates.

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WATER COLUMN HABITAT

We found delicious jellyfish in the water columns of all the oceans.

The Leatherback turtle lives in the water columns in the high seas of almost all the oceans of the planet, where they find their favorite food, the delicate and transparent jellyfish. This sea turtle has been found more than 1,000 meters deep in search of its food.



GRASSY SEA BOTTOM HABITAT

We swam in sea bottoms, rich in grass and algae... The green sea turtle also frequents the rich habitat rich in grass and seaweed, which they scrape and cut with their sharp jaws in the shape of a saw.





OCEAN DISTRIBUTION

Sea turtles are distributed and move in the oceans and seas of the world, which characterizes them as one of the most migratory animals, comparable only to whales and seabirds. They travel thousands of kilometers in search of its nesting beaches and food, sometimes facing strong marine currents, storms, hurricanes and the pursuit of large predators in the aquatic habitat (killer whales and sharks) and in the terrestrial habitat (man and animals).

We swim thousands of kilometers bravely crossing seas and oceans...

OCEAN TRAVELING

All species move around the world's oceans. Some visit the waters of the ATLANTIC OCEAN, others those of the INDIAN OCEAN and the tropical and temperate waters of the PACIFIC OCEAN.

PACIFIC OCEAN, the main ocean of the planet, with an area of 165 million km² and with the larges amount of marine biodivesity. **ATLANTIC OCEAN**, the second largest ocean of the planet, with an area of 82,4 million km². **INDIAN OCEAN**, the third largest ocean on the planet, with an area of 73,5 million km², which has, on average, the highest quality waters of the blue planet.





PACIFIC

OCEAN

GREEN TURTLE

We enjoy in the warm waters of the three main oceans of the planet... It swims in the waters of the ATLANTIC OCEAN, moving through the Gulf of Mexico, Puerto Rico, US coast, South America and South Africa. In the PACIFIC OCEAN, it has been seen in the Galapagos Islands, north coast of Chile, Peru, the coast of Asia. Australia and Hawaii. The INDIAN OCEAN, off the coast of India.

ARTIC OCEAN

TLANTi OCEAN

iNDiAN

OCEAN

PACIFIC OCEAN

HAWKSBILL TURTLE

We swim in the warm waters of the Atlantic, Indian and Pacific Ocean... It swims in the waters of the ATLANTIC OCEAN, moving along the coasts of southern Florida, Bahamas, Belize, Venezuela, the coast of Brazil and the north coast of Argentina. In the PACIFIC OCEAN, it has been seen in the Oceanic Islands of Australia, Mexico, El Salvador, Costa Rica, Galapagos Islands (Ecuador), Peru, and Easter Island (Chile). In the INDIAN OCEAN, in the Maldives and Seychelles, Madagascar and Mauritius.

ARTIC

ATLANTIC OCEAN

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INDIAN OCEAN

PACiFiC

OCEAN

LEATHERBACK TURTLE

We are the only species that swims in colder waters... Swims in the waters of the ATLANTIC OCEAN, moving through the north of Newfoundland, Nova Scotia, South of Argentina, Great Britain, Norway, Holland, Denmark, Florida and Puerto Rico. In the PACIFIC OCEAN, it has been seen in the Gulf of Alaska, California (USA) and the North of Chile. In the INDIAN OCEAN, Tasmania, India, Indonesia, Mauritius and South Africa.

ARTIC OCEAN

ATLANTí OCEAN

INDIAN

OCEAN

PACIFIC

OCEAN

LORA TURTLE

We swim preferably through the Atlantic ocean...

It swims in the waters of the

ATLANTIC OCEAN, moving through the Azores Islands, Canada, Gulf of Mexico, the US coast (from Florida to New England), and it has occasionally been seen in France, Spain and England. It is the species with the most retricted distribution on the planet.

ARTÍC OCEAN

TLANTí OCEAN

INDIAN

OCEAN

URTLE

OCEA

ARTIC

LOGGERHEAD

We swim in the warmest waters of the blue planet...

It swims in the waters of the ATLANTIC OCEAN, moving from Newfoundland (Canada) to Argentina, the coast of Mexico, Bahamas and the Caribbean. PACIFIC OCEAN, it has been seen from Alaska (USA) to Chile, Australia and Japan.

TLANTi OCEAN

PACíFíC

OCEAN

FLAT TURTLE

You can always find us on the <u>coast of Aus</u>tralia...

t swims in the waters of the **PACIFIC OCEAN**, moving along the coast of Australia and Papua New Guinea. It is endemic to the Australian continental shelf.

ARTÍC OCEAN

ATLANTIC OCEAN

INDIAN

OCEAN

PACIFIC

OCEAN

OLIVE RIDLEY TURTLE

We swim in the three main oceans of the planet...

It swims in the waters of the ATLANTIC OCEAN, moving along the coast of West Africa, the coast of Brazil, the Caribbean, Mexico, Panama and Costa Rica. In the PACIFIC OCEAN, it has been seen in the Galapagos Islands (Ecuador) and the north and central coast of Chile. In the INDIAN OCEAN, on the coast of India.

ARTÍC OCEAN

TLANTIC OCEAN

indian

OCF AN

OCEANIC TRAVELING

INDONESIA

UNITED STATES

I he large LEATHERBACK MARINE turtle travels a long and daring journey through the PACIFIC OCEAN, registering an approximate route of 9.700 km between INDONESIA and the UNITED STATES

DISTRIBUTION AND MIGRATION TROPICAL AND SUBTROPICAL WATERS



We are fans of warm waters... Most species are distributed and travel in the tropical and subtropical waters of the world's oceans, swimming around the equator of the planet.

SOCIAL BEHAVIOR

Sea turtles have very distinctive social behaviors, among which they stand out as peaceful, lonely, brave and daring animals on their journeys through seas and oceans, seeking their food, a nesting place and avoiding falling prey of its predators.

> We invite you to be peaceful and enjoy your moments of solitude..

SOCIAL BEHAVIOR

They are **PACIFIC**, they share different habitats with a great diversity of species, without claiming territory.

They are **SOLITARY**, they lead a lonely life. They are only seen as a group in their breeding stage, when they begin their route to the ocean, and in their adult stage, when they gather around food. They are **BRAVE**, undertaking long migrations, facing, alone, great dangers in the oceans.

DANGERS AND THREATS

All species of sea turtles are subject to a series of hazard and threats in all oceans. Some of them are: >Global warming >Pollution of the oceans >Destruction of the habitat >Fishing activity >Shipping transport >Attack by their predators >Exploitation of man

All these threats have led scientists to categorize the state of conservation of all species.

> We are at risk of disappearing...



DANGERS AND THREATS

DESTRUCTION OF THE HABITAT

Habitat destruction is caused by human action and natural catastrophes. This causes the destruction of nesting beaches, coral reefs, decreasing the amount of food available.

The POLLUTION of the

oceans, seas and beaches, by the dumping of detergents, chemical substance, oil, garbage and plastics discarded by man. The plastic bags are poisoning them. Many consume them as food, mistaking them for jellyfish.

We are running out of food...

DANGERS AND THREATS

FISHING ACTIVITY

The fishing activity causes high levels of mortality in the Sea turtles, due to the use of fishing nets that trap, sink and drown them.

EXPLOITATION BY MAN

The exploitation by man has caused the death of large numbers of sea turtle due to:

Consumption of their eggs and their meat, and the commercialization of their shells, which have been used to make buttons, combs and lens frames.

> Nets are a deadly trap...

HOW TO PROTECT THEM?

We can protec them in the different stages of their life cycle (offspring, juveniles and adults) through the following actions:

- > Clean the beaches
- > Do not litter
- > Get away from their nests
- > Do not buy products made with their shell.
- > Dim lights on the coast
- > Do not consume their eggs
- > Share how to protect .



VALUE AND IMPORTANCE

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Sea turtle are of great value and importance to the health of some marine ecosystems, since: **They CONTRIBUTE to maintain** the balance of other populations, feeding on the species that abound and deteriorate the marine ecosystem. They MOVE and refresh the sands in the beaches, allowing a healthy exchange of organic matter. They ENRICH the tourism sector of the coastal zone where they nest and **They CONSTITUTE a cultural** value for society.

We help the balance of the reef ecosystem by eating the abundance of jellyfishes...

SEA TURTLES LEGGEWRHEAD

Seven species give life to the minibook SEA TURTLES LIFE SEA TURTLES GREEN HAWKSBILL LEATHERBACK ELAT

LORA An e biolog OLIVE RIDLEY social provi intere minik provi matio and a

An exploration into the biological world and social life of sea turtles provided through an interesting illustrated minibook, devoted to providing valuable information that will instruct and amaze the whole family.

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