

# Azores ocean guide



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## Preface

A whale watching trip in the archipelago of the Azores, is a unique and amazing experience. It is possible to interact with cetaceans and other animals in their natural environment by seeing, getting a feeling of closeness and enjoying their behavior. It is possible to observe many different species of animals, not only cetaceans, but also birds, fish, sharks and others.

The aims of this Ocean Guide are to summarize the most important species seen on these trips, giving important information and additional details that might be interesting, as well as providing representative images.

It is not supposed to be a very technical guide but a tool that can easily be used by any person, and that can be useful for identifying and learning about the species viewed during the trip.



Through this guide, everyone will get the chance to consider and appreciate the unquestionable beauty and see how fascinating these marvelous animals are.

# The archipelago of Azores

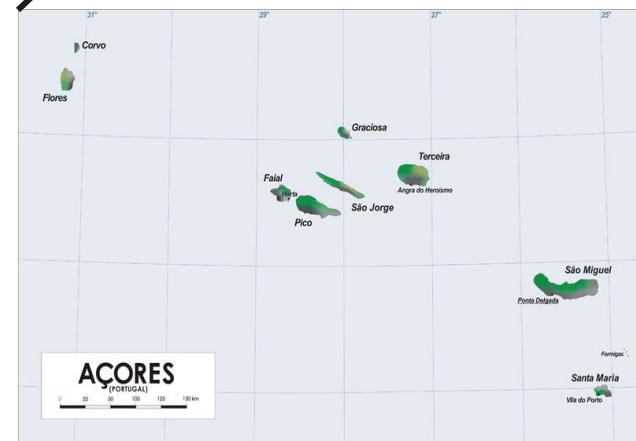
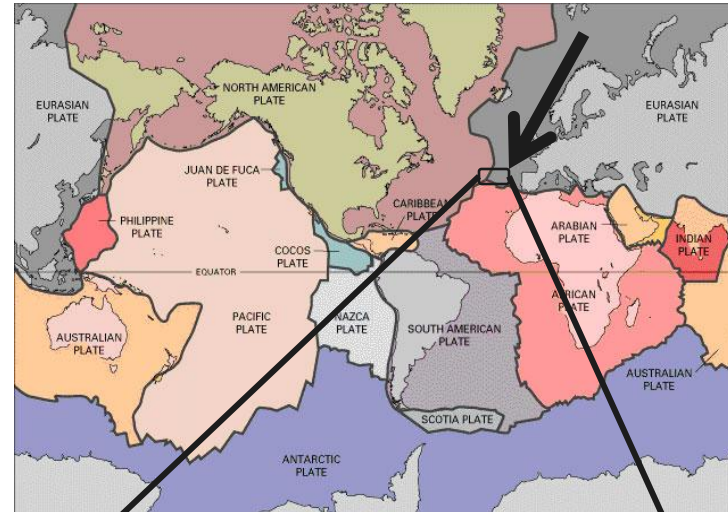
Located in the middle of the North Atlantic, the archipelago of the Azores is one of the best sites in Europe for the observation of Cetaceans.

The nine Azorean islands are the most visible faces of a complex set of underwater mountains with over a thousand meters in depth, created by volcanic activity, due to the tectonic movements of the Eurasian plate, the African plate and the North American plate.

Very few places in the world have the specific conditions which make this group of islands one of the most interesting places for Whale Watching.

The whales, with special focus on the Sperm whales, get close to the islands of São Miguel and Pico thanks to the morphology of the sea bottom, the depth, the currents and hence, the abundance of food. When the deep sea nutrient-rich currents encounters an island a phenomenon called the "island mass effect" occurs, where basically this deep sea currents are forced to go up, enriching the surface waters.

All year-round it is possible to see pods of sperm whales and many different species of dolphins. In spring, it is also possible to see different species of large baleen whales.





# Characteristics of the Cetaceans

When we talk about cetaceans, what we are actually doing, is talking about mammals. Dolphins, whales, beaked whales and porpoise are all marine mammals.

As mammals, they present typical features from this groups:

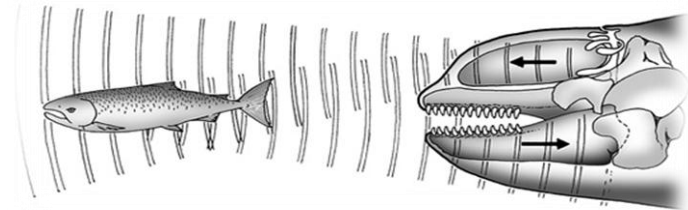
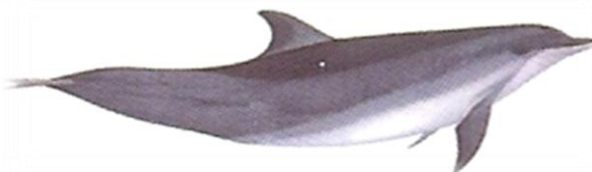
- They are warm-blooded animals (endothermic)
- They have mammary (milk-secreting) glands hidden in a slit within their belly
- They present hair at birth
- Breathing with lungs (impossible to breathe under the water)



**Odontoceti**



**Mysticeti**



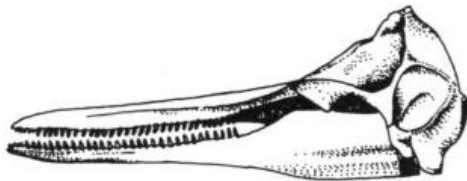
**Echolocation**

As cetaceans, they present some special features:

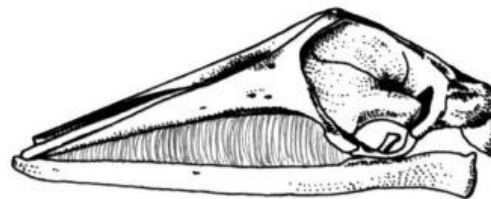
- Completely adapted to the aquatic life (streamlined body; extremities modified to fins; strong horizontal tail...)
- Ribs not joined at the sternum (more lung capacity)
- Nostrils moved to the top of the head (one blowhole in the Odontoceti; two blowholes in the Mysticeti)
- Echolocation (they emit a sound which bounces off an object and returns, giving information about the size, distance)
- Thick layer of oil and fat called blubber under the skin
- Lost of sebaceous (fat-secreting) and exocrine (sweat) glands.

# Cetaceans classification

Cetaceans are divided into two main groups (Suborders): Odontoceti or toothed cetaceans, which includes dolphins, sperm whales, beaked whales and porpoises, and Mysticeti or baleen cetaceans consisting of the baleen whales.



**Odontoceti**



**Mysticeti**



**Baleen plate**



The Odontoceti have equally sized and shaped teeth, and they feed on small schooling fish, squid, crustaceans.

The Mysticeti include 11 different species. The baleen plates are located on the upper jaw, and they are used for feeding. One of the feeding methods consists of a large quantity of water and food (krill, plankton, small fish...) entering the whale's mouth then closing it and using their tongue, they push the water against the baleen plates. Water exits, but the food is retained.

# Whale hunting

The whale hunting was a really important activity in the Azores. It started in the second half of the 18<sup>th</sup> century, and it was not until 1987 that it was forbidden, due to ecological pressures and the depreciation of the whaling industry.

It became an opportunity for people as an extra economic support. During this time, the cetaceans, especially the sperm whale, were extremely hunted. But actually, everything was useful and nothing was wasted. They obtained oils, cosmetics, fertilizers and other products that generated a lot of money.



“Look-outs” were people that worked based on-land observing the ocean. They were strategically located, with really good views, and they used high visibility binoculars for spotting the animals. It is actually the same strategy people use for finding animals in whale watching.

In the Azores there has been a peaceful transition from hunting to whale watching. Nowadays, no one even dares to think about going back to the time when whales were killed for commercial purposes. Unfortunately, in some countries, this is now a subject being discussed and is slowly gaining supporters.

# Species

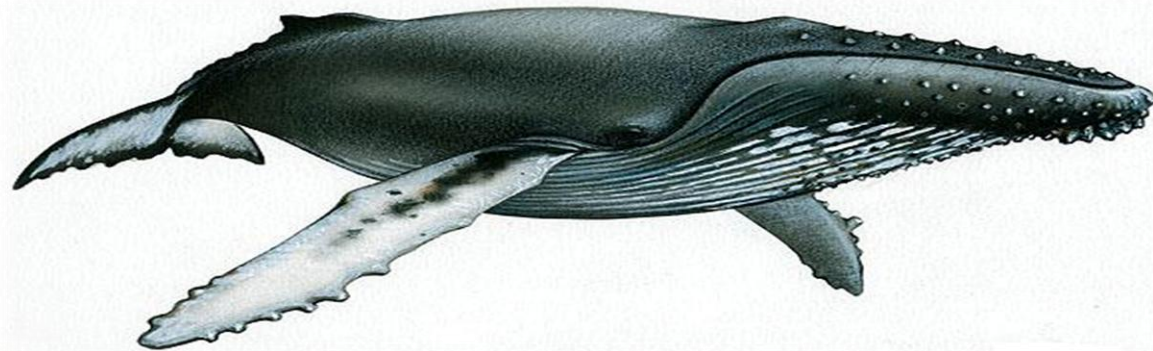
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## ***Balaenoptera musculus*** (PT: Baleia azul/ UK: Blue whale/ DE: Blauwal/ SE: Blåval/ ES: Ballena azul/ FI: Sinivalas)

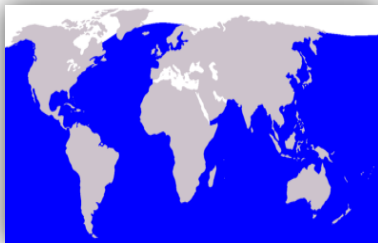
**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERIDAE**

Average length: 26–30 m

Average weight: 100–160 T (heaviest one 190 T)

Feeding on: small invertebrates (mainly *krill*)

Periodicity: Seasonal species (Spring and Autumn)



The blue whale is the biggest existing animal, reaching up to 30 m long (the largest animal known to date measured 33 m).

It might be easily confused with the fin whale or the sei whale, so its size and its small dorsal fin can help to identify it with more accuracy.

The body coloration is gray with lighter spots spread all over the body. Their head is flat in front of the blowholes. When it blows, it can reach 12 m high. Their baleen plates, where they retain their food (*krill*), can reach up to 1 m long and 55 cm wide, being the largest among all the Mysticeti.

Newborns measure 7 m and they weigh 6 to 7 tons. Females bear a single calf every 2 to 3 years. Gestation lasts about 1 year and lactation takes at least 7 months. It can live up to 80-90 years.

These animals can dive up to a depth of 200 m (for 30 min) and cruises at a maximum speed of 40 km/h.

They do not stay long in the Azorean waters, but they are observed offshore the islands during migration.

## ***Balaenoptera physalus*** (PT: Baleia comum/ UK: Fin whale/ DE: Finnwal/ SE: Sillval/ ES: Rorcal común/ FI: Sillivalas)

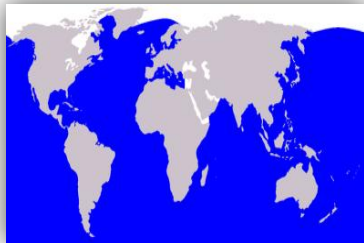
**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERIDAE**

Maximum length: 21 m (males) / 26 m (females)

Maximum weight: 80 T

Feeding on: Fishes and small cephalopods

Periodicity: Seasonal species (from March to July)



The fin whale is the second largest animal existing in the world (22 m).

His body is dark gray on the upper part and white on the ventral region. Also, the lower right jaw is white, while the lower left jaw is light gray.

They make long migrations. During summer, they remain in high latitudes where they feed on small fishes, small cephalopods and small crustaceans, like krill, which are retained in their baleen plates. However, in winter, they migrate to tropical regions where they breed.

Gestation lasts for about 1 year and lactation takes at least 6 months. Newborns measure about 6 m long and 2 or 3 T weight. Each female can bear a calf every 2 or 3 years. It is thought that they live up to be 80-90 years and they can swim up to 40 km/h.

They can emit several types of sounds, heard up to hundreds of kilometers away.

They usually live in groups of 2-5 members.

## ***Balaenoptera borealis*** (PT: Baleia sardineira/ UK: Sei whale/ DE: Seiwal/ SE: Sejval/ ES: Rorcual norteño/ FI: Seitivalas)

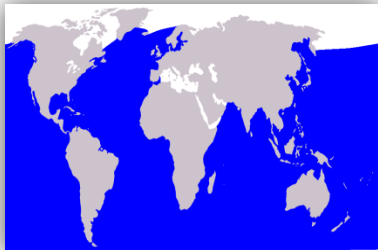
**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERA**

Maximum length: males 17 m / females 20 m

Average weight: 20 to 30 T

Feeding on: Small planktonic crustaceans, small fishes (harenk or sardines) and squid.

Periodicity: Mainly in summer



The Sei whale is the fastest existent whale, reaching speeds of 55 km/h!

The body is gray on the back and sides and has a lighter coloration on the ventral region. It has 32-62 grooves, all ending before the navel.

They have 320-340 baleen plates, which can measure up to 80 cm long.

The Portuguese name " baleia sardineira" is due to the fact that they usually feed on sardines, among other species of schooling fish.

It can dive at depths of more than 300 m for periods of 5-20 min.

Newborns measure 4,5 m and weigh up to 1 T. Females bear a single calf every 3 to 4 years. Gestation lasts about 1 year, and lactation takes about 6 to 9 months. The Sei whale can live for up to 70 years.

## ***Balaenoptera acutorostrata*** (PT: Baleia-anã/ UK: Minke whale/ DE: Zwergwal/ SE: Vikval/ ES: Rorcual aliblanco/ FI: Lahtivalas)

**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERA**

Maximum length: 8 m (males) / 9,5 m (females)

Average weight: 5-10 T

Feeding on: primarily on small fish (such as harenks or sardines), and krill as well

Periodicity: Rare species



This whale is the smallest one among all the baleen whales.

The body is dark gray on the back, and light gray and white on each side of the body. The blow is low and difficult to detect.

There are some ways to distinguish them: an acutely head that emerges first out of the water allowing the observation of the baleen plates, a skin without scars and distinctive white bands on the flippers.

Newborns measure about 2,5 m and weigh up to 450 kg. Gestation lasts 10 to 11 months, and lactation takes at least 6 to 8 months. Females bear a single calf every 1 or 2 years. The minke whale can live for up to 40-50 years.

They are frequently solitary and sometimes live in small groups of 2 to 3 individuals.

They are considered as moderately fast swimmer (5-26 km/h and capable of bursts at more than 40 km/h).

They can be seen only when they pass offshore the islands during migration.



***Balaenoptera edeni*** (PT: Baleia de Bryde/ UK: Bryde's whale/ DE: Brydewal/ SE: Bryde's val/ ES: Rorcual tropical/ FI: Tropiikinvalas)

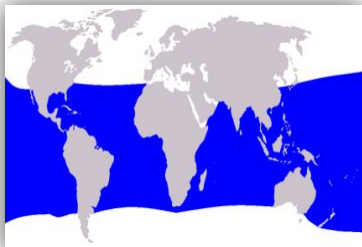
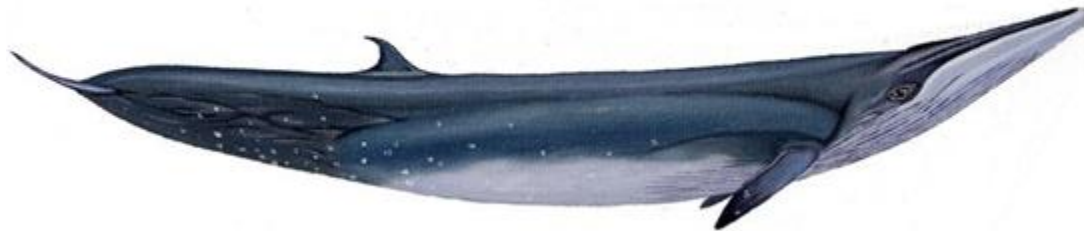
**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERA**

Maximum length: 15 m (females larger)

Maximum weight: 12 T

Feeding on: small gregarious fish and sometimes krill

Periodicity: Rare species (but only in summer)



The Bryde whale is the least known among all the whales.

They can easily be confused with sei whales, yet we noticed that their behavior was more "active", since they breach more often, their speed is about 30 km/h and above all they have 3 ridges on their heads (while the sei whale has just one). Its ventral region is light purple. Its blow is thin and 3-4 m high. The dives last between 5 and 15 minutes and it is not possible to see its caudal fin.

At birth, the calf measures 4 meters in length and weights about 650 kg. Gestation lasts between 11 and 12 months. The female gives birth to only one calf every 2 years. The longevity of the species is estimated to be 40 years.

## ***Megaptera novaeangliae*** (PT: Baleia de bossas/ UK: Humpback whale/ DE: Buckelwal/ SE: Knölval/ ES: Jubarta/ FI: Ryhävalas)

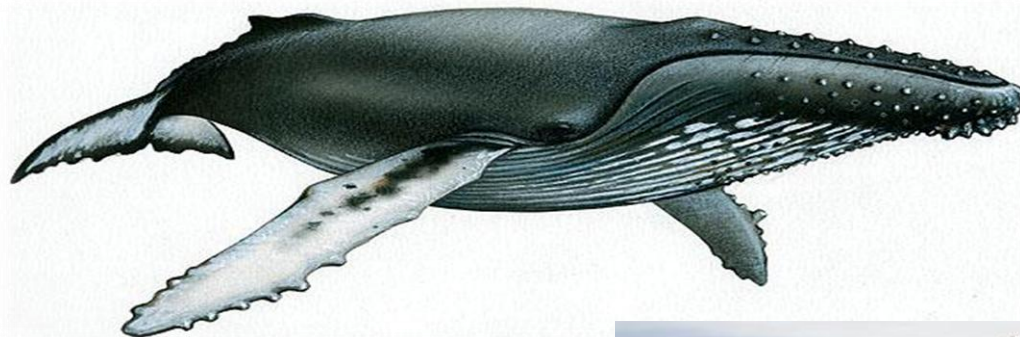
**SUBORDER: MYSTICETI**  
**FAMILY: BALAENOPTERA**

Maximum length: 13-14 m

Average weight: 25-30 T

Feeding on: Crustaceans and fishes

Periodicity: Rare species



The humpback whale is known for his acrobatics in and out of the water, including amazing jumps. It swims slowly, diving every 15-30 seconds before making a deeper dive for 15-30 min.

The body is basically blue and black, with a white region on the throat and belly. This species is distinguished by the longest flippers among the whales with protuberances (the humps), present also in his head. They use the fins like a defensive strategy or even for mating.

They can make a sudden attack on a bank of krill or on small schools of fish. Gestation lasts about 1 year. The mother takes care of its calf until it is 1 year old. They can live up to 50 years. It emits a bunch of different sounds, specially the males, which are the only ones that sing. Actually, they are known as the song whales.

It is possible to see them only when during migration.

## ***Physeter macrocephalus*** (PT: Cachalote/ UK: Sperm whale/ DE: Pottwal/ SE: Kaskelot/ ES: Cachalote/ FI: Kaskelotti)

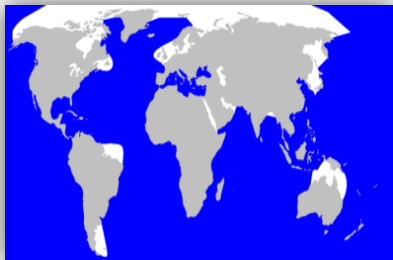
**SUBORDER: ODONTOCETI**  
**FAMILY: PHYSETERIDAE**

Maximum length: 18 m (males) 12 m (females)

Maximum weight: 60 T (males) / 20 T (females)

Feeding on: Squid

Periodicity: Resident species



The sperm whale is the most emblematic species in the Azores islands. It is the biggest existent animal with teeth. It only has teeth on the narrow lower jaw.

It has the heaviest brain which weighs about 7,5 kg.

It can dive until 3000 meters, where it mainly feeds on small and even on giant squids. The ability of diving until such depths is probably due to the spermaceti organ, located in its big head. It is able to stay underwater during more than 2 hours. When the sperm whale comes up to the surface for breathing, it blows to the left side, through a small blowhole located on the left side of its head.

Females usually live in groups with their calves, forming what is called "schools", while the males are solitary and only live together with other males when they are juveniles, Adult males migrate to colder waters.

The gestation period is about 14-15 months long. Newborn calves measure about 4 m in length. Sperm whales can live up to 70 years.

They are easily observed near the coast and offshore, because they prefer deep waters and in the Azores islands there is no continental shelf allowing large depths close to the coast.

***Delphinus delphi*** (PT: Golfinho comum/ UK: Common dolphin/ DE: Gemeiner Delfin/ SE: Vanlig delfin/ ES: Delfín común/ FI: Tavalinen delfinen)

**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 2,6 m

Average weight: 75-130 kg

Feeding on: Fish, squid and octopus

Periodicity: Resident species



The common dolphin is the most common species of Odontoceti in the Azores. They can be seen all year round. They dive as deep as 300 m during no more than 4 minutes.

This species is characterized by a dark-gray saddle below the dorsal fin and a yellow region making up each side of the posterior region of their body. There have between 40 to 55 small, conical pairs of teeth in each jaw.

They live in groups, sometimes with up to several hundreds of individuals. They are really friendly and they like to play with boats, emerging to breathe every 20 to 30 seconds while swimming, jumping and riding the waves.

At birth, calves already show a small sexual dimorphism, with males slightly larger (about 0,9 m long) than the females (about 0,8 m long).

Gestation lasts for 10 to 11 months. The lactating period ends at around 1 year of age. The females bear a single calf every 1 to 2 years. They can live up to 30 years.

They can emit sounds that can be heard even outside the water.



## ***Tursiops truncatus*** (PT: Roaz-corvineiro/ UK: Bottlenose dolphin/ DE: Großer Tümmler/ SE: Flasknos delfin/ ES: Delfín mular/ FI: Pullonokkadelfiini)

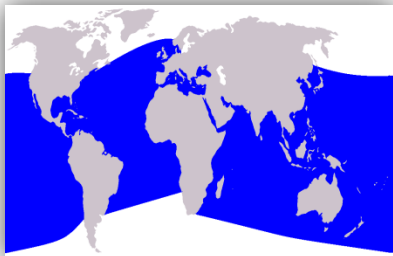
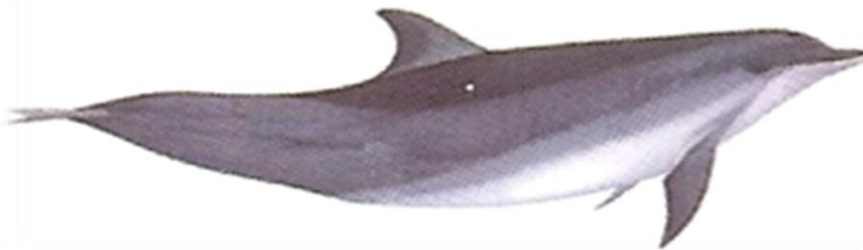
**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 2–4 m

Maximum weight: 500 kg

Feeding on: Fish, squid, octopus and crustaceans

Periodicity: Resident species



The bottlenose dolphin is a really common species in the Azores islands. They usually live in groups of several individuals (10-30 individuals, in some cases even more), being a really active species which swims and jumps close to the boats. It is often associated with other species of cetaceans, such as the pilot whale.

Their most distinguishing feature is their elongated snout, the "bottlenose" rostrum, which gives them their English name. Actually, they are the largest among the beaked dolphins.

Their coloration is mainly grey, and white in the ventral region. They can be confused with other species, such as the juveniles of the Atlantic spotted dolphin.

They surface every 2 to 3 minutes while travelling and they can be underwater for as long as 15-20 minutes diving to 800-900 m. They can swim with a maximum speed of 40 km/h for short periods of time. Gestation lasts for 12 months, and calves are often nursed for 12 to 18 months. Newborns measure between 0,9 to 1,3 m and weigh about 30 kg. Females bear a single calf every second or third year. They can live up to 40-50 years.

The bottlenose dolphin is commonly known as "Flipper", due to the famous American TV series.

***Stenella frontalis*** (PT: Golfinho pintado/ UK: Atlantic spotted dolphin/ DE: Zügeldelfin/ SE: Fläckig delfin/ ES: Delfín manchado del Atlántico/ FI: Deppladelfini)

**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 1,7-2,3 m (males larger than females)

Maximum weight: 140 kg

Feeding on: Fish, squid and other pelagical species

Periodicity: Seasonal species (from May until the end of summer)



The Atlantic spotted dolphin arrives to our shores for breeding and mating when the water starts to get warmer, although lately there have been sightings even in winter. They usually live in groups of 30-50 individuals, but sometimes it is possible to find them in huge groups (100-1500 individuals).

It is definitely the most friendly cetacean observed. They like to play with the waves really close to the boats. They breath every 3 to 4 minutes and sometimes can stay submerged for as long as 1 minute.

They might be easily confused with the bottlenose dolphin as juveniles. However, when fully grown they are easy to distinguish due to their spots. Their body pigmentation changes with age. The spots appear first in the ventral region, later on the sides and finally on the dorsal region. Gestation lasts 9 to 11 months and lactation can take as long as 1 to 2 years.

## ***Stenella coeruleoalba*** (PT: Golfinho riscado/ UK: Striped dolphin/ DE: Streifendelfin/ SE: Strimmig delfin/ ES: Delfín listado/ FI: Raitadelfini)

**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 2,7 m

Maximum weight: 165 kg

Feeding on: Fish and squid

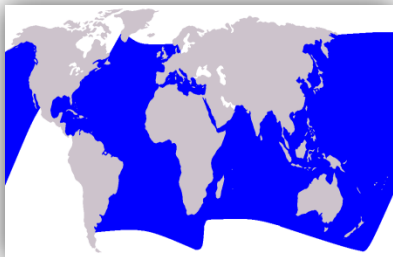
Periodicity: Resident species (but rare species)



As its name says, the striped dolphin has two characteristic black stripes all along the body, which distinguish them from other species such as the common dolphin.

Although the striped dolphin is not as frequently observed in the Azorean waters as the others beaked dolphins (they usually are farther away from the coast), when they appear, they guarantee a show. They usually swim very fast (35-50 km/h) and they do impressive jumps and acrobatics, sometimes up to 6-7 m out of the water. They are really sociable and they are frequently seen in groups of many individuals with an average of 10 to 300 individuals, even though there have been sighted groups formed by 1000 elements. They can dive to depths of 300 m, being submerged for about 8 minutes.

The reproductive cycle is biannual to triennial. The gestation period is estimated at 12 months and lactation lasts 1 to 2 years. They can live from 35 to 50 years.



## **Grampus griseus** (PT: Golfinho de Risso-Grampo/ UK: Risso's dolphin/ DE: Rundkopfdelphin/ SE: Rissos delfin/ ES: Calderón gris/ FI: Rissondelfini)

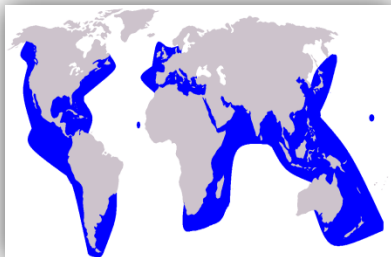
**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 4,5 m (males) / 3,5 m (females)

Maximum weight: 400 kg

Feeding on: Mainly squids (but also fish)

Periodicity: Resident species (but rare species)



The Risso's dolphin is easily distinguished by their long dorsal fin (it can grow up to half a meter in length), its coloration and the absence of a beak, like in other dolphins.

They have a typical dentition of an animal that feeds on cephalopods, having just 3 to 4 pairs of teeth in the lower jaw. Actually, fishermen say that they "steal" the squids out of longlines.

Gestation lasts for 12 months. Newborns measure 1,2 to 1,7, their coloration is dark. With age, adults bodies become gradually whiter, probably due to scars made by fights among themselves or with squids. Some of them, can become totally white. Thus, the older they are, the whiter they get. They can live up to 30 years.

The Risso's dolphin is relatively slow swimmer: when travelling, swims at 4–12 km/h, but when frightened can speed up to 20–25 km/h. They usually dive for about 1 to 2 minutes, but several times we observed dives of more than 25 minutes. They can reach a few hundreds of meters deep.

In the Azores, they are not easy to observe, since they are really sensitive to the presence of vessels and they rarely swim close to the boats.



***Globicephala macrorhynchus*** (PT: Baleia piloto/ UK: Short-finned pilot whale/  
DE: Kurzflossen-grinwall/ SE: Grindval/ ES: Calderón de aleta corta/ FI: Pallopäävalaat)

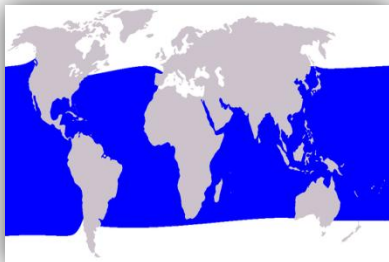
**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 7 m

Maximum weight: 3 to 4 T

Feeding on: Cephalopods and small fish

Periodicity: From April to October



The short-finned pilot whale is not actually a whale, but a dolphin. Their heads are thick bulbous and these can become more defined in older males. Their dorsal fins vary in shape depending on how old the whale is and whether it is male or female.

They have a uniform dark coloration, with a clearer blue stripe starting behind the eye.

Some adult males can dive during more than 25 minutes at a time and to depths of 800 m.

Pilot whales have been dubbed the "cheetah's of the deep" by scientists after being observed speeding after prey at incredibly fast speeds.

Gestation lasts 15 to 16 months and at birth, newborns are about 1,4 m and 60 kg weight. Lactation can last as long as 24 months.

The pilot whale is a social species, since they use to live in pods of 10-60 individuals, with a well defined social structure, and they are frequently observed together with other cetaceans, such as bottle nose dolphins, even though they can be attacked by the pilot whale.

We can consider this species as relatively common in the Azorean waters.

## ***Pseudorca crassidens*** (PT: Falsa orca/ UK: False killer whale/ DE: Kleine Schwertwal / SE: Falsk späckhuggare/ ES: Falsa orca/ FI: Pikkumiekkavalas)

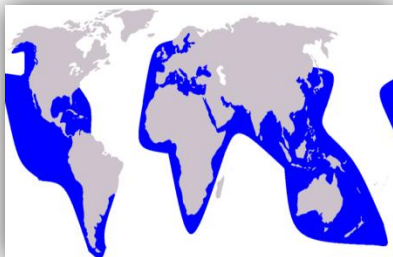
**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 6 m

Maximum weight: 2 T

Feeding on: Cephalopods, fishes and sometimes other sea mammals (cetaceans , seals...)

Periodicity: Ocasional, migratory species



The false killer whale has acquired, undeservedly, a bad reputation, so it has been commonly described as a very aggressive animal by fishermen. But in fact, these animals show a quite peaceful behavior, even though they usually can attack large cetaceans. They actually have impressive teeth, that can be shown when they open the mouth.

Their coloration is dark, and that's why they can be confused with the pilot whale. However, the false killer whale is darker, a faster swimmer (55 km/h), and also more active. Besides, they can be distinguished mainly because their dorsal fin is taller, and because their non-bulbous head.

Newborns measure 1,5 to 2,1 m and weigh 80 kg. Gestation lasts 11 months and lactation takes 18 months. They can live up to 60 years old.

They are very gregarious animals, and their stranding on beaches are common. In the Azores, this species is frequently observed associated with other species.

***Orcinus orca*** (PT: Orca/ UK: Killer whale/ DE: Schwertwal/ SE: Späckhuggare/  
ES: Orca/ FI: Miekkavalas)

**SUBORDER: ODONTOCETI**  
**FAMILY: DELPHINIDAE**

Maximum length: 9-10 m (males) / 7 m (females)

Maximum weight: 10 T (males) / 4 T (females)

Feeding on: Mainly fishes, but also turtles and other sea mammals (cetaceans , seals...)

Periodicity: Ocasional, migratory species



The killer whale name has been given, undeservedly, to this species, the biggest animal among the *Delphinidae*. They are actually, with no doubt, on the top of the food chain.

Their coloration makes them unmistakable, as well as their long dorsal fin (which in males can grow up to 2 m long).

The killer whale are considered as shallower divers (140 m) and they make dives during about 10 minutes on average.

They live in small groups, males and females together. We can distinguish males and females since they have a pronounced sexual dimorphism. Males usually are bigger and heavier than females, and also have a longer dorsal fin. Newborns are about 2,3 m long, and weigh about 200 kg. Gestation lasts 11 to 16 months, and lactation takes at least 12 months. Females can live up to 90 years old, an average of 30 years more than the males.

## ***Ziphius cavirostris*** (PT: Zífiu/ UK: Cuvier's beaked whale/ DE: Cuvier schnabelwal/ SE: Småhuvudval/ ES: Ballenato de Cuvier/ FI: Hanhennokkavalas)

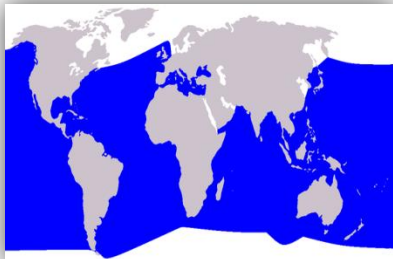
**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 6 m (females bigger)

Maximum weight: 3 T

Feeding on: Mainly cephalopods, but also small fish

Periodicity: Common species (but it is barely able to observe)



The Cuvier's beaked whale is one of the most common among the beaked whales. This species is also famous due to stranding on the beaches, which permit a better knowledge about their biology. This species is peculiar in the fact that they only have two teeth which are quite small and present only in the lower jaw of males, and not visible in the females. Coloration can change significantly and scars can appear, so that no animals are alike. Actually, it is easy to identify different individuals just for their coloration. The older ones can be almost white, and can occasionally be confused with the Risso's dolphin. They can dive for 60-80 minutes and when they come up to the surface to breathe they project a low inconspicuous blow. They are good divers, reaching depths of 1000-1900 m. Newborns measure 2 to 3 m long and they weigh about 250 kg. They can live up to 35 years. They normally live in pods of 7-25 individuals, although the older ones are usually solitary.



***Mesoplodon bidens*** (PT: Baleia de bico de Sowerby/ UK: Sowerby's beaked whale/ DE: Zweizahnwal/ SE: Sowerby's näbbval/ ES: Zifio de Sowerby/ FI: Kaksihammasvalas)

**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 6 m (males) / 4-5 m (females)

Average weight: 1 to 3 T

Feeding on: Squid and small fish

Periodicity: Rare species (even though they are commonly observed from the lookouts)



James Sowerby discovered this species in Scotland in 1804, being the first beaked whale to be registered and consequently originated its common name.

Identifying this species at sea is not easy, since they are shy and swim away from the vessels. When they surface, it is really difficult to spot the place where they will appear. Thus, the observations on land by the lookouts are much more common than at sea.

They present a changeable body coloration, from dark gray to bluish gray. We can confuse this species with other beaked whales, like the Cuvier's beaked whale or the Blainville's beaked whale. However, the presence of a pair of teeth in the middle of the prominent lower jaw of the males, and the way they show the beak, can help us to distinguish them.

Newborns measure 2 to 2,7 m and they weigh 170 to 185 kg. Gestation lasts about 12 months and the lactation period probably lasts for 1 year.

***Mesoplodon densirostris*** (PT: Baleia de bico de Blainville/ UK: Blainville's beaked whale/ DE: Blainville weizahnwal/ SE: Blainville's näbbval/ ES: Zifio de Blainville/ FI: Tiheähammasvalas)

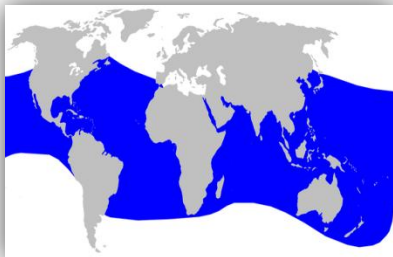
**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 5 m

Maximum weight: almost 1 T

Feeding on: Squid and small fish

Periodicity: Rare species (even though is the most common among the mesoplodon whales)



Blainville's beaked Whale (also called Dense-beaked Whale), is the widest ranging mesoplodon whale and perhaps the most documented and studied.

Their most important feature is the extremely dense bones in the rostrum. It has been thought that it may play a role in echolocation, but this still has not been confirmed. They could be also used as a form of protection again aggression from other males. The mouth line is distinctive, with an abrupt, rising step at mid-length, with teeth erupting from each side of the lower jaw in adult males, and rising above the upper jaw.

Coloration is dark blue/gray on top and lighter gray on the bottom. Males have scars bites typical of the genus.

They dive to 700-1300 m deep and they dive at least up to 45-60 minutes. When they surface they are very slow and there is very little splashing.

Newborns are 2 meters long and weigh 60 kg.

***Mesoplodon europaeus*** (PT: Baleia de bico de Gervais/ UK: Gervais' beaked whale/ DE: Gervais Schnabelwal/ SE: Gervais' näbbval/ ES: Zifio de Gervais/ FI: Gervaisinvalas)

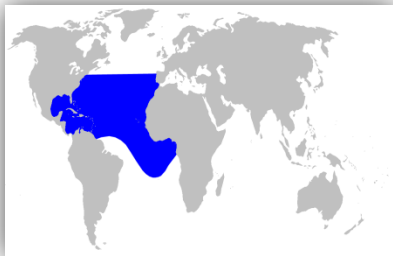
**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 4,5 m (males) / 5 m (females)

Maximum weight: 1,5 T

Feeding on: Mostly squid

Periodicity: Never identified at sea (only by the strands)



Their Latin name is due to the fact that they were discovered in 1840 in the English Channel, even though they follow the Gulf stream and they can be found in the Caribbean Sea (it is also called Gulf Stream or Antillean beaked whale).

This species has almost never been positively identified alive at sea, yet it seems to strand on the coasts more frequently than any other mesoplodont.

It is laterally compressed, with a narrow beak and a straight mouthline. The head is overall small and tapered. The coloration is dark gray on top and lighter gray on bottom. Females can have lighter spots in the genital areas or near the eyes and throat. The erupted teeth of adult males are positioned well behind the tip of the lower jaw and are inconspicuous.

Scars from fighting and from sharks are present on males.

They usually live in small groups (maximum 5 individuals) and they can live for more than 48 years old.

***Mesoplodon mirus*** (PT: Baleia de bico de True/ UK: True's beaked whale/ DE: True-Wal/ SE: True's näbbval/ ES: Zifio de True/ FI: Mustatäplänokkavalas)

**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 5,3 m

Maximum weight: 1,4 T

Feeding on: Squid (suposedly)

Periodicity: Rarely observed

This species' name refers to F.W.True, a curator at the United States Museum who described it. The True's beaked whale, once thought to occur only in the North Atlantic, is now recognized as having populations in the Southern Hemisphere. Their body is notably rotund in the middle and tapered toward both ends. The melon is almost bulbous and slopes to a short beak.

The two distinctive teeth on the males are small and set on the lower jaw on the very tip of the beak.

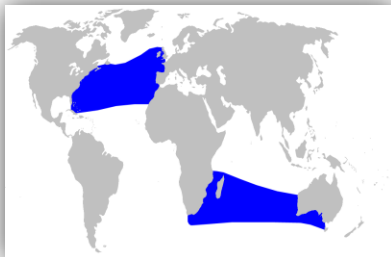
The coloration is gray to brownish gray on the back, lighter below, and notably darker on the "lips", around the eye, and near the dorsal fin. This coloration can notably change in the Southern Hemisphere populations.

Scars from fighting and from sharks are present on males.

The blow is a low column of vapor about as high as the head is long.

They are usually observed in small groups.

It is believed that when a whale is injured, another whale stays with it to nurse it.





***Hyperoodon ampullatus*** (PT: Baleia de bico de garrafa-Botinhoso/ UK: Northern Bottlenose whale/ DE: Nordlicher Entenwal/ SE: Nordligflasknosval/ ES: Zifio calderón boreal/ FI: Pohjoisenpullokuonovalas)

**SUBORDER: ODONTOCETI**  
**FAMILY: ZIPHIDAE**

Maximum length: 8–10 m

Maximum weight: 6 – 7,5 T

Feeding on: Mainly squid, but also small fish, shrimps and echinoderms

Periodicity: Rare species



The Northern Bottlenose whale is the largest beaked whale in the North Atlantic. It was hunted heavily by Norway and Britain in the nineteenth and early twentieth century. Norway finally stopped hunting the whale in 1973.

It is long but rotund animal with a pronounced beak and a bluff melon. The appearance of this melon differentiates adult males, which can be more flattened and white. There are two teeth at the tip of the lower jaw (only in adult males and oriented slightly forward)

The back is colored mid-dark grey.

They can dive for long periods of time: normally 70 minutes to depths of 1450 m. After a long dive, remain at the surface for more than 10 min, blowing regularly, but may remain at surface for hours at a time.

They live at least up to 37 years of age in small groups of about 4-10 individuals.

***Calonectris diomedea borealis*** (PT: Cagarro/ UK: Cory's Shearwater/ DE: Gelbschnabel-Sturmtaucher/ SE: Gulnäbbad lira/ ES: Pardela cenicienta/ FI: Keltanokkaliitjä)

**CLASS: AVES**

**ORDER: PROCELLARIIFORMES**

Maximum length: 45–56 cm

Maximum wingspan: 112–126 cm

Feeding on: Fish, squid, crustaceans and jellyfish, sometimes associated with dolphins or tunas.

Breeding: March – October (1 unique egg at the end of May)

Periodicity: March - November

The Cory's shearwater is the most abundant sea bird in the Azores, constituting 60% of the world's population of the subspecies *borealis*.

Its head and upper parts are brownish-grey, the under parts are white, the tail is dark, the bill is yellowish and its legs are pink.

They can dive deep (15 meters or more) in search of prey, and they like to follow fishing boats. It is usually a gregarious bird, forming really big groups.

It is silent at sea, but at night the breeding colonies become alive with raucous and noisy cackling calls.



***Rissa tridactyla*** (PT: Gaivota/ UK: Kittiwake/ DE: Dreizehenmöwe/ SE: Tretåig mås/  
ES: Gaviota tridáctila/ FI: Pikkukajava)

**CLASS: AVES**

**ORDER: CHARADRIIFORMES**

Maximum length: 38-41 cm

Maximum wingspan: 95-110 cm

Feeding on: Fish and even rubbish tips

Breeding: May - July (2-3 eggs)

Periodicity: Winter (November – April)

The Kittiwake is one of the most common sea birds. The name is derived from its call, a penetrating "kittee-wa-aaake, kitte-wa-aaake".

They have a white head and body, and a gray back, with a small black triangle on the edge of the wings, yellow beak, dark eyes, and black feet with only three toes (this is the reason for their Latin name). They do not present differences among sexes. The young show a dark bar across the nape and black terminal tail band.

They are the only gull species that are exclusively cliff-nesting, forming large, dense and noisy colonies. The kittiwake flies in a really elegant way.



***Larus michahellis atlanticus*** (PT: Gaivota de patas amarelas/ UK: Yellow legged gull/ DE: Steppenwöwe/ SE: Medelhavstrut/ ES: Gaviota patiamarilla/ FI: Aroharmaalokki)

**CLASS: AVES**

**ORDER: CHARADRIIFORMES**

Maximum length: 55 - 65 cm

Maximum wingspan: 130 - 150 cm

Feeding on: Fish, sometimes other sea birds and even rubbish tips

Breeding: March - June (2 - 3 eggs)

Periodicity: Resident species

The subspecies *atlantis* hardly occurs in the Açores, Madeira and Canary islands.

They are grey on the back and white on the rest of the body, except on the tips of the wings, which are black. The beak is yellow but with a red spot, and they have yellow legs. Juveniles are quite different being initially brown and at the age of 3 years they change, taking on the adult coloration.

They usually breed in colonies in coastal areas.

The call is a loud laugh and nasal.

The Azorean population might be increasing due to the development of the rubbish dumps and the fish industry.



**Juvenile**



**CLASS: AVES**

**ORDER: PROCELLARIIFORMES**

***Puffinus puffinus*** (PT: Estapagado/ UK: Manx Shearwater/  
DE: Schwarzschnabel-Sturmtaucher/ SE: Mindre lira/ ES: Pardela  
chica/ FI: Pikkuliitäjä)

Maximum length: 30-38 cm

Maximum wingspan: 76-82 cm

Feeding on: Small fish, cephalopods,  
crustaceans and even rubbish tips

Breeding: February - July (1 unique egg at the  
end of March)

Periodicity: September - February



***Puffinus assimilis*** (PT: Frulho/ UK: Little  
Shearwater/ DE: Kleiner Sturmtaucher/ SE: Dvärg lira/  
ES: Pardela pichoneta/ FI: Kääpiöliitäjä)

Maximum length: 25-30 cm

Maximum wingspan: 58-67 cm

Feeding on: Small fish and squid

Breeding: Desember - May (1 unique egg in January)

Periodicity: Resident species



**CLASS: AVES**

**ORDER: PROCELLARIIFORMES**

***Bulweria bulwerii*** (PT: Alma negra/ UK: Bulwer's petrel/  
DE: Bulwersturmvogel/ SE: Spetsstjärtad petrell/ ES: Petrel de  
Bulwer/ FI: Tyrskyllitjää)

Maximum length: 26-29 cm

Maximum wingspan: 67-73 cm

Feeding on: Small fish and  
crustaceans (during the night time)

Breeding: April - September (1 unique egg at  
the end of May)

Periodicity: Generally in summer



***Oceanodroma castro*** (PT: Paínho de Madeira/ UK:  
Madeiran storm-petrel/ DE: Madeirawellenläufer/ SE:  
Oceanlöpare/ ES: Paíño de Madeira/ FI: Madeirankeiju)

Maximum length: 19-21 cm

Maximum wingspan: 43-46 cm

Feeding on: Small fish and crustaceans (during the  
night time)

Breeding: April - January (1 unique)

Periodicity: Generally in summer



***Sterna hirundo*** (PT: Garajau comum/ UK: Common tern/ DE: Fluss-Seeschwalbe/  
SE: Fisktärna/ ES: Charrán común/ FI: Kalatiira)

**CLASS: AVES**

**ORDER: CHARADRIIFORMES**

Maximum length: 31–37 cm

Maximum wingspan: 70–80 cm

Feeding on: Fish and aquatic invertebrates

Breeding: April - July (2-4 eggs)

Periodicity: April - November

The Azorean population of the common tern corresponds to 4% of the European population.

They have a thin and sharp bill, which is red with a dark tip. The legs are long and also red. It is light grey on the upper part, white on the lower part. It has a dark spot on the head, involving the eyes.

This species breeds in colonies on coasts and often inland close to suitable freshwater lakes.

They dive while searching for fish, and sometimes they form associations with dolphins and tunas.

Their call is a clear piping with different tones: "kt-kt-kt-kt" or "kirrikirrikirrik".



***Calidris minuta*** (PT: Pirlito pequeno/ UK: Little stint/ DE: Zergstrandläufer/  
SE: Småsnäppa/ ES: Correlimos menudo/ FI: Pikkusirri)

**CLASS: AVES**

**ORDER: CHARADRIIFORMES**

Maximum length: 12–15,5 cm

Maximum wingspan: 27–30 cm

Feeding on: Small invertebrates near the water (insects, worms, small molluscs and crustaceans)

Breeding: May – June (4 eggs)

Periodicity: October - April





***Caretta caretta*** (PT: Tartaruga comum/ UK: Loggerhead turtle/ DE: Unechte Karettschildkröte / SE: Karett-skölpadda/ ES: Tortuga boba/ FI: Valekarettikilpikonna)

**CLASS: REPTILIA**  
**FAMILY: CHELONIIDAE**

Maximum length: 1,10 m

Maximum weight: 360 kg

Feeding on: Molluscs, crustaceans, fish, jellyfish, Portuguese man of war and other small-medium marine animals

Periodicity: Spring and summer

Their common name is due to their disproportionately large head, and the Latin name comes from French "caret", meaning turtle, tortoise, or sea turtle.

They have a red brown shell and brown yellowish skin. They also have really powerful jaws.

As with other sea turtles, females return to lay their eggs on or near the same beach where they hatched. They inhabit all the Atlantic streams, from Florida beaches to Morocco. Unlike other sea turtles, courtship and mating take place along the migration routes between feeding and breeding grounds.

They were once intensively hunted for their meat, eggs and shells. They are classified as endangered by the International Union for the Conservation of Nature.



***Dermochelys coriacea*** (PT: Tartaruga de couro/ UK: Leatherback turtle/ DE: Lederschildkröte / SE: Havslädersköldpadda/ **ES:** Tortuga laúd/ FI: Merinahkakilpikonna)

**CLASS: REPTILIA**  
**FAMILY: DERMOCHELYIDAE**

Maximum length: 2 m (biggest one ever: 3 m)

Maximum weight: 250 – 700 kg (heaviest one ever 916 kg)

Feeding on: Mainly jellyfish (important role in the control of jellyfish populations), but also tunicates and cephalopods

Periodicity: Rare species

The leatherback turtle is the largest existent sea turtle and the fourth largest modern reptile (after three species of crocodiles).

The leatherback's carapace is covered by thick leather skin with bony plates.

It has very long flippers (the largest of any sea turtle) and a short tail.

Instead of teeth, this turtle has small points on the tip of the upper lip, and some spines on the throat that help it swallow.

They are the reptiles that can dive the deepest (to depths as great as 1200 m) and swim the fastest (35 km/h).

The leatherback turtle population in the Atlantic ocean ranges almost all over the entire region.



***Mola mola*** (PT: Peixe lua/ UK: Ocean sunfish/ DE: Mondfisch/ SE: Klumpfisk/ ES: Pez luna/ FI: Möhkäkala)

**CLASS: ACTINOPTERYGII**  
**ORDER: TETRAODONTIFORMES**

The English name, Sunfish, refers to the animal's habit of sunbathing at the surface of the water (but they actually spend most of their lives at depths of 200–600 m). In other languages, meaning moon fish, refers to their round body shape, since it is flattened laterally.

Their four fused teeth that form the characteristic beak, give the order its name. It is the heaviest bony fish (about 1000 kg or more).

Their diet consists mainly of jellyfish. Sunfish are considered a delicacy in some parts of the world.



***Exocoetus volitans*** ( PT: Peixe voador/ UK: Flying fish/ DE: Schwalbenfisch/ SE: Flyg fisk/ ES: Pez volador/ FI: Liitokalat)

**CLASS: ACTINOPTRYGII**  
**ORDER: BELONIFORMES**



Their pectoral fins are unusually large, allowing them to hide and escape from predators by leaping out of the water, taking short glided flights through air just above the water's surface. These glides can last about 45 seconds covering from 50 – 400 m at speeds of more than 70 km/h.

They feed mainly on plankton.

The flying fish are commercially fished by some Asian countries, as a source of food.

They were studied and used as models to develop airplanes.



**CLASS: CHONDRICHTHYES**  
**ORDER: RAJIFORMES**

***Mobula tarapacana*** (PT: Jamanta/ UK: Box ray-Chilean devil ray/ DE: Mantarochen/ SE: Jätte manta/ ES: Manta-raya/ FI: Paholaisrausku)

These two manta rays belong to two different families: Mobulidae (*Mobula tarapacana*) and Myliobatidae (*Manta birostris*). Being the second one, the biggest one among the manta rays (they can reach up to 8 m in width).

They have evolved into open ocean filter feeders using their gills, and feeding on plankton and fish larvae.

They usually have different species of fish, like remoras, swimming in the gills and over its skin, removing the parasites and dead tissue.

Mantas swim among divers and they are not dangerous. Usually they surface near boats with stopped engines.

Sometimes it is possible to see them jumping out of the water.



***Manta birostris*** (PT: Jamanta/ UK: Manta ray-Devilfish/ DE: Mantarochen/ SE: Jätte manta/ ES: Mantarraya/ FI: Paholaisrausku)





***Rhincodon typus*** (PT: Tubarão baleia/ UK: Whale shark/ DE: Walhai/ SE: Valhaj/ ES: Tiburón ballena/ FI: Valashai)

**CLASS: CHONDRICHTHYES**  
**ORDER: ORECTOLOBIFORMES**

Maximum length: 12,5 m (fish-stories talk about individuals up to 23 m)

Maximum weight: 21,5 T (fish-stories talk about individuals up to 37 T)

Feeding on: Filter feeder (plankton, algae, small animals...)

Periodicity: Summer



The name whale shark comes from the fish's physiology, that is, a shark as large as a whale that shares a similar filter feeder eating method.

As a filter feeder it has a capacious mouth which can be up to 1.5 meters wide and can contain 300-350 rows of tiny teeth. As a fish, it has gills. Two small eyes are located towards the front of the head. The skin is marked with light spots, which are unique to each individual and can be used for identification. Its skin can be up to 10 cm thick.

Whale sharks move to different locations during different seasons for feeding and possibly to breed.

They swim quite slowly (5 km/h), so it is really nice to swim with them, since they do not pose any significant danger to humans.

They can live up to 70 years.



***Sphyrna spp.*** (PT: Tubarão martelo/ UK: Hammerhead shark/ DE: Hammerhaie/ SE: Hammarhaj/ ES: Tiburón martillo/ FI: Vasarahait)

**CLASS: CHONDRICHTHYES**  
**ORDER: CARCHARHINIIFORMES**

Maximum length: 6 m

Average weight: 230–450 kg

Feeding on: Bottom hunters

Periodicity: Present during all year round



Obviously, their name is due to the distinctive projected structure of their head, called “cephalofoil”, which might have an important role in sensory reception, maneuver and prey manipulation. The eyes and the nostrils are on the tips of this structure.

During the day they can form groups of 100 individuals, while during the night they become solitary hunters.

It is an animal that can be tanned by the sun.

Of the nine known species of hammerhead, only three can be dangerous to humans: the scalloped, great, and smooth hammerheads.



**CLASS: CHONDRICHTHYES**  
**ORDER: CARCHARINIFORMES**

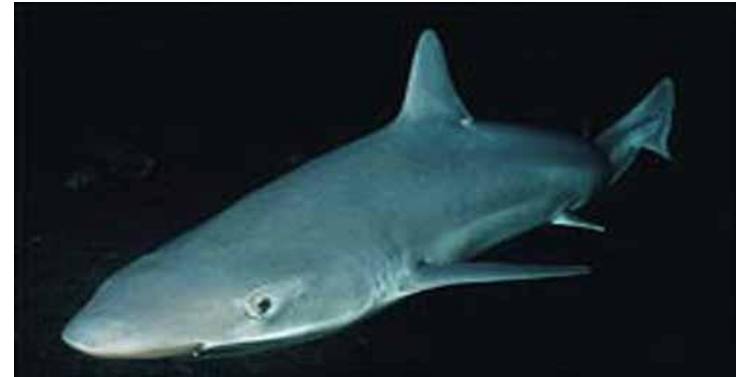
***Galeorhinus galeus*** (PT: Cação/ UK: Soupfin shark-Tope shark/ DE: Hundshai/ SE: Gråhaj/ ES: Cazón/ FI: Harmaakoirahai)

The tope shark is a small shark, with a sharp head and long fins. Its coloration is grayish and lighter underside. It grows up to 2 m long and weighs 5 – 20 kg.

Unlike other sharks, they have a protective membrane on the eye.

They feed on small fish, crustaceans and other invertebrates from the bottom of the sea (40 – 100 m, but they come to the surface).

The meat of the tope shark is consumed in Spanish cuisine.



***Prionace glauca*** (PT: Tintureira-Tubarão azul/ UK: Blue shark/ DE: Blauhai/ SE: Blåhaj/ ES: Tintorera-Tiburón azul/ FI: Sinihai)

Blue sharks are the most heavily fished sharks around the world. Humans use them for soups and other meals, leather or oils. Conversely, blue sharks are considered dangerous and have attacked humans, therefore they are called “wolves” of the sea. They are blue on top and lighter on the sides and below. The animal grows to 4 m or more in length. Their average weight is from 136-182 kg, and the heaviest one found weighed 391 kg. They feed primarily on small fish, squid and other cephalopods, crustaceans and even seabirds.

Blue sharks migrate long distances, and they habitat ranges from the surface to about 35 m in depth.



***Isurus oxyrinchus*** (PT: Rinquim/ UK: Shortfin mako shark/ DE: Kurzflossen-Mako/ SE: Makohaj/ ES: Marrajo común/ FI: Makrillihai)

**CLASS: CHONDRICHTHYES**  
**ORDER: LAMNIFORMES**

Maximum length: 4 m (females bigger than the males)

Maximum weight: 750 kg

Feeding on: Bony fishes, cephalopods , seabirds, sea turtles and other sharks (larger individuals may feed on small cetaceans)

Periodicity: Common, but rarely observed



This species has been poorly studied, so scientist do not know a lot about them.

The top of its body is bluish black and white on the underside. Their teeth are long and slender and are visible even when the mouth is closed.

It is probably the fastest of all sharks reaching a speeds of up to 50 km/h. Actually they are renowned for their speed and their ability to leap up to 9m out of the water.

Their body temperature is higher than the water giving the sharks an advantage over their prey. They have an aggressive behavior against humans, but in fact, humans cause much more harm because of the high existing the demand for the meat of this fish.

It is supposedly more intelligent than other sharks.

They live up to 23 years.



***Physalia physalis*** (PT: Caravela portuguesa/ UK: Portuguese Man o'War/ DE: Portugiesische Galeere/ SE: Portugisisk Örlogsman/ ES: Carabela portuguesa/ FI: Portugalinsoalaiva)

**PHYLUM: CNIDARIA**  
**CLASS: HYDROZOA**

Feeding on: Fish and other preys, which are paralyzed by the nematocysts

Periodicity: Following Atlantic Gulf Stream



The common name comes from a type of Portuguese war ship from the 15th and 16th century, which had triangular sails.

This is not actually a single animal. In fact it is a colony of small and highly modified individuals (zooids) with a high degree of specialization. These include an air bladder (pneumatophore) that allows it to float; small long tentacles (10–50 m) under the water, the dactylozooids, with nematocysts which are biological poisons; another kind of tentacles that digest the food (gastrozooids); and gonozooids, responsible for the reproduction. Each individual depends entirely from the others.

The "Portuguese Man o' War" is often found with a variety of marine fish in a mutual commensal symbiotic relationship.

The Portuguese Man O' War is infamous for giving a painful sting to humans, sometimes causing more serious effects and even death. We can not confuse them with the true jellyfish, since the venom differs, so the treatment of the stings should also be different.



## ***Pelagia noctiluca*** (PT: Água viva/ UK: Jellyfish-Mauve stinger/ DE: Leuchtqualle/ SE: Lysmanet/ ES: Medusa/ FI: Loistomeduusa)

**PHYLUM: CNIDARIA**  
**CLASS: SCYFOZOA**

Feeding on: Suspension feeders

Periodicity: Depending on streams



This jellyfish, by its Latin name, is described as a marine organism with the ability to produce light in the dark.

The color varies worldwide, but normally it is pink or mauve.

Like the other *Cnidaria*, they have evolved cnidae, which when fully formed are called cnidocytes. These cells are important for capturing prey, defense, locomotion and attachment. When stimulated the cnidae secrete nematocyst toxins that are biological poisons.

Cnidae are present in the epidermis, in the digestive tissues as well as on the tentacles.

Unlike other jellyfish, in the life cycle of *Pelagia noctiluca*, the polyp stage does not exist. They become completely developed jellyfish, from different and successive larva stages after one month.

Sometimes they strand on beaches in really large numbers.



**- MYSTICETI**

***Balaenoptera musculus*** (DK: Blåhval/ NO: Blaaahal/ NE: Blauwe vinvis/ FR: Baleine bleue), p.9

***Balaenoptera physalus*** (DK: Finhval/ NO: Finnhval/ NE: Gewone vinvis/ FR: Rorqual commun), p.10

***Balaenoptera borealis*** (DK: Sejhval/ NO: Seihval/ NE: Noordse vinvis/ FR: Rorqual boréal), p.11

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## The ocean and you

As we have been constantly remarking on this guide, the archipelago of the Azores is a unique place on the world highly rich in life.

A whale watching trip around these islands represents most of the time a great moment of entertainment for the youngest ones and of discovering and learning for the others.

If we want to keep enjoying these experiences, we must behave on a non-disturbing and respectable attitude, and try to keep the environment as it is.



Being aware of this richness, we are ensuring its preservation.

You can be part of it, simply by respecting the sea. We all have the duty of preserving the environment.

Small changes can make a big difference... protect the environment!

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