

Dolphins, whales and porpoises are mammals – just like us.
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They inhabit all the world's oceans.
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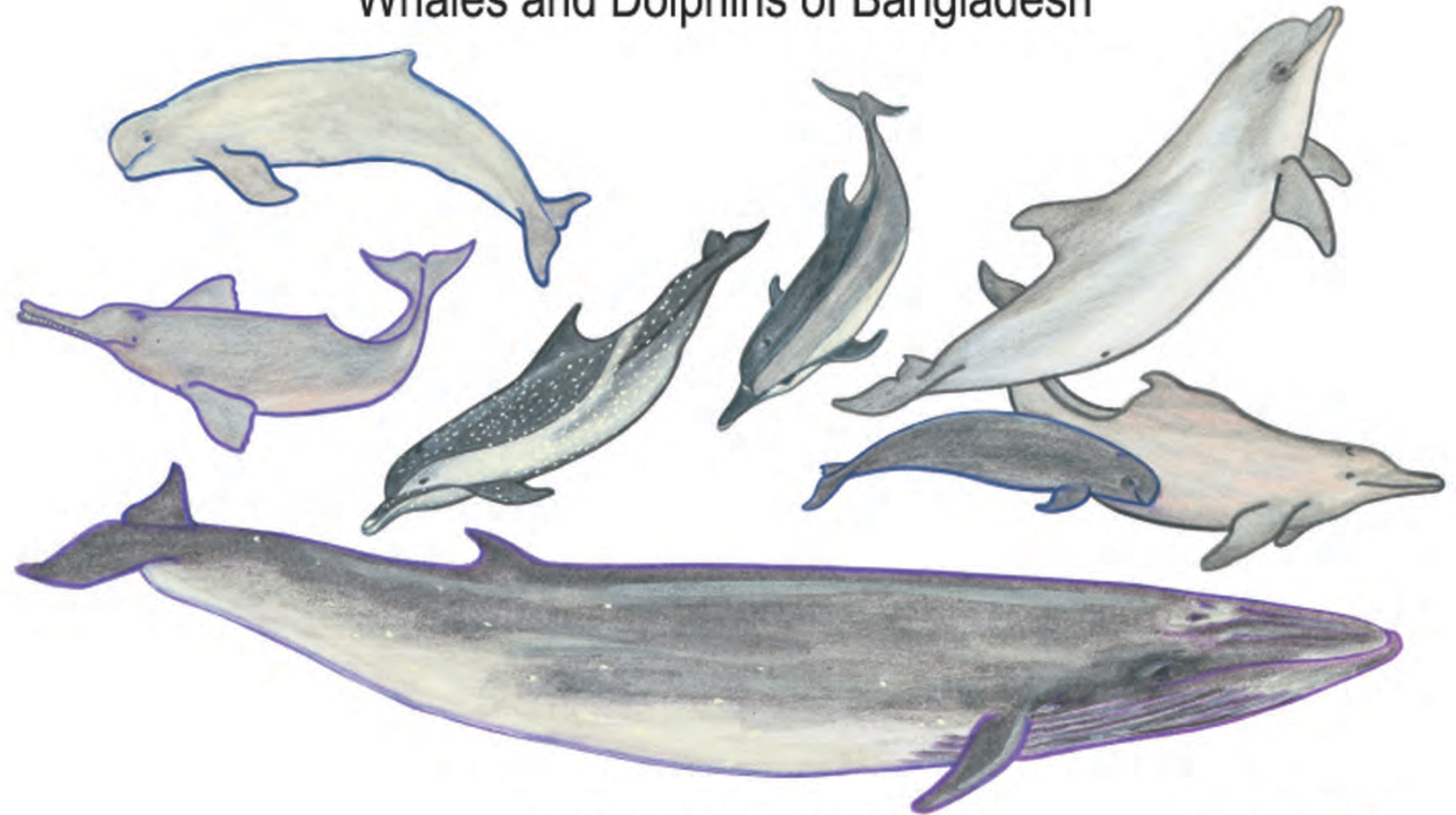
Dolphins, whales and porpoises need clean water and
healthy fish populations - just like us.
Our challenge is to protect these amazing animals from extinction.



Conserving cetacean diversity and abundance in Bangladesh with local communities and institutions
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Share Our Smiles

Whales and Dolphins of Bangladesh



Elisabeth Fahrni Mansur
Brian D. Smith





What are dolphins, whales and porpoises?

Dolphins, whales and porpoises are among the largest and most intelligent animals living on our planet. They inhabit all the world's oceans. Some dolphins like the shushuk in Bangladesh occur only in large rivers. Over 80 different species of dolphins, whales and porpoises are found throughout the world. This group of animals is known as cetaceans [sa-TAY-shuns].



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Cetaceans are mammals – just like us.

Mammals are air breathing animals. Most mammal babies grow inside their mother's womb and are born alive. All mammal mothers give milk to their babies. They take good care of their young until they can survive on their own.





How are cetaceans different from other mammals?

Cetaceans are aquatic mammals. They spend their entire lives in water. Cetaceans occur in many different sizes. But they share important features that allow them to swim, feed and reproduce in the water.

Baby cetaceans are known as calves. Calves are born with soft flukes and fins. This makes it easier for them to slip out of their mother at birth. They are usually born tail first, so the blowhole (where they breathe) comes out last. This stops the calf from taking water into its lungs. The mother gives birth near the water surface. This allows the calf to surface quickly to take its first breath.

Calves can swim at birth. During the first few weeks of their lives, they stay close to their mothers for protection. Cetacean mothers guard their calves against predators (animals that eat other animals) such as sharks.

Mothers begin to feed their calves milk a few hours after they are born. The mammary glands that produce the milk are located near the tail for easy access by the calf. The milk contains lots of fat and comes out like soft cheese. This fat helps calves develop a thick layer of blubber which keeps them warm.



How are cetaceans different from fish?

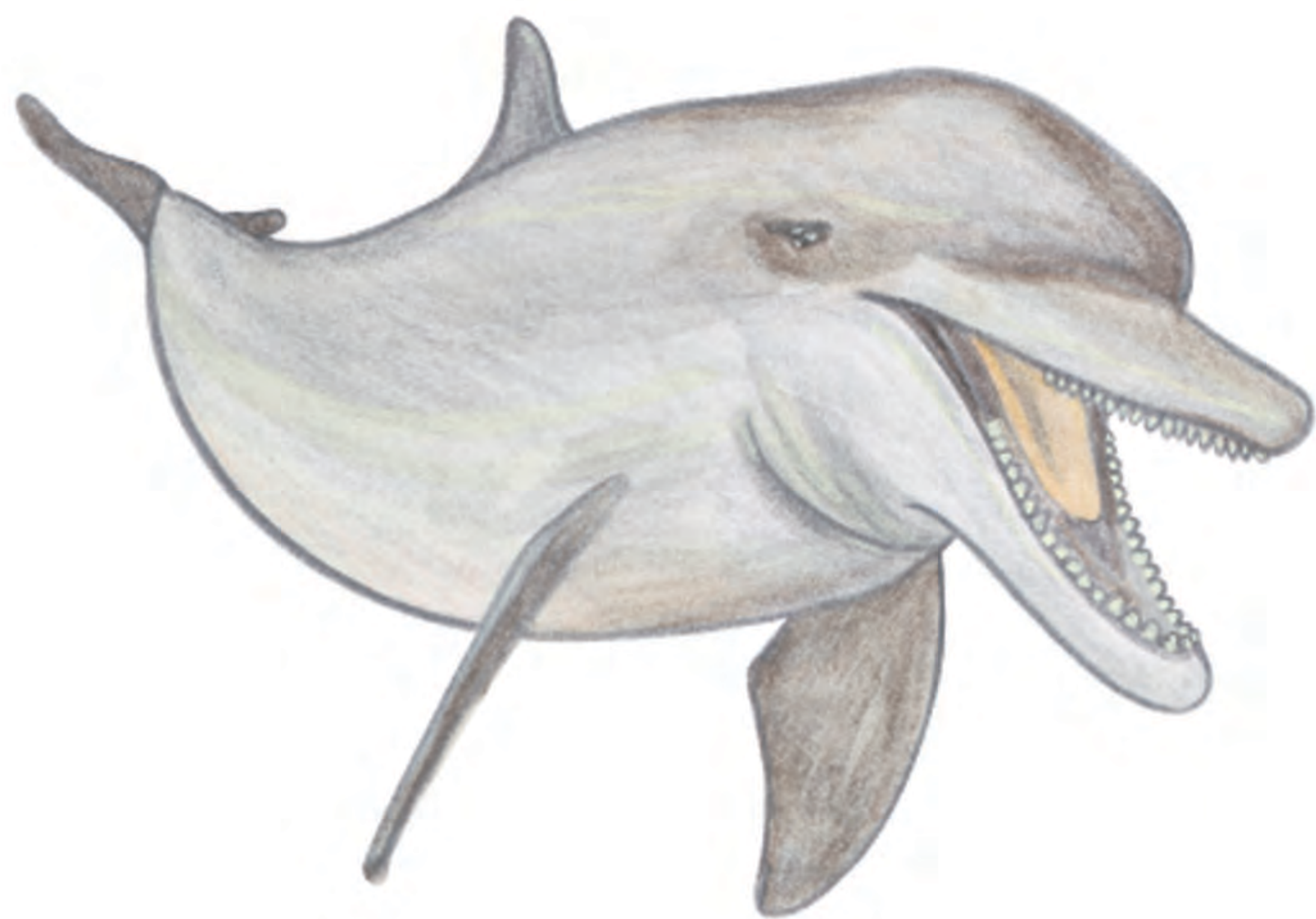
Cetaceans are not fish. Most fish get their oxygen from the water through gills. Most fish lay eggs. Newborn fish generally receive no food or care from their parents.

The most obvious visible difference between cetaceans and fish is their tail.

Fish have vertical tails that move from side to side.

Cetaceans have horizontal tails or flukes that move up and down.

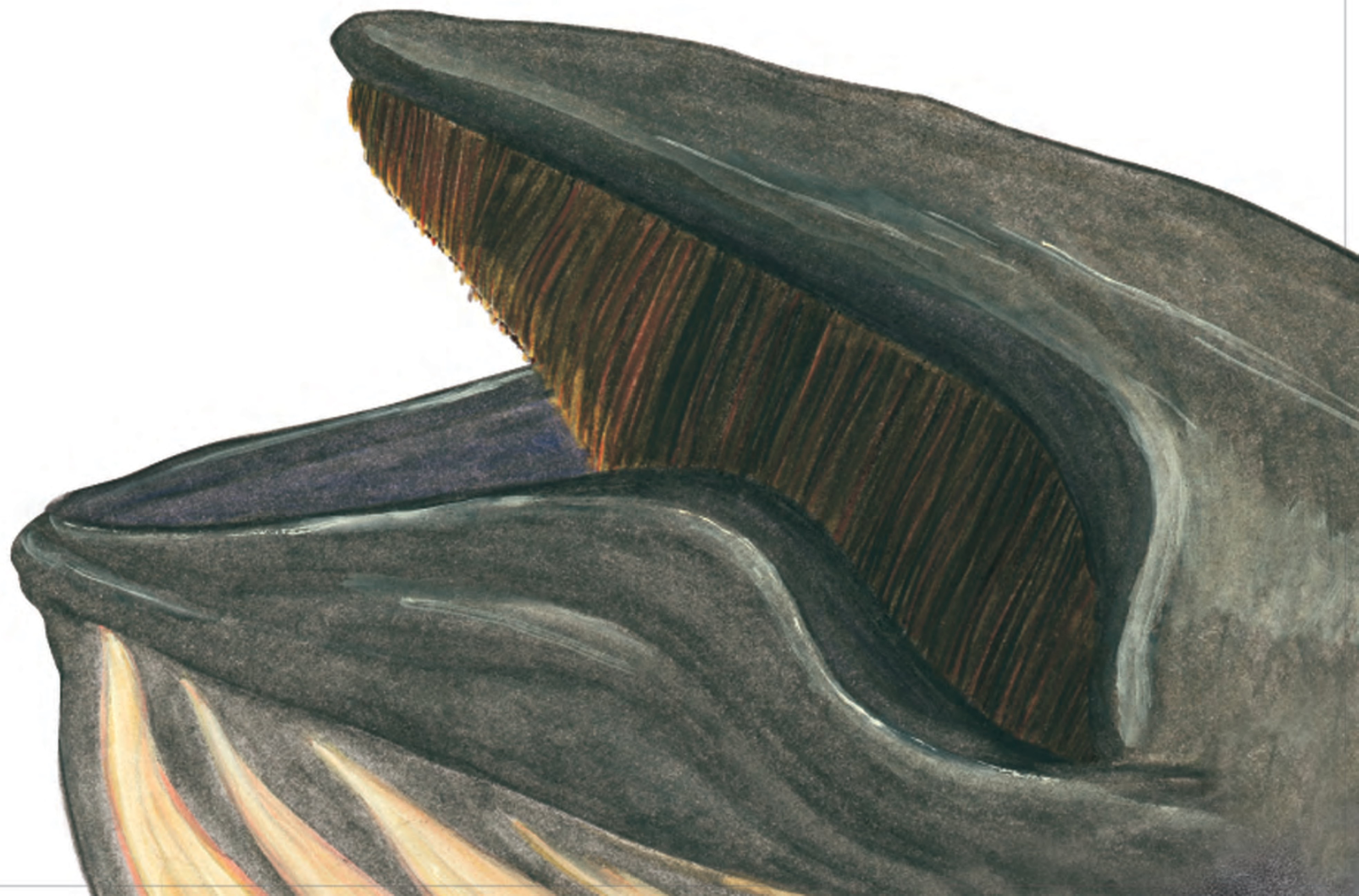




How are whales, dolphins and porpoises different from each other?

Cetaceans are divided into two groups - those with teeth and those without teeth. The Odontocetes or toothed cetaceans include all the dolphins, porpoises, and beaked and sperm whales. The Mysticetes or "mustached" whales have huge bristles called baleen [bay-LEAN] that hang in plates from their upper jaws.

The teeth of dolphins and porpoises are shaped differently. Dolphin teeth are shaped like cones. Porpoise teeth are shaped like spades.



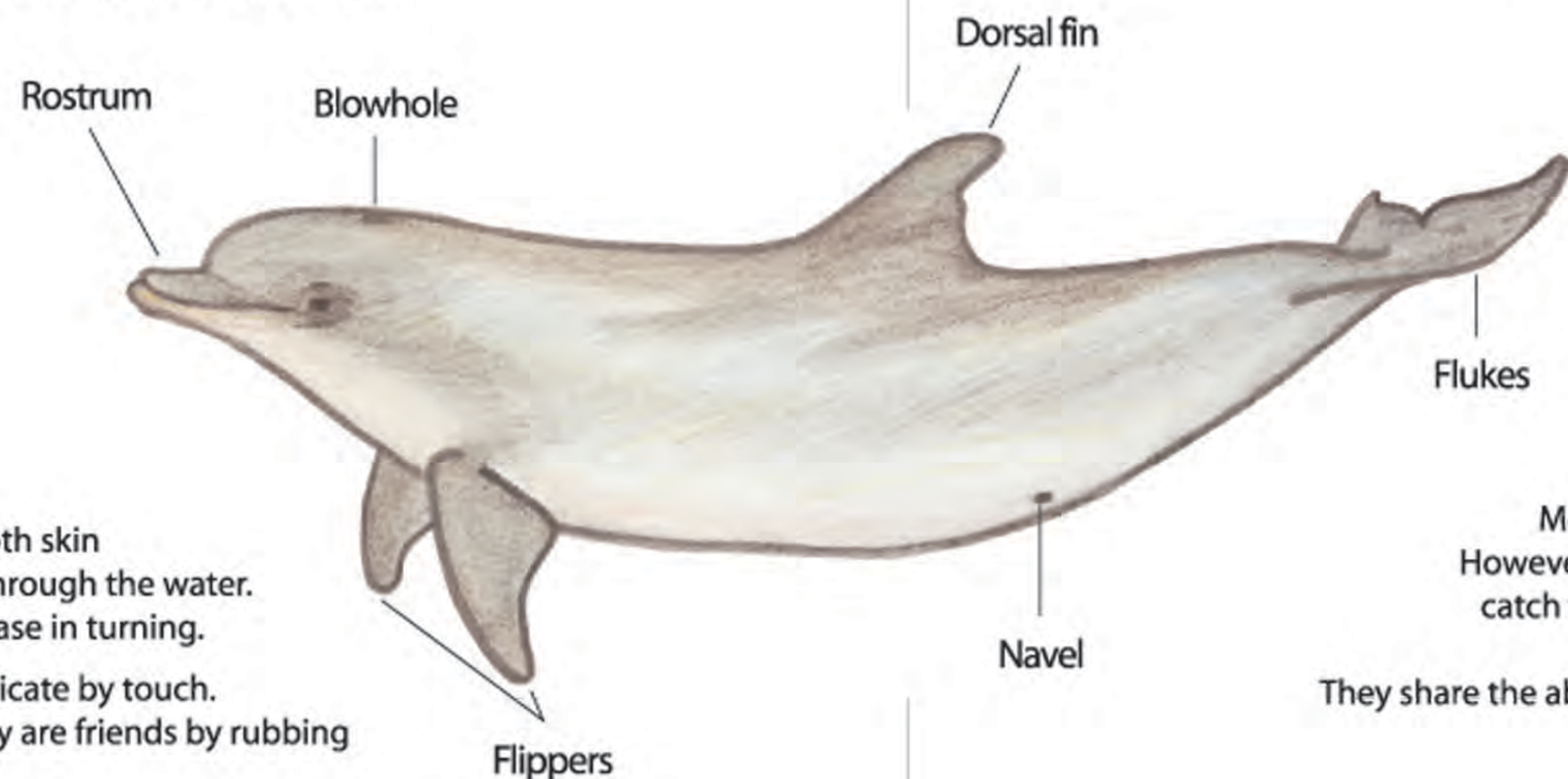
How do cetaceans survive while spending their entire lives in water?

All animals need oxygen to live. Like people, cetaceans get oxygen by taking air into their lungs. They must come to the water's surface to breathe. If a cetacean is trapped underwater, it will drown. Cetaceans breathe through blowholes on the top of their heads. This means they can breathe without raising their heads far above the surface.

Cetaceans usually surface to breathe every few minutes. But some large toothed whales can hold their breath for as long as an hour. At the surface, cetaceans open their blowholes to take as much air as possible into their lungs. Before diving, they close their blowholes to stop any water from getting in.

Cetaceans are amazing swimmers. Their tails, smooth skin and streamlined bodies help them move quickly through the water. They have flippers on both sides for balance and ease in turning.

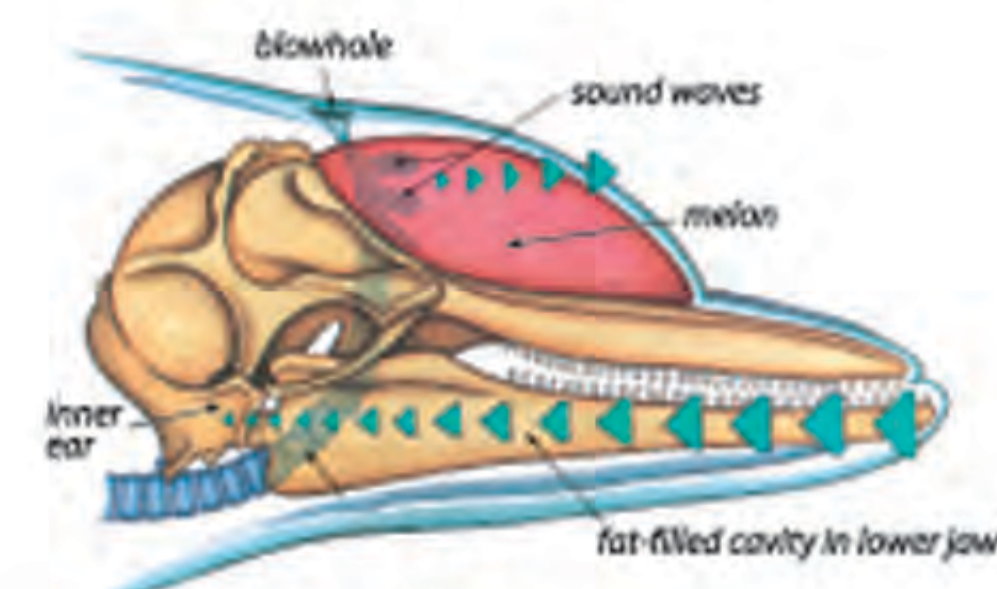
Cetaceans have sensitive skin. They often communicate by touch. Dolphins sometimes show other dolphins that they are friends by rubbing their bellies and flippers.



Cetaceans never go completely asleep. They sleep by "switching off" half of their brains at a time. They need to keep the other half switched on to breathe and detect predators.

Heat escapes much more quickly in water than in air. A thick layer of fat known as blubber helps cetaceans keep warm.

Most cetaceans have good eyesight. However, to navigate, find each other, and catch fish toothed cetaceans rely mostly on a sense called echolocation. They share the ability to see using sound with bats.



What is echolocation?

Toothed cetaceans make high-pitched clicking sounds by forcing air through small tubes located inside their blowholes. These sounds then pass through a fatty sac (melon) in their forehead that focuses the click to where the animal wants to see. By scanning back and forth the cetacean creates an image from the reflected sounds. Using sound to see is called echolocation [eko-lokaSHen].

Toothed cetaceans become aware of their surroundings using echolocation. They use echolocation to navigate, detect and capture prey, monitor predators, and find and cooperate with members of their own species for feeding and reproduction. In medical science echolocation is called ultrasound and it is often used to examine the health of unborn human babies.



What makes river dolphins special?

True river dolphins are only distantly related to marine dolphins. They have very long snouts and small eyes. River dolphins have poor eyesight but exceptionally well-developed echolocation abilities. This allows them to survive in the muddy waters where they generally live.

River dolphins are highly maneuverable with large flippers and flexible necks which allow them to change direction quickly. Shushuks often swim on their sides. They find their way by touching the bottom of the river with the edge of their flippers.

River dolphins are not social animals. They are generally found alone or in small groups at river confluences or bends.

A few dolphin species occur in both rivers and the sea. One of these is the Irrawaddy dolphin. The Irrawaddy dolphin lives in the freshwater channels of the Sundarbans mangrove forest and in the coastal waters of the Bay of Bengal. Irrawaddy dolphins occur far upstream in some large rivers in Asia, but not in the Padma-Meghna-Jamuna. The reason might be that they cannot compete with the shushuk – a true riverine specialist.





What makes baleen whales special?

Baleen whales eat by taking in enormous gulps of water filled with small fish, shrimp-like creatures called krill, and tiny animals called zooplankton. They use their baleen to strain out the food while pushing the water back out with their tongue.

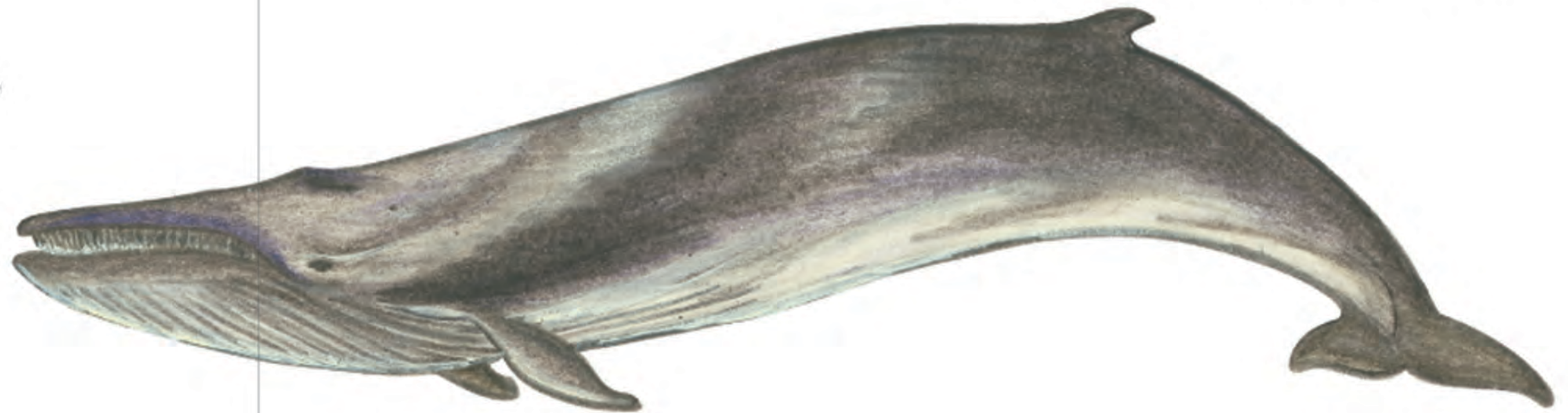
Baleen whales include the blue whale. This is the largest creature to ever roam the earth. Blue whales can grow to more than 30 metres or 100 feet long, and their heart is the same size as a 'baby taxi'.

Baleen whales live mostly alone and far away from other members of their species. Most species have special sites called breeding grounds where they meet at the same time each year to find mates.

Baleen whales make the longest migrations of any animal. Many of these whales travel from summer feeding grounds in polar waters to winter breeding grounds in the tropics. Some whale populations are residents in the same location throughout the year.

When whales breathe, they blow a cloud of spray above the water. This blow is the whale's breath. It becomes visible when hot air from the whale's lungs meets cooler air outside. The blow also contains water that has been trapped around the blowhole. By looking at the size and shape of the blow, it is sometimes possible to tell what kind of whale made it.

Baleen whales are not believed to echolocate. However, scientists think they communicate over long distances using low-pitched songs. Sound travels much better in water than in air. Whale songs have been recorded by underwater microphones positioned more than 1,000 kilometers or 620 miles away from the animals.





What makes marine dolphins special?

Marine dolphins are fast swimmers. Dolphins that live far out at sea sometimes occur in groups of thousands. Marine dolphins often catch fish by cooperating in herding them into a dense mass. By doing this they can more easily catch them with their sharp teeth.



Marine dolphins are social animals. In some species the elder females are the leaders. Marine dolphins are often seen rubbing against each other in social play. Males sometimes ram into each other while fighting over females.

There are more species of marine dolphins than other kinds of cetaceans. Some marine dolphins are found only in small areas, while others range throughout the world's oceans.

Which cetaceans occur in Bangladesh?

Scientists recognize Bangladesh as a global "hotspot" for cetacean diversity and abundance. This means that the rivers and coastal waters of the country support numerous species and that their populations are generally more healthy compared to neighboring countries in Asia.

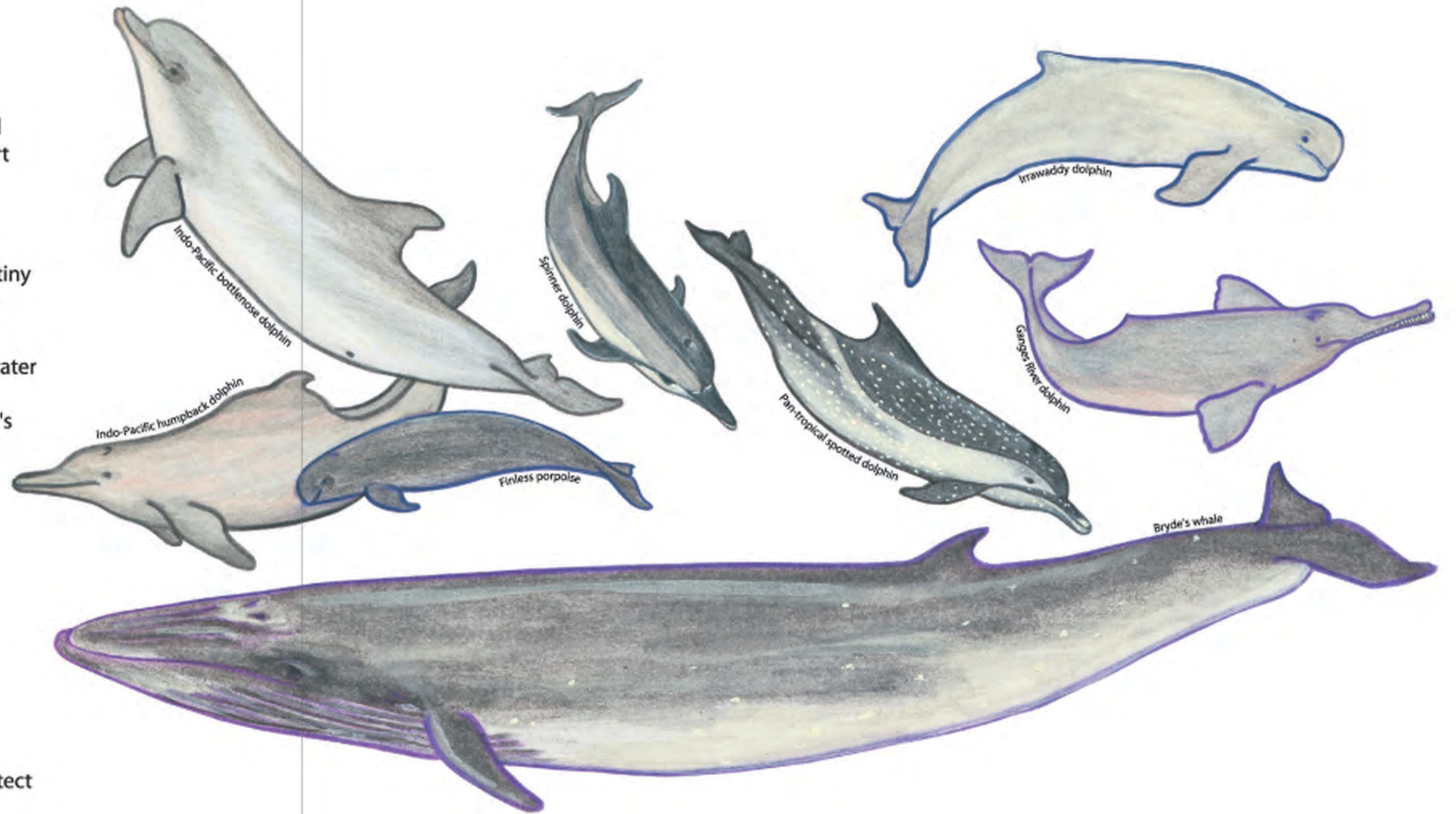
The best-known dolphin in Bangladesh is the shushuk. Shushuks are true river dolphins. They are strange looking animals with an extraordinary long snout, a tiny dorsal fin and large flippers. Shushuks live throughout the Padma, Meghna and Jamuna Rivers and their tributaries. They are frequently seen at ferry crossings.

Irrawaddy dolphins are found in rivers and in coastal waters that receive freshwater from rivers. They share habitat (the place where they live) with shushuks in waterways of the Sundarbans mangrove forest. Bangladesh supports the world's largest Irrawaddy dolphin population.

Indo-Pacific humpback dolphins and finless porpoises live mostly in open coastal waters that receive freshwater flows from the Padma, Meghna and Jamuna Rivers. They are also occasional visitors to the Sundarbans mangrove forest.

Indo-Pacific bottlenose, spinner and pan-tropical spotted dolphins and a breeding population of Bryde's whales live in a submarine canyon called the Swatch-of-No-Ground. This canyon descends to more than 900 meters or 3000 feet deep but it is located only 40 kilometers or 25 miles from the Sundarbans.

Bangladesh supports an extraordinary variety of cetaceans in a small area of mangrove forest, coastal and submarine canyon waters. Our challenge is to protect these amazing animals from extinction.





Why are some cetaceans threatened with extinction?

Cetaceans face many threats from humans. Many cetaceans die each year when they become entangled in fishing nets and drown. The widespread use of mosquito nets for catching shrimp fry has depleted populations of their fish prey. Pollution from pesticides and industrial waste reduces their resistance to disease. River dolphins are particularly endangered because people are draining the rivers where they live, and dams have kept groups from coming together to reproduce.

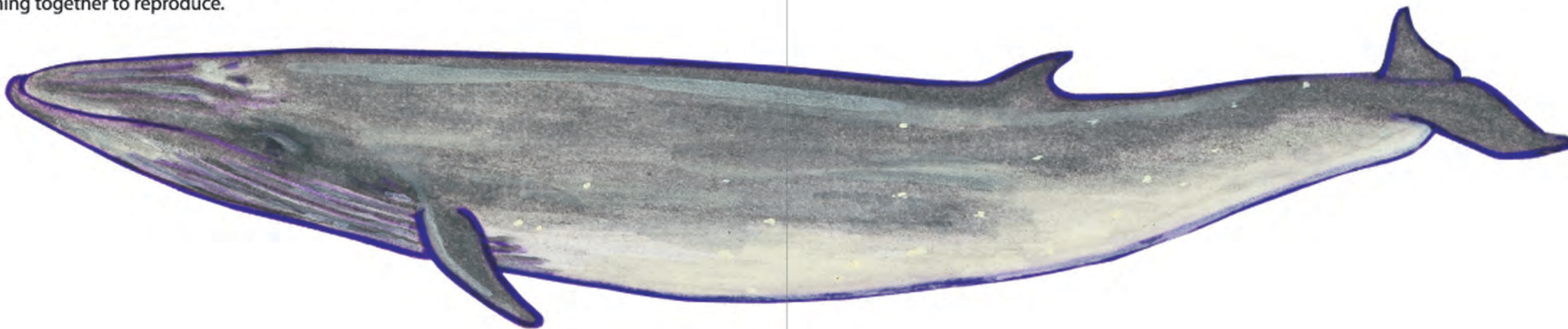


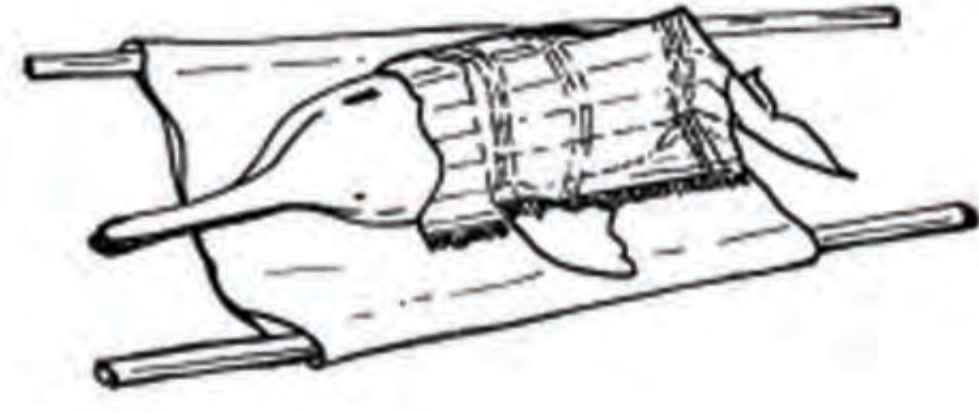
Why should people be interested in saving cetaceans from extinction?

Dolphins, whales and porpoises are fundamental to life in rivers and the sea. They are symbols of the need to take good care of aquatic resources that are essential for the survival of human communities. Both cetaceans and humans need clean water and healthy fish populations.

Cetaceans are precious to local Islamic and Hindu cultures and they are the fishermen's companions at sea and on the river. Humans have long been fascinated by cetaceans. There are many stories of dolphins and whales protecting people from shark attacks or rescuing them when they are stranded at sea.

Many people are interested in dolphins because they appear to be very intelligent. Dolphins have large brains and are good at solving problems. Some species even recognize themselves in a mirror. Many people believe that dolphins have their own language.





What can I do to help dolphins, whales and porpoises?

Being well-informed is the first step. When decisions are made by your family and friends to take actions that might endanger cetaceans, you have a responsibility to speak out for these animals. Tell others about what you know and ask them to join you in protecting cetaceans. These animals are part of the rich wildlife heritage of Bangladesh.

Many dolphins die from entanglement in fishing nets and lines. Do not set 'current jaal' or gill nets in areas where you see dolphins. Stay with your nets. If a dolphin gets caught, you can save its life. Quickly pull the animal to the surface and set it free. You may have to cut your net. It can be repaired, but a dead shushuk is gone forever.

Never attempt to catch a shushuk or to keep it in a pond. It will not survive.

Information from dead cetaceans is valuable to help other cetaceans survive. If you find a dead cetacean, make sure it does not wash away or get eaten by scavengers. Inform the Bangladesh Cetacean Diversity Project (BCDP) Team as soon as possible through their Dolphin Hotline + 8801612228800 or +8801713228800.

Cetaceans are protected by law. It is illegal to catch these animals or to sell or buy the whole animal or any part of it.



Freshwater rivers

Hundreds of rivers characterize the landscape of Bangladesh. Most of these waterways originate in neighboring India. This mighty river system carries significant freshwater and sediment discharge, resulting in turbid, brackish water extending far beyond the coast. During the dry season the water levels drop with some rivers drying up completely.

The endangered shushuk inhabits all major rivers of Bangladesh. As a true freshwater dolphin its range is limited downstream by salinity, and upstream by insufficient water, rocky barriers or dams.

Estuarine and coastal waters

The Bay of Bengal in Bangladesh is delineated by the Sundarbans mangrove forest in the west and the mouth of the Meghna river in the east. This dynamic river-sea interface is influenced by sedimentation, salinity and tidal action. Declining freshwater flow from upstream dam construction and sea-level rise from global climate change cause increasing salinity and sedimentation. This changes the ecology and reduces the productivity of estuarine and coastal waters.

The Sundarbans mangrove forest encompasses the farthest downstream range of the shushuk. The brackish estuarine and nearshore waters of the delta are inhabited by the freshwater-dependent Irrawaddy dolphin, finless porpoise and the Indo-Pacific humpback dolphin.

Marine and submarine-canyon waters

The 'Swatch-of-No-Ground' submarine canyon cuts deep in to the continental shelf coming to within a short distance of riverine habitat in the Sundarbans. Cetaceans are concentrated at the head of this submarine canyon with Indo-Pacific bottlenose dolphins, and Bryde's whales occurring close to the rim and spinner and pan-tropical spotted dolphins occurring farther offshore. The deep waters beyond the continental shelf in Bangladesh remain mostly unexplored.

Distribution of Cetaceans BANGLADESH

