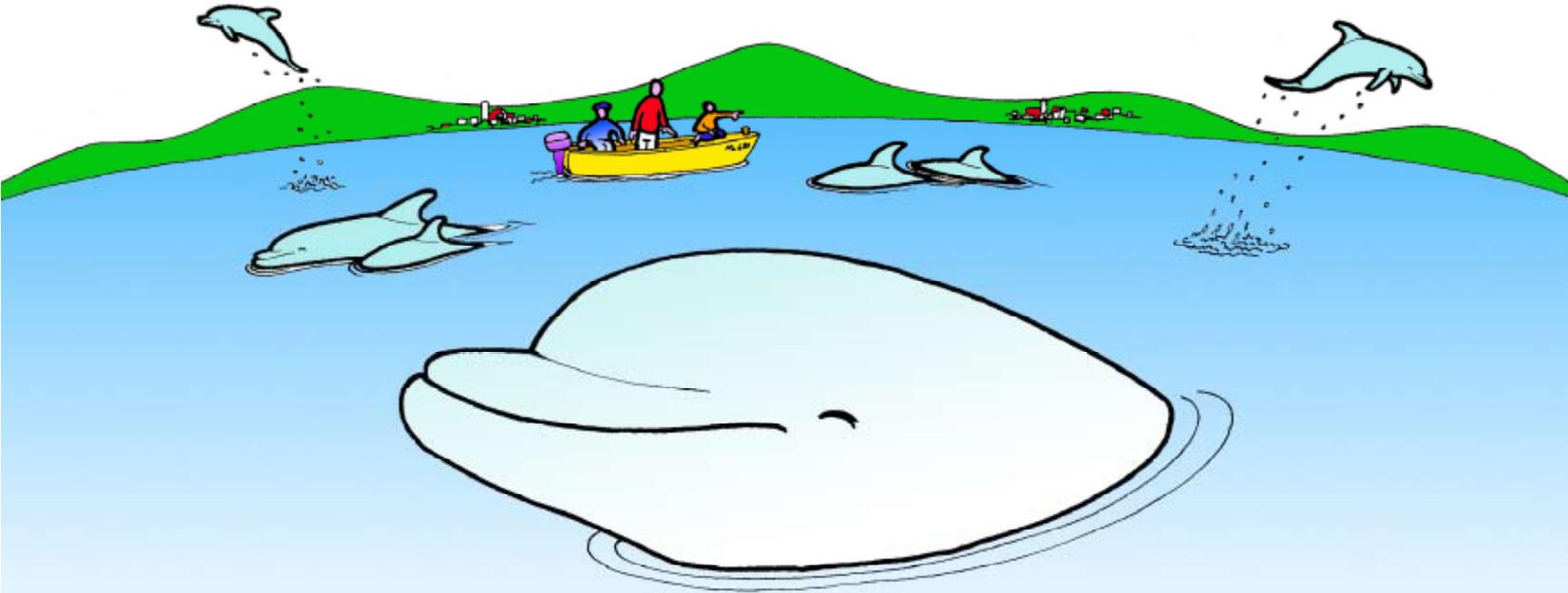


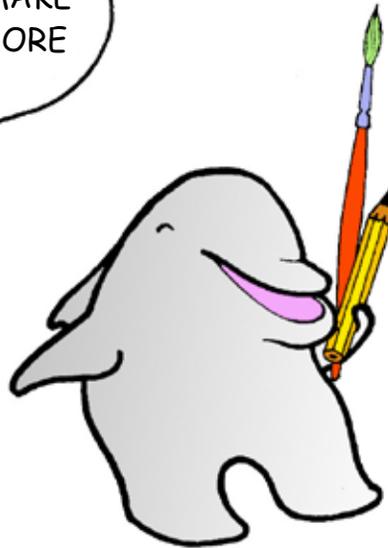
our friends the
DOLPHINS



text and illustrations by Giovanni Bearzi

THIS BOOK BELONGS TO

WITH YOUR COLOUR
PENCILS YOU CAN MAKE
THIS BOOK EVEN MORE
BEAUTIFUL !



our friends the
DOLPHINS

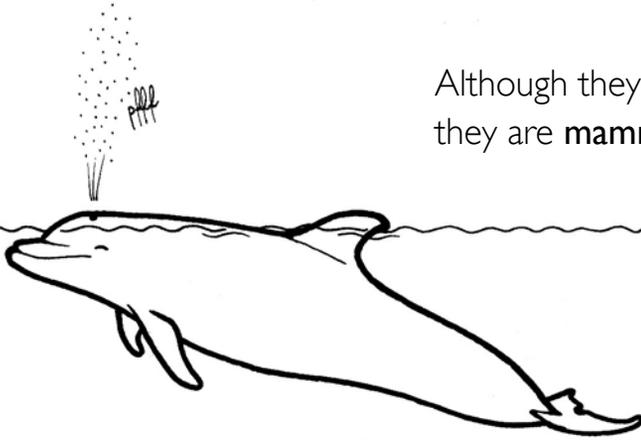


Text and illustrations: © Giovanni Bearzi (1994)

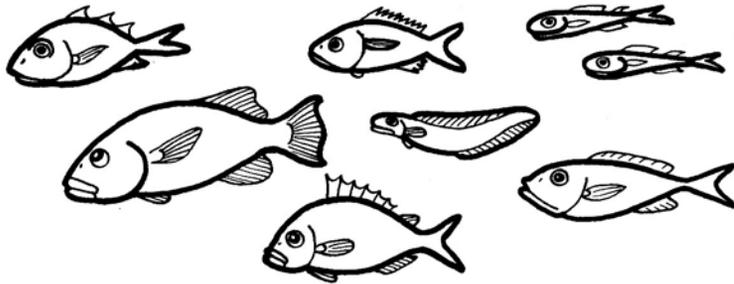
Web version: © Giovanni Bearzi (2006)

Thank you to Brigitte, Nena, Silvia and Maddalena.

Although they live in the water, dolphins are not fish: they are **mammals** and they breath air with their lungs.

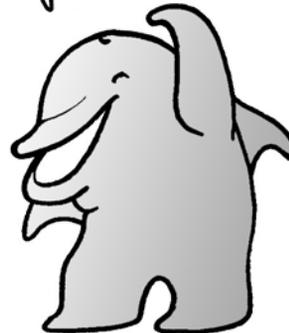


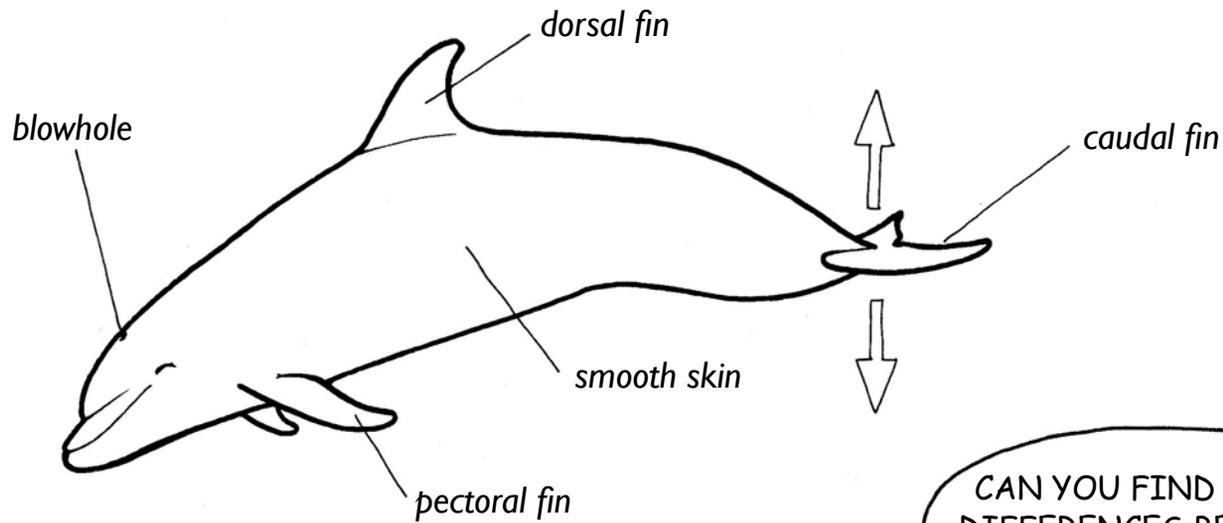
In order to breath, dolphins must come up to the surface, then they hold their breath and dive.



Fishes, with their gills, breath the oxygen dissolved in water.

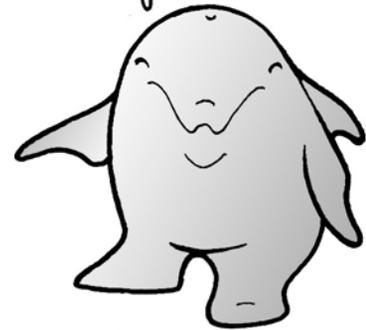
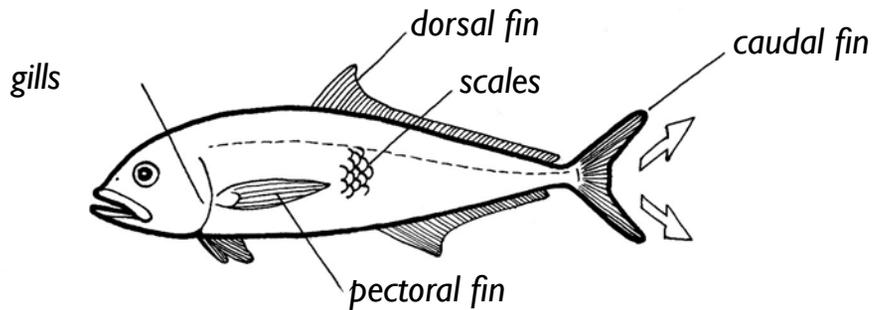
DOLPHINS BREATH WITH THEIR NOSTRILS, THAT ARE ON TOP OF THEIR HEAD AND ARE CALLED "BLOWHOLE"





The caudal fin of a dolphin is **horizontal** and moves up and down.
The caudal fin of a fish is vertical and moves left and right.

CAN YOU FIND OTHER DIFFERENCES BETWEEN DOLPHINS AND FISH ?



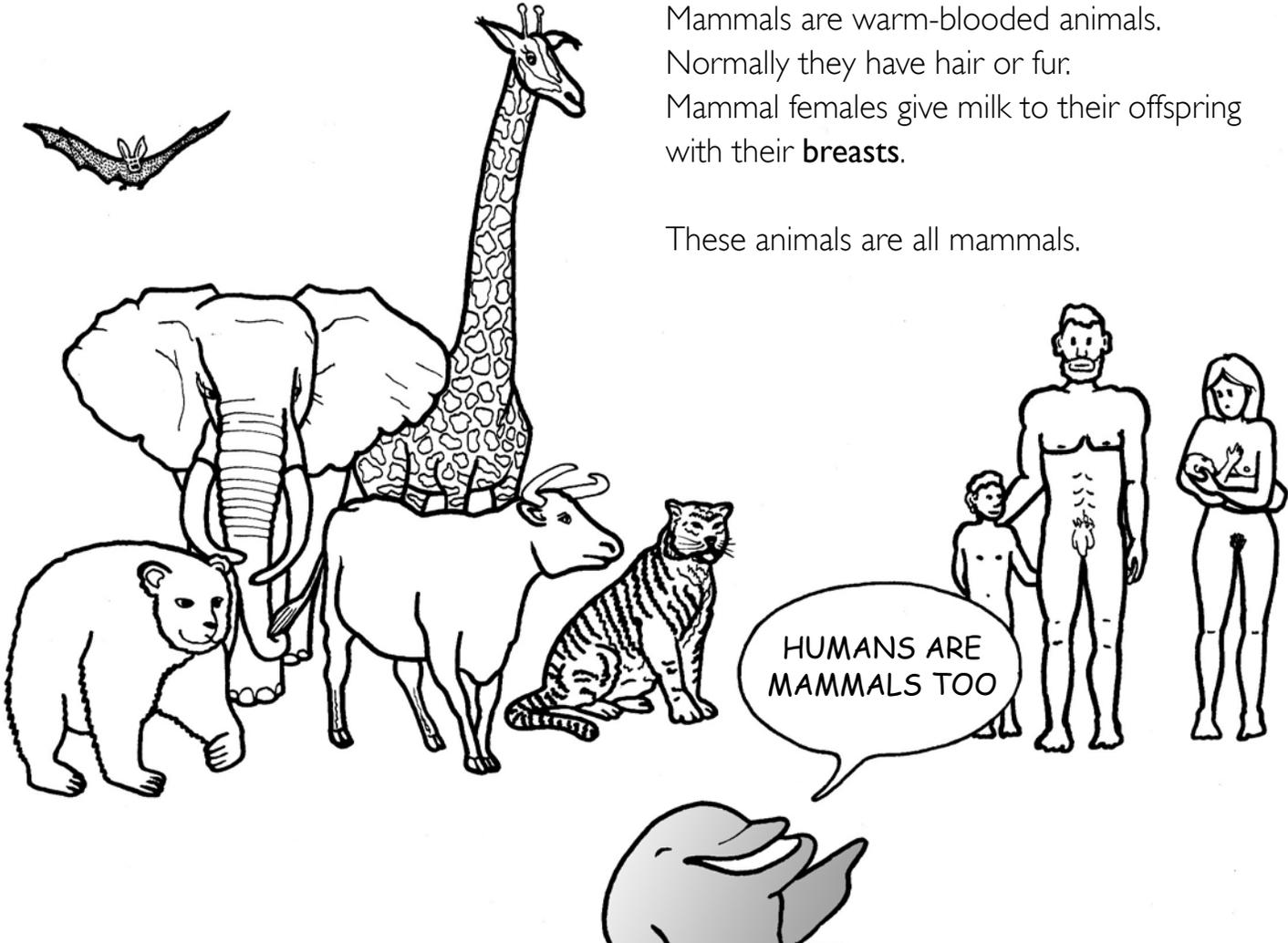
WHO ARE MAMMALS ?

Mammals are warm-blooded animals.

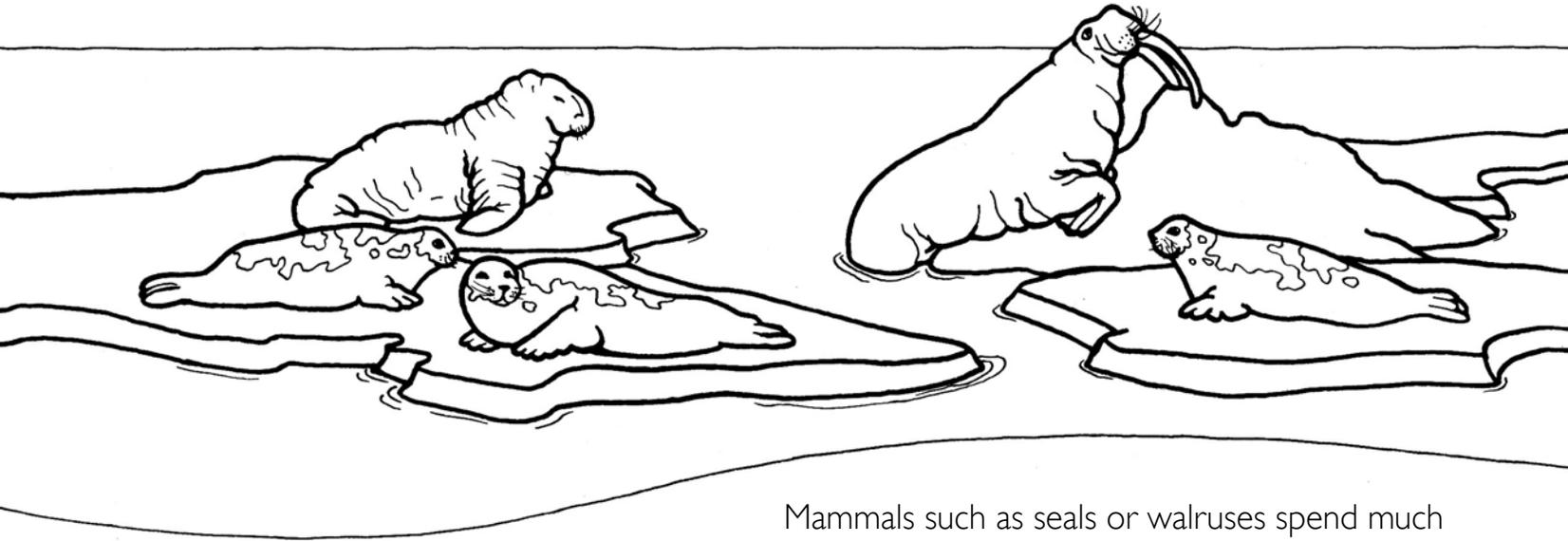
Normally they have hair or fur.

Mammal females give milk to their offspring with their **breasts**.

These animals are all mammals.

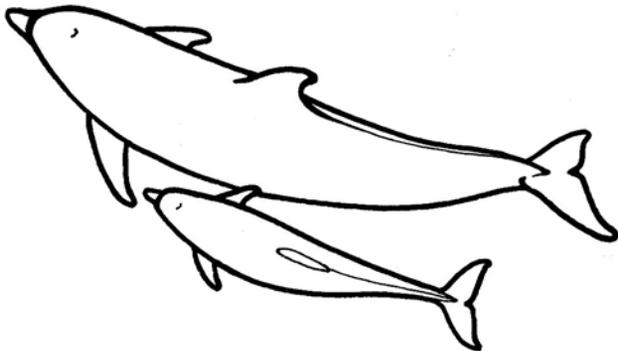


HUMANS ARE
MAMMALS TOO



Mammals such as seals or walruses spend much of their time in the water.

Dolphins spend **their entire life** in the water. In the water they eat, rest, mate and give birth. Even lactation takes place in the water.

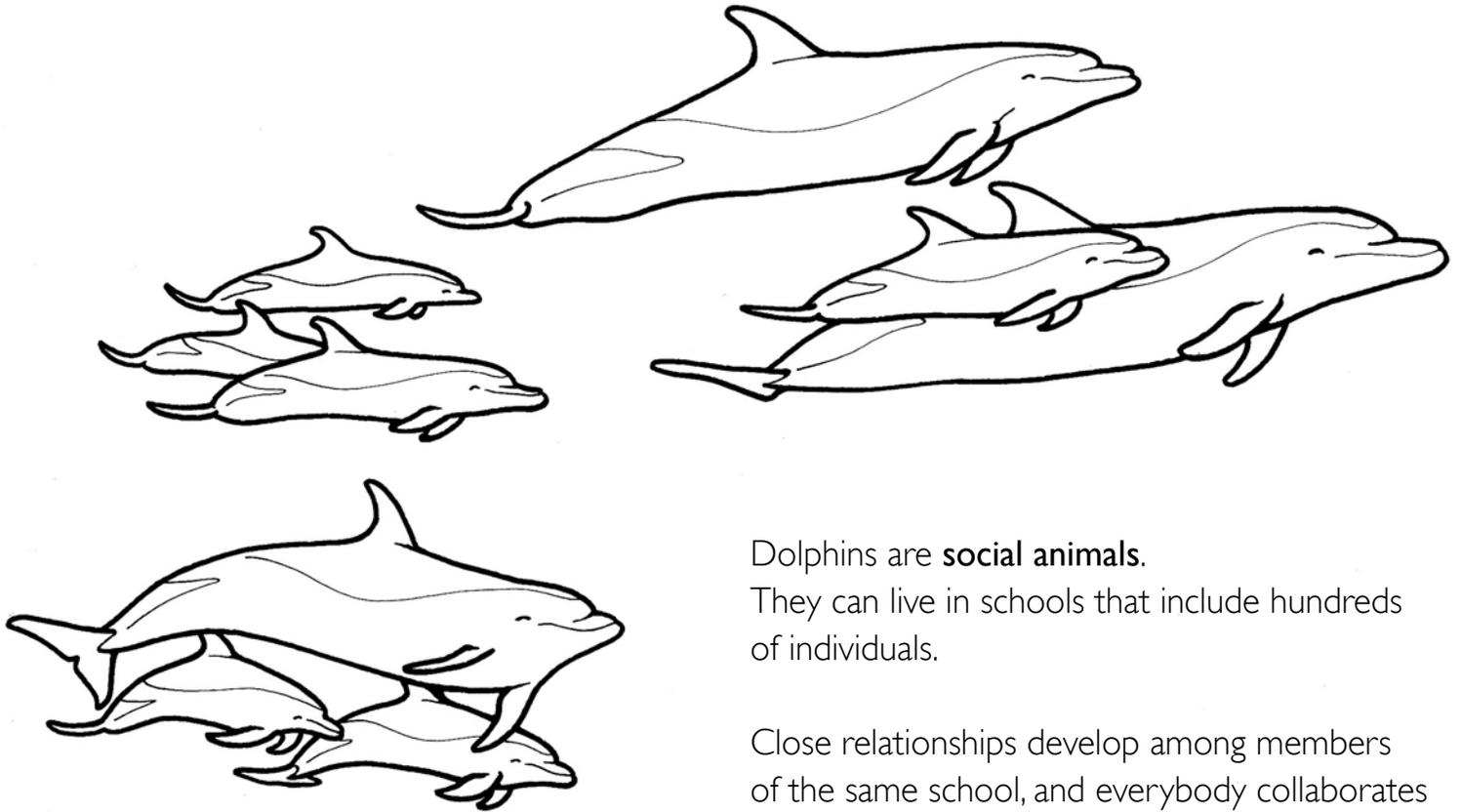


Dolphins do not have hair or fur, but their body is covered by a thick layer of blubber, which keeps them warm.

A school of dolphins swims in the open ocean.

Each individual communicates its position to all other group members through **sounds**.

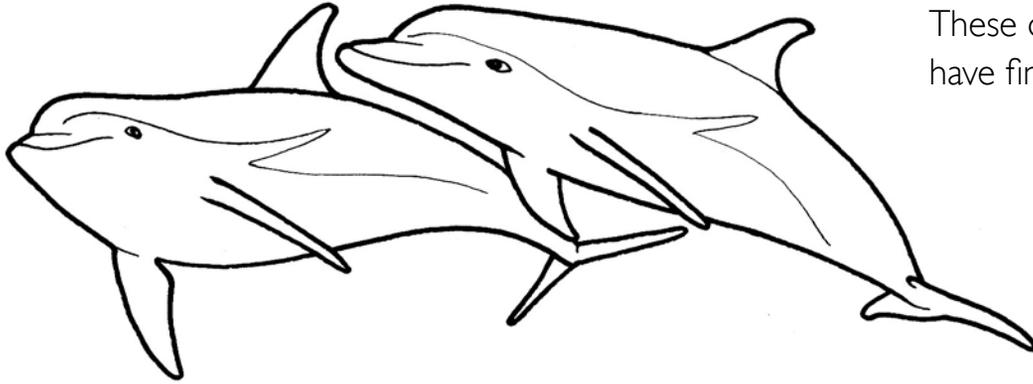




Dolphins are **social animals**.

They can live in schools that include hundreds of individuals.

Close relationships develop among members of the same school, and everybody collaborates in the search for food.



These dolphins, a male and a female, have finally reached **sexual maturity**.

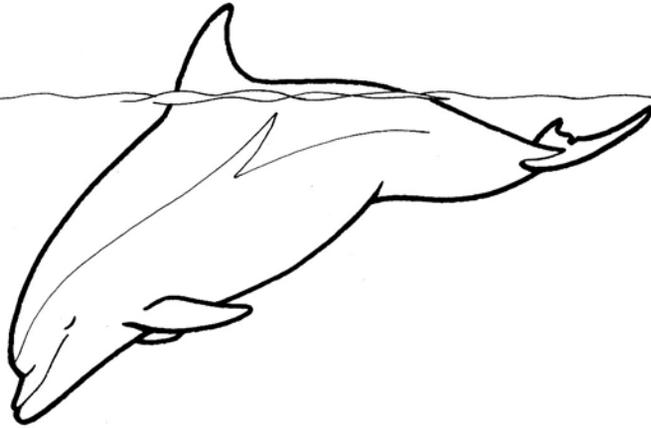
During courtship, two dolphins bite each other and rub against one another, showing appreciation for mutual contact.





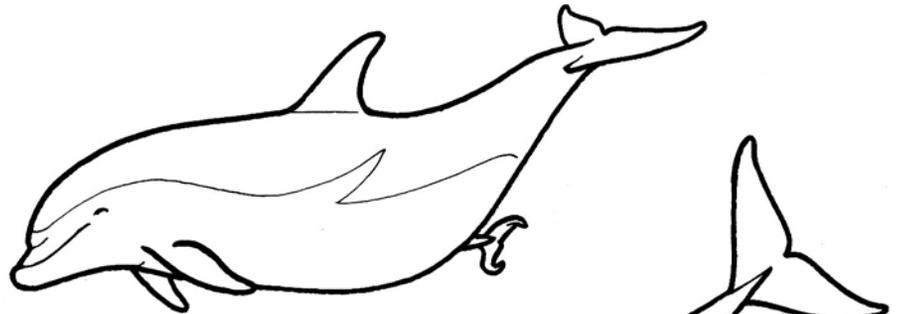
If courtship is successful, the two get together, belly to belly, and **mating** takes place.

Among dolphins, sexuality is not necessarily related to reproduction.

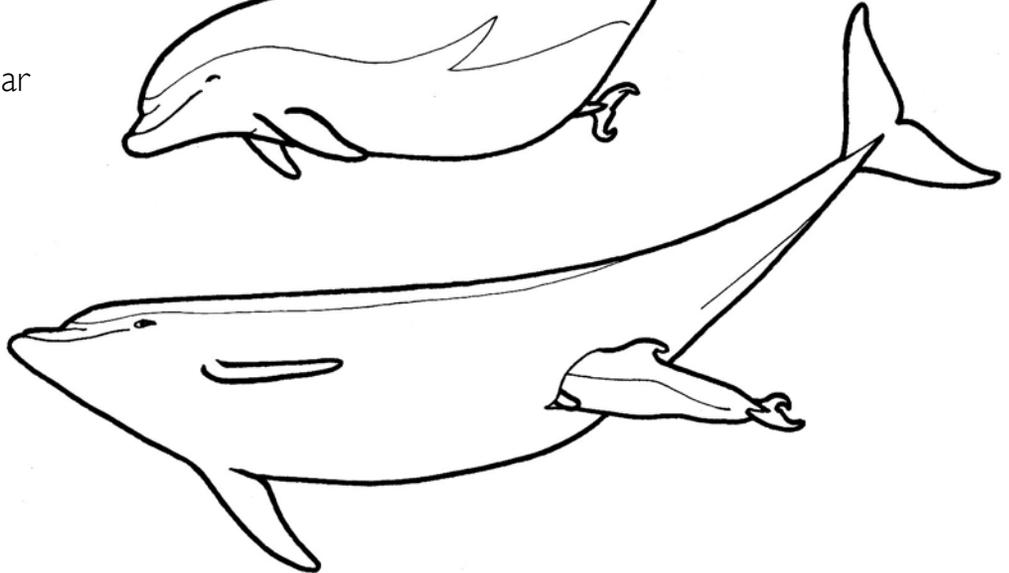


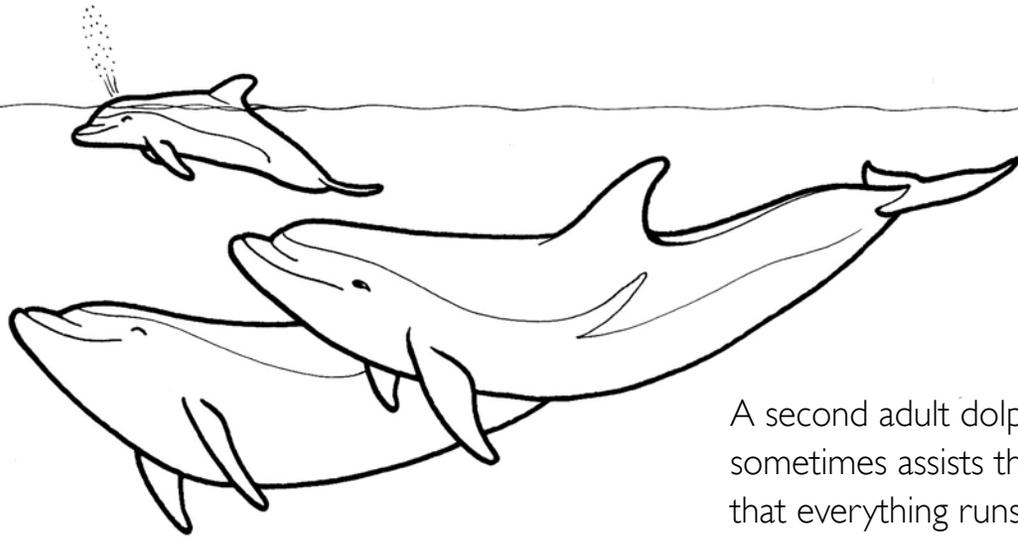
The moment of **parturition** is approaching for this female. After one year of gestation her belly has grown quite a lot.

The first part of the baby to appear is generally the tail.



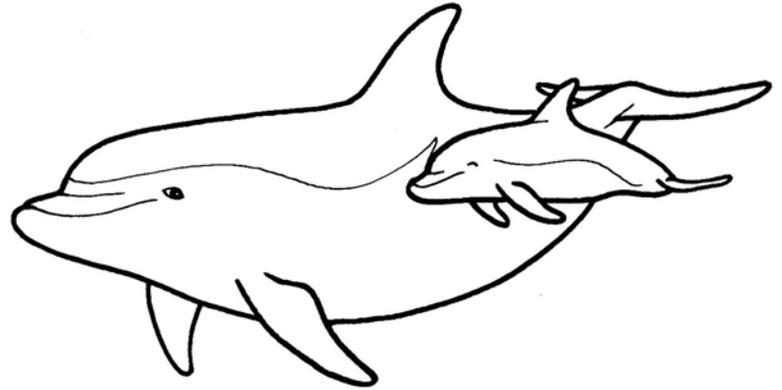
When the head is finally out, the newborn swims quickly up to the water surface to take his first breath.





A second adult dolphin, nicknamed “auntie”, sometimes assists the mother to make sure that everything runs smoothly.

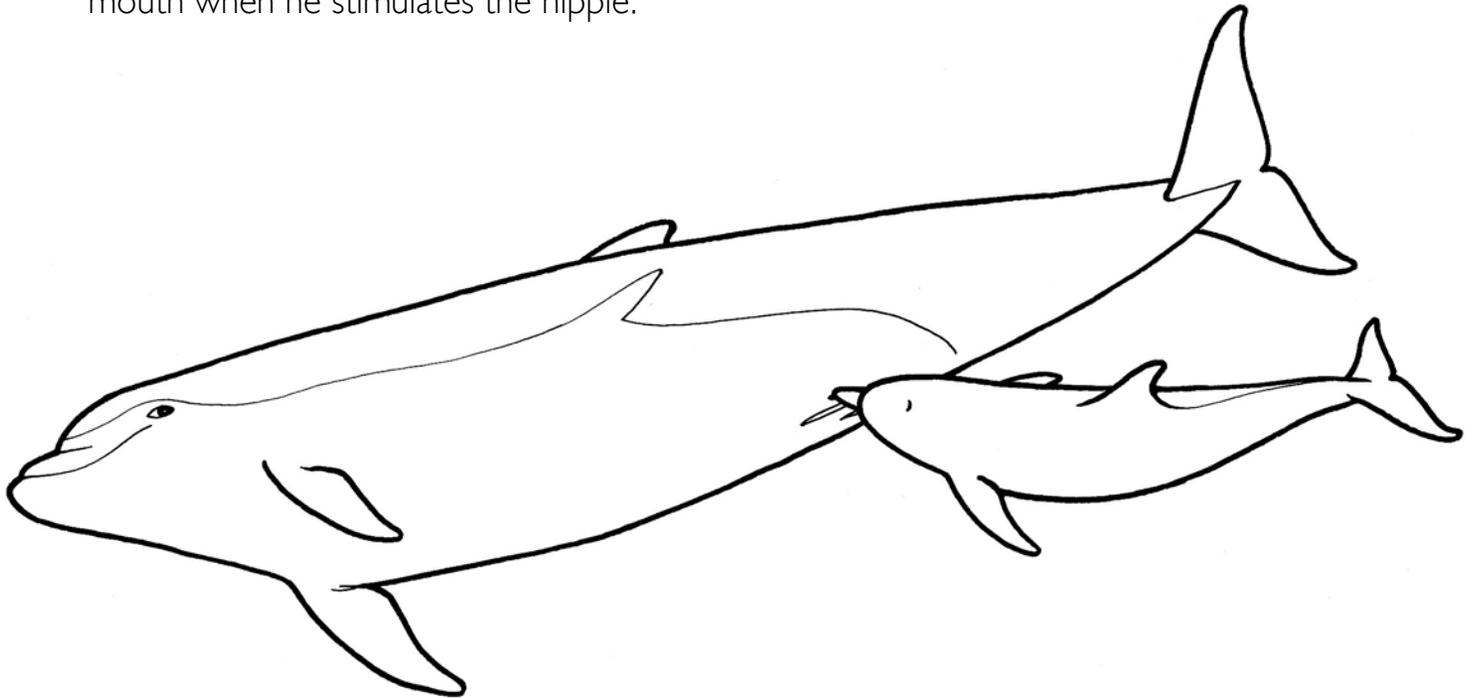
With affection, the mother observes the mini-dolphin who swims on her side with uncertain movements.



Soon after his birth, the calf tries to **take milk**.

By adjusting her position, the mother directs the efforts of the baby towards one of her two nipples.

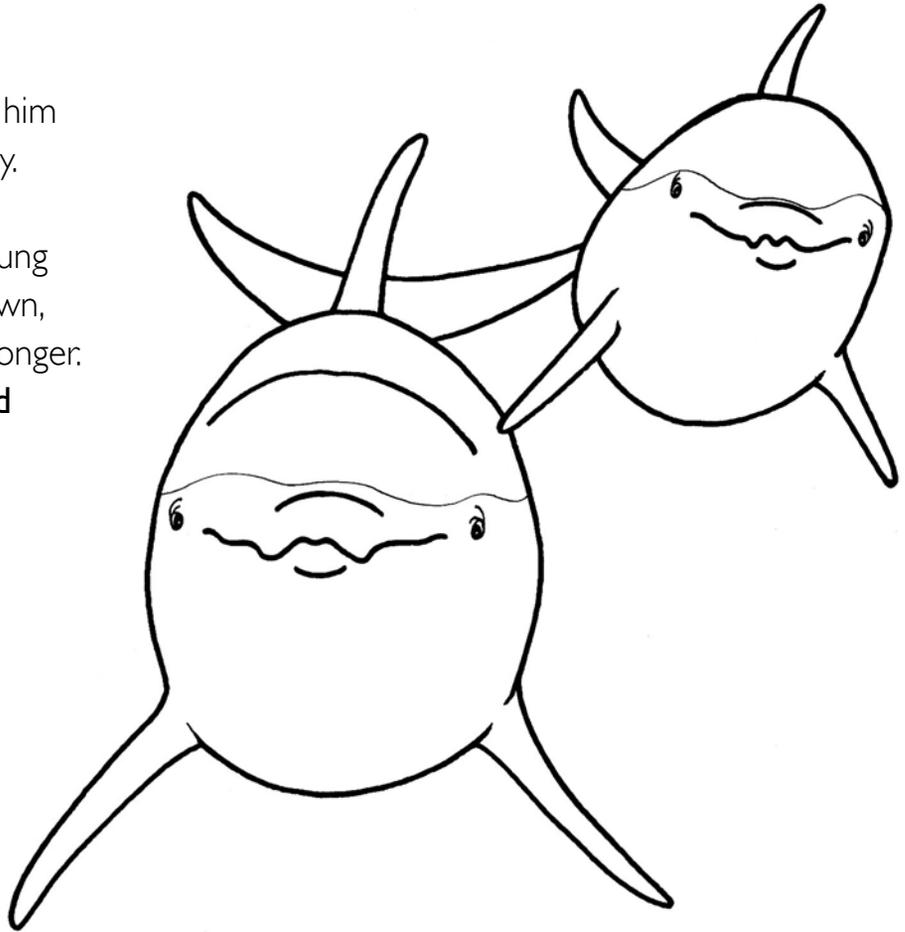
The milk, highly dense and nutritious, is squeezed into the baby's mouth when he stimulates the nipple.



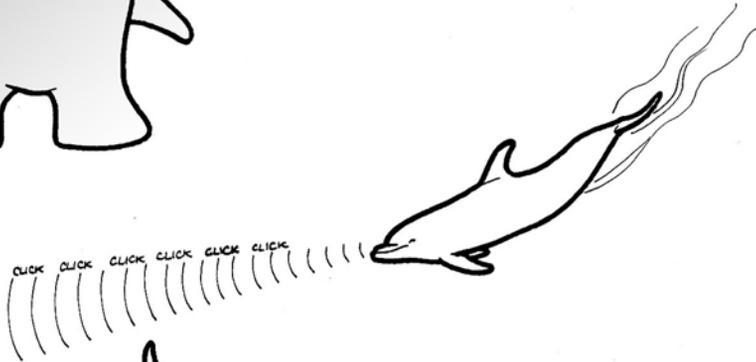
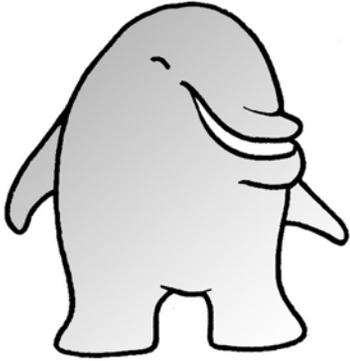
In the first months of life milking takes place at frequent intervals.

As the calf grows, the mother teaches him the techniques to forage independently.

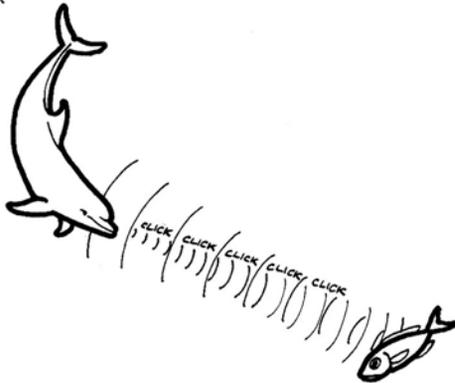
At the age of eighteen months, the young dolphin is able to catch preys on his own, but he will remain with her for much longer. Among dolphins, the **mother-calf bond** is strong and long-lasting.

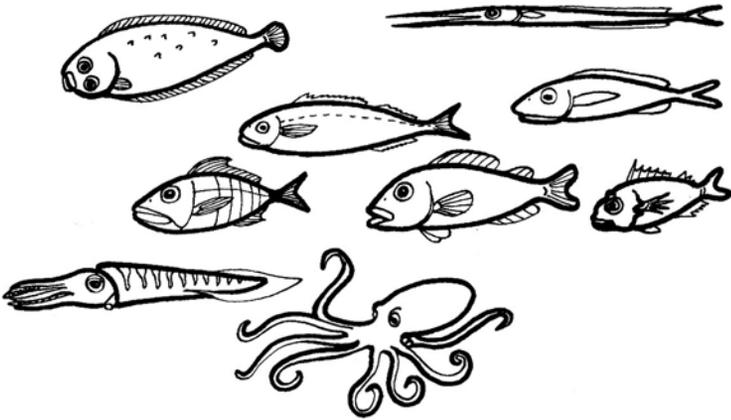


HOW DOES
A DOLPHIN EAT ?



The dolphins use echolocation to localize their preys in the water, especially where visibility is poor. They produce sounds called *clicks* and listen to their **echoes**.



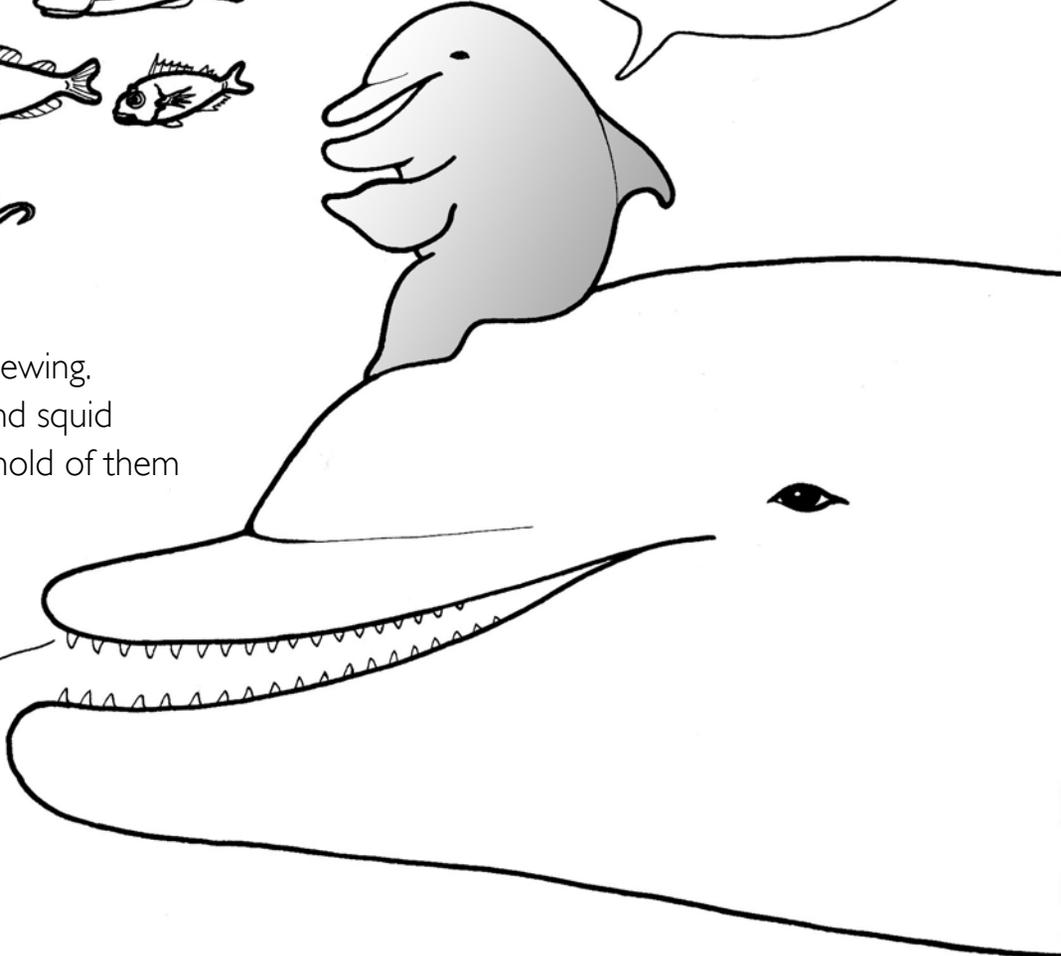


HERE ARE SOME
OF OUR PREYS

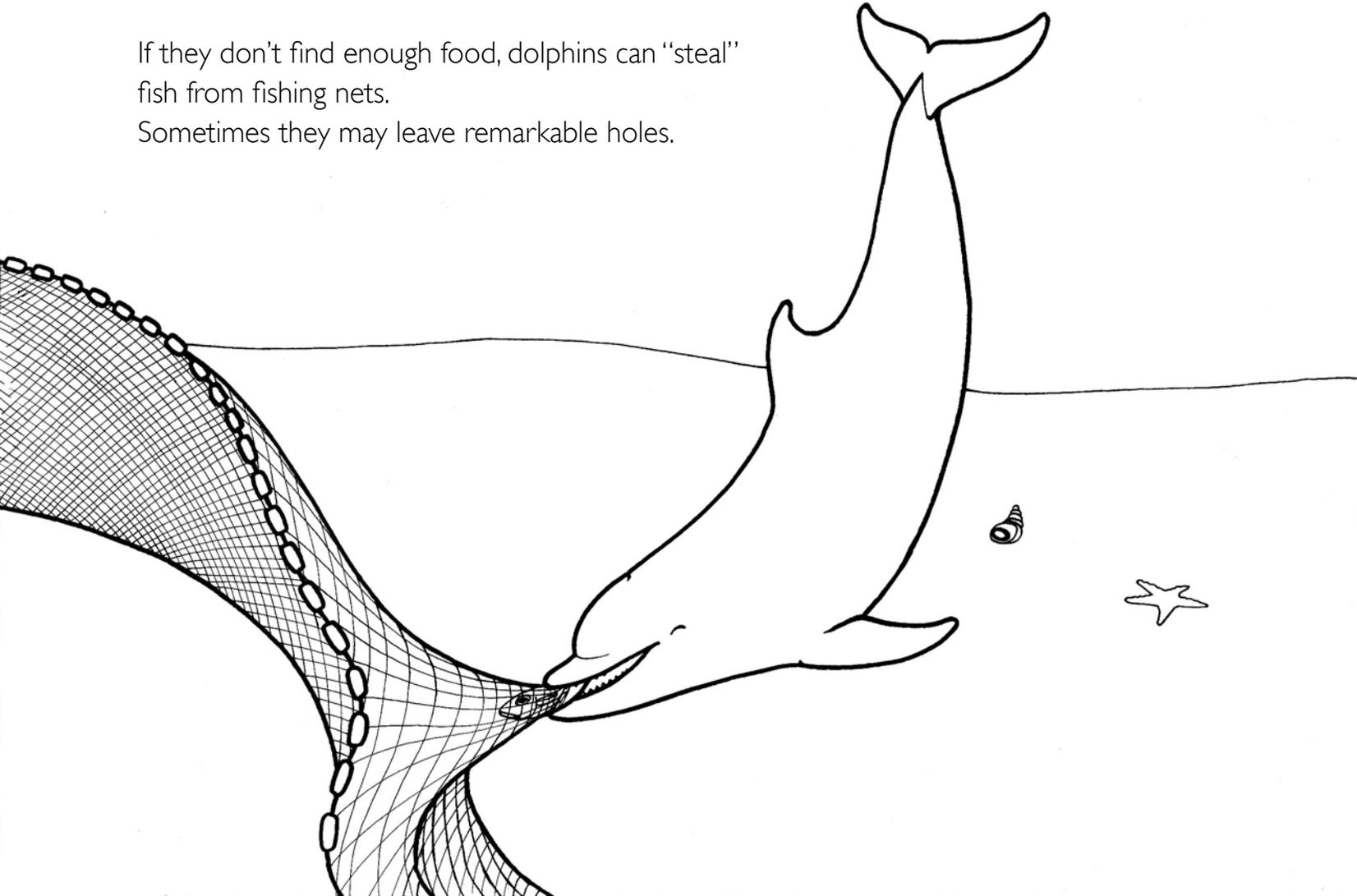
Dolphin teeth are not meant for chewing. They are used to grab preys. Fish and squid can be slippery snacks, and getting hold of them requires sharp teeth and ability.

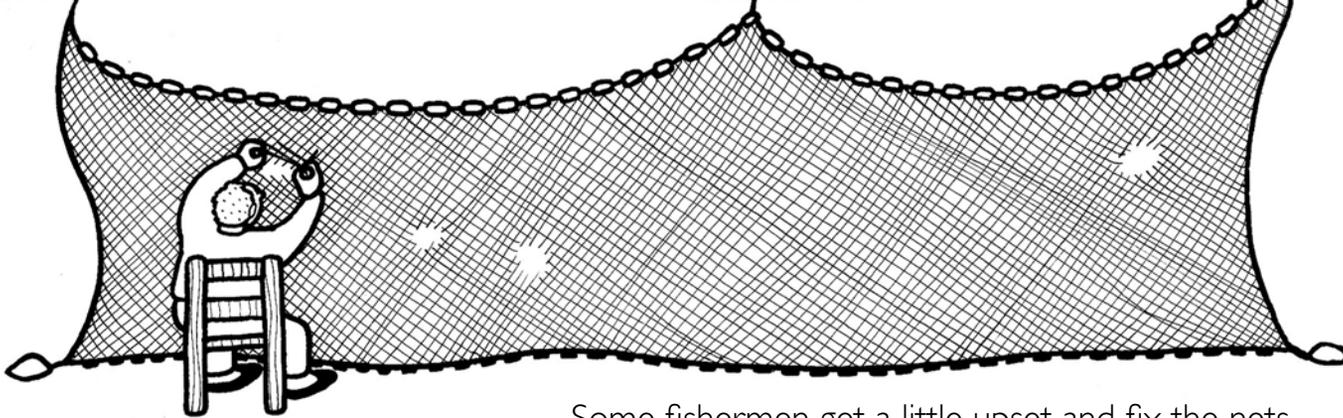


dolphin tooth

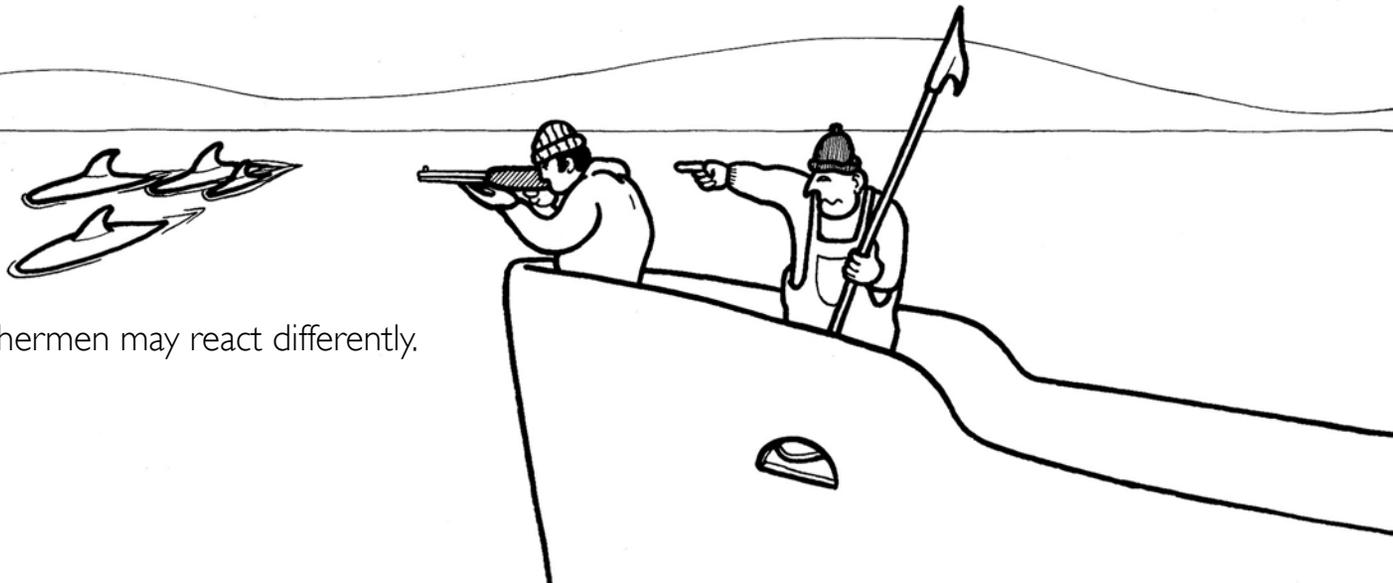


If they don't find enough food, dolphins can "steal" fish from fishing nets. Sometimes they may leave remarkable holes.





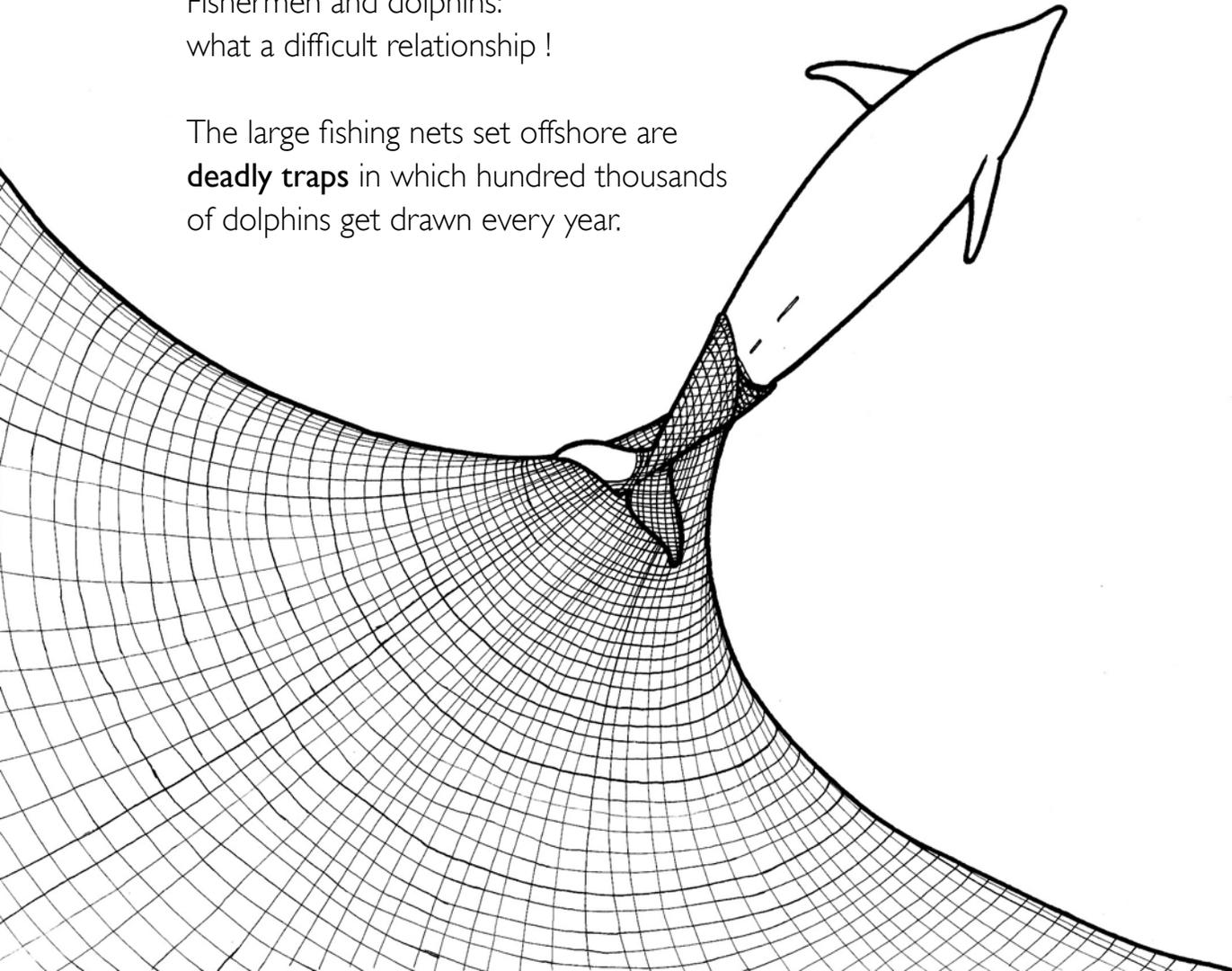
Some fishermen get a little upset and fix the nets. They understand that dolphins are part of the sea, and **accept** these animals the same way they accept the problems caused by the wind and the waves.



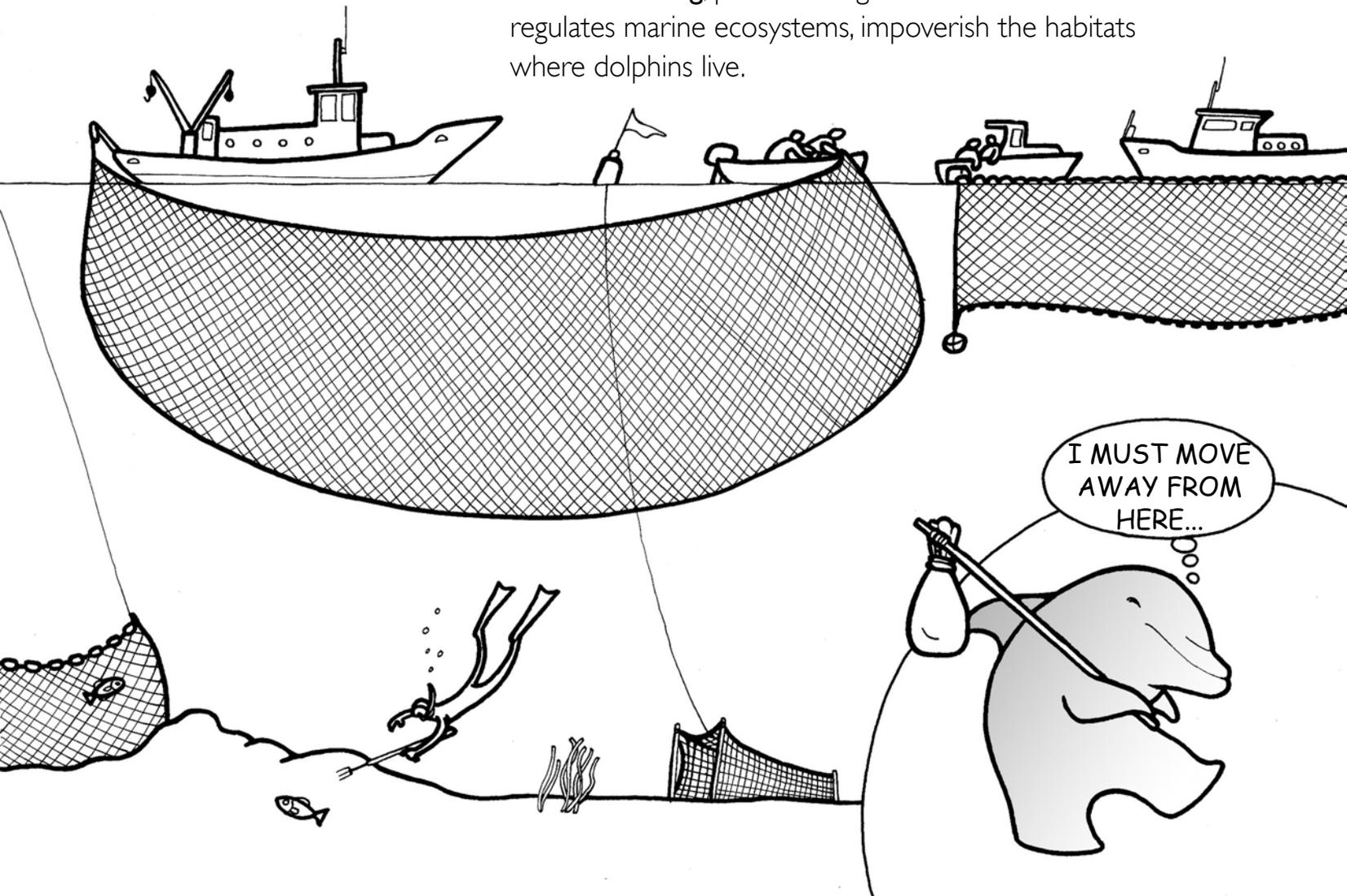
Other fishermen may react differently.

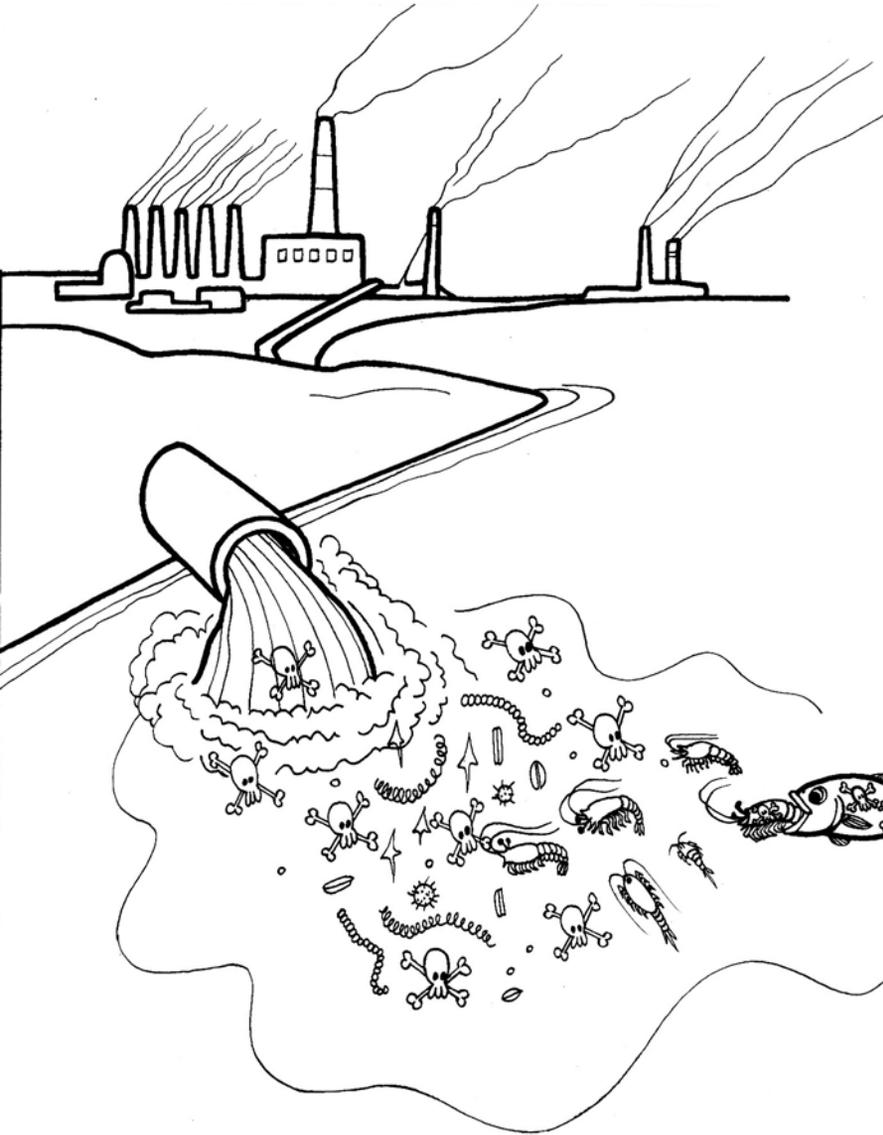
Fishermen and dolphins:
what a difficult relationship !

The large fishing nets set offshore are
deadly traps in which hundred thousands
of dolphins get drawn every year.



Intensive fishing, practiced regardless of the delicate balance that regulates marine ecosystems, impoverish the habitats where dolphins live.



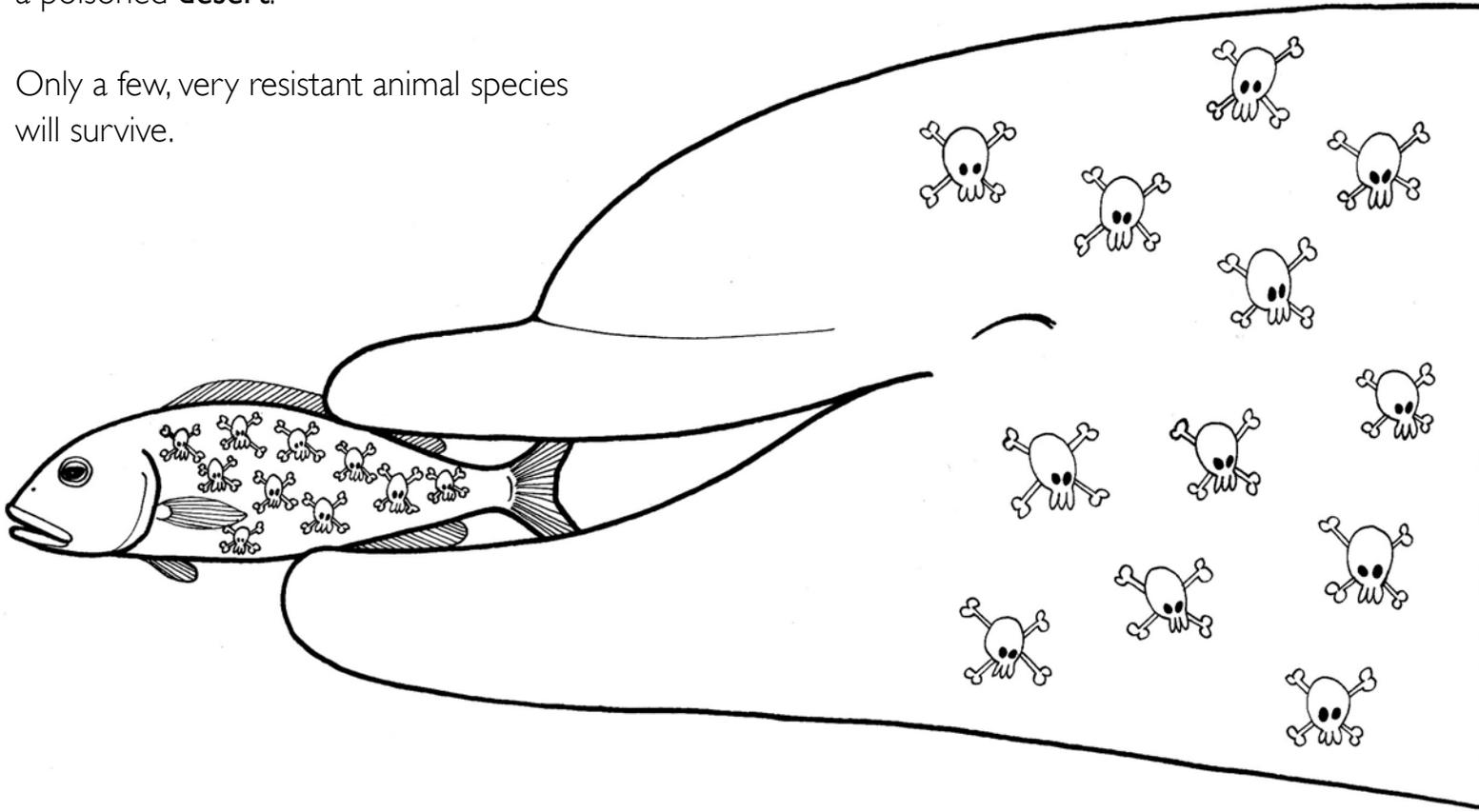


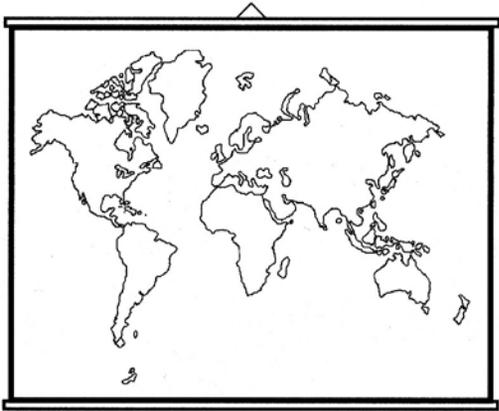
Water pollution also has devastating effects on dolphin populations.

We use the ocean as an enormous sink, but pollutants discharged at sea accumulate in the dolphins' bodies, causing their death or limiting their capability to reproduce.

The ocean full of life risks to be turned into a poisoned **desert**.

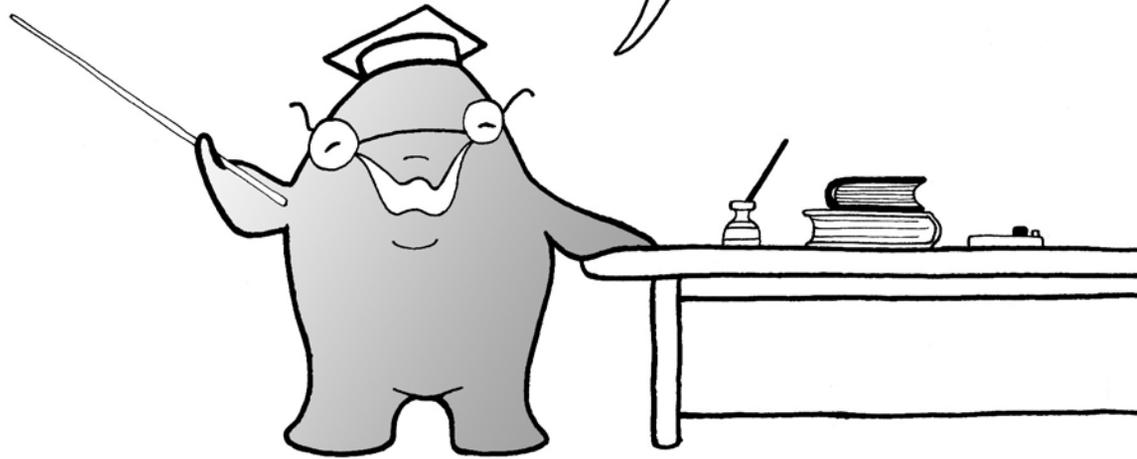
Only a few, very resistant animal species will survive.





That's why dolphins are endangered
in many seas of the world...

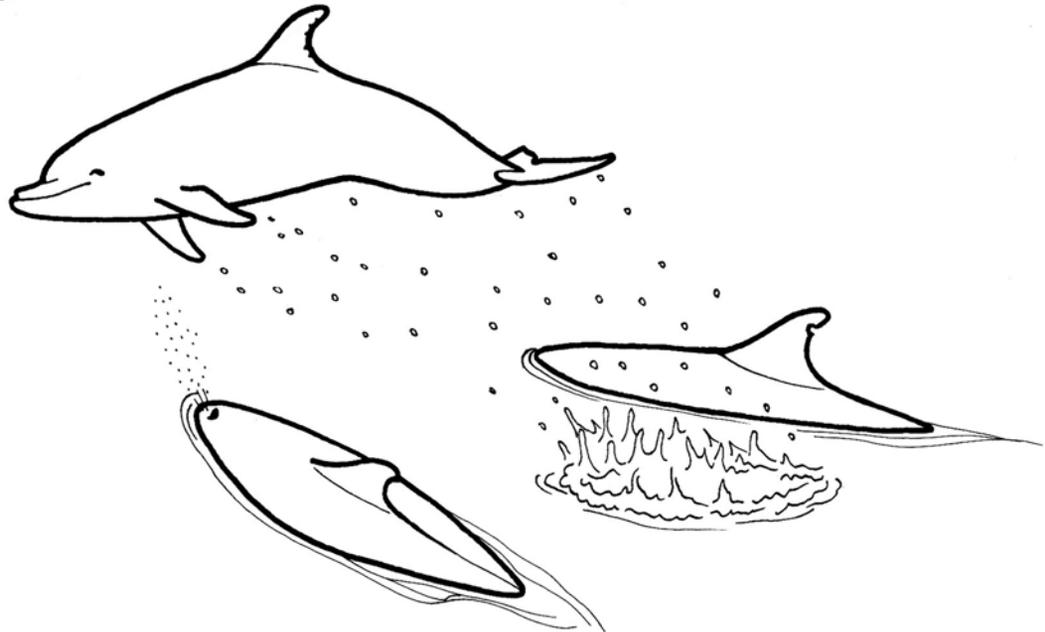
BUT THERE ARE
STILL PLACES WHERE
DOLPHINS CAN LIVE
UNTRoubLED !



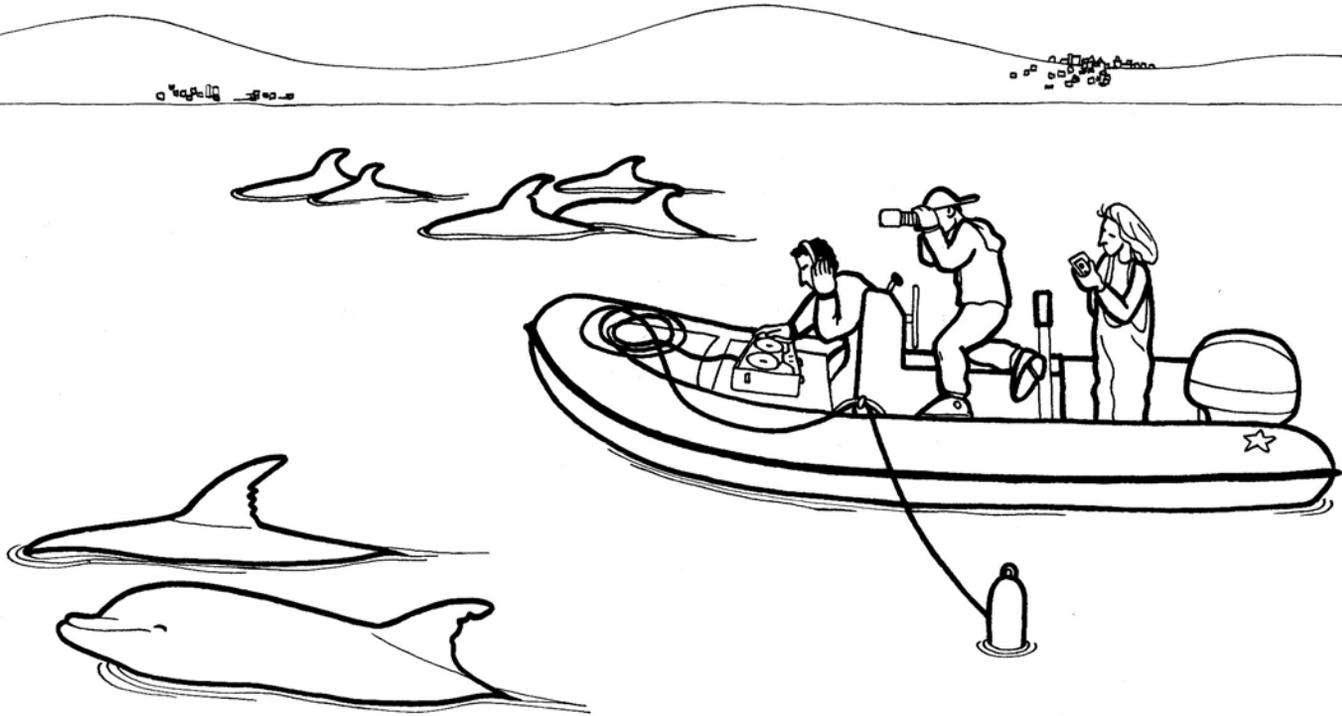


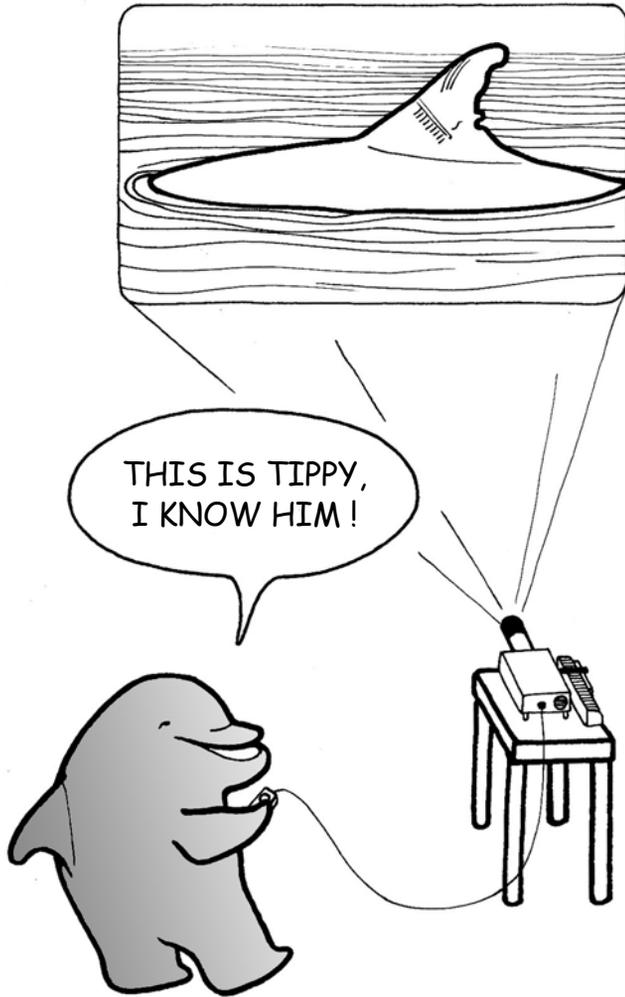
There are areas where dolphins and humans **coexist** peacefully.

In these areas fishermen know that dolphins play an important role in the marine ecosystem.



Researchers follow dolphins with small boats to study them without causing disturbance. They take photos and record the dolphins' behaviour and "voices".

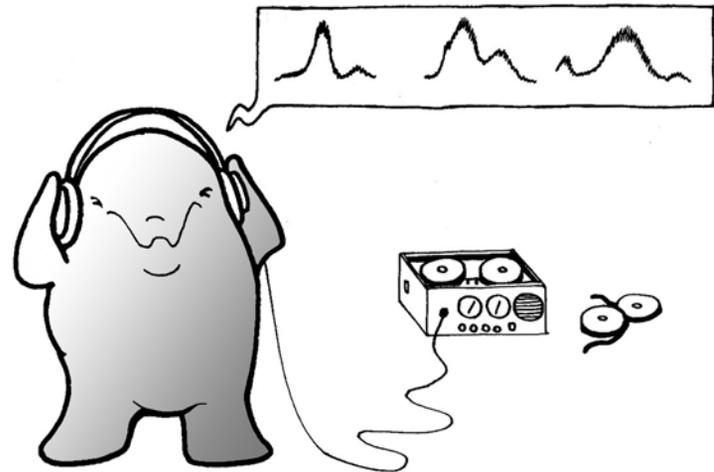




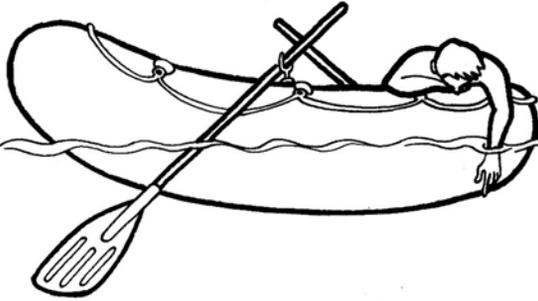
Through these simple techniques it is possible to discover many things.

Researchers recognize the individuals one by one through **natural marks** present on their dorsal fins. They study their movements, daily activities and “friendships”.

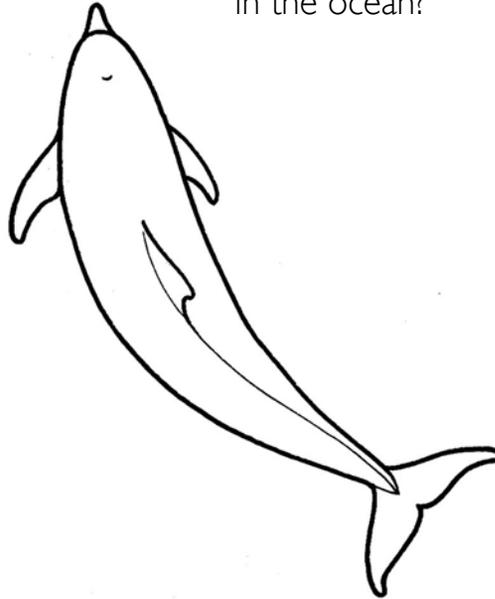
By listening to the fascinating sounds produced by dolphins, one can disclose many secrets about them.

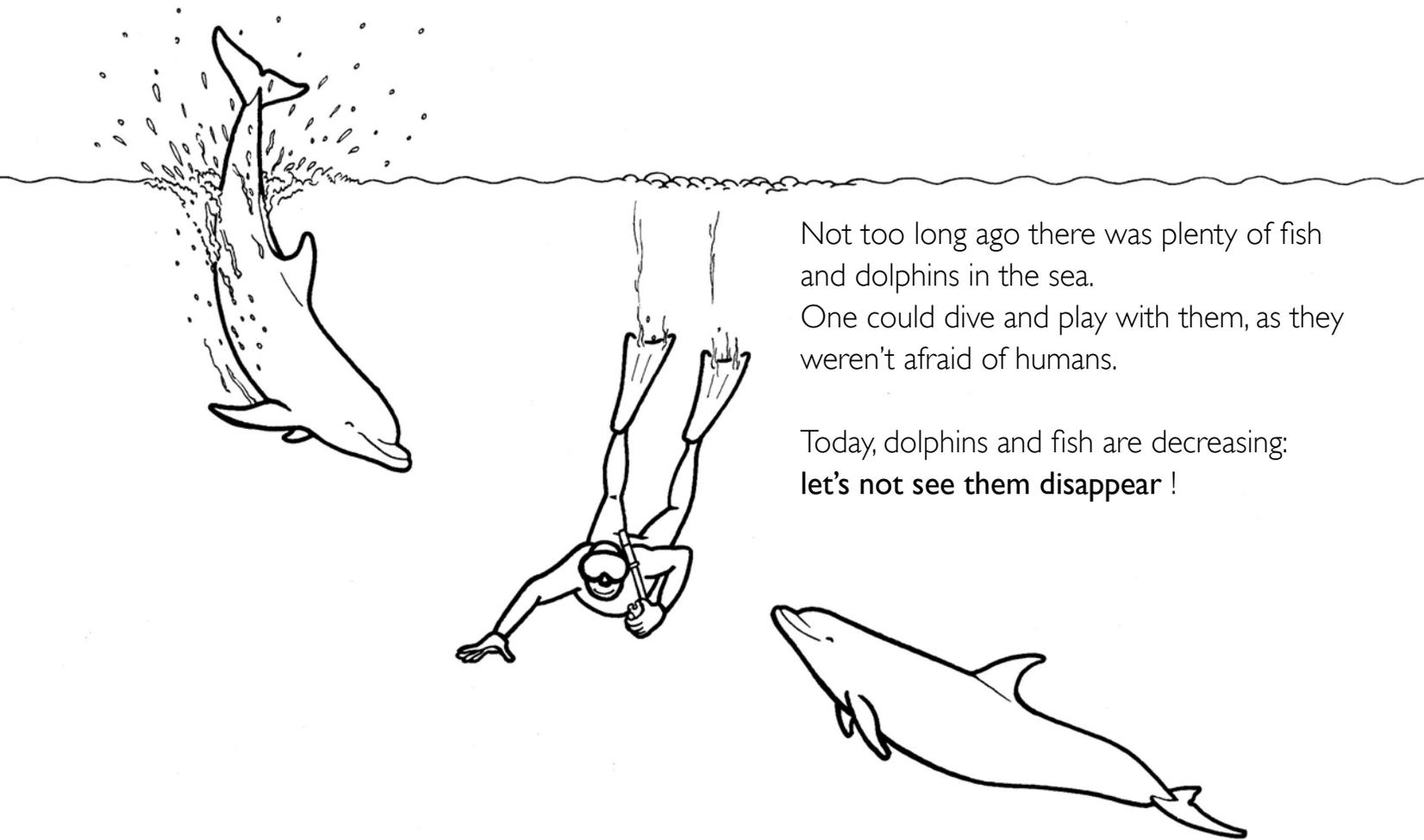


Dolphins are amazing and elegant animals. Watching them in the wild is always a **great joy**. They are cute, smart, and sometimes extremely friendly.



Wouldn't be nice, when we feel a bit lonely, to take a small boat and visit our friends in the ocean?





Not too long ago there was plenty of fish and dolphins in the sea. One could dive and play with them, as they weren't afraid of humans.

Today, dolphins and fish are decreasing: **let's not see them disappear !**



HERE ARE A FEW
SIMPLE THINGS
YOU CAN DO



Learn to love and respect **all** animals, not only dolphins. Dolphins, man, snake, spider, mouse, ant, millipede... realize that every living being has its place and function in nature. Allow yourself to be **amazed**: every form of life is a small masterpiece which deserves your interest.



Remember that **wild** animals such as dolphins, bears and giraffes should live free in their natural environment, not in zoos or pools.



Don't throw litter in the sea or in your backyard: the world **is your home** and you should contribute to keeping it clean. Recycle paper, glass and all materials that can be re-used. Try to avoid wastes and limit consumption.



Subscribe to an organization for the protection of the environment, and strongly **support** initiatives for nature conservation.



Giovanni Bearzi has been conducting research on Mediterranean dolphins since 1986, particularly in the Adriatic and Ionian Seas. He founded and directed for a decade a dolphin research and conservation programme in Croatia, that was awarded the “Henry Ford European Conservation Award” as best European project overall. Giovanni has always tried to combine his scientific work with public awareness and education to support marine conservation, and he has supervised a number of students and young researchers. He is a consultant for organizations such as ACCOBAMS and the IUCN. He holds a Ph.D. in Zoology at the University of Basel, Switzerland, with a thesis on Mediterranean coastal dolphins. Since 1990 he has been a Board Member of the Tethys Research Institute and in 2000 he became the President of Tethys. He also taught Cetacean Conservation as a contract professor at the Faculty of Sciences, University of Venice. In 2001 he won a Pew Marine Conservation Fellowship.