REPTILES:

TURTLES

Sea turtles are living dinosaurs, having survived some 90 million years from the Age of the Reptiles. Whilst people are fascinated with these ancient creatures because of their link with the distant past and the fact that they have not changed significantly in all these years, turtles are now endangered and threatened with extinction. Recent estimates of the global population of leatherback turtles alone indicate that numbers have fallen by two-thirds since 1980 and continue to plummet (Earthwatch, May/June 1997).

There are seven species of turtles – Leatherback, Green, Hawksbill, Olive Ridley, Loggerhead, Flatback and Kemp’s Ridley.

Five of the seven species occur in the waters off southern Africa. Loggerheads and Leatherbacks nest on the north coast of KwaZulu Natal whilst the Green Turtle occurs as a non-breeding resident and the Hawksbill and Olive Ridley as strays.

- Turtles are air-breathing animals and due to their watery habitat, they need to hold their breath for long periods. Thus, they can fully inflate their lungs and draw off as much oxygen as possible. When sleeping or hibernating (on the bottom), they have wonderful adaptations for surviving for hours or even months underwater.
- Unlike many lizards and snakes that bear live young, turtles lay eggs. Mating occurs at sea, usually near the surface, and fertilisation occurs internally.
- Although they appear clumsy and slow on land, turtles are powerful swimmers, using their flat, broad front flippers to propel them through the water and the smaller back flippers as rudders. The carapace (shell) of the turtle is streamlined and the bony elements have been reduced so that the gravity of the carapace is similar to that of the sea.
- Their sensory organs have evolved to function efficiently underwater.
- Turtles have good underwater vision, but their eyesight on land is poor. The popular myth, that turtles are crying when nesting, due to the pain, is based on the fact that turtles have special glands situated next to the tear ducts. These glands excrete excess salts in solution and whilst this process occurs continuously, it is obviously more noticeable when the turtle is out of the water.
- Hearing in turtles is poorly developed and ‘the eardrum is covered by ordinary skin which greatly reduces sensitivity’ (Bustard, 1972). Turtles can hear low notes the best and are sensitive to vibrations on land and in the water.
- Most turtles have a keen sense of smell, and sea turtles are unlikely to be exceptions.
- Turtles are defenceless animals, having only their shell to protect them. Unlike tortoises, turtles cannot completely withdraw their heads and limbs into their shells. In the oceans, it is only their large size that offers them some protection from predators. Sharks and whales have been known to prey on turtles.

TURTLES IN SOUTHERN AFRICA

As mentioned previously, only loggerheads and leatherbacks nest on the South African coast, although green turtles are very common offshore.

LOGGERHEAD TURTLE

Is the most common turtle in southern Africa, has a reddish-brown carapace and a hooked beak. Adults gain a maximum mass of 125 kilograms and measure up to 1,2 m in length. Loggerheads consume floating soft-bodied creatures including bluebottles, bubble raft shell as well as mussels,
rock lobsters, crabs, prawns and cuttlefish. Females nest on the northern beaches of KwaZulu-Natal and lay 100-120 eggs every 15 days during summer.

**LEATHERBACK TURTLE**

Can be distinguished from all other species purely by their great size - they can measure up to 2.5 m in length and weigh up to a staggering 1.0 ton. These turtles are the second largest living reptiles! Considering the huge size which they attain, it is remarkable that these animals feed almost exclusively on jellyfish. During a nesting season, females lay up to 1000 billiard-ball size eggs in batches of 100-120 every 9-10 days.

**GREEN TURTLE**

As their name implies, these turtles are olive-green in colour with a relatively smooth carapace. They have a short snout and their beak is not hooked as in the loggerhead turtle. Adult green turtles feed mainly on seaweed and seagrass and thus can often be seen close inshore, basking at the surface. Female green turtles lay up to 150 eggs every 12 days or so, totalling approximately 600 eggs per season. Nesting occurs on the islands off Mozambique and other Indian Ocean islands. On some of these islands, the green turtles have been hunted almost to extinction.

**REPRODUCTION**

**Nesting**

The nesting season for loggerheads and leatherbacks takes place along the sandy beaches of northern KwaZulu Natal from October to February, coinciding with the presence of warm oceanic water.

Males and females gather off the coast in September and October and mating occurs offshore in the water. Male turtles have specially adapted long, curved claws on their fore flippers, which they use to grasp the front of the female's carapace. It is whilst mating that males are particularly vulnerable and easily harpooned by man.

Females come ashore after dark, most often using the high tides to facilitate their clumsy movements on land. Remarkably, female turtles tend to return to the same beach every season to lay their eggs. It seems that each beach has its own scent and females use this scent to orient themselves. The slightest disturbance, such as torchlight or people coming too close to her, will send her straight back into the sea.

Loggerhead females tend to make small nests in the dunes while leatherbacks dig huge nests of approximately 10m square just above the high watermark. This renders the nests vulnerable to intrusive beach traffic. To build the nest, the female turtle uses her front flippers to create a large hole then using her smaller hind flippers, she meticulously scoops out a nest chamber of approximately 40-cm deep, patting down the sides to prevent them from caving in. Having completed the chamber, she then lays hundreds of white, soft-shelled eggs, the size depending on the particular species. Once the eggs are laid she carefully deposits sand into the chamber with her hind flippers, leaving a small space between the top of the eggs and the surface of the beach. Then using her front flippers, she vigorously sweeps sand over the chamber to disguise the site.


**Incubation**

The eggs incubate for a period of 55-60 days, usually hatching between January and March. An interesting phenomenon is that the temperature of the clutch determines the sex of the hatchlings during the first 3 to 4 weeks of incubation. If the clutch is between \(20-24 \, ^\circ C\), the hatchlings will most likely all be **males**. If the clutch is laid at temperatures of \(29 \, ^\circ C\) and higher, the hatchlings will be predominantly **females**.

**Hatching**

All eggs hatch at the same time, with each hatchling using an egg tooth on the top of the beak to break out of the egg. After a brief period of waiting for their shells to straighten out and harden, the baby turtles begin to make their way to the surface. This can take 3-4 days. The hatchlings remain just under the surface of the sand until the beach temperature drops below \(26 \, ^\circ C\) and then they emerge, usually at twilight.

The hatchlings rarely emerge during the day as the threat of predation by birds and the hot sand would kill them immediately. Using a light source, such as the horizon or the moon, the hatchlings head for the sea. This journey is a dangerous one, as they are exposed, and are vulnerable to predation by crabs and other nocturnal animals. Once in the water, the hatchlings swim through the breakers and out into the warm Agulhas Current.

A low percentage of hatchlings will survive to maturity, approximately only 1 in 1000. The young animals will spend months in the Agulhas Current and several years in the Indian Ocean, returning to the coast of Africa as sub-adults.

**THREATS TO SEA TURTLES**

All seven species of turtles are threatened with extinction. This is largely due to various human activities. One of the major reasons for this status is the continuing loss of nesting habitats. Increased human presence on beaches, particularly at night, disrupts nesting females. They may be forced to use less suitable sites or abort egg laying completely. Recreational activities on beaches along with umbrellas, deck chairs, small boats and 4x4 vehicles, damage potential nesting sites and even destroy existing nests.

Poaching ranks as another major threat. Nests are raided for the eggs, which provide food for the local people.

The ingestion of litter, particularly plastic, has serious and lethal consequences for turtles. Leatherbacks mistake plastic bags for jellyfish. Plastic is not only toxic, but also obstructs the stomach and prevents the turtle from receiving nutrition from its food. The result is a lingering death.

Other threats include artificial lighting from buildings, street lights, etc. which disorient hatchlings; building of sea walls, jetties etc.; beach erosion; beach cleaning; commercial fishing (turtles are accidentally caught up in gill nets) and oil and gas exploration.

Hatchlings are particularly vulnerable to Nature's predators as they make their way from the nest to the sea. Gulls, mongoose, leguans, crabs, and even ants attack the baby turtles. Once in the sea, large fishes also prey on them.
CONSERVATION AND PROTECTION OF TURTLES IN SA

South Africa is one of the forerunners in turtle protection and conservation. The first law prohibiting the killing of turtles was issued in KwaZulu Natal in 1916. Further laws were instituted in 1947, but it was only in 1963 that the Natal Parks Board, now known as the KwaZulu Natal Conservation Service, began a concerted turtle protection programme. Most nesting areas along South Africa's north east coast have been declared protected areas or marine reserves. These include the St Lucia Marine Reserve and the Maputaland Marine Reserve. The nesting populations of loggerheads and leatherbacks are monitored annually (Hughes, 1989). Local communities have been enlisted to patrol the reserves, both on foot and in vehicles. Because of this job creation, poaching has declined significantly.

The threat of a harbour development at Kosi Bay in recent years caused great concern as this area falls in the middle of the nesting grounds. As a result, the Parks Board began a translocation programme and relocated some 200,000 eggs to the St Lucia Marine Reserve between the 1982 and 1992 breeding seasons. Because of these and other efforts, there has been a steady increase in the numbers of breeding turtles.

ECO-TOURISM TOURS

The honour of witnessing the ancient rite of nesting females turtles is to be treasured. Every year from November at Sodwana Bay, those fortunate enough can join patrolling officers of the KwaZulu Natal Conservation Service and witness female turtles nesting at night. Private sector operators also take tours, either by vehicle or by foot from Cape Vidal, Rocktail Bay and Bhanga Nek.

AN EARTHWATCH SUCCESS STORY

Since 1991, every night during every nesting season, Earthwatch volunteers have watched over the nesting grounds of the leatherback turtle on Playa Grande in Costa Rica. In 1988, only one leatherback hatchling was seen to come off the beach, but by 1997 this had increased to some 125,000 hatchlings coming off the very same beach. Former poachers are now proud tourist guides, having attended a two-week training course. Because of the Earthwatch project, Playa Grande and two nearby beaches were declared as part of a new National Park, Parque Marino Las Baulas or Leatherback Turtle Marine Park, in July 1995.
MARINE MAMMALS

Whales, dolphins and porpoises are known collectively as **cetaceans**. They are the most highly modified and specialised of all mammals, being totally aquatic and never coming ashore, except when stranded. They retain attributes of mammals - breathing air and suckling their young. However they differ from other mammals in that they do not have a coat of fur. Instead they are insulated from the icy water by a very thick layer of blubber just beneath the streamlined skin. Cetaceans evolved from a group of extinct land mammals that adapted to life at sea many millions of years ago. They have streamlined bodies with a powerful tail. The fore limbs are adapted as flippers but there is no external trace of the hind limbs (which are reduced to tiny internal bones). Most cetaceans have a dorsal fin that acts as a keel.

Cetaceans are intelligent and highly sociable, living in herds or pods and communicating using a variety of clicks, squeaks, and bellows. They usually breed from the age of seven to twelve years and bear only one calf every two or three years.

WHALES

The word ‘whale’ is applied to any adult cetacean over 4 metres long. There are two main types of living whales: **baleen whales** and **toothed whales**. They have adopted vastly different feeding strategies. Baleen whales strain plankton from the water while the toothed whales and dolphins are active hunters and predators.

1. BALEEN WHALES (MYSTACOCETI)

These whales lack teeth having instead **baleen plates** that are made of an elastic, horny material forming the fringed plates hanging like vertical Venetian blinds from the upper jaw of baleen whales and strain plankton from the water. The plates are frayed into bristles on their inner edges. When feeding, a baleen whale swims with its mouth open in order to engulf plankton or krill and seawater by the ton. Then, shutting its cavernous mouth and pressing its tongue up against its palate, the whale forces the water out of its mouth, trapping the plankton on a mat of overlapping baleen plates.
BALEEN WHALES COMMON TO SA COASTLINE -

1.1 BRYDE’S WHALE

**Average size**: Length 13 m and weight 13 tons.

**Identification**: is quite small, bluish-grey body, with lighter belly. Thin pectoral fins and distinct dorsal fin located near the tail; large flukes. Has three ridges on the top of the head. Up to 50 throat grooves and large baleen plates.

**Where found**: Pacific, Atlantic and Indian oceans, especially in the winter months.

**Habits**: Pods of about six or more may be seen close to shore. They curve their backs when they dive but do not flip their tails into the air.

**Reproduction**: 12-month gestation. The calf is 4.5 m long and weighs 900 kg.

**Food**: Krill, squid and fish including sardines and anchovies.

**Other**: Lives singly or in small groups of two to three.

1.2 HUMPBACK WHALE

**Average size**: length 16 m and weight 40 tons.

**Identification**: Long rounded body with the upper part being dark grey, and the throat, chest and flukes are light coloured. Leading edges of enormous fins are jagged. Big head with pointed snout and a string of fleshy knobs.

**Where found**: The humpback whale, along with the grey whale, is the only species to live in coastal waters, breeds in warm waters and is often seen off southern African coast.

**Habits**: Pods of about 5 to 10 may herd prey. Individuals may blow a circle of bubbles called a ‘bubble net’, and then swallow the trapped zooplankton.

**Reproduction**: 12-month gestation. Calf is 4 m long and weight 1 ton.

**Food**: Krill, and small fish such as mackerel and sardines.

**Other**: Humpback whales sing complex songs on their breeding grounds. Singing is done by males, probably to attract females.

Humpback whales were the first of the large whales to be exploited by modem (cannon-fired harpoon) whaling in South Africa. Between 1908 and 1925 approximately 25 000 Humpback whales were killed in Southern Africa. Humpback whales became protected in 1963 and the population is making a rapid recovery.

1.3 SOUTHERN RIGHT WHALE

**Average size**: length 17 m and weight 60 tons.

**Identification**: Dark grey body with whitish patches individually recognisable by areas of thick skin called callosities above eye and on both jaws. The pectoral fin is shaped like a paddle. It has no dorsal fin and no ventral furrows. 230 baleen plates and is able to suspend breathing from ten to thirty minutes.

**Where found**: Antarctic and southern waters of South Africa, Australia, New Zealand and parts of the Indian Ocean.

**Habits**: Comes close inshore off southern Africa to calve.
Reproduction: Gestation period is 12 months and females produce calves on average every three years. The calves weigh about 1 ton and are about 6m long. The calves grow about 3 cm per day and feed on almost 600 litres of milk per week while suckling.

Food: Southern right whales generally do not feed in local waters, feeding occurs in the sub-Antarctic waters in summer and its principal food is krill.

Other: They were almost exterminated by open-boat whalers between 1790 and 1825, hence their name ‘right’ whale to hunt as they could be found close to shore. They are now protected by international agreements and the local population is increasing at approximately 7% per annum – this mean that the population may double every ten years.

2. TOOTHED WHALES AND DOLPHINS (ODONTOCETI).

Smaller whales, and all the dolphins and porpoises, belong to the toothed whale suborder. Those more than 4 to 5 m long are generally referred to as whales, whereas smaller species are known as dolphins or porpoises.

Toothed whales have teeth that are uniform in size and shape although they vary considerably in number, and they feed on fish and invertebrates such as squid and crustaceans; one species, the killer whale, has a more varied diet that includes seabirds and marine mammals. A few species are commercially valuable as exhibits in aquariums and oceanariums, and some of the smaller whales are hunted to a limited extent. One toothed whale, the sperm whale, is quite large: the male grows to a length of 18.3 m, and the female grows to a length of 12.2 m. It was heavily hunted in the past.

2.1 DOLPHIN OVERVIEW

Dolphins are warm-blooded, milk producing mammals and have a long ancestry, with fossils dating back 50 million years.

Dolphins, like whales, breathe through a blowhole at the top of the head. As they travel they break the surface about every two minutes to make a short, explosive exhalation, followed by a longer inhalation before submerging again. Dolphins do not a have a sense of smell but can taste quite well.

Their bodies are torpedo-shaped, their forelimbs have become flippers and the rear limbs have been lost altogether. A layer of fat beneath the skin provides the insulation needed against the cold water.

The tail, like that of other aquatic mammals, moves in an up-and-down motion, with the double flukes of the tail driving the animal forward; the flippers are used as stabilizers. Dolphins are superbly streamlined and can sustain speeds of up to 30 km/h (19 mph), with bursts of more than 40 km/h. Their lungs, which are adapted to resist the physical problems created for many animals by rapid changes in pressure, enable them to dive to depths of more than 300 m.
Navigation by echolocation

Dolphins emit clicking sounds or whistles almost constantly. The clicks are short pulses of about 300 sounds per second, emitted from a mechanism located just below the blowhole. These clicks are used for the echolocation of objects and are resonated forward by the so-called “oily melon”, which is located above the forehead and acts as an acoustic lens. This echolocation system, similar to that of a bat, enables the dolphin to navigate among its companions and larger objects and to detect fish, squid, and even small shrimp. The whistles are single-toned squeals that come from deeper in the larynx. They are able to hear six times the sound range of the human ear.

Hunting for fish

Dolphins sometimes form large schools to help locate the patchy food supplies in the ocean. They leap synchronously from the water and are thought to look for signs of fish, such as fishing birds, while in the air. This is very important as visibility under water is restricted to 10 to 100 m at the best of times. Leaping also enables them to surface and breathe without being slowed down by the turbulence at the surface. Dolphins can reach speeds of 40 kph and at these speeds, their skin ripples to accommodate the eddies due to drag, thus enabling them to slip through the water with minimal turbulence.

Reproduction

Dolphins mate underwater and gestation period lasts about 8-16 months depending on the species. The single calf is born tail first and is nudged upwards as soon as the umbilical cord breaks, so that is can take its first breath of air. Dolphin milk is four times richer in fat than human milk. The calf suckles for up to 18 months but starts its solid diet of fish and squid after about 6 months.

Intelligence

Dolphins have large brains and relative to body weight, their brain size is second only to that of humans. They are capable of imitating and learning tricks and can perform complex tasks using their echolocation and vision. They have complex social behaviour and will support and rescue animals in trouble.

Dolphins vs porpoises

Many people confuse dolphins with porpoises. No porpoises are found in southern African waters. They belong to a family of small beakless whales and have spade-like blunt teeth. Dolphins have beak-like snouts with sharp conical teeth. Most species of dolphin have prominent curved dorsal fins while those of most porpoises are small and roughly triangular.

2.2 ORCA (KILLER WHALE)

Average size: length 9 m (male); 8 m and noticeably more slender (female).

Identification: Rounded body with dark upper parts, a white belly and white patches on each side of the head, and a grey, saddle-like patch on the side. Tall triangle-shaped dorsal fin; large paddle-shaped pectoral fins, wide flukes with deep slit. Rounded head with blunt face and no beak.

Where found: Throughout the world’s oceans.

Habits: Lives in groups of up to about twenty.

Reproduction: 15-month gestation every three to ten years. The calf is about 2,3 m long and weighs 180 kg.

Food: Seals, birds, turtles, other dolphins and fish such as shark.

Other: The largest member of the dolphin family clan is surprisingly called the Killer whale not the
Killer dolphin more due its size and because they are excellent hunters. They have been known to attack baleen whales and even leap up onto a beach or ice to catch seals.

2.3 SHORT-FINNED PILOT WHALE

**Average size:** Length 6 m.

**Identification:** Long, fat body is black, with a grey throat patch. Has curved dorsal fin; pointed pectoral fins and wide flat flukes. Round melon-shaped head.

**Where found:** Warm waters of all oceans but is quite common along the east coast of southern Africa.

**Habits:** Found in groups of between 10 and 100 or more. Sometimes found stranded on beaches.

**Reproduction:** 15-month gestation. Calf is 1,5 m long and weighs 40 kg.

**Food:** Squid and sometimes fish.

**Other:** Pilot whales are, in fact, large dolphins and adapt well to captivity and have been successfully trained.

2.4 DOLPHINS COMMON TO OUR SA COASTLINE:

2.4.1 BOTTLENOSE DOLPHINS

**Average size:** Length 2,5 to 3,5 m

**Identification:** Grey body, with lighter belly and no patterning. Curved dorsal fin; pointed flukes and pectoral fins. Short, rounded beak; sharp cone-shaped teeth.

**Where found:** From temperate to tropical coastal waters throughout the world (Mainly on our lower West and South coast and up into Kwa Zulu during the sardine runs)

**Habits:** May live in large groups of a few hundred, but usually between 30 and 50. Dives to about 40 m, but is able to dive much deeper. Has been known to slide out of the water to catch fish trapped on the beach.

**Reproduction:** 12-month gestation every two to three years. The calf is 1 m long and weighs 15 kg.

**Food:** Mostly small fish, squid, eels and shrimp.

**Other:** Has good communication skills and may be trained to understand human sounds.

2.4.2 COMMON DOLPHIN

**Average size:** Length 2,5 m.

**Identification:** Dark grey back with grey and mustard-coloured shapes on sides. A sharp, curved dorsal fin, and long tapered pectoral fins. Dark around the eyes with long beak.

**Where found:** Shallow and deep warm waters throughout the world.
Habits: Commonly found in groups of about 20, but may reach thousands in deep water. Dives underwater for only short periods; jumps out of the water when catching flying fish.

Reproduction: 11-month gestation. Calf is 1 m long and weighs 18 kg.

Food: Small fish (i.e. anchovies and sardines) and squid.

Other: The Common Dolphin was the species with which the ancients were most familiar and they depicted in their artefacts.

2.4.3 HEAVISIDE’S DOLPHIN

These dolphins are endemic to Southern Africa and can be sighted, year round, in the inshore waters of the west coast to just north of Cape point.

CAPE FUR SEALS

This seal is the only resident seal on the southern African coast. Seals are like streamlined swimming dogs with flippers instead of legs and they are able to rotate their back flippers to help them clamber over rocks. Clumsy on land, they are fast agile swimmers using their flippers to power them along.

Diving
Their small ears are rolled to exclude water and although they surface at regular intervals to breathe they remain in the water for several days and can execute several hundred dives before coming ashore.
They usually dive to depths of less than 50m but can reach over 200m. When diving they breathe out, their lungs collapse and the oxygen needed for energy is obtained from their blood and muscles rather than from the air in their lungs. They have a large volume of blood with high levels of haemoglobin, the normal oxygen-binding molecule in it. Additionally, seal muscles have a high concentration of a closely related molecule, myoglobin, which also binds oxygen.
Seals have been recorded as remaining underwater for 7½ minutes at a time. (Elephant seals dive to 900m and Weddel seals frequently remain underwater for 15-30 minutes)

Keeping warm or cool
Seals have a layer of fatty blubber and thick fur. Their swimming activities also generate heat and they like to bask in the sun. A common sight is a group of seals with their flippers exposed from the water. This is because they can lose or gain heat quickly through their flippers, which have a thin covering of skin and are richly supplied with blood vessels.

Feeding
Seals usually eat bony fish and squid but will also eat rock lobsters, prawns and small sharks. An adult seal needs about 4 kg of fish a day but large bulls will eat as much as 14 kg.

Breeding
In October huge bulls haul out onto islands and deserted shores where they battle fiercely to establish territories. Pregnant cow seals arrive next and each gives birth to a squealing black pup. The pups suckle on their mother’s rich milk for 8 – 10 months of which the first six months are critical. At that point they begin to add mud prawns, crabs, small spiny lobsters and small fish to their diet as they are weaned. The mother has to leave the pups for a few days at a time to feed

1 Fact Sheet mammals 1 by Margo Branch July 1996
herself and renew the milk supply. On returning from the fishing trip she has to identify her pup amongst the hundreds in the colony. She calls loudly as she arrives and often the pups will recognise her and run to her. She in turn knows her pup by its call and scent. The pups practise swimming and diving in nursery groups when a few months old. They grow rapidly and a female can reproduce at two years old.

Females mate with the bull seal whose territory they have joined soon after giving birth but the development of embryo is delayed for 4 months. Pregnancy then lasts another 8 months so the pups are born a year after mating, when the females arrive ashore again.

The largest mainland colony in the world occurs at Kleinsee and south of Luderitz on the west coast.

**Facts about Seals**

- Seals at present are not an endangered species and populations are currently increasing.
- Breeding colonies of penguins, cape gannets and cormorants have been excluded from some islands by the increasing numbers of seals.
- Tourists enjoy visiting seal colonies and aquaria and earned over R50,000 in 1989. Hout Bay tour operators currently run three trips an hour in season to view the seals.
- Effects on the fishing industry – due to the increase in the population, seals eat twice as many fish as they did 20 years ago. They often damage nets and chase shoals of fish away. Although the seals cost the fishing industry over 2 million Rand annually this is still only 0.3% of the value of the fishing industry as a whole.
- Effects of the fishing industry on seals – less food is available for seals and fishermen kill seals.

**Seal controversies**

- People cannot agree on how to manage seals – fishermen want to get rid of them (because of damage to nets and fish stocks) and sealers want to harvest the seals for their fur, blubber, meat and organs.
- People are shocked by the harvesting and killing of seal pups and yet are not shocked by the harvesting of fish and rock lobsters!
- Managers of fisheries want to ensure seals are managed in a sustainable way so that they are not wiped out nor increase to such a degree they harm fish or penguins, however, animal rights groups want to protect seals at all costs.
- Many people disagree that seals should be kept in aquaria and trained – how do you view this?

**REFERENCES**