

SEALS



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Introduction

Today we will talk about seals. Seals is the common name for '*pinniped*'s'. This word comes from the Latin word '*pinna*' meaning fin-footed mammals.

Seals are typically sleek-bodied and barrel-shaped. Their bodies are well adapted to the aquatic habitat where they spend most of their lives. Their limbs consist of short, wide, flat flippers.

The smallest seal, the Baikal seal, weighs about 70 kg on average when full-grown and is 1.3 m long.



The largest, the male southern elephant seal, is over 4 meters long and weighs up to 4,000 kilograms.



Where are they in Australia?

Seals can be found most commonly south of the Queensland border on the east coast and right across the bottom and up to about Carnarvon on the West Coast.

Often found on rocky outcrops, some more famous spots to see them are the appropriately named Seal Rocks in NSW, Phillip Island in Victoria and along the southern coast of Tasmania.



Flippers

Seals limbs, or flippers, are proportionally shorter than those of most other mammals.

Because the density of water is much higher than that of air, seal flippers can also be proportionally much smaller than the wings of birds or bats, relative to total body size.

The digits of each limb are bound together by a web of skin (fingers and toes), and have claws on either their front flippers (earless seals), or their back flippers (eared seals).



Skin Types

Seals have both blubber and a specially adapted fur coat, including outer guard hairs that repel water and a layer of insulating underfur.

Just like dogs and cats, they molt and during this time they are usually grounded as worn fur is replaced by new fur.



In many species, pups are born with a natal coat of a different length, texture and/or colour than adults. This coat is adapted for the terrestrial, preweaning period, either a thick pelage to keep them warm in arctic environments, or a thin layer of fur to keep them cool on summer sands.

During their first molt (about 11 days after birth for harp seals), the pups replace this with an adult coat better suited to life at sea. Until this age, pups risk hypothermia and drowning if they spend too much time in the ocean.

Thermoregulation

Seals use several strategies to conserve body heat while foraging in cold waters. Most primarily they rely on a thick layer of blubber (fat) under their skin, which also provides buoyancy, hydrodynamic shape, and stores energy.

Additionally, the seal circulatory system is uniquely adapted to redirect blood away from body surface areas to prevent heat loss.

Seals living in warmer climates, such as Australia, must keep cool when they haul out onto land to rest, breed, and nurse their pups.

Strategies include resting in the shade or in tide pools, or covering themselves in a thin layer of sand ("sand-flipping").

They can also divert blood to the surface of their flippers for rapid cooling by waving or dipping in pools.



Diving

Seals can hold their breath for nearly two hours underwater by conserving oxygen.

When the animal starts diving, its heart rate slows to about one-tenth of its normal rate. The arteries squeeze shut and the sense organs and nervous system are the only organs to receive normal blood flow.

They are able to resist more pain and fatigue caused by lactic acid accumulation than other mammals. However, once they return to the surface, they need time to recover and normalize their body chemistry.

The elephant seal has been known to dive to depths of 1,600m.



Reproduction

Seals can reproduce yearly with the mother giving birth to usually a single seal pup. After giving birth, mothers suckle their young for a period of anything between 2 – 36 months.

Once they enter the water the mother will soon head off to feed and recoup the energy lost in giving birth.



Diet

Seals are carnivorous, eating fish, shellfish, squid, penguins, and other marine creatures.

Most are generalist feeders, but some specialize. For example, Ross seals and southern elephant seals mainly feed on squid. Crab-eater seals eat mostly krill, and ringed seals almost exclusively consume crustaceans.

Some seals eat warm-blooded prey, including other seals. The leopard seal, which is probably the most carnivorous and predatory seal, eats penguins as well as crab-eater and Ross seals.



Threats

The main predators for seals are ORCA's, sharks and polar bears.



Threats

The biggest human threat is from getting tangled in nets and marine debris. It is believed that 2% of seals that die each year are from plastic debris.

Generally they are not hunted as a source of food.



Oil Slicks

The biggest catastrophe that can happen in the ocean is an oil slick. Not only is it really slimy, it kills every living creature in the ocean. By strangling the ocean of it's natural supply of oxygen, all the phytoplankton, that is the bottom of the food chain, dies. As the plants die off, so do the fish and other creatures. This then means seals can starve to death.

In addition the oil destroys seal pups coats and can cause hypothermia.



What you can do to help seals



Plastic kills our marine life so use alternatives like natural products, compostable products, glass, aluminium and even stainless steel.

Every bit counts so play your part. If you do you get my.....

SEAL

OF APPROVAL





Thanks for your help.