

# THE SHALLOWS

**BOX JELLYFISH**  
The box jellyfish has an immensely powerful venom, capable of killing fish and small prey in an instant.

The yellow tang has a long, narrow mouth so that it can nibble on the algae growing in nooks and crannies.

**YELLOW TANG**

**SEAHORSE**

Seahorses move slower than almost any other sea creature.

Ribbon eels are born male, but many may eventually change sex and lay eggs later in life.

**RIBBON EEL**

The ribbon eel takes its name from its extraordinary swimming technique, undulating its long, sleek body to propel itself through the water.

**RED SEA URCHIN**

An urchin's spiky exterior protects it from most predators, but some hunters have outsmarted their prickly defences, including otters who use rocks to smash their way into the soft, edible interior.

**MANDARIN FISH**

The mandarin fish doesn't have scales. Instead, it produces a mucus-like secretion in its skin that is extremely foul-smelling, and also poisonous.

**BLUE GLAUCUS**

The blue glaucus is a small species of sea slug. It is a surprisingly efficient predator, capable of killing venomous jellyfish such as the Portuguese man o' war.

The glaucus harvests the toxic chemicals from jellyfish stingers and uses them for its own benefit, storing them in its skin to create a potent concoction of venom. When attacked, it can release these toxins, stunning and incapacitating prey.

Some species of pufferfish are covered in sharp spines and many are foul-tasting and toxic. In fact, predators that do successfully swallow a pufferfish are likely to die as a result!

**LONGHORN COWFISH**

The longhorn cowfish has horns on its head and pointy spurs near its tail in order to dissuade predators from swallowing it. It can also release toxins when threatened.

**WHITE-SPOTTED PUFFERFISH**

Species of pufferfish increase in size when threatened or attacked. They do this by rapidly wallowing water, blowing up to as much as four times their original size.

The mantis shrimp is the animal kingdom's best boxer, with a punch as powerful as a low-calibre bullet, travelling at a speed of 23 metres a second.

The mantis shrimp can flick its claws with such velocity and ferocity that it can break glass, split flesh from bone and strike a lobster's or crab's legs clean off.

**MANTIS SHRIMP**



# THE ARCTIC

## SNOWY OWL

Snowy owls hunt small rodents called lemmings and can eat as many as six per day. These owls have such an acute sense of hearing that they can even sense prey scurrying beneath layers of snow.

## WALRUS

The walrus has long tusks that it uses to drag its colossal body out of the water and on to the ice.

Tusks can measure up to 1m (39in) long.

The walrus is covered in a thick layer of blubber (fat) to protect it from the cold.

Male walruses can weigh up to 1,500kg (3,307lb).

A narwhal's 'horn' is actually a tooth, or tusk.

2m (6.5ft)

## NARWHAL

A narwhal's tusk, like human skin, contains millions of nerve endings. Rather than the fierce weapon it may resemble, scientists believe the narwhal uses its tooth as a sensory organ but also as a sign of dominance – the bigger the tusk, the more superior the narwhal.

Male narwhals grow an elongated tusk.

## POLAR BEAR

Polar bears are the largest land-dwelling carnivores. A full-grown adult can weigh as much as ten human beings.

Polar bears have a sublime sense of smell and can sniff out prey up to a mile away.

Polar bears don't really have any predators, but if they did, anything preying on them would have to beware! A polar bear's liver contains so much vitamin A that it would be poisonous to most creatures if consumed.

If Arctic ice continues to melt rapidly, polar bears may be extinct in as little as 50 years.

## ARCTIC FOX

The Arctic fox has the best coat of fur in the animal kingdom. Not only does it protect against temperatures as low as -50°C (-58°F), it also changes colour depending on the season (white in winter and brown in summer).

## HARP SEAL

Harp seals are born with white fur to help them stay hidden in the snow. Their tone changes to grey or brown as soon as they are seaworthy so that they're harder to spot in the water.

## ORCA

Orcas, also known as 'killer whales', are ferocious hunters. They belong to the dolphin family.

Orcas are at the top of the food chain. They have no natural predators other than humans.

CLICK,  
CLICK,  
CLICK!

Orcas, like dolphins, emit special sounds and clicks in order to communicate with one another and to sense the world around them. This skill is called echolocation.

Orcas can weigh more than 8,000kg (17,637lb) and measure almost 10m (32.8ft) in length.