

WHAT ARE JELLYFISH?

Jellyfish belong to a group of animals called cnidarians, along with sea anemones and coral, and are characterised by having stinging cells. There are 250 species globally and about 34 of these have been seen in New Zealand, although it is not known if any of these species are endemic. There are three species most frequently seen in New Zealand: moon jellyfish, lion's mane and the spotted jellyfish.

Jellyfish are generally carnivorous and their tentacles carry nettle cells that produce a sting (not always felt by humans), with a combination of toxins that are necessary for them to capture food. Jellyfish are mostly water and bundles of nerves. They do not have a respiratory and circulatory system or brain and rely on smell and tactile senses to find food.

They have two life stages, firstly the polyp stage, which occurs in the open sea. During this stage, they are attached to a firm surface and are closer in appearance to sea anemones. They then develop into the medusa stage in shallow waters, which is what we recognise as a jellyfish, however not all make it to this stage.

JELLYFISH IN THE WAIKATO REGION

Jellyfish are usually found in shallow, coastal waters. They are more commonly seen in the warmer summer months due to increased food supply (plankton). They drift in tides and currents and stay close to the surface using a slow pulsing action to move. Although most jellyfish are found in coastal waters, a freshwater species *Craspedacusta sowerbyi* is sometimes found in New Zealand lakes. There are several species of jellyfish commonly seen in coastal areas of the Waikato region (and elsewhere in New Zealand).

Moon jellyfish (*Aurelia aurita*) are whitish in colour and have a fringe of short tentacles on the outer margins of the bell. They have four distinctive reproductive glands seen at the centre of its body.

Lion's mane (*Cyanea capillata*) are our largest known jellyfish, with northern hemisphere specimens growing up to 2.5 metres in diameter. In New Zealand, they are usually around 50cm wide, however there have been frequent sightings around the Coromandel and Great Barrier Island of Lion's Mane jellyfish measuring over 1 metre in diameter. This species of jellyfish has many frilled-looking layers that hold its eggs below the purple coloured bell with metres of thin, long tentacles that trail behind.

Spotted Jellyfish (*Desmonema gaudichaudi*) are dome shaped with reddish-brown dots on the top of the bell. They have eight groups of long tentacles that span out from the bell and four pleated oral arms.



Blue bottle jellyfish



Moon jellyfish

Photo: NIWA



Lions mane jellyfish

Photo: NIWA

Bluebottle jellyfish (also known as the Portuguese man-of-war; *Physalia physalis*) are also common, but are not a true jellyfish. They belong to the group siphonophores, an order of gelatinous marine animal. These jellyfish-like species have blue, gas-filled floats and long tentacles, which rather than being a single animal, are made up of a group of tiny polyps. Their tentacles can wrap around arms causing stings even after they have been washed ashore.

Thimble jellyfish (*Linuche unguiculata*) have been found in warmer waters off the coast and are a small species that grow no larger than 2cm.

WHAT INFLUENCES JELLYFISH ABUNDANCE?

Warmer sea temperatures and an increase in salinity, nutrients and oxygen all contribute to increases in abundance of jellyfish. Increases in unusually large blooms of jellyfish have been linked to climate change and pollution. Overfishing may also contribute to increases in abundance, as a reduction in the numbers of fish can mean more available food for jellyfish.

HOW SHOULD WE RESPOND TO JELLYFISH?

When people see jellyfish in the water the usual response is to move quickly away, and while most of the toxins in jellyfish tentacles are not harmful to humans, the few that are may cause anything from a rash or sting to anaphylaxis (severe form of allergic reaction).

Thimble jellyfish found in the upper North Island are commonly responsible for causing an itchy rash known as 'sea-bathers eruption'. Sea-bathers eruption is caused by a hypersensitivity to the stinging cells of the tiny larval form (the size of a pin head) of this jellyfish. For more information on this rash and treatment, Dermnet NZ has useful advice: dermnetnz.org/topics/sea-bathers-eruption

The top surface of the jellyfish is generally safe to touch, however the tentacles can deliver a painful sting. If you do happen to get stung, the Ministry of Health recommends flushing the area with plenty of salt water and seeking first aid advice if required.

For more information on treating stings, the Ministry of Health has useful tips:

health.govt.nz/your-health/conditions-and-treatments/accidents-and-injuries/bites-and-stings/jellyfish-stings

Many of the factors that contribute to large blooms of jellyfish, such as climate, tidal currents and weather are entirely natural and unmanageable. Waikato Regional Council does, however, undertake work on identifying and managing sources of nutrients in coastal areas which is one factor that may affect jellyfish numbers.

MORE INFORMATION

Contact

Call our Coastal Science Team on 0800 800 401 or email info@waikatoregion.govt.nz.