

WHAT ARE SEAWEEDS?

Seaweeds are a type of algae, which are simple, non-flowering, typically aquatic plant-like organisms. Unlike plants, algae do not have true roots, stems or leaves. Seaweeds are also known as “macroalgae”. There are many other types of algae that live as microscopic, single cells.

There are brown, red and green seaweeds. The largest of the brown seaweeds are the kelps, and they include bull kelp (*Durvillaea antarctica*) and flapjack (*Carpophyllum maschalocarpum*). The red seaweeds include the coralline seaweeds, which encrust rocks, can look pink in colour and be slightly crunchy to touch. Green seaweeds include sea lettuce (e.g. *Ulva lactuca*), which is bright green in colour and grows in shallow water.

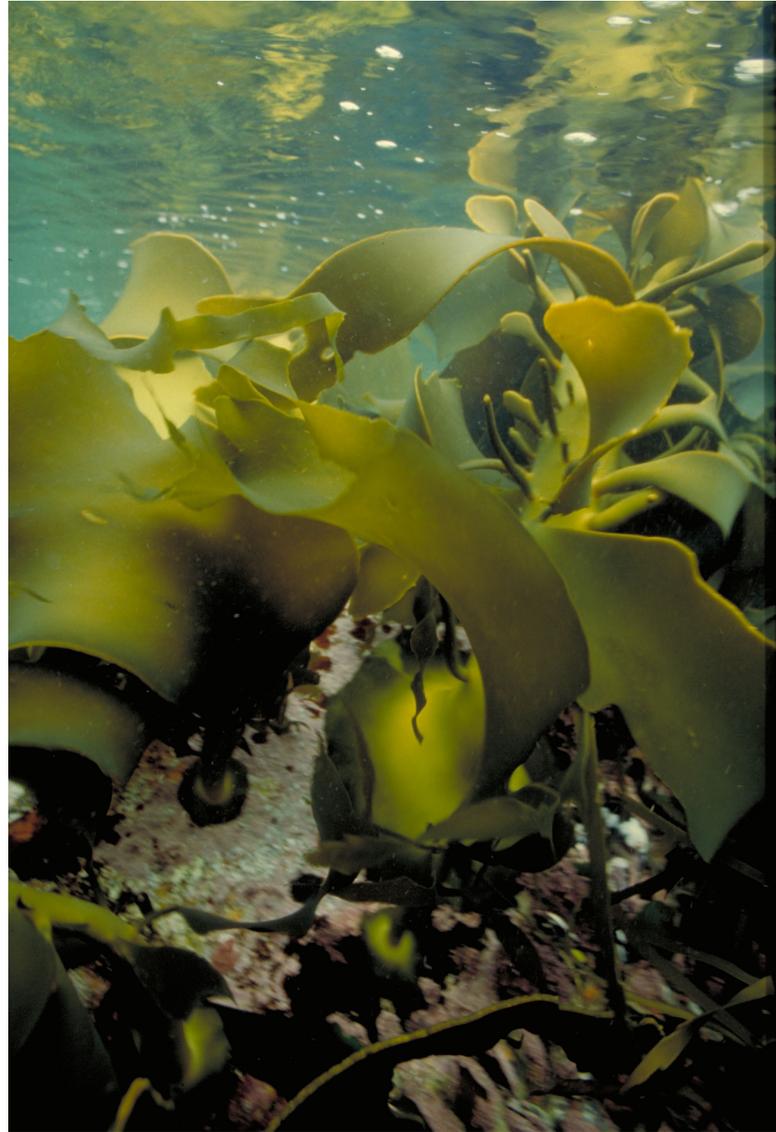
Seaweed is a traditional food source for Māori, who have also used the inflatable blades of bull kelp (*rimurapa*) to store food.

SEAWEED BLOOMS

Sudden rapid growth resulting in a seaweed “bloom” can be triggered by nutrient pollution but can also be a result of natural weather and climate cycles. For example, if there is a persistent offshore wind, this can drive upwelling at the coast of oceanic bottom water that is cool and naturally nutrient rich. This then provides favourable conditions for a bloom.

Elevated levels of nutrients in our coastal environment may result in a bloom of the bright green sea lettuce. For this reason, sea lettuce is sometimes used as a “bioindicator” of nutrient enrichment. Read about sea lettuce in more depth on our Sea Lettuce factsheet.

Occasionally, large amounts of red seaweed are washed onto east coast Coromandel beaches. In the past, this has been a result of a “bloom” of hairy basket weed (*Spyridia filamentosa*). This species is native to New Zealand but also grows in many places around the world. Unlike the green sea lettuce, it is common for this species to grow offshore over summer. Strong winds and storms can occasionally wash large quantities onto our beaches.



CAN SEAWEED BE A PROBLEM?

The seaweed that accumulates on our beaches at times is usually non-toxic. It is broken down by bacteria, however, offensive-smelling and toxic gasses such as hydrogen sulphide are sometimes produced. For this reason, large piles of rotting seaweed should be avoided.

Some species of seaweeds are invasive and can spread rapidly. One such species is the kelp *Undaria pinnatifida*, which is grown overseas for human consumption, but in New Zealand it can grow in dense plots that potentially exclude or displace our native plants and animals.

WHAT CAN I DO ABOUT INVASIVE SEAWEED?

Undaria is most commonly spread on the hulls of vessels, aquaculture and other marine equipment. The spread can be prevented by washing vessel hulls and defouling marine equipment. More information on *Undaria* in New Zealand can be found at www.biosecurity.govt.nz/pests/undaria.



MORE INFORMATION

Contact

You can contact our coastal science team on Waikato Regional Council's freephone 0800 800 401 or by emailing info@waikatoregion.govt.nz

Publications

View, download or order the following publications at www.waikatoregion.govt.nz/Services/Publications/

Spatial distribution and seasonal variation in *Undaria pinnatifida* populations around the Coromandel Peninsula, Waikato Regional Council Technical Report 2013/15

Web

www.biosecurity.govt.nz/pests/undaria

www.waikatoregion.govt.nz/TR201315/