

Why conserve seagrass?



Seagrasses are economically and ecologically valuable to both humans and marine life. Seagrass is one of the most productive natural ecosystems in the world.

Seagrasses improve water quality by acting as nutrient sinks, buffering or filtering nutrient and chemical inputs to the marine environment. They also stabilise coastal sediments, helping to avert erosion.

Seagrasses provide food and shelter for many organisms (shrimps, crabs, worms, snails and small fish) and are a nursery ground for commercially important prawn and fish species. Larger fish and seabirds visit seagrass meadows to feed.

Endangered sea turtles and dugongs also graze on seagrass.

Seagrass meadows are fragile ecosystems. Human impacts such as excessive pollution from sewage discharge, oil spills, herbicides, coastal runoff, dredging, boat propellers and anchors/moorings can damage or destroy seagrasses.



How you can help

In Queensland, all marine plants, including seagrass, are protected from unlawful damage. Incidental damage and limited collection of seagrass is allowed if only in accordance with the Qld Fisheries self assessable code MPO5 (see website below).

Many efforts are underway to educate the public about the benefits of seagrass and how they can help to protect seagrass. There are many ways you can help: don't litter; be aware when applying fertilizers and pesticides, as excess amounts can wash down gutters and drains to the sea; when boating, slow down and avoid shallow areas; support marine conservation initiatives; learn about these special marine habitats and volunteer to monitor their health by joining Seagrass-Watch.

Seagrass-Watch is a global seagrass assessment and monitoring program. Seagrass-Watch monitoring efforts are vital to assist with tracking global patterns in seagrass health, and assess the human impacts which have the potential to destroy or degrade these coastal ecosystems and decrease their yield of natural resources. Responsive management based on adequate information will help to prevent any further significant areas and species being lost. To protect the valuable seagrass meadows along our coasts, everyone must work together.

For more information visit:
www.seagrasswatch.org



Seagrasses of Great Keppel Is

Halodule uninervis



- trident leaf tip
- 1 central longitudinal vein
- rhizome usually pale with clean black leaf scars
- dugong & turtle preferred food

Halophila ovalis



- oval shaped leaves in pairs
- 8 or more cross veins
- smooth leaf surface
- preferred dugong food

Halophila spinulosa



- fern like
- leaves arranged in opposite pairs
- erect shoot up to 15cm long
- found at subtidal depths (>3m)

Syringodium isoetifolium



- narrow, cylindrical spaghetti-like leaves
- leaves 7-30cm long, taper to a point
- 2-3 leaves arising at each shoot
- rhizomes thin

Zostera capricorni (*Zostera muelleri* subsp. *capricorni*)



- long strap-shaped leaves
- 5 longitudinal veins
- cross veins which form a mesh across leaf blade
- rounded leaf tip
- found on shallow and intertidal mud/sand flats growing from rhizome

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Seagrasses Of Great Keppel Island



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What are Seagrasses?



Seagrasses are unique marine flowering plants of which there are approximately 60 species worldwide. Various common names are applied to seagrass species, such as turtle grass, eelgrass, tape grass, spoon grass and shoal grass. Seagrasses are not seaweeds. Seaweed is the common name for algae.

Seagrass live in sheltered coastal waters, undergo pollination while submerged and complete their entire life cycle underwater. They grow much like land grasses, with extensive below ground rhizomes or

runners. Plants form small patches that develop into large continuous meadows. These meadows may consist of one or many species, sometimes up to 12 species present within one location.

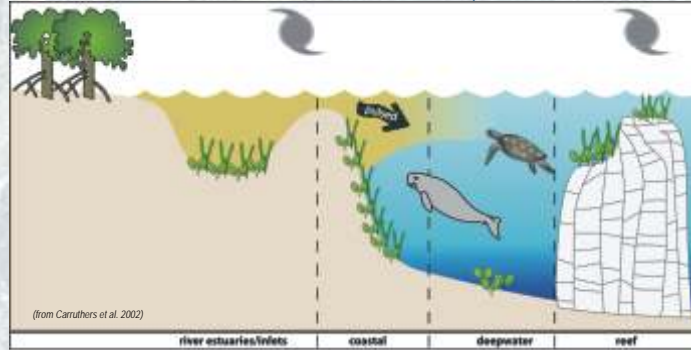
Because seagrass requires sunlight, most seagrass is found in clear shallow waters. Seagrasses survive in the intertidal zone especially in locations sheltered from wave action or where there is pooling of water at low tide, (e.g., reef platforms and tide pools), which protects seagrass from elevated temperatures and drying.



Seagrasses of the Fitzroy Region



Seagrasses are a major component of North Queensland's central tropical marine ecosystems. Ten species of seagrass have been recorded, representing 67% of the known species found in Queensland waters. The wide range of physical habitats where seagrasses are found undoubtedly contributes to the high species diversity. Habitats include intertidal and subtidal areas of estuary, coastal, reef and deep water environments.



General conceptual model of seagrass habitats in north east Australia

Seagrasses of Great Keppel Is

Great Keppel Island is located 15 km from Yeppoon off the Central Queensland Coast. It is the largest island (covering an area of more than 14.5 sq km) out of the 18 islands in the Keppel Group.

There are 17 beaches on the island and Monkey Beach is one of the most accessible and popular beaches to visit. Monkey Beach is fringed by a coral reef on its seaward edge and has seagrass growing on its intertidal flats. Scattered over the sandy areas exposed at low tide, you will find the clover leaf shaped *Halophila ovalis* and the strap leaved *Halodule uninervis* (narrow), which are both a favourite food for dugongs. There are also patches of *Zostera capricorni* and the fern like *Halophila spinulosa* present, particularly toward the seaward edges of the intertidal flats. If you look carefully, you may also find patches of *Syringodium isoetifolium* with it's distinct spaghetti shaped leaves. In the subtidal areas, particularly in Fisherman's Beach Bay, the larger leaved varieties of *Halophila ovalis* and *Halodule uninervis* are common.

The seagrasses at Monkey Beach on Great Keppel island are being monitored as part of the Reef Rescue Marine Monitoring program because seagrasses are important indicators of the "health" of the marine environment. The monitoring program provides a critical component of the assessment of any long-term improvement in water quality that will occur as best land management practices are widely adopted across the Great Barrier Reef catchments and regions

