

What is Saltmarsh?



EDMUNDS BAY



What is a Saltmarsh?

A saltmarsh is a community of plants such as grasses, reeds, sedges, rushes, succulent herbs, and small shrubs, which can tolerate high soil salinity and occasional inundation by salt water. They are found in the high tide zone of estuaries and lagoons and are frequently found behind mangrove forests.

Due to their location on the high shore, saltmarshes only receive infrequent inundation by the tide, which leads to high concentrations of salt in the soil and long periods where the plants are deprived of moisture. This creates a stressful environment for the plants. Such conditions can slow plant growth and make the community vulnerable when faced with the physical threats associated with an increasingly urbanised environment.



Saltmarsh under Threat

Saltmarsh communities are threatened on a global scale. Like mangroves, saltmarsh communities have in the past, been mistaken for wastelands and have been subjected to land reclamation for development and waste disposal. Their survival is also under threat from invasion by weeds; the landward incursion of mangroves; modified tidal flow; recreational vehicles; placement of fill on the shoreline; grazing; and runoff.

Recent estimates indicate that since 1788, 50% of saltmarsh in NSW has been destroyed. There is relatively little saltmarsh within Lake Macquarie. Edmunds Bay itself has only small fragmented patches of saltmarsh. The greatest concentration occurs on the northwestern foreshore. You may find small patches of saltmarsh in your backyard if you look closely enough and know what to look for.



Sarcocornia quinqueflora
Samphire, Glasswort



Juncus kraussii Sea Rush



Selliera radicans



Suaeda australis Austral Seablite



Zoysia macrantha
Coast Couch



Sporobolus virginicus
Sand couch, Salt Grass

Endangered Ecological Community

Coastal Saltmarsh in the New South Wales North Coast (including Lake Macquarie) has now been declared an Endangered Ecological Community and as such is protected under the Threatened Species Conservation Act 1995.

Saving the Saltmarsh

The NSW Scientific Committee recently stated that Coastal Saltmarsh “is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.”

The following measures are in place to protect saltmarsh communities:

- Approval is required from NSW Fisheries for dredging and reclamation in any saltmarsh.
- The collection of invertebrates by use of a spade or fork is prohibited within a saltmarsh area.
- NSW Fisheries recommend a buffer zone be maintained between saltmarsh and damaging developments.
- Local Councils can prohibit or modify any proposals which they determine may adversely impact upon the saltmarsh environment.

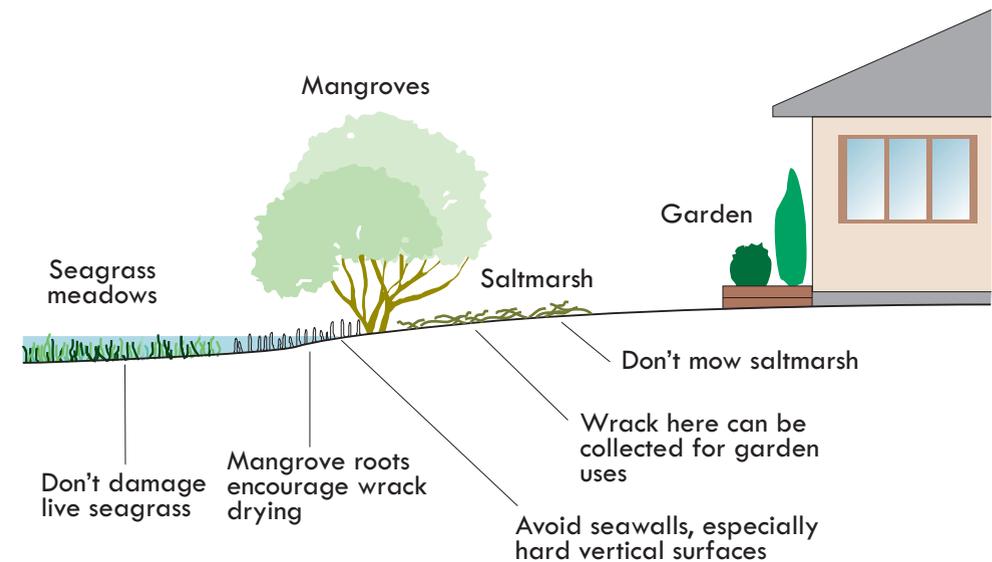
How to Care for Saltmarsh in Your Backyard

Some residents may be fortunate enough to have some small patches of saltmarsh in their backyard; maybe it is growing on the landward side of some mangroves. If so, you are ideally placed to assist the saltmarsh regenerate into a viable population which can play its role in maintaining the ecological health of Edmunds Bay, including the assimilation of seagrass wrack.

How to Care for Saltmarsh in Your Backyard (cont.)

You can adopt any or all of the following suggestions to encourage the regeneration of saltmarsh in your backyard:

- Do not build into or erect any structures over the saltmarsh.
- Do not dig up the saltmarsh or plant non saltmarsh species amongst it.
- Do not discharge your stormwater onto the saltmarsh.
- Keep the shoreline as natural as possible. Do not modify the shoreline by building seawalls or revetments. By maintaining the natural gradient between the water and the land, the seagrass wrack will be able to come up onto the shore and onto the saltmarsh where it can be efficiently broken down.
- Avoid mowing up to the edge of the foreshore. This will allow the saltmarsh to regenerate naturally, particularly if there is an existing source of saltmarsh seed in the soil.



Helping Regeneration

There may not always be a huge quantity of native seed in the soil so you may like to assist the saltmarsh regeneration by planting some of the following species:

Sedges

- *Baumea juncea*
- *Bolboschoenus caldwellii*
- *Isolepis nodosa*

Rushes

- *Juncus kraussii* Sea Rush

Herbs

- *Samolus repens* Creeping Brookweed
- *Sarcocornia quinqueflora* Samphire, Glasswort
- *Selliera radicans*
- *Suaeda australis* Austral Seablite
- *Triglochin striatum* Streaked Arrow-grass

Grasses

- *Sporobolus virginicus* Sand couch, Salt Grass
- *Zoysia macrantha* Coast Couch

Trees In Newcastle (T.I.N), a local non-profit, community owned native plant nursery can assist you with sourcing some if not all of these plants (phone: 4969 1500)

Why is Saltmarsh Important?

Saltmarsh is an important determinant of estuarine health for the following reasons:

- Saltmarsh plays an important role in the recycling of nutrients in estuaries. The dead leaves and branches of the saltmarsh vegetation are broken down by bacteria and fungi into smaller more easily digestible carbohydrates and proteins. This material can then be eaten by mussels, oysters, crabs, prawns and mullet, which in turn become food for other animals.
- Saltmarsh provides habitat, food and shelter to fish during high tide.
- Saltmarsh supports a variety of invertebrates, which can be fed upon by the fish that are brought in on the high tide.
- Saltmarsh also provides habitat for many migratory birds.
- Saltmarsh aids the natural decomposition of seagrass wrack. By providing a structure upon which the wrack can be suspended for air drying the saltmarsh encourages the wrack to break down rapidly. By assimilating wrack in this way, saltmarsh limits the accumulation of wrack on the foreshore. In turn seagrass wrack has been found to promote the growth of saltmarshes. Wrack provides a mulch cover, thereby shading the soil, retaining moisture, providing organic matter and nutrients to an otherwise nutrient poor soil, and consequently reducing physical stress.