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Saltmarsh – an important intertidal community

WHAT IS IT?

Saltmarsh is a type of tidal wetland characterised by salt-tolerant plants such as herbs, shrubs, grasses, and sedges. The kanamaluka / Tamar estuary is an ideal location for this vegetation community; it has a low energy intertidal zone, is saline, and is influenced by the tide through the length of the estuary through to Launceston.

In 2013, coastal saltmarsh was recognised as a nationally threatened vegetation community. Northern Tasmania hosts significant areas of coastal saltmarsh, including 86 hectares of saltmarsh along the banks of the kanamaluka / Tamar estuary, all within 45 minutes of Launceston.

Examples of saltmarsh wetlands along the kanamaluka / Tamar estuary can be seen at Long Tom Reef, Swan Point, West Arm, and the 'kanamaluka trail' between George Town and Low Head.

ECOLOGICAL SIGNIFICANCE

Like other wetland habitats, saltmarsh communities provide important benefits to plants, animals, and human communities. Saltmarsh helps to stimulate the productivity of the estuary through nutrient cycling. They support birds (including migratory species), invertebrates, reptiles and fish.

Importantly, they provide a nursery habitat for aquatic species that find food and protection within the vegetation. These benefits to the ecosystem support recreational activities like bird watching and fishing.

Saltmarshes, like all wetlands, help to mitigate the ever-increasing threat of climate change and flooding. Saltmarshes are better at sequestering carbon than equivalent forested areas, and act as a 'buffer' against flooding by soaking-up and slowly releasing flood waters.



2017



2018



2019



2020

Above: examples of repeat photography at Long Tom Reef from 2017 to 2020, capturing slight changes in vegetation cover. On-going monitoring of saltmarsh extent and condition is important for detecting change over time. Through repeat photography, variation in the ecosystem can be identified through change in vegetation type and cover, changes in individual species and changes in visible physical damage (e.g. from vehicles) and other human impacts. Detecting change is the first step in effective environmental management.

THREATS

In the past, limited understanding and appreciation of saltmarsh ecosystems have contributed to their degradation, and over half of the Tasmanian saltmarshes are estimated to have already been lost or impacted.

Poor water quality not only impacts the animals living within saltmarsh communities, but directly impacts the plants that make up the saltmarsh. Plants can become stressed and die-off from poor water quality. Elevated nutrients can lead to nuisance algal blooms that can cause saltmarsh plants to rot in localised areas. This can come about due to pollutants such as nutrients entering waterways from farming and industrial activities.

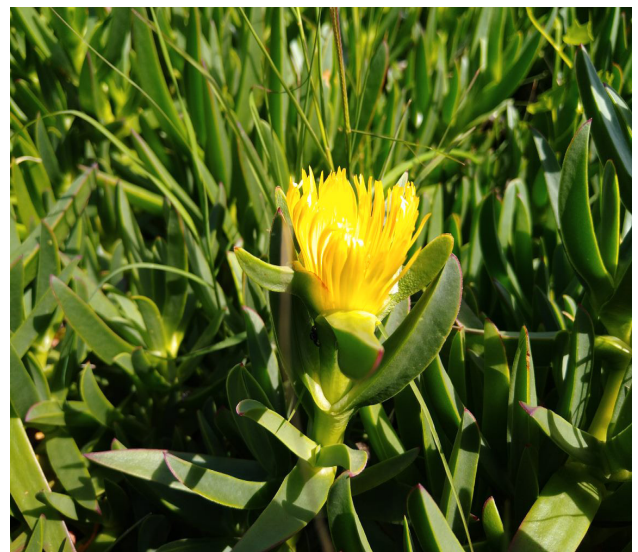
Saltmarsh communities are also under threat from in-filling and tidal levees that act as barriers and limit tidal exchange. The tidal exchange is important to maintaining the health and function of saltmarshes. Access by livestock and off-road vehicles, land clearing and management practices, together with the spread of invasive weeds can all negatively impact saltmarshes. Rice grass is an introduced species that poses a significant threat to saltmarsh communities, invading extensive areas of the estuary foreshore.

SALTMARSH COMMUNITIES AND CLIMATE CHANGE

Saltmarshes, like many vegetation communities, are already under pressure from localised threats, and the impacts from climate change apply additional pressure to these communities. These pressures are likely to lead to ecosystem change and, without active planning and management, may lead to the localised loss of saltmarsh communities.

Possible impacts of climate change on coastal and intertidal vegetation include:

- introduced species out-competing native species;
- vegetation migrating inland if suitable habitat is available; and
- inundation and eventual loss of vegetation communities where they are unable to migrate inland.



Top: human impacts are sometimes very visible within saltmarsh communities; a discarded bicycle tyre is pictured at West Arm (south).

Middle: *Limonium australe*, or yellow sea-lavender, is a rare herb found in coastal saltmarshes. This is just one of many beautiful native plant species occurring in the saltmarshes along the kanamaluka / Tamar estuary shoreline.

Bottom: *Carpobrotus edulis*, or yellow pigface, is an introduced species that, like many other introduced species, competes with native vegetation for space and resources. Photo credit: Sam Jack.