



# Coastal Vegetation of Tasmania

Tasmania's extensive coastline, with its many inlets, peninsulas and offshore islands provides plenty of habitat for coastal flora. The coastal flora makes up approximately 3.5% of the area of the state.

Coastal rocks and soils are a dominant influence on the vegetation, along with the prevailing wind direction, marine currents and other climatic influences.

## How do the plants survive?

The soils in coastal areas are usually deficient in major nutrients, highly saline and generally lacking in water, and consequently are very harsh on plants.

Many plants have adapted and flourish in the harsh coastal environment, such adaptations include:

- an increased thickness in the leaves to protect the plant from dehydration, exposure to the sun and salt spray.
- the ability to delay germination in response to excessive salt spray, dehydration or other environmentally harsh conditions.
- the ability to produce very large seeds to increase the viability and vigour of seedlings.
- dependence on the sea for the dispersal of their seeds.
- the ability to roll the leaves, in response to heat, salt and lack of water.
- occurrence of hairs on the leaves, which helps to avoid heat stress—common in plants found close to the shore.
- wiry stiff leaves and stems which enable the plants to tolerate abrasion by salt-laden winds and sands.

As well as salt spray, coastal vegetation encounters sandy and unstable substrates. Some species, such as spinifex, actually need the ground that they grow in to move in order to promote germination.

As the distance from the shore increases, the distinct adaptations of plants to tolerate coastal conditions decreases.



Coastal vegetation, Rocky Cape National Park. Photo: Joe Shemesh

## Different coastal communities?

Throughout Tasmania, the prevailing weather and the dominant rock types provide different environments for various coastal vegetation communities.

Along the west coast, where the coastline is highly active and fronts onto the southern ocean, the swell and winds often allow salt spray to carry further inland than usually occurs. The rocks in the western coast tend to be very silicious, weather slowly and contain few nutrients.

Conditions on the east coast tend to be less severe, and the underlying rocks make the soil more fertile. Consequently, the eastern and northern coasts offer habitat for many different plant communities.

Throughout the southwest of Tasmania, dolerite provides a unique stratum that is relatively devoid of nutrients. As a result of the severe conditions—poor soils and harsh climate—many plants found in the southwest are endemic.

## Dune communities

The front side of dunes, facing the ocean swell, are naturally vegetated with *Dysphyma*, *Capobrotus* and coastal bearded heath (*Leucopogon parviflorus*) and an upper stratum of *Banksia* and Spikey bearded heath (*Leucopogon australis*). The lee (back) faces of the dunes carry a closed shrub of *Banksia* and coastal bearded heath.

The more disturbed dunes have a scrub of coastal wattle (*Acacia sophorae*) and Prickly mimosa (*Acacia verticillata*).

Dune swales often have herb fields dominated by *Nabotium*, Pennywort species (*Hydrocotyle*) and club rush (*Isolepsi*). This vegetation offers great grazing opportunities for marsupials.

Consolidated dunes inland are clothed in manuka (*Leptospermum scoparium*), scented paperbark (*Melaleuca squarosa*) and *Leucopogon* closed bearded heathlands.

Damper depressions harbour swamp woodland species such as swamp paperbark (*Melaleuca ericifolia*).

## Coastal creatures?

Many birds frequent our coastlines for breeding and feeding. Birds such as the little penguin nest and rest on suitable sandy beaches, while the shearwaters migrate annually to the steeper headlands to nest and breed. Hooded plovers and other shore birds nest and breed along many beaches.

Reptiles such as skinks, snakes and blue tongue lizards can be found throughout Tasmania's coastal areas.

Mammals found in our coastal areas are numerous and include (but are not limited to) the echidna, eastern quoll, Tasmanian devil, eastern barred bandicoot, eastern grey kangaroo (Forester) as well as New Zealand and Australian fur seals.

## Fine examples of coastal plants

Throughout Tasmania much of our coastal vegetation is reserved in coastal reserves and national parks. Maria Island National Park, Freycinet National Park and Mt William National Park host a variety of different and unique coastal plant communities.

Along the north coast, Rocky Cape National Park harbours the only community of saw banksia, (*Banksia serrata*) found in the state.

## Fire and coastal vegetation

Fire tends to have a magnified effect on coastal vegetation. Burning scrub along a high energy coast can allow the coastal influence to penetrate further inland. Plants a fair distance from the coast will be subject to salt laden winds. Only following enough time protected by other plants from the coastal winds will the plants be able to grow to a tall stature.

Fire is required to maintain some heath (*Proteaceae*, *Fabaceae* and *Myrtaceae*). Without fire the heath will develop into shrubland.

## Threats to coastal vegetation

All coastal environments are part of a fragile and dynamic ecosystem. The removal of vegetation from these environments can have far reaching effects. Coastal vegetation is threatened by grazing, inappropriate firing, building developments, recreational activities and the introduction of exotic plant and animal species. Coastal areas are also susceptible to phytophthora (root-rot fungus), which can be carried into areas by humans via such items as shoes, tent pegs and car tyres.

## Further Information

*Tasmanian Native Bush: A Management Handbook*; 1991; Kirkpatrick, J.B.; Tasmanian Environment Centre, Hobart, Tasmania.

*Vegetation of Tasmania*; 1999; Reid, J.B et al. Australian Biological Resources Study

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