

Sensitive Vegetation in the Northern Territory

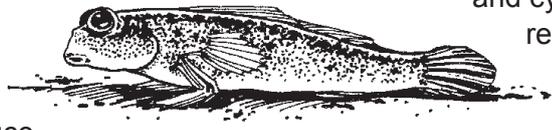
Mangrove Forest

Description of vegetation community

Mangroves are found along sheltered tropical and subtropical coast lines, growing in tidal areas frequently inundated by saline water.

A mangrove community may contain a variety of plants, from trees, palms, shrubs, vines, epiphytes, samphires, grasses and ferns. The community can vary from dense closed forests through to sparse shrublands and samphire on salt flats.

Mangroves have specialised adaptations enabling them to grow and reproduce under demanding conditions. High levels of salt, tidal inundation and wave action typify these challenging conditions.



Mudskippers live in mangroves

Historically, the extent of mangroves in the Territory has fluctuated substantially in response to changes in sea level. Further periods of changes in sea levels may lead to pronounced changes in distribution.

Why are mangroves significant?

Mangroves provide spawning and nursery areas for many marine species and protect the coastline from erosion during storm surges and cyclones. They also provide a valuable recreational, educational and scientific resource and are an important part of indigenous culture.

Mangroves support highly specialised animals, including many species which occur nowhere else. Distinctive mangrove birds include the yellow white-eye, chestnut rail, black butcherbird, mangrove gerygone, mangrove robin, white-breasted whistler and mangrove golden whistler.

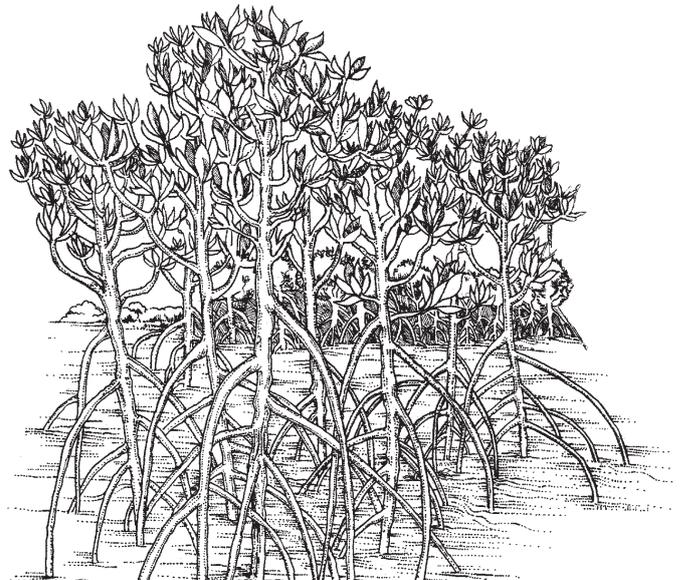
Other distinctive mangrove animals include the false water-rat, mudskipper, mangrove monitor and a group of snakes including the white-bellied mangrove snake.

Distribution and global significance

The mangrove communities of Darwin Harbour are amongst the most diverse in Australia, making them a significant natural resource locally and globally.

There are approximately 3 800 km² of woody mangroves in the Territory. Combined with samphire and saltflats, integral components of mangrove ecosystems, they occupy 9 700 km² of the Territory's coastline.

In terms of biomass, these mangrove forests represent over 73 million tonnes of woody material, which is approximately 26 million tonnes of carbon (not including soil carbon) - this carbon is equivalent to annual emissions from approximately 8.1 million cars.



Mangroves have adapted to growing in conditions of high levels of salt, tidal inundation and wave action

Region	Area (km ²)	% world mangroves
Northern Territory	3 800*	2.4
Australia	14 510	10
Indonesia	30 620	19
World	157 051	100

(* Refers to the woody mangrove component only. Not including saltpan/saline coastal flat areas ~ 5900km² of saltflat in NT).

Mangrove Forest

Mangroves are important as nursery sites for many fish species and the commercially important delicacy, mud crabs.

Mangroves provide important permanent and temporary habitats for a large number of marine and land animals. Marine animals commonly found in mangroves include snails, clams, octopus, crabs and prawns, a wide range of fish and the saltwater crocodile.

Although there are some threatened species recorded in mangroves, there are none that occur primarily in this habitat type. A wide range of animals living on the land use the mangroves as an extension of their habitat, including native rats, possums, bats, reptiles, frogs and birds.

Acid sulfate soils

Mangrove communities are associated with thick semi fluid mud. This mud has been formed by the build up of fine soil particles which have been transported in creeks and rivers over many years. If disturbed, this mud has the potential to become acidic.

Acid sulfate soils are the common name given to soils containing iron sulfides. When these sulfides come into contact with air, for example through clearing or excavation, they oxidise to form sulfuric acid.

Acid affects the health of fish, plants and many other animals. The sulfuric acid produced can also dissolve many man made materials including concrete, steel and some metals.

Threats to mangroves

Development in coastal areas, such as Darwin Harbour, has the potential to alter the ecological balance of mangrove communities. Some areas of mangroves have been reclaimed (cleared and filled) to make way for residential and industrial estates, marinas and wharf precincts.

The accumulation of sediments in mangroves can be greatly increased by upstream disturbances, including clearing of vegetation and construction.

Increased levels of silt and soil in mangroves can lead to decreases in water quality and lowered dissolved oxygen levels. These impacts can destroy plant and animal life, and subsequently impact on food webs.

Many types of pollution can affect mangrove communities. Landward pollution sources include stormwater runoff, sewage discharges, thermal

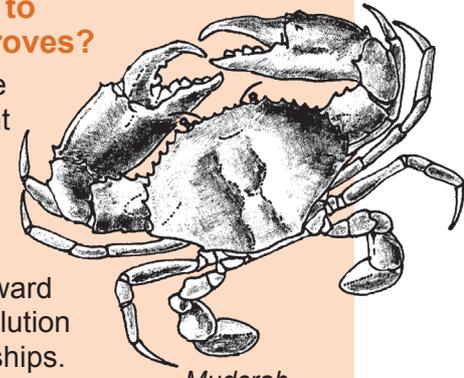
discharges, pesticide runoff and rubbish. Mangroves are also vulnerable to pollution from ocean sources such as rubbish, discarded fishing equipment and oil. Riverside mangroves may be vulnerable to attempts to exploit water by damming.

What can we do to conserve mangroves?

- Limit disturbance and development in coastal areas.

You can make a difference by:

- Preventing landward and seaward pollution from boats and ships.
- Reducing the amount of sedimentation entering waterways and coastal areas by controlling erosion.
- Controlling weeds and feral animals.



Mudcrab

References and Further Reading

Land Clearing Guidelines

nt.gov.au/property/land-clearing/apply-to-clear-freehold-land

Sites of Conservation Significance

nt.gov.au/environment/environment-data-maps/important-biodiversity-conservation-sites/conservation-significance-list

Threatened Species

denr.nt.gov.au/about/flora-and-fauna-division

Northern Territory Planning Scheme

nt.gov.au/property/building-and-development/northern-territory-planning-scheme

Other Fact Sheets in this series

Monsoon Rainforest
Sandsheet Heath
Old-Growth Forest
Riparian Vegetation

Further Information

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nt.gov.au/environment/soil-land-vegetation/native-vegetation

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