



## Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula

### TEC Description

The community occurs on the coastal sand dunes of the Dampier Peninsula. The vine thickets of the Dampier Peninsula are a very distinctive type of rainforest in the Kimberley region. It occurs as discrete areas of dense vegetation and can occur as a stand of a few trees or as larger patches. Several tree and tall shrub species are common to many occurrences. Trees include *Terminalia petiolaris* (marool or blackberry tree), *Grewia breviflora* (currant or coffee fruit), *Celtis strychnoides* (Goonj), *Diospyros humilis* (ebony wood), *Sersalisia sericea* (nangi), *Exocarpos latifolius* (broad-leaved cherry), *Mimusops elengi* (walara), *Bauhinia cunninghamii* (bauhinia or jigal tree) and *Gyrocarpus americanus* subsp. *pachyphyllus* (helicopter tree). Common tall shrubs include *Flueggea virosa* subsp. *melanthesoides* (dogwood), *Croton habrophyllus* and *Dodonaea platyptera* (broad-winged hop bush). The most common climbers include *Abrus precatorius* (crabs eyes), *Capparis lasiantha* (split jack), *Tinospora smilacina* (snake vine), *Jasminum didymum*, *Caesalpinia major* and *Vincetoxicum cinerascens* (oyster-catcher bill).



### Distribution

Department of Biodiversity, Conservation and Attractions (DBCA) Region: Kimberley

DBCA District: West Kimberley


Local Government Authority: Shire of Broome

Tenure: Native title lands, unallocated crown land, Yawuru Conservation Estate

### Habitat Requirements

This vine thicket community is largely restricted to the east and west coastlines of the Dampier Peninsula associated with dunes formed up to 11,700 years ago (Holocene) and those formed between 11,700 and 2.58 million years ago (Pleistocene). The community generally occurs on deep dune sands with a dark superficial grey organic layer, with a surface layer of moist leaf litter, but it can occur on other substrates due to other influences.

The vine thicket occurrences are dependent on rainfall, hydrology and high humidity levels. Rainfall in the northern end of the Peninsula is between about 700-750mm per annum, and in the southern end of the range of the community it is about 600mm. Many occurrences are known to occur adjacent to or on groundwater springs or shallow aquifers, and so some level of dependence on groundwater is likely. A concentration of water flow into the



shallow recharge zones at the base of the dune systems is believed to support the community. The high humidity and heavy fogs along the coast and the wet season rains also help the community to survive long dry periods. The moisture and humidity are accentuated by the dense and protective shady canopy and support the ecosystems' role as a biological refuge. The humidity is also thought to assist in protecting the community from fires.

## Indigenous Interests

The community occurs across a range of native title groups, including Yawuru, Nyul Nyul and Bardi Jawi people. An Aboriginal Sites Register is kept by the Department of Indigenous Affairs and significant sites are listed in the vicinity of the occurrences. The Traditional Owners are represented on the West Kimberley Recovery Team who assisted in drafting the recovery plan for the community and continue to assist in its implementation.

## Conservation Status

Listed as vulnerable under WA Minister Environmentally Sensitive Areas list in policy. Also listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* in 2013.

## Threatening Processes

The main threats to the community include inappropriate fire regimes, weed invasion, grazing, changes to water levels and quality, climatic changes, rubbish dumping, impacts of feral animals, and erosion.

## Recovery Plan

An interim recovery plan has been developed for the community, and outlines the recovery actions required to reduce the threats and to maintain or improve the overall condition of the community in the known locations. Recommended actions include flora monitoring, implementing an appropriate fire regime, controlling high priority weeds, investigating hydrological processes, seeking conservation tenure as appropriate, identifying and protecting critical areas, conducting research into the community's function, managing feral animals, applying planning and impact assessment processes to help protect the community, and monitoring the effects of climate change.

## Citation

Department of Biodiversity, Conservation and Attractions. (2020). Recovery plans and interim recovery plans <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/wa-s-threatened-ecological-communities>

## Key References

Beames, L. (2013). Valuable & Endangered. Working Together to Understand and Manage Threats to Monsoon Vine Thickets of the Dampier Peninsula. A Summary of Key Findings. Environs Kimberley, West Kimberley Nature Project 2011-2013.

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