



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

## Summary description

This community is a type of rainforest ecosystem that occurs in discrete patches along the Dampier Peninsula, from Broome to Derby in the south-western portion of the Kimberley region. Vine thickets occur as discrete areas of dense vegetation and can occur as a stand of a few trees or as larger patches. Common tree and tall shrub species include *Terminalia petiolaris* (marool or blackberry tree), *Grewia breviflora* (goolmi, currant or coffee fruit), *Celtis strychnoides* (goonj), *Diospyros humilis* (birimbiri or ebony wood), *Sersalisia sericea* (nangi), *Exocarpos latifolius* (broad-leaved cherry), *Mimusops elengi* (walara), *Lysiphyllum cunninghamii* (bauhinia, joom or jigal tree), *Gyrocarpus americanus* subsp. *pachyphyllus* (helicopter tree), *Flueggea virosa* subsp. *melanthesoides* (dogwood), *Croton habrophyllus* and *Dodonaea platyptera* (broad-winged hop bush). The most common climbers are *Abrus precatorius* (crabs eyes), *Capparis lasiantha* (bush caper), *Tinospora smilacina* (snake vine), *Jasminum didymum*, *Caesalpinia major* and *Vincetoxicum cinerascens* (oyster-catcher bill).



## Distribution

This vine thicket community is largely restricted to the east and west coastlines of the Dampier Peninsula. The community generally occurs on deep dune sands with a dark superficial grey organic layer, with a surface layer of moist leaf litter, but can occur on other substrates.

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

DBCA District: West Kimberley

Local Government Authority: Shire of Broome

## Habitat requirements

The vine thicket occurrences are dependent on rainfall, hydrology and high humidity levels. Rainfall is about 700–750mm per year in the northern end of the Peninsula, and about 600mm in the southern end of the community's range. Some dependence on groundwater is likely as many occurrences are adjacent to or on groundwater springs or shallow aquifers. 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 ecosystem's role as a biological refuge. The humidity is also thought to assist in protecting the community from fires.

## Indigenous interests

Traditional Owner groups: Bardi and Jawi, Jabirr Jabirr/Ngumbarl, Nyul Nyul, Nimanburr, Yawuru

A register of Aboriginal cultural heritage sites kept by the Department of Planning, Lands and Heritage lists numerous sites of Aboriginal significance in the vicinity of this community's occurrences.

Much of the community occurs on land subject to native title determinations held for the Bardi and Jawi, Jabirr Jabirr/Ngumbarl, Nyul Nyul and Nimanburr people, and the Yawuru Community. The Traditional Owners represented on the Monsoon Vine Thicket working group assisted in drafting the recovery plan for the community and play an important role in its implementation on the ground. Joint management of Bardi Jawi Gaarra Marine Park is undertaken by the Bardi and Jawi Niimidiman Aboriginal Corporation and DBCA through an Indigenous Land Use Agreement. Yawuru Minyirr Buru Conservation Park is managed through a tripartite arrangement between the Yawuru Native Title Holders Aboriginal Corporation, the Shire of Broome and DBCA.

## Conservation status

State: Listed as an endangered ecological community under the *Biodiversity Conservation Act 2016*. Threatened ecological communities are declared environmentally sensitive areas under the *Environmental Protection Act 1986*.

National: Listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as 'Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula'. The community occurs within the West Kimberley National Heritage listed place, which is protected under the EPBC Act.

## Threatening processes

Major threats to the community include vegetation clearing and fragmentation, too frequent and intense fire, weed invasion, grazing by introduced herbivores, hydrological change, damage from recreational activities, and erosion.

## Recovery plan

An interim recovery plan has been produced for this community, outlining the recovery actions that are required to reduce threats and maintain or improve its overall condition. Priority actions include research to increase knowledge and inform management, monitoring the community's condition and extent, implementing an appropriate fire regime, controlling high priority weeds, managing feral animals, and seeking conservation tenure as appropriate.

## Key references

Beames, L. (2013). *Valuable and 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. Environs Kimberley Inc.

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