



Assemblages of Walcott Inlet rainforest swamps

Summary description

The known occurrences of this community occur on the extensive floodplain that fringes a tidal mudflat in the Walcott Inlet in the north-west Kimberley. The community is focused on swampy rainforests, but associated swamp and woodland communities are included in the boundaries where they are closely linked with the rainforest. The vegetation structure varies with hydrology and includes dense rainforest to dense woodland, open savanna woodland, *Melaleuca* or grassy swamps and occasional open water. The rainforest vegetation comprises closed-canopy rainforest to 30m in height, and is dominated by *Ficus* spp., *Nauclea orientalis* (Leichhardt pine) and *Celtis strychnoides* (hackberry) over 1–3m high *Acrostichum speciosum* (mangrove fern). Eight priority flora occur in the community, including two not found anywhere else in Western Australia. Five threatened or endemic fauna including the endangered northern quoll (*Dasyurus hallucatus*) also occur. The tree *Cordia subcordata* and the snail *Torresitrachia* sp. were recorded at one patch of the community. The camaenid land snail assemblage distinguishes this community. The community was originally described in McKenzie, Johnston and Kendrick (1991).



Distribution

The community spans a range of 21km on the floodplain of the Walcott Inlet in the north-west Kimberley.

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

Local Government Authority: Shire of Derby/West Kimberley

Habitat requirements

The three known occurrences are on swampy terrain adjacent to sandstone ridges. Hydrology including water depth and seasonality drives the swamp assemblages. Spring upwelling may provide additional water to some of the swamps. One patch is fed by streams from sandstone hills and appears to be part of a broad watercourse. Water drains from the swamp towards the tidal mud flats. Free water to at least 30cm deep has been recorded in the central part of the swamp. The lithology is alluvium (soils left by flowing water) deposited in the Quaternary (from 2.588 million years ago to the present). The soils are generally highly organic and in places composed of layers with different textures including black peaty alluvial muds with a high humus content. Leaf litter depths of up to 10cm have also been recorded.

Indigenous interests

Traditional Owner group: Ngarinyin (Wilinggin)

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

Part of the community occurs on land subject to the Wanjina-Wunggurr Wilinggin native title determination held by the Wanjina-Wunggurr Aboriginal Corporation for members of the Wanjina-Wunggurr Community. The Kimberley Land Council represents the Traditional Owners and is the native title representative body for the Kimberley region.

Conservation status

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

National: The community occurs within the West Kimberley National Heritage listed place, protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

Threatening processes

Major threats to the community include grazing and trampling by introduced fauna (cattle and pigs), weed invasion, hydrological change, too frequent late season fire, and cane toads, and potentially myrtle rust.

Recovery plan

Development of a recovery plan is recommended for this community. Priority actions include surveying for additional occurrences, consistent monitoring and management of fences, threats such as cattle, weeds, fire, and potential future threats such as myrtle rust. Regular assessment of the ongoing boundary changes of the community in relation to fire frequency and intensity is recommended.

Key reference

McKenzie, N. L., Johnston, R. B., & Kendrick, P. G. (Eds.) (1991). *Kimberley rainforests of Australia*. Surrey Beatty & Sons, in association with the Department of Conservation and Land Management, Western Australia and the Department of Arts, Heritage and Environment, Canberra.

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