Assemblages of Walcott Inlet rainforest swamps

TEC 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 markedly different from other patches of rainforest. It 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 30 m in height, and is dominated by *Ficus* spp., *Nauclea orientalis* (Leichhardt pine) and *Celtis strychnoides* (hackberry) over 1 to 3 m 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 northern quoll (*Dasyurus hallucatus* (endangered)) also occur. The tree *Cordia subcordata* and the snail *Torresitrachia* sp. were recorded at 1 patch of the community. This TEC also has potential to be significant for fungi conservation, as the habitat may be particularly favorable for harboring unusual or very rich assemblages of fungi. The camaenid land snail assemblage distinguishes this community. The community was originally described in McKenzie N.L., Johnston R.B. and Kendrick P.G. (eds) (1991) “Kimberley rainforests of Australia” (Surrey Beatty & Sons, Chipping Norton, NSW, in association with the Department of Conservation and Land Management and Department of Arts, Heritage and Environment, Canberra).

Distribution

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 30 cm deep has been recorded in the central part of the swamp. The lithology is alluvium (soils left by flowing water) deposited in the Quaternary.
Indigenous Interests

The Traditional Owners are the Dambimangari. There are several known registered sites listed in the Department of Aboriginal Affairs Aboriginal Heritage Sites Register that occur in or close to the community.

Conservation Status

Listed as vulnerable under WA Minister Environmentally Sensitive Areas list in policy.

Threatening Processes

The main threats to the community that were reported in the late 1980s were widespread and severe impacts of cattle, however, this cattle damage was recently noted to have declined greatly and the impacts appeared minimal. Surveys also indicate that fire had recently burnt the margins of most of the rainforest patches. This is likely to be part of the natural dynamics. These patches were recovering from fire at that time, and another fire-protected patch had not burnt for many years. The impact of feral pigs was the most significant new threat noted in recent surveys, with other threats including weed invasion, and potentially myrtle rust, storm damage, saltwater intrusion from rising sea levels, and too frequent late season fire.

Recovery Plan

A recovery plan is recommended for the community to outline the recovery actions required to reduce the threats and maintain or improve the overall condition in the known locations. Recommended actions include surveys for additional occurrences, and consistent monitoring and management of fences, cattle, weeds and fires, and potential impacts from other sources. Regular assessment of the ongoing boundary changes of the community in relation to fire frequency and intensity is recommended.

Citation


Key References


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