



## Communities of Tumulus Springs (Organic Mound Springs, Swan Coastal Plain)

### Summary description

The community occurs in tumulus springs (organic mound springs) on the Swan Coastal Plain. The habitat of the mound springs is characterised by continuous discharge of groundwater in raised areas of peat. The peat and surrounds provide a stable, permanently moist series of microhabitats, with a high level of heterogeneity of invertebrate fauna assemblages between sites. Groups commonly represented include Ostracoda, Nematoda, Cladocera, Copepoda, Oligochaeta, Tardigrada, Turbellaria and Insecta. Typical and common native vascular plant species associated with the tumulus springs are the trees *Banksia littoralis* (swamp banksia), *Melaleuca preissiana* (moonah) and *Eucalyptus rudis* (flooded gum), and the shrubs *Taxandria linearifolia* (swamp peppermint), *Pteridium esculentum* (bracken fern), *Astartea scoparia* (common astartea) and *Cyclosorus interruptus* (swamp shield-fern).



### Distribution

The community occurs over a range of approximately 77km north to south, from Muchea to Wellard.

Department of Biodiversity, Conservation and Attractions (DBCA) Region: Swan  
DBCA Districts: Perth Hills, Swan Coastal

Local Government Authorities: City of Kwinana, City of Swan, Shire of Chittering, Shire of Serpentine-Jarrahdale

### Habitat requirements

The habitat of the mound springs is characterised by continuous discharge of groundwater in raised areas of peat. The peat and surrounds provide a stable, permanently moist series of microhabitats, with a high level of heterogeneity of invertebrate fauna assemblages between sites. Some of the fauna species have no dormant stages and depend on the maintenance of a permanent supply of fresh water. Many vascular and non-vascular plant species that inhabit the mounds are also reliant on permanent moisture. The maintenance of hydrological processes in terms of both quality and quantity of water to the mounds is essential to sustain the tumulus spring assemblages.

## Indigenous interests

Traditional Owner groups: Pinjarup and Whadjuk Noongar

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.

The area is covered by the Gnaala Karla Booja Indigenous Land Use Agreement (ILUA) and the Whadjuk People ILUA as part of the South West Native Title Settlement, which formally recognises Noongar people as the Traditional Owners of the south-west region. The ILUA regions are supported by the Gnaala Karla Booja Aboriginal Corporation and the Whadjuk Aboriginal Corporation and umbrella group, the South West Aboriginal Land and Sea Council.

## Conservation status

State: Listed as a critically 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* as 'Assemblages of plants and invertebrate animals of tumulus (organic mound) springs of the Swan Coastal Plain'.

## Threatening processes

Major threats to the community include land clearing, declining groundwater levels and quality, weed invasion, fire that burns the peat layer, grazing and trampling by native or introduced herbivores, and declining rainfall.

## 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 monitoring and managing water levels and quality, monitoring flora and fauna, controlling weeds, managing the catchment areas, and managing fire.

## Key references

Department of Conservation and Land Management. (2006). *Assemblages of organic mound (Tumulus) springs of the Swan Coastal Plain Interim Recovery Plan 2005–2010* (Interim Recovery Plan No. 198).

Jasinska, E. J. & Knott, B. (1994). *Aquatic fauna in Gnangara Mound discharge areas of the Ellen Brook catchment, Western Australia*. A report submitted to the Water Authority of Western Australia.

**Disclaimer:** The information contained in this document is current as at September 2023. The State of Western Australia and its employees do not guarantee that this publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence that may arise from you relying on any information in this publication.

For more information see the department's website [www.dbca.wa.gov.au](http://www.dbca.wa.gov.au)



Department of Biodiversity, Conservation and Attractions