



## Ethel Gorge aquifer stygobiont community

### Summary description

The community is known from the Ethel Gorge (Ophthalmia Basin) alluvium calcrete aquifer on the Fortescue River in the vicinity of the town of Newman. It comprises a diverse assemblage of stygofaunal species. It includes Oligochaeta and the crustaceans Bathynellacea (Syncharida), cyclopoid and harpacticoid copepods, Candonidae: Candoninae C (Ostracoda: Podocopida), Candonidae: Candoninae D (Ostracoda: Podocopida), Limnocytheridae (Ostracoda: Podocopida), flabelliferan Isopod (Tainisopidae) and one new genus of Crangonyctoid amphipoda (*Chydaekata*, family Paramelitidae), in which 14 species (13 in this aquifer) have been described on morphological characters. At least one species of *Chydaekata* is known only from this community.



### Distribution

The Ethel Gorge/Ophthalmia Basin alluvium calcrete aquifer on the Fortescue River is the only known occurrence of this community.

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

Local Government Authority: Shire of East Pilbara

### Habitat requirements

The Ethel Gorge stygobiont community is reliant on maintenance of the Ophthalmia aquifer which is its main habitat. The high stygofauna abundance may be associated with active creek recharge, infiltration from Ophthalmia Dam and shallower groundwater levels (less than 10m below ground level).

### Indigenous interests

Traditional Owner group: Nyiyaparli

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.

Part of the community occurs on land subject to the Nyiyaparli native title determination held by the Karlka Nyiyaparli Aboriginal Corporation for the Nyiyaparli people. The Yamatji Marlpa Aboriginal Corporation represents the Traditional Owners and is the native title representative body for the Pilbara region.

## 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*.

## Threatening processes

The main threats to the community include dewatering and salinisation of the aquifer that supports the community.

## Recovery plan

Development of a recovery plan is recommended for this community. Priority actions include monitoring and management of water quality and levels, and of component stygofauna.

## Key references

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