

# *Isoetes* sp. 'Maxwell River'



*Isoetes* sp. 'Maxwell River'. M. Garrett.

**FAMILY:** ISOETACEAE

**BOTANICAL NAME:** *Isoetes* sp. 'Maxwell River', (S.J.Jarman HO314082)

**COMMON NAME:** limestone quillwort

**COMMONWEALTH STATUS:** (*EPBC Act*)  
Not Listed

**TASMANIAN STATUS:** (*TSP Act*) rare

## Description

A small, aquatic fern ally that emerges from the surface of the water. **This taxon is yet to be taxonomically described.** **Leaves:** The leaves are stout, less than 6 cm long, and characteristically curved backwards. Herbarium specimens have been collected in February and April. **Confusing species:** *Isoetes* sp. 'Maxwell River' differs from other *Isoetes* species in that the covering over the spore capsules (sori) lacks the thin veil that the others have, and also, the spores are arranged distinctively. It is also geographically and ecologically separated from other Tasmanian species (description from Garrett 1996).

## Distribution and Habitat

This species is endemic to Tasmania and occurs in the south-west in lowland regions within alkaline pans. Habitat information attached to a particular record indicates that the surrounding plant cover was very sparse, as the entire area was severely burnt in 1986. Previously this area consisted of low scrub on peaty soils.

## Key Sites and Populations

This species occurs on alkaline pans in the Giblin, Olga, Davey and Maxwell River valleys (Garrett 1996). Approximately 12 populations are known, occupying about 8 hectares (M Garret pers. comm.)

## Known Reserves

*Isoetes* sp. 'Maxwell River' is reserved in the Southwest National Park (Davey River) and Wild Rivers National Park (Maxwell River).

## **Ecology and Management**

*Isoetes* sp. 'Maxwell River' is a fern ally. *Isoetes* plants propagate through spores that are dispersed by water or animals. No other information on the reproductive biology of this species is known. They are closely related to the primitive horsetail family (Equisetaceae).

Alkaline pans are a wetland community unique to the Southwest of Tasmania. They occur where dolomite or limestone outcrops in buttongrass moorlands and are represented by sandy, white outwashes in lowland valleys on flat to gently sloping ground. These pans are easily visible from aerial photographs, though they may be small and irregular in shape. The alkaline pan communities are very unique, maintaining a distinctive appearance, structure and species composition. Typically, a distinct zonation occurs in the pan with a raised gravelly or sandy centre with the dominant vegetation, surrounding sandy areas and a silty zone. The pH of the surface sands and silts varies between 5.0 and 8.5 (Harris & Kitchener (eds) 2003).

## **Conservation Status Assessment**

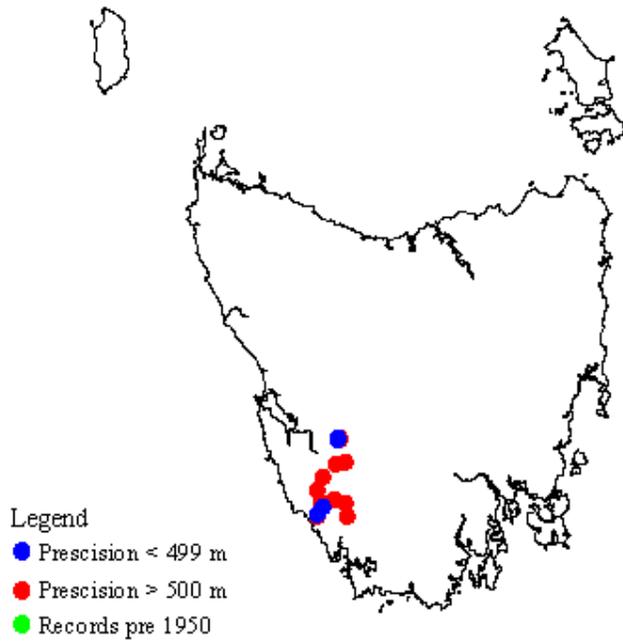
While *Isoetes* sp. 'Maxwell River' is not known from many populations, the species is likely to be under recorded because of its occurrence in remote areas.

## **Further Information**

- Garrett, M 1996, *The ferns of Tasmania, Their Ecology and Distribution*, Tasmanian Forest Research Council, Hobart.
- Jarman, SJ, Crowden, RK 1979, 'An examination of vegetation from the Lower Gordon River and associated catchments against a background of regional botany', In: *Lower Gordon Region: Land Use, Resources and Special Features*, The Hydro Electric Commission, Tasmania.
- Harris, S & Kitchener, A (eds) 2003, *Tasmania's Vegetation: A technical Manual for TASVEG: Tasmania's Vegetation Map*, Version 1.0, Nature Conservation Branch, Department of Primary Industries, Water & Environment, Hobart.

## Tasmanian Distribution

(As per Threatened Species Unit records, April 2005)



### 1:25 000 Map Sheets

Abel, Elliott, Lewis, Olegas, Osmund, Propsting, Rookery, Serpentine.

Date last modified: 12/05/2005