ENDANGERED!

Lignum and samphire freshwater wetlands

The plant community dominated by the lignum *Muehlenbeckia horrida* subsp. *abdita*, a low twiggy shrub, and the samphire *Tecticornia verrucosa* on the beds of freshwater wetlands has been classified as critically endangered. It was identified during a project to enhance the conservation of biological diversity by identifying and conserving threatened ecological communities in the agricultural areas of south-west Western Australia (for example, in the Wheatbelt). This project was funded by the Natural Heritage Trust and conducted by CALM's Threatened Species and Communities Unit (WATSCU).

This simple but unusual combination of plant species is known only from two wetlands—Lake Bryde and East Lake Bryde. Both wetlands are located in reserves near Newdegate, in the southern Wheatbelt, and are among the very few remaining freshwater or brackish wetlands in the area. The main threat to these wetlands is thought to be rising salinity levels resulting from catchment clearing. If this occurs, it is likely that salt-tolerant plant species will thrive at the expense of the freshwater-dependent *Muehlenbeckia horrida* subsp. *abdita* and *Tecticornia verrucosa*.

Lake Bryde is a popular local wetland for recreational activities such as skiing, and is an important wetland for various bird species, including the secretive freckled duck (*Stictonetta naevosa*). The first signs that the 'Lake Bryde community' was in trouble came from the results of salinity monitoring of both wetlands by CALM, which began in 1979. Initially, the water in Lake Bryde was very fresh (0.036 parts per thousand), with salt loads increasing slightly each year, but in 1992 a huge salt load increased levels to 1.27 ppt. To add to this wetland's woes, the next inflow after a flood may double the salt load.

Concerns from local people about further salinity increases in Lake Bryde and its catchment resulted in the formation of the South Lake Bryde Focus Catchment Group. The aim of such a group is to reduce the impact of salinity on the environment and agricultural land. Agricultural catchment strategies are seen as an appropriate way to prevent further degradation of this wetland.

East Lake Bryde, the larger but less frequented of the two wetlands, has only occasionally carried water since 1979, and salinity levels have not increased as dramatically. The wetland community, however, has been showing signs of degradation for a number of years; for example, some paperbarks (*Melaleuca* sp.) on the lake's fringe are dead or dying, as is some of the lignum on the lake bed.

An Interim Recovery Plan for this lake bed community is currently being drafted by CALM. The formation of a Recovery Team, with overlapping membership and close cooperation with the Focus Catchment Group, is a high priority in the conservation of this interesting system.

By Sheila Hamilton-Brown
Main photo by Val English
Insert photo by Grant Pearson

Winner of the 1998 Alex Harris Medal for excellence in science and environment reporting.

LANDSCOPE

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Western Everlasting, see page 22, follows the same successful approach to protecting threatened plants as Western Shield did for mammals.

Beneath its black and burnt exterior, the common balga is giving up its secrets. See 'Believing the Balga' on page 10.

For 25 years, CALM's Wildlife Research Centre in Woodvale has been 'A Centre of Diversity'. See page 36.

The spectacular coastline of Torndirrup National Park has been years in the making. See page 28.

Read how locals, CALM and other agencies are working together to save the Lake Muir-Unicup wetlands. See page 49.

FEATURES

REGULARS

COVER

'Moving Mala' (page 17) tells the story of the translocation of these endangered mammals from Australia's Central Desert Region to a small island off WA's north coast.

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