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Conservation and Attractions

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A unique place

Western Australia is known for its unique and diverse environment because many of its plant and animal communities are not found anywhere else in the world.

Unfortunately pressures arising from activities such as clearing, competing land management activities, disturbance from unrestricted access, inappropriate grazing, pollution, feral pests and plant disease and frequent fire have placed these communities under threat.

Funding provided by the Natural Heritage Trust is assisting the Department of Conservation and Land Management (CALM) to manage processes threatening these ecological communities. This is an important project to help conserve the State's biodiversity.

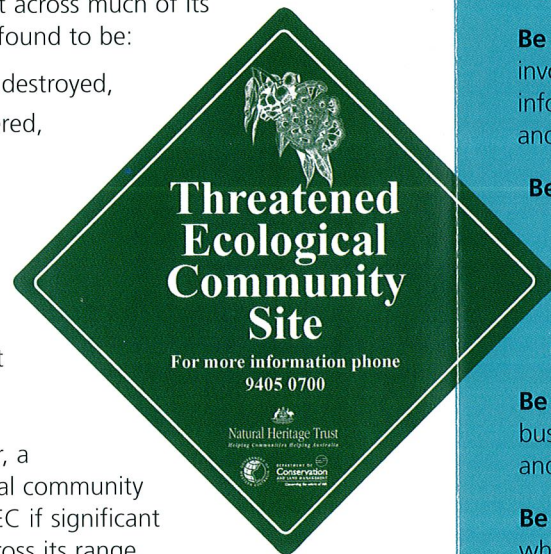
What is a Threatened Ecological Community?

An ecological community is a naturally occurring group of plants and/or animals that occurs in a particular type of habitat. Together with their habitat, ecological communities form ecosystems.

A Threatened Ecological Community (TEC) is one which is subject to processes that threaten to destroy or significantly modify it across much of its range, and which is found to be:

- ◆ presumed totally destroyed,
- ◆ critically endangered,
- ◆ endangered, or
- ◆ vulnerable.

Most TECs are either restricted in distribution, or were once widespread but now occur only as remnants in cleared landscapes. However, a widespread ecological community may be listed as a TEC if significant threats are active across its range.



A helping hand

CALM approaches the conservation and management of TECs in a cooperative way through 'Recovery Plans' – documents that prescribe actions that will be taken to ensure the long-term conservation of the TEC.

If a TEC occurs on private or shire land, CALM works closely with landowners, catchment groups, schools, wildlife enthusiasts and recovery teams to ensure the survival of the community.

Recovery actions include fencing, weed control, monitoring and hydrological investigations.



Lake Richmond. Photo – Val English

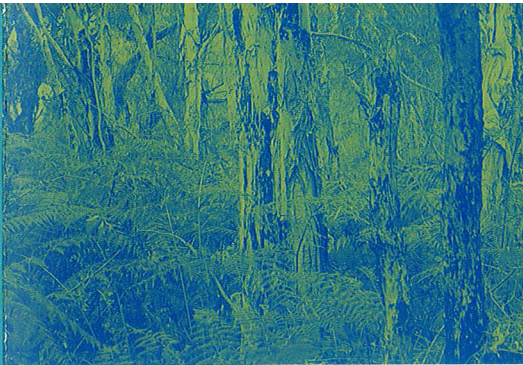
Caring for TECs

Be involved. Many community groups and individuals are involved in managing TECs. CALM staff can provide information about where TECs occur in your local area, and groups that are involved in managing them.

Be clean. Many areas that contain TECs are now included in nature reserves. These areas have high conservation values, and activities such as dumping rubbish (especially garden waste that contains garden plants or seeds) and car bodies degrade them.

Be cool. Too frequent wildfires threaten the values of bushland areas near Perth by increasing weed invasion, and can also cause local extinction of some native species.

Be watchful. Look for the signs, which indicate areas where TECs occur.



Further information

CALM protects and manages native flora and fauna throughout Western Australia.

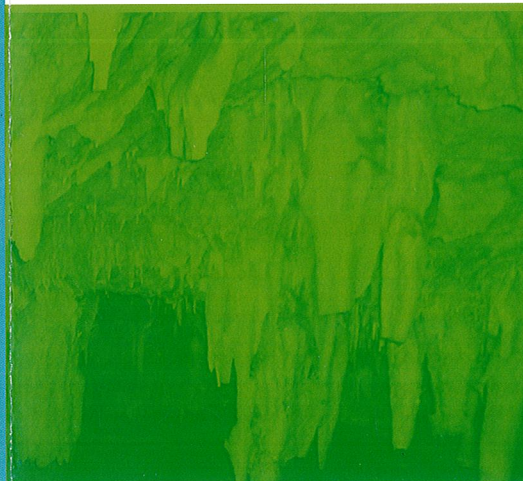
For further information please write to or telephone the Department of Conservation and Land Management at:

Swan Coastal District
5 Dundobar Rd, Wanneroo WA 6065
Telephone **(08) 9405 0700**

Or visit NatureBase at www.naturebase.net

Front: *Marri kingia*. Photo - Britt Anderson.
Inset images (L-R): Organic mound springs in Bullsbrook. Photo - Val English; Yanchev caves. Photo - Leigh Sage; Lake Richmond. Photo – Val English.

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of the Swan Coastal Plain Bioregion



On a smaller scale

In the Perth Peel Region scientific surveys have identified Threatened Ecological Communities (TEC's), a number of which are listed by the Department of Conservation and Land Management (CALM) as 'critically endangered'. Nine of these critically endangered TEC's have been the subject of urgent recovery work to ensure their continuing survival. These nine TEC's are as follows:

Yanchep National Park's caves

1 Aquatic root mat community

This is a community of invertebrate animals that feeds on and around root mats in permanent streams and pools in Yanchep National Park's caves. The Gnangara water mound feeds the cave streams. The main threat to this community is declining water levels.

Eastern side of the Swan Coastal Plain Bioregion

The eastern side of the Swan Coastal Plain was historically highly cleared for agriculture and now only small pockets of native vegetation remain. These small remnant areas are now under threat from too frequent fire, weed invasion, urban development and clearing.

Below: Organic mound springs in Bullsbrook. Photo - Val English
Below right: Yanchep caves. Photo - Leigh Sage

2 Marri – Kingia

This is a plant community found between Waroona and Forrestfield. Marri (*Eucalyptus calophylla*) dominated plant communities were probably some of the most common on the heavy soils on the eastern side of the Swan Coastal Plain but are now only seen in small pockets of remnant bushland due to extensive land clearing on the coastal plain in the past 175 years.

3 Marri – Xanthorrhoea

The driest of the marri communities is located on the eastern side of the Swan Coastal Plain on heavy soils between Bullsbrook and Waterloo near Bunbury. These communities were also extensively cleared across their former range.

4 Shrublands and woodlands

This banksias-dominated plant community is now seen only in a few small pockets of remnant bushland. This community occurs mainly on the transitional soils of the Ridge Hill Shelf opposite the Darling Scarp and extends to the eastern fringe of the Swan Coastal Plain.

5 Gingin ironstone association

This highly restricted plant community is dominated by annuals and herbs that occur on seasonally inundated ironstone and heavy clay soils near Perth.

The everlasting pink sunray (*Rhodanthe manglesii*) and *Tribonanthes australis* flower en-masse under swamp kunzea. This is the only plant community near Perth in which massed everlastings occur.

6 Shrublands and woodlands on Muchea limestone

Limestone soils usually occur near the coast, but watercourses up to 35 km inland have deposited limestone. Many of the typical plant species are normally associated with coastal limestone soils.

7 Organic mound springs

The habitat of this community is characterised by a continuous flow of ground water into paperbark (melaleuca) swamps over peat. There are only three vegetated mound springs remaining, as these areas were historically cleared and dug out for dams or packed with limestone. Falling water levels in the Gnangara mound and weed invasion also threaten this community.

Rockingham area – Swan Coastal Plain Bioregion

8 Sedgeland in Holocene dune swales

These plant communities are found in seasonal wetlands between dune swales on the western side of the coastal plain. They occur in areas that are under pressure from urban development, too frequent fires and high recreational use.

9 Stromatolite-like microbial community of coastal freshwater lakes

These structure-forming algal and bacterial associations occur at Lake Richmond, near Rockingham. These microbial structures are similar in appearance to the strombalites at Hamelin Pool, Shark Bay. The lake is under threat from declining water quality and pressure from increased urban development in surrounding areas.

