

endangered

by Jill Pryde



Shrublands on dry clay flats

Seasonally wet clay-based wetlands are among the most threatened plant communities in Western Australia. One particular clay pan community found only on the Swan Coastal Plain is 'Shrublands on dry clay flats'. It was described in a 1994 report about the vegetation that occurs on the southern Swan Coastal Plain, and is one of four clay-based wetland communities listed as threatened in WA. The community is currently ranked as endangered.

'Shrublands on dry clay flats' is the fastest drying of the clay-based wetlands identified on the southern Swan Coastal Plain. The thin soils are soaked by winter rainfall and local surface water flows, and, as temperatures rise, dry to a hard clay pan in summer. This community typically occurs in low-lying areas that hold surface water, and groundwater levels may come close to or reach the surface in wetter months.

As clay-based wetlands dry they display a vast range of colourful flowering herbs. 'Shrublands on dry clay flats'

typically contains an average of 52 species within 100 square metres. As the name suggests, this community is dominated by a dense shrub layer. Typical shrubs include furrowed hakea (*Hakea sulcata*), variable-leaved hakea (*H. varia*), swamp tea-tree (*Pericalymma ellipticum*), compacted featherflower (*Verticordia densiflora*), fringed regelia (*Regelia ciliata*) and swishbush (*Viminaria juncea*). During spring, as water begins to recede, a suite of herbs appears and includes the pointed centrolepis (*Centrolepis aristata*), *Aphelia cyperoides*, procumbent siloxerus (*Siloxerus humifusus*), sundews *Drosera gigantea* subsp. *gigantea* and *Drosera menziesii* subsp. *menziesii*, and the weed tiny flatsedge (*Cyperus tenellus*).

The heavy soils of this clay pan community were useful for agriculture and were mostly cleared and drained soon after settlement, or the clay was used for brick and tile production. Many of the remaining clay pans were close to Perth, and were later cleared for residential development.

Now, only about 83 hectares of the clay pan community remains

in small patches of bushland from Armadale south to Busselton. About one-third of this area is protected within reserves for conservation.

Threats to the clay pan community include weed invasion, rising saline groundwater, changes to drainage, drying climate and possibly too-frequent fires. Many occurrences of this community are small and fragmented and are often dissected with drains, or have been disturbed for infrastructure such as roads. The community is also vulnerable to nutrients from run-off, from sources such as roads, drains and agricultural lands. Changes to the cycle of wetting and drying of the wetlands are potentially a significant threat as the community is dependent on these. The significant decline in winter rainfall on the Swan Coastal Plain in recent years affects this cycle, and this drying trend is predicted to continue. A recovery plan is currently being prepared for the community and will outline actions such as weed control, drainage management, fire control and monitoring.

Photos by Jill Pryde

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