

Wetlands

of south-western Queensland

Acacia/belah wooded swamps

Landform and water regime

Acacia/belah wooded swamps mainly occur in basins and small depressions (eg. gilgai country). Usually the swamps are tens or hundreds of metres wide. Soils are deep-cracking clays and the ground often is hummocky with potholes.

Water supply typically is from local rain storms, runoff from adjacent areas or small creeks. A few examples may receive overflow from nearby lakes/rivers in exceptionally wet years. Inundation is temporary and many swamps are dry for several years. Water in the swamps usually is less than 0.1–0.2 m deep and normally is fresh (non-saline) and moderately to slightly turbid.

Typical vegetation

This wetland type is characterised by open to very open woodland of acacias and/or belah *Casuarina cristata*. The characteristic tree varies across south-western Queensland: generally brigalow *Acacia harpophylla* in the east, yarran *A. omalophylla* in the centre and gidgee *A. cambagei* in the west.

The trees may be more than 10 m high in some swamps. They differ from eucalypts in providing few if any hollows that offer shelter and breeding sites for animals.

Associated wetland types

- Wooded watercourses.
- Eucalypt wooded swamps.

Distribution in south-western Queensland

This wetland type is uncommon in south-western Queensland. It is best represented in the Mulga Lands and Brigalow Belt South biogeographic regions.

Prominent examples of this type

- A substantial example of belah wooded swamp is located near the north-east side of Lake Dartmouth.
- Yarran Swamp (south-east of Charleville) presumably is (or was) dominated by yarran.
- Most examples are too small to feature on maps.

Occurrence in protected areas

This wetland type occurs in six national parks in south-western Queensland. The most substantial occurrence is in Diamantina National Park (presumably gidgee-dominated swamps).

Principal conservation values

- A relatively important vegetation community where the landscape, particularly in the Mulga Lands and Brigalow Belt South, is otherwise dominated by dryland habitats.
- Probably a significant habitat for species (plants, frogs, invertebrates) that favour briefly inundated wetland that has extensive tree cover.

Characteristic plant species

Trees and shrubs:

Dominant species include:

brigalow *Acacia harpophylla*

yarran *A. omalophylla*

gidgee *A. cambagei*

belah *Casuarina cristata*.

Associated species include:

poplar box *Eucalyptus populnea*

coolibah *E. coolabah*

black box *Eucalyptus largiflorens*

lignum *Muehlenbeckia florulenta*



Dry swamp dominated by belah, near Charleville
(R. Jaensch, Wetlands International)

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Acacia/belah wooded swamps cont...

Grasses, sedges and forbs:

budda pea *Aeschynomene indica*
millet/lovegrass *Echinochloa* spp.
native millet *Panicum decompositum*
neverfail *Eragrostis setifolia*
sedges *Cyperus* spp.
spike rush *Eleocharis* spp.
common nardoo *Marsilea drummondii*
burr/poverty-bush *Sclerolaena* spp.
ruby saltbush *Enchylaena tomentosa*
Aponogeton queenslandicus (VQ)
(VQ = Vulnerable species under Queensland legislation)

Characteristic waterbird species

Australian wood duck *Chenonetta jubata*
Pacific black duck *Anas superciliosa*
white-necked heron *Ardea pacifica*
white-faced heron *Ardea novaehollandiae*
nankeen night heron *Nycticorax caledonicus*



Limnodynastes salmini occurs in brigalow swamps
(B.Thomson, Environmental Protection Agency)

Other fauna

Several species of frogs occur: these may include *Limnodynastes salmini* (brigalow country), *Cyclorana alboguttata* and *Uperoleia capitulata* (mulga/gidgee country). Small mammals such as *Planigale* spp. and *Sminthopsis* spp. have been recorded.

Threats to the conservation values

- Removal of trees in wooded swamps that occur within areas cleared for grazing or cropping purposes.
- Increased inundation, leading eventually to tree deaths, due to clearing of catchments.
- Excessive grazing of livestock on swamp vegetation, including tree seedlings, may result in loss of some characteristic plant species.
- Lack of public awareness of the existence of this type and of its conservation values.
- Some forms of this wetland type occur in regional ecosystems for which some conservation concern has been identified (see Further Reading).

Management responses required

- Retain trees in wooded swamps and adequate buffer zones around swamps, in planning for property development.
- Manage grazing in wooded swamps to ensure long-term viability of the swamp vegetation.
- Improve public awareness of wooded swamps and their conservation values.
- Establish and implement voluntary conservation agreements between landholders and government to increase the area of representative examples under protection.

Gaps in knowledge

Some research on vegetation communities has been conducted but otherwise this wetland type is poorly known. Knowledge of hydrology, ecological processes and occurrence of wetland species (eg. invertebrates) is inadequate.

Further reading

Sattler, PS. and Williams, RD. eds. 1999. The conservation status of Queensland's bioregional ecosystems. Environmental Protection Agency, Brisbane.

Ford, G.I. 1996. Inventory of wetlands, Mulga Lands biogeographic region, south-western Queensland. Unpublished report to Dept of Environment and Heritage, Toowoomba, Queensland. Site account for Lake Dartmouth.

For further information, contact:

Environmental Protection Agency, 160 Ann Street, Brisbane (Tel: 07-3227-8186), or regional offices of the Queensland Parks and Wildlife Service in Toowoomba and Rockhampton.