

of south-western Queensland

Temporary freshwater lakes with couch grassland

Landform and water regime

This wetland type occurs in basins. Often the basins are several kilometres wide. Soils are deep cracking clays.

Water supply mainly is via distributary channels from rivers with extensive catchments but, at times, heavy local storms and runoff may be the only water supply. Inundation is temporary. Some lakes are dry for many months or several years, being completely full only one in 10–20 years. However, small parts of these lakes nearest to the inflow channels may receive at least some inflow in most years. Depth of water is commonly less than 0.3 m and wind may shift sheets of shallow water around the partly dry lake bed. Water normally is fresh and turbid but may become slightly saline as the lake dries out.

Typical vegetation

This wetland type is characterised by sparse to open low tussock grassland of rat's tail couch *Sporobolus mitchellii*. The tussocks may be less than 0.1 m high in dry periods or due to grazing but can be more than 0.3 m high after major floods.

Associated wetland types

- Shrubby floodplain watercourses.
- Lignum swamps.

Distribution in south-western Queensland

This wetland type is uncommon in south-western Queensland. The prominent examples are in the Channel Country biogeographic region, adjacent to major river floodplains.

Prominent examples of this type

- Lake Yamma Yamma (south-west of Windorah), which is the largest example in Australia.
- Lake Machattie (south-east of Bedourie).

Occurrence in protected areas

This wetland type occurs in only two national parks in south-western Queensland. None of the (above) prominent examples are in protected areas.

Principal conservation values

- Feeding and migration stop-over sites for tens of thousands of waterbirds, especially ducks and shorebirds.

Characteristic plant species

Plants associated with the rat's tail couch are mainly tussock grasses and short-lived forbs, with samphires at the wetland edges.



*Rat's tail couch meadows
at Lake Machattie
(R. Jaensch, Wetlands International)*

of south-western Queensland

Temporary freshwater lakes with couch grassland *cont...*

Grasses, sedges and forbs:

pepper grass *Panicum laevinode*
brown beetle grass *Diplachne fusca*
channel millet *Echinochloa turnerana*
Cooper clover *Trigonella suavisissima*
annual verbine *Psoralea cinerea*
nightshade *Solanum* spp.
burr/poverty bush *Sclerolaena* spp.
ruby saltbush *Enchylaena tomentosa*
sapphire *Halosarcia* spp.

Characteristic waterbird species

Abundant:

grey teal *Anas gracilis*
pink-eared duck *Malacorhynchus membranaceus*
glossy ibis *Plegadis falcinellus*
black-winged stilt *Himantopus himantopus*
red-necked avocet *Recurvirostra novaehollandiae*
sharp-tailed sandpiper *Calidris acuminata*
Australian pratincole *Stiltia isabella*
whiskered tern *Chlidonias hybrida*

Migratory shorebirds:

little curlew *Numenius minutus*
common greenshank *Tringa nebularia*
red-necked stint *Calidris ruficollis*
sharp-tailed sandpiper *Calidris acuminata*
curlew sandpiper *Calidris ferruginea*
oriental plover *Charadrius veredus*

Other fauna

There is almost no information about other fauna that use this wetland type. Occurrence of pelicans suggests that some fishes, possibly spangled perch *Leiopotherapon unicolor*, must occur. Frogs such as *Cyclorana platycephala* possibly occur. When dry, reptiles that inhabit cracking clay may occur. Molluscs have been noted at some examples.

Threats to the conservation values

- Reduced inundation which may eliminate some wetland processes, reduce habitat diversity and prevent reproduction of wetland plants and animals.
- Excessive grazing of cattle on indigenous grasses, especially during droughts.
- Introduction of exotic pasture grasses.

Management responses required

- Community-wide consultation and education to prevent/minimise new water extraction/diversion schemes both upstream and on-site.
- Manage grazing on grassy lake beds to ensure long-term viability of grassland.
- Consultation between ecologists and pastoralists to assess potential adverse impacts of exotic pastures.
- Establish and implement voluntary conservation agreements between landholders and government to increase the area of representative examples under protection.

Gaps in knowledge

This wetland type is one of the least well known in south-western Queensland. Biological data are available from only a few brief surveys of the two prominent examples. Knowledge of hydrology, ecological processes and occurrence of wetland species (migratory shorebirds, fishes, frogs, invertebrates) is inadequate.

Further reading

Blackman, J.G. et al. 1996. Queensland. In, ANCA. *A Directory of Important Wetlands in Australia*, 2nd edition. Australian Nature Conservation Agency, Canberra. Site accounts prepared by G. Ford for Lake Yamma Yamma (p. 228) and Lake Mipia Area (p. 225).

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.



Red-necked avocets
(R. Jaensch, Wetlands International)

Some other species that occur:

black swan *Cygnus atratus*
hardhead *Aythya australis*
Australian pelican *Pelecanus conspicillatus*
white-necked heron *Ardea pacifica*
great egret *Ardea alba*
royal spoonbill *Platalea regia*
gull-billed tern *Sterna nilotica*