

of south-western Queensland

Temporary saline lakes



*Samphire flats beside drying saline lake, Currawinya National Park
(Environmental Protection Agency)*

Landform and water regime

Temporary saline lakes occur in basins that typically are hundreds of metres to several kilometres wide. Many of the basins are closed drainage systems. Water supply is from creeks (large lakes) and/or from local runoff (small lakes). Inundation is temporary and the lakes may be dry for many months or several years. They may be full (1–2 m deep) once every 10 years but mainly are less than 0.5 m deep. Inflow initially may be fresh but the lake water becomes saline and clear some time before the lakes dry out.

Typical vegetation

This wetland type typically is fringed by low open to sparse shrubland of succulents such as samphire *Halosarcia* spp. Samphire also may grow on parts of the bed of smaller lakes but in wetter years this may die due to prolonged inundation.

Associated wetland types

- Watercourses without trees and shrubs.
- Semi-permanent saline lakes.

Distribution in south-western Queensland

This wetland type is not widespread in south-western Queensland. However it is relatively common around the interface of the Simpson-Strzelecki Dunefields and Channel Country biogeographic regions, and also occurs in the southern part of the Mulga Lands region and in the Desert Uplands region.

Prominent examples of this type

- Lakes Torquinie and Mumbleberry (west of Bedourie) and nearby un-named saltpans in the Simpson Desert.
- Some parts of the Lake Bindegolly system (east of Thargomindah).
- Some minor lakes in Currawinya National Park (north of Hungerford).

Occurrence in protected areas

This wetland type occurs in only four protected areas in south-western Queensland, eg. Simpson Desert National Park. However, many small examples are included in these parks.

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Temporary saline lakes *cont...*

Principal conservation values

- Large examples that are fed by rivers (Lakes Torquinie and Mumbleberry, fed by Mulligan River) at times support tens of thousands of waterbirds, including substantial numbers of the rare freckled duck *Stictonetta naevosa* (in 1991-2 up to 85% of the number counted in eastern Australia).
- At times provide inland habitat for international migratory shorebirds.

Characteristic plant species

Plants associated with the samphire include:

Trees and shrubs:

saltbush *Atriplex* spp.

Grasses sedges and forbs:

rat's tail couch *Sporobolus mitchellii*

ruby saltbush *Enchylaena tomentosa*

thorny saltbush *Rhagodia spinescens*

burr/poverty-bush *Sclerolaena* spp.

rosin weed *Cressa cretica*

Characteristic waterbird species

Abundant:

grey teal *Anas gracilis*

pink-eared duck *Malacorhynchus membranaceus*

Eurasian coot *Fulica atra*

Rare species under Queensland legislation (RQ):

freckled duck *Stictonetta naevosa* (RQ)

Breeding species:

black swan *Cygnus atratus*

red-capped plover *Charadrius ruficapillus*

Caspian tern *Sterna caspia*

Migratory shorebirds:

marsh sandpiper *Tringa stagnatilis*

red-necked stint *Calidris ruficollis*

sharp-tailed sandpiper *Calidris acuminata*

curlew sandpiper *Calidris ferruginea*

Some other species that occur:

hoary-headed grebe *Poliiocephalus poliocephalus*

Australian pelican *Pelecanus conspicillatus*

red-necked avocet *Recurvirostra novaehollandiae*

gull-billed tern *Sterna nilotica*

whiskered tern *Chlidonias hybrida*

Other fauna

Some fish and frog species may occur in large lakes at low salinities, such as immediately after floods.

Invertebrates possibly are similar to those of semi-permanent saline lakes, with high abundance of copepods and cladocerans at moderate salinities.

Threats to conservation values

- No major threats identified but a more comprehensive assessment is needed.

Gaps in knowledge

Some information exists on the biota of some examples of this wetland type. Knowledge of hydrology, ecological processes and occurrence of wetland species (migratory shorebirds, fishes, frogs, invertebrates) is inadequate.



Red-capped plovers
(Environmental Protection Agency)

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 account prepared by G. Ford for Lake Torquinie Area (p. 227).

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Timms, B.V. 1999. Local runoff, Paroo floods and water extraction impacts on the wetlands of Currawinya National Park. In, Kingsford R.T. ed., *A free-flowing river: the ecology of the Paroo River*. NSW National Parks and Wildlife Service, Hurstville.

For further information, contact:

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