

of south-western Queensland

Shrubby floodplain watercourses



*Shrubby watercourses, Cooper floodplain near Naccowlah
(R. Jaensch, Wetlands International)*

Landform and water regime

Shrubby floodplain watercourses are wetlands that occur on floodplains that have extensive networks of channels. The floodplains may be several kilometres wide. The channels are termed braided or anastomosing channels because typically there are many tens of channels of similar size and the channels tend to split and rejoin. Soils are deep cracking, grey clays.

Water supply is from river flow, so inundation may be unrelated to local rainfall. Inundation is temporary, usually for only a few days or up to several weeks. It is dependent on size of floods: in some years, floods may be confined to the main river channels, resulting in no inundation of shrubby watercourses. Water normally is fresh (non-saline) and turbid.

Typical vegetation

This wetland type is characterised by sparse to dense shrubland of lignum *Muehlenbeckia florulenta*. The lignum shrubs may be up to 2 m high.

Associated wetland types

- Permanent river reaches and waterholes.
- Wooded watercourses.
- Forb meadows on floodplains.

Distribution in south-western Queensland

This wetland type is widespread in south-western Queensland and is particularly common in the Channel Country biogeographic region.

Prominent examples of this type

- Cooper Creek floodplain (for more than 300 km between Windorah and Nappa Merrie), includes the largest contiguous examples in Australia.
- On the Diamantina River floodplain (eg. north-west of Betoota).
- On the Eyre Creek floodplain (north-east of Bedourie).

Occurrence in protected areas

This wetland type occurs in only four national parks in south-western Queensland, notably Diamantina National Park. None of the (above) prominent examples are in protected areas.

Principal conservation values

- Collectively provide extensive feeding and breeding habitat for animals (see lists below) that use briefly inundated channels with dense cover.
- (Parts of Eyre Creek floodplain) provide habitat for grey grasswren *Amytornis barbatus*, a gazetted rare species in Queensland.

Characteristic plant species

Plants associated with the lignum include:

Trees and shrubs:

river cooba *Acacia stenophylla*
northern bluebush *Chenopodium auricomum*

Grasses, sedges and forbs:

budda pea *Aeschynomene indica*
channel millet *Echinochloa turnerana*
sedges *Cyperus* and *Schoenoplectus* spp.
pale spike rush *Eleocharis pallens*
common nardoo *Marsilea drummondii*
water convolvulus *Ipomoea diamantinensis*

Characteristic waterbird species

Abundant:

black-tailed native-hen *Gallinula ventralis*

of south-western Queensland

Shrubby floodplain watercourses *cont...*

Australian spotted crane *Porzana fluminea*

Rare species under Queensland legislation (RQ):

grey grasswren *Amytornis barbatus* (RQ)

Breeding species:

pink-eared duck *Malacorhynchus membranaceus*

Eurasian coot *Fulica atra*

black-tailed native-hen *Gallinula ventralis*

Shorebirds:

Where the vegetation is more open, individual greenshanks *Tringa nebularia* (migratory) and red-kneed dotterels *Erythronyx cinctus* (non-migratory) may sometimes occur.

Turtles *Emydura* sp., and probably water rats *Hydromys chrysogaster*, occur. At times, long-haired rats *Rattus vilosissimus* occur in large numbers on the western floodplains. This wetland type probably also supports several frog species such as *Cyclorana platycephala*. When dry it supports reptiles and mammals that inhabit deep-cracking clay.

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 lignum shrubs and channel millet, especially during droughts.
- Introduction of exotic plants such as *Parkinsonia aculeata*.

Management responses required

- Community-wide consultation and education to prevent/minimise new water extraction/diversion schemes both upstream and on-site.
- Manage grazing and weeds on floodplains to ensure long-term viability of shrubland.
- 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 not well known in south-western Queensland. Knowledge of hydrology, ecological processes and occurrence of wetland species (fishes, 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 Cooper Creek Overflow Swamps (p. 217), Diamantina Overflow Swamp at Durrie (p. 221) and Georgina River – King Creek Floodout (p. 222).

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.



Australian spotted crane in channel with lignum (R. Jaensch, Wetlands International)

Some other species that occur:

glossy ibis *Plegadis falcinellus*

Australian white ibis *Threskiornis molucca*

buff-banded rail *Gallirallus philippensis*

Other fauna

Fishes such as Lake Eyre yellowbelly *Macquaria* sp. possibly use shrubby floodplain watercourses to migrate between permanent waterholes. Other fishes probably include tandans *Neosilurus* spp. and spangled perch *Leiopotherapon unicolor* during floods. Whereas many fish retreat to permanent waterholes before floods subside, many other fish become trapped and die in the drying channels.