

of south-western Queensland

Wooded watercourses

Landform and water regime

Wooded watercourses occur in the channels of rivers, creeks and floodplains. They may consist of a single channel or a network of braided channels. They may be hundreds of metres wide and, in some examples, many tens of kilometres long. Soils comprise cracking grey clays and sand deposits.

Water supply is from stream flow that may originate in the local area or in distant parts of the catchment. Inundation is temporary, normally lasting a few days or, at most, many weeks. Some wooded watercourses may flood annually but others may be dry for several years. Water in the channels may be several metres deep at peak of flood, quickly falling to shallow remnant flow or pools. Water in wooded watercourses is fresh (non-saline) and usually turbid.

Typical vegetation

This wetland type is characterised by open to very open woodland, mainly of eucalypts to 10 m height but sometimes of acacias.

Associated wetland types

- Associated with most other wetland types in south-western Queensland, except saline lakes and artesian springs.

Distribution in south-western Queensland

This wetland type is widespread and abundant in south-western Queensland. Wooded watercourses are the temporary sections of most river systems in south-western Queensland.

Prominent examples of this type

- The largest examples are on the western floodplains (eg. Cooper Creek, Diamantina River).
- It is the dominant wetland type in most of the smaller rivers (eg. Bulloo and Paroo Rivers) and creeks.

Occurrence in protected areas

This wetland type occurs in all national parks in south-western Queensland.

Principal conservation values

- Provide routes for migration of fishes, such as yellowbelly *Macquaria* spp., between permanent waterholes and to spawning areas.
- Vital habitat for many fauna species (mammals, reptiles, frogs, woodland birds) that favour trees with hollows and/or require woodland corridors.

Characteristic plant species

Trees and shrubs:

poplar box *Eucalyptus populnea*
river red gum *Eucalyptus camaldulensis*
coolibah *Eucalyptus coolabah*
black box *Eucalyptus largiflorens*
yapunyah *Eucalyptus ochrophloia*
gidgee *Acacia cambagei*
river cooba *Acacia stenophylla*
bauhinia *Lysiphyllum gilvum*
river paperbark *Melaleuca linariifolia*
creek wilga *Eremophila bignoniiflora*
lignum *Muehlenbeckia florulenta*

Grasses, sedges and forbs:

sesbania pea *Sesbania campylocarpa*
budda pea *Aeschynomene indica*
narrow-leaf neverfail *Eragrostis setifolia*
millet/lovegrass *Echinochloa* spp.
native millet *Panicum decompositum*
cup grass *Eriochloa* spp.
Warrego grass *Paspalidium jubiflorum*
club-rush *Schoenoplectus litoralis*



Wooded watercourse, Lochern National Park
(R. Jaensch, Wetlands International)

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Wooded watercourses *cont...*

giant sedge *Cyperus exaltatus*
Cooper clover *Trigonella suavisima*
joyweed *Alternanthera* spp.
common nardoo *Marsilea drummondii*

Characteristic waterbird species

Breeding species:

Australian wood duck *Chenonetta jubata*
Pacific black duck *Anas superciliosa*
white-faced heron *Ardea novaehollandiae*

Some other species that occur:

pink-eared duck *Malacorhynchus membranaceus*
little pied cormorant *Phalacrocorax melanoleucos*
white-necked heron *Ardea pacifica*
great egret *Ardea alba*
nankeen night heron *Nycticorax caledonicus*
Australian white ibis *Threskiornis molucca*
yellow-billed spoonbill *Platalea flavipes*
brolga *Grus rubicundus*
black-fronted dotterel *Elseya melanops*



Spangled perch
(D. Moffatt, Department of Natural Resources)

Other fauna

When inundated, wooded watercourses provide important habitat for fishes. Widespread species such as bony bream *Nematolosa erebi*, Hyrtl's tandan *Neosilurus hyrtli* and spangled perch *Leiopotherapon unicolor* undoubtedly occur in most wooded watercourses. Some, such as yellowbelly *Macquaria* spp., may depend on this wetland type to complete migrations. Smaller fishes such as rainbowfishes *Melanotaenia* spp., glassfishes *Ambassis* spp., and gudgeons *Mogurnda* spp. possibly occur.

Frogs of the genera *Litoria* and *Limnodynastes* are probably well represented. Invertebrates probably are similar to those of temporary freshwater lakes and may include riverine species such as yabbies *Cherax destructor*.

Mammals such as koala *Phascolarctos cinereus*, sugar glider *Petaurus breviceps* and bats depend on wooded watercourses as corridors of habitat in otherwise unsuitable country.

Threats to the conservation values

- Reduced inundation which may eliminate some wetland processes, reduce habitat diversity and prevent reproduction of wetland plants and animals.
- Trampling of channel banks by cattle, causing loss of vegetation and increased erosion or collapse.
- Introduction of flood-borne exotic plants such as *Parkinsonia aculeata* and Noogoora burr *Xanthium pungens*.

Management responses required

- Community-wide consultation and education to prevent/minimise new water extraction/diversion schemes both upstream and on-site.
- Manage grazing along watercourses to ensure long-term viability of vegetation and stability of banks.
- Eradication of major infestations of weeds, especially in otherwise weed-free areas.

Gaps in knowledge

This wetland type is relatively well known in south-western Queensland. However there have been few systematic studies of its importance for biodiversity conservation.

Further reading

Kingsford, RT. ed. 1999. *A free-flowing river: the ecology of the Paroo River*. NSW National Parks and Wildlife Service, Hurstville.

There are relatively few references specifically on wooded watercourses. Greater attention has been given to permanent waterholes.

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.