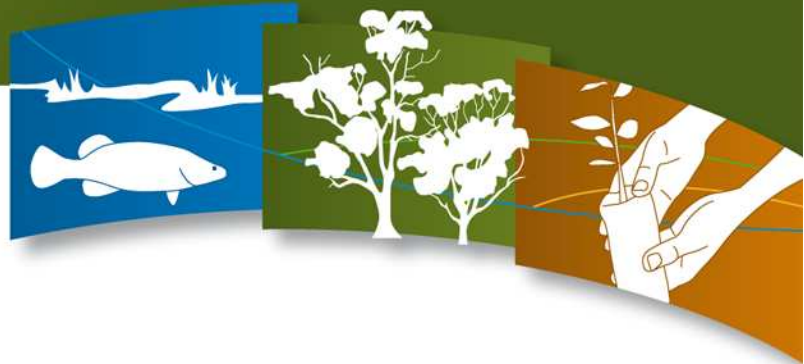


Maintaining instream habitat



Connecting Rivers, Landscapes, People

Rivers and creeks provide a unique habitat for a range of plants and animals. The Loddon River is an important source of biodiversity across the largely cleared riverine plain. Today, many of the plants and animals found in and along the river are considered threatened. They include plants such as the Woolly Waterlily and Pale Spike-sedge, birds such as the Great Egret and Red-backed Kingfisher, and aquatic species like the Warty Bell Frog and Murray Cod.

As well as good land management of the riparian land adjacent to the river, it is also important to consider the habitat available in the river channel for aquatic species.

Cod love snags

Snags are woody debris such as logs and branches from trees and shrubs that fall naturally into our rivers and creeks to provide a source of habitat and food for aquatic life.

For more than 100 years, woody debris was extensively removed from Victorian rivers in the belief that its removal would improve stream flow, reduce flooding impacts and minimise bank erosion.

Today, organisations such as the North Central Catchment Management Authority (CMA) recognise the importance of woody debris in the health of waterways and aquatic habitats.



Woody debris is a vital part of a healthy river ecosystem.
Photo: Matt Jackson North Central CMA

Current understanding and research indicates there is no evidence that woody debris removal reduces flood severity or improves stream flow in fact its presence appears to break the impact of flows to improve channel stability.

Woody debris plays an important role in maintaining a diverse aquatic habitat by helping to create pools, variation in stream flow and habitat diversity for aquatic life.

Murray Cod, Trout Cod and River Blackfish all rely on the presence of woody debris for their survival. For example, River Blackfish use woody debris for a place of refuge from predators, to forage for food, as territorial markers, and to lay their eggs.

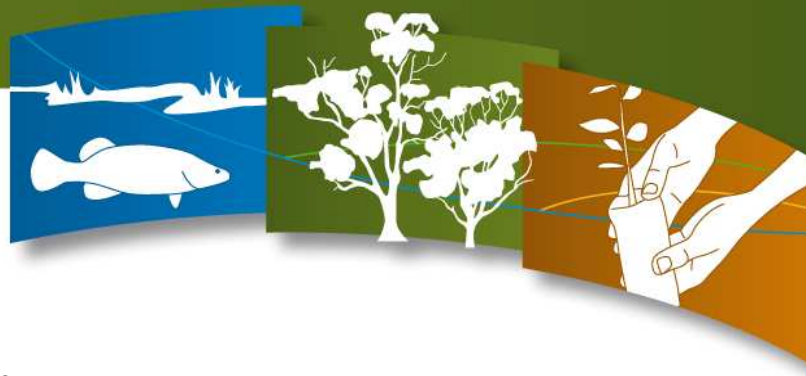
Woody debris also provides sources of habitat and food for the algae, bacteria and bugs that form the basis of aquatic food chains. Birds and snakes use large woody debris that emerges above the water surface for resting and as vantage points for hunting.

Current river management practices focus on retaining woody debris and in some cases reinstatement to waterways. Occasionally woody debris that is creating a specific problem is realigned within the stream channel.

Nature's pollutant filters

Native instream vegetation is a natural and important part of a healthy waterway. Instream vegetation grows within the water and along the lower banks of waterways, with some species floating on the water surface, some living completely under water, while others can be anchored to beds and banks and emerge from the water.

While many people often refer to instream vegetation as 'weeds', there are many native species that naturally occur within the North Central CMA region, including small floating plants like duckweed, partly submerged plants such as water ribbons, larger plants including Cumbungi, Common Reed, and fringing rushes.



Under natural conditions, instream vegetation is often restricted to the edges of waterways or scattered in isolated moist patches. Where it occurs depends on its ability to cope with drying out, flooding, shade, light, water temperature, speed of water, water quality and soil characteristics.

The North Central CMA recognises the important role native instream vegetation plays in the functioning of a healthy waterway. Instream vegetation acts as a filter by intercepting water and nutrient-bearing sediments and removing pollutants from the water. Some species can trap floodwater debris and provide rich organic matter for floodplain soils. Root systems can help stabilise streams by protecting beds and banks from erosion. This vegetation is able to reduce the speed of water and thus protect river reaches from scouring and bank collapse by acting as a buffer.

Instream vegetation can provide important food, shelter and nest sites for many terrestrial and aquatic species including fish and birds. It also provides a corridor for wildlife moving between areas.

This vegetation also provides shade to a waterway, reducing water temperatures and evaporation. Low water temperatures can play a role in preventing blue-green algae blooms and the spread of invasive exotic weed species.

Therefore it is essential that instream vegetation be carefully managed to achieve and maintain healthy waterways throughout our region.



*Cumbungi is a well known aquatic plant that is often mistaken for a weed.
Photo Linton Argall*

Would you like to find out more?

To find out more please contact:

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www.nccma.vic.gov.au

Information for this fact sheet was sourced from:

- Department of Natural Resources and Environment (NRE) (2001) 'Removal of woody debris, Fact Sheet 7. Freshwater Ecosystems Biodiversity Management Issues.