

Resnagging the SA River Murray

Instream woody habitat, commonly referred to as snags, are favoured habitats for a range of riverine animals, particularly native fishes. However, across Australia, habitat degradation due to the historical removal of snags is believed to have greatly contributed to declines in native fish populations, which have reduced by more than 90% since European colonisation.

Snags provide stable habitats for foraging, spawning and refuge for native fish, and other interdependent organisms like bacteria, algae, invertebrates, birds and predatory marsupials.

Many Australian species now experience restricted habitats which are reduced to small and highly fragmented populations, and are vulnerable to extreme environmental events.

History

Over the last 200 years, South Australian instream conditions have changed dramatically due to the removal of snags and the creation of locks and weirs. Between 1858 and 1985, specialised vessels removed millions of snags under the false beliefs that snags:

- limit transportation
- promote erosion
- contribute to river drownings
- ruin the overall aesthetics of the river

Exploding a snag



'The Grappler'



'The Grappler' was the earliest vessel to remove snags from the SA River Murray. Snags were chained up by a diving team and winched out of the river by a slewing crane. Explosives were used to dislodge stubborn snags.

The resulting instream conditions have favoured exotic species and changed the fish populations found in the River Murray.

Pictures: State Library of South Australia



Culture

The River Murray is the life blood of the Country for First Peoples of the River Murray and Mallee, who are the Native Title holders at this site. First Peoples continue to maintain links to their Country and ancestors by preserving their traditions, such as harvesting local foods including native fish.

Archaeological evidence of First Peoples residing along the River Murray dates back at least 29,000 years.

Reconnection

First Peoples are highly supportive of resnagging as a way of restoring natural habitat in the river to protect and grow the populations of native fish and other native aquatic riverine animals for current and future generations.

Murray Cod



Re-established Snags



Picture: Tumi Bjornsson

Locations

- Downstream of Lock 3 near Overland Corner and near Banrock Station Wetland
- Downstream of Lock 4 near Bookpurnong



Snags are the only natural way to replenish native fish populations. Native species have been observed using re-established snags including:

- Golden perch
- Murray cod
- Silver perch
- Murray crayfish
- Bony herring
- Australian smelt
- Unspecked hardyhead
- Rainbowfish

Four steps to resnag the River

1 Pick the right site and snag

- Look for areas that already have snags, easy access and not near high-use public areas. Flowing water is best. Avoid backwaters and slow-flowing creeks.
- Consider the cultural heritage of your site.
- Timber must be native hardwood with as much length left on it.
- Don't knock down trees without permission. Find trees approved for removal or stockpiled recently.
- Green timber is best. Older timber floats and is probably already used by land animals.
- Monitor the area for fish before the snag and after.

2 Get approval for your snag

- Department for Infrastructure and Transport to make sure you don't obstruct river navigation.
- First Nations groups because waterways are high in cultural importance.
- The Environmental Protection Agency to make sure you don't affect water quality.
- Landholder approval from agencies, e.g. DEW, National Parks, State Government and your relevant Council especially if you require access.
- A Water Affecting Permit to outline how and when you are going to put your snag in.

Contact the Native Vegetation Council if you must clear any vegetation.

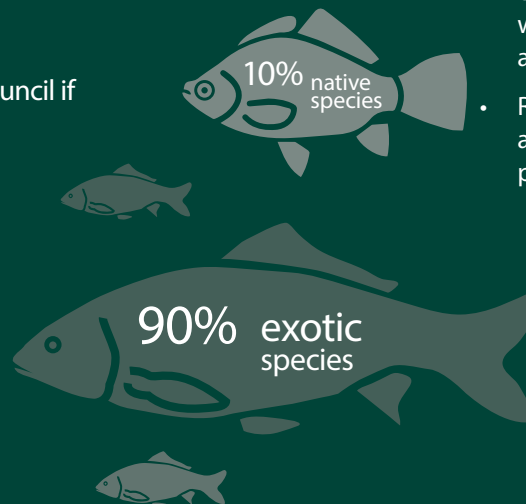
3 Be safe at all times

- Consider work health and safety with personal protection equipment, management of spectators and good communication.
- Prepare for risks by ensuring it is clear and understood by all parties who are responsible for the works and compliance with approvals.
- Transport the timber safely with accredited operators and ensure necessary transport rules are applied when on the road, land or water.

4 Think logically

- Installation can be done from land with an excavator or crane, on water with a barge and excavator or landbased with a cable dragging approach.
- Snags must be anchored securely to minimise the danger of them dislodging and moving into the river channel.
- Consider the costs and budget accordingly by seeking quotes from qualified service providers.
- Plan your project carefully, consider all risks during works, report all incidents and report all cultural finds.
- Record your project during and after construction with photos and reports.

- For more information email eva.dec@sa.gov.au



Fish that love snags

Golden perch

Murray cod

Silver perch

Bony herring

Smelt

Hardyhead

Rainbowfish

Murray crayfish*

* Extinct in the lower Murray