



CRADLE COAST
AUTHORITY
Natural Resource Management

ISSUE 1 | JULY 2020

Giant Freshwater Crayfish

Recovery Project



Welcome to the first newsletter about the Giant Freshwater Crayfish Recovery Project being undertaken by the Cradle Coast Authority's Natural Resource Management team.



Australian Government

National
Landcare
Program



This project is supported by the Cradle Coast Authority, through funding from the Australian Government's National Landcare Program.

The Giant Freshwater Crayfish

Astacopsis gouldi or the Giant Freshwater Crayfish is the largest freshwater crustacean in the world and is unique to northern Tasmania. It has been recorded from the Arthur catchment in the north-west and in most of the northern rivers that flow into Bass Strait.

Though the species used to be common and grow as large as six kilograms, they are now listed as a threatened species under both Federal and State legislation. In recent years, the majority of specimens recorded have weighed between two and three kilograms.

Crayfish are slow-growing and long-lived, with females taking up to 14 years before they can breed and males up to 9 years and can live up to 60 years of age.

Habitat requirements for Giant Freshwater Crayfish vary depending on their age. Young crayfish prefer shallow, fast-flowing streams with bed materials such as cobbles and boulders that they use for shelter. Adults often move to slower-flowing reaches where they like undercut banks to burrow in, or logs and boulders to seek shelter under. They prefer well vegetated streams with clear water and even temperatures. The presence of in-stream logs and dead wood is critical for crayfish as they mainly eat woody debris and leaf litter and it provides shelter. Vegetation along both banks of the waterway stops temperature extremes and acts as a filter, minimising sediments like soil and effluent muddying and dirtying the waterway.



Threats to the Giant Freshwater Crayfish

There are two major threats to the survival of the Giant Freshwater Crayfish, these being loss of habitat and poaching.

Land clearing, particularly the removal of woody vegetation from along and within waterways is a major issue. Not only does it remove the shading effect and food source for the crayfish but can also lead to siltation and turbidity of the water. Sedimentation in streams is particularly a problem for the small animals when they are young as they find it difficult to find hiding places away from predators. Stock access to waterways can also affect water quality and increase sedimentation.

Poaching of crayfish, particularly the larger breeding adults can lead to the loss of populations and the decline in the species given how slow growing the species is. Poaching has been illegal since 1998 and can attract fines of up to \$10,000 under Fisheries legislation and up to \$105,000 and/or a year in prison under Threatened Species legislation. Anyone with information relating to the illegal taking of protected species can email the Inland Fisheries Service at infish@ifs.tas.gov.au or call **1300 INFISH**.

Other threats to the crayfish include alterations to stream flow such as culverts and farm dams, chemical or fertiliser runoff and over extraction of water.



The Giant Freshwater Crayfish Recovery Project

The Giant Freshwater Crayfish Recovery Project commenced in October 2019 and goes until June 2023. It is working with agricultural landholders in targeted sections of rivers in the Cradle Coast area. The aim of the project is to protect known populations of Giant Freshwater Crayfish and improve the extent and quality of their habitat.

Initially, the project team undertook a desktop analysis to identify potential stream reaches to target for project activities. This took into consideration ecosystem values, land use, previous sightings and tagging of crayfish, woody vegetation quality, channel gradient and elevation. We identified 40 priority areas to start with. On-ground field checking was then undertaken, with sites that were too degraded or had limited habitat improvement potential being discarded.

To be considered for the project, potential habitat improvement areas had to be at least one kilometre and have a link to existing good remnant native vegetation. This reduced the priority areas to 14. Initial engagement activities were undertaken across these identified areas to gauge the level of landholder interest in participating in the project.

The following areas have been shortlisted as the final six priority or target areas to develop landholder projects in:

1. Upper Leven River
2. Part of the Flowerdale River and tributaries in the Lapoinya area
3. Black River near Newhaven Rd
4. Hook Creek and Detention River
5. Roger River, Spinks Creek, Upper Duck River
6. Lower Inglis River

Initial monitoring of the species, including trapping, measurement and tagging has been undertaken in 4 of the 6 areas listed above, prior to any on ground works commencing.

The project will work with rural landholders to implement habitat protection or improvement and will involve providing technical advice to landholders, financial incentives to implement works, as well as demonstration and promotion events. The types of works that may be implemented by landholders includes:

- Riparian fencing to exclude stock and install off stream water points.
- Native vegetation establishment and weed control to improve shading and vegetation, and eventually provide timber recruitment into the waterway.
- Erosion control works to stabilise banks or beds of waterways.
- Establishment and management of filter zones or buffer strips through fencing and re-vegetation.
- Site monitoring.
- Establish conservation covenants and manage areas of good remnant native vegetation for conservation.

The focus of the project for the next 12 months will be working with individual landholders to develop and implement on-ground works or conservation programs with landholders in the target areas identified above.

Completion of all on ground monitoring before works are implemented will also be undertaken. We have developed a short video on the Giant Freshwater Crayfish that is available on our [website](#).

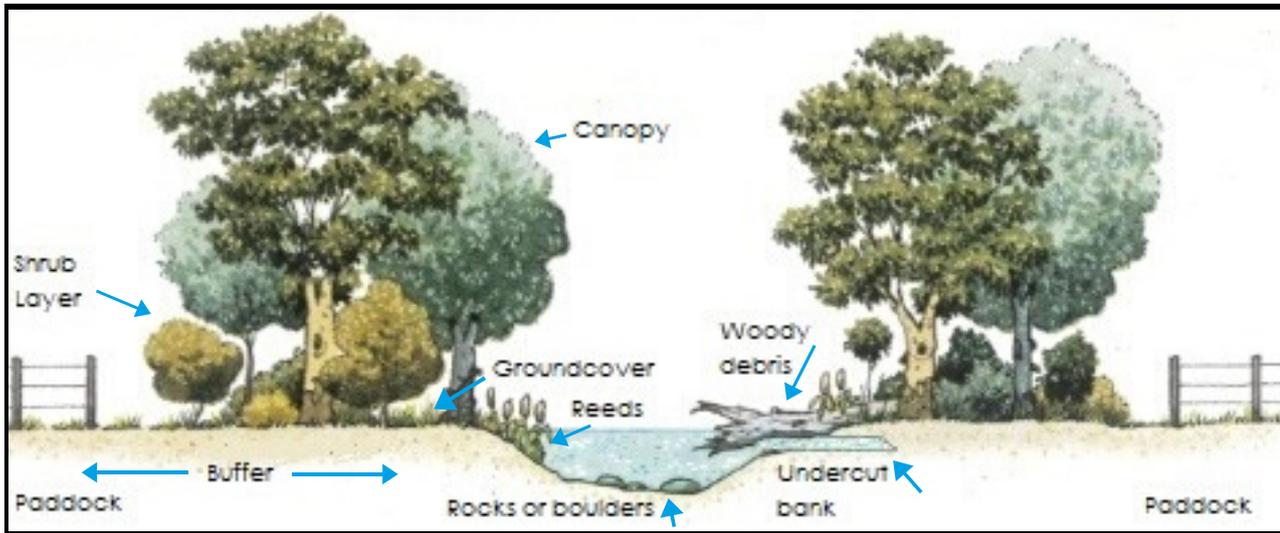


The Giant Freshwater Crayfish is the **largest** freshwater crustacean in the **world** and is unique to Northern Tasmania.

What does a good riparian area for crayfish contain?

A good river environment for crayfish includes good levels and a variety of native vegetation on both banks, in stream logs, woody debris and rotting leaves, as well as stable banks on both sides with some undercut bank areas. A variety of materials on the bed of the river also help, with cobbles and boulders that often occur in the upper catchments being good safe refuges for young crayfish.

It is important that the right native vegetation is used in any revegetation project with larger trees with deep root systems on top of the high bank, shrubs with good root systems and larger canopies that provide shade on the bank batter and low growing multi-trunked plants, reeds and sedges to bind the bank toe.



Adapted from Lovett, S. & Price P. (eds), 2007, Principles for riparian lands management, Land & Water Australia, Canberra. Redrawn from Malanson (1993). Illustration Paul Lennon.

A couple of questions to ask yourself when looking at your waterways as **habitat potential** for crayfish.

- Is my riverside vegetation native and are there three layers visible – groundcover (reeds and grasses), midstorey (shrubs) and canopy (tall trees)?
- How much habitat is there for crayfish – is the vegetation extensive and runs in a corridor either side or is it fragmented or missing all together?
- Is there a lot of plant debris on the ground and in the water?
- Is the native vegetation spreading and self-seeding naturally?
- Are there fallen logs and dead timber within the channel? If these are causing bank erosion, revegetation of the bank or realigning of the timber might be required.
- Are the banks bare of vegetation? If so erosion and runoff of dirty water and nutrients may occur in minor and major flood events.
- Is there a vegetated buffer zone between my farming areas or access tracks and infrastructure that will allow runoff to slow down and filter sediment and nutrients before it enters the river or creek.

Get in touch

For more information and to get involved in the project:

Fiona Marshall
Agriculture Project Coordinator
Phone: 03 6433 8433 Mobile: 0413 382 390
Email: fmarshall@cradlecoast.com

Website:
www.cradlecoast.com