

## The search for *Cherax rotundus*

Since its original description in 1941, the taxonomic status of *Cherax rotundus* has been the source of much debate. The type locality, listed on the label of the specimen in the Victorian Museum simply reads

Muddy R. Severn  
From E. Sutton Fletcher  
Q.

Now this is a very vague locality and raises lots of questions.

Muddy R is generally thought to be a Muddy River but nothing is specifically named as Muddy River in the area. Severn raises all sorts of options and generally is thought to refer to the Severn River in Queensland or the town of Severnlea, through which the Severn River flows. Ed Sutton lived at Fletcher Queensland just down the road from Severnlea and the Severn River passes right by there so add it all up and the best area to search is around the Stanthorpe to Fletcher area in southern Queensland.

In the past the area has been surveyed by some of Australia's top Crayfish Gurus but these surveys failed to produce any specimens. It was the same for the ACP Teams. We have been giving the area a good going over without any success. The area is granite country with lots of granite and sandy soils. The sandy soils don't hold water well and the main wet area is the Severn River and the feeder streams. We systematically surveyed many of these streams and the river but only recorded the ubiquitous *Cherax destructor* that was found at all sites with *Euastacus suttoni* at a couple of sites



There are 3 related *Cherax* crayfish species that have the lower half of the propodus covered in setae (fur). This furry covering is very distinctive and easily identifies these species from almost all other *Cherax*. We know this about the other furry crayfish related to *C. rotundus*:

1. *Cherax setosus* (Newcastle NSW) – Is an extensive burrowing species, avoids permanent water in rivers and streams, lives in deep burrows in ephemeral areas that regularly flood and then dry out. Lives in clay beds, with tea trees common in area.
2. *Cherax* sp (Murray River Echuca Vic) – Is a deep burrowing species, avoids permanent water in rivers and streams, lives in deep burrows in ephemeral areas that regularly flood and then dry out. Lives in clay beds away from the main Murray River that *Cherax destructor* prefers.

If we look at the chelae of each species we can see the fur covering on each.

If we assume that the furry *rotundus* from Queensland displays a similar ecology to its southern cousins, then we might predict it to be:-

- a deep burrowing species, avoids permanent water in rivers and streams, lives in deep burrows in ephemeral areas that regularly flood and then dry. Lives in clay beds away from the main river.

Our early surveys were conducted across all waterbody types in the area, but the last survey was conducted with this possible preference of the species for ephemeral areas in mind. We searched the area for “Clay Beds” but were unsuccessful as it's a granite and sandy soil area. Perhaps someone with local knowledge may know of some clay beds in the region?

We looked for tea trees and they were common along the Severn River, however, excavation of burrows around the base of trees only found *Cherax destructor*.

We searched for ephemeral areas and wet swampy areas but generally the area basically consists of either permanent water full of *C. destructors* or dry areas with nothing. It may well have been different 70 years ago but now there is lots of development and farm dams all over the shop collecting runoff and diverting drainage lines. This level of alteration of the natural environment may have been enough to eliminate the species but we remain hopeful.

The Severn River flows strong and then slows to a trickle and ponds, etc. This leaves large areas of wet swampy reedy areas along the verges of the river. We thought that perhaps this is where *C. rotundus* lives in amongst the reeds away from the permanent water. There are huge reed beds around the Severn River; they are a thick near impenetrable 2m high forest of reeds with wet moist swampy ground underneath them. This was the area of an intensive search and though it was ideal habitat area for a *C. rotundus* crayfish we were unsuccessful in finding any but it may well be worth further investigation. The ACP teams will be back in winter to further investigate the reed beds as on a 30°C day in waders under the reeds with the mosquitoes, spiders and snakes, excavating burrows in the mud was not much fun and enthusiasm soon wanes as the temperature rises.



Though all surveys to date have proved unsuccessful there is no reason to fully disregard this species as it may well exist and it may just be a numbers game. We know that millions of *Cherax destructor* infest the area. Perhaps they outnumber *C. rotundus* a thousand to one. If we keep trying and catch over our thousand *C. destructors* perhaps we will get a *C. rotundus*. We will keep searching, digging burrows and looking in new spots, who knows, one day we may get lucky.



Severn River *Cherax destructor*

Additionally, the best time to trap *Cherax setosus* from Newcastle and *Cherax sp* from the Barmah Forest is after a flood. Perhaps a flood through the Stanthorpe area will bring *Cherax rotundus* out and about. We will keep searching and who knows what the future holds. We really need a local Field Naturalist group to take up this search as they may have much vital information to bring to the mystery. The species was originally found by a local Field Naturalist so it would be fitting if a local group takes over the research. If anyone has any ideas, please let us know.

Jason, Andrew and I are doing a paper on *Cherax rotundus* and that will be available soon.