



**Monaro Acclimatisation Society Inc**  
**9 Thompson Drive**  
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*Sustainable future fishing for trout and native fish*

The Director  
Species Listing, Information and Policy Section  
Biodiversity Division  
Department of Climate Change, Energy, the Environment and Water

### ***Euastacus armatus* (Murray crayfish) – for listing as Vulnerable**

The Monaro Acclimatisation Society (“MAS”) founded in 1937 is a voluntary organisation primarily concerned with the development and maintenance of freshwater habitat and fisheries in South-Eastern NSW. The MAS is a primary stakeholder with the NSW Department of Fisheries. The MAS has been in existence for over 80 years and participates with NSW Fisheries in the stocking of freshwater lakes and rivers with fish, the maintenance of habitat and policy and legislation development that affects recreational fishing in NSW.

MAS supports the listing of *Euastacus armatus* as Vulnerable however, seeks to register concern about the argument presented by the NSW Fisheries Scientific Committee, particularly in respect to referring to impact of trout and consequent Management Recommendations. We also have some minor points in respect to the Common Assessment Method (CAM) Document editing.

The CAM assessment makes a compelling case for the reduction in overall numbers of *Euastacus armatus*; however, in exploring the reasons behind population loss, there appears to be some ‘boilerplate’ language used against trout:

- Page 23 of the CAM states: “The population size reduction is estimated to have largely occurred across the core lowland Murray River subpopulation.” This is reflected in the charts on that page. The chart for key habitat of trout shows population growth of *Euastacus armatus*.
- The map on page 5 shows two sites of concern (red dots) in the higher elevations/key trout range, but these are either outside the historic range of *Euastacus armatus*, or on the margins. More significantly the surveys concluded “The population declines were attributed to reductions in the availability of preferred habitat (with boulder and overhanging vegetation cover most significantly affecting mean density).” There is no mention of trout.
- In assessing exotic species predation as a “moderate risk” (page 17), a statement is made that “Exotic fishes (and stocking of native species outside of their natural range) present a threat to species of *Euastacus* such as Murray crayfish, through predation and competition [...] Common carp (*Cyprinus carpio*), redfin perch (*Perca fluviatilis*) and introduced salmonids brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*), occur extensively across the range of Murray crayfish. Whilst specific impacts are unquantified, it is highly likely that predation by these species influences the mortality rates of juvenile Murray crayfish”. MAS would dispute the claim of trout occurring **extensively** across the range; especially with respect to the particular areas where the CAM sees the main loss of population.

- Given the data provided, MAS cannot understand the specific inclusion of trout on page 24: “the primary drivers of population reduction are understood to be extreme weather events (bushfires, heatwaves, droughts, floods, hypoxic blackwater events), river regulation, exposure to pesticides and agricultural pollution, predation by exotic fish species such as introduced salmonids...”. Where is the justification for trout becoming a **primary** driver?
- This anomaly, or perhaps demonisation of trout, is then reflected in the Fisheries Scientific Committee Management Recommendations (page 28) as item 3:

Under the heading:

**‘Fisheries Scientific Committee Management Recommendations’**, dot point 3 states:

- “Focused research on flow and habitat requirements of the species and influence of threatening processes, such as river regulation, habitat alteration, blackwater disturbance, and impacts of introduced fish species (including salmonids and common carp).”

MAS would argue that aside from limited surveys such as the ones cited for Goodradigbee and Goobarrandra Rivers, the losses are mainly in the carp and redfin range. Those species should be the focus of research on exotic species impacts, not salmonids.

MAS is also dismayed that under these recommendations there is no mention of the impact of poaching. We believe, from observation and our anecdotal understanding, that a major factor within the upper reaches of the Murray and Murrumbidgee Rivers where the water is clear, extensive poaching occurs. The crayfish are easy to catch and are good to eat.

Overall, reviewing the CAM Assessment, along with observations by our members, we believe by far the most significant threats to *Euastacus armatus* are human – agricultural practices impacting on habitat, consequences of human induced climate change and finally illegal harvesting. Any impact by exotic species would principally be from carp and redfin perch.

We would seek any future DCCEW Conservation Advice in respect to *Euastacus armatus* reflect a more considered and evidence-based position in respect to trout.

The MAS is not disputing the fact that trout are predators and would most certainly exploit juvenile *Euastacus armatus*. Trout have been in the upper reaches of *Euastacus armatus* habitat range for 150 years. It is important to observe that trout have been there much longer than carp and redfin, which have only arrived more recently. It is obvious from the data presented that the population decline of these crayfish has occurred in the years since 1990, coinciding with the time from which carp and redfin began to proliferate. Our own observations have shown a marked decline in adult crayfish size and abundance in the last 10 years. For this species to survive and flourish into the future, scientists need to get over the prejudice of salmonids and realise they are no longer invasive, and that their range will diminish dramatically as climate change manifests itself across the landscape. These fish are of major significance as economic and social regional drivers. The drivers of decline are way more than simply trout.

The MAS is concerned that trout are simply an easy – and convenient – target for blame.

In respect to the minor editorial matters, the lack of page numbers in the CAM Assessment document made it difficult to refer to our concerns. We trust the page numbers cited here match your page rendering. Secondly, the link to the NSW DPI Priority Action Statement is broken:

<https://www.dpi.nsw.gov.au/fishing/species-protection/conservation/what-current/vulnerablespecies/murray-crayfish/priorities-action-statement-actions-for-murray-crayfish>

It appears that it should instead be:

<https://www.dpi.nsw.gov.au/fishing/threatened-species/what-current/vulnerable-species2/murray-crayfish/priorities-action-statement-actions-for-murray-crayfish>

(Original Signed)

Kerry Pfeiffer

President

Monaro Acclimatisation Society

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