

**FLORA & FAUNA  
GUARANTEE**

**FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE**  
**PRELIMINARY RECOMMENDATION ON A NOMINATION FOR LISTING**

**Overfishing for bait of the Common Yabby (*Cherax* sp) and localised endemic crayfish species under Fisheries Victoria Regulations**

(Potentially Threatening Process)

**Date of consideration:** 11 February, 27 April, 19 July 2010

**File No.:** FF/54/3190

**Validity:** The nomination is for a valid item

**Prescribed Information:** The prescribed information was provided.

**Name of the Nominator** is adequately provided.

**Name and Description of the process:**

In the opinion of the SAC the process is adequately defined and described.

The nominated process is defined as the 'Overfishing for bait of the Common Yabby (*Cherax* sp) and localised endemic crayfish species under Fisheries Victoria Regulations'.

Victorian freshwater crayfish comprise the following genera (number of Victorian species in brackets): *Cherax* ('smooth yabbies', two species plus at least one yet to be described taxa), *Engaeus* ('burrowing crayfish', 22 species), *Euastacus* ('spiny crayfish', 11 species), *Geocharax* ('land crayfish', two species) and *Gramastacus* ('swamp crayfish', two species). The *Engaeus* and *Euastacus* genera share the bulk of the native crayfish species recorded from Victoria (O'Brien 2007).

Semi-aquatic crayfish inhabit streams, lakes, dams etc. and are adapted to the naturally unpredictable nature of water availability in Australia, so that when water bodies become dry they burrow underground to reach moister conditions until the next rains. This group can live for some time out of water and also travel overland to other water bodies. They tend to be smaller than the true aquatic forms (125-150 mm when fully grown) and lack spines on the body. The best-known example of this group are the 'yabbies' (genus *Cherax*).

A number of Victorian crayfish (mainly the larger species i.e. crayfish growing to more than a kilogram in weight) are the target of recreational fishing (e.g. Murray Spiny Crayfish, Gippsland Spiny Crayfish and Glenelg Spiny Crayfish). These species tend to be slow-maturing and long-lived and are well known amongst anglers for their eating qualities. By far the main target of many crayfish anglers is the widely-distributed yabby (*Cherax destructor*) which now occurs across most of lowland Victoria (DSE 2010). The species is well known for its broad environmental tolerances and colonisation abilities (Coughran *et al.* 2009).

The natural distribution of *Cherax destructor* was originally the river systems west of the Great Dividing Range in Queensland, NSW, ACT, Victoria, South Australia and NT. The species has been introduced into Western Australia and Tasmania (see Coughran *et al.* 2009 for references) and widely translocated to other parts of Australia and coastal rivers in NSW. Within this range it supports important recreational and commercial fisheries and the aquaculture industry (Coughran *et al.* 2009).

Yabbies (especially *Cherax destructor*) are commercially grown for a number of purposes (Coughran *et al.* 2009)

- as food for humans and animals.
- as aquarium species and as food for other aquarium species.
- as bait for recreational fisherman.
- as stock to seed farm dams as a food source.

Some figures for yabbies sold at the Melbourne Fish Market are: 1979 - 10.92 tonnes, 1980 - 17.92T, 1981 - 13.41T (DSE data), many of these may have been artificially grown in ponds. The commercial catch of yabbies has also been increasing (ENRC 2000) viz. 1994 - 6.3T, 1995 - 6.1T, 1996 - 17.3T and 1997 - 25.5T. Aquaculture production for yabbies is far greater than the wild harvest, but the wild harvest is also growing (ENRC 2000). The commercial catch figures for freshwater yabbies in Victoria are: 2004 - 744 kg, 2005 - 1016 kg, 2006 - 1038 kg, 2007 - 1028 kg, 2008 - 2359 kg, 2009 - 3840 kg (Fisheries Victoria data, provided 2010).

Demand for yabbies is increasing both within and outside Australia. Most of the current production goes to the domestic market. They can be sold at a wide range of sizes, from seed stock to table-size yabbies (50 grams plus). Intermediate sizes are used for manufacturing and garnish, as well as for pets and bait. Markets are expanding, with demand exceeding supply (ENRC 2000). In 1997, total Australian production returned \$2,139,000, with Victoria contributing 15 per cent of the total, or \$325,000 from approximately 24 tonnes of product. Farmed production of yabbies in NSW, Victoria and SA occurs mainly in purpose built ponds. In 2001-02 these three states produced 71 tonnes of yabbies valued at \$800,000 (Australian Aquaculture Portal, May 2010, Piper 2000).

**Additional Information**

- There is a proposal to nominate translocation of *Cherax destructor* as a Key Threatening Process in NSW (Coughran *et al.* 2009).

- The 2008-2009 commercial catch of freshwater Yabby in Victoria was 4 tonnes (DPI 2009).

### Decision of the Scientific Advisory Committee

Victoria's Fisheries Regulations were reviewed and approved in March 2009. These changes meant the allowable daily take of whole yabbies (*Cherax species*) was increased from 20 litres to 30 litres.

The nomination argued that:

- the significance of the threat would be a dramatic reduction in yabby (and native cray) populations, especially during extended dry periods and conditions of climate change.
- the 2009 regulations under the *Fisheries Act 1995* will permit 721,000 Victorian recreational anglers to take an increased number (commercial quantities) of bait-sized yabbies (but not other native crays) without any form of monitoring. (In Victoria commercial bait fishermen are required to submit monthly catch and effort returns so Fisheries Victoria can monitor the health of fisheries).
- recreational fishermen are not required to be able to distinguish different species of native crays so crayfish that are not *Cherax* species would also be targeted. For example the nomination argued that *Geocharax* spp, *Gramastacus* spp, *Euastacus* spp and *Engaeus* spp (especially those that have an Occipital Carapace Length of less than 5 cm) would also be severely affected by increased recreational harvesting of crays for bait. Another un-named rare species of *Cherax* found in northern Victoria (Barmah Swamp Yabby, Edney *et al.* 2002) would also be potentially targeted.
- as a result of increased recreational fishing pressure of yabbies for bait, the average size of yabby populations could be significantly reduced leading to yabby/cray populations being more vulnerable to non-human predation.
- the amended Fisheries Regulations have no size restriction placed on a volume take of Yabbies and no requirement to return berried females this would also lead to declines in populations of these crustaceans.

The Scientific Advisory Committee (SAC) has assessed the information provided with the nomination, literature references and additional expert advice and determined as follows.

The SAC agrees that while there are limited data for commercial catches of freshwater yabbies there appears to be no monitoring of the harvest of yabbies for bait in Victoria. However, limited data from the Department of Primary Industries Fisheries Victoria Division did not support any decline in this widespread species.

The nomination identified *Cherax albidus*, *Engaeus* spp., *Euastacus* spp., *Geocharax* spp., and *Gramastacus* spp and the undescribed 'Barmah Swamp Yabby' as cray species threatened by the process. However no case was clearly made in the nomination that showed 'Overfishing for bait of the Common Yabby (*Cherax* sp) and localised endemic crayfish species under Fisheries Victoria Regulations' either poses or has the potential to pose a significant threat to the survival of two or more Victorian species or any community as required under the Flora and Fauna Guarantee Regulations 2001. The relevant information prescribed in Schedule 2 of the Flora and Fauna Guarantee Regulations 2001 was not provided.

The SAC has therefore made a Preliminary Recommendation to reject the nomination under Section 13(3)(c) of the Act.

### Selected references:

- DPI (2010) *Fisheries Victoria Commercial Fish Production Information Bulletin 2009*. Department of Primary Industries, Melbourne. Internet document at - [http://new.dpi.vic.gov.au/\\_data/assets/pdf\\_file/0017/29042/FV-Info-Bulletin-2009.pdf](http://new.dpi.vic.gov.au/_data/assets/pdf_file/0017/29042/FV-Info-Bulletin-2009.pdf)
- DSE (2010) *Atlas of Victorian Wildlife* (electronic fauna database). Department of Sustainability & Environment, Melbourne.
- Coughran, J., McCormack, R.B. & Daly, G. (2009) Translocation of the Yabby *Cherax destructor* into eastern drainages of New South Wales, Australia. *Australian Zoologist* 35(1): 100-103.
- Edney, G. N., McNeil, D. G. & Lawler, S. H. (2002) The Swamp Yabby (*Cherax* sp.) of the Murray River Catchment. *The Victorian Naturalist*. 119 (4): 200-204.
- ENRC (2000) *Inquiry into the Utilisation of Victorian Native Flora and Fauna*. Environment & Natural Resources Committee, Parliament of Victoria, Melbourne. Internet document at: <http://www.parliament.vic.gov.au/enrc/inquiries>
- O'Brien, M. B. (2007) Freshwater and terrestrial crayfish (Decapoda, Parastacidae) of Victoria: status, conservation, threatening processes and bibliography. *The Victorian Naturalist* 124 (4): 210-229.
- Piper, L. (2000) *Potential for expansion of the Freshwater Crayfish Industry in Australia*. A report for the Rural Industries Research and Development Corporation. RIRDC Publication no. 00/142.
- Internet document at - <https://rirdc.infoservices.com.au/downloads/00-142.pdf>

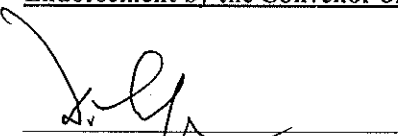
### Relevant websites:

Australian Aquaculture Portal (Freshwater Yabby):

[http://www.australian-aquacultureportal.com/PDF/industry\\_fwcrayfish\\_yabby.pdf](http://www.australian-aquacultureportal.com/PDF/industry_fwcrayfish_yabby.pdf)

### Endorsement by the Convenor of the Scientific Advisory Committee

Date

  
 Assoc Prof David Morgan  
 Convenor

26.7.10