

Honours project:

How many Cherabin (*Macrobrachium* sp.) are harvested and what is the ecological impact?

Background

Little is known about the ecological role of the freshwater prawn *Macrobrachium* (known locally in WA as Cherabin). There is some evidence that the omnivorous Cherabin can strongly impact algal and invertebrate communities and are therefore key consumers in aquatic food webs in tropical streams. Cherabin are commonly collected for consumption or bait and in some locations there is concern that Cherabin populations may be declining due to human harvesting, and possibly due to changes in the biotic and abiotic environment. Several Aboriginal communities in the Kimberley have expressed interest in research on Cherabin in local billabongs. A better understanding of the role that Cherabin play in aquatic food webs as well as information on level and impact of harvesting is important for the management of this popular species as well as ensuring the sustainable management of the regions waterways.

Project Aims

This study aims to provide important information for the management of Cherabin. The project will be developed in collaboration with Traditional Owners, Rangers and FitzCAM, since the research will be conducted in the Fitzroy River catchment of Western Australia on Indigenous country.

The project will examine the role of Cherabin in aquatic food webs and how people use them. Some of the questions might be:

- What times of the year do people collect Cherabin?
- How many do people take and for what uses?
- What is the impact of harvesting on Cherabin populations?
- How important are Cherabin in billabongs? (i.e. What would happen to the billabong if there were less Cherabin?)
- Provide recommendations regarding the management of Cherabin (*Macrobrachium* sp.)

Resources

The student will be based in Darwin at Charles Darwin University at the TRaCK hub in the School of Environmental Research. **Additional operational funding will be provided by the Western Australian Department of Water (Kununurra). And a \$2000 student scholarship will be provided by the School for Environmental Research, Charles Darwin University.**

This honours project will complement two current research projects being conducted as part of the Tropical Rivers and Coastal Knowledge Program (TRaCK). The TRaCK projects are looking at (a) The role

of large consumers on aquatic food webs and (b) Aboriginal values and river flows. TRaCK is a large multidisciplinary research program operating across northern Australia (see www.track.gov.au). This will be an excellent opportunity to build links with the WA Department of Water, the leading agency in managing water resources in Western Australia.

Potential Project Timeline

Feb/Mar 2010	<ul style="list-style-type: none"> • Student starts project • Visits Fitzroy Crossing to get a feel for the country, discuss the project with key people (traditional owners, rangers, other interested people), and organise the questions, sites and timings for fieldwork
Mar/Apr 2010	<ul style="list-style-type: none"> • Student reviews literature • Student writes detailed project proposal, including methods, field times, suggested analysis
May 2010	<ul style="list-style-type: none"> • Field trip 1 (project brief and reaffirmation with involved people, followed by field sampling. A debrief/summary of the trip to be provided before departure if possible)
June 2010	<ul style="list-style-type: none"> • Laboratory work and data entry
July 2010	<ul style="list-style-type: none"> • Work on thesis
Aug 2010	<ul style="list-style-type: none"> • Field trip 2 (summary of info from last trip for involved people, followed by field sampling. Debrief/summary before departure if possible)
Sep 2010	<ul style="list-style-type: none"> • Laboratory work, data entry and work on thesis
Oct/Nov 2010	<ul style="list-style-type: none"> • Field trip 3 (summary of info from last trip for involved people, followed by field sampling. Debrief/summary before departure if possible)
Nov 2010	<ul style="list-style-type: none"> • Student completes thesis and submits • Additional materials constructed from the work with the assistance of supervisors

Staff Involved

1. Dr. Erica Garcia (TRaCK food webs researcher (CDU) – primary academic supervision)
2. Assoc. Prof. Michael Douglas (TRaCK director (CDU) – academic supervision)
3. Dr. Marcus Finn (TRaCK Indigenous resource use researcher (CSIRO) – academic supervision and field support)
4. Rob Cossart (WA Department of Water – academic supervision and field support)
5. Jane Blackwood (KLC – supervision and coordination from KLC e.g. Rangers)

NOTE: Project subject to approval by the Kimberley Land Council (KLC)

If interested, email your CV to:

Or for more information contact:

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