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Taxonomy, zoogeography and conservation status of aquatic invertebrates

Wetlands Conservation

Project Core Team

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Project Team	granted
Program Leader	granted
Directorate	granted

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Context

The Wetlands Conservation Program undertakes research into aquatic invertebrate biodiversity, including spatial patterning and trends over time in relation to threats. Over half of the species we deal with are not formally described, but they are consistently named across departmental projects through maintenance of a voucher specimen collection. As opportunities and skills allow, program staff undertake systematics studies (primarily species descriptions and genetic analyses), sometimes with specialist co-authors. This allows formal naming and description of Western Australian endemics that would not otherwise occur and allows species to be consistently identified by external research groups. We also produce tools allowing consistent identification of aquatic invertebrates. This project encompasses this systematics research.

Aims

The aim of this project is to undertake research into aquatic invertebrate systematics to

- Better describe Western Australian aquatic invertebrate biodiversity.
- Allow more consistent identification of specimens by departmental and external researchers.

Progress

- A paper describing a new species of *Boeckella* copepod from a claypan on Matuwa (ex Lorna Glen) is nearing completion.
- A book chapter on Australian and New Zealand aquatic oligochaetes was commenced.
- Genetic barcoding of selected invertebrates was undertaken for a survey of claypans in the Fortescue Valley to enable larvae to be more consistently identified.

Management implications

- The description of a new species of *Boeckella* copepod will allow consistent identification across the Goldfields region and therefore assist with environmental impact assessment.
- Biodiversity conservation planning advice based on more comprehensive and consistent biodiversity analyses as a result of genetic barcoding of difficult to identify invertebrates.

Future directions

- Undertake similar taxonomic work as required and as resources allow.