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Taxonomy, zoogeography and conservation status of aquatic invertebrates

Ecosystem Science

Project Core Team

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Project Team	granted
Program Leader	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 dealt 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. Tools allowing consistent identification of aquatic invertebrates will also be produced.

Aims

- Undertake aquatic invertebrate systematics to improve description of Western Australian aquatic invertebrate biodiversity and 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) was published.
- A book chapter on Australian and New Zealand aquatic oligochaetes was completed.
- An annotated checklist of Western Australian rotifers was commenced.
- Scanning electron micrographs of two undescribed species were taken with a view to describing them.
- A rapid assessment of rare and restricted aquatic invertebrates of south-western Australia was undertaken, identifying about 50 potential Priority Species. These mostly require some further assessment but 10 have been assessed in more detail and proposed as Priority Species.

Management implications

- A number of aquatic invertebrates have been added to the list of Priority Species and these will need to be taken into consideration during environmental impact assessment.
- The description of new species and the production of taxonomic tools, such as the book chapter on aquatic oligochaetes, will allow more routine and consistent identification of this group, including in environmental impact assessment.

Future directions

- Undertake similar taxonomic work as required.