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The Western Australian marine benthic algae online and an interactive key to the genera of Australian marine benthic algae

Plant Science and Herbarium

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Project Team	granted
Program Leader	granted
Directorate	granted

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Context

This project is a direct successor to the 'WA Marine Plants Online' and will provide descriptions of the entire Western Australian marine flora as currently known, accessible through FloraBase. Interactive keys enable positive identification of specimens and provide a user-friendly resource that enables the identification of marine plants by non-experts. It will be of great value in systematic research, teaching, environmental and ecological research, and additionally in environmental monitoring and quarantine procedures.

Aims

- Prepare an interactive key to the approximately 600 genera of Australian marine macroalgae.
- Provide online descriptions of the Western Australian marine flora, including morphological and reproductive features, to enable easy comparison between species.
- Provide online descriptions of higher taxa (genus and above).
- Incorporate descriptions and images of newly described or recorded taxa of marine flora into FloraBase.

Progress

- All of the species descriptions (c. 150) from the book *Algae of Australia: The Marine Benthic Flora of North-western Australia, 1. The Green and Brown Algae*(Huisman 2015) have been edited and uploaded to FloraBase.
- The second book in the series, *Algae of Australia: The Marine Benthic Flora of North-western Australia, 2. The Red* Algae, is nearing completion and will be published in 2016. This book includes descriptions of over 300 species of red algae, plus higher-level taxa, and descriptions and images of these will be uploaded to FloraBase once the book is published.
- Numerous additional *in situ* and microscopic images of marine algae have been taken. Over 100 new images have been uploaded to ImageBank/FloraBase.
- 450 new specimens of marine algae have been added to the herbarium collection; these are primarily newly recorded species or specimens from remote locations, including the offshore Kimberley.

Management implications

- Easier identification of marine plant species will lead to a more accurate understanding of their conservation status, and enhanced knowledge of marine biodiversity which will permit a more accurate assessment of management proposals/practices and threats to biodiversity.
- Provision of a readily available web-based information system will facilitate easy access by managers, researchers, community and other marine stakeholders to marine plant species inventories and up-to-date names.

Future directions

- Continue preparation and finalize interactive key. As with FloraBase descriptions, this will be based substantially on the contents of the two books describing the north-western Australian algal flora.
- Continue collating existing species descriptions and write new descriptions for uploading to FloraBase.
- Upload additional marine plant images to ImageBank/FloraBase.