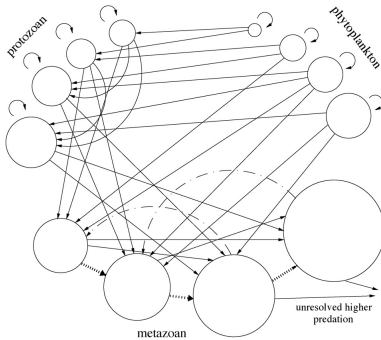


PhD Position Available

Using zooplankton size-distributions to improve ecosystem models

Supervisors: Prof. Iain Suthers (UNSW), Dr Jason Everett (UNSW), Dr Mark Baird (CSIRO Oceans and Atmosphere, Hobart), Assoc. Prof. Anthony Richardson (UQ and CSIRO Oceans and Atmosphere, Brisbane).



Project Details

It is currently challenging to represent zooplankton in biogeochemical and ecosystem models because of the complexity in the zooplankton community, with at least a dozen common phyla. As respiration, growth, mobility, abundance, and mortality are all related to organism size, describing the zooplankton community in terms of size of individuals and incorporating this into models provides a natural way to move forward.

In this project, the PhD student will use a global dataset of zooplankton size spectra to develop methods of incorporating size into existing coastal and global ecosystem models, and investigate the impact of these formulations on model predictions.

This PhD position is part of a larger Australian Research Council Discovery project that is analyzing a global database of zooplankton size spectra to investigate how zooplankton control the transfer of energy from phytoplankton to fish. The PhD student will have access to an unprecedented national and international database of zooplankton size spectra, and extensive collaborations with statisticians, biologists and ecosystem modellers.

PhD Details

The applicant will have a First Class Honours degree in science or mathematics and a keen interest in numerical modelling and marine biology. The student will require computational or numerical biology experience and programming (i.e. MATLAB, R, python).

The candidate would need to apply for an Australian Postgraduate Award at UNSW or UQ. The Ph.D. candidate will be based at CSIRO in Hobart, Australia where they can work closely with Dr. Baird and other CSIRO ecosystem modellers. Regular trips to UNSW/UQ and periods of time away at collaborating institutions will be required. In addition, the candidate will stand a good chance of getting a CSIRO Scholarship.

In the first instance, please send your CV (max 2 pages) and university transcript, along with a cover letter (max 2 pages) outlining your relevant experience/skills and reasons for applying for this PhD project to: Dr Jason Everett (Jason.Everett@unsw.edu.au).