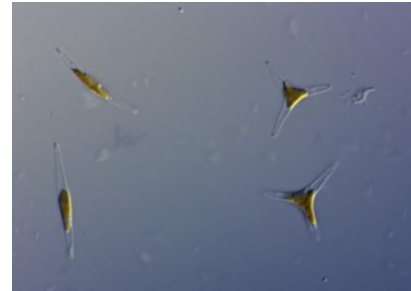


The [Community Ecology and Evolution](#) group led by Dr Giulia Ghedini is seeking motivated PhD candidates to join the team in the School of Biological Sciences at Monash University in Melbourne.

The lab: Climate change is altering how species perform and interact, with massive implications for the productivity and functioning of ecosystems. To understand these effects, we use marine phytoplankton to study how species interactions affect the metabolic rates and resource use of organisms, and how these plastic and evolutionary changes scale up to influence community properties - including their productivity, diversity and stability. For examples of our recent work see here: <https://www.giuliaghedini.com/publications>



The specific PhD project can be defined according to interests of the candidate, within the broader research interests of the group. Two available research projects are:

Project 1: Understanding how warming and resources affect the shape of population growth

How species grow influences the ability of species to coexist as well as the productivity of their communities. New data from our lab show that interactions within populations might reduce growth before resources become limiting. The project will explore how two main environmental drivers (warming and resources) interact to shape these responses and growth patterns across species of very different sizes, leveraging the size variation of phytoplankton which span more than three orders of magnitude in cell volume.

Project 2: Determining how co-adaptation influences the relationship between biodiversity and ecosystem functioning (BEF)

The student will use experimental evolution to evolve phytoplankton species in different competitive environments. The evolved species will be used to assemble of co-adapted or naïve communities using common garden experiments to determine how species co-adaptation influences BEF relationships, with particular focus on traits related to metabolic rates and resource use.

Both projects offer opportunities to work with collaborators in Australia and Europe.

Selection criteria:

- Bachelor's degree with first class honours or equivalent grades for Masters Degree
- Knowledge in one of the following areas: ecology, marine biology, evolutionary biology, microbial ecology. Hands on experience in any of those areas will also be an advantage
- Strong written and verbal communication skills in English
- A demonstrated capacity to work independently and as part of a team
- A high level of motivation and enthusiasm for the research topic and to perform laboratory work
- Experience in statistical analysis in R (or similar)

Eligibility and scholarship information:

Honours or Masters of Science degree or equivalent are required. Candidates can be national (Australian) or international and will need to apply for PhD scholarships with the support of the group leader. Information about scholarship eligibility and deadlines can be found here:

<https://www.monash.edu/study/fees-scholarships/scholarships/find-a-scholarship/monash-graduate-scholarship-mgs#scholarship-details>

After checking your eligibility, please **email your expression of interest** to Dr Giulia Ghedini (giulia.ghedini@monash.edu). Include a motivation letter (max 2 pages) describing your expertise and interests, stating why you see yourself as a good fit for our research group. Please also include your academic transcripts and your CV with a list of publications if available and contacts of two referees.