ACE CRC Intern Project for 2016/17 **Number: RP2.2_01**

Supervisor: Philip Boyd

ACE CRC Project (RP): 2.2

Project Title:

Desktop study of methods employed to study the biological effects of multiple oceanic stressors.

Background/context of project:

Ocean conditions are projected to change due to the influence of humankind on emitting CO_2 into the atmosphere, one third of which is taken up by the ocean. The direct and indirect effects of these changes on the ocean are together causing shifts on ocean pH, temperature, oxygen, nutrients, salinity and underwater light levels. A fledgling research field has begun to investigate how these changing conditions will alter biological processes - from physiology to ecology - across a wide range of marine life. However, there is a danger that few of these studies will be relatable in the future if we do not assess the range of approaches that have been used to date, and whether we can standardise the approaches in some way to make them more intercomparable.

Project outline:

This internship will develop a literature search, leading to a classification of methods used and statistical analysis employed across marine multiple stressor experiments done to date. The goal of this work is to inform the development of best practice research within ACE CRC project R2.2, and to ultimately feed into a new SCOR Working Group (149 on ocean global change biology). The successful candidate will be a co-author on both an internal report and also a manuscript that will be submitted to an international peer reviewed journal.

Key deliverables:

1. Literature review of the classification of methods employed across marine multiple stressor experiments done to date.
2. Classification of statistical analysis employed across marine multiple stressor experiments.

Any specific skills required:

1. This project is aimed at final year or honour level students with a physical sciences, environmental sciences or mathematics background although other applicants will be considered on merit.
2. Well-developed computing skills, with familiarity of www based search engines and scientific literature databases.

Contact details

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