



# PHD OPPORTUNITY



## RESEARCH TRAINING PROGRAM

### MICROBIOMES OF THE BLACK JEWFISH: SPATIO-TEMPORAL VARIATION AND THE INFLUENCE OF ENVIRONMENTAL CHANGE

#### ABOUT THE PROJECT

The black jewfish (*Protonibea diacanthus*) is highly prized fish for its table qualities. It has been heavily overfished across their tropical Indo-West Pacific distribution with northern Australia as one of the last strongholds of this species. Skin mucus bacteria form the first barrier against infections by opportunistic pathogens and parasites and could potentially be used as microbial biomarkers of fish health, thus aiding management of wild fish populations.

We are seeking a suitable candidate to undertake PhD research study to **(i) explore the phylogenetic structure of fish skin mucus and gut microbial communities;** **(ii) investigate the effect of environmental drivers on the structure of microbial communities in both tissues;** **(iii) examine relationships between microbial communities and indicators of fish health;** and, **(iv) provide research outputs linking microbiome structure to fish health and disease as tools for fisheries management.**



RIEL

Research Institute for the Environment and Livelihoods

#### ABOUT YOU

The selection of applicants involves consideration of your academic merit and research background. The following essential criteria apply:

- Australian citizens, permanent residents and New Zealand citizens
- First class honours or equivalent in a relevant research area.
- Research experience in the form of publications may be used to increase an honours score or honours equivalency.
- Background or interest in microbiology and DNA analysis, marine ecology and fisheries biology

#### APPLICATION PROCESS

For information on the application process click [here](#). The closing date for expressions of interests is **31 October 2020**.

For further information about this PhD opportunity and research project, please email Doctor [Joanne.Randall@cdu.edu.au](mailto:Joanne.Randall@cdu.edu.au) or Professor [Keith.Christian@cdu.edu.au](mailto:Keith.Christian@cdu.edu.au)