Progress Report 2015-3 (FY 2014-2015)

Student project 2015-3 Can diver operated stereo-video surveys of fish be used to collect meaningful data on tropical coral reef communities for long term monitoring?

Marine Science

Endorsements and approvals as of Jan. 21, 2016, 10:06 a.m.

Project Team	granted
Program Leader	granted
Directorate	required

Progress Report

Monitoring methods for one asset often collect information relevant to other natural assets. Use of a single method to monitor the condition of multiple assets can reduce operational costs of a monitoring program, although it is important that the method does not compromise manager's ability to detect signals of change in biological indicators. This study investigated comparability of benthic community data recorded by downwards facing cameras, commonly used in benthic monitoring programs, and a forward facing stereo-DOV (F-DOV) typically used in fish surveys. Analyses indicated a degree of similarity in the benthic taxa detected by the two digital imagery methods; however the forward facing stereo F-DOV video systems demonstrated an enhanced ability to describe erect benthic components of the reef, and limited ability to detect benthos with low morphological profiles in comparison to downwards facing cameras. Using comparative models, data recorded by one method can be adjusted and corrected to make it comparable with the data collected by the alternative method. Thus, Stereo-DOV surveys for fish can be considered a suitable method for the simultaneous assessment of fish and important benthic habitat. In conjunction with imagery collected using downwards facing cameras Stereo-DOV imagery may also provide a more extensive and cost effective description of the benthic marine environment through space and time.

A honours thesis related to this project has been submitted.