



How long do Dugongs dive?

PROJECT NAME: Testing of pressure sensors in Reef HQ Aquarium to compare the efficacy of a new sensor with the traditional ones, in order to understand dugongs' dive and surface behaviours for obtaining more accurate population abundance using aerial surveys.

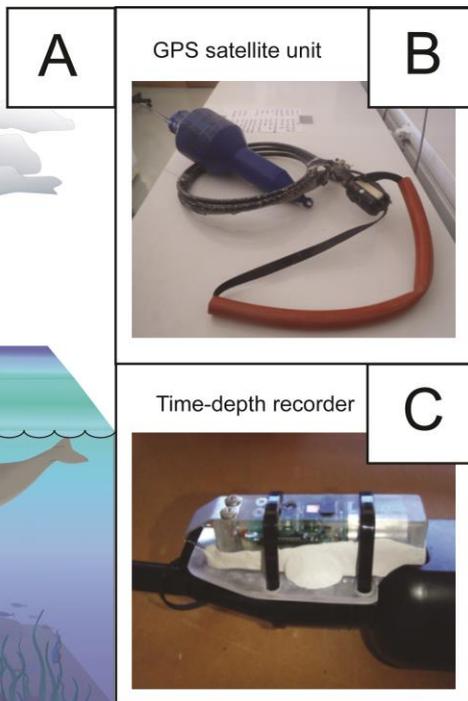
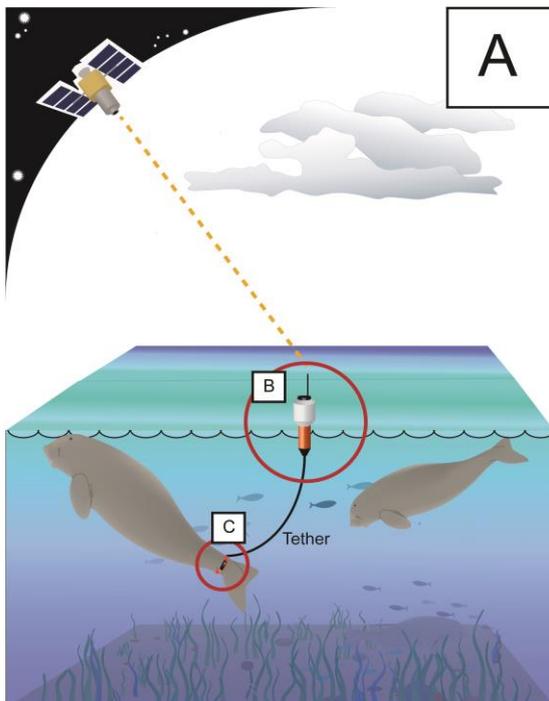
PROJECT DATES: April – July 2014.

PROJECT LEADER: Rie Hagihara. James Cook University, Australia.

PROJECT FOCUS: Dugongs are a protected species on the Great Barrier Reef. Surveying their population and their use of the ocean involves observations from planes to count individuals. In order to account for the animals that are underwater whilst counting, researchers attach depth loggers to wild dugongs to record their depth and position while diving.

These traditional sensors need to be recovered to access the data, which is limiting. So this study tests a new depth sensor called miniPAT that sends the data directly via satellite communication (no recovery required).

Before planning large scale studies with miniPAT, researchers need to assess if the miniPAT provides dive data that are of good quality compared to the traditional system. These sensors were tested in Reef HQ Aquarium under controlled conditions before attaching them to wild dugongs in Moreton Bay as a pilot study.



Dugong tracking apparatus: a GPS satellite unit, a time-depth recorder, and a 3-m tether (A). GPS unit identifies locations of the tagged dugong (B), and diving depths is recorded by a time-depth recorder (C). A miniPAT, which also records depth, was attached very close to the tail, close to a time-depth recorder.

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PROJECT OUTCOMES: After confirming the viability of the new method, the research team attached miniPAT sensors to wild dugongs captured in Moreton Bay. In the long term data acquired with miniPAT can complement aerial surveys to estimate dugong populations, monitor their dynamics, and understand their use of various habitats along the Great Barrier Reef.

