Feeding increases coral transplant survival

Juvenile corals fed prior to transplantation to new reef more successful

Feeding juvenile corals prior to transplantation into a new reef may increase their survival, according to a study published June 4, 2014 in the open-access journal *PLOS ONE* by Tai Chong Toh from the National University of Singapore and colleagues.

The global decline of coral reefs and the loss of associated ecological services have necessitated immediate intervention measures to try to reverse their further deterioration. Scientists have attempted to recolonize damaged reefs by transplanting juvenile corals, but the survival of young corals on the reef remained low. To test if feeding juvenile corals in order to reach a larger size would improve post-transplantation survivorship, coral recruits were fed four groups different amounts of food (3600, 1800, 600 and 0 nauplii/L) twice a week for 24 weeks in an ex situ nursery.

The authors found that fed coral recruits grew significantly faster and larger in the lab than unfed corals. Juvenile corals supplied with the highest density of food (3600 nauplii/L) increased by more than 74 times their initial size. Once these coral were transplanted, the fed ones had significantly higher survival rates than unfed ones. The authors suggest that nutritional enhancement can augment coral growth and post-transplantation survival, and is an economically viable option that can be used to supplement existing coral transplant procedures and enhance reef restoration outcomes.

Mr. Toh added, "The results have underlined the feasibility of feeding juvenile corals as a supplementary measure to enhance coral transplant survival on the reef, and this could be applied to both aquaculture and restoration efforts."


Financial Disclosure:

Funding for the research was provided by Wildlife Reserves Singapore Conservation Fund awarded to TCT. TCT was supported by the National University of Singapore Research Scholarship and the SingHaiYi Scholarship. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interest Statement:

The authors have declared that no competing interests exist.

PLEASE LINK TO THE SCIENTIFIC ARTICLE IN ONLINE VERSIONS OF YOUR REPORT (URL goes
Disclaimer:

This press release refers to an upcoming article in *PLOS ONE*. The release has been provided by the article authors and/or journal staff. Any opinions expressed in these are the personal views of the contributors, and do not necessarily represent the views or policies of PLOS. PLOS expressly disclaims any and all warranties and liability in connection with the information found in the release and article and your use of such information.

About *PLOS ONE*:

*PLOS ONE* is the first journal of primary research from all areas of science to employ a combination of peer review and post-publication article level metrics and commenting, to maximize the impact of every report it publishes. *PLOS ONE* is published by the Public Library of Science (PLOS), the open-access publisher whose goal is to make the world's scientific and medical literature a public resource.

All works published in *PLOS ONE* are Open Access. Everything is immediately available—to read, download, redistribute, include in databases and otherwise use—without cost to anyone, anywhere, subject only to the condition that the original authors and source are properly attributed. For more information about *PLOS ONE* relevant to journalists, bloggers and press officers, including details of our press release process and our embargo policy, see the everyONE blog at [http://everyone.plos.org/media](http://everyone.plos.org/media).

---

*AAAS and EurekAlert! are not responsible for the accuracy of news releases posted to EurekAlert! by contributing institutions or for the use of any information through the EurekAlert! system.*