Research team looks to Kickstarter to fund swarming 'coralbots' to repair damaged coral

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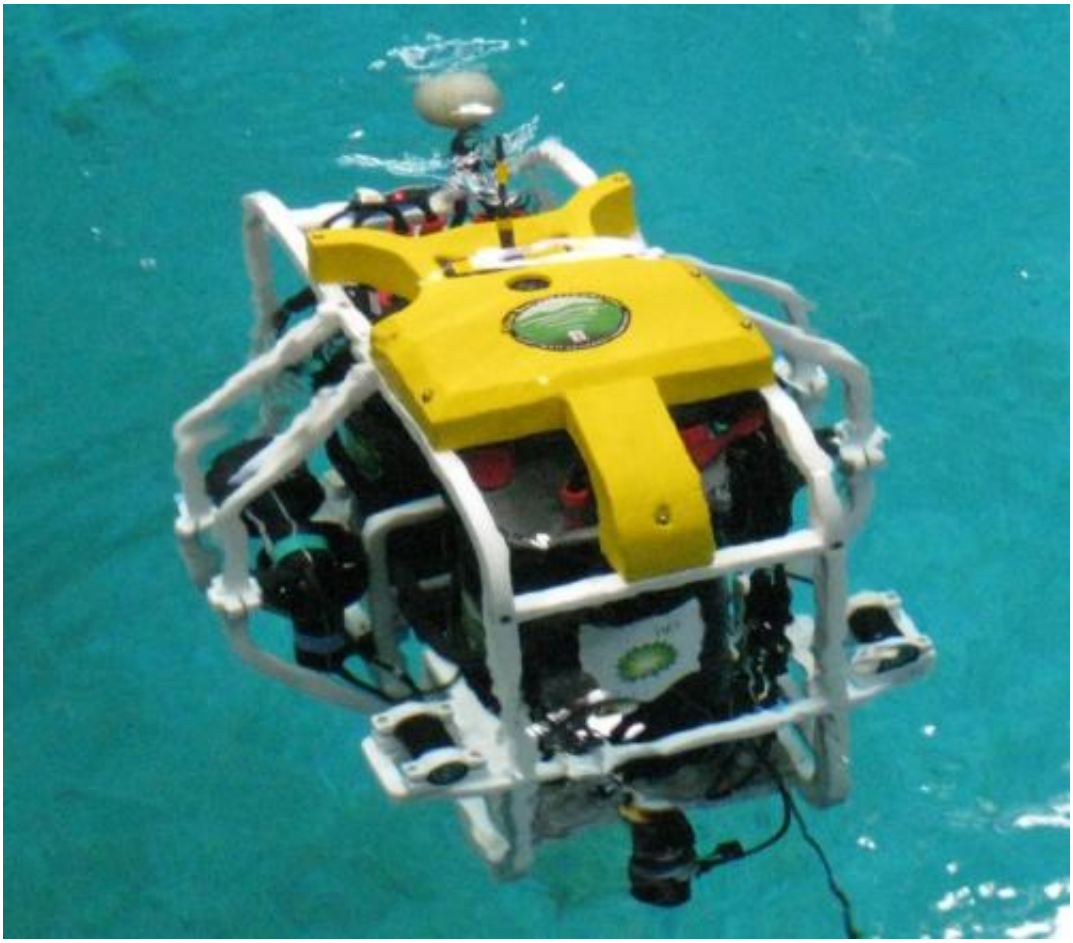

(Phys.org) —Researchers from Hariot-Watt University's Centre for Marine Biodiversity and Biotechnology, in Edinburgh, Scotland have

started a Kickstarter project with the aim of securing funds to assist in the development of swarms of undersea robots whose mission is to restore damaged coral reefs.

Coral reefs are important, the team notes—they are responsible for the livelihoods of nearly half a billion people. The problem is, the reefs have been damaged by human activities, most specifically, bottom fishing—a type of fishing that involves using hand lines or rods to catch fish that live on or near the sea floor. Hooks tied to lines are carried to the bottom by weights, which also cause them to become lodged in reefs—the person on the other end typically responds by yanking on the line, causing a piece of the reef to be torn away. Unfortunately, reefs take years, or in some cases centuries to repair themselves. Because of that, ocean scientists have been studying ways to speed up the repair process. They've found that reefs can heal much faster if pieces that fall to the ocean floor are recovered and glued back onto the reef. The problem with that approach is that people can only stay underwater for very short periods of time, and can only dive so deep. Plus, there aren't many volunteers available to help.

To get around these problems, the group from Hariot-Watt has come together to build a team of robots that could work as a swarm to repair the coral autonomously. The research group is made up of members with expertise in different areas—oceanography, computer programming, swarming, robotics, etc. Thus far, the group has built a single robot that has demonstrated some capabilities, but there is still a lot of work yet to be done, that's why they've created a Kickstarter project—the hope is that funds donated by interested parties will help in the development of a computer vision system and with configuration of the arm it will use. On their Kickstarter page, they're asking for $107,000—enough they say to complete their first true coralbot which will be demonstrated to the public in an aquarium. That they hope, will be enough to convince other

investors to kick in funds for building several more of the bots—enough to create swarms of them that can be deployed to undersea locations to repair damaged corals without assistance.

More information: www.kickstarter.com/projects/3 … t-repair-coral-reefs
www.hw.ac.uk/news-events/news/coral-reefs.htm