Volume 1, Issue 9

May, 2016

CARIBBEAN CORRESPONDENCE

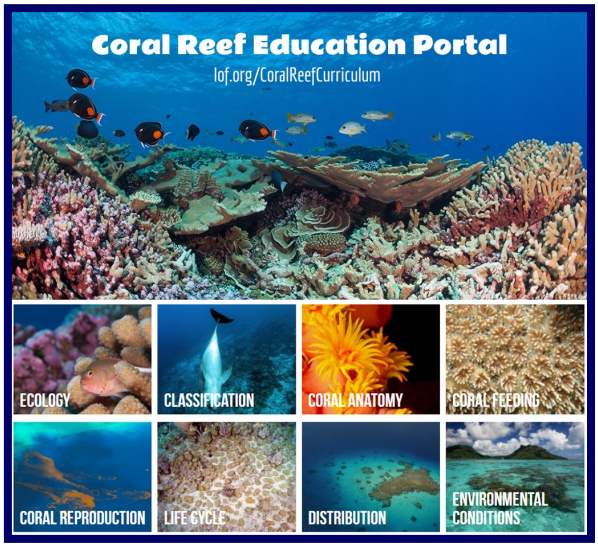
Association of Marine Laboratories of the Caribbean Monthly Note to Members

Please continue to send education and research updates to be featured in upcoming issues as well as opportunities for collaboration to communications.amlc.carib@gmail.com.

A New Artificial Reef Design in AMLC

Coral cover on Jamaican reefs decreased from more than 50% in the 1970's to approximately 10% today due to repeated natural and human impacts. The once abundant Elkhorn and Staghorn corals were destroyed by the concurrent impacts of Hurricane Allen, White Band Disease and opportunistic corallivores. Algal overgrowth due to reduced herbivory from chronic overfishing and urchin mass mortality in the early 1980's also hindered the recruitment and survival of corals. Present work at the University of the West Indies - Discovery Bay Marine Laboratory is investigating a modified version of the BioRock™ process which relies solely on adding a sacrificial anode to metal frames designed to mimic the branching structure of Staghorn coral. These Acropora Iron Reef (AIR) modules were seeded with small pieces of *A. cervicornis*. Over a period of 18 months transplant survival varied between 50% for modules in shallow, turbid, back-reef waters and 90% on those in shallow, clear water near the shore. Fragments on shallow AIR modules grew to resemble a bouquet occupying >500cm^3. Coral seeded modules appear to facilitate the presence of juvenile reef fish within and immediately adjacent to their branches. AIR modules provide low cost artificial reef structures that imitate the 3-D vertical growth form of natural staghorn thickets. The results of this project will inform future initiatives for the recovery of coral habitats and associated fisheries resources in prime tourism and fishing areas. For further information contact Peter Gayle – Principal Scientific Officer; peter.gayle@gmail.com

AMLC and Education



The Khaled bin Sultan Living Oceans Foundation is bringing marine science education to students around the world through the new Coral Reef Ecology Curriculum. This custom-built online platform contains educational videos, interactive exercises and games designed to educate people about life on coral reefs. The Coral Reef Ecology Curriculum uses marine science, conservation, and coral reefs as examples to teach broad themes relating to the natural world and our environment. The development of the curriculum is part of the Foundation's broader mission to improve ocean health through science, outreach, and education. Most lessons target S.T.E.M. subject areas, but it includes many lessons appropriate for English and art classes as well. All of the lessons are aligned to the latest educational standards including the Common Core State Standards, Next Generation Science Standards, and Ocean Literacy Principles. The Coral Reef Ecology Curriculum promises to be a great resource, especially for middle and high school science teachers, but it is also a useful teaching tool for anyone interested in learning about coral reefs. Teachers can download worksheets, get ideas for fun and instructive classroom activities, and track the progress of each of the students in their class. Students and life-long learners can test their coral reef knowledge with interactive quizzes, earn badges, and learn at their own pace. The Coral Reef Ecology Curriculum is free to everyone and simply requires an internet connection. To learn more visit: www.lof.org/CoralReefCurriculum