

**From:** Kathryn Correia  
**Subject:** CCMI Reef Research Experience - Summer 2017

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To Whom This May Concern on ECOLOG-L:

Please circulate this announcement to those whom you feel may be interested. Apologies for any cross-posting.

As CCMI is aware of the current discussions happening on these list-serve's, we are fully prepared to answer any questions anyone in the community may have regarding our need to charge a fee for these programmes.

Thank you for your time in reading and circulating this announcement!

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**The Central Caribbean Marine Institute – Little Cayman Research Station (CCMI – LCRC)**

**\*NEW\* Reef Research Experience (RRE) – Coral Reef Research and Spatial Ecology**

**\*APPLICATION DEADLINE MAY 1<sup>ST</sup>, 2017\***

**DO YOU WANT TO CONTRIBUTE TO CORAL CONSERVATION RESEARCH?**

The CCMI – LCRC in the Cayman Islands is recruiting 15 junior research assistants for an exciting new coral reef and spatial ecology research experience for a two-week period during the summer of 2017. Junior Research Assistants (JRA's) will work alongside CCMI scientists to focus on answering exciting questions regarding two specific projects:

**Project 1: Fish Herbivory and Productivity**

This project is funded with the help of the Darwin Initiative, a UK government grant scheme that helps to protect biodiversity and the natural environment in developing countries and UK overseas territories. Junior research assistants will help assist with the expansion of our knowledge regarding the population dynamics of key herbivore species (such as parrotfishes and urchins) in the waters surrounding Little Cayman. Data collection regarding competition in the spatial ecology between reef fishes, algae, and stony corals will contribute to developing a biodiversity action plan for the Cayman Islands.

**Project 2: Coral Reef Resilience and Restoration**

This project is part of our Long-term Assessment and Monitoring Program (LAMP) funded by

various organizations throughout the last 10 years. Junior research assistants will assist with monitoring the health of outplanted *Acropora cervicornis* colonies at 10 different restoration sites around Little Cayman, across various parameters such as: bleaching, disease, predation, and fragmentation. Junior research assistants will also be conducting benthic habitat surveys as part of our Coral Reef Resilience and Restoration Research program, where you will learn how to analyze data using a new program called CoralNET. CoralNet is a free platform developed by the University of California at Santa Barbara which utilizes artificial intelligence to analyze the composition of marine benthic communities. Data collected from this research will contribute to developing a restoration plan which will assist with the identification of optimal restoration sites around the Cayman Islands.

### **LENGTH OF PROGRAMME:**

**Session 1: July 14<sup>th</sup> – 28<sup>th</sup>, 2017**

**Session 2: August 16<sup>th</sup> – 30<sup>th</sup>, 2017 (If session 1 fills)**

### **PROGRAMME OBJECTIVES:**

- Establish a Cayman Islands CoralNet database of marine benthic communities
- Enrich our existing database of fish populations, stony coral cover, and algae density
- Create a Cayman Islands web-based field guide of key herbivores species
- Determine localized extinction risks of endangered corals by mapping coral restoration sites and assessing coral -health at our LAMP sites

**EXPERIENCE YOU WILL GAIN:** Minimum of 15 + research dives (weather permitting)

- Knowledge of coral reef ecology; including Caribbean coral, algae, and fish identification workshops
- Skills in underwater field research methods
- Working directly with endangered coral species (specifically *Acropora cervicornis* and *Acropora palmata*)
- Instruction on creating an experimental design, data collection, and data analysis
- Analyzing coral reef images using image analysis software (CoralNet, ArcGIS, and AgiSoft) to construct photo-mosaics and underwater maps to aid in habitat restoration techniques

\*CCMI will issue a Certificate of Completion of 80 hours in Coral Reef Research and Spatial Ecology at the completion of the reef research experience.

### **REQUIREMENTS:**

We seek a to fill 15 junior research assistant positions over a 14-day period during the summer of 2017. Requirements include:

- 18+ years of age

- Open Water Diver with at least 20 logged dives (Advanced certification or higher preferred)
- Insured through DAN
- Current enrollment in an undergraduate programme with a focus in Marine Science, Biology, Environmental Science or a related field (or a recent graduate)
- Must be physically fit to work long days in the sun and on the water

\*CCMI will endeavor to fulfill all research dives, however if weather conditions are deemed too dangerous we reserve the right to postpone all in water activities, including SCUBA diving until the next safest period.

**PRICE:**

A fee of \$2,650USD will cover:

- On site accommodations for a 14-night stay
- Three meals a day
- Roundtrip airport transportation
- Boat time
- All research dives and snorkels
- All necessary field equipment
- The use of CCMI-LCRC bicycles
- All offered course work (cumulating in 80 hours of work in Coral Reef Research and Spatial Ecology)

\*This fee does not cover flight costs, SCUBA equipment rental, or DAN dive accident insurance

**BACKGROUND AND RATIONALE:**

Whole economies and stable societies are rooted in healthy marine environments. For the Cayman Islands, coral reefs are one of the nation's greatest treasures that brings economic value and positive public relations to the country. What's shocking is that throughout the Cayman Islands, there are key species on the reefs including parrotfishes which are not protected by modern day fishing regulations. The Cayman Islands and especially Little Cayman, is in need of regional surveys to be conducted by CCMI faculty, staff, and interns to establish a better understanding of the diversity, abundance, and the level of threat which these key herbivories are facing. Additionally, on a global scale, coral reefs are at a heightened level of stress due to climate change, ocean acidification, and direct anthropogenic impacts. Average coral cover in the Caribbean has dropped to 14% and continues to decline globally. However, reefs in Little Cayman show an average coral cover of >20% and have recovered from four recognized bleaching events over the past decade. Specifically, during the 2015 temperature induced bleaching event, corals were moderately to severely impacted, however by 2016, these corals had recovered to what appeared to be 100% health. This recovery demonstrates the potentially resilient capabilities of corals around the reefs of Little Cayman. Restoration efforts of several threatened or endangered coral species have since expanded throughout the Greater Caribbean basin to assist with species recovery efforts. However, we do not

know whether these restoration efforts are successful in the Cayman Islands.

**TO APPLY PLEASE SEND THE FOLLOWING to [applications@reefresearch.org](mailto:applications@reefresearch.org) (no later than May 1<sup>st</sup>, 2017):**

- A letter of interest (maximum 500 words)
- Resume
- Contact details of two persons of reference

**\*Once accepted into the Reef Research Experience, a \$550USD deposit will be necessary to secure your spot. This will come directly out of the overall programme cost of \$2,650USD.**