



University of the West Indies

CENTRE FOR MARINE SCIENCES CMS NEWSLETTER

Volume 22

April 2014

Inside this issue:

<i>Coastal Management in Jamaica: Monitoring, Mentoring and Modeling</i>	2
<i>Research Days 2014</i>	2
<i>UWI's 3rd Marine Lab established in Portland—cont'd. from page 1</i>	3
<i>Introduction to the AGRRA Benthic & Coral Protocols Workshop</i>	3
<i>AML.C Publication</i>	4
<i>Ecosystem Valuation Publication</i>	4
<i>Upcoming Events</i>	4
<i>Spotlight on Staff</i>	4

From the Editor:

The University of the West Indies was fortunate enough to partner with TBA21 to establish the *Alligator Head Marine Lab* in order to conduct research on the marine environment in the eastern section of the island. The launch of this collaboration, which will facilitate and greatly enhance our ability to fill the data gaps that have been previously identified, is featured in this issue of the *CMS Newsletter*.

Many thanks to Patrice Francis, Gina-Marine Maddix and Pamela Housen for their contributions, constructive criticism and advice on content and layout.

Marcia M. Creary Ford

UWI's 3rd Marine Lab Established in Portland

The Alligator Head Marine Lab has been set up with financial assistance from the Thyssen-Bornemisza Art Contemporary (TBA21 Academy) out of Austria, through its founder and chairperson, Archduchess Francesca von Habsburg

On Sunday, March 9, 2014, a Memorandum of Understanding was signed between the University of the West Indies (UWI) and the Thyssen-Bornemisza Art Contemporary (TBA21 Academy) launching the Alligator Head Marine Lab (AHML). The Lab was established with the aim of raising environmental awareness through research and public outreach.

UWI owns and operates two marine laboratories (in Port Royal and Discovery Bay) and has long recognised the need to expand its research activities to the eastern section of the island.

The founder and chairperson of TBA21 (based in Vienna, Austria) and AHML, Francesca von Habsburg, a regular visitor to the island for over 50 years, expressed her concern that little had been done to protect and

preserve the dramatic coastline, rainforest habitat, rich mangroves, pristine beaches and numerous diving locations in Portland.

Portland is known to support marine and terrestrial biodiversity of local, national and global significance. However, over-fishing and over-exploitation of natural

resources, poor agricultural practices, habitat loss, coastal development, land-based pollution and climate change are real threats facing this region today. One of the primary goals of the TBA21/AHML/UWI initiative is to scientifically describe the marine biodiversity, with a view to defining boundaries for the legal establishment of a marine protected area.

The research programme, scheduled for three years in the first instance, will be led by the Research Director, Dr Dayne Buddo, with support from Dr Ruben Torres (Reef Check Dominican Republic) [See box on Page 3 for a list of current research projects]. A full-time Research Coordinator and marine



Archduchess Francesca von Habsburg, Chairperson of the Thyssen-Bornemisza Art Contemporary (TBA21 Academy) shakes hands with Prof. Archibald McDonald, Principal of the University of the West Indies (Mona) after the signing of the MOU launching the Alligator Head Marine Lab. (Photo: M. Creary Ford)

The TBA21, through AHML, hopes to pursue a long-term conservation and sustainable development programme by collaborating with UWI and its other partners, the Portland Environmental Protection Association (PEPA) and Reef Check Dominican Republic.

cont'd. on page 3

Coastal Management in Jamaica: Monitoring, Mentoring and Modeling

*The Professorial Inaugural Lecture: Professor Dale Webber, November 21, 2013
Chemistry Lecture Theatre, Faculty of Science and Technology*



Prof. Dale Webber engages the audience. (Photo: S. Persaud)



Prof. Webber with former students, Dr. Orville Grey (left) and Dr. Ava Maxam (right) (Photo: S. Persaud)



Prof. Horace Fletcher poses a question to Prof. Webber during the discussion period. (Photo: S. Persaud)



Ms. Brown and Ms. Housen of the DBML prepared and offered up tasty samples of the Lionfish.



Minister of Health Hon. Dr. Fenton Ferguson sampling the Lionfish at the CMS exhibit on Research Days 2014.

Prof. Webber started out by defining the coastal zone as “where the land meets the sea meets the air”. With 75% of the Caribbean population found along the coast, our islands are even more coastal, for some islands... the entire island is coastal. In that context, Coastal Management in Jamaica has to consider “any activity on land that impacts the sea”. Activities that take place in the forest or urbanized areas eventually have an impact in the ocean.

For Prof. Webber **monitoring** involved consistently going out and collecting data which allowed him to determine what exactly was happening. The result of extensive monitoring studies carried out in Kingston Harbour was the publication of a special edition of the *Bulletin of Marine Sciences* (Scientific Editor—Dr. Mona Webber; Managing Editor—Prof. Dale Webber). Seventeen students were able to use the

data presented in their theses to publish that huge volume which now still stands as the single largest body of information about the Harbour.

Prof. Webber pointed out that **mentoring** involved taking someone and getting them to their full potential, allowing them to develop their skills, improve their performance and become the person that they want to be. He indicated that if he included his current MPhil, PhD and MSc candidates, the total number of graduate students would be 69. He felt that he could now stop because many former students are now taking their place and fulfilling their potential.

His work in **modeling** with the University of East Anglia created the “finite element distribution model of Kingston Harbour” which explained the distribution

in stagnant areas and the influence of the Rio Cobre on water movement. He was able to use this model to show that creating a channel through the Palisadoes would not improve water circulation in the Harbour—information which saved the government a lot of money.

He concluded his lecture by saying that monitoring was essential to understand systems before and after changes, mentoring was essential to stimulate research by the next generation and modeling was essential to describe and understand the different systems.

Prof. Webber wrapped-up his lecture by thanking his wife, daughters, mother, University colleagues, students, Grace Kennedy and other partners for allowing him to shine.

Research Days 2014: Fostering Growth and Development in Small Island Developing States (SIDS) February 19-21, 2014

As is customary, the CMS participated in the annual Research Days activities by mounting an exciting and interactive exhibit on current research projects in the main tent. This year the highlight of the exhibit was the preparation and tasting of the lionfish. Visitors were treated to samples of steamed and escovitch lionfish prepared by our own DBML staff. There was also a demonstration on how to handle and safely remove the venomous spines from this exotic invasive species.

The exhibit also featured display tanks with fish (including the lionfish), corals, seagrass and other marine life. A touch tank provided visitors with the opportunity to interact with organisms commonly

found in the marine environment such as sea urchins, brittle stars and sea cucumbers. Posters and specimens of corals, seagrass and mangrove seedlings were included to showcase the rehabilitation activities being developed at the Port Royal and Discovery Bay Labs to restore damaged and degraded coastal ecosystems using natural means.

A poster display of current research projects was also mounted along the spine in the Faculty of Science and Technology.

We are very grateful to the staff of the Discovery Bay Marine Lab, Port Royal Marine Lab, Life Sciences Department and the over 20 student volunteers who contributed to making the event a success.

Photos: M Creary Ford



C. Trench demonstrates the safe handling of Lionfish to former Governor General Sir Kenneth Hall, Lady Rheima Hall and Prof Archibald McDonald (Principal UWI, Mona).



Visitors to the CMS exhibit viewing specimens of live marine organisms.



DBML staff setting up exhibit with live specimen of fish, coral and algae.

UWI's 3rd Marine Lab established in Portland cont'd. from page 1

scientist Fabian Kyne, has been employed to support the research and outreach activities. The facilities include a field station/laboratory building (outfitted with basic field and laboratory equipment as well as office space), docking facilities, a boat and accommodations.

AHML has also established the "Adopt a Coral" programme that allows others to play their part in the protection of the reef and

underwater life. AHML keeps a detailed record of each adopted coral fragment with growth measurements and pictures in order to track their progress until these fragments are eventually transplanted to the reef.

Further information on AHML, the research projects and the "Adopt a Coral" programme can be found on their website: www.AHmarinelab.org.

Current Research Projects:

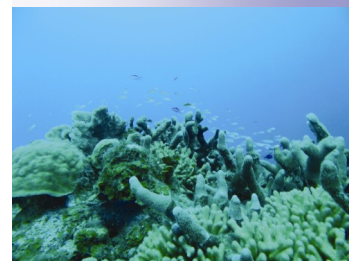
1. Lionfish Research and Control
Dr. Dayne Buddo
2. Coastal Water Quality
Prof. Dale Webber
3. Reef Herbivore Research
Dr. Dayne Buddo
4. Fish Sanctuary Establishment/Enhancement
Dr. Karl Aiken
5. Zooplankton (and Ichthyoplankton) Communities
Dr. Mona Webber
6. Reef Community Monitoring
Dr. Dayne Buddo
7. Coral Nurseries
Dr. Ruben Torres



Dr. Buddo addresses the gathering at the launch of the Alligator Head Marine Lab. (Photo: M. Creary Ford)



Dr. Buddo and F. Kane tending the coral nursery (Photo: F. von Habsburg)



Alligator Head reef with juvenile fish (Photo: D. Buddo)



Press conference to launch the Alligator Head Marine Laboratory. From left to right: Dr. Ruben Torres (Reef Check Dominican Republic), Dr. Karl Aiken (Researcher, UWI), Mr. Andre Kong (Director, Fisheries Division), Francesca von Habsburg (Chairperson, TBA21 Academy), Prof. Archibald McDonald (Principal, UWI), Prof. Dale Webber (Director, Centre for Marine Sciences, UWI), Dr. Dayne Buddo (Research Director AHML & Discovery Bay Marine Lab, UWI). (Photo: M. Creary Ford)

Introduction to the AGRRA Benthic & Coral Protocols Workshop

A workshop to introduce the AGRRA (Atlantic and Gulf Rapid Reef Assessment) benthos and coral protocols to local marine researchers, managers, consultants and students was held at the Discovery Bay Marine Lab (DBML) immediately following the Association of Marine Laboratories of the Caribbean (AMLC) meetings on the week-end of June 22-23, 2013.

The purpose of the workshop was to train local resource managers and scientists to assess reef condition using a standardized method. Persons trained will be available to participate in any AGRRA surveys proposed for Jamaica. The participants were familiarized with the updated

AGRRA protocol, including field techniques and data processing. The workshop focused on benthos and coral health and was facilitated by Dr. Judith Lang, Scientific Coordinator of AGRRA.

The workshops started on the Friday evening with introductory slides and an informal benthos pre-quiz. On Saturday participants were introduced to the benthic assessment protocol and carried out a practice dive followed by data entry. An informal post-quiz was held on Sunday to reinforce the main components of the benthic assessment. This was followed by a coral identification exercise and an introduction to the coral species protocol.

Data entry and an informal post-quiz followed the coral assessment dive.

Participants from the CMS/DBML and Life Sciences Department comprised Patrice Francis, Marcia Creary Ford, Suzanne Palmer, Camilo Trench, Hugh Small, Achsah Mitchell, Kimani Kitson-Walters, Lauren Fuess, Deanna-Lee Douglas, Denise Henry and Andrew Ross. Other participants included Anna Ebanks (Fisheries Division), Ivanna Kenny (UDC), and Bernadette Charpentier (University of Ottawa). Prof. Brian Lapointe (Florida Atlantic University) joined the workshop to assist with the marine algae identification.



Workshop participants (Photo: I. Kenny)



Participant recording data on corals (Photo: C. Trench)



Benthic substrate assessment at Old Folly Reef (Photo: M. Creary Ford)

Centre for Marine Sciences, UWI

University of the West Indies
1 Anguilla Way, Mona Campus
Kingston 7, Jamaica WI

Phone: 876 935 8836; Fax: 876 977 1033

E-mail: cms@uwimona.edu.jm

<http://www.mona.uwi.edu/cms/>

The University of the West Indies (Mona) has a long history of research and graduate training in the marine sciences. The Centre for Marine Sciences conducts and facilitates research in the marine environment of Jamaica and the wider Caribbean, exploring the presence and status of coastal and marine species and resources while providing sound environmental advice to Governments and Non-Governmental Organizations. In an attempt to get islandwide coverage of marine and coastal issues, the Centre conducts research at new locations while continuing to monitor known sites using a balance of pure and applied research.

AMLC Publication

The Proceedings of the 36th Scientific Meeting of Association of Marine Laboratories of the Caribbean (AMLC), held in Jamaica, June 17-21, 2013, will be published in the *Revista de Biología Tropical Journal*. The highlights of this meeting, which was hosted by the Discovery Bay Marine Laboratory, was featured in the October 2013 issue of the CMS Newsletter. The Journal is expected to be published by November 2014.

Ecosystem Valuation Publication

Waite, R., et al. 2014. **Coastal Capital: Ecosystem Valuation for Decision Making in the Caribbean**. Washington, DC: world Resources Institute. Accessible at www.wri.org/coastal-capital.

Upcoming Events

- **Water, Energy and Climate Conference 2014**. May 21–23, 2014, Mexico City, Mexico.
- **Oceans & Human Health: Anthropogenic Impacts on Coastal Communities and Ecosystems**. June 1–6, 2014, Biddeford, United States
- **3rd International Marine Conservation Congress—*Making Marine Science Matter***. August, 14-18 2014. Glasgow, Scotland, UK.
- **UN Third International Conference on Small Island Developing States**. September 1-4, 2014. Apia, Samoa.
- **3rd World Conference on Marine Biodiversity—*Life in the Changing Ocean***. October 12-16, 2014. Qingdao, China.

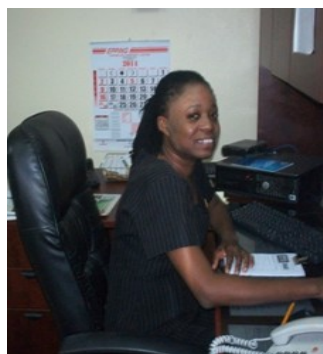
Spotlight on Staff

Centre for Marine Sciences, Mona Campus

Gina-Marie Maddix has been dubbed the New Kid on the Block, working at the CMS as a Scientific Officer/Admin Assistant since October 2013. Having recently graduated from the University of the West Indies with a double major in Environmental Biology, she is no stranger to the CMS as she has been the Supervisor for the Annual DBML Eco-camp for the past 3 years. She is currently interested in researching vital medicinal properties of marine organisms and in her spare time enjoys reading, hiking, swimming, collecting shells and painting. She is a certified Open Water PADI diver.



Discovery Bay Marine Laboratory



Marshalee Matthews is the Acting Accounting Officer since February 3, 2014. Miss Matthews' involvement with the Accounting profession is not limited to the day-to-day application of accounting principles and standards as required in a work setting but extends to working as a Lecturer; imparting knowledge to aspiring Accountants/Business Professionals. She holds a BSc degree in Business Administration and a Masters in International Business and Management.

Gemille Bryant has been working as the Clerical Assistant since February 3, 2014. Miss Bryant describes herself as a "highly self motivated, hard working professional". She has experience working in one of Jamaica's largest financial institution and is accustomed to delivering excellent Customer Service. Her qualifications include a BSc degree in Counseling (Social Work emphasis).



Oneil Holder joined the team in August 2013 and works in the capacity of Boatman. He is a licensed Coxswain and is Dive Master (PADI) certified. Oneil has over ten years diving and boat driving experience.