

CENTRE FOR MARINE SCIENCES

George F. Warner, BSc Lond, PhD UWI – Director

WORK OF THE CENTRE



Work at CMS, Mona, during 2004 -5 was dominated by diving surveys of coral reefs through both the Rackham's Cay relocated coral monitoring project funded by the Environmental Foundation of Jamaica and the Portland Bight reef survey project funded by the International Coral Reef Initiative. Hurricane Ivan in September 2004 gave impetus to these surveys since many south coast reefs suffered considerable damage. Both projects were successfully completed in June and oral reports of the Rackham's Cay project were presented at three conferences. Coral reef surveys throughout Jamaica, including this year at Pedro Bank led by The Nature Conservancy, were promoted and supported by CMS. CMS collated and edited a detailed overview of coral reefs in the Northern Caribbean and Atlantic Node of the Global Coral Reef Monitoring Network (GCRMN), which was published in *Coral Reefs of the World 2004*.

CMS at Mona was hampered in its work in 2004 -5 by two related difficulties: a large cut in operational budget, and change or loss of experienced staff at the beginning of the academic year. Stringent economies and use of savings from earlier grants enabled survival while hard work and steep learning curves by new staff enabled the successful completion of funded projects, despite the non-replacement of our Scientific Officer. In a small Centre such as CMS at Mona, the loss and only partial replacement of three out of five staff proved a serious handicap in carrying out normal duties and prohibited the taking on of significant new work. Loss of experienced staff continued with the departure at the end of the academic year of Dr George Warner after 5 years as Director. Consequent reorganization in 2005-6 will aim to maintain strength in marine sciences at UWI by building synergies with marine scientists in the Life Sciences Department.

At the Discovery Bay Marine Laboratory (DBML), reef surveys were employed in research on reef biodiversity, funded by the International Cooperative Biodiversity Groups project, and in studies of deep reefs. In addition DBML's Reef Restoration Project, funded by USAID, and studies on coral settlement, ensured constant local research activity. Aspects of this work were reported at several national and international meetings. A notable event at the Scientific Research Council's 18th annual meeting in November was the 2004 Young Technologist/Scientist Award to temporary DBML staff member Dr Mishka Stennett for her work on the DBML Reef Restoration Project.

Large numbers of overseas researchers visit DBML every year and contribute not only to its running costs but also to knowledge of Jamaican marine science. Published papers resulting from work at DBML and going back to the 1960s have now been put onto CDs for ease of reference at DBML, providing an invaluable resource for future researchers. Examples of ongoing international work at DBML were featured on PBS Television in the National Geographic series "Strange Days on Planet Earth" and in an article in the UK's "Dive" magazine about volunteer divers from the UK assisting in coral reef research as part of a project by the conservation organization "Earthwatch". DBML continued to earn sufficient foreign and local exchange from its provision of accommodation and research facilities to cover the whole of its operational budget.

DBML's work with the wider community during the year included eight Open Days for local stakeholders in connection with the Reef Restoration Project, a Sponge Workshop in connection

with the Marine Biodiversity project, which attracted an international attendance, and summer “Eco-camps” for local youth in July. Eco-camps received financial support from USAID and assistance from the US Peace Corps; the camps form part of the DBML’s outreach effort to Jamaican youth, which includes frequent day-visits from local schools.

CMS publication rate was 3.5 publications per full members of academic staff. Other CMS scientific staff, both permanent and temporary, contributed to publications.

PAPERS PRESENTED

- . • **Bowden-Kerby, A.**, Quinn, N.J., Stennet, M. & Mejia, A. “*Acropora cervicornis* restoration to support coral reef conservation in the Caribbean”. Coastal Zone '05, July 2005, USA.
- . • **Ferguson, N.**, Quinn, N.J. & Kojis, B.L. “Using GIS technology to map marine biodiversity on Jamaican coral reefs in the discovery of new drugs”. URSIA Caribbean GIS conference, 13 -17 September 2004, Barbados.
- . • **Gayle, P.M.H.**, Greenaway, A.M. & Charpentier, B. “A different perspective on the status of Jamaica’s north coast reefs – Is there a silver lining?” Association of the Marine Laboratories of the Caribbean Meeting, 13 -17 June 2005, Curacao.
- . • **Hibbert M.**, Edwards P.E., Warner G.F., Creary, M.C., McNaught, M. & Jones, L. “Monitoring of relocated corals after bleaching and hurricane”. Faculty of Pure and Applied Sciences Conference, 17 -19 May 2005, UWI, Jamaica.
- . • **Jones, L.**, Warner G.F., Creary, M.C., Edwards P.E., Hibbert M. & McNaught, M. “Monitoring of relocated corals at Rackham’s Cay – was it worth it?” Jamaica Institute of Environmental Professionals Conference, 15 -16 June 2005, Kingston, Jamaica.
- . • **Quinn, N.J.** “Montego Bay to Ocho Rio in one hour at the cost of essential fish habitat”. 57th Gulf and Caribbean Fisheries Institute Meeting, 8-12 November 2004, St. Petersburg, Florida.
- . • **Quinn, N.J.** “The value of documenting fishing practices and aquatic knowledge of local fishers”. 57th Gulf and Caribbean Fisheries Institute Meeting, 8-12 November 2004, St. Petersburg, Florida.
- . • **Quinn, N.J.**, Gochfeld, D., Hamman, M., Slattery, M., & Walker, L. “Exploring the Biodiversity of Jamaican coral reefs in the search for new pharmaceuticals”. V Congress on Caribbean Biodiversity, 25 -28 January 2005, Santo Domingo, Dominican Republic.
- . • **Quinn N. J.** & Kojis B. L. “Is there evidence for natural recovery of *Acropora* populations around Discovery Bay?” Faculty of Pure and Applied Sciences Conference, 17 -19 May 2005, UWI, Jamaica.
- . • **Quinn N.J.**, Yee T., Gallimore W., Gochfeld D., Slattery M., Hamann M and Walker L. “Exploring Jamaica's marine biodiversity while searching for pharmacologically interesting natural products from Jamaican coral reefs. The Jamaican International Cooperative Biodiversity Groups Project”. Faculty of Pure and Applied Sciences Conference, 17 -19 May 2005, UWI, Jamaica.
- . • **Quinn N. J.** Stennett, M. and Kojis B. L. “Evaluating the potential of natural reproduction and artificial means to increase *Acropora* populations in Jamaica”. Association of the Marine Laboratories of the Caribbean Meeting, 13 -17 June 2005, Curacao.
- . • **Stennett, M.**, Quinn, N.J., Gayle, P.M.H. & Bowden-Kerby, A. “Enhancing coral habitat for the benefit of the tourist and subsistence fisheries sectors”. 18th Annual Scientific Research Council Conference, 24 -26 November 2004, Kingston, Jamaica.
- . • **Warner G.F.**, Creary, M.C., Edwards P.E., Hibbert M., Jones, L. & McNaught, M. “Monitoring of relocated corals after bleaching and hurricane”. Association of the Marine Laboratories of the Caribbean Meeting, 13 -17 June 2005, Curacao.
- . • **Warner, G.F.** “Status of coral reefs in Jamaica and the Caribbean”. Caribbean Academy of Science Meeting, 30 June 2005, UWI, Jamaica.

PUBLICATIONS

Refereed Journal Articles

- .* Bush, S.L., Precht, W.F., **Woodley, J.D.** & Bruno, J.F. 2004. "Indo-Pacific mushroom corals found on Jamaican reefs". *Coral Reefs*, 23: 234.
- * Davis, B. & **Quinn, N.J.** 2004. "Using GIS in human impact analysis of mangroves". *South Pacific Journal of Natural Science*. 22: 1 -13.
- .* **Quinn, N.J.** & Kojis, B.L. 2005. "Patterns of sexual recruitment of acroporid coral populations on the West Fore Reef at Discovery Bay, Jamaica". *International Journal of Tropical Biology & Conservation / Revista de Biología Tropical* 53(1): 83 -90.

Other Peer Reviewed Publications

- * **Jones, L., Warner, G., Linton, D.,** Alcolado, P., Claro-Madruga, R., Clerveaux, W., Estrada, R., Fisher, T., Lockhart, K., Pardee, M., Pitt, J., Schelten, C. and Wild, R. 2004. "Status of coral reefs in the Northern Caribbean and Western Atlantic Node of the GCRMN". Ch 17 (pp 451 -470) in Wilkinson, C. (editor), Status of Coral Reefs of the World 2004. Vol. 2. Australian Institute of Marine Science, Townsville.

Non-Refereed

- .* Walling, L.J., Douglas, C., Mason, M. & **Chevannes-Creary, M.** 2005. Caribbean Environmental Outlook. Heileman, S. (editor). UNEP. 114 pp.
- .* **Warner, G.F. & Goodbody, I.** 2005. "Marine Biodiversity in Jamaica". pp 57 -70 in Miloslavich, P. & Klein, E. (editors). *Caribbean marine biodiversity: the known and the unknown*. DEStech Publications, Inc., Lancaster, PA.
- .* **Warner, G.F. & Linton, D.M.** 2005. "The Caribbean Coastal Marine Productivity Program (CARICOMP)". Pp 279 -280 in Miloslavich, P. & Klein, E. (editors). Caribbean marine biodiversity: the known and the unknown. DEStech Publications, Inc., Lancaster, PA.

INCOME GENERATION

Caribbean Coastal Marine Productivity program (CARICOMP)

Approximately US\$4000 were provided by CARICOMP to facilitate the attendance of four CMS staff at the Site Directors' meeting, 18-23 October, Bocas del Toro, Panama.

ICBG Project continuation funding for DBML

J\$450,000 were received from the International Cooperative Biodiversity Groups for the 2nd year of collaborative work between DBML and the University of Mississippi.

Mainstreaming Adaptation to Climate Change (MACC)

A grant of US\$8000 was received in June under the Coral Reef Monitoring activity of the MACC project. The funds will be used in CMS's Caribbean Coastal Data Centre.

Collaboration between CMS and Israel's National Institute of Oceanography

A grant of US\$200,000 over four years starting July 1st 2005 has been awarded by USAID jointly to CMS and Israel's National Institute of Oceanography under their CDR program for a collaborative project entitled "Restoration of coral reefs in Jamaica: Practicing novel measures for reef management".

PUBLIC SERVICE

M.C. Creary

— Member, Jamaica Institute of Environmental Professionals and Chair of Conference Committee

☐ **L. Jones**

— Jamaica Blue Flag Jury

N.J. Quinn

- ☐ .— Member, Jamaican Hotel and Tourist Association, Ocho Rios
- ☐ .— Member, St. Ann's Bay Chamber of Commerce
- ☐ .— Member, Executive Board, Association of the Marine Laboratories of the Caribbean
- ☐ .— Member, Board of Directors, Gulf and Caribbean Fisheries Institute.

G.F. Warner

- ☐ .— Member, National Council for Ocean and Coastal Zone Management
- ☐ .— Member, Scientific Authority for CITES
- ☐ .— Member, Advisory Board, Natural History Division, Institute of Jamaica
- ☐ .— Member, Steering Committee, Caribbean Coastal Marine Productivity program

CATEGORIES OF STUDENTS Postgraduate

A total of 10 students were registered, eight for the MPhil degree and two for PhD one MPhil was awarded.

