With roots dating back to 1903, the Bermuda Institute of Ocean Sciences (BIOS) is a world class marine science research and education institute, Bermuda's principal source of environmental education and a global training centre for young scientists.

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<td>Honor Roll of Donors</td>
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Persistence was a frequent theme at BIOS over the past year as we endeavored to grow and diversify our research and education initiatives in an uncertain economic climate. I’m pleased to report that—on the whole—we successfully navigated these challenges and both raised the visibility of BIOS and increased our capacity to engage in research of local and global relevance.

Beginning with the acquisition of the R/V Atlantic Explorer and more than 160 fully-funded days of sea time, BIOS has renewed its commitment to providing the facilities and resources required to conduct world-class ocean science research. Extensive renovations to the Reiss Conklin building significantly expanded both laboratory and office spaces for current faculty, visiting scientists, and students. Likewise, the newly completed BEACON mesocosm facility provides a unique opportunity for experimental ecosystem research and may prove to be an asset that attracts researchers from institutions abroad.

From a personnel standpoint, BIOS’ team was enhanced by the addition of two new faculty members: Dr. Eric Hochberg to head the Coral Reef Ecology and Optics Lab (formerly the Marine Environmental Program) and Dr. Falk Niehorster to lead the re-christened RPI2.0. Both Dr. Hochberg and Dr. Niehorster have successfully advanced their respective programs in the short amount of time they’ve been at BIOS.

In 2011, BIOS scientists contributed to more than twenty five research publications in peer reviewed journals reporting their work from the oceans around Bermuda but also from Antarctica to the Arctic Ocean. Data collected as part of the Bermuda Atlantic Time-series Study (BATS) at BIOS was reported in seventeen peer review publications in 2011 with over fifty papers published over the last three years. Much of this work, conducted by BIOS scientists - such as myself and Dr. Mike Lomas - has demonstrated key evidence about the long-term changes in the North Atlantic Ocean due to environmental
change and ocean acidification, and contributed to fundamental understanding about the dynamics of ocean biology and chemistry in the oceans around Bermuda.

Opportunities exist for BIOS to strengthen its presence within the local community and expand its reach beyond the shores of Bermuda. Dr. Andrea Bodnar received the first ever grant to BIOS from the US National Institutes of Health, in addition to a $3 million private donation, for her groundbreaking research into cancer and aging. The U.S. federal agencies that support scientific research also funded several new awards investigating ocean physics, biology and chemistry, and renewed support for the longest ocean time-series near Bermuda, Hydrostation S, that has been collecting ocean data continuously since 1954. BIOS is a key partner in the newly formed Sargasso Sea Alliance, with BIOS scientists providing much of the information for the scientific case for protection of the marine environment around Bermuda, and, with funding from the J M Kaplan Fund, is tasked with developing a regional database for Sargasso Sea data from a variety of ocean science research projects. The NF-POGO Centre of Excellence brought a capable and dynamic group of ten individuals from countries around the world, and expectations for the next pool of applicants are high as the program continues to meet the needs of developing countries in its fifth year.

In the Education Department, the number of scholarship-funded slots for Bermudian students increased from six in 2010 to ten in 2011, with four specifically earmarked for the new Marine Science Internship (MSI) program. A total of 22 students worked as summer interns, representing a significant increase over past years’ numbers, and many faculty indicated their willingness to offer repeat internships. All seven weeks of the summer Waterstart program filled with students from every local middle and high school, and the BIOS Explorer program reached close to 2000 K-12 students and 50 local teachers with its “Water Moves” broadcasts and professional development workshops.

With students visiting from Princeton, the University of Rhode Island (URI), and Roger Williams University—in addition to those participating in the Research Experience for Undergraduates (REU) program and the summer Microbial Oceanography course—BIOS sees a steady stream of international students eager to work alongside and learn from our experienced faculty members and education staff. With these stepping stones firmly in place, it is well within our capacity to create an innovative and unparalleled ocean science graduate program that highlights our existing research successes and leverages our academic partnerships abroad.

Commitment to BIOS’ core mission remains strong, even as our logo, website, and branding are being updated to reflect new organizational priorities and research foci. Moving forward, I anticipate continuing local partnerships and expanding international collaborations in our ongoing efforts to engage in ocean science research that is timely, innovative, and meaningful.

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Annual Fund Committee

We would like to thank the Annual Fund Committee for their hard work and dedication in 2011:

Committee Chair: Jonathan F. Reiss

Jeffery Conyers
Ann Durhager
Elizabeth A.C. Durrant
Gerald Simons
David Skinner
Amanda Swan

Photo by Priscilla Lange
2011 REVENUES & SUPPORT
Revenue and support is derived from gifts, grants and contracts received through the U.S. (54%) and Bermuda (2%) governments as well as various individual, corporate and foundation donors (31%). Additional sources of support are tuition and fees for the use of BIOS’s various scientific, marine and housing facilities and attendance at our many educational programs (13%). Investment return pertains to Endowment Funds and is not included in these percentages.

2011 EXPENSES
Program expenses include scientific research (72%); education activities (15%) and guest and residential services (2%). Other expenses include development, marketing and public relations (5%) and management and general (6%).
## Summary Financial Position

<table>
<thead>
<tr>
<th>Assets</th>
<th>2011</th>
<th>2010</th>
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<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$1,140,806</td>
<td>$1,850,158</td>
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<td>Grant receivables and other assets</td>
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<td>$1,098,963</td>
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<td>Contributions receivable, net</td>
<td>$648,369</td>
<td>$1,058,730</td>
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<td>Investments</td>
<td>$12,121,007</td>
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<td>Property and equipment, net</td>
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<td>$16,664,049</td>
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<td><strong>Total Assets</strong></td>
<td><strong>32,567,270</strong></td>
<td><strong>31,198,497</strong></td>
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<table>
<thead>
<tr>
<th>Liabilities and Net Assets</th>
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<tbody>
<tr>
<td><strong>Liabilities</strong></td>
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<tr>
<td>Payables, accruals, advances and deposits</td>
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<td>Loans payable</td>
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<td><strong>Total Liabilities</strong></td>
<td>$7,771,516</td>
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<table>
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<tr>
<th>Net Assets</th>
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<tr>
<td>Unrestricted</td>
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<tr>
<td>Temporarily restricted</td>
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<td>Permanently restricted</td>
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<td><strong>Total Net Assets</strong></td>
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| **Total Liabilities and Net Assets**       | **$32,567,270** | **$31,198,497** |

## Summary Statement of Activities

<table>
<thead>
<tr>
<th>Revenues and Support</th>
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<tr>
<td>Contributions</td>
<td>$4,995,813</td>
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<tr>
<td>Grants and Contracts</td>
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<td>Tuition, guest services and other</td>
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<td>Investment return</td>
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<td><strong>Total Revenue and Support</strong></td>
<td><strong>16,421,642</strong></td>
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<table>
<thead>
<tr>
<th>Expenses</th>
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<tr>
<td>Program services</td>
<td>$10,747,733</td>
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<tr>
<td>Scientific research</td>
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<tr>
<td>Education programs</td>
<td>$287,389</td>
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<td>Guest and residential services</td>
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<tr>
<td><strong>Support Services</strong></td>
<td>$826,910</td>
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<tr>
<td>Development and public relations</td>
<td>$837,813</td>
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<tr>
<td>Management and general</td>
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<tr>
<td><strong>Total expenses</strong></td>
<td><strong>14,991,726</strong></td>
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<tr>
<th>Increase (decrease) in Net Assets</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>$1,429,916</td>
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*Financial statements with independent auditors’ report are available on our website at [www.bios.edu](http://www.bios.edu) or by contacting Stephen M. Markman, Treasurer and Controller, telephone 441-297-1880 ext.109, fax 441-297-2222 or email stephen.markman@bios.edu.*
Every 2-4 weeks members of the Bermuda Atlantic Time-series Study (BATS) team head out to sea to filter water...lots of water. Unlike household filters that remove impurities from water to make it safe for drinking, the BATS team filters ocean water in order to study the tiny particles suspended in the water, as well as the properties of the particle-free water itself.

To collect the water samples, scientists use a device called a Niskin bottle, which is a simple tube that can open and close at both ends. The Niskin bottle is attached to a metal frame—called a rosette—and deployed from the ship to a desired depth, at which time the bottle is “triggered” and closes on both ends, effectively collecting a sample of water from a specific depth within the water column.

A single deployment is called a “hydrocast” and, over the past 21 years, BATS has conducted 3,311 hydrocasts, capturing water samples from the surface ocean down to 4.2km (roughly the distance from The Swizzle Inn to Shelly Bay). During this time period more than 40,250 Niskin bottles were triggered, collecting approximately 33,800 liters of water.

From this water, BATS obtained the following:

- ~20,000 dissolved oxygen samples
- ~12,400 salinity samples
- ~11,940 dissolved inorganic nutrient samples
- ~5,900 dissolved organic nutrient samples
- ~7,350 particle organic nutrient samples
- ~3,200 plant pigment samples
- ~5,100 particulate silicate samples (i.e., glass shells associated with diatom phytoplankton)
- ~2,350 sedimenting particles samples

If you were to stitch together all the filters used to collect these samples, they would cover an area of ~160 m². In sailor’s terms, that’s roughly the equivalent size of a mainsail from a 12-meter racing yacht. While obtaining these samples, members of the BATS research team collectively spent over 1,300 days at sea (more than 4 years!) and traveled more than 54,000km over the course of 300 individual research cruises. But the end result—the longest-running deep ocean time-series studies in the world—is by far the most impressive statistic of all!

For more information about BATS, including the methods used to process water samples and what major oceanographic research questions are being addressed, please visit the BATS website at http://bats.bios.edu/.
Research Programs

Abundance, Dynamics and Diversity of Viruses in the Northwestern Sargasso Sea
Dr. M. Breitbart, University of South Florida
R. Parsons, BIOS
Funding: NSF

Air Quality Program
Drs. A.J. Peters and A.H. Knap, BIOS
Funding: The Bermuda Government

Air-sea pCO2 Observations in the North Atlantic
Dr. N.R. Bates, BIOS
Dr. C.L. Sabine, NOAA-Pacific Marine Environmental Laboratory
Funding: NOAA

Algal Biodiesel
Drs. F.G. Plumley, M.W. Lomas and A.H. Knap, BIOS
Funding: PartnerRe

Application of the Leaf Wax-aerosol Method to Assess Spatial and Temporal Patterns of Carbon Isotopic Fractionation of Atmospheric CO2 by Terrestrial Photosynthesis
Dr. M.H. Conte, BIOS
Funding: NOAA, Global Carbon Cycle Program

BEACON: Bermuda Ocean Acidification and Coral Reef Investigation
Drs. A.J. Andersson, N.R. Bates and S. de Putron, BIOS
Funding: NSF

The Bermuda Atlantic Time-series Study, Years 21–25
Funding: NSF

The Bermuda Bio-Optics Project (BBOP)
Drs. N. Nelson and D.A. Siegel, University of California, Santa Barbara
Dr. M.W. Lomas, BIOS
Funding: NASA

Collaborative Research: Bacterioplankton Biology and Biogeochemistry at the Bermuda Atlantic Time-series Study Station: An Oceanic Microbial Observatory
Dr. C. Carlson, University of California, Santa Barbara
Dr. S. Giovannoni, Oregon State University
R. Parsons, BIOS
Funding: NSF
Collaborative Research: BEST: The Impact of Changes in Sea Ice Extent on Primary Production, Phytoplankton Community Structure, and Export in the Eastern Bering Sea
Dr. M.W. Lomas, BIOS
Dr. S.B. Moran, University of Rhode Island, Graduate School of Oceanography
Funding: NSF

Collaborative Research: Carbon Through the Twilight Zone: New Tools to Measure Change
Dr. M.W. Lomas, BIOS
Drs. K.O. Buesseler and C.H. Lamborg, Woods Hole Oceanographic Institute
Dr. D. Siegel, University of California, Santa Barbara
Dr. D. Steinberg, Virginia Institute of Marine Sciences
Funding: NSF

Collaborative Research: Combining Flow Cytometry and Stable Isotope Techniques: A Method to Measure Phytoplankton- and Bacteria-specific Nitrogen and Carbon Uptake
Dr. M.W. Lomas, BIOS
Dr. D. Bronk, Virginia Institute of Marine Sciences
Funding: NSF

Collaborative Research: Determining the Present and Future Ocean Carbon Dynamics in the Chukchi Sea and Pan-Arctic Ocean: A Contribution to Shelf-Basin Interactions (SBI) Phase III
Dr. N.R. Bates, BIOS
Dr. S.B. Moran, University of Rhode Island
Dr. J.T. Mathis, University of Alaska, Fairbanks
Dr. D.A. Hansell, Rosenstiel School of Marine and Atmospheric Science
Funding: NSF

Collaborative Research: Development of the Automated Dissolved Inorganic Carbon Analyzer (AMICA) for Seawater DIC Analyses
Dr. N.R. Bates, BIOS
Prof. J.H. Sharp, University of Delaware
Dr. G.E. Friederich, Monterey Bay Aquarium Research Institute
Funding: NSF and OTIC

Collaborative Research: Dimensions in Biodiversity: Biological Controls on the Ocean C:N:P Ratios
Dr. M.W. Lomas, BIOS
Drs. A. Martiny and S. Allison, University of California, Irvine
Dr. S. Levin, Princeton University
Funding: NSF

Collaborative Research: The Great Southern Coccolithoflora Belt
Drs. W.M. Balch and B. Twining, Bigelow Laboratory for Ocean Sciences
Dr. P. Lam, Woods Hole Oceanographic Institute
Dr. N.R. Bates, BIOS
Funding: NSF

Collaborative Research: Plankton Community Composition and Trophic Interactions as Modifiers of Carbon Export in the Sargasso Sea
Dr. M.W. Lomas, BIOS
Dr. T. Richardson, University of South Carolina
Dr. S. Neuer, Arizona State University
Dr. R. Condon, Dauphin Island Sea Lab
Funding: NSF

Collaborative Research: Prochlorococcus and its Contribution to New Production in the Sargasso Sea
Dr. M.W. Lomas, BIOS
Dr. A.C. Martiny, University of California, Irvine
Funding: NSF

Collaborative Research: Sources and Biogeochemical Cycling of Intact Membrane Lipids in the Upper Ocean
Dr. M.W. Lomas, BIOS
Dr. B. van Mooy, Woods Hole Oceanographic Institute
Funding: NSF

Collection of Sediment Cores from Lac Toponowini (French Guiana) to Reconstruct Holocene Ecosystem and Climate Variability of the Northeastern Amazon
Dr. M.H. Conte, BIOS
Funding: National Geographic Society, Committee for Research and Exploration

A Comprehensive Comparative Genomic Approach for Identifying the Saxitoxin Synthesis Genes
Dr. F.G. Plumley, BIOS
Dr. J. Hackett, University of Arizona
Dr. D. Bhattacharya, Rutgers University
Dr. D. Anderson, Woods Hole Oceanographic Institute
Funding: NSF
Research Programs

Controls on and Rates of Air-sea CO2 Gas Exchange in the Beaufort and Chukchi Sea: Investigations of Climate and Environmental Change on Arctic Pacific Shelves
Dr. N.R. Bates, BIOS
Dr. J.T. Mathis, University of Alaska, Fairbanks
Funding: NASA

Copper-binding Organic Ligands in the San Francisco Bay Estuary: Evaluating Current and Future Likelihood of Copper Toxicity Events in a Perturbed Ecosystem.
Dr. K.N. Buck, BIOS
Dr. K. Barbeau, Scripps Institution of Oceanography
Dr. Robin Stuart, USGS
Funding: California Sea Grant/ CALFED Bay-Delta Science Fellows Program

Coral reef resource surveys for Apra Harbor and four watersheds in southwestern Guam in support of the Marine Corps relocation to Guam
Dr. E.J. Hochberg
Funding: US Navy

Coral Reproduction and Recruitment Studies
Dr. S. de Putron, BIOS
Dr. G. Goodbody-Gringley, Harvard University
Prof. J. Ryland, Swansea University of Wales
J. Lawson, Dalhousie University
M. Costa, Princeton University
Funding: BIOS, Harvard

Cruise Ships and Air Quality at Dockyard
Dr. A.J. Peters, BIOS
Funding: The Bermuda Government

The Effect of Ocean Acidification and Increased Temperature on the Calcification of New Coral Recruits
Drs. A. Cohen, D. McCorkle, N. Cantin, G. Gaetani and K. Rose, Woods Hole Oceanographic Institute
H. Barkley, Princeton University
Funding: Vita Foundation, Woods Hole Oceanographic Institute and BIOS

Evaluating Carbon Dioxide (CO2) Sinks and Sources and Impacts of Ocean Acidification of Key Ecosystems
Dr. N.R. Bates, BIOS
Funding: Exxon-Mobil

Interannual Variability of the Carbon Cycle in the North Atlantic Ocean
Drs. N.R. Bates and A.H. Knap, BIOS
Funding: Exxon Mobil Corporation

Guantánamo, Cuba Marine Surveys and Photomosaicking Technology Evaluation.
Dr. E.J. Hochberg, BIOS
Funding: US Navy

Investigating the phenology of coral pigmentation via bio-optics
Dr. E.J. Hochberg
Funding: BIOS

Marine Environmental Programme
Drs. R. Jones, E.J. Hochberg, A.H. Knap, BIOS
Funding: The Bermuda Government

Mg-calcite Mineral Dynamics in Natural Subtropical Seawater Systems: Control of the Carbonate Acid System and Relevance to Ocean Acidification.
Drs. A.J. Andersson and N.R. Bates, BIOS
Funding: NOAA

Ocean Carbon Measurements in Support of the Joint Russian-American Long-term Census of the Arctic (RUSALCA) Research Program in the Bering and Chukchi Seas
Dr. N.R. Bates, BIOS
Funding: NOAA

Oceanographic Instrumentation for the R/V Atlantic Explorer
Dr. N.R. Bates and Capt. R. Harelstad, BIOS
Funding: NSF

Oceanographic Technical Services
Dr. N.R. Bates and Capt. R. Harelstad, BIOS
Funding: NSF

Operation of a Marine Atmospheric Sampling Facility at Tudor Hill, Bermuda
Drs. A.J. Peters and A.H. Knap, BIOS
Funding: NSF

POGO Centre of Excellence in Observational Oceanography
Dr. F.G. Plumley, BIOS
Funding: Nippon Foundation

Research Experiences in Open Ocean and Subtropical Marine Environments of Bermuda
Dr. F.G. Plumley, BIOS
Funding: NSF-Research Experience for Undergraduates

SGER: Exploratory Analyses of Sediment Cores from Lac Toponowini (French Guiana)
Dr. M.H. Conte, BIOS
Funding: NSF, PaleoClim

Sea Urchins as Models for Aging and Cancer Research
Drs. A. Bodnar and J. Loram, BIOS
Funding: National Institutes of Health, Department of Health and Human Services, Ray Moore Endowment for Molecular Biology, Bermuda Charitable Trust, The Christian Humann Foundation
Graduate Research

Bacterial Nitrogen Cycling in the Mesopelagic
Steven Baer, PhD Candidate, College of William and Mary
FACULTY ADVISORS:
Dr. B. Ward and D Sigman, Princeton University
Dr. M.W. Lomas, BIOS

Biogeochemistry of the Bering Sea Shelf
Matthew Baumann, University of Rhode Island
FACULTY ADVISORS:
Dr. S.B. Moran, University of Rhode Island
Dr. M.W. Lomas, BIOS

Cycling of carbon through the Sargasso Sea foodweb using a variety of experimental methods and inverse modeling
Bridget Bachman, University of South Carolina
FACULTY ADVISORS:
Dr. T. Richardson, University of South Carolina
Dr. M.W. Lomas, BIOS

Microphytoplankton of the Sargasso Sea: Variability and Chemical Composition
Charlotte Best, University of Southampton
FACULTY ADVISORS:
Dr. D. Purdie, National Oceanography Centre, Southampton
Dr. M.W. Lomas, BIOS

Molecular Approach to Determine Contributions of the Protist Community to Carbon Flux
Jessica Mohler, PhD Candidate, Arizona State University
FACULTY ADVISORS:
Dr. S. Neuer, Arizona State University
Dr. M.W. Lomas, BIOS
Funding: NSF

Population-specific Nitrogen Cycling in the Sargasso Sea
Sarah Fawcett, Princeton University
FACULTY ADVISORS:
Drs. B. Ward and D Sigman, Princeton University
Dr. M.W. Lomas, BIOS

Radiation and evolutionary biology of macroalgae in Bermuda’s coastal waters
Thea Popolizio, GSO - University of Rhode Island
FACULTY ADVISORS:
Dr. C. Lane, University of Rhode Island
Dr. M.W. Lomas, BIOS


### Publications


Summer Course Program
Coral Reef Ecology
Instructor: Dr. S. de Putron, BIOS

Marine Biology
Instructors: Dr. S. de Putron, BIOS
Dr. J. Gould, Princeton University

Microbial Oceanography
Instructors: Dr. C. Carlson, University of California, Santa Barbara
R. Parsons, BIOS

Fall Semester Program
Coral Reef Ecology
Instructors: Dr. S. de Putron, Dr. E. Hochberg

Marine Biology and Oceanographic Research
Dr. S. de Putron, Dr. E. Hochberg, BIOS
C. Newcomb-Hodgetts and K. Baird, BIOS
Dr. A. Mead, University of Cape Town

Marine Invertebrate Zoology
Dr. G. Goodbody-Gringley
C. Newcomb-Hodgetts, BIOS

Research Diving Methods
R. Patrylak, BIOS

POGO Centre of Excellence in Observational Oceanography

Faculty
Dr. T. Anderson, University of Southampton
Dr. M. Brown, Intergovernmental Oceanographic Commission
Dr. H. Bauman, Oxford University
Dr. K. Buck, BIOS
Dr. M. Conte, BIOS
Dr. M. Guishard, BIOS
Dr. F.G. Plumley, BIOS
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Dr. M. Andres, Woods Hole Oceanographic Institution
Dr. E. Shroyer, Woods Hole Oceanographic Institution
C. Best, Southampton University
S. Fawcett, Princeton University
Dr. A. Peters, BIOS

Courses
General Oceanography, Core Skills
Drs. F.G. Plumley and Dr. K. Buck, BIOS

Scientific Writing
Dr. M. Lomas

Physical Oceanography
Drs. M. Andres and E. Shroyer, Woods Hole Oceanographic Institution, Dr. M. Guishard, BIOS

Biological Oceanography
Dr. M. Lomas and R. Parsons, BIOS

Chemical Oceanography
Dr. K. Buck, BIOS

Use of Satellites, Ocean Color, Pigments, and Models of Phytoplankton Physiological Ecology in Long-term Ocean Monitoring
Drs. T. Platt and S Sathyendranath, Dalhousie University and Plymouth Marine Laboratory
Dr. H. Bouman, Oxford University
Drs. G. White & L. Zhai, Bedford Institute of Oceanography

Moored Observatories
Dr. M. Conte, BIOS

Organic Pollutants in the Marine Environment and Marine Policy
Dr. A. Peters, BIOS

Ocean Data Management
Dr. M. Brown, Intergovernmental Oceanographic Commission, Paris, France

Science Writing, Core Skills, Individual Research Projects
Instructors: Faculty

R/V Atlantic Explorer Cruise to Hydrostation S & BATS

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ADVISOR: Dr. S. de Putron

Ousmane Diankha, Superior Polytechnic School, Senegal
ADVISOR: Drs. A. Peters and M. Conte

Priscila Lange, Universidade Federal de Rio Grande, Institute of Oceanography, Rio Grande, Brazil
ADVISOR: Dr. M. Lomas

Chunli Liu, Shandong University at Weihai, China
ADVISOR: Dr. M. Lomas
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Anna Rumyantseva, Institute of Oceanography, Gdansk  
ADVISORS: Drs. F. Niehorster and E. Schroyer

Gerry Salamena, Indonesian Institute of Sciences (LIPI), Research Center for Oceanography, Technical Implementation Unit for Marine Life Conservation, Ambon  
ADVISOR: Dr. F. Niehorster

Arvind Singh, Physical Research Laboratory, Navrangpura, Gujarat, India  
ADVISORS: Drs. M. Lomas and N.R. Bates

Elisee Toualy, University of Cocody (Abidjan, Côte d’Ivoire)  
ADVISOR: Dr. N.R. Bates

Yuna Zayasu, Kyoto University, Japan  
ADVISOR: Dr. E. Hochberg

**Road Scholar**

Real Bermuda: History and Heritage  
Snorkeling the Coral Island  
Science in Bermuda Shorts  
Birding Bermuda

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Allister Stewart, Bermuda School field trips
Alexander Hunter, Woodland Restoration field trips

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St. Georges Prep
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January 6
**Using Remote Sensing and Optics to Study Coral Reef Ecology and Biogeochemistry.**
Dr. Eric Hochberg
Hanson Hall, BIOS

February 23
**Evolution in a Changing World: Insight from Phenotypic Strategies and Marine Larvae**
Dr. Justin McAlister
Hanson Hall, BIOS

February 28th
**Decision-relevant Scenarios for Long-term Hurricane Risk**
Dr. Falk Niehorster
Hanson Hall, BIOS

March 10
**Addicted to Plastic**
Hanson Hall, BIOS

May 20
**Graduation Ceremony of the Class of 2010/2011**
Nippon Foundation Partnership for the Observation of Global Oceans Scholars
**Special Address**
The Minister of Education, The Hon. Dame Jennifer Smith, DBE, JP, DHumL, MP
**Commencement Address**
Dr. Tom Malone, University of Maryland Center for Environmental Science
Hamiton Princess, Hamilton

July 5
**Marine Microbes; Invisible Super-heroes of Our Planet**
Dr. Craig Carlson, UCSB
Hanson Hall, BIOS

September 24
**Marine Science Day Open House**

November 3
**Commemorative Reception and Dinner in honor of The Bank of Bermuda Foundation**

November 4
**POGO Presentations to the Board of Trustees**
Hanson Hall, BIOS

December 1
**The Inside Stories of Ice Cores and How Bermuda Fits In**
Hans Christian Steen-Larsen, The Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado Boulder, Sunderman Room, BIOS
Seminars and Events

Science Friday

April 1
The Estuarine organic phosphorus pool- A good place to swim
Dr. Paul Worsfold, University of Plymouth

June 9
The Private Parts of Corals: A View From the Bottom
Dr. Alex Venn, Centre Scientifique de Monaco

July 8
The Warwick Wreck in Castle Harbour
Doug Inglis, Texas A&M

November 10
Galapagos Shark Research
Corey Eddy, University of Massachusetts's School of Marine Science and NSF Graduate Research Fellow

Nov 18
Paranormal trace metals in the 4th dimension - have you heard about this?
Dr. Kristen Buck, BIOS

Intern Seminars

July 8
Bermuda Program
The effects of DNA damaging agents in Sea Urchin cells
Jecar Chapman

Marine Environmental Program (MEP): Sea Water Temperature Monitoring
Maquira Brock

The Waterstart Program
Sawyer Boyle

Seawage Contamination in Bermuda
Stephen Lightbourne

July 22
Resistance to DNA Damaging Agents in Sea Urchin Cells
Jecar Chapman

The effect of climate change on calcareous algae - showing the effects of temperature
Christiana Halliday

Lunar and Diel Periodicity in the mustard hill coral, Porites asteroideas
Kascia White

August 1
Mae Lortie, Miriam Gerominus, Rosie Zhang, Allie McFadden

August 8
Peter Ford, Eva Yap, Sonya Lee

August 19
POGO Scholars

August 15
Rosie Zhang, Mae Lortie, Allie McFadden, Miriam Gerominus

Feeding modulates the impact of elevated CO2 on the skeletal growth of an Atlantic coral
Liz Drenkard

August 22
Peter Ford, Sonya Lee, Morgan Elbot

August 29
Rosie Zhang, Maria Bardon, Mae Lortie, Kyra Freeman

September 5
Eva Yap, Stuart Barker, Peter Ford

November 21
NSF-REU Program

Oxidative Cellular Damage in Sea Urchin Models of Aging
Arielle Anderson

Polychlorinated Biphenyls in Seawater
Ashley Compaan

Archaear Abundance in the Sargasso Sea, and CARD-FISH troubleshooting
Dusten Snodgrass

Bermuda Bio Optics Project: Lignin Phenols in the open ocean
Joseph Warren

Exploring Environmental Parameters' Effects on Coral Calcification in Bermuda
Miles Borgen

Copper Toxicity in Castle Harbour
Nick Fylstra

Spatial Distribution of Bacterial Clades SAR11 and SAR202
In the Sargasso Sea
Preston Pallante
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Matthew J. Wilkinson

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Ralph H. van Hoek

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E. James Doyle
Larry N. Morris Sr.
Richard C. Ogus
Glenn C. Svenning

Chief Engineer
Blake Barber (Relief)
Stewart B. Moreau (Relief)
Richard E. Smith Jr.

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Management Officers
Mel June Inocencio, 1st Officer
Manuel Par, 2nd Officer
Juan Cabungcal, 4th Engineer

Motormen
Cristito Briones
Alchamor Soliva

Chefs
Ades Gregorio
Bernardo Manalo
Dexter Ojan

Bosun
Joseph Paitone
Ronaldo De Leon

Seamen
Jesus Ambrocio
Ciriaco Mutas Jr.
Eric Parcon
June F. Manalo

Small Boats and Diving

Diving Safety Officer/Small Boats Supervisor
Alexander D. Chequer
Ryan Patrylak

Captain R/V Stommel
Alfred A. Smith
Forrest A. Williams Jr. (Relief)

Deckhand
Forrest A. Williams Jr.
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Kaitlin M. Baird

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Senior Lecturer
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Chloé Newcomb Hodgetts

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Human Resources Officer Trainee
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Kelly McLaren

Accountant
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Accounts Payable Clerk
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