



## NO BONES NEWSLETTER

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Section of Invertebrate Zoology  
Department of Systematic Biology  
National Museum of Natural History

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## Caribbean Clades Symposium Features IZ Staff and Associates

Over one-hundred registrants gathered for a two-day symposium March 27 and 28, 2001 to review research and data on the systematics, biogeography, and conservation of Caribbean biodiversity. The symposium focussed on two approaches to biodiversity assessment: a taxic approach based on clades and a faunistic/floristic approach based on geographic units. The geographic scope of the symposium included freshwater and terrestrial environments of the Caribbean islands, Bahamas, and Bermuda, and marine environments of the Caribbean Sea and Gulf of Mexico.

M. G. Harasewych and Ralph Chapman presented results of a study of "Biogeographic Patterns of Deep-Sea Gastropoda of the Tropical Western Atlantic" where they analyzed the bathymetric and geographic distributions of gastropod mollusks (946 taxa) inhabiting depths greater than 100 meters throughout the tropical and warm temperate western Atlantic [North Carolina to Brazil] based primarily on literature records. Results indicated that taxa could be divided bathymetrically into continental slope, abyssal plan and hadal communities. Geographically, the greatest faunal similarities occurred between the subregions of the warm temperate North Atlantic [North Carolina to Florida] and northern Brazil, and to a lesser extent, the faunas of Cuba and the Lesser Antilles. The faunas of the subregions on the Caribbean Tectonic Plate group together on ordinations (detrended correspondence analysis; non-metric multi-dimensional scaling), but were far less homogeneous than the other groupings.

These distributions were compared to results of biogeographic studies of shallow water molluscan faunas and deep-sea corals, and the effect of the Cretaceous intrusion of the Caribbean Tectonic Plate from the eastern Pacific into the tropical western Atlantic on the biogeography of deep-sea faunas is evaluated. Cladistic biogeographic studies of pleurotomariid gastropods [limited to upper continental slope communities] based on molecular and anatomical data were entirely concordant with these results, but provided finer details on bathymetric zonation and biogeography on the Caribbean Plate.

Klaus Ruetzler reviewed the "Impact of Crustose Clionic Sponges on Caribbean Reef Corals" which was discussed in *No Bones* Volume 14, No. 5, page 5. Candy Feller, SERC and long-time CCRE researcher, gave a thought-provoking talk on "Species richness and abundance of insects in mangroves" that provided contrary evidence for a hypothesis that co-evolutionary processes that produce close interdependencies between plant and animal do not occur in the mangrove. Her studies of the red mangrove (*Rhizophora mangle*) discovered at least



*Microlepidopteran leaf miner (Marmara undescribed species) in a red mangrove leaf.*

continued on page 2

## C O V E R S T O R Y C O N T.

four species of microlepidopteran tissue miners, each specialized and restricted to a single organ and tissue. Live twigs of the red mangrove were shown to host a feeding guild of small wood-boring insects. This specialized group of wood-feeding herbivores of only six or seven species account for as much leaf loss from the canopy as all the leaf-feeding herbivores combined. These woodborers also modify the red-mangrove canopy to provide critical habitat for numerous other arthropods. Their larvae feed internally in the twigs, killing them, and creating hollow cylinders of wood. On

small offshore islands in Belize, more than 70 species of inquiline arthropods were found associated with these hollow twigs in the canopy, using them for food, nest sites, prey sites, and diurnal refuge. In stands of the red mangrove, woodborers are responsible for creating numerous small light gaps in the mangrove canopy, thereby having a major effect on forest dynamics. Furthermore, the large bulk of coarse woody debris, which results from the feeding activities of woodborers, sustains an exceedingly rich fauna of arthropods

Keynote speaker Sylvia Earle shared her unique views on ocean exploration and looked back at the growth in marine science and associated technology from 1960 to the present. She presented information on the relatively new Sustainable Seas initiative made possible by the

Goldman Foundation and National Geographic. Finally, she shared exceptional footage of a 6'-long living female octopus with the audience of scientists (including Clyde Roper), historians, students, and managers. A special presentation of a four-volume collection of works by Felipe Poey was made by Dr. Pedro Pruna Goodgall on behalf of the eleven Cuban participants and the House of Advanced Studies of the University of Havana. Two other sets of books were presented as well: one for the Library of Congress and the other for the Smithsonian Institution. Associated with the Symposium is a temporary exhibition "Cuba's Felipe Poey and the 19<sup>th</sup> Century Discovery of Biodiversity" consisting of 11 banners along the Concourse of the Ripley Center representing the life of Poey and his significant achievements in science.

## NEWSLETTER STAFF

Kristian Fauchald  
head, IZ

Marsha Sitnik  
editor  
sitnik.marsha@nmnh.si.edu

Geoff Keel  
production  
keel.william@nmnh.si.edu

Molly Kelly Ryan  
design

Bob Skarr  
library  
skarr.robert@silib5.si.edu

*Please submit news or articles via email or disk by the 15th of the month prior to publication.*

*Publication in this newsletter does not constitute publication in a taxonomic or any other scientific context.*

## O U T R E A C H

***Polychaete workshop at ECOSUR***

Kristian Fauchald and Michael Gutknecht attended a Polychaete workshop in Chetumal, Mexico from March 10 - March 20. Organized and hosted by Dr. Sergio Salazar-

Vallejo and his laboratory at ECOSUR, the workshop involved several presentations by Fauchald and a two day collecting trip to Majahual, Mexico.



*(From L to R) Dr. Salazar-Vallejo, Luis Carrera-Parra, Patricia Salazar, and Michael Gutknecht break coral and look for polychaetes in Majahual, Mexico.*

## O U T R E A C H

**Whistle-Stops for Giant Squid Reseacher**

Just so that moss couldn't possibly grow under his feet, Clyde Roper gave over a dozen presentations on the search for the Giant Squid and other deep sea topics in February and March traveling to New York and New Jersey and then to Long Beach! In New York, he spoke at the Explorer's Club and in New Jersey he

was hosted by the Global Issues Forum. The talk was covered by The Star Gazette and also included his wife and mother-in-law. The event in Long Beach was part of the 2<sup>nd</sup> annual Smithsonian Week in Long Beach sponsored by the Public Corporation for the Arts which was covered extensively by all the news me-

dia and included 15 presentations by Roper to schools, libraries, the Rotary Club (aboard the grounded "research ship" the Queen Mary) and the Aquarium of the Pacific. Other Smithsonians there were Anthony Brown from the Jazz Oral History Program at MAH and James Bruns of the National Postal Museum.

## LIBRARY

***Invertebrate Zoology  
Libraries New Titles***

Adiyodi, K.G. and Rita G., Series eds. **Reproductive Biology of Invertebrates. Volume X, Part B, Progress in Developmental Endocrinology.** Volume edited by August Dorn. New York: John Wiley and Sons, LTD, 2000. QL364.15.R45 1983x V.10 Pt.b Invz

Burns, Jasper. **Trilobites: Common Trilobites of North America.** Wilmington: NatureGuide Books, 1999. QE821.B97 1999x Invz

Schollhorn, Elmar. **Geologie und Palaontologie des Oberapt im Becken von Organya (Nordspanien).** Coral Research Bulletin, Vol. 6, December 1998. Dresden: Cpress, 1998. qQE685.S36 1998 Invz

***Journal of Crustacean  
Biology***

Many thanks to the Crustacea Division for purchasing and donating back issues of the **Journal of Crustacean Biology** to the Crustacea Library. These issues have been sent to the bindery. Also, a subscription to this journal has been started which should prevent future gaps in our holdings.

***Library Additions***

Thanks to Molly Ryan for providing photographs and illustrations and to Steve Cairns and Cynthia Ahearn for providing specimens for display in the second floor INVZ Library.

**Director of NZP visits Carrie Bow**

The National Zoo's Advisory Board held it's meeting in Belize at the Jaguar Reef Lodge. A day trip to the Carrie Bow Field Station was led by David Challinor. After the meeting, Dr. Lucy Spelman and a colleague, Dr. Naomi Kirschenbaum from California, spent two days visit-

ing the Carrie Bow facility. There they were given an overview of the CCRE Program by Dr. James Tyler and taken on a snorkeling trip by Station Manager Dan Miller. On the return trip to Belize City, Dr. Spelman was given a tour of the Belize Zoo by Director, Sharon Matola.

**IZ Staff Assists Mentorship Program**

Elvie Fornshell, Lana Ong & Mike Gutknecht

During the school year 1999-2000, IZ staff members Lana Ong, Mike Gutknecht, Elvie Fornshell, and Yolanda Villacampa participated directly in the Oceanography Research Lab course, part of the Mentorship Program, at the Thomas Jefferson High School for Science and Technology. The Oceanography Research Lab, now in its twelfth year, also receives supplies, instruction, and specimens from IZ and ship time from SERC.

Under the guidance of their teacher, Dr. John Fornshell, eight students from the Class of 2000 completed publishable projects. Jullian Ams and Kelly Stanton collaborated with their teacher on the description of a female copepod *Monstrilla floridana* which is new to science. The manuscript will be submitted shortly for publication. Diana Gibson published her abstract in the Journal EOS and presented a paper entitled "Estimation of average primary productivity using sea surface temperature data off the east coast of the United States" at the

Spring American Geophysical Union meeting in Washington, DC. Katheryn Barletta, Kalyna Malm and Rebecca Reber also published an abstract in EOS and presented their paper entitled "Comparative study of the Severn and Rhode Rivers to determine the effects of river traffic on benthic estuarine fauna" at the Spring AGU meeting. Providence Spina and her teacher Fornshell presented a paper entitled "Internal Wave Observations off Punta Tuna Puerto Rico" at the Oceans 2000 Conference. This paper was published in the Conference Proceedings. Shenna Taneja published an abstract in EOS and presented her paper entitled "Chesapeake Bay Tidal Predictions: A comparison and in-depth look at the possibility of a Potomac Branch Reflection Wave" at the Spring AGU meeting. Kristie Sherry produced a set of detailed illustrations of a Portunid crab for her project. Heather Thomason conducted a study of bioluminescence in the larvae of Ctenophores found in the Chesapeake Bay.

## ANNOUNCEMENTS

The installation of the 3,000 gallon coral reef tank for the Smithsonian Marine Ecosystems Exhibit in Fort Pierce, Florida occurred on March 16, 2001. This tank will showcase most of the corals that formerly were on display here at NMNH. The building that will



house the exhibit is being constructed by St. Lucie County at a location across the road from the Smithsonian Marine Station. The exhibit will be maintained by Smithsonian personnel under the auspices of the Marine Station, and is expected to open early this summer.

## VISITORS

Lisa Gershwin, University of California at Berkeley (2/26-3/3) visited to work on jellyfish taxonomy. Sponsor: **Steve Cairns**

Christopher Mah, Dept. of Geology, University of Illinois, Urbana, IL (3/10-3/18). His current research focuses on the systematics and phylogeny of the Goniasteridae (Valvatida) including fossil and extant taxa. He plans to examine paleobathymetric patterns as well as biogeography and other phylogenetic implications. Chris is also interested in the role of ontogeny and heterochrony in this group as it relates to other valvatidans (such as the oreasterids) as it relates to their evolution. Sponsor: **Cynthia Ahearn**

Bela Galil, Israel Oceanographic and Limnological Research (3/12-3/21) worked in the Crustacea collections on Leucosiidae crabs. Sponsor: **Rafael Lemaitre**

Rogelio Lalana, University of Havana, Cuba (3/26-3/30) participated in the Caribbean Clades Symposium at the International Center and delivered a lecture on Cuban crustaceans. Sponsor: **Rafael Lemaitre**

Carlos Rocha, Dept. of Zoology, Institute of Biology, University of Sao Paulo, Brazil (4/2-4/15). Carlos will be completing an ongoing revision of the North American species of the cyclopoid copepod genus *Halicyclops*. His visit will be supported by an SI Short-Term Visit grant. Seminar: The Biota/FAPESP Program and the Study of Crustacean Biodiversity of the State of Sao Paulo, Brazil (4/6). Sponsor: **Jan Reid**

Dr. Ron Mollick's Invertebrate Zoology class (20+ students), Christopher Newport University, Newport News, VA (4/11). **Steve Cairns** (Cnidaria), **Bob Hershler** (Mollusks), **Jan Walker** (Crustacea) and **Cynthia Ahearn** (Echinoderms) will conduct presentations of their research interests and collections.

Akiko Nishiyama, the great-grand daughter of Kamakiche Kishinouye (a Japanese shrimp/fish researcher), will be visiting the museum with her family to see his portrait on our walls (4/12-4/13). **Rafael Lemaitre**, **Molly Kelly Ryan**, and **Rose Gullede** will be working on preparing his bio and portrait.

Greg Rouse and Eva Lewy (4/20-4/24) School of Biological Sciences, University of Sydney, Australia. Greg and Eva are working on a combined molecular and morphological analysis to provide the first detailed hypothesis on the evolution of extant crinoids. Sponsor: **Dave Pawson**

## PUBLICATIONS

**Kensley, B.** and R.C. Brusca (Editors). 2001. *Isopod Systematics and Evolution*. Papers from the Second International Isopod Conference, Amsterdam, 1998. *Crustacean Issues* 13:1-357.

**Kensley, B.** 2001. Biogeography of the marine Isopoda of the Indian Ocean, with a check-list of species and records. *Crustacean Issues* 13:205-264.

**Moser, W., Gray, N., Reed, K. and Bright, C.** 2000. The United States Antarctic Program at the Smithsonian Institution. 324-327 pp. In Davison, W., Howard-Williams, C. & Broady, P. (Eds.) *Antarctic Ecosystems: Models for Wider Ecological Understanding*. New Zealand Natural Sciences (special volume). Canterbury University Press, 350pp.

also: <http://www.mnh.si.edu/feature.html> (IZ profiling, feature article of NMNH web site).

Williamson, C. E. and **J. W. Reid.** 2001. Copepoda. Pages 911-950 (Chapter 22) in J. H. Thorp and A. P. Covich (eds.). *Ecology and Classification of North American Freshwater Invertebrates*, Second Edition. Academic Press, New York.

## BIRTHDAYS

*April*

Tim Coffey  
Brian Kensley  
Lana Ong  
Chris Tudge

*May*

Lou Kornicker