



Caribbean Marine Science

Number 2, December 2005

Official Newsletter of the AMLC
Published Spring and Fall

Contents

Association News	1
General Interest	4
Meetings/Conferences	9
New Books	10
Courses	10
Humor & Curiosities	11
Change of Address Form	13
Dues/Membership Form	14
AMLC Background & Goals	14
AMLC Officers	15

Association News

Notes from the Editors

Our greetings to all the AMLC members. We begin by extending our congratulations and thanks to Steve Piontek and the Curaçao Sea Aquarium for a well organized and excellent meeting last June. The meeting was well attended and we had a great time sharing with colleagues and friends. We begin by presenting a summary of the highlights of the Scientific Meeting and the Executive Board Meeting held in Curaçao. Then we present the new elected officers of the Association for the next four years and finally the next scheduled meetings of the Association and other interesting information. After the usual sections of the newsletter, we have added a new one entitled "Humor and Curiosities" at the end of the newsletter. Here we intend to include humoristic remarks/jokes and/or interesting facts or curiosities.

Feel free to submit to the editors if you have something.

Curacao Meeting

The meeting was indeed well attended as per the following numbers kindly provided by Steve Piontek. There were a total of 113 registered participants from the following countries:

USA - 51
Puerto Rico - 10
Venezuela - 24
Netherlands - 6
Curacao - 5
Jamaica - 3
Trinidad & Tobago - 2
Grenada - 1
US Virgin Islands - 2
Cayman Islands - 1
Colombia - 1
Panamá - 1
Canada - 1
Turks and Caicos - 1
Bahamas - 1
Bermuda - 2
Dominica - 1

Of these, 39 were students and 74 were scientists and overall, they presented 81 oral presentations and 40 posters.

During the meeting, a judging committee was organized to select the best oral and poster presentations by students. The committee was comprised of Drs. Clare Morrall, Aldo Croquer, Sascha Steiner and Mark Hardin. Henry Briceño provided some help in the selection of the best posters. The winners were awarded the following prizes during the banquet:

Best oral presentation (\$500): Ron Eytan from Louisiana State University for his presentation titled "The Ecological Consequences of Phylogeographic Breaks in Coral Reef Fishes (Chaenopsidae: Acanthemblemaria)." Ron's presentation was enthusiastic and animated, keeping his audience enthralled throughout.

Best Poster presentation (\$250): Ms. Lyndsey Holland from the Bermuda Biological Station for Research for her poster titled "Diversity and Specificity of Alcyonacean – Algal Symbioses in Bermuda and the Caribbean based on Sequence Data."

Lifetime Service Awards

During the Curaçao Membership Banquet, our Executive Director, Steve LeGore presented the Executive Board's Honorary Lifetime Member Awards to three individuals that have served and mentored the AMLC for many years, earning the Board's gratitude and respect. These awards were presented to:

- Dr. Melbourne Carriker, Professor Emeritus in the College of Marine Studies at the University of Delaware in Lewes, Delaware;
- Dr. Jim Parrish, Leader of the Hawaii Cooperative Fish Research Unit of the National Biological Service at the University of Hawaii in Honolulu; and
- Dr. Mike Dowgiallo of NOAA's Center for Sponsored Coastal Ocean Research in Silver Spring, Maryland.

We thank these friends for their long-term and continuous support, participation and commitment to the growth and viability of the AMLC.

Highlights of the Executive Board Meeting

- The Treasurer's report was given by AMLC Treasurer, Laurie Richardson, who summarized information on both institutional and individual member dues as well as other income and expenditures. Her report confirmed that the AMLC is becoming ever more fiscally stable and secure.

- NOAA/CSCOR provided a total of \$16,000 to support the Curacao meeting. Of this amount, \$10,000 was earmarked for the publication of the AMLC Proceedings, while the remaining \$6,000 paid for student travel awards.
- A committee consisting of Executive Board members Laurie Richardson, Rick Nemeth, Steve Piontek and Ernesto Weil was appointed to examine policy concerning funding of future meetings, in an effort to ensure future viability of AMLC meetings.
- Laurie Richardson presented the Membership report stating that AMLC membership included 31 laboratories and 105 individuals.
- A list of non-member laboratories to be invited to AMLC membership and compiled during the 2004 Executive Board meeting in Grenada was lost during the July 2005 hurricane, but Board Member, Clare Morrall confirmed that she is working to reconstruct the list.
- The Proceedings of the last meeting in Trinidad were scheduled for mailing about two weeks after the Curaçao meeting ended. The publication time for these proceedings was regarded by the Board as too long and a new procedure was developed to attempt speeding the publication schedule.
- AMLC newsletter editor, Ernesto Weil, is having difficulty getting people to send him contributions for the newsletter, not a new item.
- Laurie Richardson said the AMLC list server was also not being used very much, and that increased use should be encouraged. It is a major networking resource for our members if used as intended.
- Norman Quinn asked about the possibility of having simultaneous translations at the scientific meetings. Steve LeGore said it will cost \$10,000-\$20,000 to have simultaneous translations and the AMLC currently has insufficient sustainable funds to pay for this service. [Attempts are being made to secure funding for English-Spanish-English interpretation at the 2007 meeting in the Virgin Islands. STAY TUNED!!!!]

- Steve LeGore reported on the status of the AMLC website. He said the website is improving and invited everyone to visit it and see the job David Nagle has done.
- A new initiative ended up in the appointing of a Committee to recruit new Executive and Student Board Members. The members are Henry Briceño, Rick Nemeth, Norman Quinn, Ernesto Weil and Sascha Steiner.
- The Board approved the following Resolution to support long-term coral reef monitoring initiatives in the Caribbean after the case was presented by Dr. Judith Lang:

BE IT RESOLVED

Whereas reef systems within the Western North Atlantic, including the Caribbean Sea, Gulf of Mexico, and waters of Florida, the Bahamas, and Bermuda are undergoing significant changes, some of which are incompletely understood, and

Whereas similar assemblages of plants and animals construct and populate coral reefs of the Western North Atlantic, and

Whereas this connectivity results from dispersion of propagules or adults of migratory species by regional water currents, and

Whereas the same ocean current system responsible for this genetic interchange also spreads pathogens, invasive organisms, and pollutants, and

Whereas the **Association of Marine Laboratories of the Caribbean** recognizes the urgent need for a holistic regional approach to understanding the status, changes, and resilience of reefs within the Western North Atlantic region, and that the ability to distinguish between regional *versus* local impacts and to discern cause and effect relationships is constrained by the limited time span over which previous surveys have occurred relative to the timing and spatial extent of past events, including several hurricanes, coral bleaching events, water temperature shifts, and outbreaks of coral disease, and

Whereas changes in the health or viability of Western North Atlantic reef systems and shifting of their baseline norms can only be detected by periodic reassessments of representative reefs, and

Whereas it is urgent and crucial that these relationships be clarified and understood if mankind is to ever successfully manage, protect, and conserve these unique, valuable, and besieged ecosystems,

It is therefore resolved that the **Association of Marine Laboratories of the Caribbean** urges and supports the immediate establishment of a long term program for assessing representative reefs, their related biological communities, and relevant physical environmental parameters periodically into the future. To minimize analytical effects of temporal variations in observations, it is recommended that a one-year international reassessment is needed every five years, with sampling and monitoring at established repeated locations as well as at additional representative locations selected either randomly or for scientific cause. Protocols should be employed that support resource management policy development as well as promote scientific understanding of ecosystem relationships. It is further recommended that assessment efforts be established with a sense of immediacy and urgency in response to rapidly occurring changes and ecosystem impacts observed in recent years.

New Officers of the AMLC

Officers elected at the meeting are as follows, with all terms being for 4 years except for the Members-at-Large, which are for 2 years:

Executive Director - Steve LeGore

President - Tony Knap

Vice President - Ernesto Weil

Treasurer - Laurie Richardson

Membership Director - David Wilson

Recording Secretary - Karen Burns

Information Officer - David Nagle

Members-at-Large - John Brock / Mark Hardin

Future Meetings

2006 - Executive Board Meeting – Hosted by the Bermuda Biological Station in Bermuda, from June 15-17.

2007 - Scientific Meeting – Hosted by Rick Nemeth and the University of the Virgin Island in St. Thomas from July 9 - 13. Dr. Rita Colwell, former director of the U.S. National Science Foundation is scheduled to be our Keynote Speaker. Dr. Colwell served NSF for several years, having been appointed by President Bill Clinton, and she is certain to provide us with new and interesting insights into the future of science in our region.

2008 - The Executive Board Meeting will be concurrent with the 11th International Coral Reef Symposium, hosted by NOVA University in Ft. Lauderdale, USA.

2009 - Scientific Meeting – Hosted by Clare Morrall of the St. George's University Department of Marine Biology. The Executive Board enjoyed its 2005 meeting in Grenada so much that it prevailed upon Clare to host this Scientific Meeting so all our members may enjoy Grenadian hospitality.

AMLC List Server and Web Site

The purpose of these list servers is to facilitate communication and foster collaboration between and among our members. We recently found it advantageous to transfer our list server operation from the FIU server to the AMLC server. You should have received a notice by e-mail. We hope all AMLC members will take advantage of this new capability – if you have any news, requests, or questions to distribute to the membership, just send a message to the email address below. On-line discussions among members concerning Caribbean marine issues are encouraged. Don't be shy! The NEW list server addresses are:

members@lists.amlc-carib.org

Only AMLC members in good standing can post to the list. Messages not from a subscribed member will not be posted. Current AMLC members are automatically subscribed, and new members are

added as they join AMLC. The newsletter will be circulated electronically through our list server, which insures delivery and that only paid members are in our mailing list.

The Executive Board is grateful and thanks our Treasurer, Laurie Richardson, for getting the AMLC list server service implemented. We also wish to express our appreciation to David Nagle, our new Information Officer, for transferring the service to the AMLC server. This is a valuable resource for all of us if we make use of it.

We have a new web site located at www.amlc-carib.org. If you forget the URL, just do a Google search on “AMLC” and it will magically appear! Again, we owe a large debt of gratitude to David Nagle, our new Information Officer. David has volunteered a great deal of time and energy to establish and maintain our new website. There is still more to do, but steady progress is being made. Thank you, David!

Once again, we request contributions for the Newsletter from our members and readers. We have a very diverse membership involved in many different areas of research. Your Newsletter is an efficient way of sharing information about your projects, or even better, finding help or cooperation from other members of the Association.

Ernesto Weil and Isabel Urreiztieta, Editors. Steve Legore Associate editor..

General Interest

Worst Hurricane Season Ever Recorded in the Atlantic-Caribbean

A record number of tropical storms and hurricanes was recorded for the 2005 Atlantic Storm season. With the end of the Atlantic storm season on November 30th, a record 26 tropical storms and hurricanes were named. Previous record of 21 Atlantic storms in one season was set in 1933. Never before has a season exhausted the prepared list of tropical storm and hurricane names and had

to resort to the Greek alphabet system. Recent studies have observed that the proportion and number of intense hurricanes has increased since the mid 1970s, and that these changes have occurred in tandem with a rise in sea surface temperature. Some scientists have suggested that the present global warming trend and resulting change in sea surface temperature will yield more destructive hurricanes, hence increased damage to coastal infrastructure and marine ecosystems. Wilma was the strongest hurricane on record with the lowest pressure ever recorded for a storm. Wilma also developed in record time. In total, 2,823 human lives were lost and approximately \$214 billion worth of damage was caused by this season's tempests. There were 13 classified hurricanes and 13 tropical storms:

Hurricanes:

Category 1: Nate, Ophelia, Philippe, Stan and Vince

Category 2: Irene

Category 3: Maria and Beta

Category 4: Dennis and Emily

Category 5: Katrina, Rita and Wilma

Tropical Storms:

Arlene, Bret, Cindy, Franklin, Gert, Harvey, Jose, Lee, Tammy, Alpha, Gamma, Delta, Epsilon

The World Health Organization estimated that global warming and precipitation trends due to anthropogenic climate change over the past 30 years claimed 150,000 lives each year. WHO predicts this number will double over the next 30 years if the trend continues. (The World Health Organization. The World Health Report 2002 WHO, Geneva, 2002)

Recent studies:

- Webster, P.J., G. J. Holland, J. A. Curry, and H.-R. Chang, 2005: Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment, *Science*, 309 (5742), 1844-1846.
- Emanuel, K. A., 2005: Increasing destructiveness of tropical cyclones over the past 30 years. *Nature*, 436, 686-688.
- Patz J.A., D Campbell-Lendrum, T Holloway, J A. Foley. Impact of regional climate change on human health. *Nature* 438, 310-317 (17 Nov 2005).

- Hunt, J.C.R. and TU Delft, 2005: Inland and coastal flooding: developments in prediction and prevention. *Phil. Trans. R. Soc. A.* 363, 1475-1491.

Source: Reuven Walder, Program Manager. The Marine Photobank, Washington, DC

Kyoto Protocol Takes Effect, Without U.S.

Seven years after it was brokered by the United Nations, the Kyoto Protocol went into effect last week, despite lack of involvement by the world's biggest polluter, the United States. The international treaty ratified by 140 nations sets targets for the reduction of emissions of carbon dioxide and other pollutants that lead to global warming.

Bush administration officials have complained that the treaty is bad for American businesses, lets developing countries off the hook, and hardly makes a dent in global emissions. Indeed, according to UN estimates, the Kyoto treaty, if fully implemented, would reduce the projected temperature rise of 1.4 to 5.8 degrees Celsius by only 0.1 degree over the next century.

"Kyoto is without doubt only the first step," says Klaus Toepfer of the UN Environment Programme, which oversees implementation of the treaty. "We will have to do more to fight this rapid increase in temperature on our wonderful blue planet Earth. It will be hard work."

Meanwhile, scientific evidence continues to mount in support of strong action to combat global warming through emissions reductions. At an international conference in England last week, scientists reported that melting glaciers, shrinking Arctic ice sheets, and global changes in rainfall patterns are all attributable to global warming, and the effects are likely to grow worse quickly.

Source: Roddy Scheer

New Record for Subsea Hydrotesting

Valkyrie Commissioning Services, Inc. reported that it has set a new subsea hydrotesting depth and pressure record by successfully pressurizing a subsea-to-subsea pipeline to 12,563 psig, and remotely recording the hydrotesting data in 5,715 ft. of

seawater. The hydrotest was accomplished using Valkyrie's Subsea Pipeline Commissioning System (SPCS) known as Denizen. Designed for ultra deepwater applications, Denizen is operated in conjunction with a work class Remotely Operated Vehicle and currently has the ability to work in water depths to 10,000 feet and achieve pressures up to 20,000 psig.

Hawaii Declared "Tsunami Ready"

Officials from NOAA's National Weather Service were in Honolulu recently to praise Hawaii's civil defense team for completing a set of rigorous warning and evacuation criteria necessary to earn the distinction of the entire state being TsunamiReady and StormReady. "It is with great pride that we announce Hawaii as the first TsunamiReady state in America," said U.S. Senator Daniel K. Inouye. "Hawaii has experienced more tsunami threats than any other state in the union and we know how devastating they can be. As we near the one-year anniversary of the greatest tsunami of our lifetime, our hearts go out to those Indian Ocean countries who are still recovering. In Hawaii, we have taken steps to be better prepared for the next tsunami. We have an emergency operations center in every county, a statewide siren system, evacuation maps in the phone books, regular drills, and public education programs. These provisions and others helped the State of Hawai'i become TsunamiReady and StormReady."

URI Scientists Present Tsunami Expedition Results

The first research expedition to directly observe the seafloor near the epicenter of the earthquake that caused the December 2004 Indian Ocean tsunami has revealed unexpected results that will dramatically improve forecasting of future tsunamis. Scientific results of the expedition were reported at the fall meeting of the American Geophysical Union in San Francisco on Dec. 5-6, 2005.

An international team of 27 scientists, led by Kate Moran of the University of Rhode Island and David Tappin of the British Geological Survey and including biologists, seismologists, geologists and tsunami modelers, spent 17 days at sea last May

exploring the seafloor off the coast of Sumatra to gain a better understanding of the bottom deformation that led to the devastating tsunami. The team found significant differences between what they expected to find based on tsunami and earthquake observations and models and what they actually observed on the seafloor. "This event marks a sea change in our understanding of giant earthquakes and the generation of tsunami waves because modern instruments recorded the quake better than ever before, and tsunami observations of wave heights, arrival times and coastal impact were rapidly gathered immediately after the event," said Moran.

The research team found far fewer underwater landslides and generally less widespread disturbance of the seafloor than would have been expected given the size of the earthquake. "That might mean that we're safer than we realize, because the material in that environment might be dissipating the seismic energy more than we thought," Moran said. Using the results of a British acoustic survey of the region conducted last February that identified disturbances on the seafloor, the researchers used remotely operated vehicles and other techniques to investigate those disturbances to determine if and how they played a role in the tsunami. One major underwater landslide they examined probably occurred more than 1,000 years ago, but in an area they called The Ditch they found large vertical displacements of the seafloor that were very fresh and were almost certainly the result of the Dec. 26 earthquake. "In some places in The Ditch we found up to 12 meters of seafloor displacement, and that's almost twice as high as seismologists predicted would have occurred," said Stephan Grilli, an ocean engineering professor from the University of Rhode Island who led the team of tsunami modelers. Based on the geologic information collected during the expedition and the observations and measurements made when the tsunami struck the coastline, Grilli refined his tsunami model to replicate the actual seafloor movements and tsunami waves generated in the Indian Ocean. The more accurate model has also been applied to forecast future tsunamis in other locations.

"The more we learn about the motion of the seafloor, the more we can improve tsunami forecasting and mitigation," Grilli said. "It helps us improve tsunami

warning systems by knowing where to put measurement gauges that will give us the necessary advanced warning." Grilli has applied his updated model to a fault off the Oregon coast called Cascadia, which has been moving 4 centimeters per year since the last large earthquake occurred in the area in 1700 and where seismologists have long predicted another large earthquake, possibly up to 9.2 in magnitude, could occur. The refined model now predicts that an earthquake of that size could generate tsunami wave run-ups of up to 30 meters in some locations along the Pacific Northwest coast – almost three times higher than previously predicted – and significant waves could reach as far away as Japan and Russia. "Communities in Oregon and Washington have been anticipating waves of only 10 to 12 meters or so, but now they need to be even better prepared," Grilli said. Primary funding for the research expedition was provided by the BBC and Discovery Channel. A documentary about the expedition aired on both channels on Dec. 18.

Corals headed for federal protection, economic benefit will measure in the billions.

In response to a 2004 scientific petition by the Center for Biological Diversity, the National Marine Fisheries Service issued a formal proposal to place the elkhorn and staghorn corals species (*Acropora palmata* and *A. cervicornis*) on the endangered species list on 5-9-05. Corals are tiny animals that draw calcium from the sea to construct limestone skeletons. Over many years the skeletons become massive structures known as coral reefs. Considered the most biologically diverse habitat of the oceans, reefs provide habitat for fish, marine mammals, sea urchins, crabs, sponges and thousands of other creatures. The reefs also act as barriers protecting shorelines and shoreline development from storm-induced waves. The elkhorn and staghorn corals have been the dominant reef-builders in Florida and the Caribbean over the past 500,000 years. Their rapid decline in the last 15 years is a catastrophic ecosystem development that no scientists would have predicted 20 years ago. Scientists have raised an alarm about worldwide coral declines in the past few years. The reef network, a group of over 200 scientists, found that up to 20 percent of the world's coral reefs have

already been effectively destroyed. No corals, however, have been listed as endangered species. The staghorn and elkhorn corals formally occurred throughout the shallow reefs of Palm Beach, Broward and Miami-Dade counties, the Florida Keys, and the Caribbean. They declined by 97 percent since the 1980s due to global warming, disease, increasing hurricane impact, and direct human damage. When sea temperatures rise, corals become stressed and expel the tiny algae that help them generate energy. This effect is known as "coral bleaching" because it turns the corals white and eventually kills them. Bleaching is thought to be the leading worldwide cause of coral declines.

Listing as endangered species will protect the corals from direct killing and damage and indirect destruction from beach expansion programs, and will require establishment of protected critical habitat zones and development of a federal recovery plan; it will also increase funds for research and conservation. Perhaps most importantly, it will also require that industries that produce greenhouse gasses (and the federal and state agencies that regulate them) will have to take responsibility for their cumulative impacts on the environment.

The elkhorn and staghorn corals are the first of a suite of species that will eventually be placed on the endangered list due to global warming. The Center has also petitioned to list the polar bear and Kittlitz's murrelet (a small seabird) as endangered species and is researching several other species. Calling elkhorn and staghorn reefs "nurseries for marine life" and noting that reef tourism is a \$1.6 billion industry, the Miami Herald declared on 5-16-05: "Designating the elkhorn and staghorn as endangered would trigger more actions to protect them and, coincidentally, other Keys corals. These unique resources are priceless. Help save them by supporting the endangered listing campaign."

Source: Steve LeGore

For more information and to help Acroporas into the endangered species list please contact:

Center for Biological Diversity - Caribbean Coral
www.biologicaldiversity.org/swcbd/species/coral/index.html

New Methods to Track and Protect Threatened Species.

Understanding how marine populations grow and spread is essential to protect threatened species, yet tracking fish movements has posed an enormous challenge to science. An international team of researchers may have helped solve the mystery -- using the human antibiotic tetracycline. In a recent study published in *Current Biology*, Woods Hole Oceanographic Institution (WHOI) biologist Simon Thorrold and colleagues from Australia and France followed larvae of the panda clownfish to determine how far from home they wandered before settling down for good. The brightly colored, striped clownfish live on coral reefs in peculiar harmony with sea anemones, finding protection among the anemone's usually poisonous tentacles. Clownfish are therefore limited to habitats that also support anemones, making them good candidates for dispersal studies.

Many marine organisms spend a portion of their lifecycle as pelagic or free-floating larvae. During this phase, larvae have an opportunity to migrate beyond the immediate neighborhood of their birth sites, populating new areas or joining other established communities. This phenomenon poses certain questions about populations of clownfish: Were the younger members of a community born there? Were they the offspring of local adults, or did they move in from a different neighborhood? And if so, from where?

To find the answers, the researchers marked all larvae in the embryonic stage originating at a given birth site with the antibiotic tetracycline to determine whether a juvenile settling at that site had been born there. The tetracycline darkened the ear bones of the developing fish, labeling them as originating in the study area. As a further indicator of the origins of new residents, the researchers used genotyping to establish the parentage of recently settled juveniles. By comparing newcomers' DNA to that of adults previously established in the community, they were able to determine if the new members had settled close to home or had drifted in from elsewhere. Thorrold and colleagues Geoffrey Jones of James Cook University in Australia and Serge Planes of the Universite de Perpignan in France say that measuring larval dispersal is the greatest challenge facing marine

ecologists and managers. Understanding how discrete populations are connected to each other is important when making complicated decisions about the size and location of areas to be set aside as marine preserves. "Ideally, preserves would do more than protect organisms living within their boundaries," Thorrold said. "Properly sited, preserves could serve as seed areas for nearby open fishing grounds, helping to maintain a sustainable harvest."

Among the team's findings: clownfish tend to be homebodies. Although none of the offspring studied settled into the same anemone as their parents, one third and possibly more of the successfully settled juveniles had established homes within 100 meters (about 330 feet) of their birth sites. The origins of the other two-thirds have not been determined. Since the nearest anemone habitat outside the study area is more than 10 kilometers (about 6 miles) away, it seems likely that newcomers to the neighborhood traveled a considerable distance to get there. The methods used by Thorrold and his colleagues may be adapted to shed similar light on the habits of other species. About 80% of marine fish species in U.S. waters are either fully or partially overexploited.

Source: Marine Technology Reporter, Aug 24, 2005.

For more information contact: www.seadiscovery.com

Whooping Cranes Come Back, But Still Not Safe.

As a result of hunting and the draining of its wetlands habitat for development, the whooping crane was virtually extinct on American soil by the 1940s. But due to the efforts of a wide range of committed individuals and government agencies, the majestic bird's population has soared--sort of.

Today, the population numbers 217 whooping cranes, according to federal wildlife biologists. The birds are easy enough to track, as they winter in the swampy bottomlands near Rockport, Texas, just as their ancestors did for thousands of years. Luckily for the whooping cranes, the land--long recognized as a cradle of Gulf Coast biodiversity--is now administered by the U.S. Fish and Wildlife Service as Aransas National Wildlife Refuge, partly for the birds' protection.

"You see the horizon, the cranes in the marsh, the oak trees in the distance. That's the way it's looked for hundreds and hundreds of years," says Tom Stehn, Whooping Crane Coordinator for the U.S. Fish and Wildlife Service. "It's part of a natural system and we want to keep it that way if at all possible." Stehn has devoted his career to the whooping crane's recovery since 1982 when the Schenectady, N.Y., native was transferred to Aransas.

While the whooping crane's "recovery" is a testament to American restraint and a still-evolving conservation ethic, it is still a federally listed endangered species, and its population is not yet stable, warns Stehn. The birds are still threatened, by hunters and predators, as they make their long migration. But thanks to lots of hard work and constant vigilance on the part of biologists, every year recently has seen a net gain of birds back in Texas for the winter. And by now, Stehn considers most of them old friends.

Source: Roddy Scheer and
www.msnbc.msn.com/id/7722065/



Today there are cross discipline issues and multi-level changes to human and ecological problems where a sharing of information across scientific and engineering disciplines, industries and policy stances is necessary. This conference will include discussion of bioindicators based on properties of all levels of biological organization, including: genes, molecules, and individual organisms, including wildlife and human populations, as well as ecological communities.

For Detailed Information Including Topic Areas, visit www.tfilearning.com.

This event is endorsed by The International Commission on Bioindicators, International Union of Biological Sciences (IUBS), Environmental Bioindicators Journal and Taylor and Francis Publishers.

This event is organized by TFI Learning: TFI Learning is a division of Informa, a leading international provider of specialist information and services of the academic, professional and business communities.

7th International Sponge Symposium

REGISTRATION AND REGISTRATION FEE -
NEW DEADLINES

The Scientific Committee of the 7thISS decided that the registration deadline for those willing to participate in the Symposium is February 28th. Registration on the first day of the Symposium will no longer be accepted.

February 28th is also the deadline for payment of the registration fee of at least one co-author for each submitted abstract. Other participants are still allowed to pay their registration fees until the first day of the Symposium.

Official Symposium Airline – VARIG (www.varig.com)

VARIG was chosen as the official airline of the 7th ISS. Any participant to the Symposium who buys a ticket in a VARIG shop directly (outside Brazil) is entitled to a 10% discount on the ticket price. Please mention the tour code: 019605. We took the

Meetings & Conferences

The 14th International Conference on Environmental Bioindicators and the 2nd Annual Meeting of the International Society for Environmental Bioindicators.

April 24-26, 2006 at The Conference Center at the Maritime Institute in Linthicum Heights, Maryland is now accepting **abstract and poster submissions!**

liberty of passing your e-mails on to VARIG, who should be contacting you soon offering its services.

The Scientific Committee needs some time to organize all the abstracts and payments received. Confirmation messages for the payments received will be sent to you soon, possibly before the 15th of December. Confirmation on acceptance of abstracts will take longer.

SEE YOU IN BUZIOS!!!!

The Convenors of the 7th ISS :

Eduardo Hajdu, Prof. Dr. Museu Nacional, UFRJ
Quinta da Boa Vista, s/n, 20940-040, Rio de Janeiro,
RJ, BRASIL

hajdu@acd.ufrj.br

tel. +5521 25681149 (r./ext. 227), fax (r./ext. 232)

6th European Coral Reef Conference 2006 European Meeting of the International Society for Reef Studies (ISRS)

19 - 22 September, 2006, Bremen, Germany

The 6th European Coral Reef Conference 2006 in Bremen is expected to bring together leading coral reef scientists and students to present and discuss state-of-the-art scientific results, education and outreach. It covers all aspects of research, use and management of reefs with a focus on European and European partner contributions from tropical shallow waters to high-latitude deep continental shelves.

Venue: University of Bremen & Center for Tropical Marine Ecology (ZMT), Bremen, Germany

Organisation: Center for Tropical Marine Ecology (ZMT)

Deadline for submission of Abstracts: 15 May, 2006

Deadline for Early Registration: 15 May, 2006

Programme Schedule

A regional focus will be on the Indian Ocean and adjacent seas, taking into account the wealth of studies conducted in response to the 1998 bleaching

event and the 2004 earthquake and tsunami. As another scientific highlight we expect first results from the IODP Tahiti reef drilling programme. There are many more interesting sessions, and abstracts on all aspects of basic and applied research are welcome!

For details, please visit the conference webpage at

<http://isrs2006.zmt.uni-bremen.de>

On behalf of ZMT, the ISRS President and Council, we hope to see you in Bremen!

Dr Claudio Richter
Zentrum für Marine Tropenökologie
Center for Tropical Marine Ecology
Fahrenheitstr. 6
D-28359 Bremen
Germany
T. +49-421-2380025
F. +49-421-2380030

New Books

Defying Oceans End. Edited by Linda K. Glover and Sylvia A. Earle and published by Island Press

This book presents a Global Business Plan for Ocean Conservation. If humankind were given a mandate to do everything in our power to undermine the earth's functioning, we could hardly do a better job than we have in the past thirty years on the world's oceans, both by what we are putting into it- millions of tons of trash and toxic materials-and by what we are taking out of it-millions of tons of wildlife. Yet only recently have we begun to understand the scale of those impacts. Defying Oceans Ends is the result of an unprecedented effort among the world's largest environmental organizations, scientists, the business community, media, and international governments to address these marine issues. It sets out a new agenda, one in which we approach marine conservation differently and at a much larger scale than we have to date. This book is a bold step in bringing the resources needed to bear on this vast problem before it is too late. It offers a broad strategy, a practical plan with priorities and costs, aimed at mobilizing the

forces needed to bring about a "sea change" of favorable attitudes, actions, and outcomes for the oceans-and for all of us.

Chapters:

- Maintaining and restoring ecosystems
- Ocean use planning
- Economic incentives
- Land-ocean interface
- Ocean governance
- The unknown ocean

<http://www.islandpress.org/DOE/book.html>

Courses

Spring 2006 graduate-level coral reef ecology course – UNCW.

The University of North Carolina at Wilmington is offering a new spring semester, graduate-level coral reef ecology course (BIO 585 Research methods in Coral Reefs and Adjacent Systems). The course is open to graduate students and upper level seniors that meet all of the course requirements. Details about the course and requirements can be found on my web page (see link below). The field portion of the course is being taught at CARMABI, on the island of Curaçao, with the last three weeks of the semester at UNCW so that students can have access to major equipment not available in the field.

UNCW is now recruiting students for the Spring of 2006. Class size is limited to only 10 students because of the intense one-on-one interactions with instructors. There are partial scholarships available for qualified students that apply by July 1, 2005.

For more information, please contact Dr. Alina Szmant by email (szmanta@uncw.edu) or by telephone (see below) after April 11, 2005

Dr. Alina M. Szmant Coral Reef Research Group
UNCW-Center for Marine Science
5600 Marvin K. Moss Ln
Wilmington NC 28409

Tel: (910)962-2362 & Fax: (910)962-2410

Cell: (910)200-3913

email: szmanta@uncw.edu

Web Page: <http://people.uncw.edu/szmanta>

Taxonomy and Ecology of Caribbean Sponges

The Smithsonian Tropical Research Institute, Bocas Research Station presents: A short-course in: Taxonomy and Ecology of Caribbean Sponges

Dates: July 17-28, 2006

Location: Bocas Research Station, Bocas del Toro, Panama

Registration Fee: US\$ 400 (some fellowships are available)

Instructors: Dr. Cristina Diaz, Smithsonian Institution, Dr. Robert Thacker, University of Alabama in Birmingham with several guest lecturers.

Application: This course is directed towards graduate students and advance Licenciado candidates and will be conducted in English. Please e-mail your CV, one letter of recommendation, and a 1-2 page statement explaining your background and reasons for taking the course, to Rachel Collin at CollinR@si.edu before March 1, 2006. Limit 10 students. For more information see www.stri.org Course Announcement

Lucaya Marine Science Expedition Program

The 2006 Lucaya Marine Science Expedition Program will explore the natural and cultural history of the Sea of Abaco. The two-week program sets sail on 8 July and returns to port on the 21st. This unique program is designed to provide undergraduate students with an intensive hands-on study of the flora and fauna of the Sea of Abaco with an emphasis on coral reefs and the challenges they face in today's world. Students will actively participate in all research vessel operations, including training in sailing and navigation.

See <http://www.coralreefscience.com> for more information and application materials.

Internships – 2006-2007

As part of its education and outreach role, Reef HQ offers up to four curatorial internship positions* to suitable applicants for 2006 - 2007*. Each internship position carries one specialist research and development project, which will be the core duty of the candidate. However, interns may also assist Reef HQ staff with various responsibilities of all exhibits, including diving, feeding, filtration and plumbing maintenance, water quality monitoring, collections and field trips, and other routine duties related to animal care and the running of a large aquarium. This program is designed for individuals intending to undertake a technical or professional career in marine science, aquaculture or a closely related discipline. Further details can be found on our website at "<http://www.reefhq.com.au/involved/intern/curatorial.html>"

Contact Shelley L. Anthony
Acting Biologist - Coral Reef Ecosystems
Reef HQ
Great Barrier Reef Marine Park Authority
2-68 Flinders St.
PO Box 1379
Townsville QLD 4810 AUSTRALIA
Ph: (07)4750-0876
Fax: (07)4772-5281
email: shelleya@gbrmpa.gov.au

Humor & Curiosities

Strange Things You Likely Didn't Know

1. A rat can last longer without water than a camel.
2. Your stomach has to produce a new layer of mucus every two weeks or it will digest itself.
3. The dot over the letter "i" is called a tittle.
4. A raisin dropped in a glass of fresh champagne will bounce up and down continuously from the bottom of the glass to the top.
5. A female ferret will die if it goes into heat and cannot find a mate.
6. A duck's quack doesn't echo. No one knows why.
7. A 2 X 4 is really 1-1/2" by 3-1/2".

8. During the chariot scene in "Ben Hur," a small red car can be seen in the distance (and Heston's wearing a watch).
9. On average, 12 newborns will be given to the wrong parents daily! (That explains a few mysteries....)!
10. Donald Duck comics were banned from Finland because he doesn't wear pants.
11. Because metal was scarce, the Oscars given out during World War II were made of wood.
12. The number of possible ways of playing the first four moves per side in a game of chess is 318,979,564,000.
13. There are no words in the dictionary that rhyme with orange, purple and silver.
14. The name Wendy was made up for the book Peter Pan. There was never a recorded Wendy before.
15. The very first bomb dropped by the Allies on Berlin in World War II killed the only elephant in the Berlin Zoo.
16. If one places a tiny amount of liquor on a scorpion, it will instantly go mad and sting itself to death. (Who was the sadist who discovered this??)
17. Bruce Lee was so fast that they actually had to s-l-o-w film down so you could see his moves. That's the opposite of the norm.
18. The first CD pressed in the US was Bruce Springsteen's "Born in the USA."
19. The original name for butterfly was flutterby.
20. The phrase "rule of thumb" is derived from an old English law which stated that you couldn't beat your wife with anything wider than your thumb. [This statement is forcefully disputed, however, by Wilton, D. 2004. Word Myths: Debunking Linguistic Urban Legends. p 38-44. Oxford University Press. 221 p. – SL]
21. The first product Motorola started to develop was a record player for automobiles. At that time, the most known player on the market was Victrola, so the called themselves Motorola.
22. Roses may be red, but violets are indeed violet.
23. By raising your legs slowly and lying on your back, you cannot sink into quicksand.
24. Celery has negative calories. It takes more calories to eat a piece of celery than the celery has in it to begin with.
25. Charlie Chaplin once won third prize in a Charlie Chaplin look-alike contest.
26. Chewing gum while peeling onions will keep you from crying.

27. Sherlock Holmes NEVER said, "Elementary, my dear Watson."
28. An old law in Bellingham, Washington, made it illegal for a woman to take more than three steps backwards while dancing!
29. The glue on Israeli postage is certified kosher.
30. The Guinness Book of Records holds the record for being the book most often stolen from public libraries.
31. Astronauts are not allowed to eat beans before they go into space because passing wind in a spacesuit damages them.
32. Bats always turn left when exiting a cave!

Change of Address

MOVING? To ensure that you continue to receive *Caribbean Marine Science*, notification of upcoming AMLC meetings and other AMLC information, please fill out the following change of address form and mail to:

Dr. David Wilson
The School for Field Studies
10 Federal Street, Suite 24
Salem, MA 01970-3876
USA
dwilson@fieldstudies.org

Name & Title

Institution/Association

Address _____

Telephone _____

FAX _____

E-mail _____

Scientific Interests _____

Dues

Within the past year the AMLC Executive Board decided that individual dues will now cover a one-year period from June of each year to June of the following year, so that dues collected during the scientific meeting registration process may become synchronized with other dues submissions. Individual membership dues for June, 2005 – June 2006 are \$25.00 which are overdue now unless you attended the Curaçao Scientific Meeting, in which case your meeting registration fee included membership dues, or if you otherwise paid directly. If you did not attend the Curacao meeting and wish to keep your membership in good standing (Please do!) please send your dues as discussed here. You may also help AMLC with a donation membership contribution if you wish, in which case your donation in excess of the base \$25 membership fee is U.S. income tax deductible. The schedule for these is presented below. Student dues are still \$5 per year.

The AMLC can accept credit cards payments (Visa, MasterCard or American Express) for AMLC dues. A 5% service charge will be added to credit card payments. Checks must be in U.S. dollars, from U.S. banks (or a U.S. dollars bank draft), made out to "AMLC", and sent to David Wilson at the address provided in the "Change of Address" discussion, above.

Name & Title

Institution/Association

New Address

Telephone

FAX

E-mail

Scientific interests

Membership Options: Student (US\$5.00)_____
Regular (US\$25.00)_____ Sponsor(US\$30.00)_____
Sustaining Member (US\$50.00)_____ and
Patron (US\$100.00)_____.

My check (bank draft) is enclosed for US\$_____ OR Please charge US\$_____ to my Visa () Mastercard () (Charge will include an additional 5% to cover handling expense)

Card # _____

Expiration Date _____

Cardholder _____

Signature _____

AMLC Background & Goals

The Association of Marine Laboratories of the Caribbean (AMLC) was founded in 1956 by marine researchers with interests in the marine science of the tropical Atlantic and Caribbean. Founded primarily as a scientific organization, the strength of the AMLC lies in the diversity of its member laboratories and the extensive expertise of its membership. Institutional, individual scientist and student memberships are available.

Annual AMLC meetings are hosted by member laboratories which are actively conducting marine research in the Caribbean. The host laboratory arranges for facilities for research presentations, copies of the presented abstracts (the proceedings) and accommodations for participants. The AMLC has no designated official language so researchers are free to make their presentations in their native language.

Caribbean Marine Science, published in English and Spanish, is the biannual newsletter of the AMLC and informs members of AMLC activities, pertinent events, and relevant research.

The purpose of the AMLC is to advance common interest in the marine sciences by:

- a. Assisting and initiating cooperative research and education programs
- b. Providing for an exchange of scientific and technical information
- c. Fostering personal and official relations among

members

- d. Publishing the proceedings of scientific meetings and a newsletter

2005-06 AMLC Officers

Executive Director

Dr. Steve LeGore
LeGore Env. Assoc. Inc.
2804 Gulf Drive N
Holmes Beach, FL
34217, USA
(473) 444-4176
slegore@mindspring.com

Vice President

Dr. Ernesto Weil
Department of Marine
Sciences - UPR
PO BOX 908
Lajas, PR 00667
eweil@caribe.net

Membership Director

Dr. David Wilson
Center for Marine Resources
The School for Field Studies
Turks & Caicos Island, BWI
Mail: 10 Federal Street, Suite 24
Salem, MA 01970-3876 USA
dwilson@fieldstudies.org

Recording Secretary

Ms. Karen Burns
Mote Marine Laboratory
1600 Thompson Parkway
Sarasota, FL
34236, USA
(941) 388-4312
kburns@marinelab.sarasota.fl.us

Newsletter Editors

Dr. Ernesto Weil - Isabel Weil
Dept. of Marine Sciences
U. of Puerto Rico
PO BOX 908, Lajas
Puerto Rico 00667. USA
(787) 899-2048 x241
FAX (787) 899-5500
Eweil@caribe.net

President

Dr. Anthony Knap
Bermuda Biological Sta-
tion for Reseach
17 Biological Lane
St. George's
GE 01 Bermuda
knap@bbsr.edu

Treasurer/Membership Director

Dr. Laurie Richardson
Dept. of Biology
Florida International U.
Miami-Florida - 33199
(305) 348-1988
richardl@fiu.edu

Information Officer

Mr. David Nagle
USGS Center for Coastal
& Wetland Studies
600 - 4th Street South
St. Petersburg, FL 33701
dnagle@usgs.gov

Members-at-Large

Mr. Mark Hardin
Greystone Environmental
Consultants Inc.
5231 S Quebec St.
Greenwood Village, CO
80111, USA
(303) 850-0930
mhardin@greystone.us

Dr. John C. Brock
USGS Center for Coastal
and Regional Studies
600 4th St South
St. Petersburg, FL 33701
(727) 803-8747 ext. 3088
jbrock@usgs.gov

Contributions to the AMLC Newsletter:

All members of the AMLC (individual and laboratory) are encouraged to send relevant news items at any time, to the newsletter. Relevant news items include, but are not limited to: new facilities, faculty/staff changes, positions available, research programs and initiatives, publications of general interest, awards, visiting scientist opportunities, and education programs. Submitted items should be sent to the AMLC newsletter office by the end of February for inclusion in the Spring issue, and by the end of September for the Fall issue.

Please send your information and comments to:

Dr. Ernesto Weil
Department of Marine Sciences
University of Puerto Rico
P.O. Box 908
Lajas, Puerto Rico, 00667.
FAX: (787) 899-5500/2630.
E-mail: eweil@caribe.net

Published by: Association of Marine Laboratories of the Caribbean (AMLC)

Editors: Dr. Ernesto Weil and Isabel Weil.

Contributing Editor: Dr. Steve LeGore

Editorial Office:

Department of Marine Sciences
University of Puerto Rico
P.O. Box 908
Lajas, Puerto Rico, 00667.
Tel: (787) 899-2048 x 241.
FAX: (787) 899-5500/2630
