AOML Keynotes
Miami, Florida

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AOML Federal Employees Vote Yes to NWSEO

AOML's federal employees voted on August 1, 2000 to join the National Weather Service Employees Organization (NWSEO). Founded in 1975, the NWSEO provides NOAA employees with professional representation before Congress, the Department of Commerce, NOAA, and NOAA line offices. With AOML's vote for union membership, the first chapter of the NWSEO is thus established within NOAA's Office of Oceanic and Atmospheric Research.

The NWSEO effectively becomes the exclusive bargaining representative for AOML's nonsupervisory and nonmanagerial federal employees. Michael Black, meteorologist with the Hurricane Research Division, has been elected to serve as the first Steward of the NWSEO AOML chapter; Michael Shoemaker, electronics technician with the Ocean Chemistry Division, has been elected to serve as the first Vice Steward.

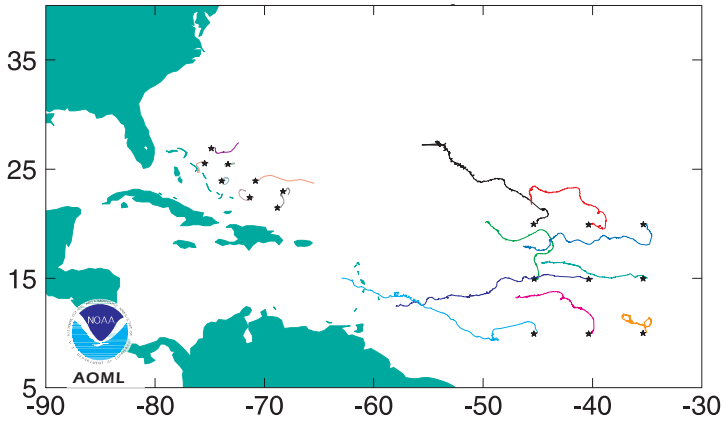
In addition to its new AOML members, the NWSEO currently represents 5,000 employees from the National Weather Service, National Environmental Satellite and Data Information Service, and the Office of General Counsel. Information about the NWSEO, including updates to legislative actions, membership benefits, etc., can be found by visiting the NWSEO Internet web site at http://www.nwseo.org.

LABOR DAY
September 4, 2000

Hurricane Drifter Array Helps Forecasters Track Storms

Scientists at AOML's Global Drifter and Data Assembly Centers have a new tool to assist forecasters gather data about developing storms in the Atlantic Ocean and Caribbean Sea. In May 2000, nine drifting buoys equipped with sensors measuring sea surface temperature, barometric pressure, wind direction, and wind speed were deployed northeast of Brazil; an additional eight buoys were deployed northeast of the Bahamas in August. Collectively, these buoys, known as the "hurricane array," gather surface meteorological data in the Atlantic basin, a region known for hurricane and tropical storm development.

Weather data is normally collected over the ocean by a fleet of volunteer observing merchant ships. During rough seas due to tropical disturbances and developing storms, however, these ships divert from their routes to remove themselves from harm's way, creating a data void where data is most needed. The hurricane array will help to fill this void, providing a continuous flow of information to computer weather models, along with satellite and reconnaissance aircraft data, from which forecasts are made. The buoy data will also help local forecasters make better regional assessments of the impact of passing storms. Ultimately, data received from the hurricane array will enable researchers to improve their models, resulting in better forecasts in future hurricane seasons.



Map of the Atlantic Basin showing the hurricane drifter array tracks for August 16, 2000. Asterisks mark the beginning of each drifter track.

AOML's Global Drifter Center manages the deployment of drifting buoys around the world. Once buoys are deployed and verified as being operational, they are monitored by AOML's Data Assembly Center (DAC). Incoming data from operational drifters are placed on the Global Telecommunications System for distribution to meteorological services around the world. The DAC is currently posting daily tracks of the hurricane array (see figure above) on its Internet web site (www.aoml.noaa.gov/phod/dac/dacdata.html). Visit the DAC web site for additional information about the hurricane array, as well as to obtain access to data received from the buoys. Funding for the buoys was provided by NOAA's Office of Global Programs and the Naval Meteorology and Oceanography Command, which performed the deployment of both sets of hurricane buoy arrays.

NOAA Stands by Atlantic Hurricane Forecast

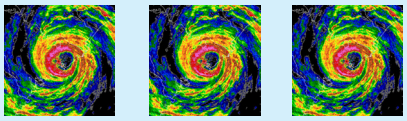
NOAA scientists officially updated their Atlantic hurricane season forecast at a press conference on August 10th, reaffirming their pre-season forecast that the likelihood still existed for the 2000 season to feature above-average overall activity. Cited as one of the major factors influencing their forecast was the weakening La Niña and the resultant modifications to global weather patterns controlling conditions in the tropical Atlantic.

Although the first two months of the June 1-November 30 hurricane season were relatively uneventful, the updated forecast calls for a 60% probability that above-average conditions will prevail for the remainder of the season. This figure is lower than the 75% probability issued by NOAA at its May 10th pre-season press conference.

While the 2000 season is anticipated to produce an above-average probability for storm formation, it is not expected to be as active as either the 1998 or 1999 seasons. Above average hurricane years typically feature 11 or more tropical storms, seven or more hurricanes, and three or more major hurricanes (maximum sustained winds over 110 mph, a category 3 storm on the Saffir-Simpson Hurricane Scale).

Other factors contributing to NOAA's updated forecast included the structure and location of the African jet stream, low surface air pressure across the Atlantic and Caribbean, and a moist unstable atmosphere over the tropical Atlantic.

DAILY TROPICAL WEATHER DISCUSSION



12:30 P.M. (WEEKDAYS)

4TH FLOOR MAP ROOM

In support of the Hurricane Research Division's annual Hurricane Field Program, join us for daily map discussions about tropical cyclones around the world, with a focus on Atlantic hurricanes. Each week a new volunteer will lead the discussions, which last about 20 minutes. Contact Chris Landsea (305-361-4357 or landsea@aoml.noaa.gov) for more information.

CEDAR Program Rescues Aging Documents and Data

CEDAR (Coastal and Estuarine Data Archeology and Rescue) is a NOAA-funded program that combines the disciplines of library science and marine science to "rescue" unpublished documents and data pertaining to south Florida's coastal and estuarine ecosystem. Without the intervention of CEDAR, these documents and data are at risk of being lost forever as printed materials physically deteriorate, personnel retire, and advances in technology make access to older electronic storage media difficult, if not impossible.

Principal investigators Linda Pikula, senior librarian at the NESDIS (National Environmental Satellite, Data, and Information Service) Miami Regional Library at AOML, and Adriana Cantillo, oceanographer with the National Ocean Survey's National Centers for Coastal and Ocean Science, obtained funding for CEDAR from the South Florida Ecosystem Restoration Prediction and Modeling Program (SFERPM). Together they have created and established a preservation mechanism for enabling unpublished documents and data about south Florida's marine environment to become accessible to the scientific and academic community.

The CEDAR program: (1) locates, catalogs, and evaluates unpublished materials about south Florida's coastal and estuarine ecosystem; (2) converts and restores information judged valuable to the south Florida restoration effort into electronic and printed format; and (3) distributes this information electronically via the Internet to the scientific community, academia, and the public. CEDAR differs from simple document scanning in that review, editing, and quality assurance evaluation are performed to ensure clarity and accuracy of the final product. Ms. Pikula coordinates search efforts among marine science libraries and institutions in the southeastern United States to locate potential CEDAR documents; Dr. Cantillo evaluates CEDAR materials and edits/reviews the electronic versions. Since CEDAR-restored information defines the state of south Florida's coastal and estuarine environments in years past, its provides a critical basis for comparison when evaluating the present state of environmental degradation and establishing restoration goals.

CEDAR supports the south Florida restoration effort; therefore, unpublished studies involving the the geographic areas of Biscayne Bay, Florida Bay, the Florida Keys, St. Lucie Estuary, the Ten Thousand Islands, Dry Tortugas, and Tampa Bay are of primary interest when considering documents and data for the restoration process. Also of interest to CEDAR are unpublished studies of topics such as algal blooms, storm impacts, contamination analysis, anthropogenic damages, sedimentary processes, socioeconomic changes, dredging, etc., involving the south Florida area.

The cost of preserving and restoring unpublished documents and data through CEDAR is small in comparison to the costs incurred in originally obtaining the data and preparing the documents. Besides the South Florida Ecosystem Restoration Task Force, another major user of CEDAR-restored materials is expected to be the Florida Biotic Information Consortium which links information resources of the Florida Museum of Natural History, Florida academic libraries, and Florida research libraries into a virtual library on Florida ecology.

To learn more about the CEDAR program, visit the CEDAR Internet web site at www.aoml.noaa.gov/general/lib/CEDAR.html. Contact the principal investigators (Linda.Pikula@noaa.gov; Adriana.Cantillo@noaa.gov) regarding unpublished documents and/or data eligible for recovery and restoration via CEDAR.

Atlantic Basin Year 2000 Storm Names:

Alberto	Beryl	Chris	Debby	Ernesto	Florence	Gordon
Helene	Isaac	Joyce	Keith	Leslie	Michael	Nadine
Oscar	Patty	Rafael	Sandy	Tony	Valerie	William

Congratulations

David Palmer, physicist with the Remote Sensing Division, has been elected to membership in the Technical Committee on Acoustical Oceanography of the Acoustical Society of America.

Diane Garcia, outreach coordinator for the MAST Academy High School on Virginia Key, will receive the Distinguished K-12 Educator Award from the Society for the Advancement of Chicanos and Native Americans in Science (SACNAC) this October at their annual conference in Atlanta, Georgia. Ms. Garcia was nominated for the award by Howard Friedman, Deputy Director of AOML's Hurricane Research Division. For several years, Ms. Garcia worked with the Hurricane Research Division in developing hurricane awareness programs. She also assisted in the development of an outreach project for the World Meteorological Organization.

Farewell

Christiane Fleurant resigned from AOML on August 31, 2000 after working for five years with the Physical Oceanography Division as a CIMAS Research Associate. Best of luck to Christiane for her continued success.

It's a Boy(s)!

Congratulations to Michael Black, meteorologist with the Hurricane Research Division, and his wife Marie on the birth of their son, Michael Alexander, on September 1, 2000 at 5:40 p.m. Michael Alexander weighed in at 7 lbs. and, according to Dad, was born with a great set of lungs.

Congratulations to Yolanda Rivera, former accounting technician with the Office of the Director, and her husband Deric on the birth of their first child, Deric William, Jr., born September 2, 2000 at 4:50 p.m. Deric William weighed in at 6 lbs., 2 oz. Mom, Dad, and baby are all doing well.

CFC Kickoff Coming Soon...

The annual Combined Federal Campaign (CFC) program to raise monies for charities via payroll deductions begins in October

Visitors

Ms. Marie-Dominique Leroux, a meteorology student from southern France, visited AOML's Hurricane Research Division from July 20-August 20, 2000. While at AOML, Ms. Leroux had the opportunity to learn about the HRD-pioneered surface wind analysis project. With the assistance of HRD scientists Shirley Murillo, Sam Houston, and Mark Powell, Ms. Leroux was able to perform analysis of wind data on current and past storms (*e.g.,* Fran, Bonnie) in the Atlantic basin.

Marie-Dominique Leroux and Shirley Murillo

Dr. Michael Taylor, a professor of meteorology at the University of the West Indies (Kingston, Jamaica), was a visiting scientist with AOML's Physical Oceanography Division during August 2000. He worked with Dr. David Enfield on joint climate research funded by the Inter-American Institute for Global Change Research (IAI). Dr. Taylor received a Ph.D. in meteorology in 1999 from the University of Maryland. He is interested in understanding how large-scale, ocean-atmosphere interactions affect the climate of the Caribbean.

Dr. Michael Taylor

Chasing Debby

Klaus "Chris" Moberg

When I tell people I flew on a hurricane hunter mission, they almost always ask what it felt like to be in the storm. I reply that, considering the flight took off at 8:30 p.m. and landed at 5:00 a.m., it was a mixture of three feelings. The first I would most closely equate to the mindless, sleep-deprived state one would experience while working the late night shift at a local 7-11 convenience store. The second feeling can be closely compared to that supremely anxious, yet incredibly exited, adrenaline packed group of emotions you feel just as you go over the top of the first hill of the biggest, tallest, bumpiest roller coaster one could find in any theme park anywhere. The third is that special, distinct moment when you wake up from a tired daze, look at the computer screen in front of you, glance at the raindrops splattering onto the window to your left, all while the hypnotic, endless drone of four rather large prop engines beckon you to close your eyes for just one more minute, and realize that what you are doing at that very moment is the exact thing that you want to be doing for the rest of your life.

However, before they ask what it was like, most people ask a different question referring to my trip into the storm: "Are you nuts?" To answer that, I just give them a little smirk and say: "Of course I am!" I flew into a tropical storm! I think you have to be a little nuts to even consider getting on the plane.

Joking aside, however, the flight on August 25th into Tropical Storm Debby was an amazing experience. It didn't matter that Debby was a rapidly weakening storm, or that there wasn't a clear eye to cruise through. The simple fact that I was on an airplane, flying around in one of the greatest (and most destructive) natural wonders one can observe on this planet made the entire trip worthwhile. It was truly an amazing, life-altering experience.

Chris Moberg is a high school student from Washington, D.C. entering his senior year. He worked this past summer as a Hurricane Research Division intern with Dr. Peter Black. While at AOML, he had the opportunity to fly aboard a late-night reconnaissance mission into Tropical Storm Debby. He thus becomes the youngest person to have ever flown into a storm aboard NOAA's reconnaissance aircraft.

Travel

James Hendee will attend a meeting of the Association for Marine Laboratories of the Caribbean on Lee Stocking Island, Bahamas on August 28-September 1, 2000 and make a presentation entitled "A real-time meteorological and oceanographic monitoring station for the Caribbean Marine Research Institute."

Bret Elkind will assist researchers from the Rosenstiel School of Marine and Atmospheric Science's Marine Biology and Fisheries Division as a Certified Scientific Diver during their annual National Underwater Research Center (NURC) cruise staged from the NURC facility in Key Largo, Florida on August 29-September 8, 2000.

Kristina Katsaros will present a two-day course on September 6-7, 2000 at the Centro de Investigacíon y de Educacíon Superior de Ensenada in Ensenada, Mexico entitled "Ocean winds and fluxes by microwave remote sensing."

John Proni and Alejandra Lorenzo will meet with Puerto Rico's Secretary of the Environment in San Juan, Puerto Rico to review wastewater infrastructure modifications on September 8, 2000.

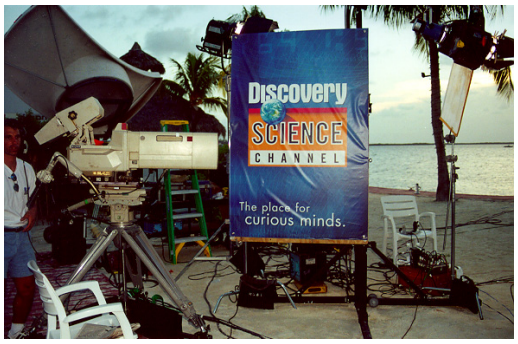
Shailer Cummings will install oceanographic equipment aboard the Royal Caribbean Cruise Lines ship *Explorer of the Seas* in Turku, Finland and perform operational testing of the equipment during the ship's transit from Finland to New York on September 6-October 18, 2000.

Judy Gray will attend a meeting with CICOR, OAR's joint institute with the Woods Hole Oceanographic Institution, in Woods Hole, Massachusetts, on September 14, 2000.

Nirva Morisseau-Leroy will attend the Oracle Open World 2000 Conference in San Francisco, California on September 30-October 6, 2000.

Rickenbacker Causeway annual passes (C-Passes and C-Cards) must be renewed by September 30, 2000. Contact the Rickenbacker Causeway Toll Plaza staff at (305) 854-2468 for questions and/or additional information.

Science Live Spotlights Florida Bay



On Wednesday, August 23rd, at 8:00 p.m., the Discovery Science Channel aired a live education program focusing on the restoration efforts in the Florida Everglades and, primarily, the role of Florida Bay. The one-hour program, *Science Live*, featured AOML's Peter Ortner, Ellen Prager of the Rosenstiel School of Marine and Atmospheric Science (RSMAS), Mike Duraco of the University of North Carolina (Wilmington), and Mark Butler of Old Dominion University (see photo below). Several other scientists from AOML, the Southeast Fisheries Science Center, RSMAS, and Everglades National Park also assisted with background information and footage. This edition of *Science Live* aired from Key Largo, Florida, and covered topics ranging from seagrass health and spiny lobster populations to the Bay's hydrogeology and the interagency working group of SFERPM (South Florida Ecosystem Restoration Prediction and Modeling Program). Special thanks goes to Peter Ortner for overseeing all science aspects of the program, and to Ryan Smith of AOML's Physical Oceanography Division for coordinating the field operations. A brown-bag lunch will be held at AOML in the coming weeks to view the program; watch for announcements.

Informal Research Report*

Acoustic imaging of seafloor hydrothermal flow regimes at the RIDGE Program Observatory, Main Endeavour Field, Juan de Fuca Ridge

Dr. David Palmer, Remote Sensing Division
September 19, 2000

***Informal research reports begin at 3:00 p.m. in the first-floor conference room. Coffee and tea are served at 2:45 p.m.**

Keynotes can be viewed online in PDF format at the following World-Wide Web Internet address:
http://www.aoml.noaa.gov/keynotes

Keynotes is published monthly by the Atlantic Oceanographic and Meteorological Laboratory. Contributions are welcome and should be submitted prior to the last week of each month to ensure inclusion in the following month's edition. Please address all correspondence to: Office of the Director, 4301 Rickenbacker Causeway, Miami, FL 33149. Contributions may also be submitted by fax at (305) 361-4421 or by email (derr@aoml.noaa.gov).

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The deadline for submitting material for the October issue of *Keynotes* is September 22, 2000.