NOAA REPORT



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April 2001

Humpback Whale Sanctuary Hosts Family Ocean Fair

—By Liza Simon Tt started out as the usual Eden-like day at Kilauea Point ▲National Wildlife Refuge, a haven for many terrestrial species that is surrounded by the waters of NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary.

Red and white tropic birds danced in mid-air. Droves of albatross skidded in for a landing on the edges of rough-hewn cliffs, while 4,000 feet below, a monk seal hauled itself up on a slab of sunny rock. Offshore in the Pacific Ocean, a pod of breaching whales sent geysers of spray skyward.

Then, at mid-morning on March 24, gates opened and the first of several thousand visitors streamed in for the Kauai Family Ocean Fair.

The ocean fair is a signature event of NOAA's humpback whale marine sanctuary, whose mandate is to provide citizens with a bridge of understanding to coastal waters.

Displays, craft booths, lectures and entertainment were all designed to immerse fair goers in the many wildlife riches the surrounding ocean has to offer.

"On a day like this, people are going to get hooked on this place!" predicted local resident and retiree Ted Yamate, as he surveyed the crowd milling through exhibits in the big white tent. A lifelong fisherman of the nearby rugged continued on page 6

Pew Oceans Commission Looks to NOAA for Answers

—By Nancy O'Donnell $\mathbf{F}^{ ext{or}}_{ ext{years, a national commission is}}$ exploring public policy needed to restore and protect living marine resources in U.S. waters, and is turning to NOAA for some answers.

The Pew Oceans Commission, a prestigious group of 20 American leaders from ocean science, industry, government and conservation groups, is traveling from coast to coast this year, conducting a national dialogue on current ocean policies and activities.

The commission, chaired by former Congressman Leon Panetta, visited NOAA's Coastal Services Center in Charleston, S.C., the last week of March. Margaret A. Davidson, acting Assistant Administrator for Ocean Services and Coastal Zone Management, met with the group to discus a variety of subjects, including coastal development and pollution issues and community-based efforts to use the geographic information system.

The commissioners, joined by national and local developers, also attended a workshop focusing on the region's efforts to balance coastal development and environmental protection.

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NOAA's Margaret Davidson (left) speaks to Michael Hirshfield of the Chesapeake Bay Foundation and Jacqueline Savitz from the Coast Alliance following a coastal development workshop hosted by the Pew Oceans Commission March 27 at the College of Charleston.



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NOAA Employee of the Month Ross Dickman.

Employee of the Month Caught Weather Bug Early

—By Robert Chartuk

A pril Employee of the Month
Ross Dickman is the Weather
Service eastern region program
manager for the Advanced Weather
Information Processing System, one
of the cornerstones of the Weather
Service modernization.

The award recognizes that under his direction, the eastern region was the first to finish commissioning AWIPS, a massive, complex task completed ahead of schedule.

While the high-tech weatherman now dwells in the rarified strata of interactive computer-worded forecasts, problem resolution matrices and graphical forecast editors, he was a precocious tyke of four when he was first bitten by the weather bug.

"I wanted to know why it was raining when the temperature was below freezing. Two weeks later, I wanted to know why it was snowing when the temperature was 42," said the weatherman who now

helps manage the the world's most sophisticated weather information processing system from his office in Bohemia, N.Y.

He built his own weather station at age six and was the go-to guy for his grade school classmates and teachers on all matters weather.

He was a regular during open house at the Allentown weather service office and covets a picture of himself, age 12, visiting the National Hurricane Center in Miami.

"NOAA Weather Radio was my life line and I grew up on a steady diet of forecasts and warnings," he said. "My 'sports hero' was our TV meteorologist."

From his early understanding of climate dynamics in the Philadelphia suburbs, Ross has never wavered from his meteorological career path.

Ross' dedication to meteorology is illustrated by the fact that he worked various odd jobs to put himself through college, including a six-summer stint at the Chowder Hut in Beach Haven, N.J.

Among his other pre-Weather Service jobs was fishing golf balls out of water traps, scooping ice cream and dicing clams at the Hut—tasks happily accomplished to sustain his meteorological dream.

"Ross epitomizes what happens to a person after the weather bug bites," said his boss, Dean Gulezian, the Weather Service's eastern region director. "We are fortunate to have people like him, who from an early age have immersed themselves in weather."

While his credentials alone would have elevated him, some of Ross' biggest breaks were created by his dedication to the science.

As a Penn State freshman, Ross got wind that the official forecaster for the college newspaper, the *Daily Collegian*, was a graduating senior. After two weeks of regaling the continued on page 8



Dane Konop/NOAA Team Member of the Month John Graves.

Team Member of the Month Chairs Tuna Committee

John Graves, a teacher, researcher and department chair at the Virginia Institute of Marine Science of the College of William and Mary in Williamsburg, Va., has been named NOAA's April Team Member of the Month in recognition of "his unselfish and tireless contributions to fisheries management."

Graves works with NOAA as the chair of the advisory committee to the U.S. International Commission for the Conservation of Atlantic Tunas. He is responsible for setting meeting agendas, helping members from different constituencies reach consensus, communicating committee positions to NOAA and coordinating the U.S. delegation to commission meetings.

Graves is recognized by NOAA for "unparalleled progress in support of NOAA's living marine resource stewardship mission and the goal of building sustainable fisheries." Graves led the commission in establishing historic recontinued on page 8

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Secretary Evans Travels West to Visit NOAA Sites

—By Carol Knight
Less than two months after
taking office, Secretary of
Commerce Donald L. Evans made
a foray into the field March 9,
visiting NOAA research laboratories and other Commerce Department facilities in Boulder, Colo.

"I am blessed to be able to serve my country," the new Commerce secretary told an enthusiastic throng that greeted him in the three-story lobby of the David Skaggs Research Center.

The new research center, completed two years ago, houses six NOAA research laboratories, NESDIS' Geophysical Data Center, the Denver-Boulder Weather Forecast Office and the Administrative Support Center serving the mountain region.

Evans told NOAA employees that during his tenure he will offer "integrity, honesty and truth," and that his decisions will be clear to everyone because with him, "Yes is yes, and no is no."

The secretary appeared to be deeply engaged by a "show and tell" briefing about NOAA's weather research and the research-to-operations connection that effectively moves new weather forecasting technology from the NOAA labs to the National Weather Service.

"Weather and climate are two sides of the same coin," Sandy MacDonald, director of NOAA's Forecast Systems Laboratory in Boulder, told secretary Evans. MacDonald noted that investments in observations, modeling and research partnerships that work to improve our understanding of atmospheric phenomena serve NOAA's prediction mission across



Wilfred von Dauster/NOAA
Acting administrator Scott Gudes (left) leads Commerce secretary Evans (second from right)
on a tour of NOAA facilities in Boulder, Colo., including the Denver-Boulder Weather Service

forecast office. time scales, from days to centuries.

Having been briefed previously on the latest international climate assessment by Aeronomy Laboratory director Dan Albritton, Evans asked how soon NOAA can extend our understanding of climate change.

"I believe we can get answers in five to ten years if we do the right things now," MacDonald replied, adding that he believes NOAA can narrow the gap among what now is a wide range of estimates of possible global temperature increases in coming years.

MacDonald emphasized to the secretary that support of research and development activities is crucial to finding these answers.

Evans and his entourage then got a tour, including Automated Weather Information Processing System workstations at the local forecast office from meteorologist-incharge Larry Mooney.

Before visiting NOAA facilities, secretary Evans addressed a standing-room only crowd of Commerce employees at the main auditorium on the Boulder DOC campus, which includes facilities of the National Institute of Standards and Technology and the National Telecommunications and Information Administration.

Evans was accompanied by NOAA's acting administrator Scott Gudes, Sen. Wayne Allard of Colorado, Rep. Mark Udall, who represents the Boulder DOC campus in Congress, and Rep. Scott McInnis, who represents Colorado's Western Slope.

"I'm going to give it everything I've got for the next four to eight years, and then head back to Texas," the secretary told the DOC assemblage.

He referred to his training as an engineer at the University of Texas and drew laughter from the crowd when he said he understands he is the first engineer to serve as secretary of commerce "since Herbert Hoover. That's pretty scary."

He also joked that in the few weeks since he was sworn in as secretary, he's "learned a lot about fish," adding he hasn't met a senator who doesn't want to talk about fish, except Sen. Allard.

The secretary observed that 60 percent of his department's budget is in NOAA programs, and he said that 60 percent "is in good hands."

Evans said with the department's role in stewardship of the environment, "we need superior minds and commitment [that NOAA offers] to advise us."

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Focus On...

Educating Teachers About NOAA

—By Patricia Viets and Patrick Slattery Teachers from across the country were introduced to NOAA in three major conferences in March that featured information about NOAA and resources the teachers can use in their classrooms.

West Chester University

In celebration of Pennsylvania's Space Satellite and Technology Week, NOAA featured state-of-the-art technology and world-class presenters at the Satellites and Education Conference, March 7- 9, at West Chester University, in West Chester. Pa.

At the conference, educators and science and technology professionals shared classroom applications of satellite data and advanced technologies. The focus this year was introducing educators to the range of learning opportunities available through satellite technology.

Workshop sessions also provided teaching materials and ideas for elementary through university classrooms.

Mary Glackin, Deputy Assistant Administrator for Satellite and Information Services, made the opening remarks at the conference, focusing on the role of satellite data in monitoring the environment. She also presented the university with two satellite posters and a special plaque recognizing conference matriarch Nancy McIntyre for her many years of work in planning and hosting the conference.

Louis Uccellini, director of NOAA's National Centers for Environmental Prediction, gave a presentation on the forecasts and science issues related to recent snowstorms that have affected the eastern United States.

University of North Carolina

NOAA's National Climatic Data Center in Asheville, N.C., was a co-sponsor of the Satellite Application and Education Conference held at the University of North Carolina's Asheville campus March 8-10.

With the theme "Satellites In Our Everyday World," the conference provides middle and high school science teachers with a basic understanding of the techniques and applications of satellite remote sensing. It also qualified for professional continuing education credit for attending teachers.

More than 60 teachers and speakers, mainly from the south-eastern United States, participated in the event.

NCDC director Tom Karl gave the opening remarks, focusing on the use of NOAA's satellite data in various applications in business, government and university and educational research.

"Attendees gained a broad overview of how satellite data are used in a variety of applications," said NCDC meteorologist Tom Ross. "The applications include meteorology, oceanography, forestry, fisheries, geology and natural/man-made hazards monitoring." continued on page 5



Nancy McIntyre/WCU

At West Chester University, teacher Tom Riley (left) shows NOAA meterorologist Bob Wanton (right) the sequential rocket launcher he built to launch over sixty student-built rockets.

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Science Teachers Association

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Combine seven tons of NOAA handouts, a group of enthusiastic NOAA employees and 12,000 science teachers and what do you get? The 2001 National Science Teachers Association Convention held in St. Louis, Mo., March 22-25.

A crew of about 20 NOAA employees from several NOAA offices from across the country joined the throng at St. Louis' cavernous downtown convention center, providing demonstrations, briefings, explanations and handouts to science teachers searching for the latest methods of keeping students' attention.

The staff at the National Weather Service St. Louis forecast office in St. Charles also provided tours of the facility and demonstrations during the meeting.

Other NOAA employees gave presentations at the convention center on subjects ranging from weather satellites to NOAA's



Patrick Slattery/NOAA

Science teachers are introduced to NOAA by the award winning "Our Seas and Skies: NOAA's 30th Anniversary Video."

Teacher at Sea Program and surveyed the teachers about their awareness of NOAA and their Internet use.

Science teachers visiting the NOAA booth received a five-page

list of NOAA Internet addresses and learned of the agency's onestop-shopping education Web site.

Free copies of a NOAA El Niño/ La Niña video were a big hit with the teachers, as were posters and weather safety brochures. Approximately 8,000 copies of the video were distributed.

"I'll take anything that's free," one teacher said, "especially something that helps me teach about weather and the atmosphere!"

NOAA staff and presenters included representatives of the GLOBE Program, the Weather Service central region headquarters and the St. Louis forecast office, NOAA's Office of Oceanic and Atmospheric Research, including the National Severe Storms Laboratory, Sea Grant, the NOAA Coastal Oceans Program, the National Marine Fisheries Service, the National Environmental Satellite Data and Information Service, the National Estuarine Research Reserve System, the Teacher at Sea Program and NOAA's Office of Public and Constituent Affairs.



Patrick Slattery/NOAA

Teachers at the National Science Teachers Association annual meeting collect posters, brochures, guides to NOAA resources and other teaching aids at the NOAA booth.

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Kauai Ocean Fair

continued from page 1 coast, Yamate said he became hooked on volunteering at the refuge 15 years ago. Also a big supporter of the fair, he was on duty for the day, helping to shuttle visitors from the parking lot to the fairgrounds.

Members of the Gardner family had spotted information about the Kauai Family Ocean Fair on the Web while still back in Minnesota planning their first-ever Hawaiian vacation.

"We planned to stop here as soon as we read about it; it's something different for us," said Ron Gardner.

By his side was daughter Devyne, sporting a humpback whale hat she had just made with the help of some sanctuary volunteers.

One of the main goals of the Kauai Family Ocean Fair, an annual sanctuary event since 1996, is to make stewardship something akin to an everyday habit.

Underlying the fun and outdoorsy atmosphere of the fair is the new concept known as "on-site interpretation," the idea that you can capitalize on the experience of the environment to teach people to care for the environment.

"School curriculum tends to stress 'hard' science, where the focus is on what happens in the laboratory.

"Environmental science is more experiential so it makes sense for the sanctuary to rely on outdoor venues," said Patty Miller, a teacher and member of the sanctuary's advisory council education committee in Hawaii.

"This is one of Hawaii's most popular natural attractions and it is also a gateway to the Kauai portion of the sanctuary. It's important that people have a place to bring their families and friends and share some time in the presence of so much wildlife," said Jean Souza, sanctuary liaison for the island of Kauai and executive coordinator for the fair.

One of the biggest hits of this year's fair was the educator's workshop, where participants learned some new tools for teaching units on humpback whales.

Sanctuary staff passed out materials and demonstrated projects and activities sure to make an impression on the young mind.

Sanctuary administrator Carol Carey showed how fibrous coconut fronds could be used to illustrate the filter-feeding habit of the humpback whale.

At another table, sanctuary Hawaiian cultural educator Joy-Lynn Oliveira led a group through the verses of a child-friendly tune with lyrics she had penned about the kohola, as humpbacks are known in the Hawaiian language.

Tina Lee, a student teacher, said the workshop gave her several ideas she planned to use with her students. She predicted that the making of the life-sized humpback whale jigsaw puzzle would go over well in her classroom.

"Kids need a break from just sitting at their desks all day," Lee said. "They learn by doing; so these hands-on projects really work," she said.

Many of those present agreed that youngsters have a natural affinity for marine mammals.

"Activities, not a textbook, really tap into their interest," volunteered a woman who identified herself as a home-school parent.

It was no mere coincidence that the workshop was held on a hillside, which provides a spectacular view of the ocean and of humpback whales.

As part of the workshop, sanctuary staff set up viewing scopes and shared some technical pointers on how to enhance whale-watching by learning to recognize specific whale behaviors.

On an "ordinary" day, the refuge admits an average of 700 visitors for a suggested donation of three dollars.

A main attraction is the historic Kilauea Lighthouse, built by the U.S. government in 1909 and currently listed on the National Register of Historic Places.

The refuge is actually the rim of an ancient volcano; its archways, ledges and knife-edged cliffs provide habitat for dozens of bird species, many of which are endangered.

Since 1985, the U.S. Fish and Wildlife Service has had the job of protecting the area, and fosters many ways of preserving and restoring indigenous plants and birdlife. The refuge also boasts wave-etched coves, frequented by Hawaiian monk seals and sea turtles, all listed as endangered or threatened.

So many humpback whales are sighted in the adjacent waters that the area was selected for inclusion in NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary, which has been designated to protect the humpback's North Pacific breeding grounds.

The first Kauai Family Ocean Fair was held in March of 1998 to mark the dedication of the Kauai portion of the sanctuary.

Souza recalls that no one quite knew what to expect; but everyone was pleasantly surprised when the total visitor count at Kilauea Point for the first event topped 3,000.

Such banner public support marked the beginning of a productive partnership between the National Marine Sanctuary Program, the U.S. Fish and Wildlife Service and a citizen's support group at the refuge known as the Kilauea Point Natural History Association.

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Pew Commission

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Staff members from NOAA's ACE Basin Estuarine Research Reserves briefed the commissioners on local efforts to preserve key coastal habitats.

Throughout its travels, the commission has turned to the national marine sanctuary system to learn more about its successes in managing 13 marine protected areas in the U.S. and American Samoa.

In November 2000, commissioners traveled to Monterey, Calif., to meet with those who study, manage and depend on marine resources—local fishers, marine resource managers, students and scientists—and to speak with citizens about local concerns and methods they use to address these concerns.

Monterey Bay National Marine Sanctuary superintendent William J. Douros provided the commission with information about the national marine sanctuary system and Monterey Bay sanctuary's own efforts to protect its marine resources. Superintendent Douros also gave his recommendations to the group, upon request, regarding expanding funding for ecosystem monitoring.

The Pew Oceans Commission next held a hearing in Pacific Grove to hear invited testimony on water pollution issues. They learned about the Monterey Bay sanctuary's successful water quality protection program and its new ecosystem monitoring program.

Resource protection coordinator Holly Price addressed regional urban runoff and sewage issues.

The commission also learned about the sanctuary's collaborative efforts with the agricultural community.

Douros led a tour with several continued on page 8

Kauai Ocean Fair

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By pooling resources, the groups were able to put some real "draw power" into this year's fourth annual Kauai Family Ocean Fair.

Back for the third consecutive time was Ohia Productions, a highly original Honolulu theatrical ensemble that uses music and dance to dramatize the plight of endangered Hawaiian wildlife.

While kids swarmed through the stations, stopping to color, scissor and stamp projects related to various plants and animals, adults were treated to substantive lessons on the Hawaiian environment, courtesy of four noted lecturers.

Jim Darling reeled off the many scientific hypotheses over the past thirty years that have attempted to explain the so-called humpback whale song.

From the Honolulu Laboratory of the National Marine Fisheries Service, marine mammal scientist

John Henderson presented an update on Kauai's monk seal population.

Researcher Rachel Cartwright used results of her latest studies to paint a captivating portrait of the maternal instinct of humpback whales.

Brian Midson led a virtual tour of Hawaii's hottest piece of real estate—Loihi Seamount, the underwater volcano located a few miles off the Big Island.

When lights came up on the final presentation, fair goers peppered the last scientist with an array of questions.

A park attendant politely informed the group that the fair was coming to an end. The parking lot would soon be locked. It was time to go.

"They'll never believe I went to a lecture on my vacation," a visitor told a refuge employee. "This has been an exceptional day for me."

The smiling worker agreed, "It's been like that for us, too."



Liza Simon/NOAA

Kauai ocean fair goer Devyne Gardner, visiting with her family from Minnesota, wears a humpback whale hat she made at the marine sanctuary booth.

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Dickman

continued from page 2 upperclassman about his love of weather, he was "willed" the coveted job.

For four years, Ross predicted and monitored Pennsylvania weather as he pursued his bachelor's degree in meteorology. Upon graduation, he and his classmates were scouted by the Weather Service.

"When I showed them my detailed weather records—that's all it took," Ross said. "My record in forecasting the local weather was better than theirs."

Three weeks after graduation, Dickman found himself at the San Francisco forecast office in Redwood City, Calif., working as an intern.

In true Weather Service fashion, he transferred to Boston and then to San Juan, Puerto Rico, where he became a lead forecaster.

"I arrived in Puerto Rico in the middle of the Caribbean's worst drought in a century," Ross remembered.

"We were only allowed access to water a half hour a day. I had to shower using a coffee cup and used pool water to flush the toilet. To this day, I'm probably the most dedicated water conservationist you will ever see." Ross said.

He noted that an old Weather Service axiom was proved when the drought was broken by record rainfall.

The meteorologist found his current home in the eastern region on Long Island in 1995 when he took over the aviation and severe weather programs.

Three-and-a-half years later, he was promoted to his current position.

For the past 30 years, Ross has also been a fixture at the Philadel-phia Flower Show, manning a booth with his mother and father.

Pew Commission

continued from page 7 commission members and some of the staff from the Pt. Lobos marine reserve, where the group discussed the site's history, the resource threats it faces and the value of a "no-take" reserve.

In February 2001, NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary hosted a reception in Maui for commission members who were in Hawaii to meet with local conservation groups.

Later in the week, Robert Smith, coordinator for the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, testified before the commission about the importance of coral reefs and sanctuary efforts to protect them. In his remarks, Smith noted the area's incredibly diverse ecosystem that is home to many species of coral, seaweeds, fish, birds, marine mammals and other flora and fauna

"These coral reefs are also home to the endangered Hawaiian monk seal, the threatened green sea turtle and the endangered leatherback and hawksbill sea turtles," Smith said. "In addition, this area has great cultural significance to native Hawaiians," he said.

The commission concluded its Hawaiian visit with a whale watching and snorkeling trip to Molokini provided by Capt. Jim Coon, owner of Trilogy Excursions.

Onboard, Joylynn Oliveira, the sanctuary cultural education coordinator, explained to members the important cultural connection of whales to the Hawaiian people and the role the sanctuary plays in Hawaiian waters.

After the commission reviews the scientific information, the group is expected to give its formal recommendations in a report to Congress and the nation in 2002.

Graves

continued from page 2 building programs for western Atlantic bluefin tuna and North Atlantic swordfish and in developing the first-ever comprehensive management plan for Atlantic tunas, sharks and swordfish.

Graves says what he likes best about his work is the challenges of reaching consensus among U.S. and international constituencies. "I am happy I have been able to put together a team that is committed to protecting animals and ensuring viable fisheries. As chair, I have tried to enhance the impact of the committee within the Fisheries Service, and to include more public input into the process."

Graves was certainly not expecting an award for his commission work. "I'm surprised and flattered. A lot of individuals donate considerable time to NMFS through service on advisory committees and panels. It is great to know those efforts are appreciated," he said.

Graves, who worked for the Fisheries Service in the early 1980s, has been advisory committee chair for the past seven years.

Graves enjoys going to the beach and fishing with his wife and two daughters. They reside in Yorktown, Va.

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