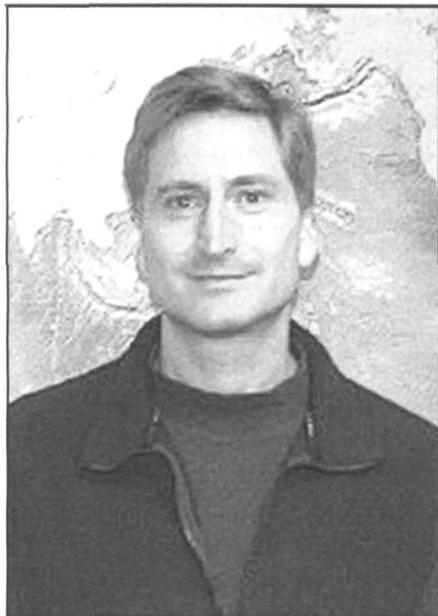


NOAA REPORT

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November 2000



Matt Fowler/NOAA

Robert P. Dziak.



Dane Konop/NOAA

Shawn M. McLaughlin.

Two NOAA Scientists Are Presidential Award Winners

Shawn M. McLaughlin, a research fisheries biologist with the National Ocean Service in Silver Spring, Md., and Robert P. Dziak, chief seismologist with the Pacific Marine Environmental Laboratory in Newport, Ore., have received Presidential Early Career Awards.

The two were among 60 federal scientists honored in a White House ceremony Oct. 24.

McLaughlin's research, in collaboration with Mohamed Faisal of the Virginia Institute of Marine Sciences, led to the description of a new species of the soft shell clam *Perkinsus* and advances in understanding the clam's susceptibility to parasitic infections.

McLaughlin, on detail from the Center for Coastal Environmental

Health and Biomolecular Research in Oxford, Md., plans to expand her research into other species and organisms, including corals.

She received her Ph.D. from Abo Akademi University in Finland earlier this year.

Dziak is a member of a team of scientists in the laboratory's Ocean Environmental Research Division that has been studying how underwater earthquakes move along the seafloor and their effect on the colonies of microbes that live there.

Dziak, who received his Ph.D. from Oregon State University in 1997, says his ultimate goal is to study underwater activity along the Pacific coast to determine its possible link to earthquakes in northern California and southern Oregon. ☺

Bronze Medals Awarded

Nearly 275 NOAA employees and offices received Department of Commerce bronze medal awards in a ceremony at the Inn and Conference Center at the University of Maryland, College Park, Md., Oct. 19.

The following are the award winners, listed by nominating office. Award winners are from that office unless otherwise indicated.

Office of the Under Secretary
Rolland Schmitt, Michael Tillman (NMFS), Robert Brownell, Jr. (NMFS), Margaret Hayes, Nancy Daves (NMFS), Scott Smullen, Cathy Campbell (NMFS), Susan Fruchter, Barbara Semedo, Sandra A. O'Brien, Penney D. Baile, Denise Keefer (NOS), Jerry Slaff, Charlotte F. Melton, Kristin M. Kniskern (NESDIS), Noel Monte (NWS), Jamie S. Umbach (NOS), Natalie Huff (NMFS) Jeanette McDonald, Julie Scanlon (OAR), Mary O'Connell, Jeannette Moore, Jose C. Gomez, Chris R. Flint, Capt. Warren Taguchi, Margaret E. Eckard, John R. Phillips (NESDIS), Barbara Z. MacNeill, Eric Mandel, Steven W. Thornton, Miguel A. Rosario-Felix, Stephen C. Gillis, Eric A. Parr (NWS), Charles Kinsey (NWS), Michael E. Earhart (NWS), Charles L. Maples (NWS), Jesse James, Jr. (NWS),
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Officials Sign Thunder Bay Agreement



Michael T. Murphy/NOAA

Elgie Holstein (left), representing the Department of Commerce, and Michigan Gov. John Engler sign documents designating Thunder Bay a national marine sanctuary.

First Great Lakes Sanctuary Designated

—By Nancy O'Donnell

Lake Huron's mercurial weather—its murky fog banks and sudden gales, coupled with rocky shoals—have earned Thunder Bay the unfortunate sobriquet of "Shipwreck Alley."

During the Great Lakes' 200-year shipping history, scores of vessels ended their careers on the floor of the bay, which lies off Alpena, Mich.

The same capricious weather that continues to plague local mariners also created a last minute flurry of changes for the Oct. 7 designation of Thunder Bay National Marine Sanctuary and Underwater Preserve, the nation's first Great Lakes sanctuary and the first sanctuary in 25 years dedicated solely to protecting submerged cultural resources.

A Weather Service forecast for foul weather forced officials to move the designation ceremony indoors, from Bayview Park on Lake Huron to the Alpena High School

auditorium, even though early morning the day of the ceremony brought blue skies and a warm autumnal sun.

But as forecast, by 11 a.m., rain and sleet pelted the area and temperatures plummeted.

Elgie Holstein, senior advisor to Commerce Secretary Norman Y. Mineta, braved the weather to represent the department at the afternoon ceremony. Holstein was joined on stage by Michigan Gov. John Engler, Alpena mayor Phil Ludlow, sanctuary advisory council chair Carol Sako and a host of divers, community leaders and local citizens.

"Through exploration, education and research, this sanctuary will bring to the American public the lore of Great Lakes maritime heritage," said acting sanctuary manager Ellen Brody. "Behind each shipwreck is a story that helps us understand what led to so many shipwrecks in Thunder Bay and

what these sailors sacrificed for the settlement of our nation."

In addition to remarks by Holstein and Engler, the day's festivities included songs, dance and poetry by the Dodworth Saxhorn Band, which recreates the look and sounds of a nineteenth century brass band, and a performance by Alpena's elementary and high school choirs.

The newly designated sanctuary will be run under an innovative partnership between the state and federal government through a joint management committee.

Brody said that the committee will soon be working with a 5-year operation plan that includes conducting an archeological survey of Thunder Bay's shipwrecks, installing a mooring buoy system, establishing underwater video links from shipwrecks to school classrooms and examining the potential for a maritime heritage center.

Tourism generated by the sanctuary and underwater preserve is expected to be a boon to the economy of northwest Michigan.

While the shipwrecks nearest to Alpena have never been inventoried, wrecks in the bay include a wide range of structures that chronicle U.S. maritime architecture from nineteenth century wooden sidewheelers to twentieth century steel-hulled steamers.

One such vessel, *Isaac M. Scott*, a steel-hulled, propeller-driven vessel, was lost in the Great Storm of 1913, described as the most disastrous storm to sweep the Great Lakes region in recorded history.

Another lost ship, the 200-foot passenger and trade ship *Pewabic*, collided with another ship on Aug. 9, 1865, and now rests in 170 feet of water in the bay.

Thunder Bay National Marine Sanctuary and Underwater Preserve is the thirteenth marine sanctuary in a system that extends from American Samoa to Massachusetts. ☺

A Week in the Life: Weather Service Director Jack Kelly

—By Marilu Trainor

On early Sunday morning, Oct. 1, Weather Service director Jack Kelly and western region director Vickie Nadolski left Salt Lake City, Utah, on a week-long journey across three states that would include visits with staff at five forecast offices, plus meetings with Weather Service customers and interviews with the news media in every city along the way.

As the director of the National Weather Service, retired Air Force Brig. Gen. Jack Kelly oversees the delivery of weather, water and climate forecasts and warnings for the entire United States. Since there are many climate areas within this vast, geographically diverse area, Kelly likes to learn first hand about the challenges forecasters face and how Weather Service customers view the agency and its products.

"I asked Jack to join me on this trip because our region's eight states are made up of many diverse climate areas," Nadolski said. "We forecast for the highest and lowest elevations, from the oceans to the deserts and, during this week, we wanted to show him the topography in Idaho and Montana."

"You can't do the Weather Service director's job by remaining by your desk. You've got to go out and talk to the people in the field, learn about the problems they face and the solutions they suggest. You've got to talk face to face with our customers to get their feedback on how well we are delivering the weather services they depend on. This might just be the most important part of my job," Kelly said.

Heading out from the regional headquarters in Salt Lake City, Kelly and Nadolski were soon at the Boise, Idaho, forecast office, located on a campus with six other agencies at the National Inter-agency Fire Center, the nation's support center for wildland firefighting.

There, meteorologist in charge John Jannuzzi briefed the visitors on how seven federal agencies work together to coordinate and support wildland fire and disaster operations to facilitate safe, efficient and cost-effective firefighting.

"When the national fire situation becomes severe, an interagency operations center is activated and we provide weather briefings," Jannuzzi said. "Depending on the fire situation nationally, the group

helps set priorities for critical, and often scarce, equipment, supplies and personnel," he said.

"With one of the worst fire seasons in 50 years, the nation got the chance to witness the dedication of these teams in Boise and the firefighters in the field this year," Kelly said. "Joining them in Boise, I got to see first-hand that their can-do spirit and the cooperative atmosphere are what makes them so successful."

On Oct. 2, the duo was off to Great Falls, Mont. Customer meetings with regional and city emergency managers, other federal agencies and local media were the first order of business.

Kelly and Nadolski presented a John Campanius Holm Award to cooperative weather observer Janet L. Zieg of White Sulphur Springs *continued on page 6*

Oceanic and Atmospheric Research Honors Seven



Ronald Bell/DOC

The seven Office of Oceanic and Atmospheric Research employees of the year for 1999 were honored during a ceremony and reception Oct. 17 in Silver Spring, Md. Congratulating the winners are assistant administrator David Evans (left) and Aeronomy Laboratory director Dan Albritton (far right). Honored were (left to right) James Hendee, Atlantic Oceanographic and Meteorological Laboratory, Daniel Law, Environmental Technology Laboratory, Joseph Brown, National Sea Grant College Program, Mary Anne Whitcomb, NOAA Research Headquarters, Jenny Martinez, Forecast Systems Laboratory, and Stephen Montzka, Climate Modeling and Diagnostics Laboratory. Not pictured is Lisa Darby, Environmental Technology Laboratory.

Focus

On...

Estuaries
Cradles of the Ocean

—By Theresa Shearer

More than 35,000 adults and children visited the 25 national estuarine research reserves during celebrations of the twelfth annual National Estuaries Day, officially observed Sept. 30.

With the theme “Cradles of the Ocean,” the reserves sponsored poster contests, guided canoe trips, boat tours, shrub plantings, fish painting, beach cleanups and other activities to educate the public on the importance of estuaries—places where rivers meet the sea.

In honor of NOAA’s thirtieth anniversary, the reserves also distributed a list of “30 Ways to Protect Estuaries.”

“We were very successful this year in raising awareness about the need to protect our nation’s estuaries,” said Laurie McGilvary, chief of NOAA’s Estuarine Reserves Division.

Other activities included:

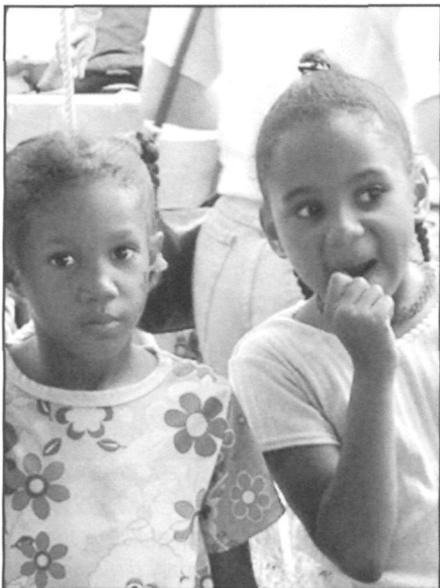
- a native plant sale at the Weeks Bay reserve in Alabama, including information on landscaping with native plants
- “Wetlands and Wildlife Field Days” in the marsh at Deal Island wildlife management area at the Chesapeake Bay reserve in Maryland
- nature hikes, canoe trips, displays and boat trips in the Chesapeake Bay reserve in Virginia
- “Ducker’s Day” and a five-mile road race in the Great Bay reserve in New Hampshire
- a tour of the new Jacques Cousteau reserve education center and Rutgers University marine field station
- a marsh tour at the North Inlet-Winyah Bay reserve in South Carolina

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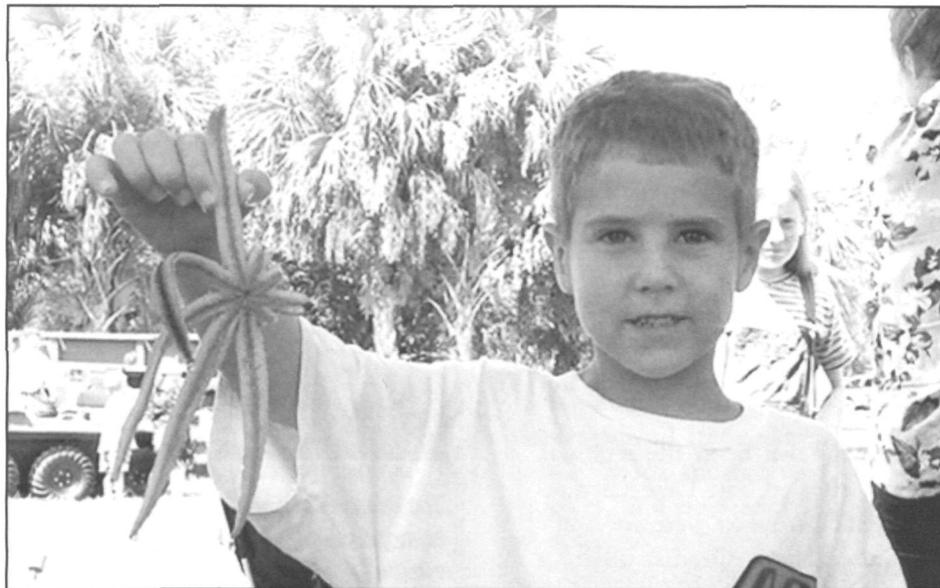


Gary Lytton/RBNERR

Elgie Holstein, senior advisor to Commerce Secretary Mineta, and Margo Jackson, deputy director of the National Ocean Service’s Office of Ocean and Coastal Resource Management, explore the Rookery Bay National Estuarine Research Reserve on National Estuaries Day.



Beverly Anderson/RBNERR



Beverly Anderson/RBNERR

Estuary day activities at the Rookery Bay reserve included boat rides to explore the mangrove wetlands, a live band singing sea chanties, food, exhibits on research and restoration projects within the reserve, presentations on manatees, and free fish print shirts and estuary posters. A 30-minute documentary, “Portrait of an Estuary,” premiered at the event, with film maker Elam Stoffus and famed narrator Peter Thomas attending.

Estuaries

continued from page 4

- a walking tour of the Hudson River reserve
- the Blue Crab Blues Band playing songs with water themes at the Waquoit Bay reserve in Massachusetts
- a salt marsh exploration and seining program at the Narragansett Bay reserve in Rhode Island
- an open house at the twentieth anniversary of Old Woman Creek reserve in Ohio, featuring three bald eagles and many migrating shorebirds, waterfowl and warblers that could be viewed in the estuary with binoculars and spotting scopes
- "Estuary Live," a live, interactive Internet field trip for an estimated 1,500 students, teachers and other participants from as far away as Canada, Mexico and Iceland hosted by the North Carolina reserve
- Puget Sound Kids Day at the Padilla Bay reserve



KBNER

At the recently designated Kachemak Bay Reserve in Alaska, approximately 225 people enjoyed an usually sunny and warm fall day for an "Art by the Sea" contest for both adults and children. The reserve also set up a "Fishy Fashions" booth at a seaside park, which drew 100 ocean enthusiasts who were eager to do fish and fern printing. Nearly 40 people donned rubber boots to join local biologists for "Mud Mayhem," a fun and very muddy exploration of Beluga Slough, a salt marsh in downtown Homer.

- a biologist-led trawling trip at the ACE Basin reserve in South Carolina

- an "enviroscape," a model that is used to demonstrate runoff pollution, at the Grand Bay reserve in Mississippi
- a question and answer session at the Sough Slough reserve in Oregon with local citizens, including the mayor of Coos Bay, a member of the city council, members of the local watershed associations and representatives from the Oregon Coastal Environmental Awareness Network, a non-profit group that is educating the public about coastal resources
- a fish print workshop for adults and a scavenger hunt and fish printing for kids at the Tijuana River reserve
- three beach cleanups at the Wells reserve in Maine
- the Delaware reserve's Coast Days celebration featuring deputy under secretary Scott Gudes
- restoration events at the Elkhorn Slough reserve and workshops and field trips as part of the Monterey Bay Bird Festival. ☺



Erik Lovestrand/ANERR

Approximately 150 people attended the Apalachicola Reserve's estuaries day celebration in Florida, which included boat tours of the reserve and guided walking tours of the new nature trail. The Apalachicola reserve also hosted a children's sidewalk art contest (using chalk), a scavenger hunt, a touch tank, button making and balloon animals.

Kelly

continued from page 3

for her dedication to observing and reporting weather in this remote area for more than 35 years.

The award is named for John Campanius Holm, whose weather records, taken without instruments in 1644 and 1645, were the earliest recorded observations in the United States.

The National Weather Service Cooperative Weather Observer Program, with more than 11,700 volunteer weather observers recording daily temperature and precipitation, has given scientists continuous observational data since the program's inception more than 100 years ago.

Great Falls meteorologist in charge Ken Mielke said, "Ms. Zieg was overwhelmed that the director of our agency gave her the award. Montana is so large and these spotters are critical to us."

The next morning, Kelly and Nadolski drove to Helena and presided at the first of two Storm Ready ceremonies, with this one held on the steps of the state

capitol. Storm Ready is a program aimed at arming America's communities with the communications and safety tools necessary to save lives and property.

"The Storm Ready Program addresses the need for a new level of community awareness to protect life and property from extreme weather," Kelly said.

Later that afternoon, the two arrived in Billings, where they were interviewed by local media.

"The broadcast media has long been our weather forecast and warning partner. They are sometimes our first line of defense in protecting the public from severe weather," Kelly said. "When we issue a tornado warning, the vast majority of people learn about it from their local media, while others hear them directly from NOAA Weather Radio," he said.

During their stop in Billings, Kelly and Nadolski discussed Yellowstone County's recent designation as Montana's first Storm Ready community.

According to Keith Meier, Billings meteorologist in charge, "Jack and Vickie met with Dick Rath, the fire management officer for the Gallatin National Forest in nearby Livingston. They discussed Montana's recent fire season and the resources used by the various agencies. The wildfire management agencies emphasized their thanks for the high quality weather services they received and noted the responsiveness of the staff of the forecast offices to provide the latest

information, which is very critical to the land managers' tactics on how to fight the fires."

Wednesday's midmorning flight to Glasgow gave Kelly a taste of the vast area and beauty of northeast Montana.

Meteorologist in charge Jim Rea had arranged a full day's activities that included customer meetings with county airport commissioners, emergency managers and members of the Montana Pilots Association.

"Keeping the aviation community safe has long been one of our top priorities," Kelly said.

Within the first hour, they were honoring Stan and Shirley Wiggins of Flatwillow, Mont.

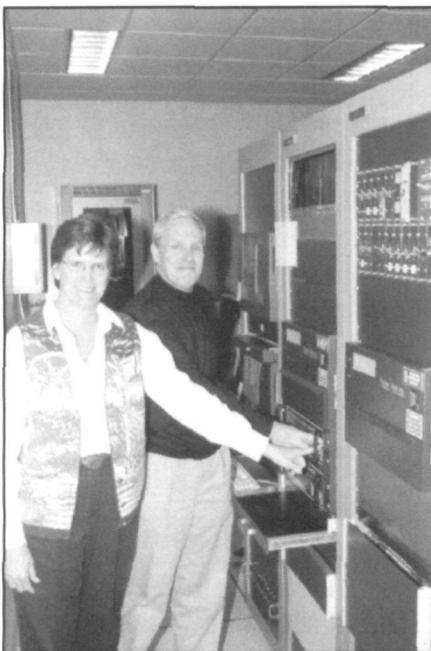
The Wiggins were presented one of ten Thomas Jefferson Awards granted nationally in 2000 for observing and reporting conditions to the National Weather Service, which the Wiggins have done for the past 40 years.

The Thomas Jefferson Award, originated in 1959, is the highest award the National Weather Service presents to volunteer observers.

That afternoon, Kelly and Nadolski presided at a ceremony at the Glasgow city and Valley County courthouse chambers, where the city was named Montana's third Storm Ready community. Meetings with Weather Service staff were also part of the day's activities. Dinner at a rustic lodge at Fort Peck Lake, one of Montana's largest lakes, provided a fitting end to the day.

Thursday's activities began in Missoula, Mont., where meteorologist in charge David Goens said, "Jack and Vickie presented Arnold Finklin, of Missoula, with a John Campanius Holm Award. Finklin has been a cooperative weather observer in this area since Nov. 1, 1970."

Finklin, now retired, was trained as a meteorologist and climatologist. *continued on page 7*



John Jannuzzi/NOAA

Vickie Nadolski, Weather Service western region director, and Weather Service director Jack Kelly ceremoniously turn off AFOS, short for Automation of Field Operations and Services, during a visit to Boise, Idaho. The system has been replaced by AWIPS, the Advanced Interactive Weather Processing System.

Kelly

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gist, and worked for many years at the U.S. Forest Service's fire research lab in Missoula.

"My father used to read the weather reports in the newspaper and talk about them with me. Then I started reading them myself, and then made my own observations," Finklin said.

"The Weather Service volunteer cooperative observers are so dedicated," said Nadolski as she thanked Finklin. "Their weather records become more valuable with age," she said. "Long and continuous records provide a more accurate picture of a locale's average and extreme weather. Their data gives climatologists and forecasters a basis for predicting future weather trends," Nadolski said.

The President's fiscal year 2001 budget request includes \$2.3 million to begin replacing several critical observing systems. According to Kelly, the funds are needed to "replace obsolete equipment that is difficult to operate and maintain."

Following the award presentation, Kelly and Nadolski met with the staff of the National Weather Service as they had done at each office on their route. They relaxed during a dinner the Weather Service staff hosted for the visitors, spouses and friends of the agency.

On Friday morning, managers from the U.S. Forest Service's Aerial Fire Depot met the group to discuss the Weather Service's support to their region during the past landmark fire season.

Afterwards, Goens led a tour of the depot and provided information about the aircraft used during the fire season. Don Artley, the Montana state forester and chairman of the National Wildfire Coordinating Group, then met with Kelly, Nadolski and other

Citizens Celebrate Bay Restoration

—By Kate Naughten

From the tribal blessing to the salmon-shaped cookies, the "Restoration Celebration" in Tacoma, Wash., was a hit.

Held under classically cloudy fall skies on the shore of Commencement Bay on Oct. 11, the event drew together the regional tribes, state agencies, federal natural resource agencies—including NOAA—and the local environmental groups that have been working together to restore Commencement Bay since 1991.

The restoration celebration kicked off with a colorful blessing by Muckleshoot Indian tribe fisheries commissioner Gilbert King George. From there, officials, including NOAA Fisheries assistant administrator Penny Dalton and NOAA acting general counsel Craig O'Connor, touted the high level of cooperation among the partners and the specific projects that are restoring acres of critical urban marsh to the bay.

"Restoring healthy habitats is neither partisan nor political," Dalton said. "The people of Washington state have chosen to

protect and restore healthy habitats, and to save fish and wildlife through hard work and cooperation. The successful completion of these projects are the result of federal, state, tribal and local cooperation. Working together with volunteers from various groups, like Citizens for a Healthy Bay and People for Puget Sound, you have restored important links in the Commencement Bay ecosystem," she said.

NOAA officials also highlighted the challenges faced by the natural resource trustees in restoring the bay, which is one of the most highly industrialized waterways in the nation.

This ceremony holds special significance for me," O'Connor said. "During my professional career, I invested a great deal of time pursuing those responsible for hazardous waste in Commencement Bay. As a result of the work of the natural resource trustees, we successfully generated more than \$20 million in funds, property and in-kind services to restore injured natural resources and habitats in this nationally significant estuary."

Weather Service officials to discuss the multi-agency group's goals for continued support to those who battle the wildfires.

Later that afternoon, Kelly and Nadolski concluded their 3,200-mile trek, with flights back to Washington, D.C., and Salt Lake City, respectively.

"That was quite the week, with a very worthwhile agenda," Kelly said. "It provided us with an opportunity to represent the agency to a variety of people and get their feedback. Our customers repeatedly told us how they appreciate the outstanding work of

the Weather Service staff, and they also have a very good understanding of our mission to protect lives and property," he said.

"I have spent a considerable amount of time traveling around the country visiting customers and our staff," Kelly said. "With every trip outside the beltway, I return with a greater appreciation for how important the National Weather Service is to the citizens and how well we are serving them. Whether they live in California, Louisiana, Illinois or Montana, we are an important part of their day," he said.

Bronze Medals

continued from page 1

Tracye L. Webb-Williams, Jane L. Watterson, Sherilyn S. Villegas, Kathleen R. Campbell, Kathleen M. Carlson, Kathleen L. Delphia, Gail J. Hamilton, Christine F. Hudson, Jamie H. Johnson and Sharon D. Turner.

National Environmental Satellite, Data and Information Service

Linda Moodie, Michael Changery, Catherine Godfrey, William Brown, Richard Heim, Thomas Ross, Jay Lawrimore, Roger Winchell, Matthew Menne, Eric Stengel, Philip Hovey, Edwin Fisher, Edward King, Marilyn Yuen, Kathleen LeFevre, Michael J. Crison, David Furlong, Reginald Lawrence, Peter Wilczynski, the Washington Volcanic Ash Advisory Center (NESDIS and NWS), David Hastings, Paula Dunbar, Robert Mairs, Peter Topoly and Alexander Kidd.

Oceanic and Atmospheric Research

Jeffrey S. Whitaker, Sandra Jean Craig, Timothy Crawford, Gennaro Crescenti, Jeffrey French and John Augustine.

National Ocean Service

Ellen L. Brody, Gary C. Guenther, John D. Broadwater, Dina B. Hill, Lt. Cdr. Matthew H. Pickett, Heather A. Parker-Hall, Lisa C. Symons, Kevin G. Flanagan (NMFS), Peter J. Stone, Carl L. Kammerer, Lt. Shepard M. Smith, Jack L. Riley, Monica M. Cisternelli, Castle E. Parker, Robert J. Wilson, Leslie A. McDonald, Lt. Richard R. Wingrove, Michael J. Dowgiallo, National Geodetic Survey, Frank Aikman III, Thomas F. Gross, John G. W. Kelley, Jeffery T. McQueen (OAR), Laurence C. Breaker (NWS), David B. Zilkoski, Edward E. Carlson, Douglas B. Graham, Brian M. Baldwin, Lloyd

W. Harrod, Cdr. Jonathan W. Bailey, Cdr. Grady H. Tuell, Susan S. Vidal, Ford A. Cross and Hanna B. Goss.

National Weather Service

Daniel B. Frashier, Bernard L. Morningstar, Valery J. Dagostaro, Dale D. Branch, Todd D. Krause, Steven J. Runnels, David L. Andra, Gene M. Hafele, Curtis Barrett, Michael B. Smith, Victor Koren, Janice L. Sylvestre, Geoffrey M. Bonnin, Gerald D. Bell, Vernon E. Kousky, John E. Janowiak, James L. Buizer (OAR), Jane D'Aguzzo (NESDIS), Michael S. Moss, Wayne E. Martin, Kenneth P. Hager, Michael L. Graf, Andrea Bair, Michelle M. Schmidt, Mary L. desJardins, Scott Jacobs, Duane Kidwell, David Plummer, Fee Jing Yen, Steve Schotz, the Middle Atlantic River Forecast Center, the Sterling, Va., Mt. Holly, N.J., Upton, N.Y., Midland, Texas, Shreveport, La., and Aberdeen, S.D., Weather Forecast Offices, the Missouri Basin River Forecast Center, the Marine Prediction Center, the Aviation Weather Center, R. Wayne Higgins, Masao Kanamitsu, Douglas Lecomte, David Miskus, Jae Kyung Schemm, Richard Tinker, Hugo Van den Dool, Kenneth Mitchell, Jerald Tarpley, Jr. (NESDIS), Gerald Bell, Muthuvel Chelliah, Wen- Yuan Wilber Chen, King Tse Mo, Richard Pasch, Lixion Avila, Christopher Landsea (OAR), Stanley Goldenberg (OAR), Stuart Williams, Mary Glackin (NESDIS), Billy G. Olsen, William E. Lawrence, James H. Paul, Maxine Brown, Luis Cano, Brent Gordon, Hocheng Lin, David Michaud, Ricardo Romero and Scott Plischke.

National Marine Fisheries Service

Thomas F. Hourigan, Andrew W. Bruckner, James A. Bohnsack, Cdr. Russell Brainard, Lawrence J.

Buckley, Maxwell B. Eldridge, Hannah F. Goodale, Richard A. Pearson, Peter W. Christopher, Joel G. MacDonald, Julie Williams, Paul J. Rago, Katherine A. Sosebee, Scott Steinbeck, Jason Link, Donald R. Reck, Alice A. Berg, Nanette M. Reck, Gregory J. Bryant, Charles R. Glasgow, Ian B. Gilroy, Leslie B. Wolff, Michael J. Ford, James P. McElhany, Mary H. Ruckelshaus, Thomas C. Wainwright, Eric P. Bjorkstedt, William S. Rainey, Bryan D. Norlund, Larry G. Holland, Maire L. Larsen, Doris B. Tucker, Tracey L. Thompson, Helen B. Troupos, Guy D. Bellamy, Grace J. Taylor, Karen M. Lecke-Mitchell, James Meehan, John Hotaling, John Everett, Bonnie Ponwith, Richard Brown, Cdr. Gary Bulmer, John Walter, Hannah Davis, Charles Byrne, Daniel Twohig, Carol Ann Manen, Frank Csulak, Norman Meade, John Catena, Marguerite Matera, John Bengtson, Timothy Ragen, Susan Salvesson, Kent Lind, Richard Ferrero, Thomas Loughlin, Lowell Fritz, Colleen Coogan, Lewis Queirolo, Stephen Copps, Jr., Craig Johnson, Marian MacPherson, Roger Eckert, Jonathan Pollard, Shane Capron, Joseph McCabe, Keith Kirkendall, Brett Joseph, Scott Carlon, Bryan Nordlund and George Balazs.

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National Oceanic and Atmospheric Administration

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