



# SFOS NEWS

Institute of Marine Science • Marine Advisory Program • Fishery Industrial Technology Center • Coastal Marine Institute  
Alaska Sea Grant College Program • North Pacific Marine Research Program • Fisheries Division • Global Undersea Research Unit

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Rawlins Apperson

## Apperson Wins Distinguished National Award

Rawlins D. Apperson, SMS, and Machinery Technician First Class, USCG, is the 2000 Reserve Enlisted Person of the Year for the U.S. Coast Guard. He was selected for this honor because of his exemplary military bearing, leadership ability and work performance. Apperson is the recipient of this award because of his dedication to Coast Guard missions, core values, and his tireless community involvement. He is currently stationed on the Coast Guard cutter Mustang (WPB-1310), Seward, Alaska.

Petty Officer Apperson has provided essential assistance to CGC Mustang and its dependents over the course of 2000, assisting them by plowing driveways and removing heavy snow from roofs, providing emergency repair to member's houses while the Mustang was underway and troubleshooting countless systems, tracing grounds and fixing casrep'd parts on the

[see Award, page 2](#)

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## SFOS Is Designated To Become A Center of Excellence

During the spring of 2001, the University of Alaska Fairbanks campus undertook the preparation of an Academic Development Plan, based on the UAF mission statement and the strategic plan 2005. The intent was to provide direction to assist in the allocation of scarce resources among high priority programs. As part of this, seven "areas of emphasis" and three "programs of distinction" were identified. The idea was to identify those areas where enhancements in the near future have a strong potential for moving UAF toward the goals described in UAF 2005.

Renewable Natural Resources was one area of emphasis, and this includes fisheries and fishery oceanography--the plan specifically mentions the current problems in the Bering Sea. Three areas selected for developing into Programs of Distinction include Alaskan Native Peoples, Arctic Climate, and Fisheries and Fishery Oceanography. These are intended to aspire towards becoming "the best in the world," and their selection was based on strong, high-priority, ongoing programs which are ripe for further development.

The first tangible outcome has been the decision to "jump start" one of the School of Fisheries and Ocean Sciences endowed chairs using the BP/Phillips income. More benefits are likely

[see Center, page 2](#)

## FITC Researchers Try to Free Whales

Kate Wynne and Robert Foy, FITC, were recently featured in an article detailing their attempts to free a humpback whale and her calf that were snarled in at least 100 feet of buoy line for several days.



Kate Wynne



Dr. Robert Foy

According to the Anchorage Daily News, after an exhausting eight-hour pursuit through the Gulf of Alaska, rescue workers, including Foy, Wynne and graduate student Brianna Lawson, lost track of a humpback whale and her calf. Alaska sees humpbacks caught in fishing line every summer, rescue coordinator Kate Wynne said. In late May, a humpback was freed from line at Resurrection Bay. This particular pursuit stands out because it involved two whales, one which was an

[see Whales, page 2](#)

This particular pursuit stands out because it involved two whales, one which was an agitated and protective mother

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## Award

CGC Mustang. Apperson is very active in the local community as an assistant cub scout master and has participated in several weekend camping activities, in addition to weekly meetings and other scout activities. He is an avid sponsor of Seward's high school ski team, which requires him to make trips out of the area.

In addition to his recently awarded Coast Guard Commendation Medal, Apperson has received the Coast Guard Achievement Medal, Department of Transportation Outstanding Unit Ribbon, Coast Guard Meritorious Unit Commendation Ribbon, Coast Guard Good Conduct Medal (second award), Coast Guard Reserve Good Conduct Medal (sixth award), National Defense Service Medal (second award), Coast Guard Bicentennial Unit Commendation Ribbon, Humanitarian Service Medal and, Coast Guard Sea Service Ribbon.

A more complete and detailed article is available at: <http://www.uscg.mil/hq/mcpcog/1awards/bapperson.htm>.

## Kachemak Bay Science Conference 2001

Homer, Alaska, September 14-16, 2001. The theme of the third Kachemak Bay Science Conference is "Patterns and Significance of Environmental Change in Kachemak Bay and the North Pacific Ocean." Main interest is in the connectivity between the local Kachemak Bay ecosystem and patterns seen in the Cook Inlet, Gulf of Alaska, and North Pacific Ocean. Researchers are asked to share research at the conference which will enhance a better understanding of spatial and temporal patterns that influence Kachemak Bay. The conference will address issues related to oceanic, near shore, freshwater, and terrestrial science and provide an opportunity for researchers from across Alaska and the West Coast to interact and share ideas while enjoying the spectacular landscape of Kachemak Bay. Dr. Robert Paine, Professor Emeritus from University of Washington, will be the Keynote Speaker. Contact person: Sue Mauger, Stream Ecologist, Cook Inlet Keeper, P.O. Box 3269, Homer, Alaska 99603, (907) 235-4068 (phone), (907) 235-4069 (fax), email: [sue@inletkeeper.org](mailto:sue@inletkeeper.org). Website: <http://www.inletkeeper.org>.

## Whales

agitated and protective mother, said Wynne. "This is the only entanglement I've ever heard of where there are two animals in the same gear, which I think made it harder than normal," she said. Foy said the situation is "extremely dangerous" for the calf, which might not be able to nurse because the quarter-inch-thick line is wrapped at least twice around its head. Wynne estimated the young humpback is 18 months old. The pair trailed a small orange buoy — 14 inches in diameter — that was attached to the line. No one saw line entangling the 50-foot mother whale, but "it appeared to be attached to the mother, because they were surfacing together for eight hours," Wynne said. "They never left each other's side," Foy added. Foy, Wynne and graduate student Brianna Lawson followed the whales in an 8-foot inflatable boat.

Rescue workers attached several more buoys to the pair to slow the humpbacks so they could try to cut the lines during 20-second periods when the whales surfaced. Throughout, the anxious mother whale guarded her calf. "She was very aware that we were there, and she was definitely not happy a couple of times," Foy said. "They were definitely distressed." The rescuers cut part of the buoy line, but it didn't appear to help. They also attached a tracking device to the orange buoy the whales towed. Later attempts to locate the tracking device failed, with the battery intended to last only 72 hours in warm water. "They headed east," Foy said, "and that's the last we know of it." The attempted rescue was Foy and Wynne's first attempt to untangle a whale, Wynne said. "We were definitely doing the best we could knowing we had a limited amount of time and also having never done one," she said. "They're tied together, and it looks like they're swimming OK," Foy said. "But if it impedes their feeding, they're not going to be able to feed. That's our biggest worry right now."

Originally reported by Katie Pesznecker, [kpesznecker@adn.com](mailto:kpesznecker@adn.com), Anchorage Daily News (Published June 19, 2001).

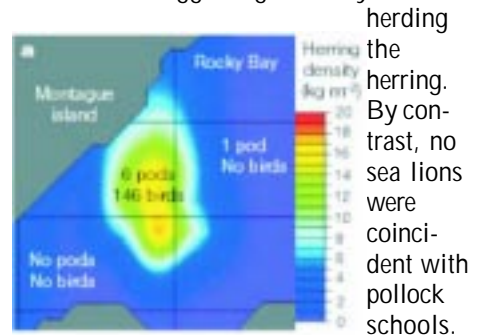


## Center

to accrue in the near future, Recognition of the important role that SFOS is playing in Alaskan marine and fisheries research and education led last year to the creation of the Pollock Conservation Cooperative Research Center by the At-Sea Processors.

## Steller Sea Lion Diet: Pollock or Herring?

Gary L. Thomas and Richard E. Thorne, Prince William Sound Science Center, reported in the June 28th edition of Nature that night-time observations of Steller sea lions in Prince William Sound, using infrared scanning technology, combined with acoustic surveillance of their prey's behaviour, reveal that the sea lions feed exclusively on Pacific herring (*Clupea pallasii*), which are less abundant than pollock but are found closer to the surface at night. They claim that despite the much greater abundance of pollock, the infrared system revealed that foraging by Steller sea lions was exclusively on herring and was conducted only at night. Foraging activity was intense on dense herring schools. Steller sea lions were often observed swimming side by side in a row of 50 or more individuals along the edges



herding the herring. By contrast, no sea lions were coincident with pollock schools.

Combined acoustic and infrared sensors reveal sea lions and birds located on the surface above the herring school at night in Rocky Bay, Prince William Sound (March 2000).

## Publications

- Paul, AJ and JM Paul. (2001). Effects of Temperature on Length of Intermolt Prids in Juvenile Male *Chionoecetes bairdi*. Alaska Fish. Res. Bulletin.
- Williams, EH and TJ Quinn, II. (2000). Pacific Herring, *Cupea pallasii*, recruitment in the Bering Sea and north-east Pacific Ocean, I: relationships among different populations. Fish. Oceanogr. 9(4): 285-299.

# News of Interest

## Question Writers Needed For National Ocean Science Bowl 2002 Competition

The organizers of the National Ocean Sciences Bowl (NOSB) are seeking individuals to write questions to be used in the 2002 competition. General topic areas for NOSB questions include the biology, chemistry, geology and physics of the oceans, estuaries and Great Lakes. In addition, questions on oceanographic and navigational technology, history, and geography as well as ocean-related current events are also sought. Writers will be paid \$3.00 for each accepted question. Complete information on the question submission process can be found at <http://core.ssc.erc.msstate.edu/NOSBadvice.html>. If you are interested in submitting possible questions contact Amy Lorenzen at [alorenzen@COREocean.org](mailto:alorenzen@COREocean.org).

## Stay Up To Date on Ocean Commission

Interested parties who wish to stay up-to-date on issues and events related to the President's Commission on Ocean Policy are encouraged to visit the CORE Ocean Commission resource page at: <http://www.COREocean.org/oc.html>.

## Melting Sea Ice Causing Reductions in Krill, Imperiling Antarctic Wildlife, Say Studies

Two separate studies have shown declines in different species of Antarctic wildlife, apparently due to decreased availability of their krill prey. In both cases, diminishing sea ice, possibly as a result of global climate change, has been advanced as a possible cause. One study, published in the Proceedings of the Royal Society of London, analyzed data on krill-eating predators at South Georgia from 1980 to 2000. It found that the population size of each species — Antarctic fur seal, gentoo penguin, macaroni penguin, and black-browed albatross — “declined during the 1990s after a period of relative stability or increase in the 1980s. The study's authors postulate that one long-term trend which might be responsible for these changes is an overall decline in krill reproduction, survival, and biomass. They note that krill reproduction and survival is apparently strongly correlated to sea ice extent — because when sea ice melts, it releases small algae into the water, which are then fed upon by the krill — and that several studies have identified significant decreases in the extent of Antarctic sea ice over recent decades. This

hypothesis is reinforced by a paper in the British journal Nature. The authors of this paper examine trends in the emperor penguin population near the French Antarctic research station of Dumont d'Urville in Adélie Land, and conclude that, over the past fifty years, it “has declined by 50% because of a decrease in adult survival during the late 1970s. At this time there was a prolonged abnormally warm period with reduced sea-ice extent. Mortality rates increased when warm sea-surface temperatures occurred in the foraging area and when annual sea-ice extent was reduced, and were higher for males than for females.” For sources and complete information, see Ocean Update, June 2001, (Vol. 6 No. 5) at <http://www.seaweb.org>.

## CO<sub>2</sub> and Deep Water

Researchers in Bergen, Norway, have proposed a large scale demonstration project, in which carbon dioxide (CO<sub>2</sub>) would be pumped directly from offshore oil and gas fields to the deep waters of the Norwegian Sea. The project would test the conclusions of a theoretical study, using computer models, that suggests the Norwegian Sea, through transport to the Atlantic Ocean, would provide safe, long term storage of this greenhouse gas, which would otherwise enter the atmosphere and contribute to global warming. Drs. Helge Drange and Guttorm Alendal and Prof. Ola M. Johannessen at the Nansen Environmental and Remote Sensing Center in Bergen are to have published their study in the July 1 issue of Geophysical Research Letters. They note that the oceans already absorb carbon dioxide from the atmosphere, but the process of mixing the gas at deep levels can take up to 1,000 years. Complete story and details at [sciencedaily.com](http://sciencedaily.com) and American Geophysical Union (<http://www.agu.org/>).

## Bleaching Could Be a Hidden Strength for Corals

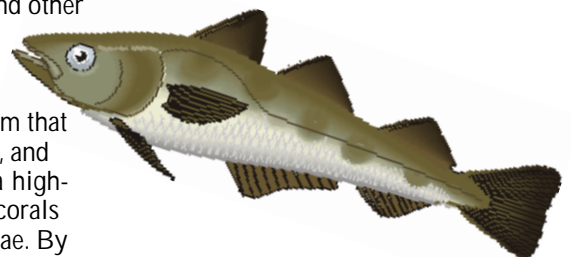
The global phenomenon of bleaching, in which reef-building corals lose their colorful algae and become white during times of stress, may actually allow some corals to adapt to global warming and other environmental changes. The study, conducted by Wildlife Conservation Society researcher Dr. Andrew Baker, counters conventional wisdom that bleaching is universally detrimental, and instead suggests that it represents a high-risk ecological strategy that allows corals to rid themselves of sub-optimal algae. By doing so, corals can become hosts to more

suitable algal types that increase their chances of survival during times of stress. Complete article available in June 14th edition of Nature ([http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v411/n6839/full/411765a0\\_fs.html](http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v411/n6839/full/411765a0_fs.html)).

## Research on Extreme Environments in Gulf of Mexico Could Lead to New information on Global Warming

Little is known about microbial processes in extreme environments, but a team of researchers, led by scientists at the University of Georgia and Georgia Tech, will travel to the Gulf of Mexico in July, 2001 and take a tiny submersible to the ocean bottom to learn more about processes that could have a major impact on such issues as the health of the seas and global warming.

Even better, those interested in the research and in the mysteries of the sea floor followed the research daily on the World Wide Web—where everything from discoveries and descriptions of work to stunning photographs were posted. The cruise began July 1 aboard the Harbor Branch Oceanographic Institute's R/V Seward Johnson. Scientists will board the Seward Johnson in Gulfport, Miss., and head for sites in the Gulf of Mexico. Once there, they began a grueling schedule of twice-a-day dives of four hours each on the four-person submersible the Johnson Sea Link II. Progress of the team can be followed until the end of the project on July 18 by logging on to <http://www.at-sea.org/missions/extremes/preview.html>. Complete press release at <http://www.eurekalert.org/releases/ug-roe062901.html>. For more information, contact: Kim Osborne, [kosborne@uga.edu](mailto:kosborne@uga.edu), University of Georgia.



# People



Kate Wynne

Kate Wynne is a now in a new position, as Associate Professor of Marine Biology in the Marine Advisory Program. Kate Wynne is the marine mammal specialist with MAP, and is based at FITC in Kodiak.



Dr. Gradinger

Dr. Rolf Gradinger, IMS, participated in the annual meeting of the German Zoological Society in Osnabrück, Germany, in June 2001. He was an invited lecturer and gave a presentation on "The adaptation of metazoans to the specific environmental conditions in Arctic and Antarctic sea ice." A written version of his contribution is going to be published in a special issue of the journal *Zoology* in 2002. During his stay in Germany he also presented a talk on "Perspectives for sea ice research along the north coast of Alaska" at the Institute of Polar Ecology, University of Kiel, Germany.



Dr. Weingartner

Dr. Tom Weingartner, IMS, presented an invited lecture at the 2001 Gordon Research Conference on Coastal Physical Oceanography, held June 10 - 15, in New London, New Hampshire. Dr. Weingartner's talk, "Going to extremes: buoyancy forced arctic coastal currents," discussed the physics of arctic coastal currents relative to the unique geomorphological and climatological characteristics of the arctic.

Heloise Chenelot has received her second year of funding through a Kachemak Bay National Estuarine Research Reserve Fellowship. Her research examines the influence of salinity and turbidity on the spatial distribution of kelp beds in Kachemak Bay, Alaska. She is currently working on this question at the Kasitsna Bay Marine Lab.

Heather Patterson has received an EPSCoR Graduate Fellowship. Her research will examine freeze tolerance and survival of intertidal invertebrates from Kachemak Bay, Alaska. She will begin her research in the fall.

Jennifer Plett has received a UAF Graduate Fellowship for Fiscal Year 2002. Jennifer's PhD research will explore the behaviors and impacts on community structure of a dominant intertidal herbivore in Kachemak Bay, Alaska.



Ray RaLonde

Raymond RaLonde, MAP, and Drs. Scott Smiley and Brian Himelbloom, FITC, were three of seven featured speakers at the Paralytic Shellfish Poisoning Education and Training workshop, held June 29-30, 2001, at the Fishery Industrial Technology Center, Kodiak. The purpose of the workshop is to: describe the PSP problem in Alaska and its complexity; present the results of current research and monitoring of marine toxins on Kodiak Island; describe the role of the University of Alaska, Alaska Science and Technology Foundation, and Jellett Biotek Corporation in PSP research and future projects; display the Jellett Biotek MISTAlert™ test kit and provide hands-on use of the kit to interested citizens; and to develop a coordinated Alaska PSP monitoring program.



Dr. Himelbloom



Dr. Smiley

Fisheries Division faculty Drs. Terry Quinn and Milo Adkison and graduate students Dana Hanselman, James Savereide, and Kalei Shotwell attended the 2001 World Conference on Natural Resource Modeling, June 26-30, Logan, Utah. Terry Quinn presented a keynote lecture "Ruminations on the Development and Future of Fisheries Population Dynamics Models" and Milo Adkison gave a presentation on "Optimal Model Complexity in Natural Resource Management." Dana Hanselman presented some of his Ph.D work on "Applications in Adaptive Cluster Sampling of Gulf of Alaska Rockfish". James Savereide presented his MS work on "An Age-Structured Model for Assessment and Management of Copper River Chinook Salmon." James Savereide shared the Best

Student Paper Award with one other student for his presentation.

The NEWNET program at the SFOS (Dr. John Kelley, IMS, P.I.) supported by the Department of Energy through the Battelle-Pacific Northwest National Laboratories, Richland, WA., conducted its annual Station Manager training program for volunteers in Alaska's rural communities who maintain NEWNET sites. Training was provided under the direction of Larry Sanders and Orval Hart from the Los Alamos National Laboratory. Loda Griffith, a student intern coordinated the station manager training. NEWNET at the UAF is also conducted in collaboration with the ADEC.

## Castellini Receives Award

Dr. Michael Castellini, IMS, has received the prestigious Society of Viennese and International Clinical Experimental Research Biology Award for outstanding contributions in Marine Biology. The award announcement states: "Dr. Castellini is an outstanding expert in cardiorespiratory function of sleep associated apnea in seals. This high knowledge about apnea in animals is very important and interesting for sleep apnea research in humans. As a multidisciplinary society for clinical and experimental research, we are proud to be able to discuss with such an outstanding specialist, Dr. Castellini."



Dr. Castellini



Correction: in the list of graduates in the June edition Dr. Henrichs was listed as the major advisor for Takeun Rho: John Goering was his major advisor.

## An All SFOS faculty Retreat Occurred in Fairbanks May 15-16, 2001.



Dr. Mark Johnson

Dr. Mark Johnson, IMS, chaired the 2001 SFOS All Faculty retreat.

A letter from Dr. Johnson, a timed-action-items list and a complete outline is available at <http://www.sfos.uaf.edu/events/2001/05/retreat/>.

According to Dr. Mark Johnson, the outline is essentially a dialogue that occurred during the retreat. It is an outline for a discussion, and not necessarily a list of recommendations for a finished product. It simply represents issues that need further discussion among all faculty. The web page was open to input till July 15th. After that date a draft report will be prepared, based on the written input received from SFOS faculty. The intent is to have a final report by Sept 1 that represents a consensus view of the majority of SFOS faculty. The final report, states Dr. Johnson, should be made available to anyone with an interest in SFOS activities.



## Cold Water Diving Symposium

The 21<sup>st</sup> Annual Scientific Diving Symposium sponsored by the American Academy of Underwater Sciences (AAUS) ([www.aaus.org](http://www.aaus.org)) will be held September 18-23, 2001 at the Alaska SeaLife Center ([www.alaskasealife.org](http://www.alaskasealife.org)), in Seward, Alaska. The focus of this year's symposium is "Cold Water Diving for Science." The first part of the program, a technical forum entitled "Cold water Diving for Science: Tips, Techniques and Training," will begin by offering a dry suit certification course in the evening of September 18. The following day several invited experts in the field will share their knowledge and experience relative to cold water diving. Information will be presented on such topics as hypothermia, insulation alternatives, managing research, using tools, risk management and incident management, gear specifications, modifications and maintenance, repair clinics, and advanced diving technologies in cold water. This will result in an AAUS post-symposium resource document. Boat dives in Resurrection Bay will be available Thursday morning, September 20.

The second part of the program will be devoted to presentations and exhibits on Friday and Saturday. Approximately twenty-two presentations will be made, which the Alaska Sea Grant College Program will publish. Some examples of talks are: German Activity in Cold Water Scientific Diving; A Comparison of Tethered Research Diving in Lake Hoare, Taylor Valley, Antarctica Using a Surface-Supplied Air Source and SCUBA; and Underwater Capture of Juvenile Stellar Sea Lions with SCUBA. Thirteen UAF scientific divers are participating. A Student Best-Paper Award of \$500 will be sponsored by the West Coast and Polar Regions Undersea Research Center.

The Banquet Keynote Speaker is renowned underwater photographer and cinematographer Norbert Wu. Mr. Wu was



an Our World-Underwater Scholar back in 1985. His photographs has appeared on the covers of Time, Geo, Science World, Natural History, and many others. He's working on a Pew Fellow's Grant in Marine Conservation, a grant that allows him to pursue a marine conservation-related project for the next three years. His upcoming high-definition television film "Under Antarctic Ice" will air on PBS stations in fall 2001. His images can be viewed on his web site at [www.norbertwu.com](http://www.norbertwu.com).

The host hotel is the new Hotel Edgewater ([www.hoteledgewater.com](http://www.hoteledgewater.com)), located a short block from the SeaLife Center. Every room offers a spectacular view of either the mountains or the bay. All rooms will be priced at a modest \$75 per night.

The symposium will be hosted by Alaska SeaLife Center, Prince William Sound Science Center, Alaska Underwater Science Foundation, University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Scientific Diving Program, and West Coast & Polar Regions Undersea Research Center. The steering committee consists of Robert Hicks (Chair), Tom Kline, Val Hodges, and Stephen Jewett, IMS.



Dr. Stephen Jewett

For information on registering for the symposium contact [www.aaus.org/symposium](http://www.aaus.org/symposium).



## Sea Grant News

Seabird Bycatch: Trends, Roadblocks, and Solutions, edited by E.F. Melvin and J.K. Parrish, is the proceedings of a 1999 symposium held by the Pacific Seabird Group. Alaska Sea Grant and Washington Sea Grant jointly funded the publication. The book significantly adds to the knowledge base of seabird incidental mortality in commercial fisheries, and emphasizes the importance of comprehensive solutions. In a concise synthesis of the symposium, the editors discuss techniques to measure bycatch in fisheries worldwide, obstacles to solving bycatch, and viable bycatch solutions. \$20.00, 212 pp., available at the Sea Grant office in 205 O'Neill, UAF.

Genetics of Subpolar Fish and Invertebrates conference (20th Lowell Wakefield Fisheries Symposium) is May 29-31, 2002, in Juneau, Alaska. Call for papers available on line at <http://www.uaf.edu/seagrant/Conferences/genetics-call.html>. Deadline is October 15, 2001. Contact: Brenda Baxter, [fyconf@uaf.edu](mailto:fyconf@uaf.edu).

For a current list of 2001 Arctic Science Journeys Radio scripts, go to: <http://www.uaf.edu/seagrant/NewsMedia/01ASJ/index.html>. Arctic Science Journeys provide

A full-color version of our newsletter is available at: [www.sfos.uaf.edu/](http://www.sfos.uaf.edu/)  
 In order to view this version, you will need a copy of Adobe Acrobat Reader.

interesting and informative programs about science, culture, and the environment of the circumpolar north.

SFOS web site on bottom trawling study is at <http://www.sfos.uaf.edu/>. The SFOS Web site now features a multi-media web site devoted to a study of bottom trawling impacts on the Bering Sea. Graduate student Eloise Brown and principle investigators Drs. Sue Hills and Bruce Finney are conducting the study with grants from the North Pacific Marine Research Program (NPMR), Alaska Sea Grant, and the Groundfish Forum. The site features a story about their field work, as well as photos, audio and video interviews with the researchers, and video of divers conducting research on the sea floor. The site also provides links to other web sites about bottom trawling. Content for the Web site was produced by Doug Schneider at the Alaska Sea Grant College Program, while Dave Partee, SFOS/NPMR, performed the "magic" to make it all work and look great on the web.

All Sea Grant program updates and current information available at: <http://www.uaf.edu/seagrant/index.html>.

## Editor's Corner: Got News?

Special thanks to Brianna Lawson, Nancy Mighells, Tom Smith, Raymond RaLonde, Doug Schneider, Drs. Alexander, Castellini, Gradinger, J. Kelley, Konar, Jewett, M. Johnson, Weingartner and others for material used in this newsletter.

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