

# **Right Whale News**

**The Newsletter of the southeastern United States Implementation Team for the Recovery of the Northern Right Whale**

**Volume 1, Number 2, November 1994**

## **CONGRESS INCREASES FUNDS FOR RECOVERY BUT HOW MUCH WILL RIGHT WHALE EFFORT GET?**

Congress recently appropriated \$6.7 million for the National Marine Fisheries Service (NMFS) endangered species recovery efforts in fiscal Year 1995. This appropriation represents a significant increase over the FY94 appropriation. Of these funds, some \$4.5 million will be used to address salmon recovery efforts in the Pacific Northwest. The remaining \$2.2 million will be used for the recovery of species other than salmon, with most of the money being divided between whales and sea turtles. The highest funding priority may be for the bottlenose dolphin recovery in the southeast and Gulf; right whales may receive second priority because Congress also continued the line-item appropriation of \$214,000 for right whale research. How much of the funds will go to right whale recovery has yet to be determined, but, optimistically, as much as \$1.5 million might be made available.

Another bill that would have required the U. S. Coast Guard to prepare a report to Congress on recommendations for promoting right whale recovery passed the House but died of inaction in the Senate. Sin spite of this setback, the level of Congressional interest in right whale recovery efforts remains high, and a similar measure is expected to be introduced and promoted next year.

## **AERIAL SURBEYS SUCCESSFUL IN REDUCING SHIP COLLISIONS**

The 1993-94 season was the first in which both large-scale aerial surveys and the Early Warning System were combined in an effort to reduce collisions between vessels and right whales within the species' high-use habitat in southeastern U. S. waters. The success of this effort on the conservation of right whales was recently reported by scientists with the New England Aquarium (Slay et al., 1994; see Recent Scientific Literature, page 9, for complete citation.) The report notes that at least six times during the 1993-94 winter season, vessels were diverted from potential collisions with whales, and dredges under contract to the U. S. Army Corps of Engineers regularly slowed their transits during nighttime operations when whales were sighted in their areas. In addition, the presence of survey aircraft routinely reporting right whale sightings to large vessels, harbor pilots, and federal and military authorities has raised awareness considerably throughout the region. This increased awareness was complemented on the ground by the educational efforts of the Georgia Department of Natural Resources, the Florida Department of Environmental Protection and the port authorities of Savannah, Brunswick, Fernandina Beach, Jacksonville, and Port Canaveral. Commercial shipping interests as well as the Navy at Kings Bay and Mayport and the Coast Guard at Mayport have voluntarily participated in the Early Warning System with great interest and vigor to insure that the potential for ship/whale collisions is reduced. The result of these efforts is that no right whale mortalities due to collisions with large vessels were reported from the surveyed area during the survey period.

## **1994-95 CALVING SEASONS SURVEY PLANS**

The National Marine Fisheries Service (NMFS) extended a request for proposals to provide Early Warning System aerial surveys for the right whale in nearshore coastal waters of Georgia and Northern Florida. Locations of whales seen during these surveys are forwarded to port authorities, harbor pilots, dredge crews, and naval installations to alert them of the presence of right whales in their area.

Both the Florida Department of Environmental Protection (FDEP) and the Georgia Department of Natural Resources (GDNR) plan regular aerial surveys for the December 1994 to March, 1995 calving season. FDEP plans to fly two surveys a week, weather dependent. One survey, from the St. Mary's River Entrance Channel to Sebastian Inlet, will follow a transect parallel to the coast, flying south at 1.5 nautical miles from shore and returning north at 4.6 nm from shore. The other survey, from Jacksonville Beach to New Smyrna Beach, will follow latitudinal transects at 3 nm intervals out 15 nm. Ancillary surveys in response to public sighting reports may also fly to the area of the reported location.

Last year's calving season aerial surveys represented one of the most intensive marine mammal survey efforts in the world with the New England Aquarium's almost daily surveys, the once-a-week surveys by FDEP and the opportunistic survey efforts by GDNR. With the entire calving season of December through March being surveyed, a wealth of right whale information was obtained. In addition to the information reported by Slay et al. (1994), FDEP surveys and other data imply that calving takes place throughout the Critical Habitat and not just in the high use area between the St. Mary's and St. Johns Rivers. Survey data also suggest that some mother/calf pairs that have moved to the southern part of the calving ground may not migrate back north through the Critical Habitat. [Bill Brooks, FDEP; Barb Zoodsma, GDNR]

## **EARLY WARNING SYSTEM COMMUNICATIONS NETWORK TO CONTINUE**

The aerial surveys and the active cooperative efforts of shipping interest in avoiding right whales are linked together by the Early Warning System Communications Network. Plans for the 1994-95 season are similar to last year's successful program: When an aerial survey crew sights a right whale in or near a ship channel, they will contact vessels in the area by marine band radio, urging cautionary measures to avoid the whale. Port dispatchers will also be notified immediately of nearby whales via radio and they in turn will advise incoming and outgoing vessels of the presence of whales (a "whale advisory".) Port dispatchers will be requested to issue whale advisories for a 24-hour period following the initial whale sighting. Additionally, locations of right whales spotted during the surveys will be faxed to the U. S. Coast Guard, port authorities, harbor pilots, and U. S. Navy installations at Mayport and Kings Bay. The survey crew will send weekly reports to the Georgia Department of Natural Resources, the Florida Department of Environmental Protection, the National Marine Fisheries Service, and the Navy Regional Coordinator.

## **RIGHT WHALE TRAINING SEMINARS PLANNED**

A series of training seminars are being planned to inform mariners of right whales. The target audiences include those from last year: the port users at Brunswick, Kings Bay and Savannah, Georgia; and at Fernandina, Mayport, Jacksonville, and Port Canaveral, Florida. The harbor pilots (Brunswick Bar Pilots, Savannah Pilots, Fernandina Harbor Pilots, St. Johns Bar Pilots and Canaveral Harbor Pilots) and the port operations personnel at Kings Bay Naval Submarine Base and Mayport Naval Station have been and will continue to be integral to the success of this effort. The Georgia Ports Authority, Fernandina

Port Authority, Jacksonville Port Authority, Canaveral Port Authority and COMNAVBASE Jacksonville (U. S. Navy Regional Coordinator) continue to assist the Implementation Team in setting up the seminars. This season's seminars are currently being scheduled and will hopefully be completed by the end of December.

The seminars are a joint effort of the Georgia Department of Natural Resources (GDNR), the Florida Department of Environmental Protection (FDEP) and Early Warning System survey biologists. The highlights of these sessions are: 1) natural history and plight of the whales, historic and present; 2) that whales utilize the calving grounds critical habitat from December through March; 3) the location of the critical habitat; 4) a review of past season survey data; 5) what to look for (e.g., characteristic features); and 6) what to do if a right whale is spotted (avoid whale, note coordinates, notify area traffic and harbor pilots, and report to sighting network for ID verification.) These seminars are also a forum for questions and suggestions from the port users to the Implementation Team and vice versa.

Members of the commercial shrimping industry were not targeted last year but will be included in this year's educational campaign. Efforts will also be made to contact longshore vessel operators and other large vessels that do not require the services of a harbor pilot. Results from the study conducted by Hain et al. in 1993 (see Hain et al., 1994 in "Recent Scientific Literature and Reports" at the end of this newsletter: that characterized vessel traffic in the St. Johns and St. Marys channels indicate that these vessels constitute a major portion of non-recreational vessel traffic in and out of the St. Johns and St. Marys channels. Training seminars will be similar to those mentioned above, but may be modified specifically for the various industries. [Bill Brooks, FDEP; Barb Zoodsma, GDNR]

## **SOUTHEASTERN TEAM MEETING**

The Southeastern U.S. Implementation Team for the Recovery of the Northern Right Whale met in Brunswick, Georgia on November 9, 1994. Topics of discussion included the Early Warning System Surveys, training seminars, the development of Recommended standard operating procedures for vessels in the vicinity of right whales, southeastern gill net fisheries, and minimum approach distance. Most topics are described elsewhere in this issue of Right Whale News. Of note, however, is that a seven-member subcommittee was designated to develop recommended standard operating procedures for vessels operating out of ports associated with the right whale calving area critical habitat. Jerry Wallmeyer, COMNAVBASE Jacksonville, is serving as the subcommittee's chairman.

Two new members of the Team were introduced: Lieutenant Commander Wesley Marquardt and Mr. Wayne McFee. Lieutenant Commander Marquardt replaces Commander Richard Rooth as the U.S. Coast Guard's Representative on the Southeastern U.S. Implementation Team. Lieutenant Commander Marquardt can be reached at the United States Coast Guard (G-NIO), 2100 Second Street, SW, Washington, DC 20593-0001; telephone (202)267-1454; Fax (202)267-4425. Dr. Wayne McFee replaces Dr. Ben Blaylock as the National Marine Fisheries Services (NMFS) Contracting Officer's Technical Representative; Mr. McFee is located at The NMFS Charleston Laboratory, P.O. Box 12607, Charleston, SC 29412; telephone (843)762-8592; fax (843)762-8700.

For a copy of the minutes of the meeting, contact Barb Zoodsma at the Georgia Department of Natural Resources, One Conservation Way, Brunswick, Georgia 31523-8600; telephone (912) 264-7218.

## **NEW ENGLAND IMPLEMENTATION TEAM IN FORMATIVE STAGES**

On August 19, 1994 representatives of a number of federal and state agencies and other entities participated in an organizational meeting for the New England Implementation Team for the Recovery of Right Whales and Humpback Whales. The clear priority of the Team will be the right whale, although the humpback and possibly other species (i.e., harbor porpoise) will be considered. The Team will provide a multi-agency, coordinated approach to large whale conservation and research in the New England area. The Team will also provide a prioritized list of funding recommendations that will indicate each of the responsible agencies and their involvement in recovery issues. Mike Payne, NMFS, suggested that while the behavior of the whales and the issues are different in the Northeast than in the Southeast, a New England Implementation Team could be modeled after the Southeastern U.S. Implementation Team.

Membership on the New England Implementation Team has yet to be determined, but it will include recognized experts with a fair balance of viewpoints. Representatives from each of the following agencies and organizations were recommended as necessary components of the Team: The Massachusetts Water Resources Authority, the New England Fisheries Management Council, the Outfall Monitoring Task Force, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the NMFS Northeast Fisheries Science Center, the NMFS Northeast Regional Office, Massachusetts Coastal Zone Management Office, the Massachusetts Office of Non-game and Endangered Species, the Center for Coastal Studies, the U.S. Coast Guard, NOAA Sanctuaries and Reserves Division, the Department of Fisheries and Oceans (Canada), the Marine Mammal Commission, MASSPORT, the New England Aquarium, and the University of Rhode Island.

Three subgroups of the Team were established with the following foci and chairs:

- Research needs ñ Mr. Gordon Waring, National Marine Fisheries Service, Northeast Fisheries Center, 166 Water Street, Woods Hole, MA 02543; telephone (508) 548-5123.

Reduction of Ship Strikes and Fisheries Entanglement -- Ms. Patricia Fiorelli, New England Fishery Management Council, Suntaug Office Park, 5 Broadway (U.S. RR#1), Saugus, MA 01906; telephone (617)231-0422, and Mr. Scott Kraus, New England Aquarium, 100 Central Wharf, Boston, MA 02110; telephone (617)973-5253.

Habitat Needs and Monitoring ñ Dr. Robert Kenney, Graduate School of Oceanography, University of Rhode Island, Kingston, RI 02881; telephone (401) 792-6251.

Prior to the next meeting (tentatively scheduled for late 1994 or early 1995), the subgroups plan to meet and make some initial recommendations, including budget costs, to implement recovery actions in the northeast.

For a copy of the minutes of the August 19 meeting or for other information regarding the NE Team, contact Doug Beech, NMFS Northeast Region, One Blackburn Drive, Gloucester, MA 01930; telephone (508) 281-9254.

To improve the contacts with activities in the northeast, Mike Payne has agreed to serve on the editorial board of Right Whale News . Mike is with the Office of Protected Resources, National Marine Fisheries Service, in Silver Spring, MD.

## **RIGHT WHALE HABITAT MANAGERS NETWORK**

Brad Barr of the Stellwagen Bank National Marine Sanctuary (SBNMS) is leading the effort to create a network of people who manage right whale habitats, including National Marine Sanctuaries, the three "critical habitat" areas (Great South Channel, Cape Cod Bay, and coastal GA-FL), Canadian Conservation Areas and Sanctuaries, National Seashores, Parks, Refuges, and other management areas. The network should help management authorities in identifying joint projects, avoid duplication of effort and improve cooperative efforts to protect the right whale throughout its range. Managers interested in participating in the network should contact Brad Barr at SCNMS, 14 Union Street, Plymouth MA 02360; telephone (508) 747-1691.

## **MASSACHUSETTS ENFORCES MINIMUM DISTANCE RULE**

During the later part of the summer, no humpback whales were seen in Cape Cod Bay, but at least several right whales remained. As a consequence, a number of commercial whale watching boats turned the focus of their attention to right whales. One particularly aggressive whale-watching operation out of Provincetown made a close approach to a right whale. An under cover law enforcement officer was on board at the time; he issued a warning citation to the operation for violating Massachusetts' 500 yard minimum approach distance rule for right whales.

Massachusetts state agencies and federal agencies are planning to increase the coordination of their enforcement efforts so that they will be more prepared to deal with the issue in the upcoming whale watching season.

To increase public awareness of the minimum distance regulations, informational brochures are included in the materials sent to people renewing their boat registrations or applying for marine fisheries permits in Massachusetts. For more information, contact Dr. Tom French, Massachusetts Department of Fisheries and Wildlife, 100 Cambridge Street, Room 1901, Boston, MA 02202; telephone (617) 727-3151.

## **GREAT SOUTH CHANNEL FISHING GEAR CLOSURE**

During certain months of the year, the New England Fishery Management Council (NEFMC) closes certain areas to gill net fishing to protect the harbor porpoise. In addition, the Council closes Area 1 to protect haddock and other groundfish. Area 1 encompasses most of the northern right whales critical habitat in the Great South channel. At present, the Area 1 closure is in effect from February 1 through March 31. The NEFMC has asked the Secretary of Commerce for emergency action to close Area 1 as soon as possible because of the current groundfish crisis. The NEFMC is also considering a change in the closure dates so that they would better coincide with right whale presence in the Great South Channel. [Pat Fiorelli, NEFMC]

## **BRIEFLY NOTED**

The U.S. Coast Guard has formed a team to address Atlantic Coast compliance with the Endangered

Species Act (ESA.) The team will be preparing a biological assessment and will formally consult with the National Marine Fisheries Service (NMFS) in conformance with the requirements of Section 7 of the ESA..

As a conservation measure, the NMFS is considering the establishment of minimum approach distance guidance to protect the Northern Right Whale. The intent is not to make an approach illegal but to get boat operators to back off once they know the species is a right whale. Certain exceptions will be provided, for instance, ships in channel and dredges whose courses cannot be changed easily. The first formal step in MNFSís consideration will be the publication of an Advanced Notice of Proposed Rule Making in the Federal Register .

The fate of the calf (#2404) that was entangled in fishing gear and hit by a vesselís propeller off the Florida coast in February 1994 is still unknown. Neither the calf nor its mother(#1004) were sighted in northern waters this summer. New England Aquarium scientists did observe one cow and calf pair in northern waters this summer that had not been observed previously in the Georgia-Florida calving ground. This sighting brings the total number of calves produced during the 1993-94 calving season to eith. One of these was the injured calf (#2404)that Scott Kraus thinks is dead.

More than 150 right whales ñ more than half the known population in the Western North Atlantic ñ were observed in the Bay of Fundy this summer. This is the largest concentration of right whales seen there in the 15 years of New England Aquarium investigation.

## **BOOK REVIEW**

### *THE SEARCH FOR THE RIGHT WHALE*

Kraus, S. and K. Mallory. 1993. *The Search for the Right Whale*. A New England Aquarium Book.

Crown Publishers, Inc., New York. ISBN#0-517-57844-1. 36 pages. \$14.00.

It is always a challenge to present scientific findings to young audiences. In addition to accurate and current information, young readers expect to be entertained. It is this successful combination of elements which makes *The Search for Right Whale* a remarkable book.

Authors Scott Kraus and Kenneth Mallory provide readers with an investigation of the North Atlantic right whale, including whale history, biology, and conservation. Readers learn the process of how scientists gather and analyze information as they trace the path of the rarest whale in the ocean along the Atlantic Coast. The material presented is the result of more than a decade of contributions and cooperative efforts by researchers from Massachusetts to Florida.

An interesting history of the right whale is presented and is documented with prints and information from whaling ship log books. Unique characteristics of the right whale, such as the V-shaped spout, and the importance of the patterns of callosities for the identification of individual whales, are explained. Migration patterns and behavior of the right whales are explored with engaging style. The richly informative text is accompanied by many excellent photos, maps, and historical prints and drawings.

The Search for the Right Whale is appropriate for grades 4-8 although some students may need assistance with vocabulary. Lower grade levels will enjoy this book if there is adult involvement with

reading and additional clarification. Adults will find the book to be useful and enjoyable overview of current right whale research presented in a visually appealing format. [Sarah Mitchell, Grayís Reef National Marine Sanctuary]

## **FERNBANK'S "GIANTS OF THE DEEP" EXHIBIT INCLUDES NEW RIGHT WHALE VIDEO**

The Fernbank Museum of Natural History in Atlanta will host the extraordinary "Giants of the Deep" traveling exhibit through January 8, 1995. "Giants is 10,000 square foot exhibition about the worldís great whales and features five life-sized, robotic whales including a 32 foot long sperm whale, a 22 foot killer whale, a gray whale, a humpback whale, and a narwhale. Some of the whales spout water from their blowholes, and all of them make the sounds typical of their species. Many interactive activities, including a whale log book to be stamped as each whale is "sighted," make this a very entertaining as well as educational exhibit. "Giants" was developed by the Pacific Science Center and the whales were fabricated by Sequoia Creative, Inc., of Sun Valley, California. It is the first robotic exhibit in the world.

As a special part of the exhibit, Fernbank commissioned Aguar Brothers Film Productions in Athens,

Georgia, to produce "Rediscovering Right Whales," a five-minute video about the recent rediscovery of the North Atlantic right whale calving waters off the coast of Georgia and Florida. The video is used to introduce museum visitors to the rarest whale in the world and Georgiaís own state marine mammal. The Museum of Science and History in Jacksonville, Florida, has purchased the right to use the video in their new marine mammals permanent exhibit (scheduled to open in 1996). The right whale video production will be available for use in Fernbankís educational programs as well.

In addition to the traveling "Giants" exhibit, Fernbankís permanent exhibit, "A Walk Through Time in Georgia" includes a mural of a right whale cow and calf. The Museum Store carries the book, *The Search for the Right Whale* by Scott Kraus and Ken Mallory (see review on page 6).

Fernbank is open daily except Mondays. Call (404) 370-0960 for times and other information. There is an admission fee for the museum (adults, \$5.50; seniors, students, and children, \$4.50) and a \$2.50 fee for the "Giants" exhibit.

Judy Cutchins, Fernbank Museum of Natural History

## **Sea World Symposium on Marine Mammals**

On Saturday, February 4, 1995 Sea World of Florida will be hosting a day-long Symposium on Marine Mammals at the Stouffer Orlando Resort. A featured speaker will be Scott Kraus with the New England Aquarium, who will speak on "The Plight of the Right Whale." Special emphasis will be placed on the link between research findings and advocacy for conservation. Other speakers at the Symposium include: Dr. Pamela Yochem ("Lessons in Life: Marine Mammal Research in Zoological Parks"); Michael Sutton ("The Southern Ocean Whale Sanctuary: New Hope for Whales"); Chuck Tompkins (ëMarine Mammal Husbandry and Training at Sea World"); and Dr. Jay Barlow ("Counting California Whales: A Status Report"). The registration fee is \$50 (\$45 for graduate students). Same day admission to Sea World is included. College credit and teacher in-service points are available. Contact the Sea

World Education Department at (407) 363-2380 for registration and other information.

Debra Erickson, Sea World of Florida

### **Sea World To Broadcast "Discovering Whales"**

Sea World's Video Classroom, SHAMU TV, takes students into the field with scientists, backstage with animal trainers, on rounds with veterinarians, and face-to-face with whales and other wonders of the sea and land. During the program, viewers may call 1-800-23-SHAMU to ask the experts about their favorite animals. At 11:00 a.m. on January 6, 1995 the SHAMU TV program, "Discovering Whales," will be broadcast; availability is via satellite downlink, cable access, local ITV/ITFS channels or your local PBS station.

Debra Erickson, Sea World of Florida

### **Coastal Naturalist Broadcasts Include Right Whales**

Cathy Sakas, the Coastal Naturalist, explores the varied and beautiful habitats of the Atlantic Coast on public television. Ranging from the Dry Tortugas to the Canadian border, Cathy introduces viewers to the wildlife that lives there, including the right whale. Recently, Georgia Public Television broadcast the five part series; other states will broadcast the series early in 1995. Contact your Public Television station for dates and times. Tapes of each program can be purchased for \$30 from GPTV Tape Sales, 1540 Stewart Avenue, SW, Atlanta, GA 30310; telephone (404) 756-4753.

### **A New Right Whale Educational Poster**

The Georgia Department of Natural Resources, the Ocean Society, and the National Marine Fisheries Service have produced a new poster, "Right Whales along the Georgia Coast." The poster includes drawings of right whales, maps, and text. The educational content makes it particularly appropriate for use in schools. For a copy, contact Barb Zoodsma at GDNR, One Conservation Way, Brunswick, GA 31523-8600; telephone (912) 264-7218.

A "Wanted! Right Whale Sightings" poster is also available from the Florida Department of Environmental Protection. The poster features photographs that vessel operators can use to identify right whales. For copies, contact Bill Brooks at FDEP, 7825 Baymeadows Way, Suite 200B, Jacksonville, FL 32256-7577; telephone (904) 448-4300, ext. 229.

### **St. Simons Island To Get Right Whale Sculpture**

The Glynn County commission recently approved the request to place a right whale sculpture in Neptune Park on St. Simons Island, Georgia. The Whales in the Park Outdoor Sculpture Project, to be created by artist Keith Jennings, will include a 19 foot long calf and the head and pectoral fin of its life-



size mother. The educational exhibit will draw attention to the calving ground and critical habitat immediately offshore. Fund-raising efforts are now underway. Contact the Golden Isles Arts and Humanities Association at (912) 262-6934 for more information or to make a contribution.

Tad Meeds, Save the Beach

### **Right Whale Research Needs**

On October 3-5, 1994 the Northeast Fisheries Science Center (NFSC) hosted a workshop to review current biological research on right whales and to identify gaps and needs. Following the workshop, on October 6 and 7, a panel chaired by Dr. Peter Best of the South African Museum met to develop recommendations on priorities for the National Marine Fisheries Service. While their report is not final, it is expected that the panel will recommend biological research grouped into top, medium, and lower priorities. Some of the research is ongoing, other proposals are new. Funding is expected to come from the Congressional appropriations (see article on page 1) and possibly other sources.

**Top priority project recommendations include:** continuation of directed data collection for photo-identification, development of a mark-recapture model, estimation of demographic parameters and modeling, carcass detection, carcass response and recovery teams, habitat use and ship traffic in the Southeast calving ground and nursery grounds and a workshop on vessel collisions.

**Medium priority projects include:** location of other summer nursery grounds, biopsy to genetically identify all individuals, location of other wintering grounds, examination of scaring trends in the photo-identification catalog, and genetic analysis to identify genetic bottlenecks.

**Lower priority recommendations include:** monitoring fishing gear in right whale concentration areas, monitoring shipping activity in the right whale's known range and including other sighting survey data in the database.

The panel's report should be ready for distribution by the end of the year. For a copy, contact Gordon Waring at NFSC, 166 Water Street, Woods Hole, MA 02543-1026; telephone (504) 548-5123, extension 204.

### **Recent Scientific Literature and Reports**

- Adegoke, J.A., U. Arnason, and B. Widegren. 1993. Sequence Organization and Evolution in all Extant Whalebone Whales of a DNA Satellite with Terminal Chromosome Location. *Chromosoma* 102(6): 382-388.

Anonymous. 1994. Marine Mammal Commission Compendium of Selected Treaties, International

Agreements, and Other Relevant Documents on Marine Resources, Wildlife, and the Environment U.S. Government Printing Office, Washington, DC. Three volumes; 3, 547 pages.

Arnason, U., S. Gretarsdotir, and B. Widegren. 1992. Mysticete Baleen Whale Relationships Based on the Sequence of the Common Cetacean DNA Satellite. *Molecular Biology and Evolution* 9(6): 1018-1028.

Best, P. B. 1993. Increase Rates in Severely Depleted Stocks of Baleen Whales. *ICES Journal of Marine Science* 50: 169-186.

Best, P. B. 1994. Seasonality of Reproduction and the Length of Gestation in Southern Right Whales, *Eubalaena australis*. *Journal of Zoology* 232(2): 175-189.

Brooks, W. B. 1994. Right Whale Aerial Surveys of the Nearshore Coastal Waters of Northeast Florida, November 1993 to April 1994. Final Report to the Florida Marine Research Institute, St. Petersburg, FL. 24 pages plus 1 appendix.

Goodyear, J. D. 1993. A Sonic Radio Tag for Monitoring Dive Depths and Underwater Movements of Whales. *Journal of Wildlife Management* 57(3): 503-513.

Hain, J. H. W., S. L. Ellis, and P. E. Seward. 1994. Characterization of Vessel Traffic at the St. Johns and St. Mary's Channel Entrances, Northeast Florida, January 1993. Report to the Army Corps of Engineers, Marine Mammal Commission, National Marine Fisheries Service, and U. S. Navy. 58 pages.

Kenney, R. D. 1994. Shifts in fish stocks impact dolphins, whales. *Maritimes* 37(1): 7-10.

Slay, C. K., S. D. Kraus, L. A. Conger, A. R. Knowlton, and P. K. Hamilton. 1994. Aerial Surveys to Reduce Ship Collisions with Right Whales in the Nearshore Coastal Waters of Georgia and Northeast Florida. Final Report to the National Marine Fisheries Service, Miami, FL, under contract no. 50WCNF406041. 28 pages plus 8 appendices.

U. S. Department of Commerce. 1994. Marine Mammal Protection Act of 1972-Annual Report-January 1, 1992 to December 1993. Office of Protected Resources, National Marine Fisheries Service, NOAA, U.S. Department of Commerce. 136 pages plus 6 appendices.

Verheyden, C. 1993. Kelp Gulls Exploit Food Provided by Active Right Whales. *Colonial Waterbirds* 16(1): 88-91.

Winn, H. E., J. D. Goodyear, R.D. Kenney, and R.O. Petricig. In press. Dive Patterns of Tagged Right Whales in the Great South Channel. *Continental Shelf Research* 14.

## **Calendar of Events**

**January 6, 1995**-11:00 a.m.- Broadcast of Sea World's SHAMU TV Program. "Discovering Whales." See article on page 7. FFI: call Debra Erickson at (407) 363-2380

**Now through January 8, 1995**- Fernbank Museum of Natural History, Atlanta, GA. "Giants of the Deep"

Exhibit featuring five life-sized robotic whales and a new right whale video. See article on pages 6 & 7. FFI: call (404) 370-0960.

**February 4, 1995**-Sea World Symposium on Marine Mammals, Orlando, FL. See article on page 7. FFI: call (407) 363-2380.

**April 21, 1995**-Meeting of the Southeastern U.S. Implementation Team for the Recovery of the Northern Right Whale. FFI: call Barb Zoodsma at (912) 264-7218.

**December 13-18, 1995**-11 th Biennial Conference on the Biology of Marine Mammals, Orlando, FL. Sponsored by the Society of Marine Mammalogy. Host sponsor: Sea World, Inc. FFI: call Dan Odell, Conference Chair, at (407) 363-2662 or Brent Stewart, Program Chair at (619) 226-3875.

### **Right Whale News**

*Right Whale News* is a quarterly publication of the Southeastern U. S. Implementation Team for the Recovery of the Northern Right Whale. The production of *Right Whale News* is underwritten by the Institute of Community and Area Development (ICAD), a service unit of the The University of Georgia. The editor is Hans Neuhauser. The editorial board consists of Bill Brooks, Lorraine Guise, Scott Kraus, Mike Payne, Jerry Wallmeyer, and Barb Zoodsma. To subscribe or submit news or articles for publication, contact Hans Neuhauser at ICAD, The University of Georgia, 1234 South Lumpkin Street, Athens, GA 30602-3552; telephone (706) 542-3350; fax (706) 542-6189.

•