

*J. Gibson*

## Northeast Fisheries Science Center

# RESEARCH HIGHLIGHTS



January-  
February  
1993

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The Northeast Fisheries Science Center's *Research Highlights* is a news bulletin on selected Center research findings. News write-ups focus on practical applications and implications of those findings to fisheries resource and habitat management. A name and telephone number have been included at the end of each write-up to contact for detailed information. Names of organisms follow--to the extent possible--the lists of scientific and common names of fishes, mollusks, and decapod crustaceans published by the American Fisheries Society. Any mention of trade names does not imply endorsement. *Research Highlights* is produced by the NEFSC Information Services Unit with the assistance of the Center's scientific staff.

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### 1992 Status-of-the-Stocks Report Issued

The Northeast Fisheries Science Center has issued the 1992 edition of its popular *Status of the Fishery Resources off the Northeastern United States*. Single copies are available -- subject to supply -- upon request.

The 133-page report discusses the population and exploitation status of 38 commercially and/or recreationally important species or species groupings in the Northwest Atlantic. It also summarizes the overall trends in resources, landings, and economics. This year's edition contains an excellent description of the role of resource surveys using research vessels as part of a comprehensive resource assessment program.

Contact D. Lynn Forbes, (508) 548-5123x260,  
for a copy of the report

Contact Dr. Steven A. Murawski, (508) 548-5123x303,  
for information on the report's content

### Sewage Sludge at 106-Mile Dumpsite Still Staying Away from Fishery Habitats

The Northeast Fisheries Science Center has found elevated concentrations of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and the heavy metal silver in surface sediments west of the 106-Mile Dumpsite. Since 1988, the dumpsite (located off New York - New Jersey) has been the exclusive site used by New York City to dump its sewage sludge. The distributions of elevated concentrations of sediment contaminants are related to dumping, and are similar to the distribution of elevated concentrations of *Clostridium perfringens* spores (a biological indicator of sewage sludge) reported in the May-October issue of this news bulletin.

So far, though, only slightly elevated concentrations of sediment contaminants and biological indicators have appeared on the continental slope above (i.e., inshore of) the dumpsite (which straddles the continental rise-slope boundary). Even lower concentrations have been found on the outer continental shelf above the continental slope. At this point, the sludge is following predictions made from hydrographic models, and not moving into productive fishery habitats.

Some zooplankton and midwater fishes from areas immediately west and southwest, respectively, of the dumpsite have shown: (1) elevated levels of heavy metals that appear to be related to dumping, and (2) low levels of PAHs, PCBs, and pesticide residues that do not appear related to dumping.

Contact Andrew F.J. Draxler, (908) 872-3054

### Fate of Georges Bank Cod and Haddock Larvae Tied to Bottom Depth

Atlantic cod and haddock larvae on Georges Bank -- at least those below the bank's surface waters -- are normally swept westward along the bank's southern

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flank due to strong prevailing currents. Recent modeling research by the Northeast Fisheries Science Center and other cooperating agencies and institutions has shown that the more shoalward the larvae during their transport, the more likely they will be retained on the bank. Those larvae seaward of the 70-meter (230-foot) isobath will generally be swept off the bank -- either into Southern New England waters or off the continental shelf altogether.

Earlier research by the Center suggested that cod and haddock larvae swept from Georges Bank into Southern New England waters can survive, grow, and return to the bank as juveniles. Larvae swept off the continental shelf would likely die of starvation.

Contact Dr. R. Gregory Lough, (508) 548-5123

## Abstracts Available from Aquaculture Seminar

The Northeast Fisheries Science Center held the 13th Milford Aquaculture Seminar during 22-24 February in Milford, Connecticut. Copies of the 34-page booklet of abstracts, covering 24 oral presentations and 6 poster displays, are available upon request.

The 125 attendees at the seminar, from 17 universities, 12 hatcheries, and 9 laboratories, were exposed to such topics as culture methods, genetic manipulation, disease transference, and pollutant and toxic algal bloom effects. Species discussed at this year's seminar included eastern oyster, northern quahog, Atlantic salmon, and tiger shrimp.

Contact Dr. Walter J. Blogoslawski, (203) 783-4235

## Treatise on *Infectious Diseases of Fish* Available

The Northeast Fisheries Science Center has received a limited supply of the translated (from Japanese) version of the 1978 treatise on *Infectious Diseases of Fish* by Shuzo Egusa. The 696-page work, which covers both saltwater and freshwater, is exceptionally good in two respects. First, it has extensive coverage, dealing with diseases caused by viruses, bacteria, fungi, mastigophorans, ciliates, coccidians, myxosporidians, microsporidians, trematodes, cestodes, nematodes, acanthocephalans, crustaceans, and unknown agents. Second, it offers specific countermeasures for most diseases described.

The Center has distributed copies to some key fish pathologists in the United States. Requests for additional copies (one per individual/organization) will initially be honored -- subject to supply -- from recognized U.S. fish pathologists and from established U.S. fish hatcheries and aquaculture firms. All foreign requests must be directed to the National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161 USA; order publication no. PB92-230408 at \$43 (U.S.) for Canada and Mexico, \$52 (U.S.) for all other countries. Foreign prices include shipping and handling.

Contact Dr. Robert A. Murchelano, (508) 548-5123

For copies and/or further information

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### Center and Rutgers to Cooperate in Fisheries Research

The NMFS's Northeast Fisheries Science Center and Rutgers University's Institute of Marine and Coastal Sciences have signed a cooperative agreement to establish a NOAA/Rutgers University Cooperative Marine Education and Research (CMER) Program. Two similar programs between NOAA and the Universities of Massachusetts (UMass) and Rhode Island (URI) commenced in 1989.

The CMER programs seek to: (1) advance graduate education in disciplines relevant to the mission of NOAA/NMFS, (2) support research and development activities of mutual interest to NOAA/NMFS and the cooperating university, and (3) disseminate findings to potential users via appropriate media. The existing programs at UMass and URI have 20 ongoing research projects relevant to NMFS's mission.

The new CMER program at Rutgers will be the first to emphasize living marine resource and environmental issues in the Middle Atlantic Bight. Selection of a program director, development of research proposals, and settlement of some financial arrangements still remain before the program is operational.

Contact Dr. George D. Grice, (508) 548-5123

### Recent Scientific Publications and Reports

Northeast Fisheries Science Center authors are indicated in all capital letters in the list below. Unless otherwise indicated, single copies of the reports are available -- subject to supply -- by writing to the senior Center author, c/o Information Services Unit, Northeast Fisheries Science Center, National Marine Fisheries Service, 166 Water St., Woods Hole, MA 02543-1097 USA.

Anderson, W.D., Jr.; Kailola, P.J.; COLLETTE, B.B. 1992. Two new snappers (Teleostei: Lutjanidae: Apsilinae): *Paracaesio paragrapsimodon* Anderson and Kailola from the western Pacific and *P. waltervadi* Anderson and Collette from the western Indian Ocean. *Proc. Biol. Soc. Wash.* 105(3): 443-461.

CROSBY LONGWELL, A.; CHANG, S.; HEBERT, A.; HUGHES, J.B.; PERRY, D. 1992. Pollution and developmental abnormalities of Atlantic fishes. *Environ. Biol. Fishes* 35: 1-21.

LEWIS, E.J.; KERN, F.G.; ROSENFELD, A.; Stevens, S.A.; Walker, R.L.; Heffernan, P.B. 1992. Lethal parasites in oysters from coastal Georgia with discussion of disease and management implications. *Mar. Fish. Rev.* 54(2): 1-6.

LUX, F.E.; WHEELER, C.L. 1992. Larval and juvenile fishes caught in a neuston survey of Buzzards Bay, Massachusetts. *Northeast Fish. Sci. Cent. Ref. Doc.* 92-09. Available from: National Marine Fisheries Service, Woods Hole, MA.

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- Sogard, S.M.; Able, K.W.; FAHAY, M.P. 1992. Early life history of the tautog *Tautoga onitis* in the Mid-Atlantic Bight. *Fish. Bull. (U.S.)* 90(3): 529-539.
- VECCHIONE, M.; Robison, B.H.; Roper, C.F.E. 1992. A tale of two species: tail morphology in paralarv *Chiroteuthis* (Cephalopoda: Chiroteuthidae). *Proc. Biol. Soc. Wash.* 105(4): 683-692.

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