



Fish Matters

Scientists to board volunteer commercial fishing vessels to conduct fall groundfish studies

Biologists from the Northwest Fisheries Science Center hope to head out to sea this November on commercial fishing vessels to conduct two new cooperative groundfish research projects on the West Coast.

Volunteer commercial fishing vessels were offered for Center use during the September meeting of the Pacific Fishery Management Council meeting, held in Portland. The offer was made to help increase the amount of data available on these species. Many fishermen believe there are greater abundances of these species than the current data indicate.

Selected industry vessels will serve as research platforms with a scientist onboard to select sample locations and oversee sam-

pling operations. The fish caught during both studies will be sold by the participating boats to help cover some of their costs.

The FV *Emerald Sea*, a pot fishing vessel from Newport, Oregon, went to sea October 15th with two Oregon Department of Fish and Wildlife (ODFW) biologists onboard to conduct four days of data collection in accordance with a plan developed by ODFW and the Center. The information collected should provide samples of sablefish size distribution across a range of depths at survey sites last occupied in 1991.

In early to mid-November Center scientists are proposing to go to sea again on four fishing industry trawlers while the RV *Miller*



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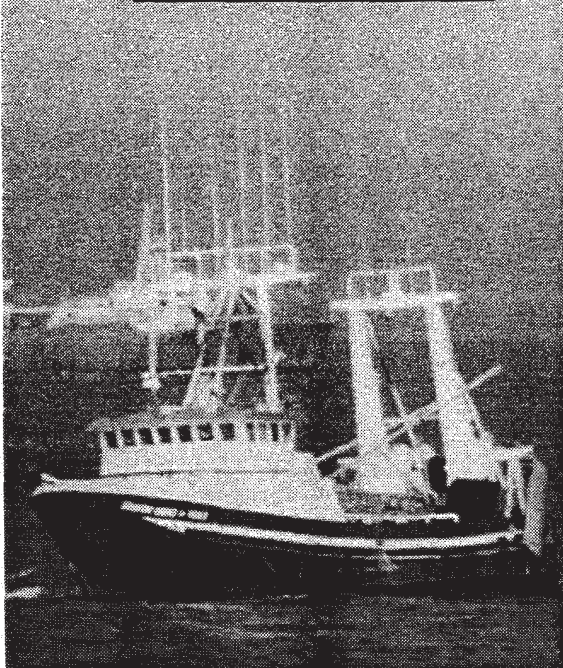
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October 1997

Freeman is conducting its normal deepwater trawl survey. Center scientists and trawl industry representatives are working together to draw up the research plan and recruit volunteer vessels. The trawlers would each work for about five days to collect data on nearshore sablefish, dover sole and thornyheads. This data is expected to augment the information collected by the RV *Miller Freeman* and improve interpretation of the survey, while allowing scientists to gain valuable experience to plan future surveys onboard local trawlers.

The results of this study are expected to be made available early next year.



Pilot study supports use of commercial fishing vessels for research

A series of three ten-day at-sea experiments by the Center and the University of Washington (UW), carried out this summer onboard three commercial fishing vessels, has demonstrated the practicality of routinely using such vessels as platforms for future survey operations, according to project coordinator Bill West.

West, who conducted the experiments, outlined their achievements during a conference between Center scientists, representatives of the groundfish industry and other constituents during the September PFMC meeting. "What I tried to do was to go out and identify gear types, rigging and operational practices that would allow us to conduct effective surveys from local vessels in the future," West told the group.

The Center and UW survey methodology development project grew out of urging from groundfish industry leaders who wanted to see more cooperation between scientists and industry. It was designed to develop procedures that will permit the Center to conduct fisheries resource assessment activities aboard local fishing vessels. The Center's Fishery Resource Analysis and Monitoring Division developed and awarded the cooperative research contract to the University's Fisheries Research Institute.

The methodology developments include the identification of (1) a suitable footrope configuration for sampling small fish while avoiding excessive trawl damage on hard bottom; (2) towing speeds and scope ratios (the amount of towing cable deployed divided by the fishing depth) that offer stable trawl performance and good bottom tending at the full range of depths tested; (3) catch handling and shipboard biological data-collection practices; and (4) information needed to make an informed choice for standard sampling trawl and rigging configuration for future surveys.

West hopes to present preliminary briefings and share information with interested scientists and fishermen later this year. A final report with recommendations and operating guidelines is expected early next year.

Center evaluates resources to expand cooperative groundfish efforts

The Northwest Fisheries Science Center is evaluating its financial and personnel resources and research priorities as a result of Center Director Usha Varanasi's commitment to expand cooperative research efforts with the groundfish industry. Varanasi made this commitment in September, at the industry-requested conference held in conjunction with the Pacific Fishery Management Council meeting in Portland.

"I have a strong personal commitment, and the Center has a strong collective commitment to develop good scientific information on groundfish," Varanasi said. "We believe that this information can only be had if we work with all groups that are generating information, including scientists and fishers." At the same time, she cautioned that the Center's limited resources could be stretched too thin if it were to commit to more than a few of the industry-science proposed cooperative projects.

Since the conference, Varanasi has conducted the first round of strategic planning meetings with the Director and staff of the Fishery Resource Analysis and Monitoring Division, the Division in charge of groundfish assessments. Further meetings will be held with the staff and Regional Administrator this month. It is here that research priorities, industry-proposed cooperative projects, personnel and funding will be evaluated.

Meanwhile the Center continues to implement many of the recommendations developed during the National Marine Fisheries Service (NMFS)-sponsored December 1996 workshop attended by industry and Center staff.

Develop an industry vessel-based trawl study.

A pilot study conducted this summer by the Center and University of Washington (UW) has demonstrated the practicality of using industry vessels for routine use in future research, as a part of an overall research plan. UW project coordinator Bill West expects to schedule presentations on the results of the pilot study later this year.

Develop an electronic-based logbook.

A grant for \$880,000 obtained by the Center will be used to develop an electronic logbook.

Stewart Toshach will be visiting with industry leaders and users (fishers, scientists, etc.) to identify and define user needs beginning this month.

Submit Oregon State University graduate student David Sampson's analysis of logbook data paper for peer review and publish.

This paper is expected to be ready for peer review in several months. Once the peer review process has been successfully completed it will be published as a NOAA National Marine Fisheries Service Technical Memorandum.

Conduct depth-specific sampling from commercial fishing trips.

The Center will take the lead on this project by requesting, at the November PFMC meeting, an "exempted" fishing permit, which will allow commercial vessels to catch additional fish during the study.

Develop and fund cooperative projects.

- 1) Conduct joint Center-industry logbook and port interview project.
- 2) Amend Groundfish Management Plan. The Center is drafting an amendment to the plan, to be presented at the November PFMC meeting, so that additional resource surveys can be conducted next year from chartered boats using an allocation of fish as payment to these vessels.
- 3) Use of volunteer vessels with RV *Miller Freeman*. The Center is using four vessels for about five days each to work, in early-mid November, in conjunction with the *Freeman* to collect near-shore data for sablefish, dover sole, and shortspine thornyhead species.

Electronic Fish Catch Logbook

The Northwest Fisheries Science Center is developing an innovative Electronic Fish Catch Logbook. Stewart Toshach will be interviewing fishers and industry representatives. Currently commercial fishermen manually record information on their fish catches in logbooks. Scientists can use this data, in addition to scientific trawl survey results, to track fish abundance and make stock assessments.

According to Toshach, Stage 1 of the project involves defining user needs (fishers, scientists, etc.) and identifying available and similar technologies. Toshach is a resource manager who received a B.S. in zoology and botany and an M.S. in resource management from the University of Canterbury, New Zealand. He will spend the next three months interviewing fishers and scientists to learn what data and uses they suggest for the Electronic Logbook. Toshach, who worked onboard a gill net vessel in Friday Harbor, looks forward to his interviews with fishers.

Toshach says that Stage 2 will involve solving technological challenges. It involves not only developing the architecture for the software, but also incorporating its use within the fishing industry. Developers will need to assess such logistical questions as: what data to include, how to cross-validate data, how to transmit data, how to store data, and how to protect proprietary business enterprise information. As part of the project, the developers will need to weigh ease of use and whether to include data from other sources. Toshach says that NWFSC's plan to coordinate field trials of the logbook with the fishing industry will greatly expand the data collection process and quantity for scientific study. It is hoped that the Electronic Fish Catch Logbook project will also support future fish management decisions and drive the standardization of data collection requirements.

If you wish to contribute, please leave a message for Toshach at 206-860-3200 or email him at stewart.toschach@noaa.gov.

The mission of the **Fishery Resource Monitoring and Analysis Division** is to provide the scientific basis for determination of ecologically-safe and economically-valuable harvest levels for west coast fisheries. This involves comprehensive analysis of data from fishery monitoring, fishery-independent resource surveys, and biological investigations. The results provide estimates of the current status and future trends in abundance and productivity of marine and anadromous fishery resources, evaluations of the potential effects of fishery management alternatives on abundance and yield of living marine resources, and better information on fishery bycatch and other multi-species issues.

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