

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
Beaufort Laboratory
101 Pivers Island Road
Beaufort, North Carolina 28516-9722

NOAA Ship ALBATROSS IV Cruise AL-92-12
02-21 December 1992

INTRODUCTION

The NOAA Ship ALBATROSS IV departed Woods Hole, MA, 14 December 1992 en route Morehead City, NC to support fisheries research objectives of the NMFS Beaufort Laboratory in the South Atlantic Bight and adjacent western North Atlantic off North Carolina from 16-21 December. The original cruise dates of 02-20 December were changed due to unscheduled repairs in Woods Hole. A total of 15 sea days were lost and resulted in a significant alteration in the research plan. Scientific gear was loaded at 1830 h on the 16th and the vessel departed Morehead City at 0015 h 17 December. Research operations were completed at 1430 h 21 December and the vessel arrived inport Morehead City at 1530 h 21 December. Scientific personnel disembarked and the vessel departed Morehead City en route Woods Hole at 1800 h 21 December 1992.

OBJECTIVES

Collect ichthyoplankton, zooplankton, water chemistry and hydrographic data for the ongoing South Atlantic Bight Recruitment Experiment (SABRE).

- 1) Survey the distribution and abundance of larval fish and zooplankton at established stations along two transects extending from New River and Beaufort Inlets across the continental shelf into the Gulf Stream and on a transect along the middle shelf of Onslow Bay extending from Cape Lookout Shoals southward to Frying Pan Shoals.
- 2) Collect synoptic data on the vertical distribution and abundance of larval fish and larval fish predators at an established station in central Onslow Bay.
- 3) Collect larval menhaden Brevoortia tyrannus from coastal and offshore waters for condition studies.
- 4) Collect water samples for pigment analysis (extracted Chla and HPLC) and phytoplankton community studies.
- 5) Collect hydrographic data.

MATERIALS AND METHODS

Oblique and surface bongo tows (60 cm diameter equipped with paired 333 micron nets), neuston tows (1 x 2 m equipped with 947 micron net) and ring net tows (1 m diameter equipped with 1 mm net) were made at 21 stations along two transects from the Gulf Stream axis to New River and Beaufort Inlets, NC. Tucker Trawl tows (1 m equipped with three 333 micron nets) were made every 30 minutes along a 70 nmi transect extending from Cape Lookout to Cape Fear. Depth stratified MOCNESS (1 m equipped with nine 333 micron nets and nine 64 micron nets) tows were made every 4 h at a station located in central Onslow Bay. All ichthyoplankton samples were preserved in ethanol. Subsamples of larval menhaden were removed from some collections prior to preservation. Tissue samples from these larvae were frozen in liquid nitrogen for condition studies. Hydrographic data were collected on all transects with either a STD or XBT. Surface water samples were collected at each station on the two inshore - offshore transects and hydrocasts (to 10 m) were made at select stations on each transect. Water samples were filtered through GF/C micropore glass fiber filters for extracted Chla and HPLC analysis. One liter samples were also fixed with Utermohl's solution for phytoplankton community analysis.

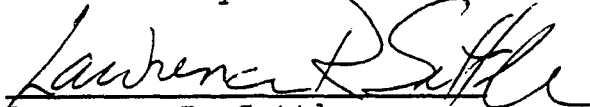
RESULTS

Six depth stratified MOCNESS deployments were made at a fixed station in central Onslow Bay. Ichthyoplankton from these samples are being processed at the Beaufort Laboratory. Zooplankton samples obtained with the MOCNESS are being processed at the University of Maryland. Fifty-two Tucker Trawl tows were completed along a transect extending from Cape Lookout to Cape Fear. Twenty-three oblique bongo tows, 21 surface bongo tows, 14 neuston tows, and 23 ring net tows were completed on the two inshore - offshore transects. All Tucker Trawl, bongo and neuston collections are being processed at the Beaufort Laboratory. The ring net samples are being processed at the University of Maryland. Subsamples of larval menhaden were removed from 14 stations for larval condition studies at the University of Miami. Twenty-one surface water samples and three subsurface (10 m) were collected for pigment analysis and phytoplankton community studies at the Beaufort Laboratory. Hydrographic data were collected along each transect with 29 STD deployments and 29 XBT profiles.

CRUISE PARTICIPANTS


NAME	TITLE	ORGANIZATION
David Peters	Chief Scientist	NMFS, Beaufort
Larry Settle	Field Party Chief	NMFS, Beaufort
Stan Warlen	Fisheries Biologist	NMFS, Beaufort
Harvey Walsh	Biol. Technician	NMFS, Beaufort
Betsy Laban	Biol. Technician	NMFS, Beaufort
Rick Metz	Biol. Aide	NMFS, Beaufort
Brandon Eleby	Biol. Technician	NMFS, Beaufort
Tristin Fiedler	Cooperator	U. of Miami
Christen Beier	Cooperator	U. of Maryland
David Nemazie	Cooperator	U. of Maryland
Kim Hall	Cooperator	Cape Fear Tech.
Neil Woerner	Cooperator	Cape Fear Tech.

Submitted By:

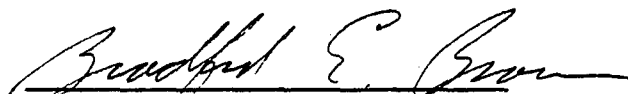


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Approved By:



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Bradford E. Brown,
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