2 May 2005

CRUISE RESULTS

NOAA FRV ALBATROSS IV
Cruise No. AL 03-01, 03-02, 03-03, 03-04, 03-05
(Parts I-V)
Sea Scallop Survey

CRUISE PERIOD AND AREA

The cruise period was from 1 July-5 September 2003 and was divided into five parts due to vessel operations issues. Part I was from 1-3 July; Part II, 8- 11 July; Part III, 4-15 August; Part IV, 18-29 August; Part V, 2-5 September. The area surveyed was from North Carolina to Georges Bank. Sampling depths ranged from 28 to 110 meters (15 to 60 fathoms). Approximate station locations are shown in Figures 1 and 2.

OBJECTIVES

The objectives of the survey were to: (1)determine the distribution and relative abundance of the sea scallop, Placopecten magellanicus and Iceland scallop, Chlamys islandica; (2) collect biological samples and data relative to assessment needs; (3) monitor hydrographic and meteorological conditions; (4) make biological collections for interested scientists at various institutions and laboratories; (5) determine bottom contact of the research scallop dredge using a deployable inclinometer sensor; (6) validate the inclinometer with the use of an underwater camera system; (7) fully implement the Fisheries Scientific Computer System (FSCS).

METHODS

Operations and gear for cruise AL 03-01, 02, 03, 04, and 05, Parts I, II, III, IV, and V

conformed with the Cruise Instructions for the Sea Scallop Survey, dated 9 May, Part I, II; 30 July, Part III; 11 August, Part IV; and 2 September, Part V with the following exceptions: Part I, postponed originally scheduled start date due to late arrival of the ALBATROSS IV from the shipyard; Part II, returned on 11 July due to a water leak in one of the scientist's cabins; Part III, originally scheduled to leave 21 July was cancelled and the vessel was sent to the shipyard for repairs. The rescheduled Part III left on 4 August and returned the same day due to engine problems and departed on 5 August; Part IV, returned on port on 22 August to disembark a crew member and returned to sea later that same day; Part V, on 4 September, a scientist was removed from the ship due to a medical condition.

Pre-selected random stations were sampled using a standard 2.44 meter (8 foot) wide New Bedford type scallop dredge rigged with 5.1 cm (2 inch) diameter rings and lined with a 3.8 cm (1½ inch) polyethylene stretched mesh liner. Tow duration was 15 minutes; tow speed was 3.8 knots and the dredge was fished using a 3:1 wire out to depth scope. A recording inclinometer was mounted on the dredge to collect bottom contact time data. Tow distance was recorded using differential GPS.

The entire catch was sorted at each standard station into biological and trash components. Live whole and clapper shells of both sea and Iceland scallops were measured in five-millimeter length intervals. Selected fish species caught incidentally in the dredge were measured to the nearest centimeter. Weights and total numbers were recorded for all fish species, cancer crabs, and starfish. Trash portions were estimated by volume and discarded. Data was recorded on paper logs as well as in the Fisheries Scientific Computer System (FSCS).

Surface temperatures were measured using the hull-mounted temperature sensor at a depth of three meters and displayed by the Scientific Computer System (SCS) at all stations. Temperature and conductivity profiles were made at approximately every third station using a conductivity, temperature, and depth instrument (CTD). A bottom salinity sample was obtained twice a day to calibrate the CTD. Water samples were also taken for fluorometer calibrations.

GMT time was used throughout the survey.

RESULTS

There were a total of 504 stations occupied during the cruise with 23, 38, 188, 204, and 51 dredge hauls made on Parts I, II, III, IV, and V respectively. There were a total of 34 occurrences of dredge flips (stations were retowed in most cases). Bottom temperatures were collected at 110 stations using the CTD system. Bottom water samples for CTD calibration were taken at 44 stations.

During Part II, an underwater camera was deployed on six tows to validate the operation of the inclinometer.

Table 1 lists the major samples collected for various studies.

DISPOSITION OF DATA

Catch data and hydrographic data will be analyzed at the NEFSC Laboratory in Woods Hole, Massachusetts. The various collections were forwarded to researchers listed in Table 1. Resulting data will be audited, edited, and archived in the NEFSC Fisheries Scientific Computer System (FSCS) database.

SCIENTIFIC PERSONNEL

National Marine Fisheries Service, NEFSC, Woods Hole, MA
Lawrence Brady, Chief Scientist[1, 4] (8/22-29)
Participant [2, 3, 4,] (8/18-22)[5]
Victor Nordahl, Chief Scientist[2, 3]
Linda Despres, Chief Scientist[4] (8/18-22)
Nancy McHugh, Chief Scientist[5] (9/2-5)
Russell Brown[5] (9/2-5)
Peter Chase[5]
Roger Clifford[1]
Devorah Hart[3]
William Kramer[1, 4]
Joseph Mello[5]
Erin Money[3]
Christopher Pickett[4]
Stacy Rowe[1, 2, 3, 5]
Olivia Seabury[1, 2]
Nina Shepherd[1, 4, 5] (9/2-4)
Sandra Sutherland[1]

National Marine Fisheries Service, NEFSC, Gloucester, MA
Donald Frei[4]

National Marine Fisheries Service, HQTR, Silver Spring, MD
Bradley Gentner[5]

National Marine Fisheries Service, NERO, Hampton, VA
Steven Ellis[5]

National Marine Fisheries Service, NERO, Cape May, NJ
Anna Macan[4]

South Carolina Dept. of Natural Resources, MRD, Charleston, SC
Erin Levesque[5]

Savannah State University, Savannah, GA

Ebony Henderson[2]
Dionne Hoskins[2]

United States Coast Guard Academy, New London, CT
Stephen Artabane[2]

SUNY, Maritime College, Throggs Neck, NY
Victoria Rochford[2]

Contractors

Robert Alexander[1, 2,3]	Woods Hole, MA
Lisa Bonacci[4] (8/22-29)	Woods Hole, MA
Laurel Col[3]	Woods Hole, MA
Robert LaFrance[2]	Canton, MA
Katie Lovett[5]	New Bedford, MA
Sean Lucey[2, 3, 4]	South Yarmouth, MA
Kevin McIntosh[3, 4] (8/22-29)	Woods Hole, MA
Sarah Pregracke[2, 4]	Woods Hole, MA
Brian Smith[3]	Woods Hole, MA
Avis Sosa[1, 2]	Jakarta, Indonesia

Volunteers

Stephen Comeau[4]	Whitman, MA
John Cookingham[4]	Falmouth, MA
Brent Courchene[5]	Rockland, MA
Christopher Foster[5]	Germantown, MD
Eileen Marvum[3]	Mattapoisett, MA
Philip Politis[4]	Long Island, NY
Deborah Rutecki[2, 3]	Woods Hole, MA
Beverly Wood[4]	Sweetwater, TN

[1]1-3 July
[2]8-11 July
[3]4-15 August
[4]18-29 August
[5]2-5 September

For further information contact: Russell Brown, National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, Massachusetts 02543-1097. Phone (508) 495-2380; FAX (508) 495-2258; Russell.Brown@noaa.gov. The Resource Survey Report for this survey can be viewed at http://www.nefsc.noaa.gov/esb/Resource_Survey_Reports.htm and the cruise results can be viewed at http://www.nefsc.noaa.gov/esb/survey.htm.

Table 1. Special samples obtained for various investigators on FRV ALBATROSS IV Cruise 03-01, 02, 03, 04, 05, (I-V), Sea Scallop Survey, during 1 July-5 September 2003.

Investigator and Affiliation	Samples Saved	Approximate Number
Stephen Artabane, US Coast Guard Academy Colchester, CT	Various species	44 indiv.
John Burnett, NMFS, NEFSC, Woods Hole, MA	Goosefish vertebrae	60 samples
John Galbraith, NMFS, NEFSC, Woods Hole, MA	Unidentified species	17 indiv.
Devorah Hart, NMFS, NEFSC, Woods Hole, MA	Scallop shells	3,224 samples
	Scallop meat/gonad weights	2,683 exam.
	Diseased sea scallops	120 exam.
	Asterias	2 bags
	Astropecten	11 bags
	Scallop viscera	64 samples
Jason Link, NMFS, NEFSC, Woods Hole, MA	Goosefish stomachs	70 indiv.
Steven Murawski, NMFS, NEFSC, Woods Hole, MA	Haddock	903 indiv.
	Atlantic cod	46 indiv.
Paul Nitschke, NMFS, NEFSC, Woods Hole, MA	Cunner	9 indiv.
Eric Parent, Fisheries and Oceans, Canada	Whole sea scallops	67 indiv.
Katherine Sosebee, NMFS, NEFSC, Woods Hole, MA	Exam/gonad meas.	145 samples
	Skate stomachs	48 exam

Figure 1. Station locations from FRV ALBATROSS IV (03-01, 02, 03, 04, 05), Parts I, II, III, IV, V, National Marine Fisheries Science Center, Sea Scallop Survey, 1 July-5 September 2003.

Figure 2. Station locations from FRV ALBATROSS IV (03-01, 02, 03, 04, 05), Parts I, II, III, IV, V, National Marine Fisheries Science Center, Sea Scallop Survey, 1 July-5 September 2003.