

RESEARCH VESSEL CRUISES, 1948-1977  
NATIONAL MARINE FISHERIES SERVICE  
WOODS HOLE, MASSACHUSETTS

by

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The research vessel ALBATROSS III arrived in Woods Hole, Massachusetts, in 1948 (Royce 1948) and conducted 128 cruises before being taken out of service in the spring of 1959. The research vessel DELAWARE I, whose home port was Gloucester, Massachusetts, was used between 1959 and 1963 until the new ALBATROSS IV arrived at Woods Hole. Between 1963 and 1977 the research vessel ALBATROSS IV conducted more than 175 cruises. The research vessel DELAWARE II whose first home port was Gloucester, Massachusetts and is presently based in Sandy Hook, New Jersey, has made many cruises out of Woods Hole. Chartered U.S. commercial vessels and vessels from cooperating scientific institutions have been used for many trips. Starting in 1967 vessels from foreign countries have conducted numerous cruises on a cooperative basis.

This report combines and brings up to date two previous reports ("Research Vessel Cruises, 1948-1962", Laboratory Reference No. 77-09 and "Research Vessel Cruises, 1963-1975", Laboratory Reference No. 76-14). The report lists the cruises in a format which allows the reader to readily find those that involved a specific species, gear, etc. The information came mostly from sailing orders and cruise reports on file in the NMFS Resource Survey Unit and the office of the Vessel Coordinator. The format is fairly straightforward, but the choices under some of the headings are explained as follows:

Party Chief or USA Participant. On non-USA vessel cruises the USA representative is indicated. For NMFS vessels chartered to other institutions, the institution is given in parentheses under the name of the Party Chief.

### Cruise Purpose

Survey This column is used when the cruise objective is assessing the population of a particular species or community.

Gear This column is used when the cruise objective is the development, testing, or catch comparison of equipment.

Other This column is used when the cruise objective is neither of the above.

To aid the reader in finding all the cruises related to a specialized topic, the following summary gives all the words used in the list under Cruise Purpose:

<u>Survey</u>	<u>Gear</u>	<u>Other</u>
Benthos	Benthos	Buoy recovery
Biological oceanography	Bottom trawl	Charter
Biology/Geology	Camera	Current meters
Bottom trawl	Dredge	Day/night catchability
Geology	Fish refrigeration	Demonstration
HELGOLAND	Grab	Fish school
Hydroacoustic	Hydroacoustic	Pathology
Hydrographic	Hydrographic	Photography
Midwater trawl	Midwater trawl	Physiology
Plankton	Oceanographic equipment	Port call
Pollution	Odometer	Predator/prey
Scattering layer	Plankton	Rendezvous
Shellfish	Underwater camera	Samples

Survey

Gear

Other

Vertical distribution  
(Single species:)

Egg bed  
Haddock  
Herring  
Lobster  
Red crab  
Redfish  
Scallop  
Silver hake  
Squid  
Surf clam

(= still pictures)  
Underwater TV  
(= moving pictures)

SCUBA  
Sea sampling  
Shakedown  
Shipyard  
Tagging  
Underwater observers

Gear Name

This column gives gear used during a cruise at 50% or more (as interpreted from cruise reports) of the stations. Gear that was used relatively little may be listed here when cruise reports give the names of gear, but no information on the relative frequency of their use. To aid the reader, the following is a summary of all the words used in the list under Gear Name:

Benthos

1. Dredges

Digby dredge (30-inch wide opening)  
Digby dredge, modified  
Jet dredge  
Naturalist's dredge (1-m wide opening)  
Quahog dredge, mud type (48-inch wide x 8-inch deep blade)  
Quahog dredge, rocker type (40-inch wide blade)  
Scallop dredge 9 (9-ft wide opening)  
Scallop dredge 10 (10-ft wide opening; the standard survey dredge)  
Scallop dredge 11 (11-ft wide opening)

2. Grabs

Dietz-Lafond grab (about 165-cm<sup>2</sup> area sampled)  
Orange peel grab  
Peterson grab  
Smith-McIntyre grab (0.1-m<sup>2</sup> area sampled). Also called a Smith grab.  
Van Veen grab (0.2-m<sup>2</sup> area sampled)

3. Other Benthos

Bottom skimmer (sled with a 6-cm wide x 3-cm deep blade)  
Digby scoop  
Dipnet  
Gravity corer (collects a cylindrical sample that is 1.375-inch diameter x 2 ft long)  
Metared roller (experimental odometer)  
Multiple corer

3. Other Benthos (contd)

- 1-m plankton, sled (1-m diameter, cone-shaped plankton net, mounted on a sled)
- 1-m plankton, sled, closing (1-m diameter, cone-shaped plankton net, mounted on a sled, self-closing)
- 1-m plankton, sled, stramin (1-m, cone-shaped plankton net, stramin "burlap" mesh)
- Scoopfish (collects a cylindrical sample that is 41-mm diameter x 55-mm long)
- Tangle (towed moplike device that entangles organisms)

Bottom Trawls

The area fished by a bottom trawl varies with how it is used. For example, vessel speed and type of net rigging are two of the variables. However, an indication of relative net size can be obtained from the length of the headrope and footrope. This information is given, when available, as headrope length/footrope length.

Atlantic Western II

Atlantic Western IV (An Atlantic Western trawl is described in Bruce [1967], page 8)

Balloon 41 (a high-opening Yankee 41)

Breidfjord floating trawl (see Krason 1949)

Canadian 36

Census net

Double trouser trawl (1½ Iceland trawl with four cod ends)

Dutch herring

Gloucester 90

Hake 815

Herring 90

Herring 180

Herring 490

HG 600 commercial

1½ Iceland (76 ft/116 ft, diagrammed in Powell [1950], page 2. It contained 1½-inch mesh liner in the cod end and belly, hence the "1½" in its name. The standard Iceland trawl, a slightly different trawl, is completely described in Knake [1956].)

Industrial fishery flat net (a net for flounder. A flat net is described in Bruce [1967], page 20. According to Fred Lux, the vessel T-79 used a flat net that was much smaller than the one described in Bruce [1967].)

Lofoten pelagic

OTS (otter trawl, small)

Polish high-opening

Polish 26-30

Polish 28-32

Polish 29-45

Shrimp trawl

Shrimp 16

Shrimp 41

40-ft gulf shrimp trawl (40-ft footrope)

60-ft shrimp trawl (60-ft footrope. A similar net is described by Bruce [1967], page 21.)

Soviet herring

Soviet 7 m

Soviet 23.5 m

Soviet 24.6 m

Soviet 27.1 m

Universal

Whiting trawl (82 ft/104 ft. Described by Bruce [1967], page 18.) 45-ft/65 ft trawl

Yankee 36 (60 ft/80 ft. Described by Bruce [1967], page 15.)

Modified 36

Yankee 41 (79 ft/100 ft. Described by Bruce [1967], page 5.)

Yankee 41A

Modified 41

Captiva 41

URI 41

3/4 Yankee

1/2 35

### Hydrographic

Bigelow sampler

Buoy mooring system

Drift bottles

Nansen bottles

Spilhaus-Miller sampler (rosette of small water bottles on a mechanical bathy-thermograph, described in Spilhaus and Miller [1948].)

STD (salinity-temperature-depth profile recorder)

Submersible photometer

Submersible pump

VACM (AMF Vector Averaging Current Meter)

Note: Bathythermograph recordings were obtained on all survey cruises; this is not listed under gear name.

### Midwater Trawls

Boothbay midwater

Isaacs-Kidd 10 (trawl having a 10-ft wide V-shaped depressing vane. Described in King and Iverson [1962], page 271.)

M&M (experimental four-seam net name from Yankee 41 sections by the Bureau of Commercial Fisheries Exploratory Fishing and Gear Research Base in Gloucester, Massachusetts)

Petersen trawl (small trawl used until the development of the Isaacs-Kidd)

### Plankton Nets and Gear

Bongo 20 (paired nets having 20 centimeter openings)

Bongo 61 (paired nets having 61 centimeter openings)

Bottom plankton trawl

Brown McGowan Opening Closing

CALCOFI

CPR (Hardy continuous plankton recorder, described in Hardy [1936])

Hensen egg net (73-cm diameter opening, truncated cone, shown in Sverdrup, Johnson, and Fleming [1942], p. 379, Fig. 91)

Miller (4-inch diameter opening, high-speed sampler, described in Miller [1961])

MOCNESS (acronym for multiple opening and closing net environmental sensing system)

Multiplane kite otter depressor (60-lb net depressor, described in Colton [1959])  
Neuston (catamaran)  
Neuston (Haedrich) - 97 cm x 36 cm modified version of net number 2 in Bartlett  
and Haedrich, 1968 (Copeia, 1968:3, 469-474)  
Neuston 1/2 x 1  
Niskin  
1-m plankton (1-m diameter opening, cone-shaped plankton net)  
1-m plankton, closing (1-m diameter opening, cone-shaped, self-closing plankton  
net)  
Working Party 3

### Other Fishing Gear

Gill net  
Hand line  
Longline  
Purse seine

### Submersibles

Alvin  
DSRV Nekton  
Nekton Beta  
Nekton Gamma  
Pisces

### Hydroacoustics

Echosounder  
Electronics  
Experimental sensor platform  
Sonar

### Other Gear

Camera sled  
CPS Emitron camera  
Depth pinger  
EG & G 200 camera  
Image Orthicon TV (described in Clark et al [1959])  
Live cages  
Loran  
Nikon-Benthos camera  
Robot 35mm camera  
SCUBA  
Underwater camera A-5

### Organisms Sought

One or two species or one stage of their life cycle are most often of major interest during a cruise. The following is a list of all words used under Organisms Sought:

Major Species

Butterfish  
Cod  
Haddock  
Hake  
Herring  
Industrial fish  
Lobster  
Mackerel  
Oceanic gamefish  
Ocean quahog  
Offshore hake  
Red crab  
Redfish  
Red hake  
Scallop  
Sharks  
Silver hake  
Skates  
Squid  
Summer flounder  
Surf clam  
Winter flounder  
Yellowtail flounder

Life Stage

Adult  
Eggs  
Juveniles  
Larvae  
1 year +  
Postlarvae  
Young  
Y-0-Y (young of the year)

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VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1948-									
ALBATROSS III	1	19 May-22 May	W. Royce	Pollution			1½ Iceland Underwater camera A-5 Bigelow sampler Nansen bottles Orange peel grab		
ALBATROSS III	2	25 May-27 May	W. Royce			Tagging		Yellowtail flounder	
ALBATROSS III	3	07 Jun-10 Jun	J. Webster		Bot trawl	Tagging	1½ Iceland with savings cod end	Yellowtail flounder Haddock	
ALBATROSS III	4	21 Jun-27 Jun	J. Webster		Bot trawl	Tagging	1½ Iceland with savings cod end	Haddock	
ALBATROSS III	5	13 Jul-21 Jul	W. Royce	Bot trawl			1½ Iceland	All	
ALBATROSS III	6	03 Aug-07 Aug	W. Royce	Bot trawl	Oceanographic equipment		1½ Iceland	All	
ALBATROSS III	7	17 Aug-25 Aug	J. Webster	Bot trawl			1½ Iceland	All	
ALBATROSS III	8	01 Sep-01 Sep				Demonstration			
ALBATROSS III	9	09 Sep-11 Sep	J. Webster	Bot trawl			1½ Iceland	All	
ALBATROSS III	10	29 Sep-05 Oct	J. Webster	Bot trawl	Fish refrigeration		1½ Iceland	All	
ALBATROSS III	11	14 Oct-19 Oct	J. Webster	Bot trawl	Fish refrigeration		1½ Iceland	All	
ALBATROSS III	12	28 Oct-06 Nov	W. Royce	Bot trawl Pollution Hydrographic			1½ Iceland Spilhaus-Miller sampler Robot 35-mm camera	All	
ALBATROSS III	13	18 Nov-19 Nov	L. Stringer		Bot trawl		Double trouser trawl		
ALBATROSS III	14	01 Dec-09 Dec	J. Webster	Bot trawl			1½ Iceland	All	
-1949-									
ALBATROSS III	15	10 Jan-13 Jan	L. Stringer		Bot trawl		Double trouser trawl		
ALBATROSS III	16	17 Jan-19 Jan	L. Stringer		Bot trawl		Double trouser trawl		
ALBATROSS III	17	28 Feb-28 Feb	W. Royce		Bot trawl		Census net		
ALBATROSS III		March-April		Vessel laid up due to lack of funds.					
ALBATROSS III	18	17 May-21 May	W. Royce	Hydrographic			Spilhaus-Miller sampler Nansen bottles		
ALBATROSS III	19	24 May-04 Jun	R. Buller	Hydrographic Bot trawl			Spilhaus-Miller sampler Nansen bottles 1½ Iceland		
ALBATROSS III	20	07 Jun-07 Jun	W. Royce			Demonstration			
ALBATROSS III	21	08 Jun-12 Jun	W. Royce	Bot trawl				All	
ALBATROSS III	22	13 Jun-16 Jun	W. Royce	Bot trawl Hydrographic			1½ Iceland	All	
ALBATROSS III	23	23 Jun-29 Jun	H. Schuck		Bot trawl	Tagging	1½ Iceland with savings cod end	Haddock	
ALBATROSS III	24	11 Jul-19 Jul	L. Stringer		Bot trawl Underwater camera		1½ Iceland with savings cod end	Haddock	
ALBATROSS III	25	21 Jul-21 Jul	W. Royce			Demonstration			

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE		GEAR NAME	ORGANISM SOUGHT	
				SURVEY	OTHER		MAJOR SPECIES	LIFE STAGE
-1949-								
ALBATROSS III	26	27 Jul-05 Aug	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	27	11 Aug-19 Aug	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	28	07 Sep-16 Sep	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	29	23 Sep-29 Sep	L. Stringer		Bot trawl	Bot trawl with 4 mesh sizes		
ALBATROSS III		October-December		Vessel laid up due to lack of funds.				
-1950-								
ALBATROSS III	30	04 Jan-13 Jan	W. Royce	Hydrographic		STD Nansen bottles		
ALBATROSS III	31A	16 Jan-24 Jan	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	31B	27 Jan-02 Feb	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	31C	06 Feb-12 Feb	E. Arnold	Bot trawl		1½ Iceland		All
ALBATROSS III	31D	16 Feb-20 Feb	E. Arnold	Bot trawl		1½ Iceland		All
ALBATROSS III	32	25 Feb-06 Mar	E. Arnold	Hydrographic		Spilhaus-Miller sampler Nansen bottles STD		
ALBATROSS III	33A	15 Mar-30 Mar	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	33B	18 Apr-25 Apr	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	34	25 Apr-05 May	W. Royce	Bot trawl		1½ Iceland		All
ALBATROSS III	35	11 May-19 May	W. Schroeder	Bot trawl		1½ Iceland		Summer flounder Yellowtail flounder
ALBATROSS III	36	06 Jun-23 Jun	J. Colton	Multiple-ship Gulf Stream survey (Operation CABOT)		Loran Nansen bottles		
ALBATROSS III	37	06 Jul-12 Jul	W. Royce	Bot trawl		1½ Iceland		All
ALBATROSS III	37A	31 Jul-10 Aug	R. Buller	Bot trawl		1½ Iceland		All
ALBATROSS III	38	21 Aug-30 Aug	R. Buller	Bot trawl	Samples	1½ Iceland		All
ALBATROSS III	39	06 Sep-13 Sep	H. Schuck		Tagging	1½ Iceland		Haddock

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1951-									
ALBATROSS III	40-44	09 Feb 1951 to Feb 1953		Operating under ONR contract to WHOI (JEZEBEL program #8961).					
DELAWARE I	2*	19 Aug-24 Aug	J. Colton	Bot trawl			1½ Iceland	All	
DELAWARE I	3*	31 Aug-04 Sep	C. Taylor	Bot trawl			1½ Iceland	All	
*A portion of these cruises was for fishery biology. All information above applies to the fishery biology portion.									
-1952-									
WE THREE		06 May-06 May	G. Kelly	Redfish			Bot trawl	Redfish	
MICHIGAN		04 Jun-12 Jun	J. Clark		Bot trawl		Yankee 41 with savings cod end	Haddock	
MICHIGAN		15 Jun-23 Jun	J. Clark		Bot trawl		Yankee 41 with savings cod end	Haddock	
US FISH & WILDL. LAUNCH (26')		10 Sep-12 Sep	G. Kelly	Redfish			Petersen trawl	Redfish	
CARYN (WHOI)		02 Oct-03 Oct	G. Kelly	Redfish Scattering layer			Bot trawl with fine mesh	Redfish Young	
WISCONSIN		14 Oct-23 Oct	J. Clark		Bot trawl		Yankee 41 with savings cod end	Haddock	
-1953-									
ALBATROSS III	45	03 Mar-11 Mar	G. Kelly	Redfish			Yankee 41	Redfish Young	
ALBATROSS III	46	19 Mar-02 Apr	J. Colton	Haddock Hydrographic			CPR STD	Haddock Eggs Larvae	
ALBATROSS III	47A	09 Apr-13 Apr	C. Taylor			Fish school	Bot trawl	Haddock	
ALBATROSS III	47B	15 Apr-21 Apr	C. Taylor			Fish school	Bot trawl	Haddock	
ALBATROSS III	48	24 Apr-08 May	J. Colton	Haddock Hydrographic			CPR STD	Haddock Eggs Larvae	
ALBATROSS III	49	14 May-21 May	J. Clark		Bot trawl		Yankee 41 with various mesh sizes	Haddock	
ALBATROSS III	50	25 May-03 Jun	J. Colton	Haddock Hydrographic			CPR STD	Haddock Eggs Larvae	
ALBATROSS III	51	08 Jun-17 Jun	J. Clark		Bot trawl		Bot trawl with covered and uncovered cod ends	Haddock Redfish Young	
CAP'N BILL		10 Jul-17 Jul	W. Schroeder (WHOI) R. Wolf (Fisheries)	Bot trawl (deep water)			60' shrimp trawl		
ALBATROSS III	52	20 Jul-29 Jul	J. Clark		Bot trawl		Bot trawl with covered and uncovered sections	Haddock	
ALBATROSS III	53	10 Aug-21 Aug	G. Kelly	Redfish			Yankee 41	Redfish	
ALBATROSS III	54	01 Sep-14 Sep	J. Colton	Haddock			Yankee 36	Haddock Y-0-Y	
ALBATROSS III	55	22 Sep-25 Sep	J. Colton	Haddock			Yankee 36	Haddock Y-0-Y	
ALBATROSS III		September 1953 to January 1955		Vessel laid up due to lack of funds.					
PRISCILLA V	1	09 Nov-11 Nov	G. Kelly	Redfish				Redfish Y-0-Y	

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1954-									
PRISCILLA V	2	05 Feb-08 Feb	G. Kelly	Redfish				Redfish	Y-0-Y
PRISCILLA V	3	20 Apr-23 Apr	G. Kelly	Redfish				Redfish	Y-0-Y
PRISCILLA V	4	03 Aug-10 Aug	G. Kelly	Redfish				Redfish	Y-0-Y
PRISCILLA V	5	13 Sep-02 Nov	J. Clark		Bot trawl		Bot trawl with various mesh sizes	Silver hake	
PRISCILLA V	6	17 Nov-23 Nov	J. Clark		Bot trawl		Bot trawl with various mesh sizes	Redfish	
-1955-									
ALBATROSS III	56	01 Feb-13 Feb	J. Clark	Bot trawl			Yankee 36	All	
ALBATROSS III	57	21 Feb-09 Mar	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	58	19 Mar-01 Apr	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	59	06 Apr-12 Apr	J. Clark		Bot trawl		Yankee 41 with various mesh sizes	Haddock	
ALBATROSS III	60	19 Apr-03 May	R. Marak	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	61	16 May-28 May	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	62	06 Jun-18 Jun	J. Wise	Bot trawl			Yankee 36	All	
ALBATROSS III	63	15 Aug-19 Aug	G. Kelly	Redfish			Yankee 41	Redfish	
ALBATROSS III	64	23 Aug-02 Sep	J. Clark		Bot trawl		Yankee 41 with various mesh sizes	Redfish	Adult
ALBATROSS III	65	07 Sep-16 Sep	J. Colton	Haddock Silver hake			Yankee 36	Haddock Silver hake	
ALBATROSS III	66	21 Sep-28 Sep	J. Colton	Haddock Silver hake			Yankee 36	Haddock Silver hake	
ALBATROSS III	67	03 Oct-05 Oct	R. Wigley		Grab		Van Veen grab Petersen grab 1-m plankton, sled Quahog dredge, rocker Quahog dredge, mud Digby dredge		
ALBATROSS III	68	12 Oct-05 Nov	J. Clark		Bot trawl		Yankee 41 with covered and uncovered cod ends		
DELAWARE I	11	13 Oct-05 Nov	J. Murray		Bot trawl		Yankee 41 with covered and uncovered cod ends		
ALBATROSS III	69	15 Nov-23 Nov	R. Wigley	Benthos			Van Veen grab Digby dredge Quahog dredge, mud 1-m plankton, sled, stramin Petersen grab Tangle		
ALBATROSS III	70	06 Dec-19 Dec	R. Wigley	Benthos Scallop		Tagging	Digby dredge Modified Digby dredge 1-m plankton, sled, stramin Tangle Digby scoop		

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
		-1956-							
ALBATROSS III		21 Jan-15 Feb				Shipyard			
ALBATROSS III	71	20 Feb-02 Mar	R. Marak	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	72	21 Mar-31 Mar	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	73	17 Apr-28 Apr	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
ALBATROSS III	74	02 May-10 May	J. Clark		Bot trawl		Yankee 41 with various mesh sizes	Haddock	
ALBATROSS III	75	16 May-29 May	J. Colton	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
T-79	1	25 May-27 May	J. Clark			Shakedown Tagging	Longline	Haddock	
ALBATROSS III	76	11 Jun-24 Jun	R. Marak	Haddock Hydrographic			CPR	Haddock	Eggs Larvae
T-79	2-I II III	28 Jun-02 Jul 04 Jul-09 Jul 10 Jul-14 Jul	J. Clark J. Wise A. Jensen			Tagging	Longline	Haddock Cod	
ALBATROSS III	77	05 Jul-11 Jul	J. Posgay	Scallop		Tagging	Scallop dredge II	Scallop	
ALBATROSS III	78	16 Jul-17 Jul	J. Clark		Underwater TV		Image Orthicon		
ALBATROSS III	79	23 Jul-04 Aug	J. Clark		Bot trawl		Yankee 41 with various mesh sizes	Haddock	
DELAWARE I	23	23 Jul-04 Aug	R. Wilson		Bot trawl		Balloon 41	Haddock	
ALBATROSS III	80	09 Aug-17 Aug	R. Wigley	Benthos		Sampling (groundfish stomachs)	Yankee 36 Smith-McIntyre grab Digby dredge 1-m plankton, sled		
ALBATROSS III		17 Aug-02 Nov				Shipyard			
T-79	3	22 Aug-22 Aug	J. Colton			Sample	Shrimp trawl	Butterfish	
T-79	4	29 Aug-29 Aug	J. Colton		Trawl				
T-79	5	31 Aug-31 Aug	J. Colton			Sample	Bot trawl	Butterfish	
T-79	6	12 Sep-14 Sep	R. Edwards	Bot trawl Hydrographic		Sample (groundfish stomachs)	Bot trawl Smith-McIntyre grab Bot plankton trawl		
T-79	7	05 Oct-05 Oct	R. Livingstone		Underwater TV				
T-79	8	10 Oct-12 Oct	R. Edwards	Hydrographic Bot trawl		Sample (groundfish stomachs)	Industrial fishery flat net Water bottles Bot plankton trawl		
T-79	9	16 Oct-16 Oct	R. Livingstone		Underwater TV		Image Orthicon		
HUCKLEBERRY FINN WILLIAM CHESEBROUGH		29 Oct-01 Nov*	R. Livingstone		Underwater TV				
ALBATROSS III	81	02 Nov-10 Nov	J. Conover	Bot trawl			Yankee 36	Haddock Silver hake	
ALBATROSS III	82	13 Nov-21 Nov	J. Conover	Bot trawl			Yankee 36	Haddock Silver hake	
ALBATROSS III	83	27 Nov-30 Nov	R. Livingstone		Underwater TV		Yankee 36 Image Orthicon		
ALBATROSS III	84	06 Dec-14 Dec	J. Wise			Tagging	Sot trawl	Cod Haddock	
ALBATROSS III	85	19 Dec-20 Dec	R. Livingstone		Underwater TV		Image Orthicon CPS Emitron		

\*Dates for this two-boat operation are available only for the HUCKLEBERRY FINN.

VESSEL	CRUISE	DATE	PARTY CHIEF OR US PARTICIPANT	CRUISE PURPOSE		GEAR NAME	ORGANISM SOUGHT	
				SURVEY	OTHER		MAJOR SPECIES	LIFE STAGE
-1957-								
ALBATROSS III	86	21 Jan-23 Jan	R. Edwards	Bot trawl		Yankee 36	Industrial fish	
ALBATROSS III	87	30 Jan-07 Feb	R. Livingstone		Underwater TV	Yankee 41 Live cages Image Orthicon	Haddock	
T-79	10	14 Feb-14 Feb	F. Lux	Bot trawl	Tagging	Bot trawl	Yellowtail flounder	
ALBATROSS III	88	19 Feb-28 Feb	A. Farrin	Herring Hydrographic		CPR 1-m plankton	Herring	Larvae
T-79	11	25 Feb-25 Feb	F. Lux		Tagging	Bot trawl	Yellowtail flounder	
T-79	12	12 Mar-12 Mar	R. Edwards		Tagging	Bot trawl	Skates	
T-79	13	12 Mar-14 Mar	R. Edwards	Hydrographic				
ALBATROSS III	89	21 Mar-05 Apr	R. Livingstone		Underwater TV	Yankee 41 Image Orthicon	Haddock Cod	
T-79	14	22 Mar-22 Mar	R. Edwards		Tagging	Bot trawl	Industrial fish	
T-79	15	26 Mar-26 Mar	J. Posgay		Underwater camera			
T-79		April-August		Laid up due to lack of funds.				
ALBATROSS III	90	11 Apr-17 Apr	J. Colton	Haddock Hydrographic		CPR Hensen egg net	Haddock	Eggs Larvae
ALBATROSS III	91	22 Apr-23 Apr	J. Colton		Plankton	Multiplane kite otter depressor		
ALBATROSS III	92	25 Apr-02 May	J. Colton	Haddock Hydrographic		CPR Hensen egg net	Haddock	Eggs Larvae
ALBATROSS III	93	08 May-16 May	R. Marak	Haddock Hydrographic		CPR Hensen egg net	Haddock	Eggs Larvae
Can HARENGUS		15 May-18 May	G. Kelly				Recapture tagged redfish	Redfish
ALBATROSS III	94	22 May-29 May	J. Colton	Haddock Hydrographic		CPR	Haddock	Eggs Larvae
ALBATROSS III	95	05 Jun-12 Jun	J. Colton	Haddock Hydrographic		CPR	Haddock	Eggs Larvae
WHALING CITY	1	13 Jun-23 Jun	J. Posgay		Dredge	Scallop dredge 10, 11 with various size rings	Scallop	
ALBATROSS III	96	19 Jun-26 Jun	R. Livingstone		Underwater TV	Bot trawl Image Orthicon		
ALBATROSS III		26 Jun-10 Jul					Shipyard	
ALBATROSS III	97	10 Jul-13 Jul	J. Clark		Underwater TV	Bot trawl Image Orthicon	Silver hake	
ALBATROSS III	98	14 Jul-19 Jul	R. Fritz		Tagging		Silver hake	
ALBATROSS III	99	25 Jul-02 Aug	G. Kelly	Vertical distribution		Isaacs-Kidd	Redfish Haddock	Postlar
WHALING CITY	2	08 Aug-17 Aug	J. Posgay		Dredge	Scallop dredge 10 with various size rings	Scallop	
ALBATROSS III	100	14 Aug-14 Aug	J. Clark		Demonstration	Image Orthicon Plankton gear		
ALBATROSS III	101	21 Aug-30 Aug	R. Wigley	Benthos		Smith-McIntyre grab Sconpfish		
ALBATROSS III	102	05 Sep-11 Sep	G. Kelly	Vertical distribution		Isaacs-Kidd	Redfish	Postlar
T-79	16	16 Sep-20 Sep	R. Fritz		Tagging		Silver hake	

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	SURVEY	GEAR	OTHER	GEAR NAME	ORGANISM SOUGHT	
								MAJOR SPECIES	LIFE STAGE
1957 (continued)									
ALBATROSS III	103	18 Sep-26 Sep	J. Posgay	Scallop				Scallop	
ALBATROSS III	104	09 Oct-20 Oct	A. Jensen			Tagging	Yankee 41	Haddock Cod	
T-79	17	15 Oct-17 Oct	R. Edwards			Tagging Sample	Shrimp trawl	Scup Red hake	
ALBATROSS III	105	28 Oct-08 Nov	J. Wise			Tagging	Yankee 41	Haddock Cod	
T-79	18	30 Oct-30 Oct	F. Lux			Sample	45 ft/65 ft trawl	Yellowtail flounder Industrial fish	
T-79	19	14 Nov-27 Nov	E. Ofatsch			Tagging Sample	45 ft/65 ft trawl	Haddock	Adult Y-O-Y
ALBATROSS III	106	03 Dec-20 Dec	R. Temple	Herring Hydrographic			CPR	Herring	Larvae
-1958-									
ALBATROSS III	107	07 Jan-24 Jan	R. Temple	Herring Hydrographic			CPR	Herring	Larvae
T-79	20	21 Jan-21 Jan	F. Lux			Sample	45 ft/65 ft trawl	Yellowtail flounder	
T-79	21	28 Jan-31 Jan	J. Colton		Plankton		Miller Multiplane kite otter depressor		
ALBATROSS III		February -March				Shipyards			
SILVER MINK	1*	12 Feb-12 Feb	J. Clark			Sample Tagging	8ot trawl	Haddock	
SILVER MINK	2*	09 Mar-09 Mar	J. Clark			Sample Tagging	8ot trawl	Haddock	
ALBATROSS III	108	26 Mar-09 Apr	A. Jensen	Hydrographic		Tagging	Yankee 41 Nansen bottles	Haddock	
SILVER MINK	3*	11 Apr-11 Apr	J. Clark			Sample	8ot trawl	Haddock	
ALBATROSS III	109	21 Apr-24 Apr	R. Livingstone		Underwater TV		Yankee 41 Image Orthicon		
ALBATROSS III	110	30 Apr-08 May	R. Marak		Plankton		Miller Multiplane kite otter depressor		
SILVER MINK	4*	12 May-12 May	A. Jensen			Sample Tagging			
ALBATROSS III	111	19 May-28 May	J. Colton	Vertical distribution			Miller	Fish	Eggs Larvae
JACQUELYN	1	21 May-21 May	R. Edwards			Sample	45 ft/65 ft trawl OTS	Industrial fish Scallop	
SILVER MINK	5*	08 Jun-08 Jun	A. Jensen			Sample Tagging	8ot trawl	Haddock	
ALBATROSS III	112	09 Jun-13 Jun	R. Livingstone		Underwater TV		Yankee 41 Image Orthicon		
JACQUELYN	2	12 Jun-12 Jun	R. Edwards			Sample	45 ft/65 ft trawl OTS	Industrial fish Scallop	
JACQUELYN	3	18 Jun-18 Jun	A. Merrill			Sample	OTS Digby dredge	Industrial fish Scallop	

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
		-1958- (continued)							
ALBATROSS III	113	19 Jun-26 Jun	J. Posgay			Tagging Photography		Scallop	
ALBATROSS III	114	07 Jul-16 Jul	R. Fritz			Tagging	Yankee 36	Silver hake	
SHIRLEY & ROLAND	6*	12 Jul-12 Jul	A. Jensen			Sample	Bot trawl	Haddock	
ALBATROSS III	115	23 Jul-23 Jul	R. Livingstone			Demonstration	Image Orthicon		
ALBATROSS III	116	28 Jul-01 Aug	G. Kelly	Vertical distribution			Isaacs-Kidd	Redfish	Postlarvae
SHIRLEY & ROLAND	7*	09 Aug-09 Aug	J. Clark			Sample	Bot trawl	Haddock	
T-79	22	11 Aug		Sail to Charleston, South Carolina, to return vessel to Army					
JACQUELYN	4	18 Aug-18 Aug	A. Merrill			Sample	OTS	Industrial fish Scallop	
ALBATROSS III	117	09 Sep-16 Sep	G. Kelly	Vertical distribution Hydrographic			Isaacs-Kidd Yankee 41 Nansen bottles	Redfish	
DARTMOUTH		09 Sep-16 Sep	F. Nichy	Scallop	Dredge Odometer		Scallop dredge with various ring sizes Metered roller	Scallop	
SHIRLEY & ROLAND	8*	14 Sep-14 Sep	J. Clark			Sample Tagging	Bot trawl	Haddock	
ALBATROSS III	118	22 Sep-02 Oct	J. Colton	Haddock			Yankee 36	Haddock	Y-O-Y
JACQUELYN	5	23 Sep-23 Sep	R. Edwards			Sample	OTS Digby dredge	Industrial fish Scallop	
ALBATROSS III	119	06 Oct-17 Oct	R. Marak	Haddock			Yankee 36	Haddock	Y-O-Y
SILVER MINK	9*	14 Oct-14 Oct	A. Jensen			Sample Tagging	Bot trawl	Haddock	
ALBATROSS III	120	20 Oct-28 Oct	J. Colton	Haddock			Yankee 36	Haddock	Y-O-Y
ALBATROSS III	121	04 Nov-06 Nov	R. Livingstone		Underwater TV Hydrographic		Yankee 41 Gurley 622-D current meter Image Orthicon		
SILVER MINK	10*	13 Nov-13 Nov	J. Clark			Sample Tagging	Bot trawl	Haddock	
ALBATROSS III	122	17 Nov-26 Nov	J. Clark	Bot trawl Benthos		Tagging	Yankee 36 Scoopfish Naturalist's dredge	Haddock	
ALBATROSS III	123	04 Dec-11 Dec	R. Fritz	Bot trawl		Sample Tagging	Yankee 36	Silver hake Yellowtail flounder	
SILVER MINK	11*	11 Dec-11 Dec	J. Clark			Sample	Bot trawl	Haddock	
ALBATROSS III	124-I	16 Dec-17 Dec	R. Wigley		Benthos		1-m plankton, sled, closing Smith-McIntyre grab Naturalist's dredge		
ALBATROSS III	124-II	18 Dec-18 Dec	D. Miller		Plankton	Sample	Miller Scallop dredge 10	Scallop	

\*The series of 12 monthly charter cruises by the SILVER MINK and SHIRLEY & ROLAND were never assigned cruise numbers. I have assigned consecutive numbers for this laboratory report.



VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1959-									
ALBATROSS III	125	13 Jan-15 Jan	R. Fritz	Bot trawl	Bot trawl		Yankee 36 with two mesh sizes	Industrial fish	
SILVER MINK	12	15 Jan-15 Jan	A. Jensen			Sample Tagging	Bot trawl	Haddock	
ALBATROSS III	126	21 Jan-04 Feb	R. Edwards	Bot trawl			Yankee 36	All	
ALBATROSS III	127	10 Feb-11 Feb	S. Nickerson			Buoy recovery			
ALBATROSS III	128	15 Feb-20 Feb	S. Nickerson			Bell Telephone lab exercise			
ALBATROSS III				Vessel decommissioned					
DELAWARE I	59-03	18 Mar-26 Mar	F. Lux			Tagging	Yankee 36	Yellowtail flounder	
DELAWARE I	59-04-I	02 Apr-08 Apr	J. Clark	Midwater trawl	Underwater TV		M&M trawl	Haddock	Spawning
DELAWARE I	59-04-II	09 Apr-17 Apr	J. Clark			Tagging	Yankee 41	Haddock	
WHALING CITY	3	13 May-20 May	J. Posgay	Scallop			Scallop dredge	Scallop	
ASTERIAS	1	19 May-19 May	R. Edwards		Bot trawl		Otter trawl		
DELAWARE I	59-09	05 Aug-11 Aug	R. Wigley	Benthos			Smith-McIntyre grab Naturalist's dredge		
DELAWARE I	59-10	18 Aug-29 Aug	E. McRae	Bot trawl			40' Gulf shrimp trawl	All	
WHALING CITY	4	12 Sep-18 Sep	A. Merrill	Scallop			Scallop dredge	Scallop	
DELAWARE I	59-12	23 Sep-07 Oct	J. Wise	Haddock			Yankee 36	Haddock	Y-0-Y
DELAWARE I	59-13	13 Oct-27 Oct	A. Jensen	Haddock			Yankee 36	Haddock	Y-0-Y
DELAWARE I	59-14	04 Dec-14 Dec	R. Fritz	Evaluation of transect method for fish surveys			Yankee 36	All	
-1960-									
DELAWARE I	60-02	10 Feb-26 Feb	R. Fritz	Hydrographic Red crab Bot trawl			Yankee 36	Red crab All	
DELAWARE I	60-03	08 Mar-17 Mar	J. Skerry	Bot trawl			Yankee 36 Isaacs-Kidd	Silver hake Offshore hake	
DELAWARE I	60-04	23 Mar-02 Apr	J. Wise	Plankton			1-m plankton, closing Yankee 36 Breidfjord floating trawl	Haddock	Eggs
DELAWARE I	60-05	06 Apr-10 Apr	C. Wheeler			Sample	Yankee 36	Haddock	
DELAWARE I	60-07	11 May-21 May	A. Merrill	Scallop Benthos			Scallop dredge 10 Digby dredge 2'	Scallop	
DELAWARE I	60-08	23 May-29 May	J. Posgay	Scallop			Scallop dredge 10	Scallop	
DELAWARE I	60-10	05 Jul-09 Jul	R. Fritz	Bot trawl			Yankee 36	Haddock	Y-0-Y
CAPT BILL III	1	22 Aug-26 Aug	J. Skerry	Bot trawl			Yankee 36	Haddock	Y-0-Y 1 year +
CAPT BILL III	2	19 Sep-23 Sep	J. Skerry	Bot trawl			Yankee 36	Haddock	Y-0-Y 1 year +
NOAH A	1	30 Sep-30 Sep	A. Merrill	Scallop		Sample	Scallop dredge 9	Scallop	
NOAH A	2	08 Oct-08 Oct	A. Merrill			Sample SCUBA		Scallop	
NOAH A	3	23 Oct-23 Oct	A. Merrill		Underwater camera	Sample SCUBA		Scallop	
DELAWARE I	60-12	02 Nov-21 Nov	J. Skerry	Bot trawl			Yankee 36	All	
NOAH A	4	13 Nov-13 Nov	A. Merrill		Scallop dredge	Sample		Scallop	

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1961-									
DELAWARE I	61-04	17 Mar-27 Mar	R. Fritz	Vertical distribution			Yankee 36	Silver hake Offshore hake	
DELAWARE I	61-05	30 Mar-07 Apr	F. Lux			Tagging	Yankee 36	Summer flounder	
DELAWARE I	61-07	03 May-10 May	A. Merrill	Scallop			Scallop dredge 10	Scallop	
DELAWARE I	61-09	12 Jun-16 Jun	R. Fritz	Bot trawl			Yankee 36	All	
DELAWARE I	61-10	20 Jun-30 Jun	R. Wigley	Benthos			Smith-McIntyre Naturalist's dredge Dietz-Lafond grab Dipnet		
DELAWARE I	61-12	20 Jul-03 Aug	R. Edwards			Bot trawl	Whiting trawl with window Yankee 36	Haddock Silver hake	
DELAWARE I	61-13	10 Aug-19 Aug	A. Merrill			Scallop dredge	Scallop dredge 3" rings, 4" rings and 5" rings		
CHARLOTTE	1	01 Sep-01 Sep	A. Merrill	Scallop				Scallop	
DELAWARE I	61-16	22 Sep-01 Oct	J. Posgay	Scallop			Scallop dredge 10	Scallop	
DELAWARE I	61-17	03 Oct-06 Oct	R. Fritz	Bot trawl			Yankee 36	All	
CHARLOTTE	2	16 Oct-16 Oct	A. Merrill			Sample		Scallop	
DELAWARE I	61-19-I	25 Oct-06 Nov	R. Fritz	Bot trawl			Yankee 36	All	
DELAWARE I	61-19-II	08 Nov-20 Nov	D. Miller	Bot trawl			Yankee 36	All	
CHARLOTTE	3	14 Nov-14 Nov	A. Merrill			Sample		Scallop	
-1962-									
CHARLOTTE	4	16 Jan-16 Jan	E. Haynes			Sample		Scallop	
DELAWARE I	62-03	15 Mar-22 Mar	K. Cumming			Sample	Otter trawl	Haddock	
CHARLOTTE	5	07 Apr-07 Apr	E. Haynes			Sample		Scallop	
DELAWARE I	62-06	28 May-08 Jun	A. Merrill	Scallop			Scallop dredge 10	Scallop	
DELAWARE I	62-07	11 Jun-20 Jun	R. Wigley	Benthos			Naturalist's dredge Smith-McIntyre grab Bottom skimmer Gravity corer		
DELAWARE I	62-08-I	25 Jun-26 Jun	C. Wheeler			Sample	Yankee 36		
DELAWARE I	62-08-II	26 Jun-28 Jun	R. Fritz			Sample	Yankee 36		
Fre THALASSA		26 Jul-12 Aug	Dr. Ancellin	Observe operation of a stern trawler as part of ICNAF scientist exchange program					
DELAWARE I	62-10	11 Sep-20 Sep	A. Merrill	Scallop			Scallop dredge 10	Scallop	
DELAWARE I	62-12	09 Oct-20 Oct	R. Fritz	Bot trawl			Yankee 36	All	
DELAWARE I	62-13	25 Oct-04 Nov	A. Jensen	Bot trawl			Yankee 36	All	

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1963 -									
ALBATROSS IV	Trial	27 Feb-28 Feb	R. Fritz						
ALBATROSS IV	Trial	26 Mar-26 Mar	R. Fritz						
ALBATROSS IV	Trial	24 Apr-28 Apr	R. Fritz						
ALBATROSS IV	63-01	13 May-17 May	J. Posgay	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	63-02	27 May-06 Jun	R. Fritz			Demonstra- tion	Various		
ALBATROSS IV	63-03	10 Jun-13 Jun	J. Posgay	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	63-04	19 Jun-25 Jun	R. Edwards			Sample	Otter Trawl		
ALBATROSS IV	63-05	1 18 Jul-01 Aug 2 07 Aug-19 Aug	R. Fritz R. Marak	Bot Trawl			Yankee 36	All	
ALBATROSS IV	63-06	05 Sep-09 Sep	J. Posgay	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	63-07	1 13 Nov-27 Nov 2 02 Dec-16 Dec	R. Fritz R. Marak	Bot Trawl			Yankee 36	All	
ALBATROSS IV	63-08	18 Dec-19 Dec	D. Miller	Hydrographic Plankton			Nansen Plankton		
- 1964 -									
ALBATROSS IV	64-01	1 16 Jan-30 Jan 2 04 Feb-15 Feb	R. Fritz R. Livingstone	Bot Trawl			Yankee 36	All	
ALBATROSS IV	64-02	24 Feb-07 Mar	D. Miller	Hydrographic Plankton			Nansen 1m Plankton Drift Bottles		
ALBATROSS IV	64-03	17 Mar-26 Mar	K. Cumming			Sample	Yankee 36	Haddock	Adult
ALBATROSS IV	64-04	06 Apr-08 Apr	R. Edwards			Sample	Handline	Haddock	Adult
ALBATROSS IV	64-05	08 Apr-14 Apr	F. Lux			Tagging	Yankee 36	Winter Flounder	Adult
ALBATROSS IV	64-06	23 Apr-06 May	R. Fritz			Tagging	Yankee 36	Winter Flounder	Adult
ALBATROSS IV	64-07	13 May-22 May	J. Posgay	Scallop		Sample	Scallop Dredge	Scallop	
ALBATROSS IV	64-08	02 Jun-12 Jun	H. Boyar			Sample	Dutch Herring Yankee 36	Herring	Adult Juve- niles
ALBATROSS IV	64-09	Cruise cancelled							
ALBATROSS IV	64-10	1 27 Jul-06 Aug 2 11 Aug-22 Aug	R. Fritz M. Grosslein	Bot Trawl			Yankee 36	All	
ALBATROSS IV		07 Aug-07 Aug	H. Graham			Demonstra- tion			
ALBATROSS IV	64-11	31 Aug-13 Sep	J. Colton	Hydrographic			Nansen Drift Bottles		
ALBATROSS IV	64-12	07 Oct-15 Oct	E. Haynes	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	64-13	1 22 Oct-04 Nov 2 10 Nov-25 Nov	R. Fritz A. Jensen	Bot Trawl			Yankee 36	All	
ALBATROSS IV	64-14	03 Dec-18 Dec	J. Colton	Hydrographic			Nansen Drift Bottles		

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1965 -									
ALBATROSS IV	65-01	12 Jan-16 Jan 19 Jan-25 Jan	M. Grosslein		Bot trawl		Yankee 36		
ALBATROSS IV	65-02	1 01 Feb-15 Feb 2 26 Feb-02 Mar	R. Fritz F. Nichy	Bot trawl			Yankee 36	All	
ALBATROSS IV	65-03	09 Mar-22 Mar	J. Colton	Hydrographic			Nansen Drift bottles		
ALBATROSS IV	65-04	1 30 Mar-08 Apr 2 08 Apr-14 Apr	R. Fritz M. Grosslein	Bot trawl	Bot trawl		Yankee 36	All	
ALBATROSS IV	65-05	21 Apr-30 Apr	H. Boyar			Sample	Yankee 36 Dutch herring 1 m plankton Drift bottles	Lobster	Adult
ALBATROSS IV	65-06	03 May-13 May	E. Haynes	Scallop			Scallop dredge	Scallop	
ALBATROSS IV	65-07	19 May-03 Jun	J. Colton	Hydrographic			Nansen Drift bottles		
ALBATROSS IV	65-08	08 Jun-18 Jun	H. Boyar			Sample	Yankee 36 Dutch herring 1 m plankton Drift bottles	Lobster Herring	Adult Larvae
ALBATROSS IV	65-09	25 Jun-27 Jun	R. Fritz			Port call			
ALBATROSS IV	65-10	1 07 Jul-21 Jul 2 28 Jul-10 Aug	R. Fritz G. Kelly	Bot trawl	Bot trawl		Yankee 36	All	
DELAWARE I	65-06	08 Jul-15 Jul	L. Lawday		Bot trawl				
ALBATROSS IV	65-11	17 Aug-27 Aug	R. Wigley	Benthos			S/M grab Scallop dredge Quahog dredge Naturalist dredge		
ALBATROSS IV	65-12	01 Sep-16 Sep	J. Colton	Hydrographic			Nansen Drift bottles		
ALBATROSS IV	65-13	22 Sep-30 Sep	E. Haynes	Scallop			Scallop dredge	Scallop	
ALBATROSS IV	65-14	1 06 Oct-20 Oct 2 27 Oct-09 Nov	R. Fritz F. Nichy	Bot trawl			Yankee 36	All	
ALBATROSS IV	65-15	08 Dec-22 Dec	J. Colton	Hydrographic			Nansen Drift bottles		

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1966 -									
ALBATROSS IV	66-01	1 18 Jan-04 Feb 2 09 Feb-23 Feb	R. Fritz F. Nichy	Bot Trawl			Yankee 36	All	
ALBATROSS IV	66-02	02 Mar-14 Mar	J. Colton	Hydrographic			Nansen Drift Bottles		
ALBATROSS IV	66-03	23 Mar-31 Mar	K. Cumming			Sample	Yankee 36	Haddock	
ALBATROSS IV	66-04	06 Apr-14 Apr	G. Kelly	Vertical Distribution	Midwater Trawl		Isaacs-Kidd Depth Pinger	Silver Hake	Young
ALBATROSS IV	66-05	19 Apr-29 Apr	H. Boyar			Sample	Dutch Herring Yankee 41A Gill Net	Lobster Herring	
ALBATROSS IV	66-06	1 06 May-13 May 2 16 May-16 May	(Naval Acous- tic Lab) G. Kelly			Charter  Demonstra- tion			
ALBATROSS IV	66-07	24 May-07 Jun	J. Colton	Hydrographic			Nansen Drift Bottles		
ALBATROSS IV	66-08	15 Jun-25 Jun	F. Perkins			Sample	Yankee 36 Dutch Herring Gill Net		
ALBATROSS IV	66-09	11 Jul-23 Jul	E. Haynes	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	66-10	27 Jul-04 Aug	H. Boyar	Lobster		Sample	Plankton Yankee 36 Drift Bottles	Lobster Herring	Larvae Adult
ALBATROSS IV	66-11	1 09 Aug-13 Aug 2 13 Aug-21 Aug 3 21 Aug-30 Aug	A. Merrill R. Yancey J. Ropes	Surf Clam			Jet Dredge	Surf Clam	
ALBATROSS IV	66-12	08 Sep-23 Sep	J. Colton	Hydrographic			Nansen Drift Bottles		
ALBATROSS IV	66-13	27 Sep-06 Oct	E. Haynes	Scallop			Scallop Dredge	Scallop	
ALBATROSS IV	66-14	1 12 Oct-26 Nov 2 02 Nov-13 Nov	F. Nichy F. Lux	Bot Trawl			Yankee 36	All	
ALBATROSS IV	66-15	1 29 Nov-29 Nov 2 01 Dec-01 Dec 3 06 Dec-07 Dec 4 13 Dec-16 Dec	R. Wigley J. Posgay J. Posgay G. Kelly		UW Camera Sled Plankton		UW Camera Sled Multiplane Kite Otter Depressor		
ALBATROSS IV		16 Dec-19 Jan				Ship- yard			

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1967 -									
ALBATROSS IV	67-01	23 Jan-01 Feb	J. Posgay		Plankton		Brown-McGowan opening closing Working party 3		
ALBATROSS IV	67-02	14 Feb-17 Feb	R. Edwards			Sample	Bot trawl	Silver hake Red hake	
ALBATROSS IV	67-03	06 Mar-10 Mar	F. Nichy			Sample	Yankee 36	Silver hake Red hake	
ALBATROSS IV	67-04	13 Mar-16 Mar	R. Marak		Plankton		Miller Brown-McGowan Bongo II		
ALBATROSS IV	67-05	28 Mar-31 Mar	H. Stern			Sample	Bot trawl	Silver hake Red hake	
ALBATROSS IV	67-06	04 Apr-08 Apr	R. Wigley		Camera		Nikon- benthos EG&G 200		
ALBATROSS IV	67-07	11 Apr-14 Apr	J. Posgay		Plankton		Various		
ALBATROSS IV	67-08	25 Apr-04 May	H. Boyar			Sample	Bot trawl	Herring Lobster	
ALBATROSS IV	67-09	16 May-19 May	F. Nichy	Silver hake			Isaacs-Kidd midwater	Silver hake	Young
ALBATROSS IV	67-10	05 Jun-09 Jun	R. Marak		Plankton		Various		
ALBATROSS IV	67-11	21 Jun-30 Jun	H. Boyar			Sample	Yankee 36	Lobster Herring	
ALBATROSS IV	67-12	05 Jul-13 Jul	H. Jensen	Scallop			Scallop dredge	Scallop	
ALBATROSS IV	67-13	03 Aug-04 Aug	R. Marak		Plankton		Bongo 61, 20		
ALBATROSS IV	67-14	08 Aug-12 Aug	R. Marak		Plankton		Bongo 61, 20		
ALBATROSS IV	67-15	17 Aug-18 Aug	G. Kelly			Demon- stration	Various		
ALBATROSS IV	67-16	18 Sep-22 Sep	J. Posgay		Plankton		Bongo 61, 20		
Sov ALBATROS		18 Sep-22 Sep	V. Bryantsev		Plankton		Bongo 61, 20		
ALBATROSS IV	67-17	28 Sep-29 Sep	R. Edwards				Bot trawl	Sov herring	
Sov ALBATROS		28 Sep-29 Sep	R. Livingstone				Bot trawl	Yankee 36	
ALBATROSS IV	67-18	03 Oct-11 Oct	R. Edwards				Bot trawl	Yankee 36 Sov herring	
Sov ALBATROS		03 Oct-11 Oct	R. Livingstone				Bot trawl	Yankee 36 Sov herring	
ALBATROSS IV	67-19	11 Oct-13 Oct	G. Kelly			Demon- stration	Various		
ALBATROSS IV	67-20	17 Oct-29 Oct	R. Livingstone		Bot trawl		Yankee 36	All	
Sov ALBATROS		17 Oct-27 Oct	R. Edwards		Bot trawl		Sov herring	All	
ALBATROSS IV	67-21	1 07 Nov-21 Nov 2 29 Nov-10 Dec	F. Nichy F. Lux		Bot trawl		Yankee 36	All	

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT		
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE	
		- 1968 -								
ALBATROSS IV		24 Jan-20 Feb					Shipyard			
ALBATROSS IV	68-01	21 Feb-23 Feb	M. Grosslein		Bot trawl		Yankee 36 Modified 36 Yankee 41			
ALBATROSS IV	68-02	26 Feb-03 Mar	J. Posgay		Plankton		Bongo 20			
ALBATROSS IV	68-03	1 06 Mar-22 Mar 2 26 Mar-08 Apr	F. Nichy B. Burns	Bot trawl Plankton			Yankee 36 Plankton	All		
ALBATROSS IV	68-04	15 Apr-22 Apr	R. Marak	Plankton Bot trawl			Plankton Yankee 36	Haddock	Eggs Larvae Adult	
ALBATROSS IV	68-05	24 Apr-03 May	K. Honey			Tagging Sample	Yankee 36	Lobster		
ALBATROSS IV	68-06	07 May-15 May	G. Kelly	Plankton			Bongo 20	Haddock	Eggs Larvae	
ALBATROSS IV	68-07	21 May-28 May	F. Lux	Plankton			Bongo 20	Haddock	Eggs Larvae	
ALBATROSS IV	68-08	03 Jun-07 Jun	R. Marak	Plankton			Bongo 20	Haddock	Eggs Larvae	
ALBATROSS IV	68-09	12 Jun-21 Jun	K. Honey			Tagging Sample	Yankee 36 Neuston	Lobster	Adult Larvae	
Sov BLESK	68-01	14 Jul-06 Aug	V. Richter	Bot trawl			Soviet 27.1	All		
ALBATROSS IV		18 Jul-22 Jul				Port call				
ALBATROSS IV	68-10	22 Jul-27 Jul	H. Stern		Bot trawl		Yankee 36			
DELAWARE I	68-06	22 Jul-27 Jul	H. Jensen		Bot trawl		Yankee 36			
ALBATROSS IV	68-11	01 Aug-01 Aug	Livingstone			Demon- stration				
ALBATROSS IV	68-12	12 Aug-22 Aug	R. Wigley	Benthos			Naturalists dredge			
ALBATROSS IV	68-13	26 Aug-30 Aug	M. Grosslein		Bot trawl		Yankee 36 Sov trawl Universal			
ALBATROSS IV	68-14	04 Sep-18 Sep	H. Jensen	Scallop			Scallop dredge	Scallop		
ALBATROSS IV	68-15	23 Sep-27 Sep	J. Posgay		Plankton		Bongo 61, 20 Miller			
Can THETA		23 Sep-27 Sep	G. Kelly		Plankton		Bongo 61 Miller			
Sov BLESK		23 Sep-27 Sep	R. Marak		Plankton		Miller Bongo 20			
ALBATROSS IV	68-16	02 Oct-06 Oct	H. Stern		Bot trawl		Yankee 36 Sov 27.1			
Sov BLESK		02 Oct-06 Oct	R. Hennemuth		Bot trawl		Universal			
ALBATROSS IV	68-17	1 10 Oct-20 Oct 2 28 Oct-13 Nov 3 18 Nov-26 Nov	M. Grosslein F. Nichy Livingstone	Bot trawl Plankton			Yankee 36 Bongo 20	All		
Sov BLESK	68-17	1 10 Oct-20 Oct 2 28 Oct-13 Nov 3 18 Nov-26 Nov	R. Edwards H. Stern T. Morris	Bot trawl			Sov 27.1	All		
ALBATROSS IV	68-18	09 Dec-14 Dec	C. Hollister (WHOI)	Geology			Grab Camera			

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1969 -									
ALBATROSS IV	69-01	1 28 Jan-14 Feb 2 20 Feb-27 Feb	Livingstone J. Crossen	Hydrographic			STD		
ALBATROSS IV	69-02	1 05 Mar-16 Mar 2 18 Mar-29 Mar 3 01 Apr-10 Apr	H. Stern F. Nichy B. Burns	Bot trawl Plankton			Yankee 36 Bongo 20	All	
ALBATROSS IV	69-03	15 Apr-19 Apr	J. Posgay		Plankton		Bongo 61		
Sov PROGNOZ		15 Apr-18 Apr	R. Marak		Plankton		Bongo 61		
ALBATROSS IV	69-04	28 Apr-10 May	K. Honey			Tagging Sample	Yankee 36	Lobster	
ALBATROSS IV	69-05	20 May-29 May	R. Marak		Plankton		Bongo 61		
Sov PROGNOZ		20 May-29 May	T. Morris		Plankton		Bongo		
ALBATROSS IV	69-06	02 Jun-14 Jun	F. Perkins			Tagging Sample	Yankee 36	Lobster Herring	
ALBATROSS IV	69-07	18 Jun-03 Jul	R. Yancey	Surf clam			Jet dredge	Surf clam	
ALBATROSS IV	69-08	1 14 Jul-25 Jul 2 31 Jul-16 Aug	F. Nichy J. Musick	Trawl Plankton			Yankee 36 Bongo 20	All	
ALBATROSS IV	69-09	04 Sep-11 Sep	C. Brown (US Navy)	Midwater trawl			Midwater trawl		
ALBATROSS IV	69-10	30 Sep-04 Oct	K. Honey	Egg bed			Digby dredge S/M grab Camera Bongos	Herring	Eggs
Sov EKLIPTIKA		30 Sep-04 Oct	V. Anthony	Egg bed			Digby dredge Sov dredge	Herring	Eggs
Sov ALIOT		30 Sep-04 Oct	J. Sigajev	Egg bed				Herring	Eggs
ALBATROSS IV	69-11	1 08 Oct-19 Oct 2 27 Oct-08 Nov 3 13 Nov-23 Nov	M. Grosslein Livingstone F. Nichy	Bot trawl Plankton			Yankee 36 Bongo 20	All	
Sov EKLIPTIKA	69-11	1 08 Oct-19 Oct 2 27 Oct-08 Nov 3 13 Nov-28 Nov	S. Wilk T. Morris H. Stern	Bot trawl			Soviet 24.6	All	
ALBATROSS IV	69-12	02 Dec-12 Dec	J. Colton		Bot trawl Hydro- acoustic		Glou trawl Yankee 36 Sonar	All	
ALBATROSS IV	69-13	18 Dec-18 Dec	C. Hollister (WHOI)			Demon- stration	Various		



VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1970 -									
ALBATROSS IV	70-01	15 Jan-23 Jan	G. Kelly		Trawl		Yankee 36		
ALBATROSS IV	70-02	03 Mar-13 Mar	H. Stern		Trawl		Yankee 36 Gloucester 90		
DELAWARE II	70-02	03 Mar-13 Mar	H. Jensen		Trawl		Yankee 36 Gloucester 90		
ALBATROSS IV	70-03	1 13 Mar-20 Mar 2 25 Mar-10 Apr 3 15 Apr-30 Apr	H. Stern R. Livingstone F. Nichy	Bot Trawl Plankton			Yankee 36 Bongo 20	A11	
Sov KVANT	70-01	10 Aug-03 Sep	V. Richter	Bot Trawl			Soviet 27.1	A11	
DELAWARE II	70-07	03 Sep-11 Sep	H. Jensen	Bot Trawl Plankton			Yankee 36 Bongo 20	A11	
Sov KVANT	70-02	07 Sep-16 Sep	V. Richter	Bot Trawl			Soviet 27.1		
ALBATROSS IV	70-04	15 Sep-17 Sep	G. Kelly			Demonstration			
Sov KVANT	70-03	1 23 Sep-01 Oct 2 01 Oct-10 Oct	P. Twohig T. Morris		Trawl Trawl		Soviet 27.1 Soviet 23.5		
ALBATROSS IV	70-05	24 Sep-08 Oct	J. Graham	Egg Bed			Smith Grab Pisces Submarine	Herring	Eggs Larvae Adult
Sov ALFERAS	70-05	24 Sep-08 Oct	I. Sigajev	Egg Bed			Grab Trawl	Herring	Eggs Larvae Adult
Sov KVANT	70-04	14 Oct-01 Nov	T. Morris	Bot Trawl			Soviet 27.1	A11	
ALBATROSS IV	70-06	1 15 Oct-01 Nov 2 05 Nov-21 Nov	F. Nichy H. Stern	Bot Trawl Plankton			Yankee 36 Bongo 20	A11	

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1971 -									
ALBATROSS IV	71-01	1 09 Mar-26 Mar 2 30 Mar-12 Apr 3 16 Apr-05 May	R. Livingstone H. Stern F. Nichy	Bot Trawl Plankton			Yankee 36 Bongo 61, 20	All	
ALBATROSS IV	71-02	11 May-21 May	T. Morris		Plankton		Bongo 61, 20 CALCOFI Net		
ALBATROSS IV	71-03	1 03 Aug-03 Aug 2 06 Aug-13 Aug	J. Graham		Plankton	Shakedown	Bongo 61 Boothbay 5		
Sov BLESK	71-01	09 Aug-30 Aug	V. Sauskan	Bot Trawl			Soviet 27.1	All	
ALBATROSS IV	71-04	31 Aug-04 Sept.	B. Griswold		Trawl		Yankee 36 Modified 36 Atlantic Western II Atl West IV		
Sov BLESK	71-02	08 Sep-11 Sep	W. Handwork		Trawl		Soviet 27.1 Yankee 36 Modified 36		
DELAWARE II	71-03	09 Sep-13 Sep	D. Moller (WHOI)			Charter			
Fre CRYOS		09 Sep-24 Sep	G. Paulmier	Plankton			Bongo 61	Herring	Larvae
ALBATROSS IV	71-05	14 Sep-25 Sep	B. Griswold		Trawl		Yankee 36 Modified 36		
Sov BLESK	71-03	14 Sep-25 Sep	V. Efanov		Trawl		Soviet 27.1		
DELAWARE II	71-04	21 Sep-04 Oct	K. Honey	Plankton			Bongo 61	Herring	Larvae
ALBATROSS IV	71-06	1 29 Sep-14 Oct 2 14 Oct-26 Oct 3 03 Nov-19 Nov	H. Stern B. Griswold F. Nichy	Bot Trawl Plankton			Yankee 36 Bongo 61, 20 STD	All	
Sov BLESK	71-04	1 28 Sep-14 Oct 2 14 Oct-26 Oct	E. Bowman M. Parrack	Bot Trawl			Soviet 27.1	All	
Sov VIANDRA		09 Oct-25 Oct	V. Balkovoi	Plankton			Bongo 61	Herring	Larvae
FRG W HERWIG	39	31 Oct-12 Nov	R. Marak	Plankton			Bongo 61		
ALBATROSS IV	71-07	02 Dec-17 Dec	J. Colton	Plankton			Bongo 61	Herring	Larvae

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1972 -									
ALBATROSS IV	72-01	23 Feb-03 Mar	R. Livingstone	Bot Trawl			Trawl 41	A11	
ALBATROSS IV	72-02	1 08 Mar-17 Mar 2 21 Mar-07 Apr 3 12 Apr-28 Apr	E. Heyerdahl B. Griswold F. Nichy	Bot Trawl Plankton			Yankee 36 Bongo 61, 20	A11	
ALBATROSS IV	72-03	1 04 May-13 May 2 16 May-27 May	H. Perkins J. Graham	Plankton			Bongo 61, 20 Isaac-Kidd	Herring	Juveniles
ALBATROSS IV	72-04	01 Jun-09 Jun	B. Griswold		Trawl		URI 41 Captiva 41		
DELAWARE II	72-17	05 Jun-09 Jun	A. Merrill		Trawl		Yankee 36		
ALBATROSS IV	72-05	23 Jun-01 Jul	E. Anderson		Trawl		Yankee 36		
Can CAMERON		25 Jun-01 Jul	J. Scott		Trawl		Canadian 36		
ALBATROSS IV	72-X	07 Jul-08 Jul	J. Colton		Hydrographic		STD		
ALBATROSS IV	72-06	1 11 Jul-30 Jul 2 03 Aug-21 Aug	J. Colton K. Honey	Plankton			Bongo 61, 20 Neuston STD Nansen		
Sov BLESK	72-01	10 Aug-02 Sep	V. Bryantsev	Bot Trawl			Soviet 27.1		
DELAWARE II	72-21	1 11 Sep-16 Sep 2 19 Sep-24 Sep	E. Bowman E. Bowman		Trawl		Modified 41		
Sov BLESK	72-02	19 Sep-24 Sep	V. Bryantsev		Trawl		Soviet 27.1		
ALBATROSS IV	72-07	21 Sep-25 Sep	C. Davis	Plankton			Bongo 61	Herring	Larvae
ALBATROSS IV	72-08	1 28 Sep-10 Oct 2 17 Oct-30 Oct 3 02 Nov-20 Nov	E. Anderson F. Nichy B. Griswold	Bot Trawl Plankton			Yankee 36 Bongo 61, 20	A11	
Sov BLESK	72-03	1 26 Sep-12 Oct 2 17 Oct-30 Oct	V. Bryantsev E. Heyerdahl	Bot Trawl			Soviet 27.1	A11	
Pol WIECZNO		02 Oct-28 Oct	T. Morris	Plankton			Bongo 61	Herring	Larvae
FRG A DOHRN		31 Oct-15 Nov	R. Marak	Plankton			Bongo 61	Herring	Larvae
ALBATROSS IV	72-09	28 Nov-20 Dec	T. Morris	Plankton			Bongo 61 Neuston	Herring	Larvae

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SCIGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
- 1973 -									
ALBATROSS IV	73-01	10 Jan-11 Jan	D. Au		Plankton Hydrographic		Bongo 61, 20 Neuston STD		
ALBATROSS IV	73-02	1 18 Jan-05 Feb 2 09 Feb-02 Mar	D. Au K. Honey		Plankton Hydrographic		Bongo 61, 20 Neuston STD		
FRG W HERWIG	73-00	26 Feb-15 Mar	H. Dornheim		Bot Trawl		Herring 180	A11	
ALBATROSS IV	73-03	1 19 Mar-03 Apr 2 09 Apr-24 Apr 3 03 May-16 May	B. Griswold F. Nichy H. Jensen		Bot Trawl Plankton		Modified 41 Bongo 61 STD	A11	
DELAWARE II	73-04	23 May-25 May	W. Rathjen			Trawl Camera	Shrimp 41 Camera		
DELAWARE II	73-05	04 Jun-21 Jun	W. Rathjen		Benthos		Shrimp 41 Camera		
G. W. PIERCE		07 Jun-22 Jun	R. Cooper		Benthos		DSRV Nekton Submarine		
ALBATROSS IV	73-04	27 Jul-07 Aug	A. Pacheco		Pollution		Smith-McIntyre Grab 3/4 Yankee		
ALBATROSS IV	73-05	14 Aug-21 Aug	E. Bowman			Trawl	Modified 41		
ALBATROSS IV	73-06	27 Aug-07 Sep	E. Bowman			Trawl	Modified 41 Yankee 36		
Sov BELOGORSK		27 Aug-07 Sep	W. Handwork			Trawl	Modified 41 Yankee 36		
ALBATROSS IV	73-07	11 Sep-21 Sep	D. Au		Plankton		Boothbay midwater Neuston		
Pol WIECZNO	73-02	12 Sep-27 Sep	H. Jensen		Bot Trawl		Herring 90	A11	
Sov BELOGORSK	73-01	1 15 Sep-23 Sep 2 27 Sep-13 Oct	V. Anthony E. Anderson		Bot Trawl		Modified 41		
Fre CRYOS	73-01	16 Sep-29 Sep	F. Knapp		Plankton		Bongo 61 Neuston	Herring	Larvae
P LANGEVIN II		24 Sep-18 Oct	R. Cooper		Egg Bed		Nekton Gamma Submarine	Herring	Eggs
ALBATROSS IV	73-08	1 26 Sep-11 Oct 2 17 Oct-26 Oct 3 30 Oct-20 Nov	E. Heyerdahl H. Jensen F. Nichy		Bot Trawl Plankton		Yankee 36 Bongo 61 Neuston STD	A11	
Pol WIECZNO		28 Sep-23 Oct	J. Dohrmann		Plankton		Bongo 61 Neuston	Herring	Larvae
Sov BELOGORSK		15 Oct-03 Nov	T. Morris		Plankton		Bongo 61 Neuston	Herring	Larvae
FRG W HERWIG		28 Oct-10 Nov	R. Marak		Plankton		Bongo 61 Neuston	Herring	Larvae
ALBATROSS IV	73-09	04 Dec-21 Dec	D. Au		Plankton		Bongo 61 Neuston	Herring	Larvae

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1974-									
ALBATROSS IV	74-01	1 22 Jan-31 2 01 Feb-06	Jan Feb	J. Thomas A. Pacheco	Pollution		S/M Grab 3/4 Yankee	All	
ALBATROSS IV	74-02	11 Feb-22	Feb	D. Au	Plankton		Bongo 61	Herring	All
ALBATROSS IV	74-03	04 Mar-08	Mar	E. Bowman		Trawl	Modified 41		
ALBATROSS IV	74-04	1 12 Mar-22 2 28 Mar-10 3 16 Apr-05	Mar Apr May	D. Flescher H. Jensen F. Nichy	Bot Trawl Plankton		Modified 41 Bongo 61 Neuston STD	All	
FRG W HERWIG	74-01	19 Mar-04	Apr	E. Anderson	Bot Trawl		Herring 180	Herring	Juveniles
Sov KRONOMETER	74-01	20 Mar-15	Apr	K. Smith	Hydroacoustic Bot Trawl		Electronics Hake 815		
ALBATROSS IV	74-05	09 May-24	May	M. Ingham	Pollution		STD Bongo Neuston Isaacs-Kidd Camera		
ALBATROSS IV	74-06	24 Jun-28	Jun	R. Wigley		Benthos	Camera Shrimp 16		
ALBATROSS IV	74-07	08 Jul-24	Jul	R. Wigley	Benthos		Camera Shrimp 16	Red crab	
ATLANTIC TWIN		1 11 Jul-19 2 21 Jul-29	Jul Jul	R. Cooper R. Cooper	Benthos		Nekton Gamma Submarine		
ALBATROSS IV	74-08	30 Jul-07	Aug	E. Bowman		Trawl	Modified 41 Yankee 36		
ALBATROSS IV	74-09	13 Aug-23	Aug	C. Davis	Plankton		Bongo 61, 20 Neuston	Fish	Juveniles
Sov BELOGORSK	74-01	14 Aug-27	Aug	B. Kotelnikov	Bot Trawl		Hake 815	All	
ALBATROSS IV	74-10	06 Sep-17	Sep	E. Bowman		Trawl	Modified 41 Yankee 36		
Sov BELOGORSK		06 Sep-17	Sep	W. Handwork		Trawl	Modified 41 Yankee 36		
Fre CRYOS	74-01	06 Sep-24	Sep	T. Morris	Plankton		Bongo 61 Neuston	Herring	Larvae
DUCHESS	74-01	08 Sep-14	Sep	C. Davis	Plankton			Herring	Larvae
PoI WIECZNO	74-01	14 Sep-24	Sep	E. Anderson	Bot Trawl		Herring 90	Herring Mackerel	Juveniles
Sov BELOGORSK	74-11	1 20 Sep-02 2 07 Oct-21	Oct Oct	E. Bowman	Bot Trawl		Modified 41	All	
ALBATROSS IV	74-11	1 23 Sep-04 2 08 Oct-24 3 30 Oct-10	Oct Oct Nov	A. Pacheco H. Jensen F. Nichy	Bot Trawl Plankton		Yankee 36 Bongo 61 Neuston STD	All	
PoI WIECZNO	74-02	26 Sep-21	Oct	T. Morris	Plankton		Bongo 61 Neuston	Herring	Larvae
GALATEA		04 Oct-04	Nov	R. Cooper	Egg bed		Camera S/M Grab Plankton	Herring	Eggs
DELAWARE II	74-12	08 Oct-16	Oct	C. Davis	Plankton		Bongo 61	Herring	Larvae
Sov PROGNOZ		18 Oct-30	Oct		Plankton		Bongo 61, 20	Herring	Larvae
PoI WIECZNO	74-03	23 Oct-29	Oct	K. Smith		Hydroacoustic	Electronics	All	
Sov BELOGORSK	74-04	26 Oct-03	Nov	M. Parrack	Bot Trawl		Soviet 7 m	Mackerel	
PoI WIECZNO		30 Oct-06	Nov	A. Paciorowski	Bot Trawl		Herring 90	Herring Mackerel	Juveniles
ALBATROSS IV	74-12	12 Nov-13	Nov	P. Twohig		Trawl	Electronics		
FRG A DOHRN		15 Nov-25	Nov	D. Potter	Plankton		Bongo 61	Herring	Larvae
ALBATROSS IV	74-13	04 Dec-16	Dec	G. Lough	Plankton		Bongo 61 STD	Herring	Larvae

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1975-									
ALBATROSS IV	75-01	29 Jan-06 Feb	E. Bowman		Trawl		Modified 41 Yankee 36		
ALBATROSS IV	75-02	12 Feb-27 Feb	G. Lough	Plankton			Bongo 61, 20 Neuston STD	Herring	Larvae
GDR E HAECKEL	75-01	26 Feb-11 Mar	Danke	Bot Trawl			Herring 160	Herring	Juveniles
Po1 WIECZNO	75-01	01 Mar-27 Mar	H. Jensen	Bot Trawl			Herring 90	Herring Mackerel	Juveniles
FRG W HERWIG	75-01	10 Mar-28 Mar	J. Messersmith	Bot Trawl			Herring 180	Herring	Juveniles
GDR E HAECKEL	38	11 Mar-17 Mar	Danke	Bot Trawl			Herring 160	Herring Mackerel	Juveniles
ALBATROSS IV	75-03	1 14 Mar-18 Mar 2 20 Mar-29 Mar 3 17 Apr-30 Apr 4 05 May-12 May	T. Pacheco Christensen H. Jensen L. Despres	Bot Trawl Plankton			Modified 41 Bongo 61 STD Electronics	All	
DELAWARE II	75-03	1 18 Mar	R. Edwards	Rendezvous with E HAECKEL to discuss hydroacoustic survey					
		2 20 Mar-26 Mar 3 28 Mar-13 Apr	E. Bowman E. Bowman	Hydroacoustic			Electronics		
Sov POISK	75-01	1 20 Mar-26 Mar 2 28 Mar-12 Apr	P. Twohig P. Twohig	Hydroacoustic			Electronics		
GDR E HAECKEL		20 Mar-26 Mar	Danke	Hydroacoustic			Electronics		
Po1 WIECZNO	75-02	27 Mar-13 Apr	L. Despres	Hydroacoustic			Herring 90		
PHALAROPE	75-01	15 Apr-30 Apr	F. Lux	Bot Trawl			1/2 35	All	
ALBATROSS IV	75-05	13 May-22 May	C. Davis	Plankton			Isaacs-Kidd Bongo 61,20 Neuston		
LULU		23 Jun-01 Jul	J. Uzmann	Benthos			Alvin Submarine		
ALBATROSS IV	75-06	24 Jun-25 Jun	J. Colton		Plankton		Bongo 61		
ALBATROSS IV	75-07	08 Jul-18 Jul	R. Schlitz	Hydrographic			STD		
DELAWARE II	75-11	29 Jul-07 Aug	E. Bowman		Trawl		Yankee 36 3/4 Yankee		
Sov BELOGORSK	75-00	06 Aug-26 Aug	I. Sigajev	Bot Trawl			Hake 815	All	
ALBATROSS IV	75-08	07 Aug-16 Aug	C. MacKenzie	Scallop			Scallop dredge Digby dredge	Scallop	
Po1 PORMORZE		15 Aug-08 Sep		Transport of HELGOLAND from Germany to USA					
ALBATROSS IV	75-09	20 Aug-29 Aug	E. Bowman		Trawl		Yankee 36 Modified 41		
ALBATROSS IV	75-10	03 Sep-19 Sep	E. Bowman		Trawl		Yankee 36 Modified 41		
Sov BELOGORSK	75-01	04 Sep-19 Sep	G. Waring		Trawl		Yankee 36 Modified 41	Herring	

VESSEL	CRUISE	DATE	PARTY CHIEF OR U.S. PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1975-									
FRG HELGOLAND (underwater habitat)		04 Sep-05 Dec	R. Cooper	Egg Bed				Herring	
ALBATROSS IV	75-11	27 Sep-03 Oct	C. MacKenzie	Scallop			Scallop dredge Digby dredge	Scallop	
CHALLENGE	75-01	04 Sep-09 Sep	C. Davis	Plankton			Bongo 61, 20	Herring	Larvae
ADVANCE II		05 Sep-11 Sep	J. Uzmann	Helgoland			Nekton Beta Submarine		
DELAWARE II	75-15	23 Sep-02 Oct	C. Davis	Plankton			Bongo 61, 20	Herring	Larvae
Sov BELOGORSK	75-02	24 Sep-10 Oct	T. Morris	Plankton			Bongo 61, 20	Herring	Larvae
DAVID & KATY	75-01	29 Sep-16 Oct	F. Lux	Bot Trawl			1/2 35		
DELAWARE II	75-16	06 Oct-10 Oct	E. Bowman		Trawl		Modified 41		
ALBATROSS IV	75-12	1 07 Oct-23 Oct 2 07 Nov-18 Nov	R. Mayo L. Despres	Bot Trawl Plankton			Yankee 36 Bongo 61	All	
Sov BELOGORSK	75-03	15 Oct-16 Nov	T. Morris	Plankton			Bongo 61, 20	Herring	Larvae
ALBATROSS IV	75-13	28 Oct-05 Nov	J. Colton	Plankton Helgoland			Bongo 20		
FRG A DOHRN	75-01	31 Oct-15 Nov	R. Marak	Plankton			Bongo 61, 20		
ALBATROSS IV	75-14	02 Dec-17 Dec	T. Morris	Plankton			Bongo 61, 20		
Fre CRYOS	75-01	22 Nov-01 Dec	P. Wood	Squid			Lofoten		
	75-02	04 Dec-11 Dec	L. Despres	Squid			Pelagic		

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1976-									
DELAWARE II	76-01	29 Jan-06 Feb	E Bowman		Bottom trawl		Modified 41		
ALBATROSS IV	76-01	09 Feb-25 Feb	T Morris	Plankton Hydrographic			Bongo 61,20 Neuston 4x1 STD Niskin	Herring	Larvae
FRG A DOHRN	76-01	01 Mar-09 Mar	H Jensen	Bottom trawl Plankton Hydrographic			Herring 180	Herring	Juveniles Larvae
SDR E HAECKEL	76-01	02 Mar-18 Mar	G Waring	Bottom trawl Plankton			Herring 490 Bongo 61	Herring	Juveniles
DELAWARE II	76-05	04 Mar-25 Mar	T Azarovitz	Bottom trawl Plankton			Modified 41 Neuston (Haedrich)	All	
ALBATROSS IV	76-02 I II III	25 Mar-09 Apr 13 Apr-30 Apr 03 May-08 May	H Jensen L Despres L Despres	Bottom trawl Plankton			Modified 41 Bongo 61 Neuston 4x1	All	
Pol WIECZNO	76-01	09 Apr-04 May	T Morris	Plankton Hydrographic			Bongo 61,20 Neuston 1x2 Nansen	Herring	Larvae
SPIRIT OF '76	76-01	19 Apr-24 Apr	F Lux	Bottom trawl Plankton			4 35 Bongo 61 Neuston	All	
Pol WIECZNO	76-02 I II	06 May-20 May 20 May-29 May	T Burns W Overholtz	Bottom trawl			Polish 28-32	All	
ALBATROSS IV	76-03	11 May-21 May	R Schiltz	Hydrographic			STD		
ATLANTIC TWIN	76-01	14 Jun-30 Jun	R Cooper			Underwater observers	Nekton gamma submarine		
ALBATROSS IV	76-04			Cruise cancelled.					
DELAWARE II	76-11			Cruise cancelled.					
ALBATROSS IV	76-05 I II	28 Jul-29 Jul 30 Jul-16 Aug	W Wright R Schiltz	Hydrographic Plankton	Hydrographic		Buoy mooring system STD Plankton (various)		
ALBATROSS IV	76-06 to 76-09	These cruises, as originally scheduled in sailing orders, were cancelled.							
Sov KVANT	76-01	05 Aug-23 Aug	T Morris	Plankton Hydrographic			Bongo 20 Nansen		
ALBATROSS IV	76-10 I II	24 Aug-29 Aug 29 Aug-09 Sep	J Thomas	Pollution Biological oceanography			Smith McIntyre grab Multiple corer Submersible pump Submersible photometer		
ALBATROSS IV		11 Sep-28 Sep		Vessel laid up for generator repair.					



VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1976-									
SPIRIT OF '76	76-02	16 Aug-21 Aug	F Lux	Bottom trawl Plankton			1/2 35 Bongo 61 Neuston 1x1	All	
Sov BELOGORSK	76-01 I	04 Sep-13 Sep	H Jensen	Bottom trawl Plankton			Hake 815 CPR	All	
Sov BELOGORSK Sov YUBILEINY	76-02	14 Sep-30 Sep	G Waring			Tagging	Purse seine	Herring	Adult
MT MITCHELL	76-09	22 Sep-25 Sep	W Wright			Current meters	VACU		
ALBATROSS IV	76-09 I II III	28 Sep-18 Oct 20 Oct-05 Nov 09 Nov-23 Nov	T Azarovitz L Despres W Overholtz	Bottom trawl Plankton			Yankee 36 Neuston 1x1	All	
ANNANDALE	76-01	01 Oct-18 Oct	G Lough	Plankton Hydrographic			Bongo 61,20 Neuston 1x1 STD	Herring	Larvae
Sov BELOGORSK	76-03	04 Oct-11 Oct	T Morris	Plankton			Bongo 61,20	Herring	Larvae
Sov BELOGORSK	76-01 II	11 Oct-22 Oct	T Morris	Bottom trawl Hydrographic			Hake 815 Nansen	All	
SILVER LINING	76-01	08 Oct-31 Oct	G Waring			Tagging	Purse seine	Herring	Adult
PHALAROPE	76-01	13 Oct-15 Oct	F Lux	Bottom trawl			1/2 35 Bongo 61 Neuston 1x1	All	
Pol WIECZNO	76-03	13 Oct-04 Nov	L Sullivan	Plankton Hydrographic			Bongo 61,20 Neuston 1x1 Nansen	Herring	Larvae
Sov BELOGORSK	76-04	24 Oct-03 Nov	R Mayo			Day/night catchability	Modified 41 Bongo 61	Mackerel	Adult
Pol WIECZNO	76-04	06 Nov-16 Nov	R Mayo			Day/night catchability	Modified 41 Polish 28-32 Bongo 20	Mackerel	Adult
Fre CRYOS	76-01 I II	09 Nov-22 Nov 25 Nov-03 Dec	H Jensen A Tibbetts	Bottom trawl			Lofoten	Squid Herring	
FRG A DOHRN	76-02	14 Nov-01 Dec	G Bolz	Plankton Hydrographic			Bongo 61,20 Neuston (catamaran) Nansen	Herring	Larvae
Pol WIECZNO	76-05	18 Nov-29 Nov	C Stillwell			Tagging	Longline	Oceanic jameffsn	
RESEARCHER	76-11	26 Nov-12 Dec	J Pottar	Plankton Hydrographic			Bongo 61,20 Neuston 1x1 STD	Herring	Larvae
ALBATROSS IV		30 Nov 76 to 01 Apr 77		Vessel in shipyard.					
DELAWARE II	76-13	22 Dec-24 Dec	H Jensen	Pollution (oil spill)			Yankee 36 Bongo 61,20 Water samplers (various) Benthic samplers (various)		

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1977-									
DELAWARE II	77-01	04 Jan-10	Jan H Jensen	Pollution (oil spill)			Yankee 36 Digby dredge Plankton (various)		
DELAWARE II	77-02 I II III	26 Jan-24 Feb 25 Feb-03 Mar 07 Mar-16 Mar	J Ropes	Shellfish			Jet dredge	Surf clam Ocean quahog	
MT MITCHELL	77-02	12 Feb-25	Feb T Morris	Plankton			Bongo 61.20 Neuston 1/2x1 STD	Herring	Larvae
KELEZ	77-01	14 Feb-18	Feb A Pacheco	Hydrographic			Niskin		
Pol WIECZNO	77-01	17 Feb-07	Mar H Jensen	Pollution (oil spill)			Polish high- opening trawl Plankton (various) Grabs and dredges (various)		
GDR GOERLITZ	77-01 I II	03 Mar-15 Mar 15 Mar-07 Apr	J Nicolas W Overholtz	Bottom trawl Plankton			HG-600 commercial Bongo 61	Herring	Juveniles
Pol WIECZNO	77-02	08 Mar-18	Mar R Mayo	Bottom trawl			Polish 26-30	Herring	Juveniles
SPIRIT OF '76	77-01	14 Mar-18	Mar C Davis	Bottom trawl Plankton			1/2 35 Bongo 61 Neuston 1/2x1	All	
FRG A DOHRN	77-01	15 Mar-21	Mar R Clifford	Plankton Hydrographic			Bongo 61 Nansen		
ADVANCE II	77-01 I II	16 Mar-24 Mar 25 Mar-02 Apr	J Thomas	Biological oceanography			Submersible pump Submersible photometer		
DELAWARE II	77-03	19 Mar-08	Apr W Morse	Bottom trawl			Modified 41	All	
Pol WIECZNO	77-03	20 Mar-05	Apr J Casey		Tagging		Longline	Sharks	
SPIRIT OF '76	77-02	11 Apr-16	Apr C Davis	Bottom trawl Plankton			1/2 35 Bongo 61 Neuston 1/2x1	All	
DELAWARE II	77-04	12 Apr-29	Apr P Berrien	Plankton			Bongo 61 Neuston 1/2x1 Neuston (Haedrich) Niskin	Mackerel Yellowtail Flounder	Eggs Larvae
ALBATROSS IV	77-01			Cruise cancelled.					
ALBATROSS IV	77-02 I II III	13 Apr-27 Apr 30 Apr-14 May 16 May-20 May	L Despres H Jensen W Overholtz	Bottom trawl			Modified 41	All	
KELEZ	77-04	14 Apr-17	Apr S Ramp			Current meters			
WHITEFOOT	77-01	19 Apr-23	Apr W Wright			Current meters			

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				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1977-									
Sov NOGLIKI	77-01 I II	19 Apr-03 May 05 May-20 May	T Burns F Almeida			Tagging	Purse seine	Herring	
DELAWARE II	77-05 I II	03 May-13 May 17 May-27 May	W Smith J Sibunka	Plankton			Bongo 61 Neuston 1/2x1 Neuston (Haedrich) Niskin	Mackerel Yellowtail Flounder	Eggs Larvae
ANNANDALE	77-01	12 May-17 May	R Maurer	Pollution Plankton Physiology			Bongo 61 Neuston Niskin	Mackerel	Eggs
Sov NOGLIKI	77-02	22 May-06 Jun	T Morris	Plankton Hydrographic			Bongo 61,20 Neuston 1/2x1 Nansen		
ALBATROSS IV	77-03	24 May-03 Jun	T Azarovitz	Scallop			Scallop dredge 10	Scallop	
DELAWARE II	77-06 I (for II see 29 Aug)	01 Jun-06 Jun	F Staimie	Hydrographic			STD		
SPIRIT OF '76	77-03	06 Jun-13 Jun	C Davis	Bottom trawl Plankton			1/2 35 trawl Bongo 61 Neuston 1/2x1	All	
ALBATROSS IV	77-04	07 Jun-16 Jun	W Wright	Hydrographic		Current metars	VACM STD		
DELAWARE II	77-07 I II	09 Jun-17 Jun 20 Jun-30 Jun	M Fahay P Berrien	Plankton			Bongo 61 Neuston 1/2x1 Niskin	Mackerel Yellowtail Flounder	Eggs Larvae
ALBATROSS IV	77-05 I II	22 Jun-01 Jul 05 Jul-14 Jul	J Thomas	Biological oceanography		Summersible pump Summersible photometer			
Sov YUBILEINII	77-01	11 Jul-28 Jul	T Morris	Plankton Hydrographic			Bongo 20 Nansen	Hake	Larvae
DELAWARE II	77-08 I II	15 Jul-18 Jul 18 Jul-22 Jul	R Reid F Staimie	Hydrographic Benthos		Physiology Pathology	Niskin Smith-McIntyre grab		
Japan SUZUKA MARU	77-01 I II	19 Jul-29 Jul 28 Jul-08 Aug	E Bowman R Mayo	Squid			Bottom trawl Midwater trawl	Squid	
ALBATROSS IV	77-06	20 Jul-29 Jul	T O'Connor	Pollution (deepwater dumosits)			Acoustic Underwater pump Plankton (various)		
DELAWARE II	77-09 I II	27 Jul-30 Jul 30 Jul-07 Aug	C Byrne	Bottom trawl			Yankee 36	All	
Sov YUBILEINII	77-02 I II	30 Jul-15 Aug 17 Aug-03 Sep	D Busch T Morris	Plankton Biological oceanography			Bongo 61,20 Neuston 1/2x1 Nansen		

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1977-									
ALBATROSS IV	77-07 I	01 Aug-05 Aug	L Despres	Bottom trawl			Yankee 36	All	
	II	07 Aug-12 Aug	J Suomala (MIT)		Hydroacoustic		Experimental sensor platform SCUBA		
	III	16 Aug-01 Sep	H Jensen	Bottom trawl			Yankee 36	All	
DELAWARE II	77-10	17 Aug-25 Aug	M Corbett		Dredge		Jet dredge		
RORQUAL	77-01	17 Aug-26 Aug	T Meyer		Dredge		Jet dredge SCUBA		
DELAWARE II	77-06 II	29 Aug-02 Sep (for I see 01 Jun)	J Thomas	Hydrographic			Nfskin		
Sov YUBILEINYI	77-03 I	05 Sep-16 Sep	T Burns			Tagging	Purse seine	Herring	
	II	16 Sep-04 Oct	F Almeida						
ALBATROSS IV	77-08	06 Sep-16 Sep	T Azarovitz	Scallop			Scallop dredge 10	Scallop	
LULU	95	06 Sep-11 Sep	R Cooper	Biology/Geology Atlantis Canyon			DSRV ALVIN		
DELAWARE II	77-11 I	07 Sep-09 Sep	S Wilk		Midwater trawl		Yankee 36		
	II	13 Sep-21 Sep	M Silverman		Bottom trawl		Modified 41		
Pol WIECZNO	77-04	08 Sep-16 Sep	L Despres	Bottom trawl			Polish 28-32	Herring	Adult (prespawning)
Pol WIECZNO	77-05	17 Sep-03 Oct	L Sullivan			Predator/ prey	Polish 28-32 Polish 29-45	Herring	
ALBATROSS IV	77-09	19 Sep-25 Sep	S Ramp	Hydrographic		Current meters	VACM		
ALBATROSS IV		17 Nov-12 Jan 78	Vessel in shipyard.						
DELAWARE II	77-12 I	26 Sep-07 Oct	C Byrne	Bottom trawl			Yankee 36	All	
	II	11 Oct-21 Oct	L Despres						
	III	25 Oct-07 Nov	W Overholtz						
	IV	08 Nov-14 Nov	H Jensen						
	IV	28 Nov-05 Dec							
Pol WIECZNO	77-06	04 Oct-24 Oct	J Kane	Plankton Hydrographic			Bongo 51,20 Neuston 1x1 Nansen	Herring	Larvae
FRG A JOHRN	77-02	10 Oct-30 Oct	T Azarovitz	Bottom trawl Hydroacoustic			Bottom trawl Echosounder	Herring	Adult (spawning)
Sov ARGUS	77-01 I	15 Oct-25 Oct	T Morris	Plankton			Bongo 51,20 Neuston 1x1 Neuston (Haedrich)		
	II	25 Oct-11 Nov		Hydrographic					

VESSEL	CRUISE	DATE	PARTY CHIEF or US PARTICIPANT	CRUISE PURPOSE			GEAR NAME	ORGANISM SOUGHT	
				SURVEY	GEAR	OTHER		MAJOR SPECIES	LIFE STAGE
-1977-									
FRG A OOHNM	77-03	01 Nov-18 Nov	G Lough	Plankton			Songo 61.20 MOCNESS Neuston (catamaran) Nansen	Herring	Larvae
MT MITCHELL	77-11	12 Nov-19 Nov	P Berrien	Plankton Hydrographic			Songo 61.20 Neuston 1x1 Nansen		
Sev ARGUS	77-02	13 Nov-25 Nov	A Lange	Bottom trawl			Hake 315 Songo	Squid	
KELEZ	77-11 77-12	25 Nov-04 Dec 06 Dec-13 Dec	J Sibunka	Plankton Hydrographic			Songo 61.20 Neuston 1x1 Neuston (Haedrich) Niskin		
DELAWARE II	77-13	08 Dec-20 Dec	G Bolz	Plankton			Songo 61.20 Neuston 1x1	Herring	Larvae
TREMONT		16 Dec-19 Dec	F Serchuk			Sea sampling	Otter trawl		