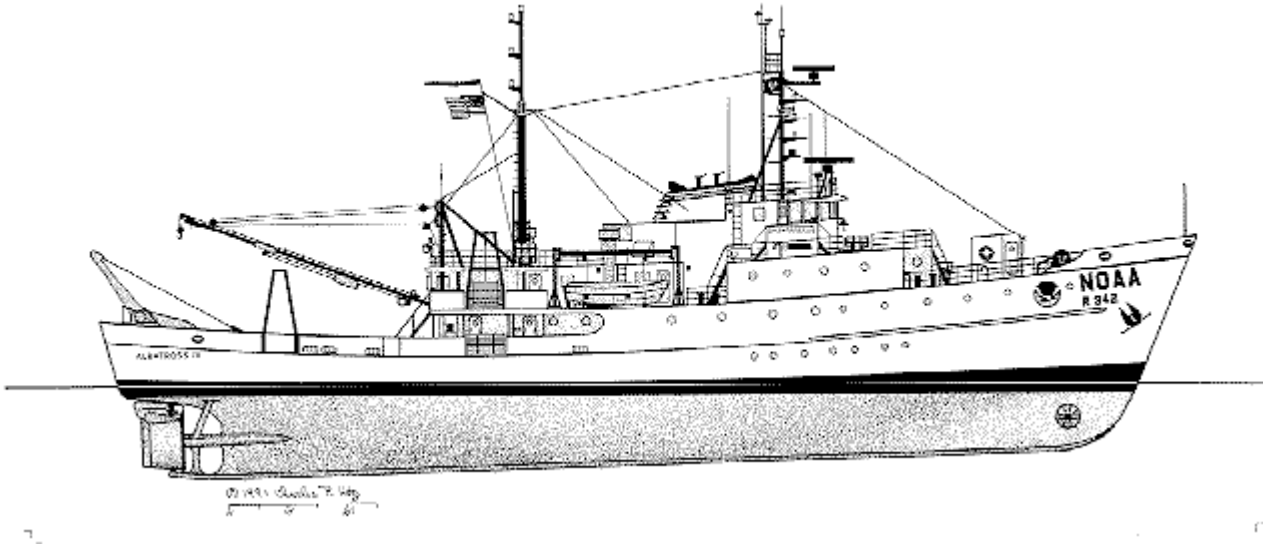
ALBATROSS IV

NOAA Ship ALBATROSS IV conducts fishery and living marine resource research in support of NOAA's National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center's, Woods Hole Laboratory in Woods Hole, Massachusetts. The ship's normal operating area is the Gulf of Maine, Georges Bank, and the continental shelf and slope from Southern New England to Cape Hatteras, North Carolina. Typical assessment work includes groundfish surveys and Ecosystem Monitoring surveys. Research conducted from **ALBATROSS IV** provides an understanding of the physical and biological processes that control year class strength of key economical fish, shellfish, and zooplankton species.



Line Drawing by Bob Hitz

Design

- Designer: Dwight S. Simpson Associates
- Builder: Southern Shipbuilding, Slidell, Louisiana
- Launched: April 1962
- Delivered: November 1962
- Commissioned: May 1963
- Hull Number: R342
- Call Letters: WMVF
- Home Port: Woods Hole, Massachusetts
- Length (LOA): 57.0 m (187 ft.)
- Breadth (moulded): 10.1 m (33 ft.)
- Draft, Maximum: 4.9 m (16.2 ft.)
- Hull: Welded steel/ice strengthened
- Displacement: 1,089 tons
- Gross Tonnage: 1,115 tons
- Net Tonnage: 413 tons

Speed & Endurance

- Cruising Speed: 10 knots
- Range: 3,933 nmi
- Endurance: 16 days
- Endurance Constraint: Stability

Complement

- Commissioned Officers: 4
- Crew: 13
- Licensed Engineers: 3
- Scientists: 14 (Max)

Food Service Seating

- Officer's Mess: 14
- Crew's Mess: 7

Berthing

- Single staterooms: 8
- Three bunk rooms: 4
- Double staterooms: 9
- Total bunks: 38

Medical Facilities

- Emergency and first-aid equipment aboard, administered by designated vessel personnel.

Scientific Laboratory Facilities

- Photographic/Oceanographic/Chemistry Lab: 110 sq. ft.
- Scientific Study Lab: 100 sq. ft.
- Plankton Lab: 110 sq. ft.
- Biological Lab: 300 sq. ft.
- Electronics Lab: 180 sq. ft.
- Stern: 1,080 sq. ft. of open deck space (accessible by 5 ton boom), and sufficient area to house two standard deck lab containers.
- Stern Ramp and Trawler

Cranes and Booms

- Fixed Length Boom
  - Quantity: 1
  - Manufacturer: Marine Hydraulics Inc.
  - Boom Length: 35 ft
  - Location: Boat Deck, Aft
  - Lifting Capacity: 10,000 lbs.

Winches

- Trawl Winch
  - Quantity: 2
  - Manufacturer: New England Trawler
  - Drive: Electrohydraulic
  - Line Speed: 215 ft/min
  - Maximum pull: 16,000 lbs
  - Drum Capacity: 6,000 ft. of 7/8" wire rope
- Dredge Winch
  - Quantity: 1
  - Manufacturer: New England Trawler
  - Drive: Electrohydraulic
  - Line Speed: 185 ft/min
  - Maximum pull: 4,000 lbs
  - Drum capacity: 3,900 ft. of 5/8" wire rope
- Oceanographic Winch
  - Quantity: 1
  - Manufacturer: New England Trawler
  - Drive: Electric
  - Line Speed: 200 ft/min
  - Maximum pull: 3,500 lbs
  - Drum capacity: 6,000 ft. of 3/8" wire rope
- Hydrographic Winch
  - Quantity: 1
  - Manufacturer: New England Trawler
  - Drive: Electrohydraulic
  - Line Speed: 250 ft/min
  - Maximum pull: 3,800 lbs
  - Drum Capacity: 20,000 ft. of 1/4" wire rope

A and J Frames

- Movable Gantry
  - Clearance over the side: 11 ft.
  - Location: Stern
- Hydrographic Winch A-Frame
  - Type: Movable
  - Clearance over the side: 13 ft.
  - Location: Starboard Boat Deck
- Aft J-Frame
  - Type: Movable
  - Clearance over the side: 8 ft.
  - Location: Starboard Main Deck, Aft

Ground Tackle

- Bower anchor
  - Quantity: 2
  - Type: Stockless
  - Weight (each): 2,000 lbs
- Anchor Chain
  - Quantity: 2
  - Size and type: 1.5" stud link
  - Length: 105 fathoms

Boats

- Utility/Rescue Boat
  - Quantity: 1
  - Length: 16 ft.
  - Manufacturer: Hurricane Zodiac
  - Propulsion: 35 hp Outboard motor

Engineering

General

- Cruising Speed: 10 knots
- Range: 3,933 nmi
- Power: 1,130 SHP
- Fuel Capacity: 44,700 gallons
- Fuel Consumption: 50 gal/hr
- Fuel Type: #2 diesel
- Endurance: 16 days
- Endurance Constraint: Stability

Propulsion Plant

- Main Propulsion
  - Type: Geared diesel
  - Quantity: 2
  - Manufacturer: Caterpillar
  - Rated Power (each): 565 hp
- Propeller
  - Type: Controllable Pitch / Kort Nozzle
  - Quantity: 1
  - Manufacturer: Liaaen
  - Diameter: 8 ft.
  - Blades: 3
- Bow Thruster
  - Quantity: 1
  - Manufacturer: Murrat and Tregurtha
  - Type: Through Hull Tunnel
  - Rated Power: 125 hp
  - Drive: Electric Motor (Reliance)

Freshwater System

- Storage capacity: 22,324 gal.
- Normal consumption: 1,100 gal./day
- Maximum production: 1,900 gal./day
- Evaporator
  - Type: Waste Heat Recovery
  - Quantity: 2
  - Manufacturer: Maxim

Pollution Control

- Marine Sanitation Device
  - Type: Omnipure
  - Manufacturer: Severn, Trent, Denora
  - Holding capacity: 400 gal.
- Oily Waste Control
  - Type: Oily water separator
  - Manufacturer: Harco Manufacturing Co.
  - Holding capacity: flow rate 4 gpm or 1,000 gal.

Electrical System

- Ship Service Generators
  - Quantity: 2
  - Manufacturer: Caterpillar
  - Output Voltage: 450 VAC, 60 Hz, 3Ø
  - Power Rating (each): 215 kW
- Emergency Generator
  - Manufacturer: John Deere
  - Output Voltage: 450 VAC, 60 Hz, 3Ø
  - Power Rating: 45 kW
- Electrical Service
  - 450 VAC, 60 Hz, 3Ø
  - 120 and 220 VAC, 60 Hz, 1Ø
  - 120 and 230 VDC
  - Power isolation protection for scientific and navigational equipment.

Communications

- VHF-FM Marine Band Transceivers
- HF Marine Band Transceivers
- HF Alarm Watch Radio Receiver (2182 kHz)
- INMARSAT Standard B Radio Transceiver
- INMARSAT Standard C Radio Transceiver
- Skycell Satellite Transceiver
- Radio Teletype Capability
- NAVTEX Receiver
- Cellular Telephone
- Emergency Position Indicator Radio Beacons (Class 1 and Mini-B)
- Search and Rescue Transponders (X-Band Radar Frequency)
- E-mail (ALBATROSS IV's E-mail address is: Noaa.Ship.Albatross@noaa.gov)

Acoustics

- Deep Water Echo Sounder
- Shallow Water Echo Sounder
- Vertical Fish Finder
- Acoustic Doppler Current Profiler (ADCP)
- Simrad EK60 High Resolution

Navigation

- X-Band and S-Band Radar with an ARPA display.
- Differential Global Positioning System (DGPS) Receivers
- LORAN-C Receiver
- Doppler Speed Log
- Gyrocompass
- Electronic Chart System

Scientific Equipment

- Thermosalinograph
- Fluorometer
- XBT System
- Shipboard Environmental *Data* Acquisition System (SEAS)
- Heave and Pitch Sensor

Data Acquisition and Processing System

- This vessel is equipped with a data collection system which integrates navigational and environmental data for both display and logging purposes. The system processor is a Digital Equipment Corporation (DEC) Alpha Work Station running NOAA's Scientific Computer System (SCS) software.
- Local Area Network