

XV. Oceanography - Government

Section XV outlines plans for United States Antarctic Program sponsored oceanographic expeditions during the 2002-2003 season.

R/V Nathaniel B. Palmer

The *R/V Nathaniel B. Palmer* first arrived in the Antarctic Peninsula area in April 1992. The vessel is owned by Edison Chouest Offshore and is of United States Registry. The vessel will start its second long-term charter to support the United States Antarctic Program in April 2002. The *R/V Nathaniel B. Palmer* is ice-class ABS A2, is 93.9 meters long, has a beam of 18.3 meters, a design draught of 6.9 meters, and displaces 6800 long tons. The vessel has 13,000 shaft horsepower driving two controllable pitch propellers and is also equipped with both bow and stern thrusters. The vessel is a multidisciplinary research platform, has a crew of 26 and accommodation for 39 scientists and RPSC staff. It is designed for year-round operations in Polar regions.

Research Capabilities

The vessel is equipped with a P-Code GPS satellite precision navigation system, fish-finding sonar, sub-bottom profiling sonar, a SeaBeam swath bathymetry system, INMARSAT communications, TeraScan satellite imaging system, and HF and VHF transceivers. The vessel is also equipped with a dynamic positioning system. A deep-sea trawl and coring winch and two hydrographic winches are operated through stern and starboard A-frames. One hydrographic winch, equipped with electromechanical cable, leads through a baltic-room arrangement that protects it from the weather. The vessel is also equipped with multi-channel seismic capability, and laboratory space totaling approximately 520 square meters, all located contiguously on the main deck. The vessel also has a suite of portable lab vans. Zodiacs are available for ship-to-shore transport and sample collection.

Ship's Master: Captain Joe Borkowski.

Scientific Programs in the Antarctic Treaty Area

The R/V *Nathaniel B. Palmer* will conduct cruises in the Southern Ocean surrounding Antarctica, for scientific research in the following disciplines: Physical and Chemical Oceanography, Marine Geology and Geophysics, and Marine Biology.

Intended Tracks and Schedule

The vessel is currently scheduled for work in the Weddell and Bellingshausen Seas, Bransfield Strait, and Marguerite Bay areas, and to enter a dry dock period May 25 through July 25 in Talcahuano, Chile. During this period the Simrad Seatrial and the RVIB Acceptance test will take place. Ports of call include: Punta Arenas and Talcahuano, Chile; Lyttelton, New Zealand; and McMurdo Base; and San Diego, CA. The vessel will perform approximately 9 cruises during the 2002-2003 season. The vessel is tentatively scheduled to transport hazardous waste from Palmer Station back to the United States in September 2002.

R/V *Laurence M. Gould*

The R/V *Laurence M. Gould* first arrived in the Antarctic Peninsula in January 1998. The vessel is owned by Edison Chouest Offshore and is of United States Registry. The vessel will be on long-term charter to support the United States Antarctic Program. The R/V *Laurence M. Gould* is ice-class ABS A1, is 70.1 meters long, has a beam of 14.02 meters, a design draught of 5.48 and displaces 3780 long tons. The vessel has 4,575 shaft horsepower driving two controllable pitch propellers and is also equipped with a bow thruster. The vessel is a multidisciplinary research platform with a crew of 16 and accommodation for 28 scientists and RPSC staff. It is designed for year-round operations in Polar regions.

Research Capabilities

The vessel is equipped with a P-Code GPS satellite precision navigation system, fish-finding sonar, sub-bottom profiling sonar, INMARSAT communications and HF and VHF transceivers. A deep sea trawl winch and two hydro-winchs are to be operated through a stern A-frame and starboard side-hydro davits. One hydrographic winch, equipped with electromechanical cable, leads through a baltic-room arrangement that protects it from the weather. Various over-the-side sampling equipment will be handled through use of an articulated Hiab crane on the ship's fantail. In addition, it is equipped with laboratories totaling 99 square meters and an additional 27 square meters in portable laboratory vans. Zodiacs are available for ship-to-shore transport and sample collection.

Ship's Master: Captain Robert Verret

Scientific Programs in the Antarctic Treaty Area

The R/V *Laurence M. Gould* will support research during 2002-2003 season that includes biological, chemical, and physical oceanography as well as marine geology and geophysics. The R/V *Laurence M. Gould* will also provide logistic support to transport scientists, cargo, and personnel to/from Palmer Station.

Intended Tracks and Schedule

The R/V *Laurence M. Gould* will transport support personnel to and from Palmer Station, provide research support in and around the Bransfield Strait/Marguerite Bay areas, and enter a routine maintenance period and Dry Dock May 25 through July 1 in Talcahuano, Chile. The vessel will perform approximately 10 cruises in the Antarctic Peninsula area during the 2002-2003 season.