

XV. Oceanography - Government

Section XV outlines plans for United States Antarctic Program sponsored oceanographic expeditions during the 2003-2004 season.

R/V Nathaniel B. Palmer

The R/V *Nathaniel B. Palmer* first arrived in the Antarctic Peninsula area in April 1992 and is now in the third year of its second long-term charter to the United States Antarctic Program. The vessel is owned by Edison Chouest Offshore and is of United States Registry. 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 41 scientists and RPSC support staff. It is designed for year-round operations in Polar Regions.

Research Capabilities

The vessel is equipped with a Seapath GPS and inertial navigation system, a P-Code GPS satellite navigation system, fish-finding sonar, sub-bottom profiling sonars, a Simrad multi-beam swath bathymetry system, INMARSAT and Iridium voice and data communications, TeraScan satellite imaging system, and HF and VHF transceivers. The vessel is also equipped with a DP0(zero)-rated 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; both a north- and southbound research transect between Lyttelton, New Zealand and Dutch Harbor, Alaska; and a science cruise above the Arctic Circle. Scientific research conducted onboard includes the following disciplines: Marine Biology, Marine Geology and Geophysics, and Physical and Chemical Oceanography.

Intended Tracks and Schedule

The vessel is scheduled for work in both polar regions during the 2003-2004 season, including the Pacific, Southern and Arctic Oceans, Chukchi and Ross Seas. During the southbound transit following the Arctic Ocean cruise, a seismic sea trial will be conducted to evaluate and test a new multi-channel streamer system. Ports of call include: Barrow and Dutch Harbor, Alaska; Honolulu, Hawaii; Lyttelton, New Zealand; McMurdo Station; and Pago Pago, American Samoa. The NBP will sail in support of approximately nine science cruises during the 2003-2004 season.

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 is 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 and Iridium voice and data communications and HF and VHF transceivers. A deep-sea trawl winch and two hydrographic winches are to be operated through a stern A-frame and starboard side hydrographic 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, the vessel 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 conduct cruises in the Antarctic Peninsula area of the Southern Ocean and Drake Passage. Research projects supported during the 2003-2004 season will include Marine Biology, Chemical and Physical Oceanography, and Marine Geology and Geophysics. The *R/V Laurence M. Gould* will also provide logistic support to transport scientists, cargo, and personnel to and from Palmer Station from its primary port of Punta Arenas, Chile.

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 areas, and enter a routine maintenance period from 30 June to 10 August 2003 in Punta Arenas, Chile. Ports of call include: Punta Arenas, Chile and Palmer Station, Antarctica. The vessel will sail in support of nine science cruises, two peninsula research field camp openings and Palmer Station staff and resupply shuttles in the Antarctic Peninsula area during the 2003-2004 season.