Columbia Scientists Take First Geological Samples from Arctic Ocean’s Gakkel Ridge

BY ABIGAIL BESHKIN

A team of scientists, including six from the Lamont-Doherty Earth Observatory, will enter the Arctic Ocean with two ice breakers to collect the first rock and sediment samples from the seafloor along the Gakkel Ridge, the earth’s slowest-moving mid-ocean ridge system.

This is the first time systematic geological sampling of this area has been undertaken. The Arctic Basin is one of the last of Earth’s oceanic frontiers to be explored. The expedition departed from Tromso, Norway on July 31 into a raging north Atlantic storm. The ship will return to Tromso October 3.

Last March, Columbia’s scientists and others published an article in Nature on findings of volcanic activity on the eastern portions of the Gakkel Ridge. This discovery was based on bathymetric (sonar mapping) data and sidescan images taken in 1999 by a Navy submarine. Before that expedition, only vague descriptions of the Gakkel Ridge. This discovery has never before been undertaken.

The Gakkel Ridge poses unique scientific opportunities as the slowest-moving ridge on earth, and as a result scientists expect this expedition to yield discoveries of rocks that have never been seen before. In addition, the isolation of the arctic basin could allow discoveries of species of animals that have never been seen before.

Ridges are the elevated boundaries-like underwater mountain ranges-between the Earth’s tectonic plates. As the plates spread apart, they create gaps. Magma, which turns into the volcanic rock basalt, fills in these gaps, thus creating the ocean floor. The fastest-moving ridge moves at a speed of one foot each year. The Gakkel Ridge moves less than one half inch each year.

“Ridges that spread at the slowest end have not been able to be investigated,” said Charles Langmuir, Arthur Stone Profesor of Earth and Environmental Sciences at Columbia’s Lamont-Doherty Earth Observatory. “As the spreading slows, everything is still down there never been seen before.”

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General Studies and Continuing Education Achieving Success With An Array of New Programs and Services for Non-Traditional Students

BY KRISTIN STERLING

General Studies and Continuing Education are two units within the Arts and Sciences that offer programming for non-traditional students. The School of General Studies is a distinguished undergraduate liberal arts college for non-traditional students. The School of General Studies is a distinguished undergraduate liberal arts college for returning students or those who have delayed attending college, as well as those enrolled in the Post-baccalaureate Premedical Pre-Health Program. Additional post-baccalaureate programs are housed in Continuing Education, which also focuses resources and attention on the Summer Session, the American Language Program, programs for students wishing to study abroad, high school students and those seeking applied professional education. In serving their individual student constituencies, both have a strong basis in customer service and rely on technology to deliver their messages and provide academic opportunities.

Until a comprehensive reorganization in 1995, the two units functioned under a single umbrella organization. In the six years since they were separated, both General Studies and Continuing Education have expanded and flourished. The two articles below highlight ways in which specialization has resulted in an impressive list of programs that we didn’t have before.”

In 1995 CE included programs such as the Summer Session, American Language Program, Special Students Program, Computer Technology and Applications, Summer Program for High School Students and the Columbia Study Abroad Programs in Paris and Italy. At that time there were approximately 3,000 applicants per year for the various Continuing Education programs. Today that number exceeds 6,000.

Within two years of its creation, Continuing Education undertook a self-study, identifying its strengths and weaknesses. This study resulted in the recommendation, which was endorsed by the faculty of Arts and Sciences, that Continuing Education should grant degrees, offering masters and certificate programs.

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