

## Join Jim Swift on an Arctic Ocean Research Cruise aboard the US Icebreaker Healy!

Sail as a working volunteer - a full science participant - on a summer 2010 Arctic Ocean research cruise on the large polar science icebreaker USCGC Healy with SIO oceanographer Jim Swift! Experience the front lines of ocean climate research first hand as we work north from Bering Strait into the Arctic Ocean sea ice pack. Do something wonderful for the La Jolla Symphony & Chorus while assisting the UCSD Scripps Institution of Oceanography with climate research, and enjoy the experience of a lifetime!

Jim - a Research Oceanographer at SIO and second bassoonist in the La Jolla Symphony & Chorus orchestra - is leading a group of four technical specialists from SIO on a 38-day Arctic Ocean research cruise June 12-July 22, 2010. The work is one component of a NASA-funded study, led by Dr. Kevin Arrigo (Stanford), relating to changes in the biological and physical oceanography of the region north of Alaska. The science questions to be addressed include:

- How will climate-related changes in the Beaufort and Chukchi Seas (e.g. sea-ice cover, nutrient supply, pH, ocean optical properties) affect phytoplankton community composition and primary production?
- How will changes in hydrography and primary production in Arctic waters affect carbon export and air-sea CO<sub>2</sub> exchange?
- How will the presence of a subsurface chlorophyll maximum and the increase in freshwater discharge from rivers influence our ability to study Arctic regions using remote sensing techniques?

There will be several science teams on board. Jim and his team will be measuring the temperature, salinity, dissolved oxygen, and nutrients via an electronic profiling instrument and by taking and analyzing water samples. The volunteer will work as a full participant, side-by-side with Jim every day preparing the equipment, running the casts, keeping records, drawing water samples, and assisting the other teams. Life on board, for better or worse, will be the same as everybody else's: long hours, occasional hard work, military food, short showers, disrupted sleep - plus excitement, fun, likely polar wildlife sightings, new science findings, and interesting companions. Icebreaking on the Healy is fantastic. Keep that camera handy!

This unique opportunity is equally open and suitable for a female or a male, 18 years of age or older. There is no upper age limit, and the work will be only as physically demanding as one chooses, but the participant must be in reasonable physical condition. (For example there are a lot of steep stairs - we call them "ladders".) There is a medical officer and a ship's hospital, but we will be 3-7 days from shore medical facilities, and so it is very strongly advised that the participant consult and obtain the approval of a physician before sailing. (Medical clearance may be required.) A research ship is not a dangerous place, but it is an industrial environment. Safety is paramount in all operations and daily life. The participant is expected to work with Jim ahead of the cruise in order to be well prepared and know what to expect.

The bidder/donor can choose to send someone else, but Jim Swift will interview and must approve whoever participates at sea. The participant will be obligated to the authority of the ship's captain, as are all persons who sail on the ship, and must obey all rules and the captain's instructions. The participant must agree to standard UCSD/SIO terms regarding volunteering for work at sea. Note that as an official, working member of the UCSD Scripps Institution of Oceanography science team, the participant will be covered under California Workman's Comp.