Aquatic Adventures: Great Lakes Field Trip

Winter semester EARTH professors Brian Arbic and Michela Arnaboldi took their classes, Introduction to Physical Oceanography (421) and Geology of the Great Lakes (417) respectively, on a joint field trip. The trip was optional for both classes, and about 22 students chose to participate.

The field trip consisted of an oceanographic cruise on Lake Michigan during which students could observed and carry on, first hand, real operations and measurements necessary to collect oceanographic and limnologic data.

The ship that we sailed on is the R/V Laurentian, an 80-ft steel-hulled vessel built in 1974 by the University of Michigan. Today, GLERL (Great Lakes Environmental Research Laboratory) leases and runs the Laurentian but, luckily for us, offers vessel access and support to University of Michigan scientists. The ship operates out of the NOAA/GLERL Lake Michigan Field Station in Muskegon, where we arrived on Friday, April 12. There we met NOAA chief scientist Dennis Donahue for a briefing and an introduction to NOAA’s operations on the Great Lakes.

As an added bonus, we spent the night at the USS Silverside Submarine Museum. There we were given a wonderful tour of the WWII era submarine USS Silversides and slept on the USCGC McLane, a 1920’s era Coast Guard cutter.

The research cruise took place on Saturday April 13. Although we had originally planned to go out on Lake Michigan, due to high winds (it turns out April is not yet Spring on the Great Lakes!), we had to go out on Lake Muskegon instead. Students were given the opportunity to choose the tasks they led onboard, including taking bottom samples with PONAR grabs (these are bottom grabs developed at the University of Michigan), taking water samples using Niskin bottles, taking biological samples with vertical net towings, and taking temperature profiles using CTD sensors.

The students greatly enjoyed the trip. In fact one Masters student said that it was the highlight of all of the classwork he had done at University of Michigan.

And, by the way, if you ever sail on the Laurentian, you’ll have to go through a drill and wear your safety suit! (check out our picture)

Special thanks to Dennis Donahue and his NOAA crew and to the staff and tour guides at the USS Silverside Submarine Museum for their generous help with a trip enjoyed by all.

Transformation of the Geology of the Great Lakes and Physical Oceanography classes as they donned their protective gumby suits for their trip on the USCGC McLane (Photo courtesy of Sang Chen, UM graduate student).