BOY SCOUT OCEANOGRAPHY MERIT BADGE PROGRAM
MAY 21, 2005
TROOP 13 (Hampton, VA) and TROOP 81 (Yorktown, VA)

All photos were taken by Julie R. Morgan, CCPO Program Specialist.

Dr. Hofmann, professor of oceanography, began the Oceanography Merit Badge Program, which was held at the Center for Coastal Physical Oceanography (CCPO), with an overview presentation. Basic oceanographic concepts were covered, as well as ship etiquette and the plan for activities on the R/V *Fay Slover*.

Dr. Hofmann explained how a plankton net is used to collect samples.

Interested participants inquired about the various equipment on display.

A group photo was taken at the NOAA dock prior to boarding the R/V *Fay Slover*.

The *Slover* took the participants on a scenic tour of the Elizabeth River.

Patrick Curry (left), mate for the R/V *Fay Slover*, piloted the vessel for the event and welcomed visitors to the bridge.

Participants enjoyed the view from the stern.

Once on station, the real work began. Olga Polyakov, CCPO research scientist, explained what a Niskin bottle is and how it is used to collect water samples.

Mate Laura Gibson instructed two Scouts in preparing the Niskin bottle for deployment.

A Scout guided the Niskin bottle out to prevent it from swinging.

The Niskin bottle was lowered down into the water column.

Olga and a few Scouts brought the Niskin bottle back up.

Olga guided the bottle back after being deployed.

Olga told the Scouts about how this type of sampling allows for collection of water at specific depths.

Dr. Hofmann put the Niskin bottle in a mount on a wall.

Next was the plankton tow. Laura explained how this would be done.

The Scouts prepared to deploy the plankton net.

A Scout asked Olga a question about the type of specimens to be collected.

The canister attached to the net holds the various specimens collected during the tow.

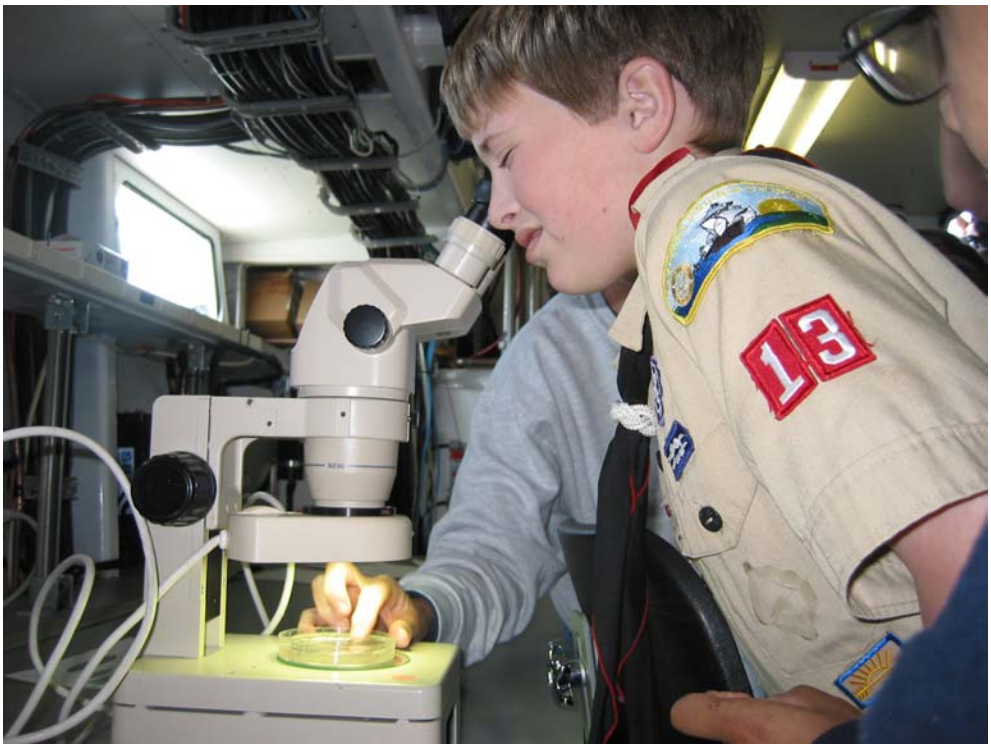
Olga guided the plankton net out, while a Scout volunteer held the canister.

This Scout prepared to launch the canister out into the water.

After the net was brought back up, it was hosed down to send any specimens remaining in the net down to the collection canister.

Dr. Hofmann and Olga separated the net and canister to see what was caught inside.

The specimens collected in the plankton net tow were put into a Petri dish for inspection under the microscope. Dr. Hofmann identified some of the specimens for a curious group of Scouts.



A ctenophore known as a comb jelly was included in the plankton net tow, as well as copepods, fish eggs, and Daphnia.

Several Scouts eagerly awaited a chance to investigate with the microscope.

While the Scouts below deck checked out the plankton net sample, other Scouts were preparing to do a bottom mud grab. Olga explained how this would be done.

The equipment was lowered to the bottom to collect a sediment sample

The mud grab sample was deposited into a plastic tray.

The Scouts investigated the sediment.

Laura found polychaete worms inside the sediment and encouraged the Scouts to dig, as well.

Below deck, a budding scientist was focused intently on the microscope. Julia Bangs (far right), a Tidewater Community College student, participated in the program through a mentoring partnership with Dr. Hofmann.

Back on deck, Scouts prepared to deploy a CTD (conductivity-temperature-depth), which measures the conductivity and temperature of the water column as a function of depth. Salinity is also measured using a CTD.

Olga explained the profiles produced by the CTD, which relays data back to the onboard computers. Kirby Broyles, a videographer from Old Dominion University, joined the excursion to shoot some video footage.

Dr. Hofmann and a Scout discussed the organisms found in the plankton net tow.

Traveling from Hampton and Yorktown meant a very early start to the day. Some of the Scouts took advantage of the return leg of the trip to rest.

Another successful program was completed as the *Slover* approached its berth.