

We Know Where It Isn't!

by Cadet 1/c Stephen Glynn

In the last issue of the *The Bulletin* you read that after months of preparation, the search for the BEAR had gotten underway. Now the "BEAR" team of 1/c cadets is back and can cheerfully report that they achieved their number one goal; gathering valuable experience and training. No, they did not find the BEAR. But, in the words of Dr. Harold Edgerton, the MIT Professor Emeritus who accompanied the group: "If you had found it in eight days you would have thought that this searching is too easy." He also commented that it sometimes takes months to find a wreck such as the BEAR.

Although the BEAR wasn't actually found, the group made some remarkable achievements. This was the first attempt to locate a sunken ship in deep water, out of sight of land. Even if it were close to land, with the "pea-soup" fog the group encountered the entire time it was out it would have made little difference. Instead of the visual and short-range navigation techniques used in earlier searches, the team utilized a digital "computer chip" technology LORAN-C receiver interfaced with a

true plot, digital, electro-mechanized plotter. Using these two pieces of equipment, position determinations to within approximately fifty yards could be made. In addition, the main unit contained such useful functions as: time differential memorization, automatic speed over ground computation, and steering information display based on a pre-programmed destination. By placing the plotter in front of the helmsman, he — and the OOD as well — had a graphic display of the ship's motion; hence, once a search pattern was placed on the plotter, the helmsman could steer down each search leg as if he was steering a video "car" in a penny arcade. Without this ability, accurate and complete searches would have been nearly impossible. As it was, approximately 70 square miles of ocean were covered with an overall probability of detection of 85% — a figure which would have been higher if it were not for a few difficulties encountered early in the search.

Dr. Harold Edgerton was a great asset to the search, supplying both necessary technical expertise (he developed the

side-scan sonar) and an unflagging curiosity and drive which inspired the entire group. Both he and Mr. Charles Miller, who also accompanied the search team aboard the USCGC CONFIFER, are professors in electrical engineering at MIT, Boston, MA. Both men are very capable teachers of practical electronics and each cadet gleaned considerable knowledge, particularly from their trouble-shooting methods.



Cadet 1/c Linda Johanson standing watch on the plotter.



Search for BEAR is Underway

As of press time, the CGC CONIFER, a tender homeported in Morehead City, NC, was at sea in the Brown's Bank area some 200 miles east of Boston searching for the remains of the BEAR. A 13 member team of cadets, led by LCDR Greg Keary, '66, an Academy electronics instructor, and Prof. Harold Edgerton, the famed underwater search expert from MIT who located and photographed the remains of the Civil War ironclad MONITOR, are on board with a sophisticated array of Loran C track plotting gear, side-scanning sonar, and underwater photography equipment investigating wrecks in the area BEAR's remains are expected to lie (See "Cadet Team To Search For BEAR," *The Bulletin*, Mar/Apr '79, pp. 10-11).

A new resource has become available to facilitate this quest, courtesy of the U.S. Navy. The small nuclear powered experimental submarine NR-1 will be operating in that same area under civilian contract in mid-August. If CONIFER makes contacts that require further investigation, she will mark them with deep anchored transponders — electronic devices that "answer back" to sonar transmissions. During her August operations NR-1 will undertake



CONIFER pulls away from Academy pier with BEAR search party aboard.

to relocate and photograph the most promising of these contacts.

The search and identify effort is one of many Mission Area Programs (MAP)

laid on for the summer training of cadets. First class cadets now spend half their summer with the Cadet Practice Squadron, half on MAP programs. ■

Academy Yacht Scores Well In Annapolis to Newport Race

The Coast Guard Academy Yacht SHEARWATER, competing against eight U.S. Naval Academy Yawls in level competition, won the second place trophy for Luders Yawls in the 1979 Annapolis to Newport Race. SHEARWATER finished less than 30 minutes behind the first Navy Yawl in the 473 mile, 115 hour race. SHEARWATER was skippered by LCDR Ron Beck with LCDR Bob Luckritz as the other watch captain. The cadet crew included Cadets 2/c Darrell Milburn, Navigator; Bruce Campbell, Sailmaster; Richard Kaser, Main/Mizzen; Giff Hammar, Cockpit/Cook; Vincent Scalesse, Fore-deck Cook; and Preston Gibson, Cockpit/Engineer.

The race started on June 16 with a

beat out of Chesapeake Bay to Chesapeake Light. SHEARWATER had a good start and after 24 hours of beating to the Bay Bridge Tunnel could count five Navy Luders close behind. The race strongly favored the larger yachts as ample winds from a favorable direction changed shortly after they crossed the finish line. The smaller boats were treated to high winds and seas from the Northeast (least favorable) and then a frustrating calm off of Eastern Long Island. Ted Turner's TENACIOUS crossed the finish line almost 46 hours before the first Luders Yawl.

One Navy yawl was visible far ahead as SHEARWATER approached Montauk Point. The Coast Guard crew at this point felt they were far behind. It

was only after finishing the following day that they learned that two of the Navy Luders Yawls had abandoned the race and five others had not yet finished. As the trophies were being presented later that day, two of the Navy yawls had still not finished.

This year's Annapolis-Newport Race provided the cadets involved with a variety of experiences; heavy weather, light airs, difficult piloting and navigation in some of the busiest waters in the country. Ocean Races such as this require thorough preparation, excellent seamanship and navigational skills and a crew with a competitive spirit that works as a team. What could be finer experience to prepare these future officers for their Coast Guard career? ■