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The R/V Kaho – Lake Ontario

The USGS Great Lakes Science Center is dedicated to providing scientific information for restoring, enhancing, managing and protecting living resources and their habitats in the Great Lakes region.

The Center is headquartered in Ann Arbor, Michigan, and has biological stations and research vessels located throughout the Great Lakes Basin.

Background

The 65 foot long R/V *Kaho* has been the workhorse of the fisheries research fleet in Lake Ontario for almost three decades. The vessel was built in 1961 by Hansen Welding Company in Toledo, Ohio, and since it was assigned to the Lake Ontario Biological Station in 1977, the *Kaho* has participated in long-term population studies of important prey fish and in long-term studies aimed at evaluating the performance of stocked lake trout used in the bi-national restoration program. Current information on prey fish populations is used by resource agencies to manage stocked predator populations and population models built from the long-term data are used to anticipate future changes in the prey fish community.

In addition to lake trout restoration research, the *Kaho* has participated in tightly focused short-term studies designed to determine the effect of invasive species on the Lake Ontario ecosystem. Such studies included documenting changes in the food web and in fish distribution associated with establishment of invasive species. Studies conducted aboard the *Kaho* documented the spread of zebra and quagga mussels across the lake bottom and the concurrent decline of the burrowing amphipod, *Diporeia*, an important food for many fishes. The *Kaho* is also used to collect fish and environmental samples for a wide spectrum of studies, including the Great Lakes Fish Contaminants Monitoring Program in cooperation with U.S Environmental Protection Agency.

Specifications

The R/V *Kaho* has two crew members, and has sleeping accommodations for four scientific personnel. There are two washrooms, one with a shower, and a full galley including an electric range, microwave, refrigerator and eating area. The *Kaho* has the ability to be at sea for 17 days.

Sampling zooplankton on the R/V Kaho

Length: 65 ft.
Beam: 17.8 ft
Draft: 9 ft.
Displacement: 83 tons
Propulsion: Twin diesel engines Cummins N-855 Big Cam, 195 HP each), Twin Disc 2.95:1 marinegear, twin Michigan Wheel 3-blade, 40" x 28½" propellers, 3" shafts.
Cruising speed:10.4 knots (12 mph)
Range: 2400 miles
Fuel: 3000 gallons

On-board Equipment

Fully equipped for fisheries research, the *Kaho* has bottom and mid-water trawls, gillnets, stainless steel sorting table, trawl winches, a deck crane, gillnet lifters, enclosed balances and a wet laboratory with freezers and refrigerators for processing fish collected.

The *Kaho* also has limnological sampling capabilities with a Seabird SBE 19 Bathythermograph with Licor PAR sensor, ALEC Electronics ABT-1 Direct Reading Bathythermograph, 0.5m plankton nets with flow meters, Niskin bottles, Van Dorn water sampler, 9"x9" Ponar bottom sediment sampler, YSI digital temperature probe, and secchi disks.