USGS
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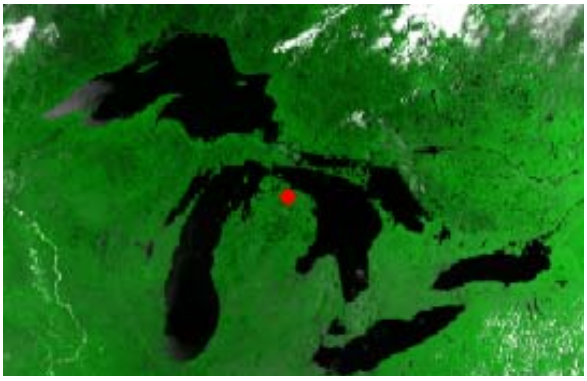
Hammond Bay Biological Station

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.



The Station

The Hammond Bay Biological Station (HBBS) is a field station of the USGS Great Lakes Science Center. Located at 11188 Ray Road near Millersburg, Michigan, it was a former U.S. Life Saving Service and U.S. Coast Guard Station, and was built in 1879. It became a biological research station in 1950 and has since made important contributions in sea lamprey research and control in the Great Lakes. Scientists here were responsible for many major developments, including design of effective barriers, discovery of the selective lampricide (TFM) used in stream treatments, discovery of a second lampricide (Bayluscide), and development of the sterile-male-release technique for sea lamprey control.

Primary Research Capabilities

Work at the HBBS centers almost exclusively on the study and control of the parasitic sea lamprey that invaded the Great Lakes and devastated many native fish species. Scientists at the station study all three stages of the sea lamprey life cycle: the larval phase that burrows into stream bottoms, the parasitic phase that feeds on host fishes, and the spawning phase that migrates upstream in spring to spawn. Research on sea lampreys and their hosts is conducted both within the laboratory and in the field.

Facilities

The station is able to pump Lake Huron water from two depths at over one million gallons per day. Larval sea lampreys can be held and fed for extended periods. Water temperatures can be controlled to allow studies of both warm and cold-water fishes or to study the effects of parasitic feeding by sea lampreys. Artificial spawning channels allow study of sea lamprey spawning behavior. Analytical capabilities include spectrophotometry, high performance liquid chromatography, and spectrofluorometry. The station is equipped to conduct static and flow-trough toxicity tests used to examine the effects of various factors on lampricide toxicity in the laboratory and the field. A nearby stream with a combined low-head and electrical barrier allows study of migratory behavior in sea lampreys. A launch ramp provides access to Lake Huron.

Cooperating Agencies

Funded by the Great Lakes Fishery Commission (GLFC), the station conducts research and provides technical support for the GLFC and its control agents--the U. S. Fish and Wildlife Service and the Department of Fisheries and Oceans Canada. Cooperative studies are conducted with

A lake trout attacked by sea lampreys

GLFC-funded researchers from universities in the U.S and Canada, and with fishery biologists from state, provincial, and tribal agencies throughout the Great Lakes Basin. Through an agreement with the GLFC, the station is formally partnered with Michigan State University and the University of Guelph. When possible, station facilities are provided to other university researchers worldwide who are engaged in research on lampreys.