

## GREAT OUTDOORS

## Charter captains briefed on status of lake fisheries



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Tory Gabriel, Ohio Sea Grant's Fisheries Extension Specialist, hosted a workshop on August 27 for 25 licensed charter captains at OSU's Stone Laboratory on Gibraltar Island.

Since 2014, workshops have been used to provide Lake Erie charter captains with information about the status of the fisheries and environmental conditions on the lake to share with their clients.

During a 1 1/2-hour science cruise aboard two of Stone Lab's research vessels, the Bio-Lab and Gibraltar III, biological sampling techniques were demonstrated. The participants were given a chance to get their "hands wet," like thousands of school kids do during the spring and fall aquatic science workshop program.

The final collection was a fish trawl that showed the captains a collection of fish species or sizes not frequently encountered via hook & line, such as troutperch, mimic shiners and some young-of-year (YOY) game fish specimens.

Similar trawls are what the Ohio Division of Wildlife use each summer

and fall to determine spawning success for the fish species that they monitor in the lake, including sportfish and their important prey species.

On the Bio-Lab, the vessel that I rode on with half of the group, YOY yellow perch, white perch and a white bass were joined by a few adult round gobies and yellow perch.

After departing the respective research vessels, there were four brief presentations made by Lake Erie researchers.

Dr. Chris Mayer from the University of Toledo's Lake Erie Center summarized their work with the U.S. Fish and Wildlife Service, Ohio Division of Wildlife and others to document grass carp spawning locations and determine the best methods of removing them from Lake Erie tributary streams to hopefully prevent them from reaching densities that cause adverse impacts to native fish.

Ann Marie Gorman of the Ohio Department of Natural Resources' Division of Wildlife discounted some suggested cures for the low perch population in Lake Erie's Central Basin.

Stocking perch from hatcheries would

be cost prohibitive, and the lack of microscopic prey — suspected to be the cause for reduced perch recruitment — would still occur with stocked perch fry.

Thinning the walleye population would be unwise, since only 2% of walleye stomachs contained yellow perch. To boost the perch population, massive numbers of walleyes would have to be removed.

Commercial fishermen are highly monitored to stay within their assigned quota, so allowing them up to 35% of the annual perch Total Allowable Catch remains biologically sound.

Dr. Stu Ludsin, OSU Aquatic Ecology Unit Leader, investigated the impacts on fisheries that might occur at different nutrient concentrations.

Reducing nutrient levels enough to improve water quality, reduce harmful algal blooms, eliminate the Central Basin Dead Zone and keep beaches safe would likely reduce walleye and yellow perch populations by narrowing the foundation of the food pyramid.

Walleye and perch are thriving under the current conditions that create fertile water in the Western Basin, but Lake

Whitefish did better when the water was less productive, and carp prefer even more enriched conditions.

Dr. Mike McKay of the University of Windsor reviewed some of his findings on the impact of reduced ice cover on the Great Lakes, which has declined an average of 1.3% per year for the past 30 years.

Accelerated bluff erosion rates, lower egg survival of fall-spawning fish species and higher lake-effect snowfall levels all occur during winters with lower ice cover.

He has also documented the presence of previously unknown dense winter patches of filamentous diatoms, a type of algae. These algal species have been discovered to be helpful for aiding ice formation under suitable conditions.

The decay of diatoms during the summer may be responsible for low oxygen levels seen below the thermocline in the Central Basin, according to other algal researchers.

The captains were shown how complex the lake's ecosystem is — and what can and cannot be done to deal with Mother Nature's moods.