

Researchers study 'fundamental, amazing change' in Great Lakes (w/ Video)

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(PhysOrg.com) -- The Great Lakes are in the midst of a remarkable ecological transformation, driven largely by the blitzkrieg advance of two closely related species of non-native mussels.

Though the zebra mussel is better known to the public, over the past decade it has largely been displaced in Lake Michigan by the quagga mussel, which can thrive far from shore in deep, mud-bottomed waters.

"Fundamental, amazing change is happening in the Great Lakes right now, and it's being propagated throughout the [food web](#), from the bottom up," said David Jude, a research scientist at the University of Michigan's School of Natural Resources and Environment.

Recently, Jude and several colleagues cruised Lake Michigan aboard the 80-foot R/V Laurentian, investigating the links between the invasive mussels' spread and the recent sharp decline of a tiny, shrimplike creature called diporeia. The algae-feeder has for millennia been one of the pillars supporting the base of the Great Lakes food web.

Make no mistake: The study of diporeia's decline is no esoteric academic pursuit. Nearly every [fish species](#) in the Great Lakes feeds on diporeia at some point in its life cycle. The diporeia downturn is already impacting Great Lakes commercial fisheries and a sport-fishing enterprise valued at more than \$4 billion per year.

"A decade ago, there were no quagga mussels in Lake Michigan," Jude said. "Now you can find them across the entire lake, and this invasion has happened faster than anyone thought it would. We're really grappling with some of the changes that are going on in the Great Lakes as a result."

"We're going to lose a big chunk of that sport fishery," said Jude, a fishery biologist who has studied the [Great Lakes](#) for more than 30 years. "That will have a tremendous economic impact and will result in dramatic changes to the fisheries people have relied on in the past."

Provided by University of Michigan ([news](#) : [web](#))

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