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Distribution of Sphaeriid Clams in Lake Erie Twenty-five Years After Invasion of Dreissena

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Abstract

Clams in the family Sphaeriidae are widespread native mollusk species that are often overlooked. The distribution of these organisms in Lake Erie has not been examined in the 25 years since the initial invasion of the zebra mussel, *Dreissena polymorpha*. Carr and Hiltunen identified 10 species of Sphaeriidae in Western Lake Erie in 1961, of which *Pisidium casertanum*, *P. compressum*, *P. nitidum*, *Sphaerium corneum*, and *S. striatinum* and *Musculium transversum*, contributed 89.7% of all fingernail and pea clams sampled and were considered common. Four other species were reported as rare. Our research examines whether the distribution of Sphaeriid clams in western Lake Erie have declined similar to unionid mussels, as a step to enhancing the overall picture of impacts from the invasive dreissenids. Strayer has reported for the Hudson River that sphaeriid diversity initially declined after the dreissenid invasion, but after a significant die-off of *D. polymorpha*, a condition present in Lake Erie, densities of native species rebounded. Multiple standard ponar samples of Sphaeriid clams were made by the Ohio Environmental Protection Agency at 12 Western Basin stations and several more from the Central Basin as by-catch from mayfly-larva sampling in the summers of 2012-2014. Preliminarily, members of *Sphaerium* are rare, *M. transversum* are common as are at least several species of *Pisidium*.