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Population Dynamics of the Invasive Round Goby Fish in the Great Lakes

The round goby fish, *Neogobius melanostomus*, is an invasive species believed to have originated in ballast water from Eastern Europe and Western Asia that was first detected in the St. Clair River in 1990 and later known to be present in all of the Great Lakes by 2000. An unfortunate consequence is the decline or displacement of many native species such as the mottled sculpin, sturgeon, and trout. In this talk, I will present a density-dependent, discrete-time model of the population of the round goby that accounts for dispersion. Moreover, I will provide a preliminary analysis and simulation. This should lead to practical control strategies.