Seminar title: Coordinated response efforts to the red swamp crayfish invasion in Michigan, U.S.A.

Native to the southeastern United States, red swamp crayfish (Procambarus clarkii) currently have a near-global distribution as a consequence of purposeful and accidental introductions. Their effects in invaded ecosystems are often dramatic, and include negative effects on native amphibians, macrophytes, water quality, and native crayfish species. Red swamp crayfish construct extensive burrows and are demonstrated to undermine water control structures and enhance erosion in invaded systems. In July of 2017, red swamp crayfish were confirmed in several waterbodies in Michigan including a natural lake, residential ponds, and golf course waterways. Their discovery led to the development of a multifaceted and coordinated response plan involving MSU along with multiple state and federal agencies. This response plan includes early detection, genetic determination of source populations, life history studies, and the evaluation of novel and traditional control methodologies. Crayfish are notoriously difficult to eradicate, and little information exists on red swamp crayfish invasions at this latitude to guide eradication efforts. As a consequence, our research provides the unique opportunity to inform efforts to control this species around the world. This seminar will provide an overview of the red swamp crayfish invasion in Michigan and will detail the coordinated effort to eradicate this species in the state.