# From little bugs to big fish:

beginning to understand how AIS disrupt sport fisheries

Sustaining Walleye Populations: Assessing the Impacts of AIS A collaborative project seeking to understand links between invertebrate invasion and sport fish populations in Minnesota's largest walleye lakes

Young sport fish, like walleye, can be negatively affected by zebra mussels and spiny waterfleas.

#### Zebra mussels:

- Found in 344 water bodies in Minnesota
- Become very abundant in lakes
- Remove nutrients from the water that would otherwise support micro-organisms (zooplankton), which small fish eat



#### Spiny waterfleas:

- Found in 66 water bodies in Minnesota
- Are large zooplankton that eat smaller zooplankton
- They replace the small zooplankton, but are difficult to eat because of their large spine, reducing the amount of food for small fish

## Want to learn more?

Contact the Minnesota Aquatic Invasive Species Research Center at maisrc@umn.edu or www.maisrc.umn.edu, or reach out to a member of the research team:

Bethany Bethke bethany.bethke@state.mn.us (218) 302-3271

# The research

Project goals: In lakes with and without zebra mussels and/or spiny waterflea, compare fish food habits and compare fish growth and catch rates over time.

## Sampling:

- The DNR samples these lakes annually, in the summer and the fall
- We're working with existing sampling to get more large and small fish and invertebrates
- Sampling in Leech Lake, Red Lake, and Lake Mille Lacs is complete
- This summer, researchers will be sampling at Cass Lake, Lake Winnibigoshish, Lake of the Woods, and Lake Vermilion
- Data will be analyzed over the winter, with results expected in 2019



