



MINNESOTA AQUATIC INVASIVE
SPECIES RESEARCH CENTER

UNIVERSITY OF MINNESOTA

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PROJECT: EFFECTIVE RUSTY CRAYFISH REMOVALS TO PROTECT **WILD RICE**

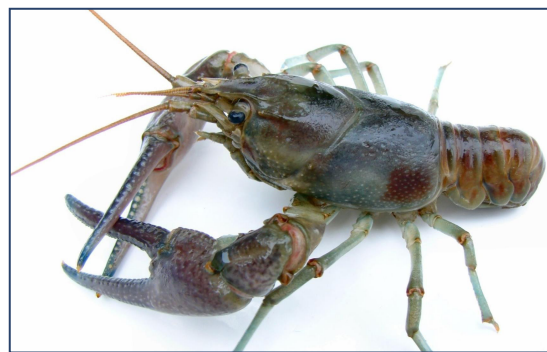
Rusty crayfish are an aquatic invasive species that can be harmful to emergent vegetation like wild rice.

PROJECT SUMMARY

This project will determine the **best trapping methods to remove invasive rusty crayfish** and protect sensitive vegetation, such as wild rice. Research teams will evaluate catches of rusty crayfish among three different types of traps and baits, and in two seasons (spring and summer). During the spring sampling, researchers will mark and release some rusty crayfish which will be recaptured during the summer sampling. Recaptured rusty crayfish will tell researchers how far rusty crayfish move between seasons to determine if localized reductions near wild rice are sustainable.

WHAT ARE AQUATIC INVASIVE SPECIES?

AIS stands for “aquatic invasive species.” AIS are **non-native organisms** that use resources needed by our native aquatic creatures. AIS can harm our lakes in ways that affect our fishing, water quality, and local economies.



*Image: Rusty crayfish
Photo credit: Jeff Gunderson*

THE IMPACT OF RUSTY CRAYFISH ON WILD RICE

Rusty crayfish eat and uproot aquatic vegetation. **Wild rice is an important cultural resource** vulnerable to rusty crayfish grazing, and is particularly sensitive to disturbances in its growth during spring (May-June) when young and tender shoots are rising from lake bottom to the water's surface.

FOR MORE INFORMATION:
Z.UMN.EDU/RUSTYREMOVAL

Image credit, top: John Noltner

HOW THE FIELD RESEARCH WORKS

The research team selected three Northeast Minnesota area lakes for 2023: **Garden Lake in Lake County, Dumbbell Lake in Lake County, and Caribou Lake in Cook County.** Three additional lakes will be selected for 2024. These lakes were selected because they contain rusty crayfish and wild rice (or *suitable surrogate habitat/vegetation*).

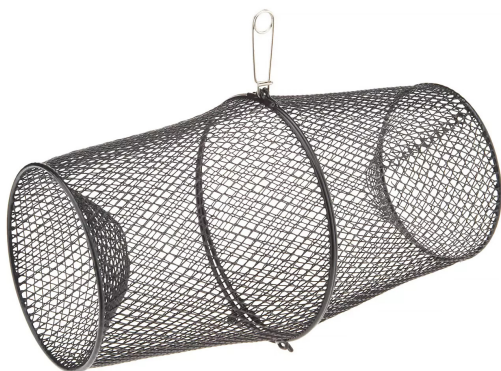
When researchers visit one of these lakes, they will **deploy seventy-five crayfish traps** in a relatively small area. Researchers try to pick locations that will be the least disruptive to lakeshore owners or to lake recreation activities. Each trap has its own buoy to mark its location, and research team members check and re-bait traps every day for one Monday-Friday work week per visit. **Neither the traps nor the buoys will block any docks or navigation channels, and traps will be removed at the end of each sampling visit.** You may see these buoys in the water if you visit. Just remember: *science is happening!* Researchers will visit lakes to conduct trapping research twice each year: once in spring (May-June) and again in summer (July-August).

RESEARCHERS HOPE TO LEARN:

- What trapping method removes more rusty crayfish per unit effort?
- Which method removes the most females? Most biomass?
- What methods are most economical?
- How much do rusty crayfish move in a lake?



Example of a type of buoy



Example of a type of Rusty crayfish trap

Photo credit: Frabill

PROJECT TEAM

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- **Brennan Pederson**, Field Technician, UMD & NRRI
- **Liz Anderson**, AIS Coordinator, Lake County Soil and Water Conservation District
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