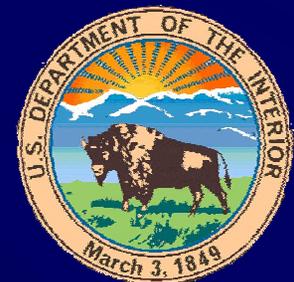


Status of Aquatic Nuisance Species in Lake Huron in 1999

Jerry McClain

U. S. Fish & Wildlife Service
Fishery Resources Office
Alpena, Michigan 49707



>140 Species in the Great Lakes 80+ in Lake Huron

- 40 Plants
- 20 Fish
- 10 Invertebrates
- 10 Algae

Introduction Pathways

- Ballast Water
- Open waterways (Passive)
- Movement of Boats
- Baitfish Dumping

High Profile Exotics Found in Lake Huron

- Fish

- Sea lamprey
- Eurasian ruffe
- Round goby

- Mollusks

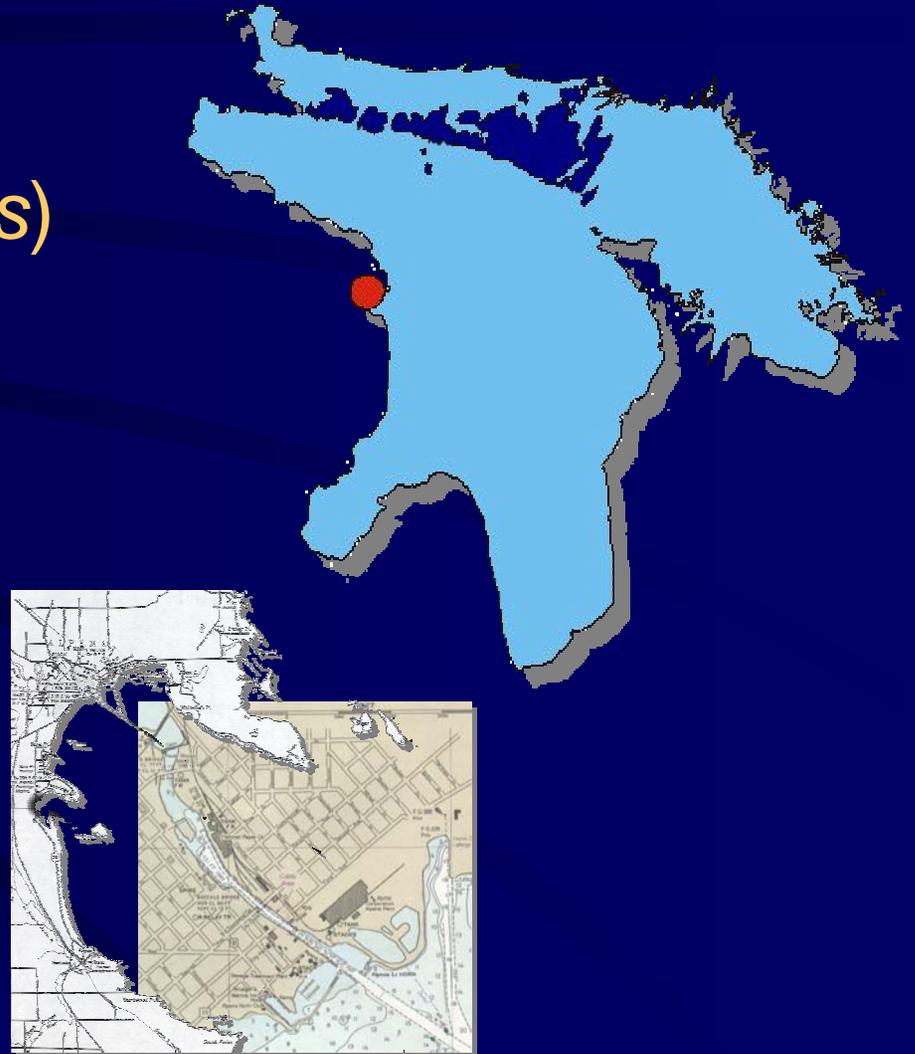
- Zebra mussel
- Quagga mussel

- Zooplankton

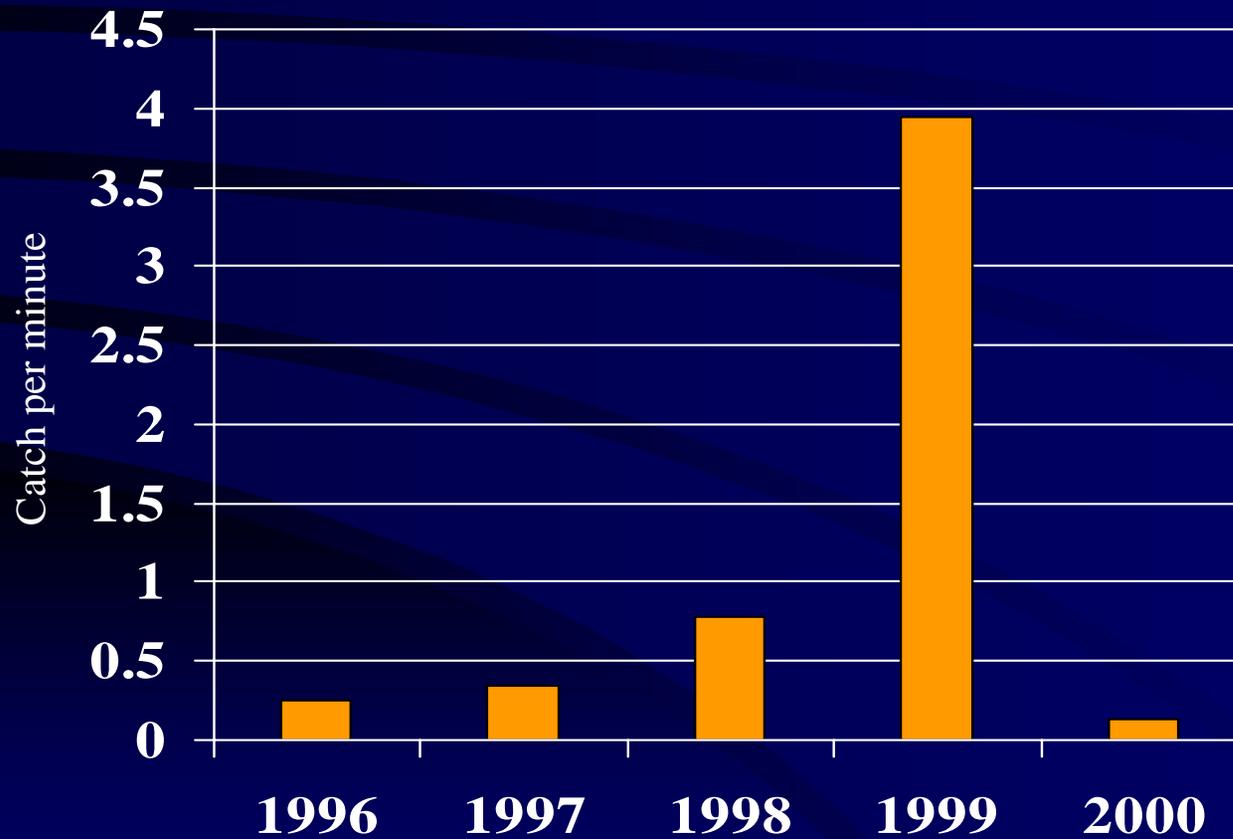
- Spiny water flea

Fish

Eurasian ruffe
(*Gymnocephalus cernuus*)

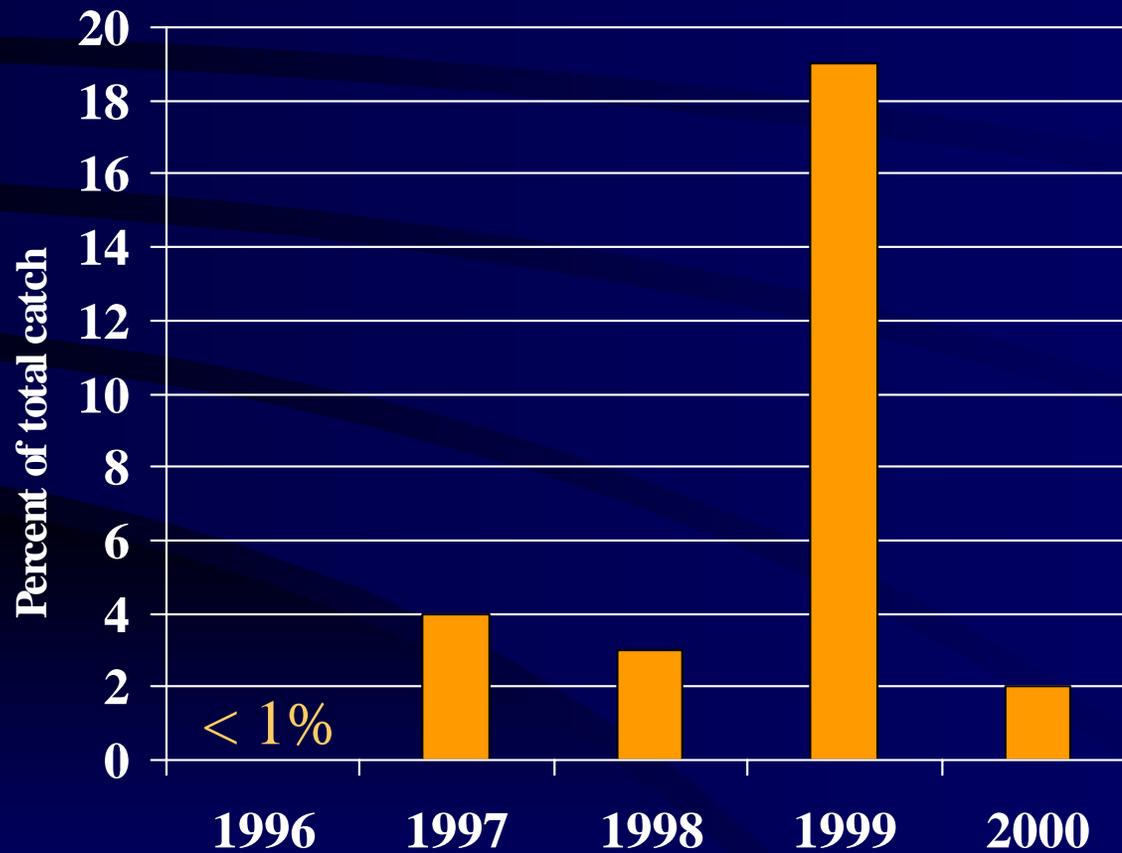


Relative Abundance of Eurasian Ruffe in Thunder Bay from Fall Bottom Trawling Surveys



USFWS

Percent of Total Catch Comprised of Eurasian Ruffe in Thunder Bay from Fall Bottom Trawling Surveys



USFWS

Fish

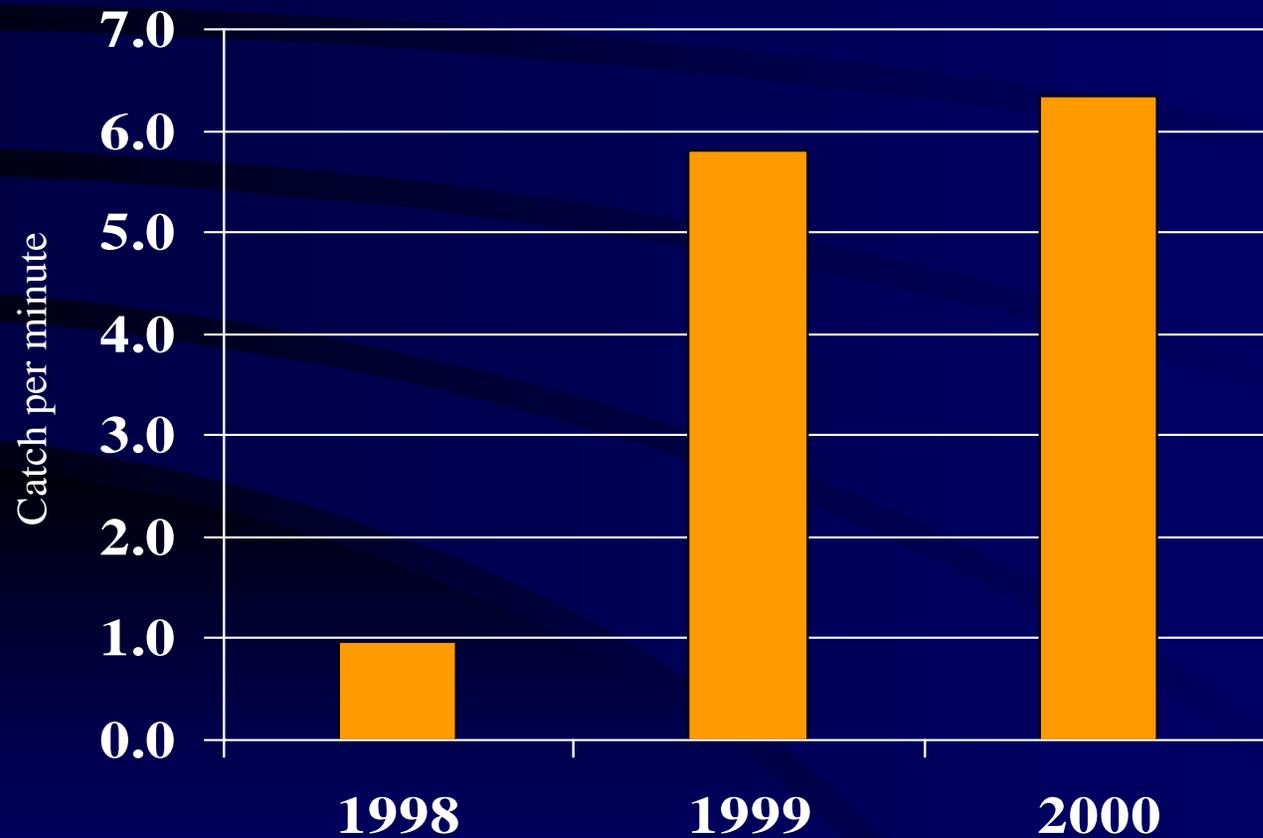
Round goby
(*Neogobius melanostomus*)



Photo Credit: David Jude

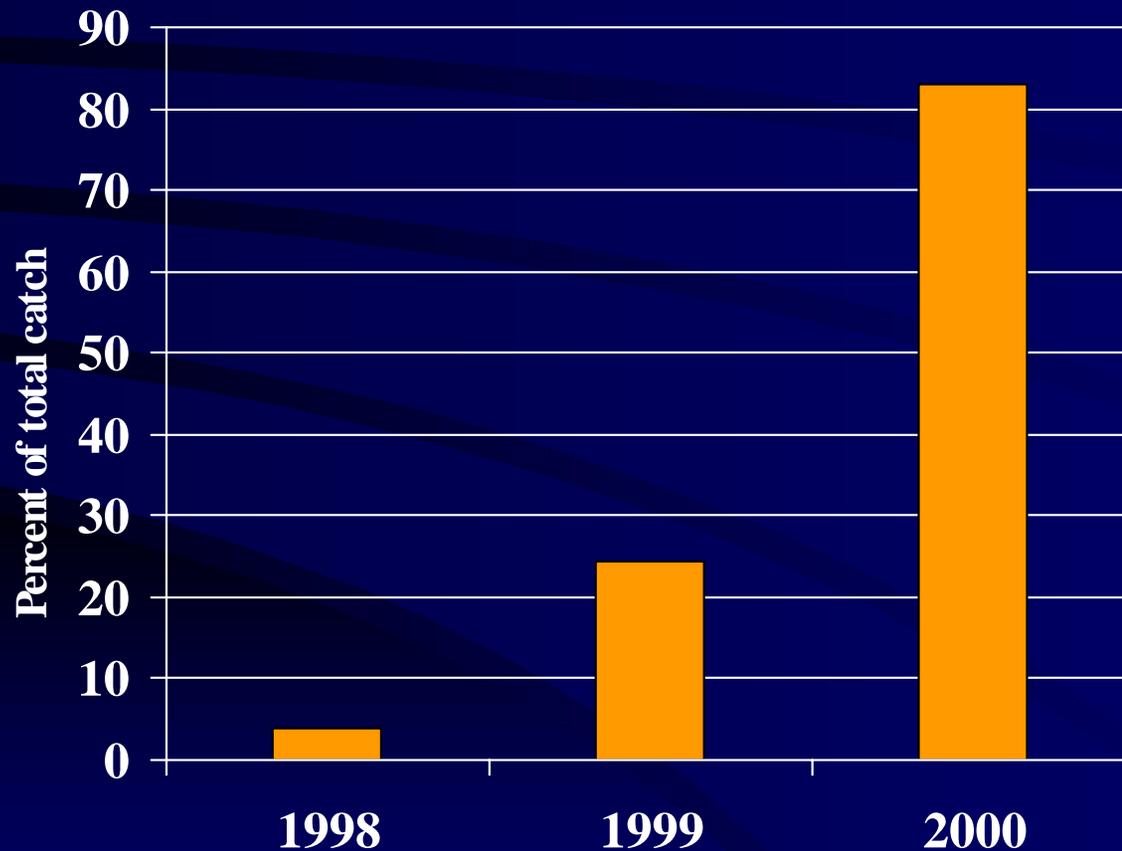
INCHES

Relative Abundance of Round Goby in Thunder Bay from Fall Bottom Trawling Surveys



USFWS

Percent of Total Catch Comprised of Round Goby in Thunder Bay from Fall Bottom Trawling Surveys



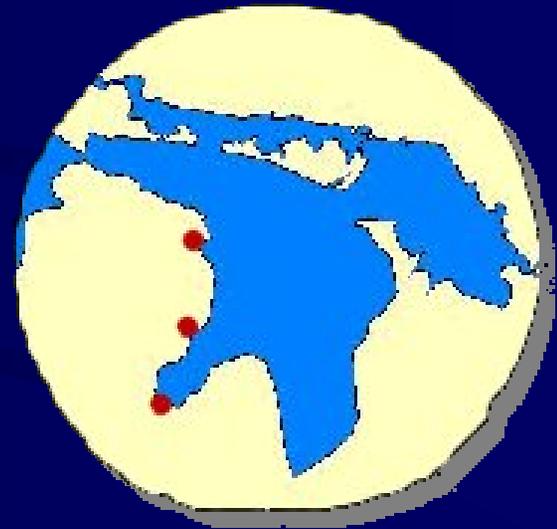
USFWS

Round Goby Abundance at Three Lake Huron Locations

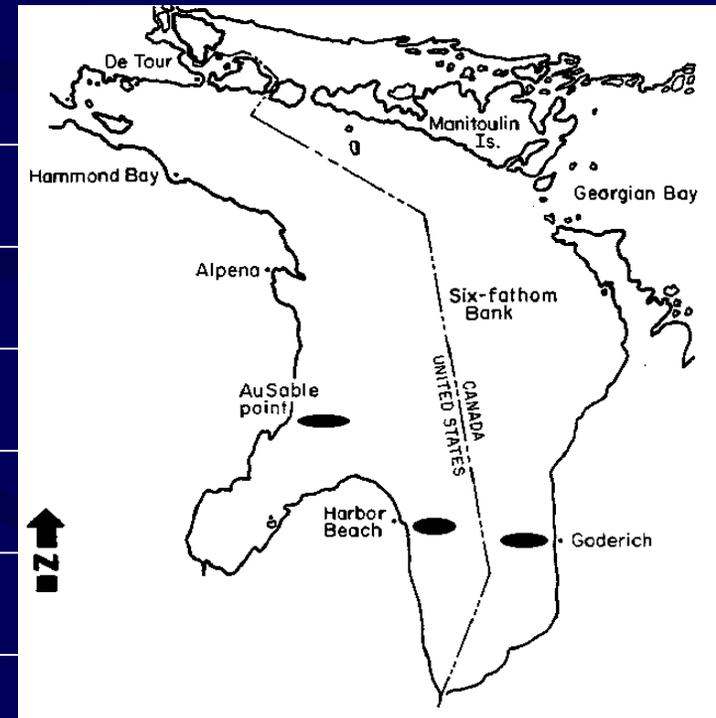
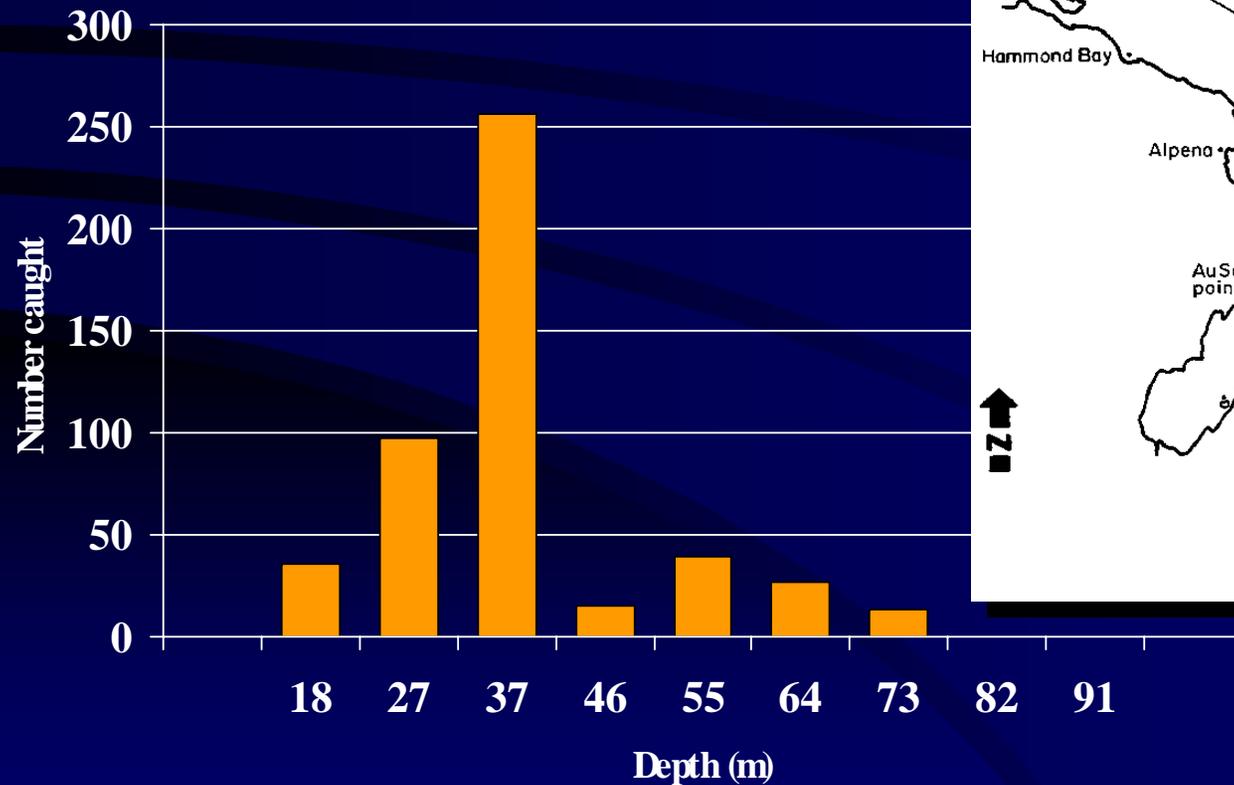
**Alpena – Thunder Bay
#1 in 2000**

**Tawas – Tawas Bay
#1 in 2000**

**Essexville - Saginaw River
3 in 2000**

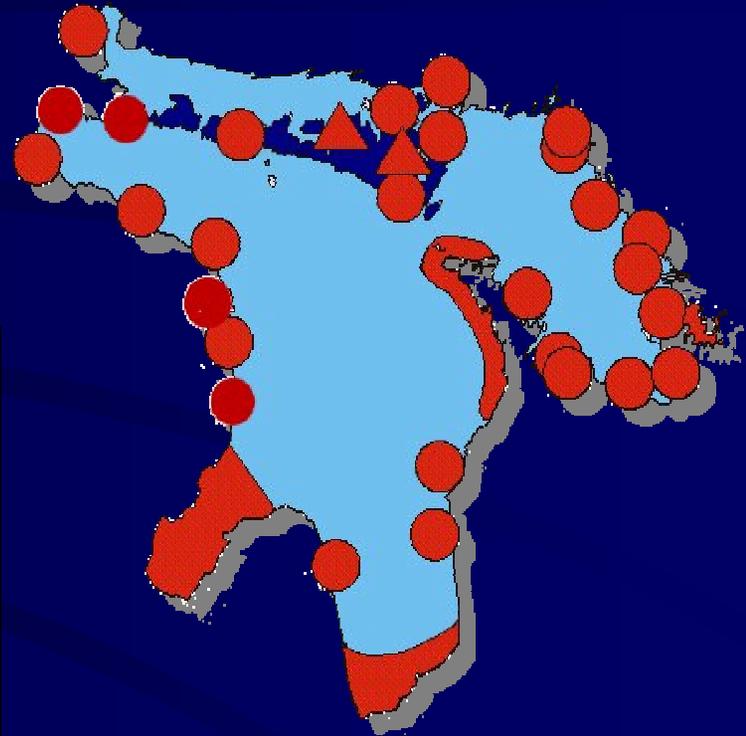


Offshore Depth Distribution of Round Gobies Southern Lake Huron - Fall 1999



Mollusks

Zebra mussel
(*Dreissena polymorpha*)



Spiny Water Flea

Bythotrephes cederstroemi



Management Measures Used in Lake Huron

- Ballast control
- Education
- Monitoring/Research
- Regulation
- Legislation



RUFFE IN LAKE HURON

The U.S. Fish and Wildlife Service is trying to identify the current range of ruffe in Lake Huron. Ruffe are an exotic fish from Europe that are thought to have entered the Great Lakes in the ballast water of ships. They were confined to Lake Superior until 1995 when they were caught in the Thunder Bay River in Alpena, Michigan. We need your help to locate these fish. Ruffe may be identified by characteristics listed below. Please inspect any perch-like fish you catch for these characteristics.

How to Identify Eurasian Ruffe

Rows of dark spots between spines Sharp spiny fin Two fins are continuous
Glassy eye Soft fin
Small down-turned mouth Spotted tail
Gill cover with many sharp spines One sharp spine Two very sharp spines

General Characteristics:
Very slimy when handled
Usually less than 6" (15.5cm) long
Perch-like body shape

Ruffe should be killed and placed in a bag with information on the date and location of your catch.
Freeze or refrigerate the contents of the bag and drop it off or call

The U.S. Fish and Wildlife Service
Alpena Fishery Resources Office
Federal Bldg, Rm. 204, 145 Water Street
Alpena, Michigan 49707
(517) 356-5102

Summary

- Introductions are difficult to control
- Control efforts can be expensive and planning difficult
- Eradication impossible in large open systems
- Prevention is the best measure
- Awareness is necessary for success
- Cooperation is important