

## **MSU Extension Publication Archive**

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Safe Harvest and Disposal of Aquatic Weedy Plants to Prevent the Spread of Eurasian Watermilfoil, Zebra Mussels and Other Exotic Species

Michigan State University

Michigan State University Extension

Michael Klepinger, Michigan Sea Grant Extension

Issued November 2000

2 pages

The PDF file was provided courtesy of the Michigan State University Library

**Scroll down to view the publication.**

# Safe Harvest and Disposal of Aquatic Weedy Plants to Prevent the Spread of Eurasian Watermilfoil, Zebra Mussels and Other Exotic Species



By Michael Klepinger  
Michigan Sea Grant Extension  
334 Natural Resources Bldg.  
Michigan State University  
E. Lansing, MI 48824

**Michigan Sea Grant  
College Program**  
2001 Bonisteel Avenue  
Ann Arbor, MI  
(734)764-1118  
fax (734)647-0768  
<http://www.engin.umich.edu/seagrant>

Sea Grant is part of the National Oceanic Atmospheric Administration (NOAA), US Department of Commerce. Michigan Sea Grant is one of 29 state programs nationwide that work to improve the wise use and management of marine and Great Lakes resources for public benefit. Sea Grant uses university expertise in research, education, and technology transfer to help solve problems and challenges of the oceans and Great Lakes. Michigan Sea Grant Project A-NIS-3.

**MICHIGAN STATE  
UNIVERSITY  
EXTENSION**

Extension Bulletin E- 2745  
MSG-00-500

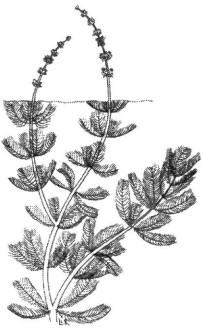


Illustration by:  
IFAS, Center for Aquatic Plants  
University of Florida, Gainesville,  
1990

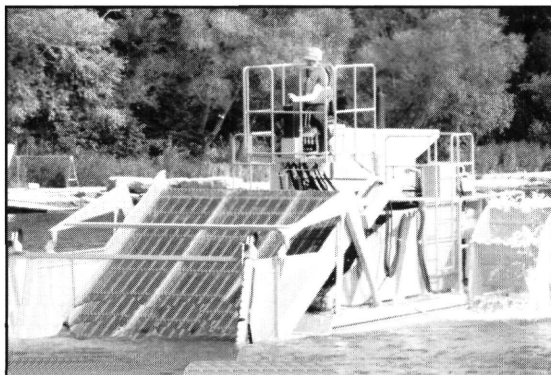
*A single fragment of  
Eurasian watermilfoil can  
start a large new colony.*

## What is the Problem?

Zebra mussels and other aquatic nuisance species like Eurasian watermilfoil can be carried from an infested lake to a non-infested lake if aquatic plant harvesting equipment is not thoroughly cleaned. Whether you are a property owner or a professional, there are a few steps you should take to lower the risk of contaminating nearby lakes if you have reason to suspect that your lake is home to aquatic nuisance species.

Aquatic nuisance species of concern in the Great Lakes Basin include zebra mussels, Eurasian watermilfoil, and three species of waterfleas. These exotic organisms, which are the focus of this factsheet, are not the only exotic species of concern but they are much more likely to be transferred by aquatic plant harvesters than, for example, exotic fish like round goby or Eurasian ruffe. Zebra mussels, Eurasian watermilfoil, and exotic waterfleas each have special characteristics that make it easy for them to hitchhike from one lake to another by way of aquatic plant harvesting if harvesters don't take care to prevent the spread. Once harvested, aquatic plants must be properly disposed of to avoid contaminating additional bodies of water.

Jurisdictions have different rules about possession and transport of exotic species. Check with your DNR.

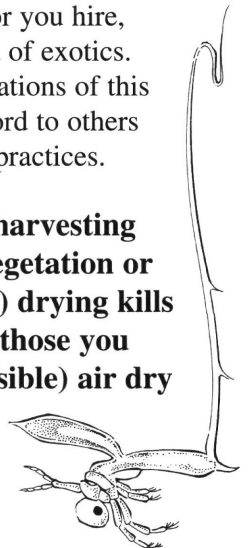


Aquatic plants and weeds are mechanically removed from lakes when other controls, such as chemicals, are not used. Some property owners do it themselves and others hire professionals. Sometimes aquatic plants are removed to improve fishing habitat and sometimes to improve boating or swimming. For a variety of reasons, thousands of tons of aquatic plants are removed from lakes each year. Aquatic plants that are "harvested" by hand pulling, raking, mechanized equipment or even by dragging an old bedspring can contain visible adult zebra mussels or invisible zebra mussel spawn. They can contain visible fragments or seeds of Eurasian watermilfoil or they might contain tiny eggs of exotic waterfleas. It is easy to see how a bedspring-full of weeds from an infested lake might contaminate the next lake down the road if precautions are not taken. Sometimes the risk of contamination is not so obvious. Fortunately, aquatic plant harvesters can take some well-recognized precautions.

## What Can Aquatic Plant Harvesters Do to Stop the Spread of Exotics?

The first step in preventing the spread of aquatic exotics is to develop an attitude of concern. Second, accept the fact that your actions, or the actions of the contractor you hire, could contribute to the spread of exotics. Third, follow the recommendations of this publication and spread the word to others about good lake stewardship practices.

**Remember: 1) inspect harvesting equipment and remove vegetation or attached zebra mussels, 2) drying kills aquatic organisms - even those you cannot see - so (when possible) air dry equipment for five days between lakes.**



For other publications or advice from local experts, contact the Sea Grant program or state natural resources management office nearest you. Phone numbers of the Great Lakes Sea Grant Network programs follow.

**Illinois - Indiana**  
847/872-0140  
**Minnesota**  
218/726-7677  
**New York**  
800/285-2285  
**Ohio**  
614/292-8949  
**Wisconsin**  
608/263-3259

Sea Grant Nonindigenous Species Internet Site  
<http://www.sgnis.org>

For more information about Aquatic Nuisance Species, ask for some of these Sea Grant publications:

*Boaters: Take Action Against Zebra Mussels*  
OHSU-FS-054

*Detecting Zebra Mussels: A Monitoring Program for Citizens*  
Michigan Sea Grant 1997

*Control of Zebra Mussels in Residential Water Systems*  
New York Sea Grant 1998

*Identifying Eurasian Watermilfoil*  
VTDEC-6/96

*Ruffe: A New Threat to Our Fisheries*  
OHSU-FS-064

*Round Gobies Invade N.America*  
OHSU-FS-065

*The Spiny Water Flea, Bythotrephes cederstroemi*  
OHSU-FS-049

*Daphnia lumholzi: The Next Great Lake Exotic?*  
11SG-99-10

*Cercopagis pengoi invades Lake Ontario*  
Ontario Federation of Anglers & Hunters 1998

Mechanical harvester graphics courtesy of Hydraulic Boat Company, Inc., Port Byron, NY and Aquamarine, Waukesha, WI

MSU is an Affirmative-Action Equal-Opportunity Institution. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status.

IP-11:00-500CW, .20, single copy free to Michigan residents

## Aquatic Plant Harvesting Equipment

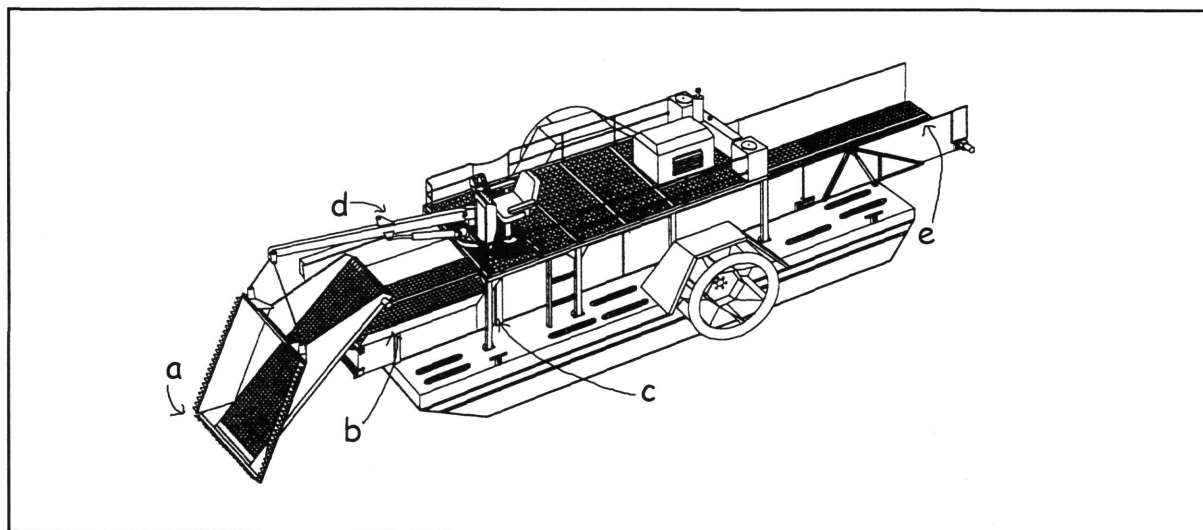
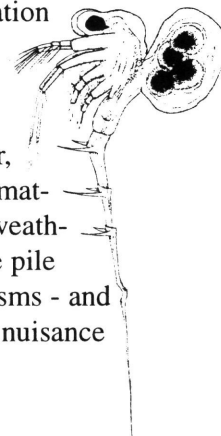
Many commercial harvesting contractors use mechanized weed cutters to clip and remove unwanted vegetation from lakes. These large machines, usually mounted on barges, can be very effective as they move across a weedy lake cutting a swath that may be as wide as 10 feet. Unfortunately, cutting blades, lift arms, lead bars, hydraulic systems and barge floats, can become entangled with plant fragments, and plant fragments can host zebra mussels or other nuisance species. Aquatic plant cutting equipment can inadvertently scrape an undulating lake bottom and pick up zebra mussels which become lodged in the harvester's nooks and crannies. An operator could move to his next lake harvest job and there deposit aquatic nuisance species from the previous infested lake if, when the job is completed, care is not taken to inspect and remove entangled materials. Be sure your harvesting contractor is exotics-free. Ask about safety precautions and select a conscientious contractor. It takes only minutes to help prevent the spread of aquatic exotics.

## Disposal of Harvested Plant Material

A typical harvesting machine can remove 3,000 to 4,000 pounds of wet material in less than an hour if the plant population in the lake is quite dense.

That's a lot of material to dispose of. Fortunately, the clippings are often 80%-90% water, so the disposal pile shrinks dramatically after a bit of warm, dry weather. Before it dries, however, the pile could harbor all sorts of organisms - and some of them could be aquatic nuisance species. Be careful to keep moist plant clippings away from waterways.

Dry the clippings thoroughly and then apply as mulch or compost.



Mechanical harvesters are not all alike, but this 36' paddle-wheel driven unit with a front mounted aquatic plant-cutter illustrates some of the most important inspection points: a) front cutting table, b) front conveyor belts, c) frame members, d) hydraulics e) rear storage conveyor