**Mapping the Spread Teacher Key: Eurasian Watermilfoil**

Directions: Choose an invasive species in your region and research how and where it was introduced into North America and the Great Lakes basin. Use a map to follow the path of how it spread throughout the Great Lakes region.

1. What is the species? (Include both common name and *scientific name*.)

Eurasian watermilfoil; *Myriophyllum spicatum*

1. Where is the species’ native range?

It is native to Europe, Asia, and North Africa.

1. Why is the species a problem in the Great Lakes region?

It grows early in the year before other plants and forms a dense canopy in the water which shades sunlight from other plants in the area.

1. How does the species expand its range (move to new locations)?

Eurasian watermilfoil spreads by fragmentation or breaking of the plant. Pieces can get stuck on and in boats, trailers, and live wells. The fragments can also be transported by wind and water currents.

1. If not originally from North America, where was the species introduced into North America? (**Mark this location on the map**)

The earliest confirmed detection of Eurasian water milfoil in the US was October 29, 1942 in Belch Spring Pond in Washington, D.C. (MI Tech: <https://www.mtu.edu/mtri/research/project-areas/environmental/water/eurasian-watermilfoil/spread/>)

It was first documented in the U.S. in the 1940s (USDA: <https://www.usda.gov/media/blog/2021/02/22/spread-word-not-weeds#:~:text=Eurasian%20watermilfoils%20were%20first%20documented,and%20below%20the%20water's%20surface>)

1. How was the species first introduced in the Great Lakes region?

It was first introduced through aquaculture trade and ballast water from ships.

1. Where was the species first documented in the Great Lakes Region? **(Mark this location on the map)**

Lake Erie near Ohio in the late 1940s.

1. Where was the species first documented in Michigan? **(Mark this location on the map)**

Lake St. Clair, 1961

1. List all the other places in Michigan this invasive species has spread in-order of year it was found. **(Mark these locations on the map.)**

(<https://www.mtu.edu/mtri/research/project-areas/environmental/water/eurasian-watermilfoil/spread/>)

Some answers are below:

* Whitmore Lake, Washtenaw County, Lake Huron, 1965
* Little Bay De Noc, 1972
* Lake Michigan, 1978
* Charlevoix co, 1982
* Mason co, 1984
* Arenac co, 1985
* Upper Grand River, 1989
* Oakland co, 1991
* Grand Traverse co, 1997
* Alcona co, 1999
* Gogebic co, 2000
* Marquette, Lake Superior, 2001
* Iron co, 2004
* Dickerson co, 2006
* Baraga, 2008
* Chippewa co, 2013

Established in every county in Michigan by 2015.

1. What patterns did you notice in the spread of this invasive species?

It spread rapidly and along all the waterways. It jumped all over the state of Michigan as it spread.

1. What might be the cause of the patterns you noticed?

Since it spreads through fragmentation, if people moved boats without washing them off, they could have easily transferred some small pieces of the plant to other locations. Fragments could have also been in shoes or boots that were worn in the water or fishing gear used in different bodies of water that weren’t naturally connected.

1. What could have stopped or slowed the spread of this invasive species?

Earlier detection and making sure boats, trailers, recreational gear, and clothing are cleaned off may have slowed the transfer of this species.



