

Outreach and Awareness-- Montana State University

Jane Mangold

MSU Extension Invasive Plant Specialist

Early Detection of New Plant Invaders

- **Develop committed network of weed watchers to**
 - *Look for new plant invaders*
 - *Share information*
 - *Reduce or prevent establishment of new invaders, including aquatic weeds*

Methods



- Publications
- Workshops
- Weed Watch Days
- Various locations across Montana
- Target audiences
 - Weed coordinators
 - Extension agents
 - Agencies
 - Volunteer/
special interest groups



Publications

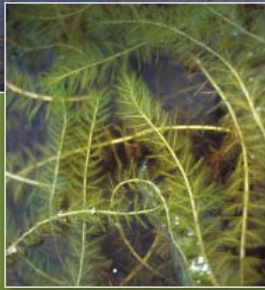

- **Extension Bulletins**

Biology, Ecology and Management of
Flowering Rush
(Butomus umbellatus)



Hilary Parkinson, R
Resources and En
Jane Mangold, MSU
of Land Resource
Virgil Dupuis, Salish
Peter Rice, Researc
Biological Science

Biology, Ecology and Management of
Eurasian Watermilfoil
(Myriophyllum spicatum L.)



Hilary Parkinson, Research Associate,
MSU Department of Land Resources
and Environmental Sciences
Jane Mangold, MSU Extension Invasive
Plant Specialist, Department of Land
Resources and Environmental Sciences
Jim Jacobs, Plant Materials Specialist,
Natural Resources Conservation Service
John Madsen, Associate Extension/
Research Professor, Geosystems
Research Institute, Mississippi State
University
John Halpop, MSU Extension Agent,
Sanders County

EB0193 March 2010

Publications

Monthly Weed Posts

Eurasian Watermilfoil (*Myriophyllum spicatum* L.)

Identification: Eurasian watermilfoil (hereafter referred to as EWM) is a submersed aquatic plant. Leaves are whorled in groups of four and each leaf consists of 14 or more paired leaflets. While flowering may be prolific, germination is rare and most reproduction is asexual from root crown buds and stem fragments. This plant can be difficult to distinguish from two native milfoils. Refer to the Extension bulletin in the link below for more information.

Impacts: EWM forms dense tangled beds that can displace submersed native plant communities, impact recreation, clog agricultural and drinking water supplies, and negatively impact fish and wildlife.

EWM colonizes rivers, lakes and other water bodies. It can tolerate strong currents and wave action facilitate optimum depth ranges from 3 to 13 feet deep if the water is very clear. EWM was first reported at Noxon Reservoir in 2007. In 2010 it was found in additional counties (Table 1).



(John Halpop)



Idaho (Ryan)

Spread: Plants spread through stem fragmentation. Water recreation (primarily boats and boat trailers) is the predominant vector of long distance dispersal.

Management priorities: EWM is a priority 1B noxious weed in Montana. After prevention, early detection and immediate action to contain and eradicate infestations are the most important management actions for EWM. For more information on identification as well as management options see "Biology, Ecology, and Management of Eurasian Watermilfoil" EB193.

<http://msuextension.org/publications/AgandNaturalResources/EB0193.pdf>

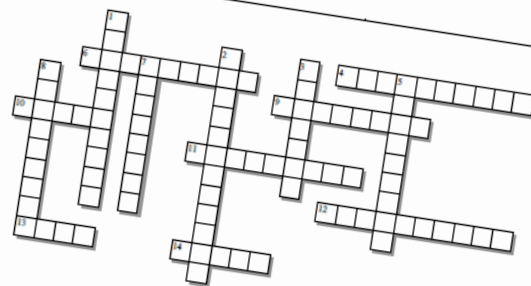
Records submitted to INVADERS Database. <http://invader.db.s.wmt.edu/>

Locations from INVADERS Database
Noxon Reservoir (first confirmed record in Montana)
Mountainwood Channel (upper reaches of Canyon Ferry Reservoir, north of Townsend)
Rocky Mountain Dam, plants scattered at least 1 mile upstream from dam
Jefferson River 0.5 and 1.5 miles below Williams Bridge Fishing Access
Jefferson River at Drouillard Fishing Access
Prairie Dog Island, near Buggy and Little Buggy Creek. Some plants were 8-10' long
Big Dry Arm
Rock Creek Marina
Plant observed floating in the water, upstream from Timber Creek and Bone Trail
First dredge cut below Fort Peck Dam
Fort Peck Marina
Pines Boat Ramp

An Aquatic Plant Management Plan is being developed for the state of Montana. A 2011 Annual Conference on Thursday, January 13th is dedicated to discussing this plan. Contact us to learn more about the plan and provide constructive feedback.

Weed Post Puzzle: Test your knowledge of Eurasian watermilfoil

Monthly Weed Post | 2 January 2011



Across:

- 4 - Common name for the native watermilfoil with less than 14 paired leaflets
- 6 - River in Gallatin County where EWM has been reported
- 9 - Marina in Valley County where EWM has been reported
- 10 - Reservoir where EWM was first reported in 2007
- 11 - Pieces of stem that are the primary method of EWM dispersal
- 12 - This naturally facilitates fragmentation and dispersal (two words)
- 13 - Number of leaves in an EWM whorl
- 14 - Structure on flowering stem needed to differentiate EWM from whorl-leaf watermilfoil

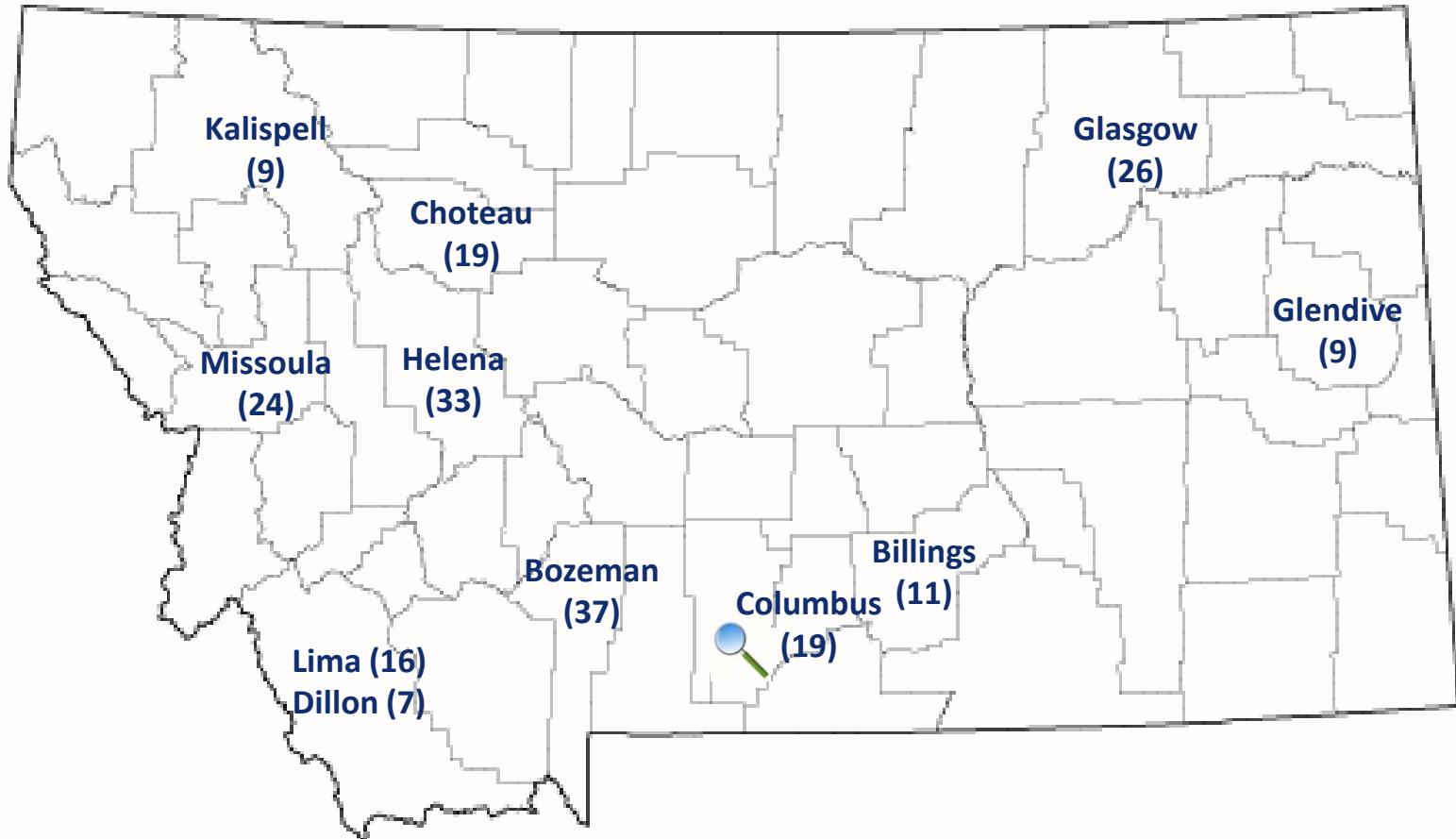
Down:

- 1 - Most important management criteria to protect non-infested water bodies from EWM invasion
- 2 - What humans use to transport water craft long distances and can inadvertently transport EWM (two words)
- 3 - Adjective describing how EWM leaves are arranged
- 5 - Marina in McCone County where EWM has been reported
- 7 - Minimum number of paired leaflets for EWM
- 8 - Common name for the native watermilfoil with highly dissected bracts that are longer than the flowers

Answers are posted to the MSU Extension Invasive Rangeland Weed website: <http://www.msuextension.org/invasiveplants/Mangold/extensionsub.html>

For EWM educational materials contact the Eurasian Watermilfoil Task Force at aquaticweeds@sanderscounty.mt.gov or visit www.protectyourwaters.org

Workshops and Weed Watch Days



 indicates Weed Watch Day

Participants

- 210 workshop participants
- ~280 Monthly Post participants
- 20+ different entities



U.S. EPA	MT-Dept. Agriculture
USDA-ARS	MT-Dept. Environmental Quality
USDA-FS	MT-Dept. Natural Resource Conservation
USDA-NRCS	MT-Dept. Transportation
USDI-BLM	MT-Fish, Wildlife, and Parks
USDI-NPS	County Weed Districts
U.S. FWS	County Extension Agents
U.S. Army Corps Engineers	Tribes
The Nature Conservancy	Native Plant Society
Private businesses	Ranchers

Lessons Learned Thus Far. . .

- Utilize the “locals”
- Events are fun, easy to organize, and important for education
- Organize, organize, organize!
- Motivating weed watcher network is challenging
 - Monthly Weed Post
 - Follow-up contact



Questions

- **Jane Mangold**
- **994-5513**
- **jane.mangold@montana.edu**