



INVASIVE WEEDS IN WISCONSIN

An Approach to Their Management

Background

- **Invasive plants still on radar screen at many levels**
- **Plants move by natural means and via human activities**
- **Will always have new species on our doorstep**

Where is the Effort for a New Noxious Weed Law?

Noxious Weed Tech. Advisory group

- ▶ Created in 1999; check 2000 Proceedings
- ▶ Many meetings and public sessions
- ▶ Document sent to LRB in 2003
- ▶ State budget woes delayed and now stalled progress

We Cannot Sit Still

- **Action is happening at many levels**
- **IPAW: Invasive Plants Assoc. of Wisconsin**
 - ▶ See display here at the Conference
 - ▶ Has organized two state-wide conferences
 - ▶ Has a list of invasive plants

Visit

Invasive
Plants
Association of
Wisconsin
P.O. Box 5214
Madison, WI 53705

Invasive Plants Association of Wisconsin



The mission of the Invasive Plants Association of Wisconsin is to advance our understanding of invasive plants and encourage their control in order to promote good stewardship of the natural resources of Wisconsin.



What are invasive plants?

Invasive plants threaten all of Wisconsin's natural resources from our northern forests and lakes to our southern prairies, oak woods, and wetlands. Each year more acres are invaded by unwanted plants such as purple loosestrife, leafy spurge or Eurasian water milfoil. They escape and cause problems by out-competing native plants, degrading fish and wildlife habitat, reducing agricultural yields, and hindering recreational activities.

When a plant is introduced to a new area, it leaves its natural enemies behind. Plants in new environments tend to become invasive because their populations are no longer controlled by insects, fungi, disease, grazing animals and competition from other plants. Invasive plants tend to be highly adaptable and are generally successful in a wide variety of habitats.

Weeds cost private citizens and agencies billions of dollars in North America every year. It is estimated that the cost of controlling these plants, combined with the economic loss to our rangelands, crop fields, waterways and forests, approaches \$35 billion annually in the United States alone.

For more information about invasive plants, see our links page at www.ipaw.org.

What is IPAW?

The Invasive Plant Association of Wisconsin is a non-profit organization that:

- Provides a focus for issues and concerns regarding invasive plants in Wisconsin
- Facilitates the exchange of information regarding all aspects of invasive plant control and management
- Provides a forum where all interested parties may participate in workshops and symposiums and share in the benefits of the information generated by IPAW
- Promotes public understanding regarding invasive plants and their control
- Serves as an advisory resource for funding, research, management and control of invasive plants
- Facilitates efforts to monitor and control invasive plants in Wisconsin
- Works to review incipient and potential invasive plant management problems and activities and provide relevant information to interested parties

IPAW depends on your support to accomplish these goals. Your membership and volunteer assistance provide the resources to produce communication, educational materials, develop public education presentations, maintain our site, and host our bi-annual conference.

Illustrations by Mary Reynolds

IPAW Top
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Are they
targeted
invasives
or
crops???

Common Name	Mean
	Imp.
Reed canary grass (nn)	9.9
Garlic mustard	9.4
Purple loosestrife	9.3
Common buckthorn	9.3
Eurasian water milfoil	9.3
Glossy buckthorn	9.0
Bell's honeysuckle	8.9
Tartarian honeysuckle	8.5
Common reed grass (nn)	8.4
Morrow honeysuckle	8.4
Amur honeysuckle	8.3
Leafy spurge	8.3
Crown vetch	7.9
Hybrid cattail	7.7
Japanese knotweed	7.7
Spotted knapweed	7.5
Black locust	7.5
Narrow-leaved cattail	7.4
Cut-leaved teasel	7.0

IPAW Mid

14



Common Name	Mea Imp.
White sweet clover	6.9
Common periwinkle	6.9
Autumn olive	6.7
Wild parsnip	6.6
Yellow sweet clover	6.6
Multiflora rose	6.5
Smooth brome	6.5
Oriental bittersweet	6.3
Canada thistle	6.3
Dame's rocket	5.9
Common teasel	5.8
Lily of the valley	5.8
Moneywort	5.7
Tall fescue	5.6

IPAW Bottom 33



Common Name	Mean
	Imp.
Quackgrass	5.6
White poplar	5.5
Cypress spurge	5.4
Curly-leaf pondweed	5.3
Orange day-lily	5.0
Siberian elm	4.8
Bird's-foot trefoil	4.8
Kentucky bluegrass	4.8
Orange hawkweed	4.4
Forget me not	4.4
Russian olive	4.2
Tansy	4.2
Yellow hawkweed	4.0
Hawksbeard	3.9
Creeping Charlie	3.8



Queen Anne's lace	3
Norway maple	3
Japanese barberry	3
Creeping bellflower	3
Yellow Iris	3
Climbing nightshade	3
Soapwort	3
Common burdock	3
Sheep sorrel	3
Red clover	3
White clover	2
White mulberry	2
Scotch pine	2
Helleborine	2
Motherwort	2
Canada bluegrass	2
St. John's wort	2
Field bindweed	2

List in IPAW Newsletter, Mar. 2003

What Does the List Mean?

We need to be and we are involved

- ▶ We have representatives on the Tech. Advisory Committee (Agronomy, WCIA)
- ▶ And on the IPAW Board (Seed Industry, Agronomy)

Approach to Invasive Weeds

- **Know your enemy**
- **Be alert for new invaders**
- **Find existing info**
- **Take action sooner rather than later**
- **Find the movers and shakers in the effort**
- **Document where, what, when and who**

Know your enemy

- **Can you name the invasives in your back yard?**
 - ▶ Buckthorn, comfrey, Japanese bamboo all started at home
 - ▶ Grass to wildflowers and these showed up:
C. thistle, leafy spruce, wild buckwheat, goldenrod, hoary alyssum, white cockle, toadflax & milkweed
- **Do you know what others have?**

**Great
resources**

**These from
Extension**

**Common
and
Glossy
Buckthorn**



**Major Threats
to
Wisconsin's Woodlands**

PUB-FR-216 2002

Garlic Mustard
(Alliaria petiolata)



**A Major Threat
to Wisconsin's
Woodlands**

PUB-FR-217 2002

Know your enemy

- **Do you know what Minnesota and Iowa have?**
 - ▶ Biennial wormwood
 - ▶ Asiatic dayflower
 - ▶ Buffalo bur

This is a
great one
to study

Weeds to Watch

New Weed Threats for Corn and Soybean Fields



Crossleaf Groundsel



Purple Deadnettle



Biennial Wormwood



Asiatic Dayflower



Hophornbean Copperleaf



Giant Ragweed



Burdock



Wild Buckwheat



Kochia



Lambsquarters Complex



Waterhemp



Palmer Amaranth



Star-of-Bethlehem



White Campion



Wild Four O'Clock



Pokeweed

"Weed communities continually shift in response to management practices. Failure to properly identify new weeds when they first enter a field may result in the plant becoming permanently established and increase weed management costs. The weeds included on this poster pose an increasing threat to agronomic fields. The maps provide information regarding current distribution of species. **Rare Occasional Common**

This poster is a joint project of:
Iowa State University Extension
University of Illinois
Michigan State University Extension
University of Minnesota Extension Service
Purdue University Cooperative Extension
University of Wisconsin Cooperative Extension

IOWA STATE UNIVERSITY
University Extension

Funding provided by:
North Central Region Pest Management Center

Be alert for new invaders

- **Take advantage of road time**
 - ▶ Spy as you drive
- **Hunting, fishing, hiking, biking:**
 - ▶ We cover much landscape
 - ▶ Are our antenna for new species up?

Be alert for new invaders

Take advantage of road time

- ▶ Travels to Farm Tech. Days last year
- ▶ Very little wild parsnip
- ▶ How much effort to eradicate known patches in Shawano County?

Be alert for new invaders

- **You're scouting the fields**
- **But take note of the edges, farm lanes and especially the barnyard**
 - ▶ Many weeds start at home
 - ▶ Jimson weed too common in exercise lots

A disaster
waiting to:
Happen
Spread

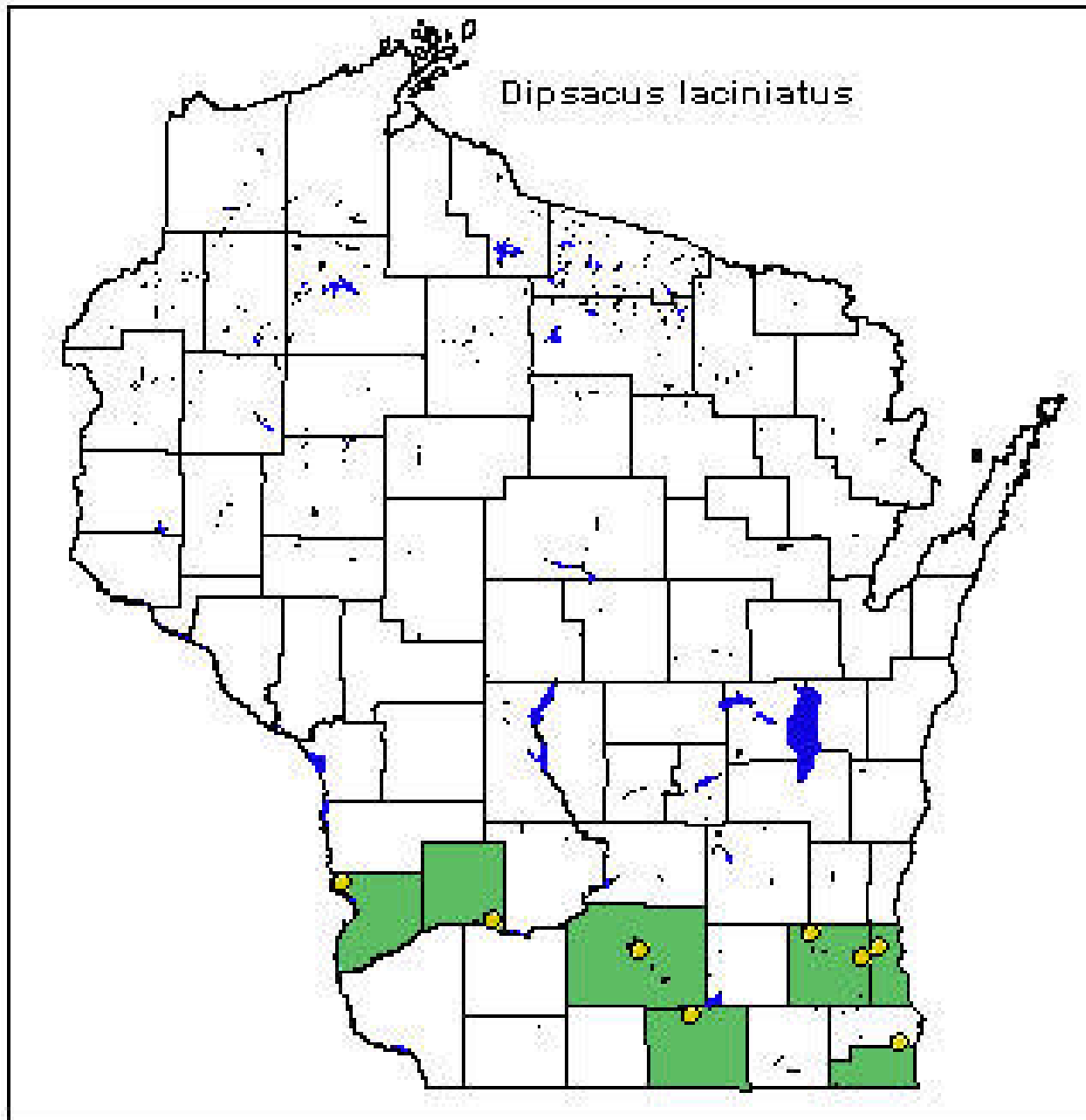


Be alert for new invaders

**I found it, I identified it, but is it already
common in Wisconsin?**

The UW Herbarium site has distribution maps

[www.botany.wisc.edu/
herbarium](http://www.botany.wisc.edu/herbarium)



Find Existing Info

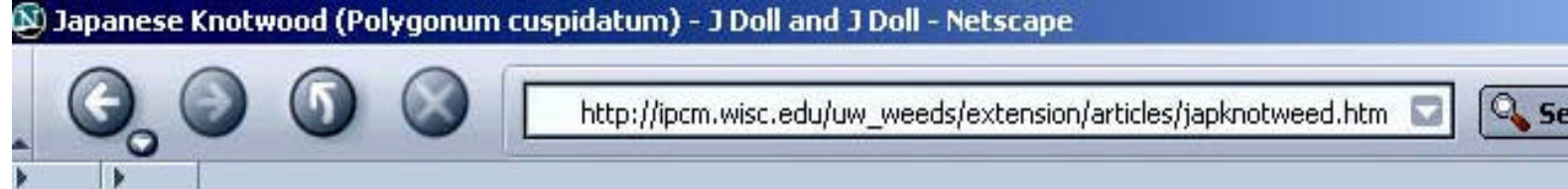
- **Internet is unreal**
- **Whitnall Park in Milwaukee Co. called:
how do we control black swallowwort?**
 - ▶ The Nature Conservancy web site has the answer: triclopyr (Garlon)
 - ▶ Not on the label nor known by the company representative
 - ▶ Is it legal to use for this weed?

Find Existing Info

Many useful web sites

- ▶ DNR: www.dnr.state.wi.us/org/land/er/invasive
- ▶ USDA: <http://plants.usda.gov/>
- ▶ Nature Conservancy:
<http://tncweeds.ucdavis.edu>
- ▶ And 100s more (I stopped my “invasive plants” search at 700 hits)

Check
out the
UW Weed
Science
web site



Japanese Knotweed (*Polygonum cuspidatum*)

"Japanese knotweed {Japanese bamboo} is one of the most persistent, durable, hardy plants known" (Locandro 1978). This quote does not exactly give those with an infestation of this weed a good feeling about their problem; unfortunately, it is only too true. The spread of Japanese knotweed has been swift and unstoppable. Not only an issue in the United States, the eradication of this weed has stumped many a farmer, gardener, and herbicide in many countries. The problem is such in the United Kingdom that Loughborough University is sponsoring a workshop in late 1998 for the sole purpose of discussing eradication and control of Japanese knotweed.

The official name of *Polygonum cuspidatum* is Japanese knotweed but it is also known as Mexican bamboo, crimson beauty, Japanese fleece flower, Reynoutria fleece flower, Kontiki bamboo, and Japanese polygonum. Some of these common names are used because this species has been used as an ornamental plant in many countries.

The taxonomy and nomenclature of Japanese knotweed have changed often over time, resulting in references to it in three genera: *Polygonum*, *Reynoutria*, and *Fallopia*. The many names are the result of a history of confusing taxonomy. In 1777, material brought from Japan was named *Reynoutria japonica* and then in 1846 additional plant material from Japan was named *Polygonum cuspidatum* by Siebold and Zuccarini. Only in 1994 was it discovered that the two plants were identical (Beerling et al. 1994). Taxonomy

Take Action Sooner Rather Than Later

- **This is where we need the new noxious weed program**
- **A judgment call of controlling or not**
- **At least let some one know of your finding**

Find The Movers And Shakers in The Effort

- **IPAW is probably best source of leads**
- **NRCS will increase activity on invasives**
 - ▶ Some action now via EQIP
 - ▶ Literature and programs
- **DNR is and will be a significant player**
- **DOT especially at local levels needs reminding/nudging/educating**

Working
together.

Noxious Weeds of Minnesota

Prohibited Noxious Weeds
Restricted Noxious Weeds
Selected Secondary Noxious Weeds
and Weeds of Special Concern

2003 Edition

EPA Tribal Pesticide Special Project
OPP-00710



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Find The Movers And Shakers in The Effort

- **“All politics is local”**
- **“All weed detections and control is local.”**

Example of Invasive Control

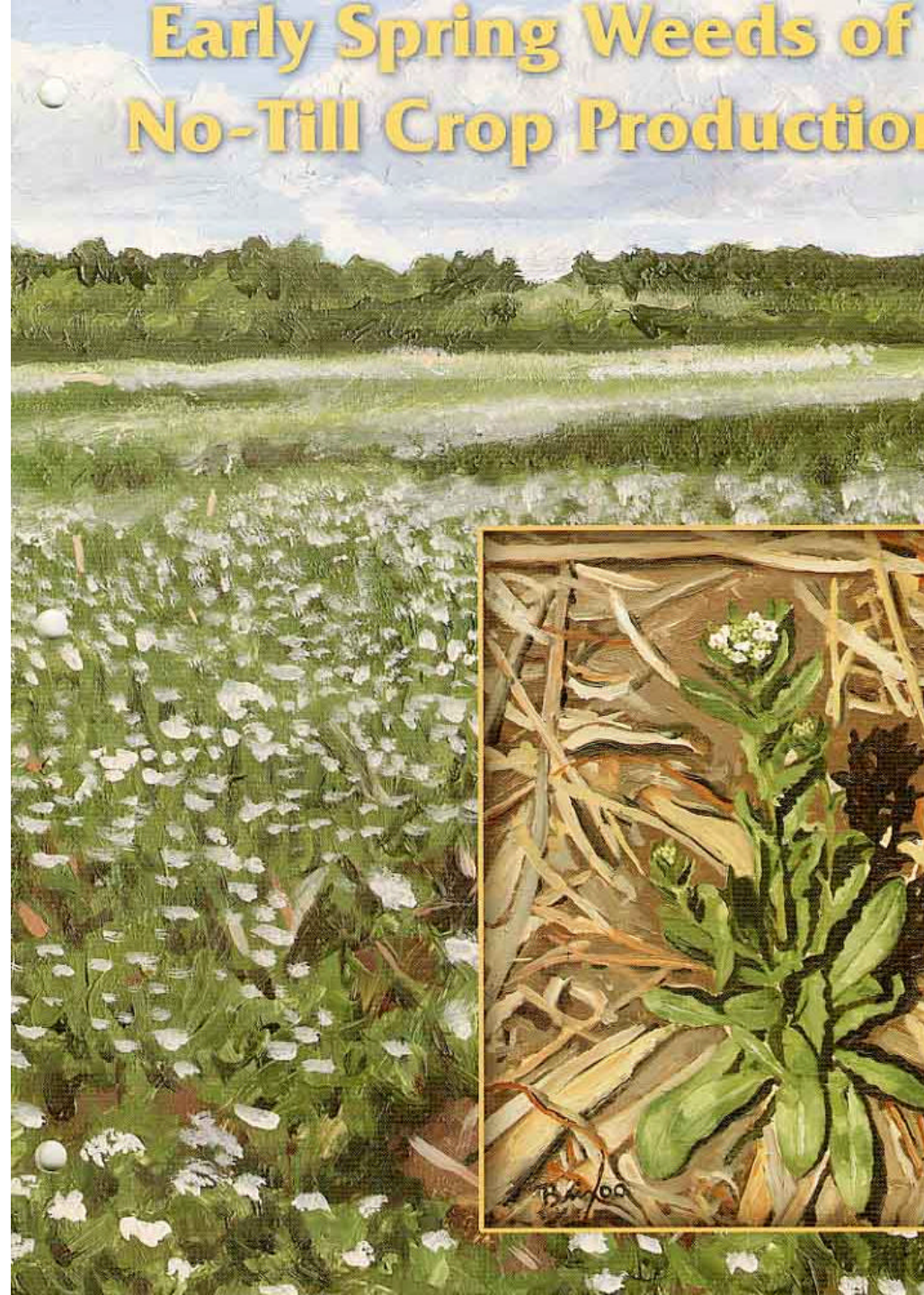
- **Winter annuals**
- **Biennials**
- **Perennials**

Controlling Winter Annuals

Garlic mustard

- ▶ The poster child of this life cycle
- ▶ Fall application of growth regulators very effective
- ▶ So is glyphosate but be careful if desired plants still green

Best Winter Annual ID Bulletin



Controlling Biennial Invasives

- Many invasive species are biennials
- Wild parsnip, teasels, most thistles
- We win the battle if we stop seed production
- Mowing reduces but seldom stops seed production

Controlling Biennial Invasives

- **Cut them below the crown and they do not regrow**
- **Prairie Enthusiasts have the “parsnip predator” for this purpose**
- **“labeled” for any and all biennials**



Controlling Biennial Invasives

- **Herbicides 100% effective if done in fall or early spring**
- **Need not chose glyphosate unless plants are bolted**

Controlling Perennial Invasives

- **All species on current noxious and nuisance weed laws are invasive**
- **Good lists to start with!**
 - ▶ C. thistle, leafy spurge, field bindweed: noxious
 - ▶ Multiflora rose and loosestrife: nuisance

Controlling Perennial Invasives

- **Clopyralid and glyphosate the best molecules for Canada thistle**
- **Several effective herbicides for multiflora rose (triclopyr, metsulfuron, glyphosate)**
- **Loosestrife controlled by glyphosate and triclopyr (Garlon 3A has aquatic label)**

Controlling Woody Invasives

- **Buckthorn, honeysuckle, prickly ash, autumn olive and Russian olive of concern**
- **Cut surface treatment safest method**
 - ▶ Not always practical
- **Also highly effective most of the year**

Document Where, What, When And Who

- **GPS is a natural for the where**
 - ▶ Usually small areas out-of-way sites
 - ▶ Can monitor rate of spread
 - ▶ Better yet: monitor effects of control efforts!
- **Hand-made maps also work**
- **Some year we'll have a system to compile and analyze this data**

Text Book Example of Where, What, When And Who

- **All known leafy spurge sites along Adams Co. state highways mapped in 02, 03 by Jim Keir, DNR**
 - ▶ Checked all state roads: none on Hwy 23 or 73
 - ▶ 25 sites from few sq feet to .5 acre along Hwy 13, 21 & 82
- **All sites mowed in July & then treated with Plateau in Sept., 03**
- **Will be monitored for several years**

Invasive Weed Summary

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Questions?
Comments?