

July 24, 2007

Mr. Bob Szafoni
Illinois Department of Natural Resources
1660 West Polk Avenue
Charleston, IL 61801

RE: Wildlife Preservation Fund Grant #07-013W

Workshops on Using Illinois-adapted Native Plants in Landscaping for Gardeners,
Nurseries, and Educational Institutions

Dear Mr. Szafoni:

We have enclosed a copy of the published press release and our final report for the Wildlife Preservation Fund Grant #07-013W. For this grant, we held six workshops (~2 hours each) for gardeners (64 people attended) including ones at nature centers (3), extension offices (1), and garden centers (2). For these workshops, a powerpoint presentation was given, a binder with information about native plants in landscaping was distributed, various materials were available (such as native plant catalogs and reference books), and native plants were provided as door prizes to participants. The binder was developed for a project last year, with updates to many sheets plus development of four new sheets (deer resistant plants, sunny garden plants, shady garden plants, and wet garden plants). Also, for the workshops given at garden centers, a list of native plant species available at their center was developed from their plant inventory list.

In addition to the workshops for gardeners, an all day workshop was held for educators. This workshop included a presentation and materials similar to those for gardeners, but also included hands-on propagation, field trips and a discussion about how to promote future collaboration between educators to promote use of native plants in landscaping. Educators from across the state were invited. Eleven people attended, and materials were mailed to three additional people who could not attend.

Three hard copies and an electronic copy of the following materials are included for our report: 1) Workshop summary (location/date/attendance), 2) Binder materials (only one hard copy and no electronic copy enclosed since we sent one last year with IWPF Grant #06-010W), 3) List of native plant species available at two garden centers (Prairie Gardens and Green View, Champaign, IL), and 4) Educator workshop handouts (overview and hands-on propagation). The Payment Request Certification Form will be forwarded separately.

We look forward to working on future projects in conjunction with the Illinois Department of Natural Resources. Thank you for support of this project.

Sincerely,

Janice M. Coons and Nancy E. Coutant
Professor of Botany and Instructor of Botany
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Enclosures (5)

cc: Bob Chesnut

LANDSCAPING WITH NATIVE PLANT WORKSHOPS SUMMARY

Workshops for Gardeners

LOCATION	DATE	NUMBER OF PARTICIPANTS
Allerton Park Visitor Center; Monticello, IL	Sunday, April 1, 2007	5
Douglas-Hart Nature Center; Mattoon, IL	Sunday, March 4, 2007	25
Green View Garden Center; Champaign, IL	Saturday, April 28, 2007	0*
Moultrie-Douglas Extension Office, Master Gardeners; Arthur, IL	Tuesday, Feb. 20, 2007	8
Prairie Gardens Garden Center; Champaign, IL	Saturday, March 31, 2007	8
Sugar Grove Nature Center; McLean, IL	Saturday, April 14, 2007	18

*Green View forgot to advertise for this workshop

Workshop for Educators

Eastern Illinois University Charleston, IL	Wednesday, May 23, 2007	11(3)**
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**materials were sent to 3 additional people who could not attend

Location: Eastern Illinois University

Date: Wednesday, May 23, 2007

Prairie Gardens

Native Plants Available To Gardeners

Scientific Name	Common Name	Cultivar(s)
Shady Perennials		
<i>Arisaema triphyllum</i>	Jack in The Pulpit	
<i>Asarum canadense</i>	Canadian Wild Ginger	
<i>Dicentra eximia</i> -eastern U.S.	Bleeding Heart	'Stuart Boothman's'
<i>Filipendula rubra</i>	Queen-of-the-Prairie	'Venusta'
Ferns		
<i>Athyrium filix-femina</i>	Tatting Fern	'Frizelliae'
	Lady Fern	'Victoriae'
	Crested Lady Fern	'Veroniae Cristatum'
<i>Osmunda cinnamomea</i>	Cinnamon Fern	
<i>Polystichum acrostichoides</i>	Christmas Fern	
Sunny Perennials		
<i>Amsonia tabernaemontana</i>	Common Bluestar	
<i>Aquilegia (canadensis)</i>	Columbine	
<i>Asclepias incarnata</i>	Swamp Milkweed	
<i>Aster dumosus</i>		'Prof. Kippenburg'
<i>Aster lateriflorus</i>		'Lady in Black'
<i>Aster novae-angliae</i>		'Alert'
		'Alma Potschke'
		'Purple Dome'
<i>Baptisia australis</i>	Wild Indigo	
<i>Campanula (rotundifolia)</i>	Bellflower	
<i>Coreopsis lanceolata</i>	Tickseed	'Sterntaler'
<i>Coreopsis grandiflora</i>		'Rising Sun'
<i>Echinacea purpurea</i>	Purple Coneflower	Several cultivars
<i>Eupatorium maculatum</i>	Joe Pyeweed	'Atropurpureum'
<i>Eupatorium rugosum</i>	Joe Pyeweed	'Chocolate'
<i>Gaillardia</i> -western U.S	Blanket Flower	Several cultivars
<i>Gaura longiflora</i>		'Crimson Butterflies'
		'Siskiyou Pink'
<i>Heliopsis helianthoides</i>	False Sunflower	'Lorraine Sunshine'
		'Summer Nights'

<i>Liatris spp.</i>	Gayfeather	‘Floristan Violet’ ‘Floristan White’ ‘Kobold’
<i>Lobelia cardinalis</i>	Cardinal Flower	Several Cultivars
<i>Monarda (fistulosa&didyma)</i>	Bee Balm	
<i>Oenothera macrocarpa</i>	Evening Primrose	‘Spring Gold’
<i>Penstemon spp.</i>	Beard Tongue	Several Cultivars
<i>Penstemon digitalis</i>	Foxglove Beardstongue	‘Husker’s Red’
<i>Phlox pilosa</i>	Phlox	Several Cultivars
<i>Physostegia</i>	Obedient Plant	‘Miss Manners’ ‘Vivid’
<i>Rudbeckia fulgida</i>	Black-eyed Susan	‘Fulgida’ ‘Goldsturm’
<i>Ridbeckia triloba</i>	Brown-eyed Susan	Several Cultivars
<i>Rudbeckia laciniata</i>		
<i>Silene (regia)</i>	Royal Catchfly	
<i>Thalictrum</i>	Meadow Rue	
<i>Tradescantia spp.</i>	Spiderwort	

Sedges and Grasses

<i>Carex muskingumensis</i>	Varigated Palm Sedge	‘Oehme’
<i>Chasmanthium latifolium</i>	Northern Sea Oats	
<i>Panicum virgatum</i>	Switch Grass	‘Heavy Metal’ ‘Prairie Sky’ ‘Rotstrahlbusch’ ‘Shenandoah’
<i>Pennisetum alopecuroides</i>	Dwarf Fountain Grass	‘Cassian’
	Hameln Dwarf	
	Fountain Grass	‘Hameln’
	Giant Fountain Grass	‘Foxtrot’
	Red Head	
	Fountain Grass	‘Red Head’
	National Arboretum	
	Fountain Grass	
<i>Sorghastrum nutans</i>	Indian Grass	‘Sioux Blue’

Green View

Native Plants Available To Gardeners

Scientific Name	Common Name	Cultivar(s)
Shady Perennials		
<i>Aquilegia canadensis</i>	Columbine	
<i>Anemone patens</i>	Pasque Flower	
<i>Dicentra eximia</i> -eastern U.S.	Bleeding Heart	
<i>Filipendula rubra</i>	Queen-of-the-Prairie	
<i>Polemonium reptans</i>	Jacob's Ladder	
<i>Polygonatum commutatum</i>	Solomon's Seal	
Ferns		
<i>Athyrium filix-femina</i>	Tatting Fern	'Frizelliae'
	Lady Fern	'Victoriae'
	Crested Lady Fern	'Veroniae Cristatum'
<i>Osmunda cinnamomea</i>	Cinnamon Fern	
<i>Polystichum acrostichoides</i>	Christmas Fern	
Sunny Perennials		
<i>Amsonia tabernaemontana</i>	Common Bluestar	
<i>Asclepias incarnata</i>	Swamp Milkweed	'Cinderella'
<i>Asclepias tuberosa</i>	Butterfly Milkweed	
<i>Aster dumosus</i>		'Prof. Kippenburg'
<i>Aster lateriflorus</i>		'Lady in Black'
<i>Aster novae-angliae</i>		'Alert'
		'Alma Potschke'
		'Purple Dome'
<i>Baptisia australis</i>	Blue Wild Indigo	'Australis'
<i>Campanula rotundifolia</i>	Bellflower	
<i>Coreopsis lanceolata</i>	Tickseed	'Sterntaler'
<i>Coreopsis grandiflora</i>		'Rising Sun'
<i>Echinacea purpurea</i>	Purple Coneflower	Several cultivars
<i>Eupatorium maculatum</i>	Joe Pyeweed	'Atropurpureum'
<i>Eupatorium rugosum</i>	Joe Pyeweed	'Chocolate'
<i>Gaillardia</i> -western U.S	Blanket Flower	Several cultivars
<i>Heliopsis helianthoides</i>	False Sunflower	'Lorraine Sunshine'
		'Summer Nights'

<i>Liatriis</i> spp.	Gayfeather	‘Floristan Violet’ ‘Floristan White’ ‘Kobold’
<i>Lobelia cardinalis</i>	Cardinal Flower	Several Cultivars
<i>Monarda (fistulosa&didyma)</i>	Bee Balm	Several Cultivars
<i>Oenothera macrocarpa</i>	Evening Primrose	‘Spring Gold’ ‘Missourinensis’
<i>Penstemon</i> spp.	Beard Tongue	Several Cultivars
<i>Penstemon digitalis</i>	Foxglove Beardstongue	‘Husker’s Red’
<i>Phlox pilosa</i>	Phlox	Several Cultivars
<i>Physostegia virginiana</i>	Obedient Plant	‘Miss Manners’ ‘Vivid’
<i>Rudbeckia fulgida</i>	Black-eyed Susan	‘Fulgida’ ‘Goldsturm’
<i>Rudbeckia triloba</i>	Brown-eyed Susan	Several Cultivars
<i>Rudbeckia laciniata</i>		
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	
<i>Tradescantia ohiensis</i>	Ohio Spiderwort	
<i>Tradescantia virginiana</i>	Virginia Spiderwort	
Sedges and Grasses		
<i>Carex muskingumensis</i>	Varigated Palm Sedge	‘Oehme’
<i>Chasmanthium latifolium</i>	Inland Sea Oats	
<i>Panicum virgatum</i>	Switch Grass	‘Heavy Metal’ ‘Prairie Sky’ ‘Rotstrahlbusch’ ‘Shenandoah’
<i>Pennisetum alopecuroides</i>	Dwarf Fountain Grass	‘Cassian’
	Hameln Dwarf	
	Fountain Grass	‘Hameln’
	Giant Fountain Grass	‘Foxtrot’
	Red Head	
	Fountain Grass	‘Red Head’
	National Arboretum	
	Fountain Grass	
<i>Sorghastrum nutans</i>	Indian Grass	‘Sioux Blue’

**WORKSHOP TO PROMOTE USE OF NATIVE PLANTS IN LANDSCAPING
SCHEDULE**

May 23, 2007

**Eastern Illinois University
Room 2011 Life Sciences Building**

Registration: 8:30 – 9:00 am (coffee, tea and donuts)

Welcome and Opening Presentation: 9:00 - 10:00 am

Break: 10:00 – 10:15 am

Hands-On Plant Propagation: 10:15 – 11:30 am

Lunch: 11:30 am – 12:30 pm

Field Trip: 12:30 – 3:00 pm

Wrap-Up Discussion: 3:00 – 4:00 pm



PLANT PROPAGATION—NATIVE SPECIES

SEEDS

Many seeds of native plant species exhibit seed dormancy—a condition where seeds are alive, but will not germinate even if optimal environmental conditions for germination are present. In nature, seed dormancy helps prevent germination at a time of year when seasonal conditions are not likely to allow plants to develop to maturity, such as the onset of a cold period or a dry season. When developing cultivars for horticultural use, plant breeders attempt to select against dormancy requirements. When using seeds of native species that have not been selected for horticultural use, seed dormancy often still is present.

Source of Seeds.

Seeds of many native plant species can be purchased from native plant nurseries. These seeds may be more desirable than seeds collected from the wild. Seeds from plant nurseries usually provide a reliable source of high quality seed that contains a high percentage of vigorous seeds because they often are cultivated and sorted to provide the best seed possible. However, if you are interested in producing plants of local ecotypes, you may need to collect your own seeds. The vigor of these seeds will vary depending on seasonal factors (environment during seed development), genetic factors (related to parent plants), and collection time. NEVER collect seeds from nature preserves or other protected natural areas. Following are steps to follow if collecting your own seed.

1. When collecting fruits with seeds from natural populations, limit your collection to less than 10% of the total seed production for a given species, so as not to reduce reproduction from seed of natural populations.
2. During collection, place fruits/seeds in paper bags so they can dry properly. If placed in plastic bags, seeds are more apt to mold and rot.
3. As soon as possible, spread fruits with seeds in open trays and place in a warm, dry area to air dry.
4. Remove seeds from fruits. This technique varies with each species, and often is the most time consuming step in propagation from seed. Time spent in this step alone may justify purchasing your seed.

Treatments to Break Seed Dormancy.

Two techniques commonly used to break seed dormancy for temperate species are stratification (cold) and scarification (cut). Stratification involves treating seeds with cold (just above freezing—such as a refrigerator but not the freezer) and often moist conditions. Stratification simulates winter conditions. In scarification, seeds coats are broken or cut, a process that often occurs in nature with freezing and thawing or blowing sand or exposure to acid in the digestive track of an animal.

Stratification.

- a. Wrap seeds in cheesecloth if you want to stratify several species in the same container. Close cheesecloth “bags” with string that is long enough to hang outside the container. Label the end of string for ease of locating seeds later.

- b. Dip cheesecloth containing seeds into a fungicide solution (a Captan bulb fungicide works well with ~1-2 tblsp. powder/quart or liter of water). This fungicide reduces mold development as seeds often have fungal spores on their surface. A small amount of this fungicide solution also may be mixed into the medium in the tub.
- c. Place bundle of seeds into plastic tub with moistened sphagnum moss and/or fine sand. This medium will keep seeds moist but still provide aeration.
- d. Place tub in refrigerator (2-4°C/36-39°F) for 1-3 months. The recommended time varies by species.
- e. On occasion, check seeds to be certain the medium is not drying or becoming moldy and to move seeds around somewhat to provide aeration.
- f. After desired time in cold, remove seeds to plant.

Scarification.

- a. Cut or abrade the surface of seed coats with sandpaper rubs, razor blade cuts, file scrapes or concentrated acid soaks. Cuts will cause breaks in the seed coat.
- b. If using concentrated acid, be certain to rinse thoroughly the residual acid from the seed coat. This treatment is best done in a fume hood with proper eye and skin protection.
- c. Plant seeds soon after scarification.

Additional information with recommendations for individual species can be found at www.eiu.edu/~prairie or in the Prairie Moon catalog.

VEGETATIVE

Many native plant species can be propagated using vegetative propagation techniques similar to ones used for horticultural species. In vegetative propagation, new plants are produced from stem, roots or leaves of a mother plant. The offspring plants are genetically identical to the mother plant. For these techniques, never use plants growing in natural areas to provide mother plant material as this practice may reduce natural populations. For vegetative propagation, plants (via crowns) or specialized structures (such as corms, bulbs, rhizomes or stolons/runners) can be divided. For some woody plant species, layering might be best. Although many horticultural species are propagated via cuttings, little work is reported using cuttings of native species. Hence a variety of vegetative propagation techniques can work well for native plant species.

HANDS-ON ACTIVITY

Seeds and vegetative structures of several native plant species are available to practice these techniques.

5/23/07

Workshop to Promote Use of Native Plants in Landscaping
Eastern Illinois University