Collecting Native Seed

MASTER GARDENER

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Why Collect Seed?

Photo by Janet Mackey

- Save money
- Plant selection for your environment
- Hard-to-find species
- Scientific exploration
- Genetic diversity or preservation

Topics

- Plant types
- Location & Species
- Characteristics of Seeds to Collect
- Techniques
  - *Gathering*
  - *Cleaning*
  - *Storing*
- Suggested Species for Seed Collecting

Types of Seeds

Annual

- Bears seeds the year they are planted
- Most likely will **not** overwinter
- *Impatiens capensis* (orange jewelweed)

Biennial

- Bear edible fruit the first year they are planted, flowers and seeds in the 2nd year
- *Oenothera biennis* (common primrose)

Perennial

- Grows year-after-year from established root system
- May grow more slowly in the first 1-2 years

Before Starting:

1. Select species based on location or project
2. What is the purpose?
3. Collection/propagation techniques will be dependent on genus
4. Takes patience and time!

Location

- Select the right species for your project or purpose
- ***Identify the species***- don't wait until seed head stage!
  - Mark plants in bloom
- Permission of property owner or entity
  - Avoid public parks or spaces
  - Private property easiest
- Large population size
  - Genetic diversity
  - Ethics

Above: *H. moscheutos* in bloom
Below: *H. moscheutos* seed head

Ethics Note: Wild Collecting

- Take no more than 5-10% of a wild population
  - *20 Rule*
- You **must** have permission from landowner/entity
- **Do not** take seeds from rare, threatened, and endangered plants
- **Do not** collect seed from public parks, recreation areas, or other public regions
- **Do not** collect from small populations
  - *Larger populations best for both ethics and genetics*

Marking and Protecting Seeds

Columbine

Native Azalea

Collecting Seed

- Determine location
  - *Garden, roadside, wild, etc.*
- What you need:
  - Pruners, loppers, or scissors
  - Gloves for stripping
  - Paper bags, pillow cases, wide buckets, tarp
  - Labels or marker
  - *Optional:* Organza sachets, hand lens
- Selecting specimens
- Look for dry seed heads 6-8 weeks after bloom period

Preparing and Cleaning Seed

- Paper bags for collection
  - *Seed heads should face down, with stems upward*
  - *Can be stored here for 1-2 weeks while seeds dry*
- Remove “extra” plant material
  - *Chaff, stems, leaves, etc.*
- Mesh sieves (not necessary)
- Winnowing & debearding
- Organization helps
  - *Storing bags in boxes, envelopes upright in smaller boxes*

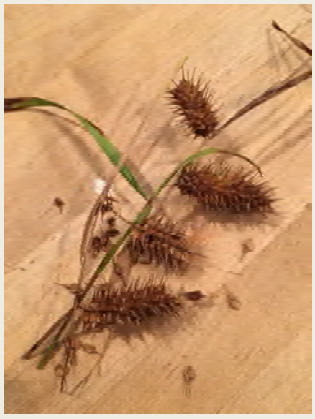
Cleaning Seed

- Line work area with newspaper, keep bucket on-hand
- Work with a single type of seed at a time
  - *Small seeds can be tricky!*
- Some may need several rounds of cleaning
- "Threshing" with pillow cases, rolling pin
- Use mesh sieves to separate chaff

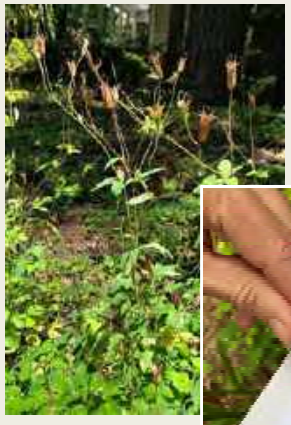
Easy-to-Collect Seeds

Blue flag iris
Iris Versicolor

Sallow Sedge
Carex lurida



Columbine
Aquilegia canadensis



More Easy-to-Collect Seeds:

- *Aquilegia canadensis*- wild columbine (summer)
- *Iris versicolor*- blueflag iris (late summer- fall)
- *Panicum virgatum*- switchgrass* (fall)
- *Asclepias* spp. – milkweed species* (fall)
- *Verbena hastata*- blue vervain (fall)
- *Hibiscus moscheutos*- marsh mallow, hibisicus (fall)
- *Chasmanthium latifolium*- northern sea oats* (fall)

*indicates prolific behavior

Seeds Requiring Special Techniques

Swamp Milkweed

Pawpaw

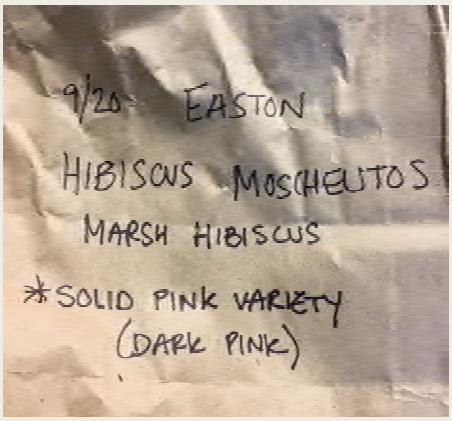
Seeds with Pappus

Golden Groundsel

Seed Heads

Taking Care of Collected Seed

- Coin envelopes are a good size for most seeds
- Mix with damp sand in plastic baggie for stratification
- LABEL the seed envelopes
  - *WHAT the plant is (common name and botanical name)*
  - *WHERE it was collected*
  - *DATE collected (at least the year)*
- Store them properly
  - *Dry*
  - *Away from insect pests or animals*
  - *Out of the light*



What Seeds Should I Collect?

Hard-to-Find Species

Pink Fuzzy Bean
Strophostyles umbellata

Genetic Variation

Photo Credit: Park Seeds

Genetic Variation

Great Blue Lobelia
Lobelia siphilitica

White Variation

Other Methods…

Propagation Methods: Transplant

Propagation Methods: Layering

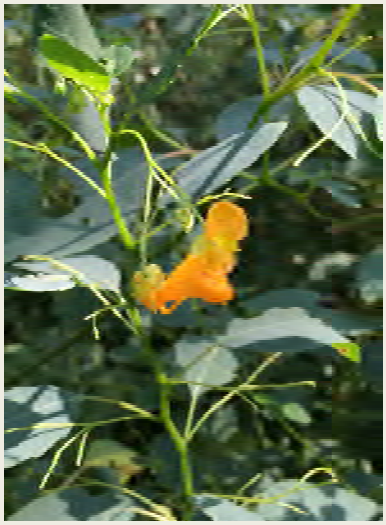
Virginia Sweetspire
Itea virginica

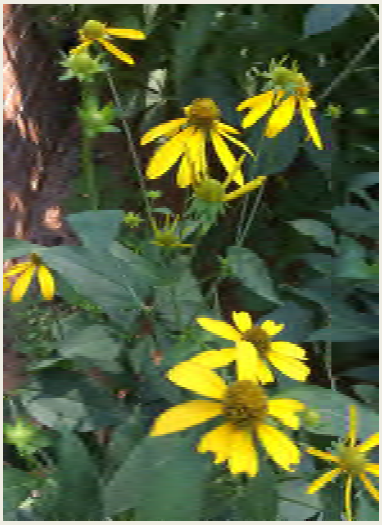
Propagation Methods: Cuttings & Dividing

Blue-eyed grass
Sisyrinchium scoparium

Foamflower
Tiarella cordifolia

Self-Seeding Types





What should you collect?

- Easy to collect
- Easy to clean
- Easy to grow

Grasses

Bottlebrush Grass
Elymus hystrix

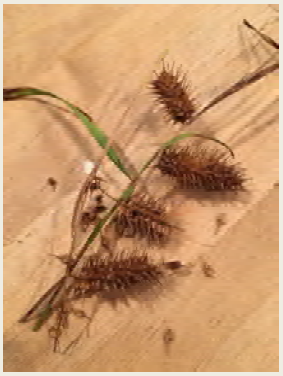
Splitbeard bluestem
Andropogon ternarius

- Most do not need stratification- *but it doesn't hurt!*
- Dry, brown seeds (hand lens)
- Will germinate at temperatures >70 degrees
- Warm-season vs. cool-season
- Bearded seeds
  - *May need "de-bearding"*
  - *Can be difficult to clean*

James H. Miller, hosted by the USDA-NRCS PLANTS Database

Sedges

Fringed sedge *(Carex crinita*), Sallow sedge *(C. lurida),* and Frank's sedge (*C. frankii)*



- Some *Carex* are “hydrophilic”
- Sow immediately, or store in damp sand (plastic bag)
- Cold stratification is good MB2
- Have papery coating- can be removed for better germination

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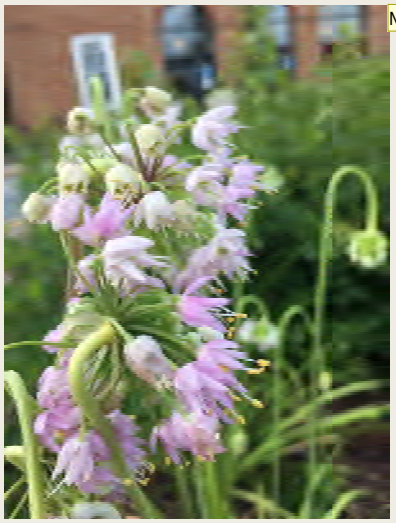
Flowering Perennials



MB3

Slide 31

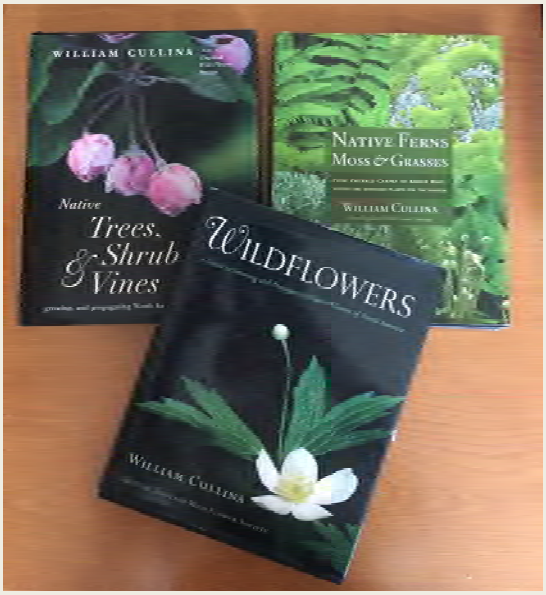
MB2 Need photo of sedge seeds under microscope, with and without perigynium
Mikaela Boley, 9/23/2020

Slide 32

MB3 Need picture of seeds/seedhead
Mikaela Boley, 9/23/2020

Foxglove Beardtongue-
Penstemon digitalis

- More variation in treatment and collecting
- *Most* require stratification (cold)
- *Some* require scarification
- Watch for hybridization (species)
- Lots of variability



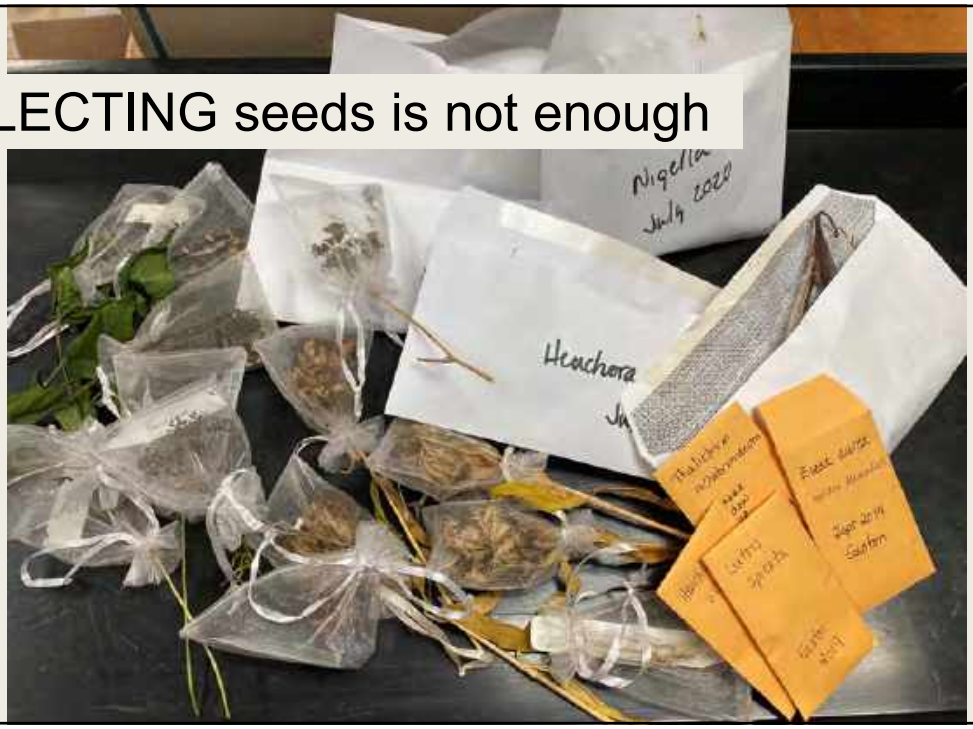
Resources

- Xerces Society- *Collecting and Using Your Own Wildflower Seed*
  - https://xerces.org/publications/guidelines/collecting-and-using-your-own-wildflower-seed
- Tallgrass Prairie Seed Collecting Guide
  - https://tallgrassprairiecenter.org/sites/default/files/techguide1_seedcollecting_2015_web.pdf
- Pleasant Valley Conservancy seed collecting chart
  - https://pleasantvalleyconservancy.org/seedcollectingtimes.html

Talbot County Free Seed Library

https://www.facebook.com/talbotcountyfreeseedlibrary

COLLECTING seeds is not enough



Seeds need a purpose!

Winter Sowing

"Sowing Native Seeds"

Friday, November 13th at 1:00 PM

Registration:
https://go.umd.edu/nativeseeds

https://go.umd.edu/ENRTEACH

Name: Boley, Mikaela
Date: September 30th, 2020
Topic: Master Gardener

UME- MG Continuing Education
Native Seed Saving

September 30th, 2020

Overview:

Native plants have increased in popularity with homeowners and gardeners as a way to embrace native ecosystems, provide valuable food and habitat for wildlife, and adapt to variable environments in Maryland. Saving seed from native plants provides the following benefits for the home gardener:

- Saving money by growing your own plants.
- Growing plants best adapted for the landscape.
- A way to propagate hard-to-find species.
- The scientific exploration of preserving local provenance and plant genetic material.

There are many advantages to saving native seed, and the process is somewhat forgiving to beginners. With low cost and input, individuals can save commonly found native plants to propagate for their landscape. For more detailed information, please consult the resources guide.

Key Points:

- Know your location and growing conditions, and select species appropriate for the environment.
- A little goes a long way- most people will collect far more than they will actually use. Please be judicious in your collecting.
- Observe the ethics of wild collecting, and *never* collect rare or endangered species.
- Treat each genus differently- research what is needed in order to collect, store, and sow seeds.
- Label, label, label. Include common name, scientific name, location, and date collected. Include this information on both short-term and long-term storage receptacles.
- Have patience and fun! Native seeds germinate at different rates and times, so it may take 1-2 years for germination to sizable seedling.

Collecting:

Determine the location you plan to collect from; the best place to start are home gardens. Make sure you have the permission of the property owner, and *do not* collect from public parks or protected forests. Look for specimens of mixed characteristics, or collect specimens thriving in sites similar to your own. It is ethical to collect 5% or less of a wild population (1 seed for every 20 available).

Generally, you will collect browned or dried seed heads approximately 6-8 weeks after the bloom period has finished. Most of the tools and equipment used for collecting are cheap and readily available, although you may opt to purchase specialized equipment for refining the process:

- Pruners, loppers, or scissors for cutting
- Gloves for "stripping" seeds from stem
- Paper bags, pillow cases, wide buckets, or tarp for collecting
- Labels and/or marker
- *Optional*: Organza sachets, hand lens, screens or sieves for cleaning

Seeds and seed heads may be stored in their paper collection bags for 1-2 weeks while seed dries. The specimens can then be processed using a variety of methods, such as threshing, crushing, and other means to separate the chaff, stems, and leaves from the actual seed. Winnowing and mesh sieves can also help separate the material. It is recommended to work with 1 species or seed at a time, using newspaper to line your work station and changing out the paper after each species.

For long-term storage, use paper envelopes or plastic bags (for stratification in refrigerator). Don't forget to label!

Easy-to-Collect Seeds

Scientific Name	Common Name	When to Collect	Notes
Aquilegia canadensis	Wild columbine	Summer	Upright seed heads bear round, black seeds.
Asclepias spp.	Milkweed	Fall	Silks can make cleaning difficult.
*Chasmanthium latifolium**	Northern sea oats	Fall	Large seed head, easy to gather. Look for dried, brown appearance.
Hibiscus mosheutos	Marsh hibiscus	Fall	Large seed pods easy to identify and collect.
Lobelia spp.	Lobelia	Fall	Very tiny seeds can be difficult to handle.
*Panicum virgatum**	Switchgrass	Fall	Look for dried, light brown seed head.
Solidago odora	Sweet goldenrod	Late fall	Pappus can make collecting difficult.
Tridens flavus	Purple top	Fall	Seed head will turn from oily, dark purple to light brown.
Verbena hastata	Blue vervain	Fall	

*Indicates prolific behavior

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NATIVE PLANTS

Recommended Resources

Books:

- *Native Trees, Shrubs, & Vines*, by W. Cullina
- *Native Ferns, Moss, & Grasses,* by W. Cullina
- *Wildflowers: A Guide to Growing and Propagating Native Flowers of North America*, by W. Cullina

Online/Charts:

- Xerces Society- *Collecting and Using Your Own Wildflower Seed*
  - *https://xerces.org/publications/guidelines/collecting-and-using-your-own-wildflower-seed*
- Tallgrass Prairie Seed Collecting Guide
  - *https://tallgrassprairiecenter.org/sites/default/files/techguide1_seedcollecting_2015_web.pdf*
- Pleasant Valley Conservancy seed collecting chart
  - *https://pleasantvalleyconservancy.org/seedcollectingtimes.html*
- U.S. Forest Service- Native Seed Collecting
  - *https://www.fs.fed.us/wildflowers/Native_Plant_Materials/developing/collecting.shtml*