

North Country Gardening with Wildflowers

*A Guide to Growing and Enjoying Native Plants
in the Upper Great Lakes Region*

by Neil Moran

*Illustrations by
Patrick Rambo*



Haylake Publishing
Sault Ste. Marie, MI

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Book and cover design by Five Rainbows Services www.FiveRainbows.com

First Edition

Manufactured in the United States.

Haylake Publishing

www.NeilMoran.com

Publisher's Cataloging-in-Publication Data

Moran, Neil.

North country gardening with wildflowers : a guide to growing and enjoying native plants in the upper Great Lakes region / Neil Moran ; illustrations by Patrick Rambo.

p. cm.

ISBN: 978-0-9834413-0-4

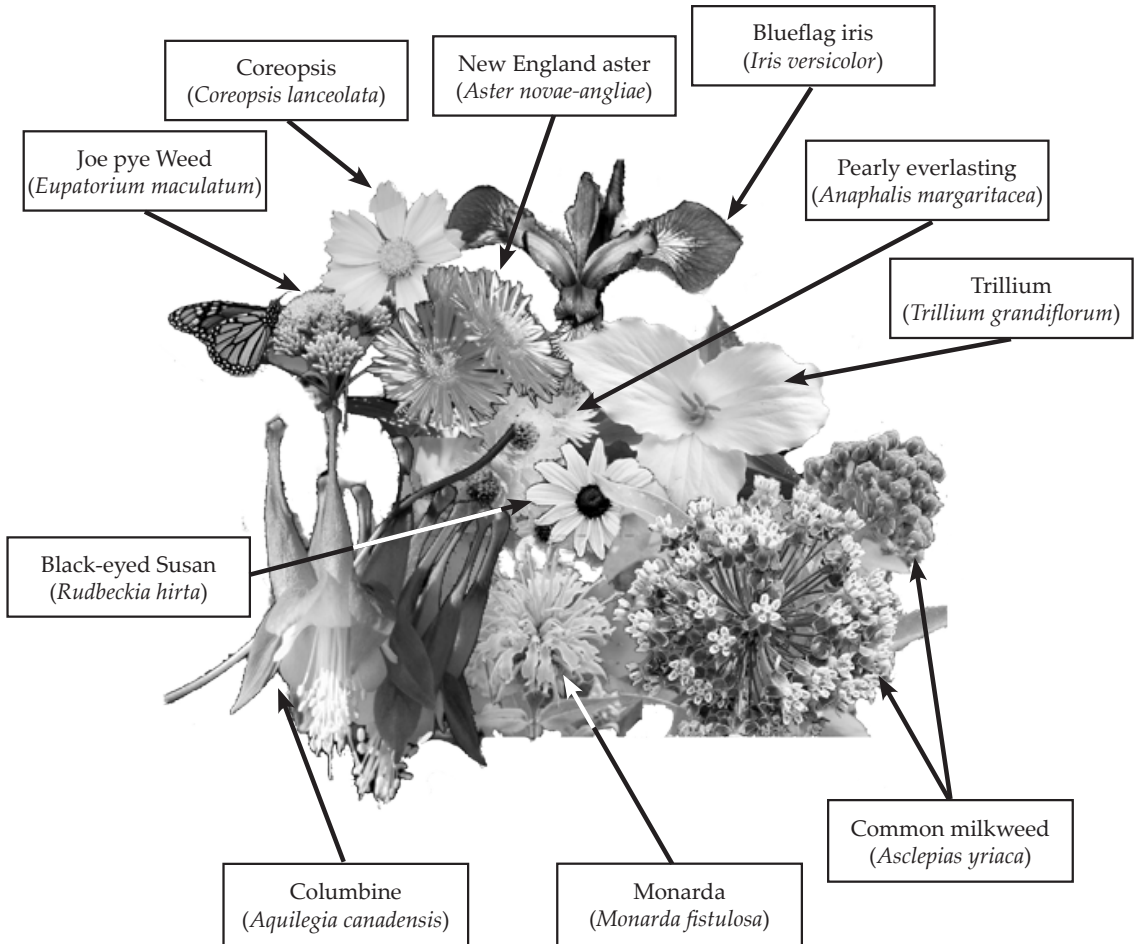
1. Wild flower gardening—Middle West. 2. Native plant gardening—Michigan. 3. Gardening—Michigan—Upper Peninsula. I. Rambo, Patrick, ill. II. Title.

SB453.2.M525 M67 2011

635'.09774—dc22

2011925296

WILDFLOWER IDENTIFICATION FOR FRONT COVER PHOTO



4



EED GERMINATION SECRETS REVEALED

Growing native plants from seed is kind of like predicting the weather around the Great Lakes. Sometimes you get it right, and sometimes, well, you're a little off. The fun, of course, is in the challenge.

The plants chosen in this book represent the ones I and others in the business have experience in planting. The directions and tips on propagation were gleaned from a variety of rather limited sources, as footnoted, but mostly from my own experience growing native wildflowers. It is by no means the final say on how to germinate each species. If there is one thing I've found out in the past few years of experimenting with native seeds, it is that just when you think there is only one way to germinate a certain species, you discover another way to do it, or at least, an exception to the rule.



These plants were grown in a state-of-the-art greenhouse by the Otsego Soil Conservation District.

For instance, for many years I believed the only way to germinate mountain ash (*Sorbus* species) seed was by soaking them in an acid solution that would mimic the natural stratification or scarification that supposedly takes place in the digestive tract of an animal. Then one day I witnessed how some *Sorbus* seed, left in a moist medium in a refrigerator for a few weeks, had germinated...in the dark, and in the cold! So go figure.

The point is to experiment. Nature is unpredictable and there are many variables that effect seed germination, such as when it was harvested, how it was stored, its overall viability, and even how it is handled (for instance, the membranes of native seeds can actually be damaged in the process of cleaning and sorting the seed).

Sound daunting? Not really, but it is challenging. If your initial attempt fails to germinate a particular species, try another approach. For example, if after a one-month cold, moist stratification period you only achieve 20% germination,

Use a journal to record all the details of this project, including how and when it was stratified and details regarding germination (such as when it was brought into the heat, how the seed was covered, etc.).

try a one-month cold, followed by one-month warm, stratification. See if it germinates better with the latter approach. You'll be tickled pink when you learn nature's script and figure out how to germinate a specific species of wildflower. Bear in mind, though, that for some seed, if you get 50% or better germination, you're doing fine (compared to up to 95% with commercial seed).

Native vs. Primed Seed

Native seeds are quite different from the ones we buy from seed companies, such as Burpee and Jung. Catalog varieties, such as the Hybrid Northern X-tra Sweet Corn I grow in my vegetable garden, have been crossbred a number of times to improve on many traits, including seed vigor. Also, commercial seeds are primed, which means they've been given a chemical or water treatment that ensures success if planted in favorable conditions.

On the other hand, native seeds have a scripted plan for germination, which is only shared by mother nature. Most native plants have evolved to germinate only under certain conditions, and they may require some type of stratification

to germinate, such as a month of cold, moist conditions. Some native plants even need to be scarified, or have the seed coat nicked, to aid in what is called radical emergence. The challenge, of course, is to find out the seed germination requirements for the seeds of a particular native plant and replicate it the best you can in a greenhouse, refrigerator, or outside in a garden bed.

It is imperative, when experimenting with native plants, to keep a journal to log your successes and failures. Record things like date started, methods used to stratify or scarify the seeds, planting depth, time it took to germinate, percentage of germination, when it was transplanted, and any other information that may help you next time around.

Starting Seed in a Greenhouse or Cold Frame

There are basically two ways to germinate native seed. One way is to simply sow the seed in a permanent spot outdoors. This is best done in the fall. The seed is simply sown or broadcast into loose soil that has been worked up with a rototiller or farm implements. This seed will undergo a natural stratification process and will most likely germinate in the spring.

If you're looking to grow transplants that can be sold or transported to a specific site, you will need to start them inside in flats or pots. This process starts with the proper selection of a germination medium. The best medium for germination and "growing on" is a sterile, non-soil medium containing sphagnum peat moss, vermiculite, and perlite. These come pre-mixed and go by the trade names Sunshine, Bacto, and Premier Pro-mix. Much of this stuff comes via Canada and works well for most situations which call for a sterile mix that absorbs water well but also drains well.

These mixes can be purchased most economically in a



Seeds should be started in a shallow container with good drainage.

5



STARTING SELECTED WILDFLOWERS FROM SEED

Over the past twelve years I've been involved in propagating various native plants that are found in the forests and along the shoreline of the Great Lakes region. These plants were used for plant restoration projects by nonprofit groups as well as in home gardens. I've talked with groups and individuals who share my interest in native plants. From these conversations and experiences I've been able to narrow down what I believe to be the most popular and, with a few exceptions, easiest wildflowers to propagate.

The below list of plants is by no means an exhaustive list of the native plants found in the region. I've presented these selected plants in this chapter to give you the information you'll need to successfully germinate and establish them in a flower bed, meadow, etc. I'm sure I've missed someone's favorite wildflower or even a type that is easy to propagate and should be mentioned.

It should also be said that propagating wildflowers is not an exact science. The propagation information presented below is simply what has worked for myself and others. Experimentation is the rule when propagating wildflowers. If a particular method of stratification isn't working-- for instance, a cold, moist stratification period-- try a cold, moist stratification period followed by a warm, moist stratification period.

Over the years myself and fellow members of the Northern Plant and Seed Cooperative have identified certain species of wildflowers that are easy to grow and maintain. We call these plants work horses, because they'll work hard at establishing themselves wherever they're planted. If you're just starting to grow wildflowers, we suggest you include these reliable native plants in your flower beds and other places you desire native wildflowers.

Lanceleaf Coreopsis (*Coreopsis lanceolata* L.)

Black-eyed Susan (*Rudbeckia hirta* L.)

Evening Primrose (*Oenothera biennis*)

Asters (*Aster* sp.)

Goldenrod (*Salidago Canadensis*)

Bee Balm (*Monarda fistulosa* L.)

I hope you'll rise to the challenge and attempt to grow some of these wildflower favorites-- for the good of the critters and perhaps the planet. But most of all, have fun growing native wildflowers and learn more about your natural heritage so you can pass it down to your children and grandchildren.

AGRIMONY

Agrimony is a “sturdy” wildflower that will hold its own once established. The seeds of this native wildflower can stick to your clothing when you brush up against it. This could be a good thing as you could be spreading it to a new locale.

The long stems of agrimony bear small yellow flowers. Ht. to 5’.

Where it grows: Agrimony is found in the woods and along the weedy perimeters of old hay fields. It will grow in fairly damp, clay soils. Hardy to zone 4.

Seed collection: The bur which contains the seed is rather conspicuous at the end of a spiked stalk. Collect the seed in late summer to fall.

Propagation: Mainly by seed after soaking for 24 hours, then providing a three-week cold stratification period.

Planting depth: ¼"



Agrimonia gryposepala

BEE BALM, AKA WILD BERGAMOT

Bee balm is to butterflies and hummingbirds what sunflowers are to songbirds. Plant bee balm and you're virtually guaranteed to attract these critters, which flock to the pinkish-red flowers. This is an easy-to-grow native plant that can be divided in 2–3 years. Bee balm is a member of the mint family so it's no wonder the foliage gives off a fragrant scent when crushed. Native Americans made Oswego Tea of the leaves. Contemporary teas are made from bergamot leaves.

Lavender-pink flowers bloom from mid-summer to early fall. Ht. 2–4'.

Where to plant: Prefers well-drained soil and is often found in open prairies, pine woodlands, fields, rocky or gravelly sites and roadsides. Hardy to zone 4.

Seed collection: Bee balm produces nut-like seeds measuring about $\frac{1}{16}$ " in diameter. It is typically harvested in October. Cut the seed head then shake out the seed. You can garner more seeds by rubbing the seed heads by hand. The seeds are small and black. It isn't necessary to clean the chaff from the seed.

Propagation: Simply dry the seeds in an open paper bag or plastic container, then store in a cool, dry place until ready to plant. No need to provide a moist stratification for this one.

Planting depth: Just cover.



Monarda fistulosa L.

6: Other Plant Propagation Methods

Prepare a moist germination medium by mixing three parts germination mix with one part water in a large bucket or wheel barrel. Firmly pack the medium in three-inch pots or deep-cell packs. Dust the node area of the stem (where you just clipped off the leaf and petiole) with the rooting hormone. Loosen the potting medium in the center of the pot or cell in preparation for sticking the cutting. Insert the cutting in the pot so that the node is buried at least an inch deep. Firm the soil around the cutting with your fingers.

The ideal place to root cuttings is in a commercial greenhouse where temperature, humidity, and airflow can be precisely controlled. If you do this in your home, or a hobby greenhouse, keep in mind that these cuttings will need similar conditions to root as found in a commercial greenhouse.

To successfully root cuttings in your home, it will be necessary to increase humidity and keep the cuttings at a consistent temperature (70-80 degrees) and out of direct sunlight. This can be achieved by placing the cuttings under a grow light with florescent tubes or a halide bulb. The desired humidity can be maintained by placing a clear plastic dome over the cuttings and spraying a fine mist of warm water over them two to three times per day. This should be sufficient to root herbaceous cuttings.



Use a flat stick to prepare a hole to “stick” the cutting in the sterile medium.



Stick the cutting in the prepared hole, then firm soil around the buried stem.

Keep the medium moist and continue misting the leaves of the cuttings until rooting takes place. Depending on the particular plant, it should be rooted in two to six weeks. Once it is rooted, carefully remove the cuttings and pot them up like you would a houseplant or young seedling. Start watering like you would for most seedlings. That is, water well and then let it dry out somewhat before you water it again. This will encourage good root development. You can further encourage healthy roots by adding a fertilizer, organic or inorganic, with a high phosphorous content.

Division and Separation

Chances are you've performed a plant division or separation, but didn't give it a name. Division is simply dividing a perennial plant to make more plants. Here are a few suggestions to ensure success with this easy propagation technique:

- ☼ division can be done on any perennial, at any time during the growing season, though spring and fall are the best when the weather is cool and moist. Always water-in transplants. If you do a division during the summer months, be sure to give the plants a good soaking once per week;
- ☼ division is best done when the weather is still cool and wet, such as in the spring or early fall. This way, you don't have to spend time watering and your success rate will be much higher;
- ☼ choose plants that have a fibrous root, rather than a tap root. Plants with a tap root, such as the mallow species, do not take to division very well;
- ☼ don't be afraid to slice through the root systems of fibrous plants. They'll recover in no time.

Separation is simply separating a bulb or corm from a plant and replanting it. This technique is best done in the fall when the bulb has already regenerated itself through the summer. Simply separate the bulblets or cormels from the parent and replant them outside in the desired location.

And that's all there is to it. By stepping out of your comfort zone and trying some of these easy methods of propagation, you can multiply your collection in no time. Use your new starts to naturalize areas in your yard, to create a meadow, or for use in a restoration project, such as a dune along the Great Lakes.

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