Wild for Monarchs

Milkweed Basics Index

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Wild Ones Wild for Monarchs Campaign
Collecting, Shipping, and Growing Milkweed

Collecting:
Chapters can utilize a variety of sources to collect Milkweed seed
- Chapter Members
- Community organizations (e.g. Master Gardeners, Boy Scouts, Girl Scouts, conservation organizations, etc.)

Drop off locations - Several chapters have arranged places where collectors can drop off their seed. These sites included multiple shops of interested business owners and members' homes. The more convenient and numerous the locations, the more likely it is that people will participate in the collection efforts.

Steps for collecting: Please obtain permission to collect milkweed from the owner of the property or the manager of the roadway. Do not over-collect in one area. This ensures that you get a genetic diversity and an you leave seed for wildlife and self sowing. Pick no more than 33% of one plant and no more than 33% from each site.. Safety Note: Take care, milkweed sap can harm eyes. Do not collect near busy highways.

Easy Collection Steps:
1. Collect clean mature pods (as they begin to split) from native wild plants only. Paper bags work well.
2. For each location, make a new labeled bag. Each species needs its own bag. 4. Use attached labels.

Please dry the pods. If you want to, clean the fluff off the seeds, and pull or shake seeds off (please do not burn).

Cleaning:
Description: If possible, please clean the seed before packaging and shipping. The Milkweed seed pod has very light fluff attached to each seed. At first, trying to corral the escaping seed and removing the fluff can be extremely exasperating. However there are several ways we recommend to accomplish the “defluffing” without too much effort or mess.

- Scrape the seed from the pod. If you can get the mature pod just before it pops open on its own, you can split it and scrape the seed off the white fluff. Watch this short (1 ½ minute) video which shows that this is easier than it sounds. http://www.youtube.com/channel/UCk2I0dSjIhkuUJalQkTjWQEQ?feature=em-share_video_user
- Shake but not bake – You’ll hear that many people burn the fluff off. We don’t recommend this for several reasons: 1) it can be dangerous; we’ve heard of several cases where the person got burned, and 2) there is some evidence that burning greatly reduces the germination rate. We do see great success with putting a fair amount of “fluffy seed” into a paper bag and shaking hard, real hard. But first, make sure you’ve got the top closed securely. And we recommend you do this outside inc case some seed escapes. After shaking for a little bit, cut the bottom corner of the bag off. Don’t cut too large a piece. You’ll be now able to pour the separated seed out of the bottom while containing the fluff inside the bag.
- For very large amounts of seed, Dr. Chip Taylor and his students at the University of Kansas invented an inexpensive yet effective . You can see the video and download the
Packaging / Labeling
Consolidate seeds of each species and collection area into individual bags. Lunch type paper bags seem to work well. Attach labels (see label document) with pertinent information to each bag.

Shipping Seed
Whatever seed isn’t used by the Chapter to grow locally should be sent to Monarch Watch. They have a grower who will grow seedlings, keeping them separate by bio region. These plants will then be distributed back to the region they came from.

Monarch Watch is still happy to pay for volunteers to send in seed but they will need to contact them for a shipping label. (Contact Ann Ryan annryan@ku.edu at Monarch Watch for specific shipping details). Please note this is a not-for-profit organization and to date no one has asked for a shipping label. To date everyone has donated the shipping costs as a contribution to the cause.

Growing –
Our objective is get as many milkweed plants as possible back into our ecosystems. The preferred method of growing is in quantity by local qualified growers/nurseries. Therefore we recommend wherever possible, each chapter should establish a relationship with local resources to grow the Milkweed seed that has been collected. (see document on working with local growers).

Here is information from Jan Hunter on growing:
I grow seeds out in flats in the greenhouse in spring. Pods are collected in fall, seeds stripped or burned of fluff and stored dry in paper bag in 38F refrigerator. I fill a flat with organic germination mix, (soaking seed overnight in a cup of water will speed up the germination process) spread 100 or so seeds on top, then just a handful of germination mix on top to cover seeds ever-so-lightly. Keep moist (not wet) and warm until germination occurs, about 1-2 weeks. Then I transplant into individual plugs when the two dichotomous leaves are thick and dark green, before roots get too long (6-8 weeks or so). Never over-water or dry out completely, keep at 65-75F and give lots of direct sunlight. Sowing seed outdoors in spring after frost (April 15 here) is OK as well; rake lightly into cleared area free of weeds and keep moist, not wet. Germination is MUCH greater if in flats in a greenhouse or under artificial light.

If you are planting seed directly into the ground, here is an article with an embedded video of how to do this:
Other websites with instructions:
http://monarchwatch.org/milkweed/prop.htm

**Distributing Milkweed**
Plugs or plants – distributed free or extremely low cost by chapters. Instructions on growing and educational material on Monarch butterflies go with the plant.

- Seed swaps
- Plant exchanges
- County Fair
- Cinco de Mayo events
- Other conservation events
- Local native nurseries give a milkweed away with every plant purchase
- Master Gardeners

**Seeds:** Work with local chapters of national conservation organizations who are involved in larger scale meadow and prairie plantings.

- Pheasants Forever
- Soil and Water Conservation Districts
- 4H clubs
- State Highway departments
- The Nature Conservancy
Mailing Instructions for Milkweed Seed

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UPS and other type of shipments should be sent to:

Monarch Watch
University of Kansas
2021 Constant Ave
Lawrence, KS 66047

If you have any questions let us know.

Thank you for your support!
Wild for Monarchs:
Milkweed Seed Collection

Steps for collecting: Please obtain permission to collect milkweed from the owner of the property or the manager of the roadway. Do not over-collect in one area. This ensures that you get a genetic diversity and an you leave seed for wildlife and self sowing. Pick no more than 33% of one plant and no more than 33% from each site. Safety Note: Take care, milkweed sap can harm eyes. Do not collect near busy highways.

Easy Collection Steps:
1. Collect clean mature pods (as they begin to split) from native wild plants only. Paper bags work well.
2. For each location, make a new labeled bag. Each species needs its own bag. 3. Use attached labels. Please dry the pods. If you want to, clean the fluff off the seeds, and pull or shake seeds off (please do not burn).

LABEL every bag of milkweed seed. Please Email: (insert your chapter contact email address) for seed drop-off.

For more information, and to grow milkweed, please visit wildones.org and monarchwatch.org. Thank you for helping monarch butterflies! Any amount of seed is welcome.

Wild Ones thanks you for helping the Monarch Butterfly!
| Milkweed Species: Common/Swamp/Butterflyweed | Collector's Name ___________________________ Phone # ___________________________ Date ___________ Email ___________________________ Location collected ___________________________ Zip code ___________ County __________________ State ______ Milkweed Count: ___ # up to 25 stems. Circle: 25-50 / 50-100 / 100+ Circle Soil Type: Sand / Clay / Other ___________________________Comments:_____________________________________________________

*Wild Ones thanks you for helping the Monarch Butterfly!*
This Agreement between Wild Ones (insert Chapter name here) (WOC) and (insert Grower’s name here) (GROWER) describes the understanding of the two parties regarding the growing and distribution of Milkweed plants for the benefit of Wild Ones’ “Wild for Monarchs” program in collaboration with Monarch Joint Venture and Monarch Watch’s “Bring back the Monarch” campaign.

At a cost of _____ $ (insert cost per plug. If donated, enter $0) per plug to WOC, GROWER will grow the following quantities of each species from seeds provided by WOC.

1. (insert species, quantity, and size)
2. (insert species, quantity, and size)
3. (insert species, quantity, and size)
4. (insert species, quantity, and size)
5. (insert species, quantity, and size)

GROWER will:

1. Use only seeds of local genotype, and never milkweed from horticultural varieties.
2. Plants for Wild Ones-Wild for Monarchs will be grown without pesticides.
3. GROWER will have the plants ready by ___ (date)______________________.

WOC will:

1. At all events where WOC distributes these Milkweed plants, WOC will display the GROWER’s name and indicating GROWER grew the plants. If GROWER is donating the plants, GROWER will also be recognized as contributing the plants.
2. In presentations given by WOC wherein reference is made to the Milkweed plants to be distributed via WOC, WOC will credit GROWER for growing and if appropriate for donating the plants.
3. (Describe other things WOC will do to help GROWER in producing the plants at little or no cost to WOC. This might include hours of volunteer work at GROWER’s facility, funds to buy potting mix and pots and to help offset cost of production.)
Each party to this agreement (including Wild Ones Natural Landscapers, Ltd. and Wild Ones Natural Landscapers, Ltd.) on their own behalf and on behalf of their heirs, administrators and executors, do hereby release, indemnify and agree to hold harmless all other parties to this agreement from any liability for any and all claims, demands, damages, costs, causes of action and expenses (including, without limitation, reasonable attorneys' fees) arising out of or resulting from participation in growing Milkweed under this agreement.

Signed:  ______________

By:  ____________________________________  By:  _______________

Official representative of (insert Chapter name) ————  (insert name and title of authorized person representing GROWER)

( date )________________________
Germinating Milkweed from Seed

Common Milkweed (Asclepias syriaca)
Swamp Milkweed (Asclepias incarnata)

The methods below are for Common Milkweed (Asclepias syriaca) and Swamp Milkweed (Asclepias incarnata).

1. Both species of milkweed require a cold, moist stratification period. This means that the seed after being harvested, dried and cleaned needs to have a “chilling” period. Nature’s method is done through the winter weather. To obtain similar results the seed should be mixed with moist sand, sealed in an airtight container, and placed in storage 33-38 degrees Fahrenheit. (A refrigerator works best). The period of chilling varies with the species. A. syriaca requires 30 days of cold stratification. A. incarnata requires 30-90 days of cold stratification. Some growers opt to soak the A. incarnata seed in hot water (190 degree F.) for 12 hours. [www.usda.gov](http://www.usda.gov) suggests this process be repeated for a total of 3 times before sowing the seed.

2. The seed can be sown in open trays using a commercial seed starter mix. It is usually better to sow seeds 2-3 per cell in a deep flat (cell counts vary). Cover very lightly with soil. I have found a 38 ct. 4 inch deep tray to work well allowing room for root growth and the least amount of disturbance when transplanting. However, commercial seeding trays can work if that is what is available. If the trays are to remain inside, the air temperature should be maintained between 65-75 degrees F. A heating pad can be used underneath to help with germination. Keep the soil moist by misting or spraying. Do not overwater! A plastic cover can be placed over the tray until germination. Light is very important for continued growth and can be obtained by using a fluorescent overhead fixture. A timer placed on the light source will assure 14-16 hours of needed light. Plants usually take 4-8 weeks to reach a stage where they can be moved to a cold frame to harden off.

3. If you would like to sow in trays outside, you can follow the same instructions above, eliminating the need for the cold stratification as the outside temps will take care of it. Just keep in a protected area and check occasionally, especially as the weather warms. They will need watering after the last frost. Also, rodents can be a problem. A wire mesh covering can help. Again, a simple cold frame can speed the germination and growing time, but requires more diligence.

Helpful websites are:

- [www.ehow.com/info_8473460milkweed-perennials.html](http://www.ehow.com/info_8473460milkweed-perennials.html)
- [www.easywildflowers.com/quality/asc.syria.htm](http://www.easywildflowers.com/quality/asc.syria.htm)
- [www.prairiemoonnursery.com](http://www.prairiemoonnursery.com)
Germinating Butterfly Milkweed
(Asclepias tuberosa)

1. Butterfly milkweed requires a moist 30 day stratification of 33-38 degree Fahrenheit temp. Wherever you store your milkweed, make sure it is protected from rodents! They will find it in a garage or shed. Most people mix the cleaned seeds with moist sand and store in a refrigerator.

2. Select your tray for sowing. A. tuberosa does not like to be disturbed, it will send down a tap root. You may sow in a shallow tray until the first leaves appear, but be aware that transplanting those little seedlings into a larger container is time consuming and can be unsuccessful with A. tuberosa if the root is disturbed. I recommend sowing in a tray that is at least deep 3-4” deep with separate cells. This allows the roots to grow deep with little disturbance when transplanted. You may also use small homemade or peat containers to sow in. Unwaxed small disposable cups will work but can break down too soon, (before it is time to plant into the garden). Experiment with what you have on hand.

3. Sow the seeds (you can leave them in the sand) in a clean germination mix. This mix is readily available in garden/home centers. Moisten the soil prior to sowing the seed, even prior to placing soil into the tray/container. Sow seeds lightly on the top of the soil. You may press in gently but they need light to germinate so please don’t bury them. An alternative to pressing them in is to cover them (again lightly) with the germination mix or sand. I usually just sow them and let them be (no covering at all).

4. Provide a heat source under the tray/container and a light source above. Mist/Spray to keep moist but not wet. You may cover with plastic/dome until germination. Air temp should be between 65-75 degrees Fahrenheit. Milkweeds do not like the cold! You will need to provide light; an overhead florescent fixture will work, at 14-16 hours a day. Once germination occurs, which can take up to 3 weeks, keep soil evenly moist, but on the dry side. Do not let the roots dry out but do not overwater! A. tuberosa germinates best in very warm, bright locations.

5. Plan to transplant outside after hardening off, after the last frost, approximately 8-10 weeks after sowing seeds. Plant in a sandy soil in full sun. Keep moist until established. If using peat cups or another container that you are placing directly into the ground, place rim just below the surface of the soil to avoid the moisture being wicked away from the plant.

Helpful websites:
- www.usda.gov/factsheet/pdf/fs_asn.pdf
- www.ehow.com/info 8473460milkweed-perennials.html
- www.easywildflowers.com/quality/asc.syria.htm
- www.prairiemoonnursery.com
Wild For Monarchs

Ordering Milkweed Plugs

Wild Ones has partnered with Monarch Watch's Bring Back the Monarchs (MW BBTM) program through our Wild for Monarchs campaign. Integral to BBTM is the planting of milkweed throughout the United States to restore Monarch butterfly habitat lost because of devastating weather conditions and land development. This is the information you will need to order plugs from BBTM for the 2015 Growing Season. **Order early.** MW's Executive Director Chip Taylor has provided the following information:

Monarch Watch Bring Back the Monarchs
Milkweed Plug Production for 2015 Growing Season

Monarch Watch began soliciting orders for milkweed plugs through Dplex L and Facebook in 2012 and personally through several organized groups. They have firm orders for about 9000 milkweeds, mostly from Texas, Arkansas and Virginia. They are growing additional plugs on the assumption that they will be able to obtain orders from the other states as indicated below. They have firm orders from both inland and coastal areas in Virginia. They piloted the shipping system last year with good results. That said, they know there are still additional details to work out for the coming season, so please be patient with the ordering and shipping process.

In 2014 Monarch Watch distributed over 65,000 milkweeds. Chip Taylor, founder and director of Monarch Watch, says “The target is 100K milkweeds this season but it's likely we are going to exceed that number. Orders are coming in pretty fast.

“We should have enough plugs for all regions to the north of OK and east of the Dakotas. However, I'm assuming that Elliott and crew successfully germinate and grow out what we requested. They haven't disappointed me yet BUT there can always be problems with low germination, damping off and insects.

“We lost $$$ last year on the plug distribution - not a lot but enough to cause us to reevaluate our costs. The cost of each flat is now $66/32plugs - shipping included.

“We will have milkweeds for most regions of the country. We are now working with 4 nurseries

“Here is the link to the Milkweed Market - [http://monarchwatch.org/milkweed/market/](http://monarchwatch.org/milkweed/market/)

“Here is our request form - [https://docs.google.com/forms/d/1wGhqVHqTNzRPlrMlqprx1-dJOGEw5zRhhhn8guKUfj4/viewform](https://docs.google.com/forms/d/1wGhqVHqTNzRPlrMlqprx1-dJOGEw5zRhhhn8guKUfj4/viewform)"
Milkweed Seed Separator

Chip Taylor’s design is for a 30 gallon metal trashcan (plans and video [http://monarchwatch.org/bring-back-the-monarchs/milkweed/seed-separator](http://monarchwatch.org/bring-back-the-monarchs/milkweed/seed-separator)). Bryan Bockbrader of the Wood County Ohio Park District modified it to fit a 5 gallon bucket. These pictures show the 5 gallon version.

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<th>An overall picture of the 5 gallon bucket separator.</th>
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<th>This design has a lid that overlaps the top of the bucket with cleats on the outer edge to center the pole and keep the top rack centered.</th>
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<tr>
<th>Looking into the bucket with the top rack inserted. The fluff that has been ‘deseeded” is lighter and floats up to the top of bucket where it can be carefully vacuumed away.</th>
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<tr>
<th>The top rack with the center pole. The outer boards fit outside the bottom rack boards. All the screws overlap with the adjacent boards. In other words, the screw points of this outer rack fit between the screws of the inner rack. And the screw points from the center pole also fit between the inner rack screws. As the top rack spins around the bottom rack, this creates a nice ripping action.</th>
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With the top rack removed, this looks into the bucket with only the bottom rack installed. The bottom tack fits easily into the bucket and floats off the bottom a little on pieces of 2x4 fastened to the bottom. During operation ¼ inch hardware cloth screening allows the seed to drop through while keeping the fluff above.

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<tr>
<th><img src="image1.png" alt="Image" /></th>
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<tr>
<td>A side view of the bottom rack.</td>
<td>Another view of the bottom rack.</td>
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<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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<tr>
<td>The entire device broken down to its component pieces: the lid, bucket, bottom rack, and top rack.</td>
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<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
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<td>Here’s a view of the handle I retrofitted to the center pole. Bryan’s version stopped with the drill bit jammed into the top of the pvc pipe. I added a T and a few other pieces to create the offset handle for manual spinning. (see notes below)</td>
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<td>This is a seed pod resting on the top plate of the top rack prior to stripping the seed and fluff out and putting into the container.</td>
<td><img src="image1.jpg" alt="Image" /></td>
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<tr>
<td>A wider view of the pod and fluffy seed inside the bucket.</td>
<td><img src="image2.jpg" alt="Image" /></td>
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<tr>
<td>A view looking down into the bucket filled with about 5 pods worth of seed and fluff.</td>
<td><img src="image3.jpg" alt="Image" /></td>
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<td>Side view of the same. Note the screw on the side of the plate that attaches the top rack to the center pole. Also note how fluffy the uncleaned seed is.</td>
<td><img src="image4.jpg" alt="Image" /></td>
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<tr>
<td>A closer view of inside the bucket after a few spins of the top rack.</td>
<td><img src="image5.jpg" alt="Image" /></td>
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A wider view showing the placement of the shop vac hose. This catches a lot of the fluff as it rises during spinning.

Notes:

Bryan’s crew at the Park District hooked a drill up to the top of the pole and used that to spin the top rack for about a minute. They then slid the plywood top off and used a shop vac near the top to suck the fluff away. I didn’t see them use it, but they were happy about the results. Bryan lent it to Denise and me to take for a test drive. We used the drill to spin the upper rack as Bryan described. I’m guessing about ½ the seed came clean with this method.

Jan Hunter came over and we tried it with some of her seed. Also using the drill, we guess that ½ the seed came clean. Jan felt that she does as well in a shorter amount of time by manually rubbing the fluffy seed over a screen.

With this disappointing review, I went back to Chip’s plans and built one to fit a 15 gallon plastic trash can. The big difference between Bryan’s and mine was that I had a good 10 inches or so of space above the top rack and below the top edge of the container. Bryan’s top rack came right up to the top of the 5 gallon bucket. Otherwise I believe the placement of the screws remained as in Chip Taylor’s plans.

Using my 15 gallon system, I decided to manually turn the upper rack in the bucket instead of hooking up a motor to do it. My hypothesis was that the motor spun the fluff too fast and tossed it to the outer edge where it didn’t get as much shearing action as a slower method. As in Chip Taylor’s video my configuration uses a couple of 90 degree pvc elbows and two short pieces of pvc pipe at the top of the pole to create an offset handle. This allowed me to easily turn the rack at any speed I wanted. I cut a hole in the plywood top and attached my vacuum. I put about 15 pods worth of common milkweed fluff/seed in the device, put the lid on, hooked up the vacuum, started turning the rack, and turned on the vacuum. I could hear seed moving into the vacuum. So I disconnected the vacuum hose and took the top off the cleaner. Manually I turned the rack back and forth and watched I could see fluffy seed catching on the screws and then being torn clean by an overlapping screw. Sometimes bunches of fluffy seed would compress and pile up somewhere in the machine. I found that turning the rack back and forth would dislodge the clumps. Using the vacuum cleaner hose near the top my trashcan I could see the fluff that had been cleaned of seed would float up and get sucked out. After about 10 minutes or so of playing with this, I found that the fluff in the vacuum cleaner was mostly pure of seed and there was a lot of seed in the bottom on the separator. I’m estimating near 100% cleaned seed.
Here’s what I found worked best for me:

1. Make sure the uncleaned seed is dry and the floss fluffy.
2. Don’t put the pods in the container with the fluff. Strip the fluff and seed out of the pod and let the seed / fluff fall into the area underneath the top plate of the upper rack.
3. Don’t put too much in. Don’t pack it in there. It needs to remain fluffy and free to float around.
4. In addition to spinning the rack around, rotate it back and forth sometimes. This keeps the fluff from bunching up and compressing.
5. Be careful with the vacuum. It’s amazing how light that fluff is. It’s easy to suck out fluff with seed still attached if you get to close.

Is it more efficient than hand cleaning? Jan would probably say it’s not worth her time to use this apparatus. She’s done it for years and seems happy with the manual results and the little time it takes her. For me, I’m satisfied sitting on a stool in front of this thing and churning away for awhile.

Is it less messy this way? No question. The container keeps the fluff contained and the vacuum sucks away the fluff. I tried the bag shaking technique the other day and had milkweed fluff blowing all over the neighborhood. And I suspect any method of rubbing the fluff over a screen would produce a lot of free ranging fluff. Regardless, I still wouldn’t use the separator inside the house.

It took me about ½ day to build mine. I used materials I already had. I am fairly skilled in woodworking and have all the tools to help. However, this isn’t a difficult device to construct. I’m sure it could be done with a handsaw, drill, and screwdriver. No question, it’s easier and faster with power tools.

I tried both the 5 gallon and 15 gallon versions. I spun the upper rack manually for both of these sessions. Obviously I was able to load a lot more into the 15 gallon trashcan than the 5 gallon bucket. Both constructs worked well for me.