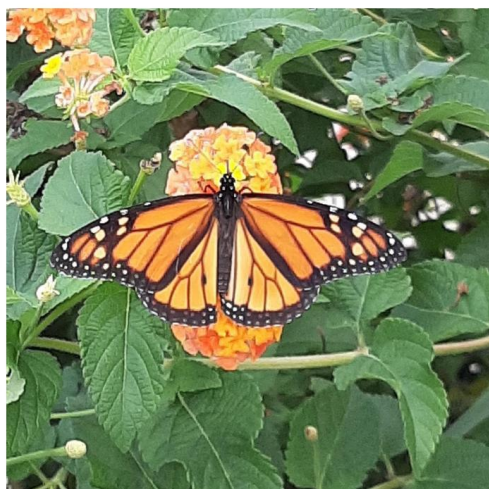


Did You Hear the News?

Bea Leach

The migrating monarch butterfly, a subspecies of the monarch butterfly (*Danaus plexippus*), has been placed on the endangered species list by the International Union for Conservation of Nature (IUCN) in August, 2022. The United States has yet to add it to the Endangered Species Act, but several environmental groups believe it should be listed.



Migrating monarchs in North America undertake the longest migration of any insect species known to science. After wintering in central Mexico, the monarch migrates north breeding multiple generations along the way. The offspring that reach Canada make the return trip to Mexico at the end of the summer. A smaller group of monarchs spend winters in coastal California and then migrate to several states west of the Rocky Mountains.

The IUCN estimates that the migrating monarchs have declined in North America between 22% and 72% depending on the measurement method over the last ten years. Nick Haddad, a conservation biologist at Michigan State University, estimates the population of the monarchs he studies in the eastern United States has declined between 85% and 95% since 1990. The western population is at greatest risk of extinction, having declined by 99.9% since the 1980's.

Sources:

<https://www.corvallisadvocate.com/2022/monarch-butterflies-endangered-or-not/>, accessed August 22, 2022

<https://iucn.org/press-release/202207/migratory-monarch-butterfly-now-endangered-iucn-red-list>, accessed August 22, 2022

It is not too late to begin helping increase the population of these magnificent creatures. Deforestation and urban development have eliminated many of the butterflies' winter shelters in Mexico and California. Climate change has impacted the monarch with drought, high temperatures and dangerous wildfires that have inhibited the growth of milkweed. The milkweed is where the monarch lays its eggs and the plant the larval caterpillars use for

food. We can provide for the larvae by planting milkweed in our home gardens and encouraging others to do the same.

As a young teacher, my students and I had the wonderful experience of watching a very large kaleidoscope of butterflies as they migrated over the school's playground. It was an amazing sight I hope to see again someday.

[Note from the Extension Agent: There are two important questions regarding the decline of monarchs that, according to my brief review, have not been definitively answered. The first is to quantify what if any impact on monarch populations can be attributed to the loss of milkweed caused by herbicide use in agriculture. The second is to quantify what if any impact the use of agricultural insecticides has had on monarchs. Answering these questions is exceptionally difficult, but vitally important. ~Paul McKenzie]



Proof That You Can Garden Anywhere

Mary Jane Bosworth

If you think gardening is difficult in North Carolina, with its clay soil and critters like deer and bunnies who eat what you plant, have you ever thought of the difficulties encountered by those who wish to plant gardens in other parts of the US?

How easy do you think gardening is in New York City, for example, with concrete everywhere, high-rises and millions of people? All it takes is one determined



woman named Carol, many volunteers and lots of time. The area I am talking about is the Lower East Side of Manhattan bounded by Grand, Essex, Clinton and E. Broadway. In this area there are shops, restaurants, a grocery, library, Seward Park and Seward Park co-op Hi-rises. There are also trees planted along the streets with a 4 foot by 8 foot section of ground around them. Here is one place where gardening in NYC happens. Volunteers are given a “tree/garden” and may select the seeds they wish to plant. After the ground (it can hardly be called soil at this point) has been cleaned of debris and leavings of the neighborhood dogs, it is amended with compost and mulch and seed planting begins. Herbs and flowers are sown and watered.



Water carts have been purchased and the grocery store allows storage and access to a locked water spigot. These carts are on wheels and the volunteer takes one to his/her plot and waters the plants when needed.

There may not be deer or bunnies to eat the plants but the volunteers need to watch for rats, dogs, and careless people. To hinder two of these problems, the gardens are roped off in quadrants...sort of like our one square foot gardens. This at least takes care of the dogs and people.

The results of these gardens are many. Besides making this part of NYC a beautiful spot, more and more people have become volunteers and are interested in maintaining the area. Also, friendships have been formed, children have participated and realized the “Power of the Flower”, people are being educated with the plant information provided on placards and a community spirit has developed.

Start gardening where you are and you will reap the rewards.



I Want A Greenhouse, Again.

Juel Duke

I'm going to bet that most gardeners want a greenhouse or cold frame. I know that I do and that I've had a greenhouse in the past. After all, they can be used for so many purposes including starting seeds, rooting cuttings, winter vegetable production and overwintering tender plants (e.g. annuals, houseplants, etc.). There are many options available, some of which are quite inexpensive. One reason for buying our first house, in 1984, was the beautiful teak and glass greenhouse attached to the garage. It would be perfect for the orchids I grew then, once a little bit of maintenance was complete. Since winter was just a few months away, that maintenance was the first task and we quickly learned that it was more than a little maintenance. The non-teak wooden floor needed to be replaced but the teak was fine as was most of the glass—until we took that down and stacked the glass to keep it safe. That was the only way we saw to replace the support given to the structure by the now rotted floor. While we were pondering that task, we realized that we kept hearing a strange popping sound that came from the stacks of glass panes. Old glass, exposed to intense sun for years, will likely become brittle, it turns out. Stacking the glass had resulted in ALL of the 200+ 1 foot squares of glass breaking into more and more pieces the longer it sat.

We faced the fact that we would need to start over with the greenhouse and I enthusiastically researched options. We finally decided on a kit that was the same footprint as the previous greenhouse but with a metal structure. Happy with my selection, I planned to order it the next day after the annual furnace inspection was completed. That was not the way it worked out. The furnace needed to be replaced and it would cost almost to the penny the same as the new greenhouse. We opted for a warm house and gave up on a greenhouse for about twenty years.

The next planned greenhouse happened. It was a 6x8 kit that came in two big plastic boxes. I put it together, by myself, over a couple of days. It cost far less than the first attempt would have, even with the 6x6 lumber frame, filled with gravel that the greenhouse itself was bolted to. Electricity and water were routed to the inside. I built benches on both of the long sides with a narrow walkway between. I absolutely loved almost everything about it.

This kit with polycarbonate frame and panels was supposed to have a ten year lifespan and it lived up to that. I figured 10 years would be adequate for me to know if a more grandiose greenhouse would be enjoyed. I'm sure it would and may be still. My

current realization is that I don't need a greenhouse so much as a squirrel-proof structure to protect seeds and small plants. For now, I'm testing two different cold frames.

One cold frame is an inexpensive plastic frame covered in clear plastic, open on the bottom as is typical with cold frames. Rather than on the ground, it sits atop a table under the shade of a large red cedar. Even in the shade, it was too hot and I needed to open the handy zippered windows that are now covered with wire shelving. I like almost everything about this squirrel excluder, though I don't intend for it to remain in use outside over the winter. For most winter uses of a cold frame, it must be placed on the ground or it won't retain any heat overnight.



The other is a much more expensive "fancy" cold frame from Juwel with an aluminum and plastic frame and double wall polycarbonate panels. I chose to elevate this one as well and built a wooden frame for it.



The frame was much easier to construct than the cold frame itself. In fact, I've yet to figure out how to properly mount the door on the frame so duct tape hinges are in use.

This door is the top of the cold frame and swings up but I have to hold it open or use a stick to do the same when I'm working in it. This wouldn't be a problem if the door fit as shown in the instructions. The door has an insect screen that can be used alone or you can slide in the polycarbonate panel that is included. I thought that I could use the screen or the panel but, no. The screen stays in place and will reduce the amount of sun that reaches the items inside. This cold frame is in the sun and for the summer I've left the panel off. I will add the panel to the door later in the year.

I intend to use it over the winter to cold stratify some seeds and to overwinter some small but winter hardy plants. That's not the traditional use for a cold frame, but at 65+ years old, I've found that bringing the gardening closer to my hands is much easier on my knees.

A few years ago I bought one of those cheap flimsy seed-starting "greenhouses" that consists of a plastic frame, wire shelves that fit the standard seed flat and a green and clear plastic cover. It does work pretty well for squirrel exclusion even if the covering is now more of an open net than a cover. This also keeps it from overheating where I have it. This prompted me to invest, if you call \$30 an investment, in a similar structure in a 4' x 6' size that I plan to test this winter. It will be a place to safely, squirrels-excluded, overwinter all the seeds that need to be stratified (assuming it doesn't stay too warm) as well as the plants I've started that aren't quite as large as I like when I plant them out. I haven't chosen the place for it yet, so assembly hasn't happened. By the winter issue of the Garden Path, it will be in place and, hopefully, filled. More on it next time.

To learn more about cold frames and other season extenders read this section <https://content.ces.ncsu.edu/extension-gardener-handbook/appendix-e-season-extend-ers-and-greenhouses> from the Extension Master Gardener Handbook.

All The Buzz

Bea Leach

At the Vance County Memorial Garden, we have been working on getting more native plants in the garden. When a gardener talks about native plants, they are referring to the plants that have evolved in a particular area or region. Audubon states:

Native plants are those that occur naturally in a region in which they evolved. They are the ecological basis upon which life depends, including birds and people. Without them and the

insects that co-evolved with them, local birds cannot survive.

(<https://www.audubon.org/content/why-native-plants-matter>, August 22, 2022)

One of the native plants we added this spring is *Eryngium yuccifolium*, Rattlesnake Master. It is an herbaceous perennial from the Apiaceae family which makes it a relative of fennel, parsley, coriander and carrot. Flowers of Rattlesnake Master are made up of many green and white flowers that resemble thistle. These unusual flowers are attached to long, stiff stems that can be three to six feet tall. The honey scented flowers attract pollinators such as bees, butterflies and wasps.



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Rattlesnake Master's blue-green leaves resemble those of the yucca plant. And like the yucca, the margins of the leaves have sharp spines. It would not be hard to believe someone long ago grabbed the plant and thought they had been bitten by a snake. Indigenous people used the leaves to weave baskets and sandals as well as for medicinal purposes, but NOT to treat rattlesnake bites. You can see *Eryngium yuccifolium* in the Memorial Garden at the Vance County Regional Farmers Market near the large boulder on the southeast side of the garden.

For more information, visit the North Carolina Extension Plant Toolbox at
<https://plants.ces.ncsu.edu/plants/eryngium-yuccifolium/>.

Eryngium yuccifolium was selected as the 2016 NC Wildflower of the Year.
 (http://www.floraquest.org/plant/show.php?id_plant=ERYU)

To see other wildflowers selected by the North Carolina Botanical Garden, go to
<https://ncbg.unc.edu/plants/nc-wildflower-of-the-year/>.

Debbie Roos is a NC State Extension agent in Chatham County. She maintains a pollinator garden in Chatham Mills with the help of her Master Gardeners. See her top 25 native plants and suppliers here: <http://go.ncsu.edu/beeplants>.

The North Carolina Wildlife Federation has an excellent weekly newsletter that can be obtained through email by signing up at

https://lp.constantcontactpages.com/su/ex4CtSn/butterflyhighway?source_id=2c323d4b-8c35-4bd0-9b9b-d74b8864f516&source_type=em&c=PSmwCG6rRgznBBxIL-2Rxtyv9Q3RRQKOgklzOc6-uZtG8CO81J64sQ, (August 22, 2022).

Each weekly Butterfly Highway contains information about the native plants blooming and pollinators flying each week. Also included each week is information about an invasive plant. Kudzu and Japanese Barberry have been highlighted recently. New to the newsletter is “What Mushrooms are Growing This Week”. Links to resources for “Habitat and Wildlife Happenings” calendar throughout the state are also included.

Please consider adding more natives to your yard and gardens next season. You will be amazed and entertained to see the variety of pollinators visiting. Until next time...

Checklist of Things To Do in the Garden in the Autumn

Mary Jane Bosworth

September

- Most flowers have now set seeds and they may be collected and saved for the following year. Annuals and biennials are among the easiest to grow from seeds. Some you might want to consider for this project would be: marigolds, zinnias, spider flowers, strawflowers, larkspur, and sunflower. Store seeds in a cool, dry place in a paper envelope or bag.
- If you will be considering planting spring bulbs for the following year, now is the time to order them, so get out your catalogs or go on-line now.
- Plant pansies for splashes of winter color.
- Control winter weeds with a pre-emergent herbicide applied from September 1-15 on shrub planting areas.
- Divide and replant overgrown perennials such as hostas, coneflowers and daylilies.
- Keep harvesting your figs.
- This is a good time to get your soil tested for next year's plantings.
- Clean debris out of your garden. Remove spent annuals and cut the tops of perennials.
- Bring houseplants indoors when temperatures dip below 50. Give them a good bath with soapy water or spray with insecticidal soap. Move plants to shade for a week to condition them to the lower light levels they will receive when they are returned to the house.

October

- Now is the time to look for bargains at nurseries.
- Keep watering as needed so that plants don't get stressed.

- Finish cleaning up garden beds by pulling out annuals and vegetables. Cut off tops of perennials.
- Just before frost, dig up sweet potatoes and pick all the green tomatoes which can be wrapped in newspaper and will continue to ripen.
- Most flowering shrubs can be propagated by hardwood cuttings. Make cuttings 6-8" long and dip in rooting hormone. Set them in garden soil, leaving 2" exposed and keep moist.
- Store the bulbs of Dahlia, Canna, Caladium, Gladiolus and Tuberous Begonia as they may not overwinter. Lift the roots, tubers or corms about the time of the first killing frost and store in a garage until the soil dries and then shake it off. Cut off the dried stem and place in sawdust or peat moss and store in a basement or other cool, dry place. These plants cannot withstand freezing.

November

- Plan now for spring color and plant spring flowering bulbs.
- Prepare your vegetable beds by tilling or double digging the beds and adding organic matter.
- Test your soil. Submit samples to the lab before the end of the month to avoid paying a \$4 per sample analysis fee.
- Keep up your garden care and harvest your cool season vegetables.
- Plant asparagus this month. If you already have some, now is the time to cut back the ferny tops as they turn yellow and brown.
- Mulch well around figs, pomegranates and other warmth loving fruits.
- Dig, divide and share perennials.

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Recommendations for the use of chemicals are provided as a convenience. User is responsible for reading and following all instructions. For more information, contact your local Agricultural Extension Agent.

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