

Monarch Butterflies

& Georgia's Gardeners



Do you want to help Monarch butterflies in Georgia? Are you a gardener wondering which plants will encourage Monarchs to visit your garden? Are you a land manager wanting to restore plant and insect diversity to the lands you steward?

What's the big deal about Monarchs? Monarchs (*Danaus plexippus*) migrate south like many birds do—flying south in the fall and returning north in the spring to avoid our cold winters. For unknown millenia, the eastern Monarch population has been flying south to a handful of fir forests in the Transvolcanic Mountains of Mexico, where the temperature and humidity are just right for them to cluster together and survive the winter. Their round-trip journey, up to 3,000 miles, is one of the world's longest and most spectacular insect migrations.

If they've been doing this for so long, why are Monarchs suddenly in the news? Monarchs are in trouble. Viewed over the past few decades, the number of Monarchs has dramatically declined. The U.S. Fish & Wildlife Service has been petitioned to protect the Monarch under the Endangered Species Act and is currently assessing the species' status.

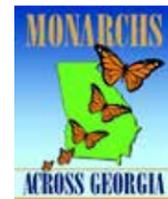
What's happened? There are many suspects, including loss of host plants, destruction of habitat, climate change, and increased pesticide use. While any one of these factors could be problematic, taken together they may spell doom for Monarchs. These butterflies are the proverbial “canary in the mine.” Their troubles are our troubles, warning of danger to the health and well-being of humans as well as plants and other animals.



Monarchs feed and breed in Georgia on both the north-bound spring migration of the eastern population as well as the return trip to Mexico in the fall.

The Georgia Native Plant Initiative and the Georgia Milkweed Initiative represent a network of growers, nurseries, conservation professionals, and plant scientists that are committed to producing and selling native milkweed plants and their seeds in an ethical, eco-friendly way. Members are aware of the problems that can arise when certain plants, such as milkweeds, receive a lot of publicity, including pressure to poach plants from the wild and to overcollect both plants and seeds from natural populations. GNPI/GMI members have participated in public meetings with conservationists to identify the dangers of rushing native plants into commercial cultivation and to hammer out Best Practices that address these dangers. An example is the “10% Rule,” which specifies that less than ten percent of the seeds of a given species can be removed from a wild population. Another example is a commitment to preserving genetic diversity: by collecting and propagating seeds from across a species' range in Georgia, seed collectors and growers ensure that the full range of genetic diversity—including such traits as disease resistance, frost tolerance, and heat/drought adaptation—is captured in commercially propagated plants.

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What can one Georgian do to help Monarchs? You can help by doing something you are already passionate about – gardening with native plants and restoring native landscapes. Plant native milkweed species, which are the only plants that support Monarch caterpillars, and nectar-producing native plants that provide food for the adult butterfly. Monarchs Across Georgia (<http://www.eealliance.org/mag>) also recommends:

- Reducing or eliminating the use of insecticides, especially neonicotinoids (see over), in your gardens and yards
- Participating in a citizen science project such as Project Monarch Health, Journey North, Monarch Watch, or Monarch Larva Monitoring Project.

The fab four!

Four species of Georgia's milkweeds grow in nearly every region of Georgia and are safe and beneficial to grow throughout the state. Lucky for us, these four are among the showiest of our milkweeds. And as an added benefit, deer avoid eating any and all milkweeds because of their bitter, toxic latex.



Whorled Milkweed (*Asclepias verticillata*) naturally occurs in dry to moist, sunny areas and woodland edges, especially where the soils are sweeter (more basic) than Georgia's typical acidic soils. This milkweed may be the most subtly beautiful of all of Georgia's milkweeds. Its slender, branched stems bear many whorls of long, slender, drooping leaves and numerous small flower clusters from June through September. The flowers are delicately shaded white to pale green to purple. Nectaring insects, including a variety of bees, wasps, flies, butterflies, and skippers, visit the flowers. Deer especially avoid browsing on this plant as it is one of the more toxic milkweeds.



Clasping Milkweed (*Asclepias amplexicaulis*) thrives in dry, sunny, sandy areas such as woodlands and sandhills. It can reach 3½ feet in height and has large, widely spreading leaves tinged with dark pink. The fragrant flowers are a beautiful mix of pink, mauve, and purple, tinged with green, and make a great substitute in the garden for the non-native Common Milkweed mentioned above. Its flowers, peaking between May and July, attract hummingbirds as well as nectaring insects such as long-tongued bees, butterflies, and skippers.

Butterfly Weed (*Asclepias tuberosa*), with its bright orange flowers gracing roadsides and sunny woodlands, may be the best loved of Georgia's milkweeds. It forms clumps of branching stems that reach 2½ feet in height and bear large clusters of unmistakably brilliant flowers that attract bees, wasps, and butterflies (including fritillaries and swallowtails) in search of nectar. Butterfly Weed leaves lack the toxic, milky latex that other milkweeds have, but it still serves as a host plant for some Monarchs and is avoided by deer. It flowers over a long period in Georgia, from June through August.



Red-ring Milkweed (*Asclepias variegata*) naturally occurs in sunny, dry to moist areas. It is a stately plant, with an erect, purplish stem up to 3 feet tall, widely spreading leaves, and flower clusters that resemble a snowball except for a purplish-red ring around the “waist” of each flower. Their nectar attracts long-tongued bees, butterflies, skippers, and maybe even night-flying moths. White Milkweed flowers May to June.



Eastern Swamp Milkweed (*Asclepias incarnata* var. *pulchra*) naturally occurs in wet areas such as swamps and marshes in north Georgia. It will also happily grow in gardens that are kept well watered. Swamp Milkweed stems are 2-6 feet in height and branched. The pale to deep pink flowers open July through September. The flowers are visited by many kinds of butterflies as well as several types of bees, wasps, flies, and the occasional hummingbird.

Mountain Milkweed (*Asclepias exaltata*) grows on moist, shady slopes in Georgia's Blue Ridge Mountains. In gardens, it blooms best in patchy sun.



Fourleaf Milkweed (*Asclepias quadrifolia*) grows in full to partial sun, often in dry soils. In gardens, it benefits from a bit of lime.

The terrific trio for North Georgia Only!

Three other Georgia species of milkweed are also excellent Monarch caterpillar food, but they are a bit pickier about where they live. If you live in the mountains or Piedmont of Georgia, consider adding these north Georgia milkweeds to your garden...

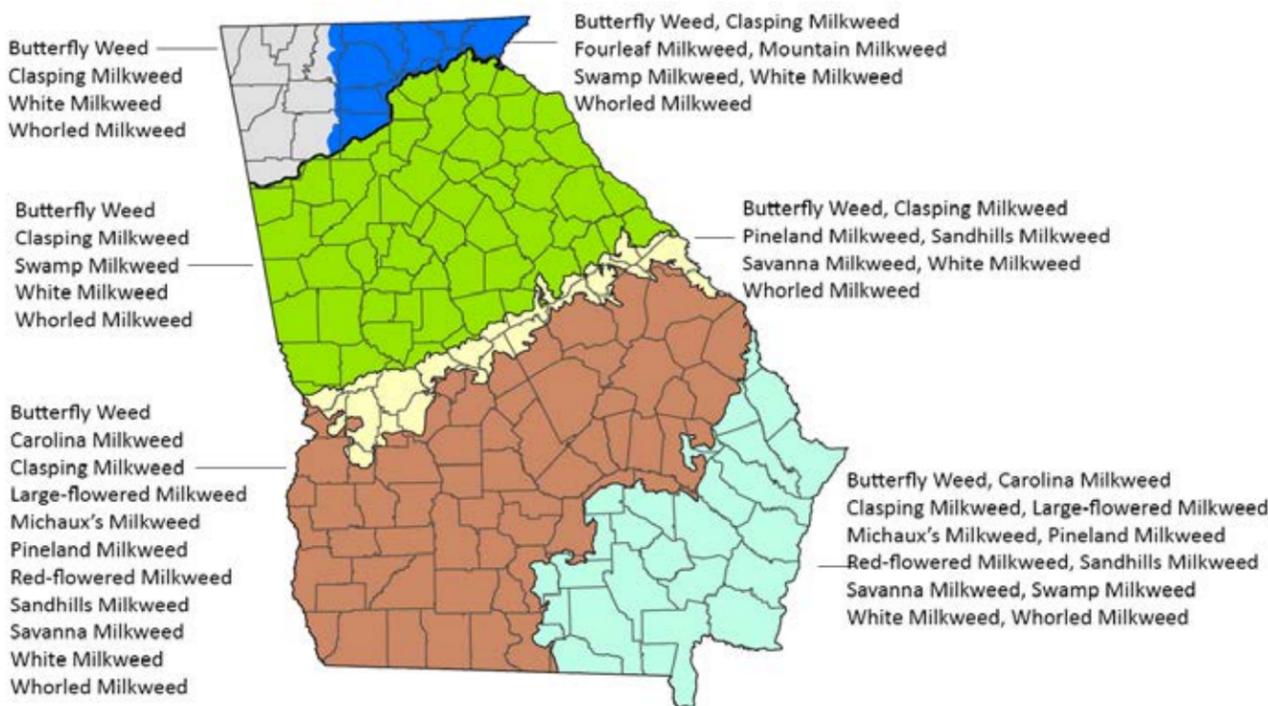
Which plants should I grow to help Monarchs?

Monarch butterflies are 100% dependent on a group of plants called milkweeds to support their young. While the adult Monarchs sip nectar from a variety of flowers, their caterpillars can only eat the leaves of milkweeds. This relationship between Monarchs and milkweeds has developed over thousands of years. Milkweeds produce a milky latex that is toxic to most insects but Monarchs are largely immune to the effects of the toxin. They take up the latex while they are still in caterpillar form, munching away on milkweed leaves. The toxin sticks around when the caterpillar changes into the winged adult form—birds quickly learn that eating a Monarch will cause them to vomit.

And don't forget to grow native butterfly nectar plants! Plants that produce showy, nectar-bearing flowers sustain adult butterflies and provide the nectar that fuels the Monarchs' migration to Mexico. These including goldenrods, sunflowers, asters, and joe-pye-weeds.

Which are the best milkweeds to plant in Georgia gardens?

That depends on which part of Georgia you live in. Although milkweeds naturally occur throughout most of Georgia, the type of milkweed (that is, which species) differs from region to region within the state. Here's a breakdown of the state's regions and the milkweeds that grow naturally in each. Most of these milkweeds are not yet available in nurseries, but we hope in time that they will be.



Growing Milkweeds

Milkweeds can be challenging to establish and grow in some Georgia soils, particularly dry, hard-packed, heavy clay soils. Most milkweeds need well drained soils. We recommend planting small plugs (nursery six-pack size) rather than direct seeding for gardens or restoration projects, especially in the northern half of the state. Growers in the Georgia Native Plant Initiative are developing best practices for propagating, growing, and establishing milkweeds for Georgia gardens and restoration projects. Stay in touch with us through the State Botanical Garden of Georgia website for the latest on best practices for planting and growing milkweeds: botgarden.uga.edu.

Are there some milkweeds that shouldn't be grown in Georgia?

YES! There are two answers to this question, one involving two non-native milkweeds and another involving rare milkweeds.



Tropical or Scarlet Milkweed (*Asclepias curassavica*) is a non-native milkweed imported from tropical regions of the Americas. It has a showy cluster of red, yellow, and orange flowers at the top of a tall stem and is attractive to Monarchs. The problem with this plant is that, in mild-winter southern states, it flourishes year-round and has the potential to short-stop

Monarchs on their way to their wintering grounds in Mexico. If the butterflies stick around too long, they may be killed during one of our occasional but inevitable hard frosts. They may also be killed by the so-called "OE parasite" which infects Monarchs that linger too long in one place. Tropical Milkweed may be the only milkweed sold by your local big box store, but **please – don't plant this milkweed!** It's worth making the effort to find one of the several milkweeds native to your region of Georgia. At the end of this brochure is a list of nurseries where you can be confident that the plants you buy are Georgia natives.



Common Milkweed (*Asclepias syriaca*) is indeed "common" – in the Midwestern and Northeastern United States. It is not native to Georgia and has the potential to escape from gardens and take over the habitats where our native milkweeds now grow. You may see Georgia on some range maps for this species, but those are mostly records of garden escapes

and are not reflective of the species' natural range. Yes, it is pretty but, **please – don't plant this milkweed!** You may provide food for a few Monarchs but at the expense of some of our native milkweed species and their habitats.

Off limits for now: Rare, Threatened, and Endangered Milkweeds

Six milkweed species are rare in Georgia (found in 11 or fewer counties) or listed as Special Concern by the Georgia Department of Natural Resources. Plant scientists and conservationists are working on securing these species and restoring their habitats on protected lands. Until we know more about these species and their status in Georgia, it's probably best to leave their cultivation to the experts. If you come across one of these rare milkweeds in the woods, let Georgia DNR know by calling 706-557-3032, but **please, do not buy, collect, or plant these milkweeds!**



Barrens Milkweed
(*Asclepias hirtella*)



Savanna Milkweed
(*Asclepias pedicellata*)



Purple Milkweed
(*Asclepias purpurascens*)



Red Milkweed
(*Asclepias rubra*)



Green-flowered Milkweed
(*Asclepias viridiflora*)



Green Milkweed
(*Asclepias viridis*)

Doing it Right: Growing and Selling Milkweeds in Ethical and Eco-friendly Ways

Over the last few years, Monarch butterflies and their milkweed hosts have attracted a lot of publicity, which is a wonderful thing. But there are dangers too. The wrong milkweeds, mentioned above, may be sold to unsuspecting buyers who want only to help out the Monarchs. Growers may rush to get native milkweeds to market and cut a few corners. Important questions—such as, where did these seeds come from, and were these plants dug from a wild population?—may not get asked by either buyers or sellers. How can we, in Georgia, avoid these pitfalls and do the right thing?

Where Can I Ethically and Safely Buy the Milkweeds Mentioned in this Brochure?

We list these nurseries to help home gardeners, land managers, and garden designers find ethical sources of plant species native to Georgia. None of these companies or organizations have provided us with any financial or other benefits in order to be listed here. We try to keep this list updated. If you have information to share, write to jceska@uga.edu.

Baker Environmental Nursery
Beech Hollow Farms
Blue Meadows Farm
Lazy K Nursery, Inc., and Garden Delights, LLC
Mellow Marsh Farm
Nearly Native Nursery
Niche Gardens
Piccadilly Farm
Plant Delights Nursery, Inc.
Rock Spring Restorations (formerly Rock Spring Nursery)
Southern Native Plantings @ Longwood Plantation
State Botanical Garden of Georgia Gift Shop
Thompson's Garden
Trillium Gardens
Woodlanders, Inc.

ALSO....
Chattahoochee Nature Center
(spring and fall plant sales)
Coastal WildScapes
(spring and fall plant sales)
Garden of the Coastal Plain, Georgia Southern Univ.
(spring and fall plant sales)
Georgia Native Plant Society
(spring and fall plant sales)
Georgia Perimeter College, Decatur Campus
(spring and summer plant sales)
State Botanical Garden of Georgia
(spring and summer plant sales)

A Caution About Neonicotinoids

"Neo-nics" are a group of widely used insecticides that are absorbed into every part of a plant: roots, leaves, stems, pollen, and nectar. Neo-nics kill insect pests that attack the plant's leaves and they also kill beneficial or harmless insects that consume pollen and nectar such as bees and butterflies. When you buy plants for your butterfly or pollinator garden, ask if the plants have been treated with any version of neonicotinoid, the most popular being Imidacloprid. For more information, visit this website:

<http://www.xerces.org/neonicotinoids-and-bees/>