

## What can we do to help the monarchs?

We can help by doing something that you are already passionate about—gardening with native plants and restoring native landscapes. Monarchs Across Georgia recommends planting native milkweed species for monarch caterpillars and planting nectar-producing plants for adult butterflies. Other tips include:

- Providing multiple species of nectar-producing native plants in spring, summer and fall. Plants producing nectar in September and October are critical to fueling the monarchs' migration to Mexico! These include native asters, goldenrods, ironweeds, bonesets and blue mistflowers.
- Reducing or eliminating the use of pesticides on your property.
- Removing non-native invasive plants. A list is available from the Georgia Invasive Species Council.
- Participating in a community science project such as Project Monarch Health, Journey North, Monarch Watch or the Monarch Larva Monitoring Project can help scientists and land managers make informed decisions about conservation practices.

### The Fab Four!

Four species of Georgia's milkweeds are commercially available to gardeners and are safe and beneficial to grow throughout the state, helping to support monarch butterflies and related insects such as the queen butterfly and milkweed tussock moth as well as the whole milkweed community of pollinators, predators and plant-eaters!



Swamp milkweed (*Asclepias incarnata*) naturally occurs in wet areas such as swamps and marshes. It will also happily grow in gardens that have at least average soil moisture. 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 pollinators including the occasional hummingbird.

Butterfly milkweed (*Asclepias tuberosa*), with its bright orange flowers gracing roadsides and sunny areas, may be the best loved of Georgia's milkweeds. It forms clumps of branching stems that reach 2 1/2 feet in height and bear large clusters of unmistakably brilliant flowers that attract bees and butterflies in search of nectar. Butterfly milkweed lacks the milky latex sap that other milkweeds have, but it still serves as a host plant for monarchs. It flowers over a long period in Georgia, from June through August.



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. A wide range of pollinators visit the flowers. Deer especially avoid browsing on this plant as it is one of the more toxic milkweeds.



Smoothseed milkweed (*Asclepias perennis*), also called white swamp milkweed, naturally occurs in floodplain swamps, marshes, and wet ditches in full to part sun in the Coastal Plain. Easy to grow and quick to regrow after being used by monarchs, this species has a long bloom period (May to September) and a shorter height (1–2 feet), making it perfect for smaller gardens and containers.



## Growing milkweeds

Milkweeds can be challenging to establish and grow in some Georgia soils, particularly dry, hard-packed clay soils. Most milkweeds need well drained soils. We recommend planting plugs rather than direct seeding for gardens or restoration projects, especially in the northern half of the state. Gardeners might try growing from seed using the winter sow method.

Get more tips here: <https://www.xerces.org/milkweed>

Remember that if you are growing milkweeds for monarchs, the leaves, not the flowers, are critical for caterpillar development. Monarchs migrate through Georgia in both the spring (April–May) and the fall (August–October) and will breed during both periods.

Consider planting more than one native milkweed species. Depending on temperature and sun exposure, swamp milkweed and tall milkweed tend to send up shoots earlier than other species in spring.

Some research has found that monarchs will lay eggs more readily on milkweed regrowth than on older stems. If in mid-summer your milkweed looks in need of a refresh, you can cut back the stems to encourage regrowth in preparation for breeding in August and September.

*Caution: milkweed sap can cause skin and serious eye irritation. Always wash your hands after encountering milkweed sap. Wearing garden gloves and eye protection is recommended.*

### Where can I ethically and safely buy Georgia milkweeds?

Nurseries that sell native milkweeds to home gardeners and land managers can be found at the following link on the Georgia Native Plant Society website:

<https://gnps.org/georgias-native-plants/sources-native-plants/>.

None of these businesses have provided any financial or other benefits in order to be listed.

### A caution about neonicotinoids

“Neonics” are a group of widely used insecticides that are absorbed into every part of a plant: roots, leaves, stems, pollen and nectar. Neonics kill insects that eat the plant's leaves, such as caterpillars, and are also harmful to 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 systemic pesticides like neonicotinoids (Imidacloprid is a common one). For more information:

<https://www.xerces.org/pesticides/understanding-neonicotinoids>.

## What's the big deal about monarchs?

The monarch (*Danaus plexippus*) is one of the most recognizable and well-studied butterflies in North America. The eastern population is known for its annual tri-national migration from as far north as southern Canada to the Transvolcanic Mountains of Mexico each fall, returning to the United States in the spring. A journey of nearly 3,000 miles, it is one of the longest documented insect migrations. Because they cannot survive the cold winters of northern climates, they overwinter in the Mexican Oyamel forests at 10,000-foot elevations. Monarchs are a flagship species for conservation! Creating habitat for monarchs benefits other pollinators as well.

### If monarchs have been migrating for millennia, why are they now in the news?

For more than 20 years, communities and scientists have been tracking monarch populations with growing concern as the number of monarchs in the overwintering sites in both Mexico and California has declined dramatically. These declining trends led to the petition of the U.S. Fish and Wildlife Service to list the North American migratory population for protection under the Endangered Species Act. In 2020, FWS published a Species Status Assessment Report declaring this migratory population as warranted but precluded, meaning that the monarch is a candidate species for listing under the ESA but there are not enough resources to focus on higher priority listings. Its status is reviewed each year until it is no longer a candidate.

### What are the reasons for the decline in the monarch population?

Multiple threats and stressors contribute to their decline, most significantly, the loss of habitat for breeding, migrating, and overwintering. The overuse/misuse of pesticides and herbicides has harmful unintended consequences. Natural enemies such as disease, predators and parasitoids also take their toll. Climate change is making some habitats unsuitable and modifying migratory patterns.

Monarchs Across Georgia, the Georgia Native Plant Society, the Georgia Plant Conservation Alliance and the Georgia Native Plant Initiative network with growers, landscapers, land and right-of-way managers, botanists, plant societies, garden clubs and gardeners to promote the use of Georgia native plants in all landscapes. This collaboration seeks to transform gardens, roadsides and landscapes across Georgia by showcasing the horticultural appeal and ecological value of our native flora. Members follow best practices like the 10% rule—less than 10% of the seeds of a given species can be removed from a wild population—and a commitment to preserve genetic diversity by propagating plants from across a species' range in Georgia.

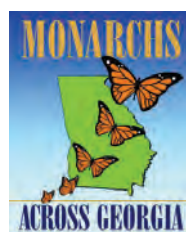


Monarch caterpillar on butterfly milkweed



The eastern monarch population feeds and breeds in Georgia on both the south-bound fall migration to Mexico and their return trip in the spring.

# Monarchs, Milkweed Georgia Gardeners



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## Which plants should I grow to help monarchs?

Milkweeds, in the genus *Asclepias*, are the prime host plants for monarchs. Their caterpillars feed exclusively on milkweed leaves. Without milkweeds, monarchs cannot complete their life cycle.

The monarch has evolved closely alongside milkweeds, plants named for their milky-white sap that contains a toxic cardiac glycoside. Monarch caterpillars sequester this toxin in their bodies which protects them and their subsequent life stages of pupa and adult from most vertebrate predators. There are some vertebrates (a few bird species in particular) that can tolerate this toxin but it certainly does not prevent arthropods (such as spiders, ants, wasps, etc.) from preying on monarchs. On average only 10% of monarch eggs mature to adults.

Although monarch adults drink nectar from milkweed flowers, they will feed on a variety of blooms. **A good rule of thumb is that, for every milkweed, you should provide 8-10 nectar plants.** Excellent choices for early spring (April-May) include several native species of coreopsis, phlox, salvia, bluestar and butterweed. Plants producing nectar in September and October are critical to fueling the monarchs' migration to Mexico! These include native asters, goldenrods, ironweeds, bonesets and blue mistflowers.

### 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.

Note: Vines such as honeyvine (*Cynanchum laeve*) and milkvine (*Matelea spp.*) have the potential to provide monarch larval food but little documentation is currently available.

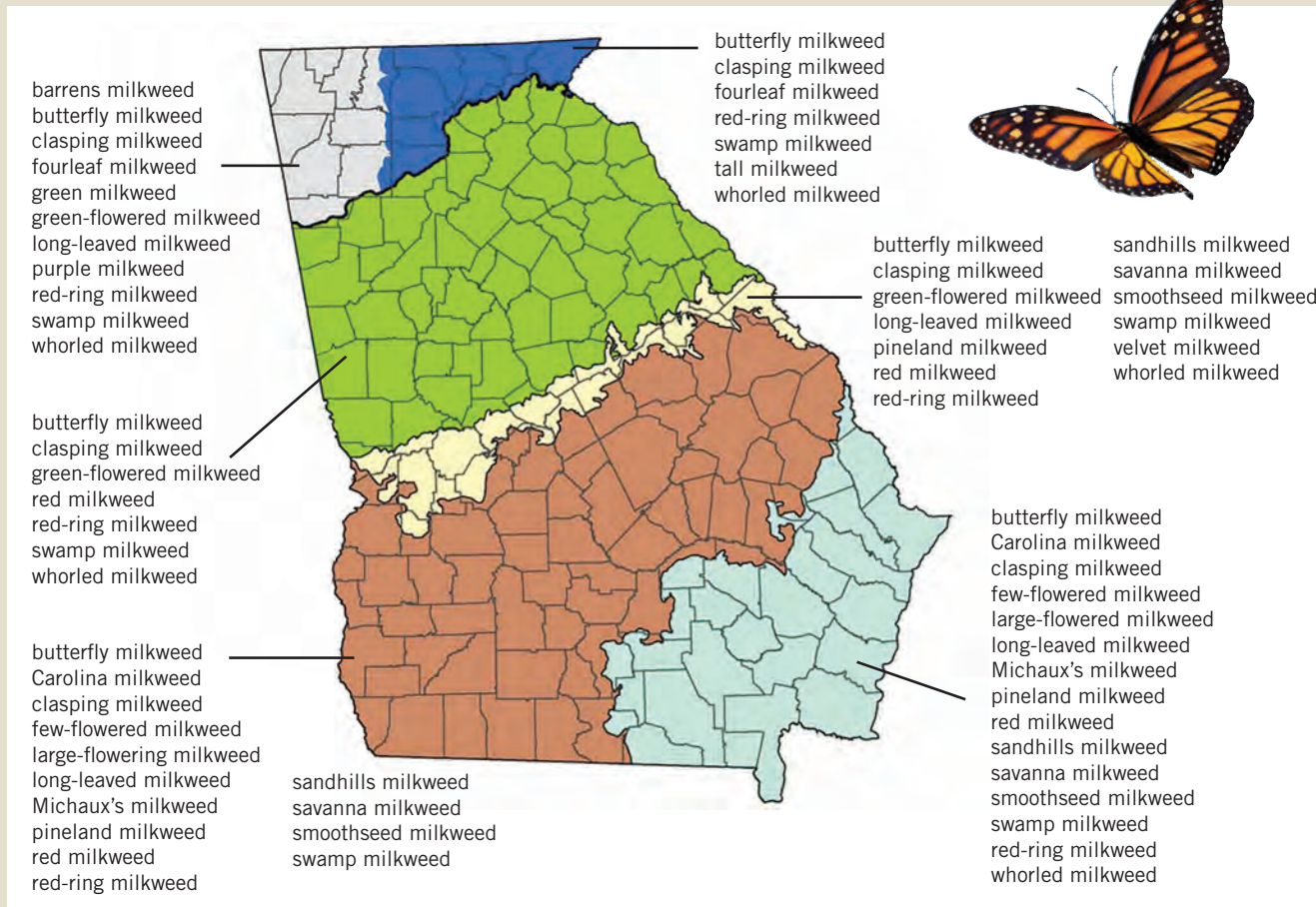
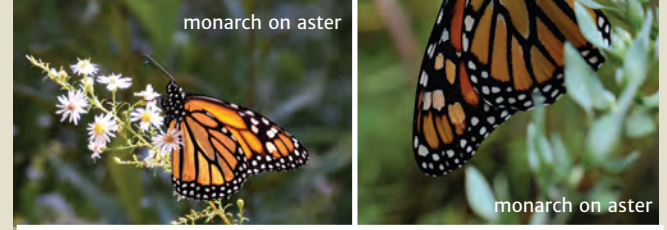


## Are there some milkweeds that should not be grown in Georgia?

Tropical milkweed, Mexican milkweed or bloodflower (*Asclepias curassavica*) has a natural range as far north as Mexico but this plant is not native to the United States. Flower clusters range from yellow to red-orange atop upright stems. It is able to grow in mild winter climates whereas our native milkweeds are perennials that die back. If this milkweed is present, then monarchs can breed in the winter. Research is ongoing but indicates that monarchs that continue to breed in the winter months are at higher risk of mortality and lower ability to reproduce due to (1) a disease known as OE that infects monarchs, (2) lack of nectar and host plants and (3) possible freezing temperatures.

Balloon plant, hairy balls or swan plant (*Gomphocarpus physocarpus*) is a shrubby herbaceous perennial in the milkweed family native to South Africa. A tender perennial in zones 8-10, it can grow over 6 feet tall from fibrous roots. The white flowers are not particularly showy and can occur in drooping clusters. The yellowish ball-like fruits are often used in floral arrangements.

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 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 escapees and are not reflective of its natural range. Please don't plant this milkweed! You may provide food for a few monarchs but at the expense of some of our native milkweeds and their habitats.



Scientific name	Common name	GA Range	Notes
<i>Asclepias amplexicaulis</i>	clasping milkweed	Statewide	
<i>Asclepias cinerea</i>	Carolina milkweed	South	
<i>Asclepias connivens</i>	large-flowered milkweed	South	
<i>Asclepias exaltata</i>	tall milkweed	North	Early, shade tolerant
<i>Asclepias hirtella</i>	barrens milkweed	North	Rare
<i>Asclepias humistrata</i>	sandhills milkweed	South	
<i>Asclepias incarnata</i>	swamp milkweed	Statewide	Available in nurseries, wet tolerant
<i>Asclepias lanceolata</i>	few-flowered milkweed	South	
<i>Asclepias longifolia</i>	long-leaved milkweed	South	
<i>Asclepias michauxii</i>	Michaux's milkweed	South	
<i>Asclepias obovata</i>	pineland milkweed	South	
<i>Asclepias pedicellata</i>	savanna milkweed	South	Rare
<i>Asclepias perennis</i>	smoothseed milkweed	South	Available in nurseries, wet tolerant
<i>Asclepias purpurascens</i>	purple milkweed	North	Rare in Georgia
<i>Asclepias quadrifolia</i>	fourleaf milkweed	North	
<i>Asclepias rubra</i>	red milkweed	North	Rare
<i>Asclepias tomentosa</i>	velvet milkweed	South	
<i>Asclepias tuberosa</i>	butterfly milkweed	Statewide	Available in nurseries, dry tolerant
<i>Asclepias variegata</i>	red-ring milkweed	Statewide	Shade tolerant
<i>Asclepias verticillata</i>	whorled milkweed	Statewide	Available in nurseries
<i>Asclepias viridiflora</i>	green-flowered milkweed	North & Northwest	Rare
<i>Asclepias viridis</i>	green milkweed	North & Northwest	Rare

## Off limits for now: rare, threatened and endangered milkweeds

Six milkweed species are rare in Georgia, according to 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 best to leave their cultivation to the experts. If you think that you have found a rare milkweed, contact GA DNR Wildlife Resources Division (email: gabiodata@dnr.ga.gov).