



Bee-Friendly Flowers: Milkweeds



Common milkweed

When it comes to enticing pollinators, few flowers can top those in the milkweed family. Bees of all kinds, butterflies, moths, wasps, beetles, ants, and flies are all drawn by their strong perfume and abundant nectar. There are 73 species of milkweed in the United States. The three most common in New Jersey are **common milkweed** (*Asclepias syriaca*), **butterfly weed** (*Asclepias tuberosa*), and **swamp milkweed** (*Asclepias incarnata*).

Asclepias was a mythical son of the Greek god Apollo and a god of medicine. He carried a staff that was wrapped in wise serpents. The serpents shared the herbal secrets of healing with Asclepias who shared the cures with humans. Today his staff, the caduceus, is still the symbol for the physician.

The scientific name of the genus is fitting as milkweeds have a long history of medicinal use. The plants contain white, sticky sap akin to latex. The sap oozes out of the stem and leaves when the plant is bruised. This sap contains sugar, gum, fat, cardiac glycosides and toxic alkaloids. It clots like blood soon after it oozes from the plant, but it looks like thick milk. The white sap can cause cardiac arrest in grazing animals and can be poisonous to humans, so don't ever drink it!

Despite its toxicity, Native Americans boiled the long tap roots of milkweed to make remedies for warts, respiratory ailments, arthritis, to induce vomiting, and for lactation and childbirth issues, to name a few. Butterfly weed became an important pharmaceutical for American physicians in the 19th century when it was widely used as an expectorant to treat smallpox and as a liquid bandage for skin wounds.



Butterfly weed



Swamp milkweed

The toxic nature of the plant is actually beneficial to many insects. For example, the monarch butterfly only lays its eggs on milkweed. The caterpillars feed on the leaves and the ingested juice makes them and then later the adult butterflies almost poisonous to birds and other predators. Milkweed beetles and milkweed bugs also reap the same protections, but they let predators know they should not be messed with as they are bright red just like stop signs.

The toxicity of milkweed sap does not deter bees, butterflies, and moths from seeking out their heady fragrance and sweet nectar. Once a pollinator lands on a flower, the plant makes it do its bidding to move pollen from one flower to another. Each star-shaped flower has a slippery surface and insect feet slide around when they land. Often, a foot will slide down between one of the five nectar-filled points in the flower's crown. In that slit between the points, the pollen is



Honeybee with pollinia attached to feet

packaged in little gold mustache-looking sacs called **pollinia**. As a bee's foot slips into a slit, it will catch the pollinia and as it frees itself from the clutches of the flower, the pollen sacs come along for the ride. When a bee visits another flower, the pollinia will get deposited when the foot slips into another slit. This is how the pollen is transferred. It's a very tricky maneuver though. If the bee or other insect is too small or isn't strong enough to pull away from the flower's stronghold, then sometimes the insect will die trying to free itself.

When the flowers are pollinated, the seeds form in pointed pods that turn brown, dry out, and crack open in late fall. Milkweed uses wind to disperse its seeds. Each seed in the pod is topped with its own little parachute called a pappus. The wind can carry a seed for miles. When seeds land on bare soil, they have a high rate of germination the next spring. They quickly develop long tap roots that burrow far down into the soil making the plant stable for years. These mother plants also send out runners to send up sprouts nearby.



Common milkweed seed pods with seeds



Monarch on swamp milkweed

Duke Farms Connection

Milkweeds are plants of meadows and sunny open wetlands. At Duke Farms we find common milkweed and butterfly weed in the Great Meadow, in the meadow behind the Visitor Center and in native flower beds around the property. Swamp Milkweed and Butterfly weed are also planted in the pollinator hoop house behind the Orchid Conservatory. Swamp Milkweed and Butterfly weed make beautiful additions to your home pollinator garden. These two bright bloomers mostly reproduce from seed, so they are easily controlled in a garden setting. They do like sun and are happiest when they get 6 to 8 hours of sunlight a day. Common milkweed will spread, so you need a lot of space if you want to grow this bee-friendly flower in your backyard.

Want to grow milkweed in your garden? Buy plants from native nurseries and **never collect them from the wild!** The Native Plant Society of New Jersey is a great resource to help you find where to buy them or to get more information.



Questions and Answers

1. What are the three most common milkweeds in NJ?

Answer: Common milkweed, butterfly weed, and swamp milkweed.

2. What is the scientific name of the milkweed genus?

Answer: Asclepias.

3. Who was Asclepias and what did he carry?

Answer: He was a mythical son of the Greek god Apollo and a god of medicine. He carried a staff entwined with snakes that taught him how to heal humans - it was called a caduceus and it's still the symbol of physicians today.

4. Why is this plant called milkweed?

Answer: It has a thick, sticky sap the color of milk that oozes from the plant when it is bruised.

5. How were milkweeds used medicinally?

Answer: Native Americans had multiple uses: for warts, lung diseases, arthritis, lactation, and to induce vomiting. Doctors in the 19th century used it for smallpox and as a liquid bandage for skin wounds.

6. How does milkweed sap benefit insects?

Answer: It renders insects that eat the plant toxic to other predators.

7. What pollinators are attracted to milkweeds?

Answer: Many different pollinators including all kinds of bees, butterflies, moths, wasps, beetles, ants, and flies.

8. What is the name of the packet that holds the pollen in a milkweed flower?

Answer: Pollinia.

9. Where do milkweeds grow best?

Answer: In sunny meadows and open wetlands.

10. Which two kinds of milkweed are the best to plant in a home garden?

Answer: Butterfly weed and swamp milkweed.



Additional Resources

Common Milkweed Plant Guide

Butterfly Weed

Swamp Milkweed Fact Sheet

Guide to Native Milkweeds

Milkweed for Monarchs

Journey North, Monarch Migration and Resources

Historical and Medical uses of Milkweed

Milkweed flower photos and Monarch courtesy of Mrs. Bird's garden.

Photo of Bee with pollinia and Milkweed pods form Google free images.