



# Milkweed

*Who's calling me a weed?*

The USDA Plants Database lists 76 species of milkweed (*Asclepias* spp.) that can be found in the U.S., (72 native). These species are considered native in NJ and are larval host plants:

**Common Milkweed** (*Asclepias syriaca*) produces nectar during the day and night which is valuable for moths. The plant prefers moist but well-drained soil, needs lots of sun and blooms from June to August.



**Swamp Milkweed** (*Asclepias incarnate*) usually grows in swampy areas or roadside ditches but will adapt to drier soil. It needs sun but tolerates light shade and blooms from June to October.



**Butterflyweed** (*Asclepias tuberosa*) Of the 72 native milkweeds, only Butterflyweed lacks the milky latex sap. It does contain cardiac glycosides. Flower colors can be orange, yellow and, rarely, red. Butterflyweed needs sun, grows in dry to moist soil and blooms from May to September.



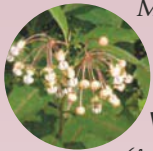
**Purple Milkweed** (*Asclepias purpurascens*) needs sun, grows in dry to moist soil and blooms May to July. The flowers are shade of magenta red.



**Whorled Milkweed** (*Asclepias verticillata*) grows well in meadows and open areas. It has narrow leaves whorled around the stem and clusters of small greenish white flowers which bloom May to September.



**Poke Milkweed** (*Asclepias exaltata*) Milkweeds usually need full sun but this species grows in some shade or in woodland areas.



**White (Redring) milkweed,** (*Asclepias variegata*) has white flower clusters that bloom May to September. It grows in dry soil and is moderately shade tolerant.



BY HENE O. SABIN '94

The word "weed," as part of the common name, has not been conducive to the planting of milkweeds as desirable ornamentals in the past. It is the current monarch butterfly crisis which has catapulted these plants into prominence. While adult monarch butterflies can feed on any nectar plants, the larval caterpillars need milkweed leaves as their only food source to complete their life cycle. Milkweed sap contains 1-2% latex and all milkweeds have cardiac glycoside toxins (*cardenolides*) which deter predators from eating the insects that feed on the plants. Black-backed orioles and black-headed grosbeaks have developed a tolerance for milkweed toxins and these birds are responsible for 60% of current monarch deaths in Mexico.

## Monarch Caterpillar Survival

Research done in 2010 indicated that survival of monarch caterpillars is reduced when they feed on milkweed with high latex flow and high levels of cardenolides. So, how does the monarch caterpillar survive the gummy latex that could glue together its mouthparts and drown him in place? The adult monarch lays one egg on the back of a milkweed leaf. The first instar eats its egg case and shaves the defensive hair on the top of the leaf to make its bed. Then, it spends time cutting a trench in the leaf which deflects the rapid flow of the sap so it can feed on that part of the leaf. There are five instars before pupation.

Milkweeds attract beneficial insects and have some allelopathic qualities which protect nearby plants from pests like wireworms. Monarch butterflies are not the best pollinators of milkweeds because the flowers have pollen massed in bundles called pollinia which tend to ensnare the pollinators. Other butterflies, like

swallowtails, as well as moths, large bees, wasps and hummingbirds are more successful.

## Milkweed reproduction

Milkweeds reproduce by seeds stored in large seedpods which pop open when the seeds are mature. Each seed is attached to a silky filament (pappus) from the seed pod and is spread by the wind. Seeds can be saved for planting by lightly taping the seed pod until it splits. Milkweeds have taproots and also spread by rhizomes, so planning a dedicated garden plot or a wildflower meadow, away from other ornamentals, is recommended. Seeds need cold stratification, which could be done in a refrigerator, but planting in the fall is the easiest method.

## Toxicity

How dangerous are milkweeds to grow in the garden? Not all milkweeds have the same toxicity: to cause death, animals would need to eat at least 10% of their body weight in milkweed fodder. Young shoots of milkweed were boiled and eaten by American Indians but the bitter and revolting taste of mature plants induces vomiting and would probably deter humans from consuming a lethal dose. The sap can cause mild dermatitis so gloves should be worn when gardening with milkweeds.

## Uses, historically and now

The floss from milkweed seed pods was used by the U.S. in WWII for life preservers because it floats and insulates well. Kapok, the standard material, was unavailable during the war. Since 2007, milkweed has been grown commercially as hypoallergenic filling for pillows. Milkweed fibers are also used for cleaning up oil spills.

Carl Linnaeus named the genus after Asclepius, the Greek god of healing.