

# Herbal Milkweeds

*Asclepias* spp.



*Asclepias variegata*

*An Herb Society of  
America Essential Guide*



# The Herb Society of America

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The Herb Society of America is dedicated to promoting the knowledge, use and delight of herbs through educational programs, research and sharing the knowledge of its members with the community.

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## Notable Native Herb

Each year the Native Herb Conservation Committee of The Herb Society of America chooses a native American herb to study in depth and to encourage its preservation and conservation. The Notable Native Herb for 2014 was *Asclepias variegata*, redring milkweed. In response to the interest this choice engendered, The Society has created this essential guide to other herbal members of the genus *Asclepias*.

Learn

Explore

Grow

Photo of *Asclepias variegata* herbarium specimen  
courtesy of Joyce Brobst



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*Asclepias tuberosa*

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**Cover Art:** Photo of *Asclepias variegata* by Katherine Schlosser

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Photo of *Asclepias* seed pods by E. Kennel

## INTRODUCTION

Milkweeds (*Asclepias* spp.) are members of the Apocynaceae, a large, widespread family of woody and herbaceous plants which also includes oleanders. Until recently, they had been in Asclepiadaceae, a separate family, which is now placed in the Apocyanaceae.

Asclepios, named in honor of the god Apollo, were the first healing centers and temples, the hospitals of ancient times. Apollo was in charge of both healing and music, as music seems to slow heart rate, lower blood pressure and reduce the level of stress hormones. The milkweed genus is named for Asclepius, son of Apollo, revered for his healing powers.

Milkweeds are so named for the milky juice contained in the stem. Butterfly weed (*A. tuberosa*) is an exception. Milkweeds have complex flowers with five sepals and five petals, all reflexed. Above the petals is a corona or crown of five upright tubular or scoop-shaped bodies colored like petals and having a horn (curved). The horn is the most conspicuous part of the flower. Clusters of fragrant, usually purplish flowers bloom in June through August.

Five stamens cohere and adhere to the large stigma. The pollen of each pollen sack forms a large waxy mass in which insects become entangled and usually carry away two pollen masses on their legs to pollinate the next plant. The pistil grows into a large pod, splitting along one side and having numerous seeds. The seeds are generally flattened, ovate, having a narrow marginal rim and tufts of silky hair.

All milkweeds are perennial with lance-shaped leaves, usually opposite, occasionally whorled, or reduced to a scale or spine, two to eight inches in length. The leaves, like the stems, are often hairy. John Gerard's *Herbal* of 1597 details milkweed's medicinal properties. Many years later Native Americans taught their own medicinal usages to English settlers.

The milky sap, or latex, was used for skin ailments, treatments of warts, ring worm, poison ivy and other skin problems. During the 1800s, American physicians used the sap and root to treat respiratory diseases. During World War II, the down from the seedpod was used as stuffing for beds, pillows and life jackets.

As a culinary resource, flowers of the common milkweed can be compared to broccoli florets. French Canadians in the late 18<sup>th</sup> Century regarded milkweed as a type of asparagus. The plant is milky and toxic, so the flowers, fruit, and stems must be boiled three times to remove the toxins. Planted in March, plants are vigorous in growth the first year, blooming the second year and thereafter. Underground runners allow all *Asclepias* species to become very invasive.

Milkweeds do well in all environments. Plant them in full sun and well-drained soil. Swamp milkweed does best with moisture, but will tolerate dry soil. Plant the milkweeds two to three feet apart. Nursery seedlings can be transplanted while dormant in spring or fall. Blooming season can be lengthened by cutting off the first flowers after they start to fade.

~Justina Campbell



Photo of *Asclepias tuberosa* by Laura Perlick, U.S. Fish & Wildlife Service

## ~~~~~ ETHNOBOTANICAL USES ~~~~~

by E. Barrie Kavasch  
Ethnobotanist/herbalist/botanical illustrator

Milkweeds abound with clever Indian uses. Perhaps more than 500 unique Indian names once existed for these 40 or so native species long before Linnaeus aptly named the genus for the Greek Father of Healing. Names can be revealing. Milkweed is named for its milky juice which consists of [latex](#)-containing [alkaloids](#) and several other complex compounds. Native uses for the ubiquitous milkweeds were so diverse that some tribes believed milkweed was a panacea, a storehouse of healing, and used from childbirth and infancy through maturity and even death – as most species of milkweed can be toxic and if misused are poisonous. Imagine the empirical knowledge gained through centuries of experimentation with these rugged perennial plants.

The milkweeds blessed many aspects of Native American life for hundreds of years. Archaeologists have discovered remnants of a milkweed fiber fishnet dating back to 300 B.C. in a prehistoric Indian site in Ohio. The ancient Mound Builders, ancestors of today's Indians, used the rot-resistant milkweed fibers to create mats, items for apparel, and to string pearls to wear, as well as to make a red dye. We can only speculate about how many other unique uses these widespread native plants inspired prehistorically.

*You, whose day it is, make it beautiful. Get your rainbow colors, so it will be beautiful.*

~ Nootka Indian song to bring fair weather

All across the Americas wherever milkweeds occurred, they have represented strength from the earth. Dense, colorful, fragrant blossoms produced in great profusion intoxicated insects as well as wild food enthusiasts. Yet bitter sap containing toxic alkaloids discouraged many predators. All plant parts were useful in various ways. From region to region, native people sought milkweeds and knew them by various tribal names, which were often based upon usage. Native American technology explored the milkweeds broadly in every aspect of personal necessities from weaving sandals and tying mats and moccasins, to fashioning hunting lures and fishnets, to crafting flutes and bird whistles, and much more.

The white woody mature stems, when peeled, were dried to use as blow pipes, flutes, and medicine pipes; the easily removed central pith was also sometimes useful in medicines. The robust *A. syriaca*, the common milkweed, and *A. exaltata*, the poke milkweed, were especially sought for use as pipe stems and even cut into short beads to use as spacers in threading between larger beads.

Iroquois, Mohegan, Cherokee, and Delaware (Lenape) Indians in the east used regional milkweed infusions for respiratory, flu, and heart problems, as well as for ceremonial uses; roots were pounded into poultices to dress wounds and even a baby's navel after childbirth.

Root and leaf decoctions were also used to bathe and strengthen the body. Rappahannock and Schaghticoke Indians used the pounded roots of milkweed in snakebite remedies and applied them (and also chewed them) to treat bee stings and spider bites. Indian women even developed temporary contraceptives using root infusions, which were also variously used to treat the problems of rheumatism, coughs, and tuberculosis, and much more.

Southern tribes from the Cherokee, Creek, Seminole, and Catawba, to the Choctaw and Chitimacha, and others used the whole milkweed plant in healing infusions and poultices. The leaves were also smoked/burned and inhaled to relieve asthma and other respiratory concerns and to mask human scent before hunting. Pounded root poultices were placed on swellings, cuts, and bruises. Some of my Cherokee and Creek ancestors were no doubt skilled in milkweed harvesting and uses. This could explain my own interests.

Across the western regions Lakota, Ponca, Omaha, Shoshoni, Paiute, and Blackfeet Indians used the milkweeds in many similar ways, as spring foods and summer/fall medicines to treat a wide variety of human needs, and even for dogs and horses, to bind wounds and rapidly assist healing plus relax muscle spasms. Many surrounding tribes, not mentioned here, also used the milkweeds extensively as foods, medicines, and for ceremonial needs, and for adornment and hunting requirements. The best fishing nets and hunting bags were often fashioned from milkweed (and dogbane) fibers, and tumplines (burden straps), some of which are found in natural history museums today. These are prime examples of Native American ingenuity and fine weaving!

Around the Great Lakes regions Potawatomi, Menominee, Chippewa, Ho Chunk, and other tribal peoples used the various milkweeds similarly to the other tribes, as well as for nasal congestion, toothache treatments, and gynecological problems. Milkweed roots were carried in medicine bags in order to treat many needs; root infusions eased skin problems and muscle aches, as well as made valuable eye remedies. The milky exudations from broken fresh plant parts were used to treat warts, insect bites, various skin irritations, and syphilitic sores; while strong root decoctions treated venereal disease, as well as diarrheal and laxative problems.

From the Hopi, Isleta, Zuni, and other Pueblo tribes, to the Navajo, Pima, and Papago, and across the desert southwest the milkweeds were seasonally important plant resources in ways that mirror other tribal examples. The mature (peeled) white stems were used in prayer sticks and other ceremonial items, especially weavings of the peeled inner bark. Unique Kiva ceremonial uses for milkweeds, especially relating to the Kachina rites have probably remained carefully guarded secrets.

Along the northwest coast from the numerous California tribes north and inland, Indians sought seasonal milkweeds for countless uses from foods to poisons, and healing to ceremonial necessities, and especially for hunting and fishing needs. The Mendocino, Miwok, and Makah to the Chumash, Clallam, and many others native healers used native milkweeds extensively, reflecting a broad scope of ethnobotanical resourcefulness. Many different uses and applications for milkweed seeds and plant parts were part of the native legacy, and from one tribe to another the uses often varied quite a bit based upon traditional concepts and indigenous plant wisdom.

The widespread dogbanes, *Apocynums*, are close relatives of the milkweeds and were/are often used interchangeably – with caution, as both can be highly toxic, even poisonous. Remnants of *Apocynum* fibers were identified in archaeological Indian fabric in dry caves in the Midwest, which date back more than 3,000 years. Dogbanes yield a fine rot-resistant fiber that was considerably exploited in native uses. Indeed, a fine, durable rope and fishing net were produced by the Lenape Indians in regions that became New Jersey and Pennsylvania; these products became prized trade items during the Colonial Period.

As a scientist, I have worked with the milkweeds for more than 50+ years. I have dug them to explore the lateral branching root systems, and photographed and drawn them. I have peeled mature plants to make fiber from the bark, and twisted it into cordage for weaving. The rubbings from milkweed leaves and uses for the milky sap have been most intriguing, My encounters with milkweeds have taken place from the Mayan site of Copan in Honduras to ancient Mound Builders sites in the American heartlands and from coast to coast across the country. The seasonal fragrances of edible blossoms are amazing and translate well in pots of soups or just as steamed vegetables. What remarkable perfumes! So many resources are available from just one milkweed plant!

I have carefully harvested and eaten the milkweeds in safe seasonal explorations, mainly *A. syriaca* and *A. cordifolia*. I have also applied the milky caustic latex from leaves and stems to my skin in order to explore its effects in treating rashes from poison ivy as well as the irritation of insect bites, spider bites, and stings. My children and their friends have also been willing experimenters.

The early spring “spears” of milkweed were eagerly sought and steamed and eaten like asparagus. *Asclepias syriaca*, is often referred to as “Indian broccoli” and the steamed early summer buds and young (1-inch-long) pods are a perfumed delicacy for many wild food enthusiasts. Beyond these brief windows of opportunity, milkweeds become toxic and medicinal resources, for crafting and tools. Some mature milkweed species, like *A. tuberosa*, the brilliant orange blossoming butterfly weed, (not to eat!) were also used for dyes and inks, as well as for musical instruments and even jewelry.

The milkweeds were usually considered powerful medicine plants, especially as heart remedies (with caution). The long, pencil-like roots were essential components of Indian medicine bags and used as treatments for everything from poison ivy to heart and respiratory problems.

Contemporary medicinal research continues to study the cardiatic glycosides inherent in milkweeds for their potential cardiovascular benefits.

*In our way of life it is the elders, the grandparents, who are seen as the bridge to the past, just as the young are seen as the bridge to the future. And both are necessary to complete the circle of life.*

~Trudie Lamb Richmond, Schaghticoke Tribal Historian

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My extensive praise for the countless American Indian people who shared generations of special plant uses for the milkweeds and close relatives the dogbanes. Also special thanks for the valuable records created by Richard Evans Schultes, William Sturtevant, Daniel Moerman, and James Duke, and their countless students, and others devoted to learning. My very special thanks to The Herb Society of America.



~~~~~ **ASCLEPIAS SPECIES WITH IDENTIFIED HERBAL USES** ~~~~~

***Asclepias albicans* S. Watson [whitestem milkweed, wax milkweed, candelilla, jumate (Yamate)]**

Native to the arid environments of the Sonoran and Mojave Deserts, southeastern California, southwestern Arizona, Baja California, and Mexico, *A. albicans* grows on rocky slopes, valleys, dry washes and gravelly slopes in a community of creosote bush scrub and other hardy desert plants. *A. albicans* was described by Sereno Watson (1826-1892) in the *Proceedings of the American Academy of Arts and Sciences* 24: 59-60. 1889. Watson's observations were made when he was a field botanist with Clarence King's Expedition (1867-71), which conducted a geological survey of the 40<sup>th</sup> parallel. Watson is known for his careful attention to detail and his botanical reports are considered the best survey/expeditions reports of the time.

*A. albicans* is a fast-growing, deciduous, upright subshrub that generally grows about four feet wide and between three to six feet tall (although it has been recorded as tall as 10 feet). It is perennial in Zones 9, 10, and 11 at elevations from 600-3000 feet. *A. albicans* is recognizable for its height (perhaps the tallest milkweed in the desert) and its many leafless branches. From a thicker, woody base, the lower branches of the plant grow as spindly stems which bleed milky sap when cut. The stems when young are coated in a waxy residue and fuzzy hairs. Older stems are smooth, erect and chalky-white to blue-green in color. There are a few narrow, elongated simple leaves, opposite or in threes, growing at the tip of the stems. They are deciduous, which gives the plant a leafless appearance. The stems provide the necessary photosynthesis.

In spring (March to June), light green umbels of 8 to 15 small white or yellowish star-like flowers sprout from the tips and the side nodes of the stems. The five petals fold backward away from the rest of the flower and may be tinted with a pale purplish color. The five rounded hoods circle the stigma head. Pods which develop from pollinated flowers may mature on each stem and often dangle in clusters from the branch. When mature, the pod (three to six inches long) splits open so that the seeds (about 1/8 inch in size) attached to silky strands can be carried away by the wind.

*A. albicans* requires full sun and well-draining soil. The plant is drought tolerant but likes moist soil when rain occurs (the deserts get about 10 inches of rain annually, with the Baja receiving about 12 inches). It propagates by wind dispersal of seeds. Conventional propagation methods of capturing ripening seeds in a collecting bag can be used but isn't often done because of the small area where this plant will grow.

The caterpillars of the Monarch and the striated Queen butterflies feed on the stems and foliage of *A. albicans*, and the flowers attract the adult butterflies as well as birds and bees (including the large, colorful tarantula hawk wasp).

Medicinally, *A. albicans* has been studied for use in treating cancer. Ornamentally, it is suitable for natural and environmental landscaping with other desert plants that can live with similar precipitation and climate conditions.

**Parts of this plant are poisonous if ingested and a skin rash may appear on human skin after contact with this plant.**

~ Ruth Wicks

***Asclepias amplexicaulis* Sm. [clasping milkweed, blunt-leafed milkweed, blunt-leaf milkweed, sand milkweed, curly milkweed]**

An easily recognizable milkweed resembling its name, clasping milkweed is native to the central and eastern United States and is found in dry, sandy soil in fields and open woodlands where it receives adequate sunlight. In the area encompassed by the four corners of New Hampshire, Florida, Minnesota and Texas, clasping milkweed can be found in the dry soil of roadsides, railways, power line clearings, prairies, scrub barrens and sandy river bluffs.

The plant was first published in *The Natural History of the Rarer Lepidopterous Insects of Georgia* by Sir. James Edward Smith (1759-1828), a British botanist and founder of the Linnaean Society, from the illustrations and notes of John Abbot (1751-1840), an English entomologist and artist, who settled in southeast Georgia in 1775.

*A. amplexicaulis* emerges in the late spring from a rhizome as a single, stout, unbranched, hairless, erect stem that has a whitish, waxy coating. The plant can reach a height of three feet and the leaves and stems contain milky sap that will stream out when cut or crushed. Opposite leaves that clasp each other at the node grow along the stem in pairs of two to five groupings. The leaves are broadly oblong, heart shaped at the stem, with veins of a reddish tint. The dark green, wavy leaf blades can be up to six inches long and three inches wide.

One (infrequently two) stalk rises above the last pair of leaves and develops to hold a large (three to four inches in diameter), airy single cluster of 15 to 80 small (three-quarters to one inch) flowers, formed at the tip and blooming in May, June and July, depending upon the growing zone. Each flower has five light-green petals with edges tinged with rose or violet that bend backward when open and hang down away from the center, slightly curling up at the outward point. Each of the five pink tubular curved hoods that form a ring in the center contains a protruding horn that curves inward. It takes larger, stronger insects to pollinate this plant. The insect's leg must make contact with the stigmatic slit for a pollen sac to break off and attach to its leg before it lifts off. Pollination only occurs when this sac is transferred to the stigmatic disc of another blossom.

As the seed pods develop, unfertilized flowers will wither and fall off. Although several seed pods (a maximum of four) appear on the stem after being fertilized, not all will successfully mature. The pods are three and one-half to six inches long and about one-half inch wide, fatter in the middle and tapered at the end. The mature pod will dry and then split along one side and curl backward, releasing tightly compacted seeds attached to long silky hairs.

This plant is on special-concern lists or protected in several states. It likes room to grow, and although it will naturalize, doesn't like other plants close to it. Mowing, herbicide spraying, deer eating the young flowers, birds and small animals eating the seeds, and lack of adequate seed set could be limiting the propagation of this plant. This plant is very attractive to bees and butterflies.

**Special care must be taken when using this plant.** It contains a poison dangerous to humans and livestock. Folk culinary uses specify using only young growth. Young milkweed sprouts can be steamed for consumption as well as young pods and early leaves boiled to eat. Medicinally, one glycoside from this plant, called *amplexoside*, was demonstrated to restrain human cancer cell growth (Kindscher, 1992). The plant is currently used in phytochemical research. Ornamentally, it is used in landscaping with similar drought-resistant plants.

~ Ruth Wicks

***Asclepias asperula* (Decne.) Woodson and *Asclepias asperula* ssp. *capricornu* (Woodson) Woodson [antelope horns, antelopehorn milkweed, spider milkweed, green-flowered milkweed, spider antelope-horns]**

Perennial and native to North America, *A. asperula* is often called “immortal” by the inhabitants of the area north of Mexico. One reason was due to usage of the root by the Mexican elderly for its strengthening effect on the heart. Another rationale for the name was because the plant grew back after winter, even after periods of drought when it had appeared to be dead. The species was researched by American botanist Robert Everard Woodson, Jr. (1904-63). Woodson’s life-long interest in Apocynaceae began in college and continued during his career as curator of the Missouri Botanical Garden and Herbarium.

*A. asperula* grows through the western states of Arizona, California, New Mexico, Nevada, Utah, Idaho, Colorado, Oklahoma, Texas and also into Kansas and Nebraska in a wide variety of elevations and growing conditions. It likes dry plains and desert swales, sandy and rocky hillsides as well as pastures and meadowlands. It inhabits woodlands along with pinyon, juniper, oak, and mesquite as well as in communities of yucca and sage brush.

Although the average height of *A. asperula* is about two feet, it has been found as tall as three feet and is usually erect. The stems may spread out especially when unsupported by other plant life. The green stems are covered with tiny hairs and grow in clumps from a taproot. The leaves are long (four to eight inches), narrow, simple, and the end comes to a point. Both sides of the leaves fold up lengthwise into a V formation and grow irregularly on the stem.

Blooming in late spring and summer, sturdy flower heads can support the weight of the largest of pollinators. Each bisexual flower forms into clusters (about 20) that are three to four inches across at the top of the stems. The outside petals are a light green color and surround the hoods instead of flexing backward like many other milkweed blossoms. In the middle of this bowl are five white balls with a maroon coloring at the center base.

After pollination, several pods may develop per stem changing color from green to brown as they mature. The seed pod averages about four inches in length. The maturing pods begin to curve upward and have the appearance of “antelope horns,” thereby giving rise to the common name for this plant. The light brown, flat seeds have long silky hairs and ripen from August to October at which time the pod splits open and the seeds are exposed to the elements.

*A. asperula* prefers semi-shade to full sun and is tolerant of soil type – basic to acid soils and sandy to course, clay to fine ground. It requires well-drained terrain but tolerates dry conditions – as little as 8 inches of water annually up to 50 inches of water. It is hardy in Zones 7-9 in western states of the United States and elevations of 4,100 to 9,000 feet.

The plant self-seeds, but ripe seeds can be taken from the pods for greenhouse germination for later use in garden and landscape plantings. Soak seeds in hot water, changing every 12 hours for three times. Chill seeds for a month (stratify), then surface sow in light and warm temperature. Germination is also possible in any good soil and well-drained, sunny location in spring. Put root cuttings (obtained in fall or early spring) into pots and keep protected from harsh winds and direct sun until the plant is established.

Slugs and aphids are natural enemies of *A. asperula*. The sap is a primary food source for Monarch caterpillars and the nectar attracts large bees, butterflies and birds.

**Special care must be taken when using this plant.** It contains a poison dangerous to humans and livestock. Unopened flower buds, collected in the early morning, young shoots, and young seed pods can be cooked. The oil from the seeds can be used, and the stems provide sap for gum.

Native Americans of the Southwest (Navajo and Hopi), Mexican Americans, and early settlers have used the root of *A. asperula* in teas, tinctures and decoctions for many ailments. A tea was used for respiratory issues, especially to increase mucus secretion to moisten the bronchial tissue and aid in expectorating. Due to its moderate cardiac glycoside content, antelopehorn milkweed has been used as a heart stimulant for age-related heart issues. A root decoction in various doses and preparations has been used to stimulate menstruation and aid in expelling a placenta. Daily application of fresh sap (latex) has been useful in treating various fungal infections. The plant was also used as snuff for treating catarrh.

Ornamentally, this milkweed is used in flower bed plantings and landscaping.

Because this plant self-seeds and is a colonizer, it has been used for soil stabilization and revegetation. The insects attracted by the nectar may assist in the pollination of orchards and other cash crops.

~ Ruth Wicks

***Asclepias auriculata* Kunth (syn. *Asclepias engelmanniana*) [eared milkweed, Engelmann's milkweed]**

Eared milkweed is an erect, native perennial found near creeks, canyons, and open woodlands. The species was originally named for George Engelmann (1809-1884) who was born in Germany and settled in St. Louis, Missouri. He was a physician and botanist who described many species, and, when he died, his collection went to the Missouri Botanical Garden.

Depending on its location and environment, *A. auriculata* grows from 2 to 4 feet tall. The flowers are pale green tinged with purple. Stems are erect, glabrous to glaucous, with a milky sap. Leaves are irregularly alternate to approximate, sessile, the blades linear, 2 to 10 inches long, up to 0.3 inch wide, attenuated at apex and base, glabrous on both surfaces, or with a few hairs on the margins and mid-vein below. Flowers are small, with calyx lobes 0.15 to 0.2 inch long; the corolla greenish or flushed with pale purple; the hoods are sessile, in ascending curves, ovoid-oblong, up to 0.1 inch long, less than 0.06 inch wide in the middle. The fruits are erect follicles on deflexed pedicels, 2.8 to 4.7 inches long.

*Asclepias* species produce their seeds in follicles. The seeds, which are arranged in overlapping rows, have white, silky, filament-like hairs known as *pappus*, silk, or floss. The follicles ripen and split open, and the seeds, each carried by several dried *pappi*, are blown by the wind.

*A. auriculata* requires full sun, tolerates poor soil, and is drought tolerant. It is pollinated by native bees, honey bees, and butterflies and is self-seeding. It is hardy in Zones 4-9.

Medicinally, Native Americans used this plant as a respiratory aid for nasal congestion from a cold.

~ Jane I. Brubaker

***Asclepias californica* Greene [California milkweed, round hooded milkweed]**

This milkweed is a reclining to erect plant found primarily in California. It is rarely found growing across the state border. This plant is found on dry slopes; in desert sand, even in some high desert areas; as well as in coastal woodlands. *Asclepias californica* is a beautiful plant with red or violet flowers and gray

fuzzy foliage. It grows to 3.3 feet in height in mostly sandy soil and is drought tolerant. It blooms from April through July, depending on location. It produces a milky sap. It is hardy in Zones 7-10. Propagate it from seed.

The Kawaiisu made two forms of candy from this plant. In one form the leaves were roasted under hot ash and then chewed. In the other form the milky juice was boiled down and then chewed like present day chewing gum.

As medicine, the Kawaiisu dried and powdered the leaves and applied the powder to spider bites.

~ Pat Magala

### ***Asclepias cordifolia* (Benth.) Jeps. [heartleaf milkweed, purple milkweed]**

Located geographically in California, Nevada, and Oregon, this species is native to California, but it extends to the western North American states. The common name for this species is derived from its Latin name *cordifolia*, which means heart shaped.

*Asclepias cordifolia* is an erect plant with several flower clusters branching off the top of the main stem. It grows 1 to 4 feet tall and has a taproot system. The foliage is glabrous with ascending stems. The leaves are opposite, oval, cordate and clasping at base, smooth, bluish green with purplish tints, 4 to 7 inches long. Several flower clusters branch off the top of the main stem. The corolla is spreading to reflexed, dark red-purple; the pale pinkish to purplish hoods are slightly elevated above the corolla base, with no horns. Fruits are large, usually erect, oblong, pointed follicles tightly packed with flat, circular seeds. They are light green in color with a purplish tinge and are 3 to 5 inches long.

Mainly a California species, it is found primarily in the northern part of the state. It will bloom in its second year during June to August. Results vary, but you can get it to bloom in its first year by trimming it. *A. cordifolia* prefers full sun to partial shade and coarse to medium soil, but grows well on slopes and in rocky soil. It is also found in woodland and coniferous forests. This plant prefers soil with good drainage, with 8 to 40 inches of rain annually, but is drought tolerant. It is perennial in Zones 7-10 and can tolerate a minimum temperature of -10 to 0° Fahrenheit.

Propagation is from seed.

Native Americans used the fibers of this plant to make ropes and nets, including a 40-foot long deer net discovered by anthropologists that required an estimated 35,000 plant stalks to create. The stems supply tough fibers for making cords and for weaving a coarse cloth.

As quoted in her article above, E. Barrie Kavasch has safely eaten *A. cordifolia*.

~ Nola Gildin

### ***Asclepias cryptoceras* S. Watson (syn. *Acerates latifolia* Torr. & Fremont) [pallid milkweed, Humboldt Mountains milkweed, Davis' milkweed, and cow-cabbage]**

*Asclepias cryptoceras* was initially named *Acerates latifolia* by Torrey and Fremont from specimens collected by Fremont in 1844 near the Green River. In 1871, after examining specimens of Nuttall's which were collected from the same area in 1834, Sereno Watson decided that the plant belonged in the genus *Asclepias*. He named it *Asclepias cryptoceras*. *Cryptoceras* means "hidden horn," which is a description of the protuberance on the flower's hood.

This perennial herb grows close to the ground from a woody rhizome and reaches a height of four inches to one foot tall. The waxy coated leaves are opposite and rounded ellipses. The flowers are large in comparison with other *Asclepias* species and acutely fragrant. The flower head is a drooping cluster of small flowers with centers comprised of pink or red-purple hoods with a pale green corolla blooming in April to June depending on location. The fruits are smooth and oval shaped containing seeds attached to a tuft of fluff, which are borne in the air or on animal fur when the fruits are dried and open. Plants should be sown in late fall in poor, extremely well-drained soil. Germination takes 1 to 3 months at 62 to 65° Fahrenheit. The seed can be stratified and sown in late winter or early spring. The young plants are very fragile and should be handled with care when transplanting into a permanent place. This plant should only be propagated by a specialty grower. Its conservation status is uncommon, but not rare, in some areas, and threatened in other areas.

*A. cryptoceras* requires full sun, but it grows in many types of habitat; sand, shale, and clay. It needs dry, well-drained soil; as in semi-desert, sandy areas or shrub lands. This plant is perennial in Zones 4-7. *A. cryptoceras* is best grown from seeds sown directly into loamy soil.

The Paiute people used the root for headaches and also as a poultice for sores. The latex from the sap was used topically for ringworm. The juice of the plant was rubbed on sore backs of horses.

This milkweed is a nice addition to a rock garden. It attracts a large number of native bees which aid in the pollination of other plants, and it attracts predatory insects that kill pest insects.

Several subspecies exist: *A. cryptoceras* subsp. *Davisii*, *A. cryptoceras* S. Watson. ~ Sherry Fillman

***Asclepias curassavica* L. (syns. *Asclepias nivea*, *Asclepias bicolor*, *Asclepias aurantiaca*, *Asclepias cubensis*, *Asclepias margaritacea*, *Asclepias curassavica* f. *flaviflora*, *Asclepias curassavica* var. *concolor*, *Asclepias nivea* var. *curassavica*) [scarlet milkweed, tropical milkweed, blood-root, blood flower, Mexican butterfly weed, swallowwort, Indian root, red butterfly plant, cancerillo, silkweed, cotton bush, pleurisy root, sunset flower, bastard ipecacuana, bastard-ipecac, Madagascar cottonbush, milky cottonbush, red milkweed, red-cotton, redhead cottonbush, wallflower cottonbush, West Indian ipecacuana, wild ipecac, wild oleander]**



Photo by Joyce Brobst

Native to South America, *A. curassavica* has become naturalized in some southern parts of the U.S. where it grows as a tender perennial; in other colder areas it may be grown as an annual. It is widely distributed in the subtropics from sea level to 65.5 feet. Blood flower was introduced into European and American gardens by the late 18th century.

The plant was thought to have insecticidal properties and repelled fleas. In the late 19th century Native Americans used the plant as a contraceptive and a snakebite remedy.

*A. curassavica* has simple lanceolate leaves (to 5 inches long), which are arranged opposite on the stem and end in acute tips. Leaf color is a medium green with white midribs. Like other members of the milkweed family the stems and leaves exude a milky sap when bruised. Each flower has 5 sepals and 5 lobes and is arranged in round clusters or cymes with 10 to 20 flowers each; they are 2 to 4 inches across and have purple or orange corollas. The plant blooms year round in the subtropics; otherwise, flowering occurs from spring into the early fall. Flower color is red-orange. After pollination, long

narrow spindle-shaped seed pods (3 to 4 inches long) form, which split open and contain many hair-tufted flat seeds, which are easily dispersed by the wind.

*A. curassavica* grows 2 to 4 feet tall and 1 to 2 feet wide on upright stems with some branching. It can be weedy. It self-seeds in warmer climates. The plant prefers full sun to part shade and grows best in light, rich, evenly moist but well-drained soil, pH 6.1 to 7.5. It requires regular watering, as it is not as drought tolerant as some milkweeds; it needs to be kept uniformly moist but not saturated. Once established, it tolerates some dryness. This milkweed is a native subshrub from South America but has become naturalized in USDA Zones 8B-11, including central and southern Florida, Louisiana, and Texas. In these zones it is a tender evergreen perennial, unless it freezes to the ground. If it does freeze it usually comes back in spring. In cooler climates it can be grown as an annual.

[Wikimedia commons.org](https://commons.wikimedia.org/)

*A. curassavica* can be started from seeds, cuttings or root division. It self-seeds in warmer climates. It can be started easily from seed. If it is grown as an annual, start seeds 8 to 10 weeks indoors before the last frost. Plant seeds ¼ inch deep and keep moist; they should germinate in 2 to 3 weeks. Plant the seedlings outside 18 to 24 inches apart after danger of frost. Pinching back the tops will encourage a bushier plant.

Plants bloom the first year. In the south this plant may re-seed itself easily in the garden, or you may sow seed directly in the fall. It will not self-seed in colder climates. Seeds are easily saved from pods, which have dried and have just started to open.

This milkweed may become weedy when grown in warmer climates. In cooler climates it may be brought indoors and grown as a houseplant.

*A. curassavica* is considered deer resistant, but the plants can attract numerous aphids, which in turn may lead to sooty mold.

**Although the leaves and the flowers should be considered toxic**, tribal medicines made use of root extracts. And, although *A. curassavica* is used as an emetic known as Bastard Ipecacuanha in the West Indies, it should not be confused with the drug known in modern medicine by the same name. In South America it goes by the name *cancerillo* and root extracts are used as an emetic and a laxative. The roots are also used for their anodyne (pain reducing) properties. Other uses include a remedy for snakebite, a treatment for lung ailments, a treatment for warts, fever, ringworm (Jamaica), and in Africa it has been used for intestinal troubles in children. A decoction of the plant has been used as an abortifacient.

This plant is a host plant for Monarch butterflies, and hummingbirds, butterflies, and bees are attracted to the flowers. The orange flowers are attractive in the landscape. The dried pods can be used in arrangements.

Cultivars include 'Red Butterfly' with brightly colored flowers in red and yellow clusters that are darker than average and 'Silky Gold' with yellow flowers.

The growing of this plant should be discouraged north of its natural tropical range. Parasites hosted by the plant affect the survival of the Monarch.

~ Lori Schaeffer

***Asclepias eriocarpa* Benth. (syns. *Asclepias eriocarpa* var. *microcarpa*, *Asclepias fremontii*)**  
**[woollypod milkweed]**

This native American milkweed is found only in California and Nevada and used extensively by Native Americans of the area for various medicinal, culinary, and economic purposes.

Leaves are opposite or sometimes whorled; leaf attachment is sessile or with a short petiole. There is a silver tint to the underside of the leaves because of the tiny white hairs that cover the entire plant. Bloom occurs in June, July and August. Flowers are pink, white or cream colored. Corollas fold back so that the hoods stand erect over them; horns come out of the hoods. The plant has one umbel, which contains about 15 flowers and can be 4 to 5 inches in diameter. The plant stands erect and has a tap root. Its height ranges from 36 to 48 inches. Propagation is by seed.

*Asclepias eriocarpa* prefers a sunny situation on moist soil which should be sandy-loamy or gritty-loamy, although it will tolerate clay. The plant needs full sun and does not tolerate shade. It exists in dry regions and deserts. It is perennial in Baja California, Nevada and Baja, Mexico and cold hardy in Zones 3-11.

Native Americans stirred the milky sap, added it to salmon fat or deer grease, and used it for a chewing gum. They also boiled the stem sap until it was the consistency of chewing gum.

This plant was also used by Native Americans as a cold remedy, a dermatological aid, and a respiratory aid. Powdered, dried root was inhaled to cause sneezing.

In addition to gum and medicine, the plant provided fibers for use in making ropes, string, and twine. These were then made into certain articles of clothing or large meshed nets. They were sometimes used to make bow strings.

~ Diane Schuster



Photo by Joyce Brobst

***Asclepias erosa* Torr. [desert milkweed]**

This native American milkweed species is found only in the southwestern United States. It is native to southern California but also grows in Arizona, Nevada, and Utah. In the ecosystem it is a food plant for insects and butterflies (including the Monarch). It is not recommended as a butterfly plant for gardens in other regions of the country because if the larvae feed on this plant and are not tolerant to the particular chemicals found in the sap their survival may be compromised.

*Asclepias erosa* is an erect perennial with yellow-green stems and foliage that ranges from shades of pale green to dark green in color with white veins. The plant, which may be hairless or highly pubescent, grows from 18 inches to 6 feet in height. The stem is sturdy with opposite, pointed (lanceolate) leaves that can be 3 to 8 inches in length, and 1 to 4 inches wide. The plants are sessile rather than in large clumps. A strong taproot anchors each plant. The flowers, in rounded umbels, are yellowish or cream colored and have thick reflexed corollas. The center of the flower is composed of rounded, horned filaments. The bloom period is from April to October.

*A. erosa* needs full sun; it will not grow in shaded areas. It prefers well-drained sandy soil and grows in loose dry desert soils along roadsides, in gulches, on dry slopes, and where soil has been washed out of sloping terrain. It can grow in soils that are nutrient poor or low in organic content. It requires less than

8 inches to 20 inches of water annually. It is hardy in all zones in the southwestern United States (Zones 4-10) and will survive temperature drops to – 10° Fahrenheit.

Propagation is from seeds which are produced in 2 to 3-inch pods on the plant. Because this species requires desert conditions for optimum growth, attempting to grow it in other climates is not advised. If stratified seed is started in a greenhouse, the young plants should be planted outdoors when they are actively growing in early spring. Mature plants do not like to have their roots disturbed once established.

**Some caution is advised when growing or working with this species. It can cause minor dermatitis.**

As with *A. eriocarpa*, the sap from the stem was heated until it became solid to make a chewing gum by Native American groups. Animal fat was added to make the chewing gum last longer. The Coahuilla and Tubatulabal Indians were known to make this milkweed (candy) chewing gum (Herbal Uses of *Asclepias erosa*, U. of Mich.)

Plants for a Future (Plant Database, p. 112) asserts that “rubber can be made from the latex contained in the stems and leaves.”

~ Joyce Brobst

***Asclepias exaltata* L. (syns. *A. bicknellii* Vail, *A. phytolaccoides* Pursh) [poke milkweed, tall milkweed]** Poke milkweed is native to eastern North America, tolerating temperatures of -40 to -30° Fahrenheit. The flowers attract bumblebees and butterflies, including the Monarch and Great Spangle Fritillary butterflies. These insects suck nectar from the flowers. Other insects feed on the foliage, flower tissues, seed pods, pith of the stems, or plant juices. Herbivorous mammals usually avoid eating it because the foliage contains toxic cardiac glycosides, and it is bitter tasting.

*A. exaltata* is an erect plant, from 3 to 5 feet tall, with a single stem. It is anchored by a strong taproot. Its height can exceed 6 feet under optimum conditions. A tall milkweed frequently found on the edges of forests, it resembles the common milkweed, *A. syriaca*, and has been known to hybridize with this species where both occur in close proximity. Leaf arrangement is opposite. Leaf shape is elliptical, lanceolate and ovate. Veins in the leaves have a purple tone to them. Stems are purplish. The flower color is white with lavender to green tinges. Flowers consist of a five-parted crown, about 0.5 inch long, with a horn sticking out of each of the 5 cylindrical hoods, a short column tucked in the center, and 5 flaring petals that bend back away from the flower. The inflorescence consists of several drooping, loose, few-flowering umbels. The fruit forms in erect pods from downwardly pointing stalks. Pods are long and narrow up to 6 inches in length and contain many seeds on silky hairs. The plant contains cardiac glycosides and resinoids. **All parts are toxic if large quantities are consumed.** Symptoms include vomiting, stupor, weakness, and spasms.

Poke milkweed grows in sunny or partly shaded places. It prefers shores, woodlands and woodland edges, moist woodland habitats. It is a perennial plant which blooms from late spring to early summer. Cold hardy in Zones 3-11, it can tolerate minimum temperature of -40° Fahrenheit.

Propagation is by seed. In fall, each seedpod splits open along one side to release its seeds. Seed color is dark brown. Seeds have tufts of hair at their apices, which assist with distribution by the wind.

Native Americans (Omaha, Ponca) used poke milkweed as a gastrointestinal aid. The root was eaten raw for stomach trouble.

~ Diane Schuster

***Asclepias fascicularis* Decne. [Mexican, narrow leaf, whorled, or wiry milkweed]**

Narrow leaf milkweed is native to southeast Washington and adjacent Idaho through California, Oregon, into Baja California, Mexico, and west into Nevada. It has a long use by the native Californians for medicine, food, cordage, and as a poison.

*Asclepias fascicularis* is a herbaceous perennial with a three-foot tall stem and large (but narrow) five-inch leaves, and a five-inch flower cluster. Plants have a deep, sturdy taproot that allows them to grow and flower during the warmer months. It dies back to the root system each fall. It often grows in patches and can be invasive. The narrow leaves give this species a more delicate appearance than other milkweeds. The leaves are usually folded slightly along the midrib and arranged in whorls along the upright stem. Bloom occurs from June to September. The flower colors are pale pink, purple, or white, to greenish. Umbels stand erect. Horns protrude through the hoods. After blooming the corolla extends down under the hoods. The corolla color is white to pinkish in contrast to the hoods and horns, which are white. Several umbels are borne on each stem. The flowers are 3/16 inch and the pedicels are 3/16 to 7/16 inch. Given the unusual flower structure, one might expect pollination to occur only rarely. Quite the contrary: the highly modified structures, and the lure of sweet nectar, insure highly efficient milkweed pollination. Numerous seeds develop within the narrow, sharply-pointed smooth seed pods. At maturity, the pods split open, releasing the brown seeds with their fluffy "parachutes." Wind distributes and deposits the seeds. Narrow leaf milkweed is an excellent source of habitat for many insects, and its nectar is food for butterflies, bees and wasps. The seed pods and foliage are eaten by the milkweed bug and Monarch butterfly larvae. The use of all milkweed species to attract Monarchs and other species is well documented.

Narrow leaf milkweed is quite easy to grow and can be propagated from seed. It does well in full sun to part-shade in most sandy to clay soils. The plants like plenty of winter/spring moisture and can even tolerate winter flooding. But, once established, they are remarkably drought tolerant. Established plants require less than 10 inches to 40 inches of water per year. Overwatering milkweeds can cause them to become invasive. Tapering off watering in the fall allows the plants to enter dormancy. Milkweeds also should be cut down to 1 to 2 inches in the fall. The new spouts in the spring will produce a healthy plant. The plants need full sun and are not shade tolerant. They prefer dry to moist soils and grow well in clay and on moderate slopes. They are hardy in Zones 6- 9.

**This plant is not recommended today because it is toxic.** Native Americans; however, ate milkweed in a variety of ways. The Miwok added boiled greens to thicken manzanita cider. Other parts of the plant were also used as a food source. The Paiute also used the greens as food. The Yokio ate the young blossoms occasionally in small quantities. The most common use for these plants, recorded among almost all the tribes throughout California, was to obtain a kind of chewing gum from the sap. It was heated until it became a solid and then was added to salmon fat or deer grease.

The Californian Indians used a poultice of fresh leaves as a snakebite remedy.

Early tribes used the fibers of the milkweed to make cordage, which they turned into clothing, nets, rugs, baskets, and decoration on clothing. The dried stems were split and rolled on the thigh to release the tough fibers.

Drying of the pods was also done for ornamental reasons.

~ Peggy Manbeck

***Asclepias fruticosa* L. [syn. of *Gomphocarpus fruticosus* (L.) W.T. Aiton] [white swan milkweed, wild cotton, African milkweed (known as melkbos or tontelbos)]**

This milkweed's specific epithet, *fruticosa*, means "of shrub-like habit." In Africa, the plants are available in market places as bundles of leaves and smaller stems to be used as a crude drug.

This species is a perennial subshrub which grows on an erect stem. It is native to South Africa and grows in all provinces as well as in Lesotho, Swaziland, Zimbabwe, Namibia, and Botswana. It has naturalized in Jamaica and South America. In the United States it grows in California and has been said to grow in Arizona, Arkansas, Texas, Kentucky, North Carolina, and New Jersey.

*A. fruticosa* is a small evergreen perennial shrub, 2 to 6 feet tall, depending on environmental conditions. The plant exudes a milky latex sap. The stem is erect, straight, light green and occasionally branching near the top. Mature specimens turn grey to brown. The leaves are opposite and up to 6 inches long and 1.5 inches across; are linear, alternate, glabrous, and light green, with an entire margin and sharply pointed apex. The flowers have axillary umbels of 5 to 10 creamy white flowers; lobed and reflexed corollas around laterally flattened corona lobes, about 0.25 inch long. The hoods are folded with 2 curved lobes at the apex, without horns. The seed/fruit is green and later light brown. The papery pods, or bristly green follicles, taper to a beak, which contain numerous dark seeds bearing silvery cotton wool-like attachments, which facilitate wind distribution. There is sometimes a taproot, but in hard ground a few main roots meander just below the ground's surface, often extending farther than the height of the plant.

[*Gomphocarpus* sp. (Photo by E. Kennel)]



Although primarily found in Africa, *A. fruticosa* can be grown in other countries where the environment permits. It has naturalized in wastelands of South America, for example. It is grown mostly from seed and can be invasive. Softwood cuttings are also possible for propagation. The plant prefers sun and sandy-loamy or gritty-loamy, moist soil. It also prefers regular watering. *A. fruticosa* is hardy in Zones 9-11.

Medicinally, leaf infusions are used orally for intestinal disorders or in children as an enema or purgative. It is also used for headaches and tuberculosis. In Africa a leaf infusion, taken by mouth, is used to treat diarrhea and stomach pain. Dried powder made from the leaf is inhaled as a snuff for relief of coryza (inflammation of nasal membranes), headache and tuberculosis. ~ Gail Seeley

***Asclepias hallii* A. Gray [Hall's milkweed, purple silkweed]**

Hall's milkweed has a limited range (southwestern U.S.) and is extremely rare in the trade. It is supported by the rocky slopes in sagebrush, mountain brush, pinyon-juniper, ponderosa pine and aspen communities typical of that area. It was described by botanist Asa Gray (1810-1888), thus its listing as *Asclepias hallii* A. Gray.

*A. hallii* is native to the Western U.S. (Arizona, Wyoming, Nevada, Utah, Colorado, and New Mexico) and can be found mainly in those states. It will reach 3 to 4 feet tall by 2 feet wide in rich, moist soil; growth will be stunted in poor, drier, sandy soil. It can spread by underground stolons. This Monarch butterfly host and nectar source displays lovely smallish deep pink to purple flowers in umbels on upright stems above attractively veined blue-green oval shaped leaves. The flowers are hermaphroditic (having both male and female organs) and are self-fertile. The leaves are irregularly alternate to approximate, the

blades lanceolate to narrowly ovate, 2 to 5 inches long and 0.5 to 1 inch broad. It is in flower from June to August, and the seeds ripen in September, attached to silky “floss” which aids in wind dispersal.

Stratified seed can be sown as soon as it is ripe in the autumn or late winter. It will take 1 to 3 months for germination. Plants in individual pots can grow in the greenhouse for their first winter. Plant them out when they are in active growth in late spring or early summer and give them some protection from slugs. Divisions of mature plants can be made in the spring with great care since the plant resents root disturbance. This plant grows best in full sun and will grow in most soils (except wet ones); it prefers dry, sandy soils. It is perennial in Zones 4-10.

*A. hallii* attracts native bees as pollinators. It has been used in container plantings. Medicinally, the Navajo used an infusion of the plant as a tonic for the mother after she gave birth. This plant was poisonous to livestock, but was used by the Kayenta Navajo as a veterinary aid. ~ Dawn Fry

***Asclepias hirtella* (Pennell) Woodson [syn. of *Asclepias longifolia* subsp. *hirtella* (Pennell) J. Farmer & C.R. Bell] (syns. *Aceratus hirtella* Pennell; *Asclepias floridana* Lam.; *Aceratus f* (Lam) A. S. Hitchc.) [tall green milkweed, green milkweed, prairie milkweed]**

Tall green milkweed is native to America, but has become threatened in several states and Ontario in Canada. It appears that the use of herbicides and extensive plowing, beginning at the turn of the century, has caused this problem.

This milkweed species grows to 1.5 to 4 feet in height with numerous narrow to linear alternate leaves that are covered with small, stiff hairs. Cut foliage and stems produce milky latex. The flowers are greenish-white to slightly purple-tinged. They are borne in dense, spherical umbels of 30 to 100 flowers from the leaf axils. Two to 6 umbels exist on each plant. This species is the only alternate-leaved milkweed whose flowers lack a horn. *A. viridiflora* also lacks horns, but its leaves are mostly opposite. *A. hirtella* produces a fruit that is a smooth follicle. It is a stout, erect plant which is known for abundant clusters of green-white flowers. Its range is from Virginia north to southern Ontario and Michigan and west to southern Minnesota, northern Iowa, Oklahoma and Arkansas.

*A. hirtella* is found in both moist tall-grass prairies, such as those along bodies of water, and moist sand prairies. It can exist in relatively dry to moderately moist but well-drained sandy loam or moist, alkaline clay. It is propagated from seed, either by wind dispersal or by planting the seed. It is best to mix the seed with sand 30 days prior to planting. The plant grows in full sun to partial shade with moderate moisture. It is perennial in Zones 3-7b.

During World War II school children gathered the silk from the pods to stuff life jackets. Other uses such as for paper, fabric, lubricant, fuel, and rubber were found but later proved to be impractical. Like many other milkweed species, the American colonists used it for stuffing pillows. ~ Gail Seeley

***Asclepias incarnata* L. [swamp milkweed, rose milkweed, white Indian hemp]**

First used by the Iroquois, Meskwaki and Menominee tribes, *Asclepias incarnata* was referred to as swamp milkweed because of its location in highly saturated soils.



Photo by Joyce Brobst



Photo by Joyce Brobst

Swamp milkweed is a clump-forming plant with a spread of 2 to 3 feet. Some are shallow rooted, but others may have taproots of 18 inches or more. The leaves are opposite, linear to ovate-elliptic and are 2 to 6 inches long. This is the only wetland milkweed with lanceolate opposite leaves. The inflorescence is usually in pairs in the upper axils. The corolla is pink, lobes are about 1/8 inch long, hoods are stalked, each with a curved horn. The follicles are erect on erect pedicels, are fusiform, and are about 3.5 inches long. The flowers are medium sized with erect and usually flat umbels, hour-glass-shaped, and borne on smooth stalks. They have a cinnamon-like scent and, although usually a light pink or light purple, white variants can be found in the wild and are also sold by nurseries. The pods are erect, narrow and 4 inches long, often in pairs. *A. incarnata* is native to the New England states, but is also found in parts of Canada and most states east of California, Oregon, and Washington. It is a rather stout-stemmed perennial, which grows up to 5 feet tall.

*A. incarnata* is the only milkweed species in New England found primarily in swamps and wet areas. It grows in swamps, wet ditches, wet prairies, marshes, and stream-banks. It is propagated from seed and is slow to spread. It grows in full or part sun but is not shade tolerant. Although it prefers sandy, loamy soil, it tolerates clay and well-drained soil. As befits its name, swamp milkweed likes moist or wet amounts of watering. It is hardy in Zones 3-6.

When gathered young the roots can be cooked and eaten as a vegetable. Muskrats also eat the root. Medicinally, the roots of the swamp milkweed were simmered to make tea, which was taken in small quantities as a purge to destroy and expel parasitic worms. Chippewa used an infusion of the root as a strengthening bath for children and adults. Iroquois used a root infusion to heal a baby's navel, and a decoction of the plant to increase urine, for kidney problems and for lame backs. They also dried the stems to make cord to use for tooth extractions. Meskwaki used an infusion of the root for tapeworms; as a carminative, cathartic and diuretic; and as an emetic.

~ Gail Seeley

***Asclepias involucreta* Engelm. ex Torr. (syns. *A. macrosperma*, *A. macrosperma* Eastw. ex Vail, *A. involucreta* var. *tomentosa* Eastw.) [Eastwood's milkweed, dwarf milkweed]**

This species of milkweed was named and described by Alice Eastwood in 1893 after collecting specimens from Court House, Washington, which is now Arches National Park, in 1892. She called it "macrosperma" for its large seeds.

The soft green color of this perennial plant is a result of the woolly hairs that cover the curvy alternate or opposite leaves. The flowers are a yellow-green-purple umbel form, and contain both male and female reproductive organs. The plant is pollinated by bees, insects, butterflies and moths. Another species, *A. uncialis*, is similar and also known as dwarf milkweed. Plants of 4 to 6 inches in height spread close to the ground, each comprised of a deep root and several 2- to 4-inch sparsely, branched stems containing clusters of flowers at the ends of each stem. *A. uncialis* is rare, but overlaps habitat with *A. involucreta* in Arizona and New Mexico. *A. involucreta* differs by containing larger lanceolate leaves, the flower hoods are longer than the anthers, and *A. involucreta* blooms slightly later than *A. uncialis*. As do other milkweeds, the plants contain a milky sap. The pod that forms is green, but turns brown when dried. The pod opens to allow the seed to drop. Each seed is born on a tuft of downy fluff, which catches the air current or animals' fur and is spread. **Caution must be taken if using this species internally.** Although, there have been no reports regarding this specific species, the genus *Asclepias* contains resins toxic to humans and animals.

*A. involucrata* grows in shrubby, sandy areas and canyon washes. As with other members of this genus it is propagated by sowing seed in the greenhouse in autumn or in late winter. Germination takes 1 to 3 months at 64° Fahrenheit. Cuttings may be taken in spring and kept shaded in a greenhouse until they are rooted. Seed or cuttings should be planted when ripe in autumn or late winter or after 2 to 3 weeks cold storage in the early spring. Transplanting while small to the final location is recommended to prevent disturbing the roots. Protect from slugs until the plants are mature. The species prefers full sun, but tolerates light shade. It also tolerates nutrient-poor soil with a varied pH. It requires a well-drained soil, but grows in dry or moist soils. *A. involucrata* is perennial in Zones 6-9b.

Although this plant has been used as a food plant and medicinally, **caution is recommended due to the cardio-glycosides** contained in the genus of this species. When this plant was consumed, it was purported to have been boiled while changing the water several times. The young shoots have been cooked and used as an asparagus substitute. The gum has been used for chewing. Medicinally, an infusion was used for stomach ailments. Poultices were made by heating the roots to apply for toothaches. The latex in the leaves and stems can be used to make rubber. ~ Sherry Fillman

***Asclepias lanceolata* Walter (syns. *Asclepias paupercula*, *Asclepias lanceolata* var. *paupercula*) [lance leaf milkweed, fewflower milkweed, purple silkweed (stems are purple)]**

This eastern coastal plains plant was identified and described in the early 1800s. It prefers wet, peaty soils and is a nice ornamental plant in the garden. It is known to attract large numbers of native bees, as well as predatory insects which help control other garden pests.

Photo by Joyce Brobst



*A. lanceolata* is an attractive native perennial with orange-red flowers. The fragile-appearing wand-like stems are quite strong and grow 3 to 4 feet tall. The name comes from the plant's long, lance-shaped leaves. When it is not flowering it is difficult to recognize in its natural setting, but when it is in bloom it is a real treat to see. The pods are slender.

The non-invasive nature of this plant makes it a good companion plant in pitcher bogs with slow growing carnivorous plants. It commonly grows in the coastal plain (savannas, and freshwater or slightly brackish marshes) from New Jersey south to Florida and Texas. It is uncommon in southeastern North Carolina. It is recommended for wildflower and butterfly gardens.

Seed can be started in a greenhouse in the autumn as soon as it is ripe. Seed stratified for 2 to 3 weeks can be started in the spring. Germination usually takes about 1 to 3 months at a temperature of about 68° Fahrenheit. Plants should be placed in the garden when they are actively growing. They do not like to have their roots disturbed, so be sure to select the spot carefully where you want the plant to establish itself. Root divisions can be taken in early spring and potted until the plant is sturdy and can be placed in the garden.

*A. lanceolata* is a good plant for soggy or wet spots in the garden. It prefers sun to partial shade and likes wet soils – both fresh and brackish. It is thought to be hardy from Zones 6-9.

*A. lanceolata* is a host plant for butterflies and attracts hummingbirds and other pollinators. Its flower buds, young shoots, and leaves are cooked as potherbs or added to soups. The flowers may be boiled in water to make sugar syrup. Chewing gum is made by heating the latex found in the stems and leaves.

Medicinally, latex from the stem is applied for the removal of warts. Fiber is obtained from the bark and is used in the manufacture of twine, coarse cloth, and paper. Seed floss is mixed with other fibers to make cloth. It is also used as a stuffing for pillows. In the manufacture of life jackets it may be used as a substitute for kapok. Rubber is made from the latex. Floss has been used to mop up oil spills at sea (*A. lanceolata*, Plants for a Future, p. 2). ~ Joyce Brobst

***Asclepias latifolia* (Torr.) Raf. [broadleaf milkweed, common milkweed, corn-kernel milkweed]**

**This plant is toxic** and will poison cattle and goats, but more often sheep. It is toxic at all levels of growth, but is more toxic when immature. Cattle can generally graze on frost-killed plants and not be poisoned.

*A. latifolia* is a perennial that grows 2 to 3 feet tall, has no branches, but has numerous large leaves that are about 3 to 4 inches long and 2 inches wide. They are attached directly to the main stem, which is hairless and smooth. The leaves are coarse with prominent veins. The pale green to yellowish flowers can be hidden by the leaves. The flowers are hermaphroditic (having both male and female organs). The bloom can be yellow or green and occurs from July to October.

This milkweed self-seeds in the wild from seeds which are produced in pods. Attempts to grow it in the greenhouse require scarification of the seed (putting seed in a container with sand and shaking vigorously to scratch the seed coat before planting). The plant is propagated by bees, insects and Lepidoptera. It grows in full sun to part shade in well-drained light sandy soil and can grow in nutritionally poor soil. This milkweed prefers dry soil, but can survive in moist soil. *A. latifolia* is native to California but is also found in dry plains and prairies of Arizona, Colorado, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas and Utah.

This plant was used by the Isleta Indians as a respiratory aid. The leaves were ground, as was the stem, and both were made into a powder and inhaled for catarrh. ~ Pat Magala

***Asclepias linearis* Scheele [slim milkweed]**

The western coastal area of southeastern Texas, which was quite vast prairie land at one time, has been reduced to less than 65,000 acres. The land was converted to pasture for cattle grazing, growing rice, sugar cane, forage, and grain crops. Because of cattle production slim milkweed was lost due to overgrazing.

As host to the Monarch butterfly, milkweed plants are used by the Queen and Monarch butterflies for egg-laying. It is the only plant material the Monarch caterpillar can eat and survive. Besides attracting the Queen and Monarch butterflies, its nectar is a food source for bees, swallowtails and hummingbirds.

The leaf arrangement of *A. linearis* is opposite, sessile with revolute (rolled under) margins that help distinguish this species from other milkweeds. Leaf shape is linear. The inflorescence is axillary and terminal with white and green blooms. Bloom time is May through November for Maryland and June through August for Texas. The underground root of coastal prairie plants may be up to three times the size of the above-ground plant. This species self-sows.

*A. linearis* is a low suffrutescent (subshrub) perennial having numerous stems with a height of one to three feet, found in grasslands and open woods in Texas and Maryland. Slim milkweed needs tall grass

prairies similar to the tall grass prairies of the mid-western United States and the hay meadows in Texas. Factors contributing to re-establishment and maintenance of prairie species are soil type, fire, rainfall, and grazing. Fire removes plant litter and helps seed dormancy needs. The whole coastal prairie system is considered critically imperiled by major conservation organizations. Hay meadows in Texas are at risk due to development and/or agriculture.

Native Americans and European settlers used *A. linearis* medicinally.

~ Justina Campbell

***Asclepias longifolia* Michx. (syns. *Acerates delticola*, *Acerates floridana*, *Acerates longifolia*)**  
**[longleaf milkweed]**

Andre Michaux, an explorer and naturalist, moved with his son to the United States from France in 1785 establishing a botanical nursery where he studied and documented plant material. Throughout his travels, he sent 60,000 plant specimens back to France, naming and identifying three hundred plants new to science. One of the new plants was *Asclepias longifolia*.

*A. longifolia* dates back to 1803, typified by plants from the eastern seaboard. It is of value to beneficial insects, native bees, bumble and honey bees and supports conservation using biological controls. Longleaf milkweed is a larval food source for Monarch butterflies and other herbivorous insects including beetles, moths and true bugs, despite their chemical defenses. Milkweeds use the hair of the leaves containing *cardenolide* toxins and latex fluids to limit damage caused by caterpillars. The narrow-leaved milkweeds possess larger quantities of the constituents that cause nausea and vomiting.

**Milkweed cardiac glycosides are potentially poisonous to both humans and animals.**

Flowers of *A. longifolia* occur in round umbels; several are near the top of the main stem. They are small and whitish. Tips are strongly recurved petals and tips of the corollas are often a purplish pink. Although normal blooming is in May, bloom time may be late spring or as late as early summer. Seed production will start six weeks after bloom time. *A. longifolia* is not as showy as other native milkweeds and is habitat sensitive. *A. longifolia* emerges in spring with a few basal leaves. Within a few weeks, the plant stands two feet tall, has a rigid thin main stem and has numerous three to six linear leaves. Leaves can be opposite, or may be alternate, however most classification keys use opposite as a characteristic. *A. longifolia* has a rhizomatous root system.

This milkweed is not widely grown but could be used in a mixed wildflower savannah or wet meadow planting. *Asclepias* species produce seeds in follicles. The seeds are in overlapping rows, have white, silk-like hairs known as *pappus*, silk or floss. The follicles ripen and split open, and seeds are blown by the wind. During much of the year, *A. longifolia* is rather inconspicuous. The plant is a deciduous species, being dormant in winter and beneath the soil surface. Aphids can be a problem.

Longleaf milkweed is habitat sensitive and is not offered commercially by any nursery associated with the Association of Florida Native Nurseries. However, if seed can be obtained, it could possibly be used in a wildflower savannah or wet meadow. It is easy to grow from seed, but it must be planted at the correct time. *A. longifolia* may be on display and may be available from Crosby Arboretum, Picayune, Mississippi. This milkweed needs a lot of sun and moist soil. It occurs naturally in moist to wet pinelands and savannahs. Longleaf milkweed is a dicotyledonous (having two, paired, primary or seed leaves), self-sowing perennial with distribution in Alabama, Arkansas, Delaware, Florida, Georgia, Maryland, Louisiana, Mississippi, North and South Carolina, Texas, Virginia and West Virginia.

The dextrose content of the nectar in the flower of this milkweed is high and was used as a sweetener by Native Americans. Medicinally, the milky juice of milkweed was considered to help remove warts when rubbed on warts daily; it was also used to treat bee stings and cuts. In many Native American cultures women who could not produce milk for their newborns drank a tea made from the whole plant of various species of milkweed. *A. longifolia* could potentially be used in mixed wildflower savannah or wet meadow planting. ~ Justina Campbell

### ***Asclepias meadii* Torr. ex A. Gray [Mead's milkweed]**

Samuel B. Mead, 1799-1880, was a pioneer medical/botanist doctor who first published a plant list in the *Prairie Farmer* describing an *Asclepias* as "*Asclepias cordata* non Walt" (Mead, 1846). However, a specimen was sent to John Torrey, a botanist, who recognized this as a new species and named it *Asclepias meadii* (Torrey, 1856) after Dr. Mead. It is considered at risk and is a federally listed threatened species due to loss of native habitat to agriculture. Factors for its demise include mowing, plowing and erosion, loss of natural prairie, pesticide drifting, invasive plant species, trampling by hikers, loss of native insect pollinators, and predation by a number of insects.

The only naturally occurring sites are in Missouri and Illinois, although it has been reintroduced to Indiana and Wisconsin. There are some plants in Kansas and Iowa; however, these may not last as they are growing on private hay fields that are mowed. Hay mowing prevents seed production and leads to loss of genetic diversity. This plant is very slow growing. It needs four or more years after seed germination to reach the flowering stage. *A. meadii* can live for decades, possibly as long as a century. *A. meadii* is a host to the Monarch butterfly.

*Asclepias meadii* is a rare, erect, rhizomatous perennial, 10 to 20 inches tall having a single stem with milky juice. The rhizome is thin; plant stems are glabrous (smooth), glaucous (covered with a fine bloom which rubs off), and herbaceous (lacking persistent or woody aerial parts). Leaves are lanceolate, opposite with pointed tips and a U-shaped base, smooth and grayish. Margins are sometimes ciliate (have a fringe of fine hairs), entire, acute to acuminate (tapering to a point), sometimes having a slightly wavy margin. The inflorescence of white to pink is a drooping umbel. The flowers have five petals, greenish with some purple tinge, ovate to elliptic-lanceolate, glabrous. The five sepals that are behind are reflexed. Hoods are greenish, arching over and resting upon the anther column. Flowering occurs in May and June with a nodding umbel having on the average twelve flowers. The flowers are nectar rich. The fruit is a follicle containing hairy seeds.

This perennial species is self-incompatible. The few small remaining populations often reproduce vegetatively by sprouting more stems from the rhizome. Sometimes *A. meadii* may reproduce sexually. However, plants that no longer produce seed are vulnerable to stochastic (random) extinction processes. The plant is pollinated by small bumble bees and digger bees. Pollen is dispersed in pollinia (masses of more or less coherent pollen grains), and seed are wind dispersed. The decline of suitable habitats removes developing follicles thereby eliminating pollen-mediated gene flow and reproduction.

Direct human assistance in transplanting seedlings into protected areas represents minor restoration success in Illinois, Indiana and Wisconsin. *A. meadii* has not been found throughout a large part of its original range since 1879. However, with continuing loss of individual plants to borers, disease organisms, and moving stress, it is probable that the populations in the hay meadows will continue to decline and become extinct.

*A. meadii* prefers full sun in open prairie or meadow areas; it occurs naturally in dry prairie, prairie hay meadows, and/or rocky open areas. The plant responds in areas that are burned regularly. It is drought tolerant. It is hardy in its native American Midwest. This species is severely endangered with few seeds being produced or dispersed by wind. Some seedlings have been transplanted into protected areas in an effort to restore this species in its natural habitat.

As with other milkweeds, the milky juice and root could have been used medicinally.

~ Justina Campbell

***Asclepias nyctaginifolia* A. Gray [Mojave milkweed, Mohave milkweed, four o'clock milkweed  
Spanish: *hierba lechosa, talayote*]**

This species is threatened by solar energy development, road widening, and road maintenance and is considered endangered in California and Arizona.

*A. nyctaginifolia*, a dicot, is a low-growing, perennial herb that is native to California, Arizona, New Mexico and Nevada. It lives at elevations of 1500 to 5000 feet on dry slopes. It grows up to about 1.5 feet in height, when erect, but is often found bending or drooping. The large, thick, dark green, wavy-edged leaves are oval to lance-shaped and arranged in whorled, opposite pairs around the stem. The leaves and stem are generally slightly hairy. The inflorescence is a dense umbel up to about 3 inches wide and packed with pink-tinted pale green flowers. The rounded flower clusters are found along the plant's stem. Flowering season is late spring to early summer. The fruit is a large follicle up to 4 inches long. It blooms from May to June. The resulting pod contains many flat seeds, each seed having a tuft of silky hairs. Pollen in packets must be pulled off by insects for pollination to occur. If insects are not strong enough they may get stuck and die on the flower. When pollen is extracted it may then be placed in the slits on the stigma. Mojave milkweed regrows each year from underground roots/tubers and is propagated from seed.

*A. nyctaginifolia* grows in direct sunlight in desert, upland areas. It likes dry desert conditions. This species of milkweed is hardy in Zones 6-9.

Mojave milkweed is one of the food plants for Queen butterfly (*Danaus gilippus*) caterpillars. Navajo, Kayenta gave an infusion of the plant to infants and children as an antidiarrheal medicine. The sap is used to treat sores. **Caution, however, should be taken when working with this plant because it has been known to cause minor dermatitis.**

~ Peggy Manbeck

***Asclepias pumila* (A. Gray) Vail [plains milkweed. dwarf milkweed. low milkweed]**

*A. pumila*, a native plant, means "dwarf" in botanical Latin. After its discovery by the renowned Harvard professor Asa Gray (1810-1888), plains milkweed was described for science in 1898 by Anna Murray Vail (1863-1955), librarian at the New York Botanical Garden and authority on legumes and milkweed.

One of the smallest milkweeds, *A. pumila* is a vascular plant without significant woody tissue above the ground. Plants are usually less than 12 inches tall. This creeping perennial also has creeping roots. It lacks significant thickening by secondary woody growth and has perennating (overwintering) buds borne at or below the ground surface. Stems may be simple or branched near the base or below the ground. Leaves are linear and densely spaced along the stem, sometimes appearing whorled, although they are alternate. Leafy stems have a bottle brush appearance. Its flowers has lobes reaching 1/8 inch in

length, hoods are stalked, cucullate (hood-shaped), and about 1/16 inch long, each with a horn twice as long; follicles are narrow, fusiform, and 1.75 to 3 inches long. The smooth pods (follicles) are about 2 inches long and 0.25 inch wide and are filled with oval seeds bearing whitish hairs, about 1 inch long. Blooming occurs from July to September. Flowers are white or pink or yellow-green and are in umbels at the tip of the stem. Fruits are upright and are 1.5 to 2.5 inches tall. As its name suggests, it grows on dry sites on the plains and lower foothills.

*A. pumila* is pollinated by bees and other insects; while they feed, pollen sacs attach themselves to the insect. In the greenhouse, the seed is best sown as soon as it is ripe in the autumn or in late winter. Germination usually takes place in 1 to 3 months at 68° Fahrenheit. The plants require full sun and sandy, clay, rocky calcareous or gypseous soils characteristic of the prairies. They are drought tolerant and hardy in Zones 2-9. They are self-seeding from seeds carried by wind.

**This species is said to be poisonous to livestock. Possibly appropriate to the species, proceed with great caution.** Unopened flower buds when cooked taste somewhat like peas. Young flower buds are used like broccoli. The buds can be used as a flavoring and a thickener in soups. The flower clusters can be boiled down to make a sugary syrup. Latex in the stems is made into chewing gum. Medicinally, Native Americans made an infusion from the leaves for adult and pediatric diarrhea. ~ Jane I. Brubaker

### ***Asclepias speciosa* Torr. [showy milkweed]**

*A. speciosa* is native to California but is also found elsewhere in North America and beyond.

Showy milkweed is closely related to the common milkweed, *A. syriaca*, with which it sometimes hybridizes at the eastern limits of its distribution. These species are similar in appearance and growth form (tall and robust), but can be distinguished by the layer of fine white hairs on *A. speciosa* and flowers that look like small crowns. Unlike *A. syriaca*, *A. speciosa* does not form large clones. The foliage of *A. speciosa* is a blue-green color, coarse and hairy. The leaf arrangement is opposite and attachment is petiolate. The leaf petioles are 1/8 to 3/8 inches long. The flower color varies from pink, to red, and purple. Horns are near the base of the hoods, but the hoods grow to be much taller than the horns. Horns do protrude through the hoods. The corolla flexes backwards after blooming. Blooming season is May through September. The seed pods are 3 to 4 inches long, erect, with hair covering the entire pod.

Photo by Kathy  
Schlosser

*A. speciosa* is an erect plant with flowers presented at the top of the stems. Usually 1.5 to 3 feet tall, it can reach 6 feet with favorable conditions. The taproot system has depths to 18 inches. In the United States the geographic range includes Arizona, California, Colorado, and Iowa. It is threatened in Idaho, Illinois, Kansas, Michigan, Missouri, Minnesota, Montana, North Dakota, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wisconsin, and Wyoming. It is also threatened in parts of western Canada.

This species prefers a sunny location and is usually found in open spaces, such as pastures, meadows, untilled fields, roadsides, forest clearings and ditch banks. It grows from sea level to 6,250 feet. It needs full sun and is not shade tolerant. It likes open spaces and well-drained soil. In most regions

Photo by Kathy Schlosser

showy milkweed is considered a facultative species, meaning it is equally likely to occur in wetlands or non-wetlands. It is perennial in Zones 3-9 and can tolerate temperatures as low as -40 to -30° Fahrenheit (-40 to -35° Celsius). It self-seeds, but its spread rate is moderate.

The fibers from this plant were used by Native Americans to make ropes, nets and other items. Many Native American tribes, including Cheyenne, Flathead, Lakota, Miwok, Navajo, Kayenta, Okanagan, Paiute, and Shoshoni, used this plant medicinally. **It is one of the least toxic milkweeds but may still cause dermatitis.** A decoction of plant tops was strained and used as an eye medicine and for snow blindness. Decoctions of the root were taken for headaches; cough, especially from tuberculosis; “bloody diarrhea”; emaciation; and, in small doses, for venereal disease. A poultice of mashed roots was applied for rheumatism, and a hot decoction of the root was used to “bring out the rash of measles.” A decoction of seeds was used to draw poison from snakebites. The roots were either chewed or pulverized and boiled for stomachache. The milk of the plant was applied to remove warts and calluses. Latex or pulverized seeds were used as an antiseptic and healing agent on sores, cuts, and ringworm. The milky juice from the stem was used as a face cream.

~ Nola Gildin

Photo by Joyce Brobst

***Asclepias stenophylla* A. Gray (syns. *Polyotus angustifolius* Nutt., *Acerates* (Nutt.) Decne.) [narrowleaf milkweed, slimleaf milkweed, narrowleaf green milkweed, the Lokota name is *tinsila pejuta* (meaning prairie turnip medicine)]**

Narrowleaf milkweed is characteristic of dry hill prairies in the Lower Great Plains region. It is an endangered native plant. The most spidery of the native milkweeds it could be more difficult to spot but for its austere habitat preference.

*A. stenophylla* grows up to 32 inches in height rising from a thick, woody root. The narrowleaf milkweed is a herbaceous perennial with a few erect and usually unbranched stems that are decumbent or upright. Foliage of the milkweed is moderately to sparsely hairy, and the sap is milky. The white, yellow, or green flowers are less than 0.5 inches long, have five oblong, pale green reflexed segments and five white hoods. The hoods have a 3-lobed tip. The middle lobe is triangular and shorter than the two lateral lobes. The fruits are in pods 4 to 5 inches long, and are erect on a downward-curved pedicel. This species is native to the Great Plains region of the United States. It blooms in the summer (June, July, and August). The height of the plant is generally less than 3 feet.

*A. stenophylla* reproduces only by seed. It is generally found growing as a solitary plant in its habitat of dry hills and prairies, in rocky or sandy limestone soils, preferably with a pH above 7.2. It requires low to medium amounts of water. It is both heat and cold tolerant and can be found in Zones 3-9.

Lokota Indians give the root to children for appetite stimulation.

~ Peggy Manbeck

***Asclepias subulata* Decne. [desert milkweed, rush milkweed, ajamete, leafless milkweed]**

Carl Linnaeus named the genus after Asclepius, son of Apollo, revered for his healing powers, because of the many folk-medicinal uses for the milkweed plants.

*A. subulata* is a native plant indigenous to the desert southwest of the United States and northern Mexico. It is an erect herb with evergreen stems, which loses its leaves early in the season and stands as a cluster of naked stalks. Atop the stems are inflorescences of distinctive flowers. Each cream-white flower has a reflexed corolla that reveals the inner parts, a network of five shiny columns, each topped with a tiny hook. White milky sap oozes from cut stems and contains rubber. The fruit is a pouch-like follicle that contains many flat, oval seeds with long, silky hair-like plumes. The plant grows to 4 feet with a spread of up to 4 feet from a cluster at its base.

*Asclepias* species produce their seeds in follicles. The seeds, which are arranged in over-lapping rows, have white, silky filament-like hairs known as *pappus*, silk, or floss. The follicles ripen and split open and the seeds, each carried by several dried *pappi*, are blown by the wind. Milkweeds use three primary defenses to limit damage caused by caterpillars: hairs on the leaves, *cardenolide* toxins, and latex fluids. In a greenhouse, seeds are best sown as soon as they are ripe in the autumn or late winter. Germination takes place in 1 to 3 months at 68° Fahrenheit. The plants prefer full sun to light shade and desert-type soils. They are drought tolerant and are hardy, self-seeding perennials in Zones 5-9 in Arizona, California and Nevada.

*A. subulata*'s uses are economic, culinary, ornamental, and **medicinal – with caution**. **This plant is considered poisonous by some native North American Indian tribes.** It has sometimes been referred to as a “Panacea Plant” because it has been used to treat many conditions. It is used to treat sore eyes and stomach disorders and has cathartic and emetic properties. This plant is used as a landscape accent and is suitable for xeriscaping. It attracts butterflies and is the forage source for Monarch and striated Queen butterflies, which use them as larval food plants. It is of special value for its nectar for native bumble and honeybees. Rubber can be made from latex contained in the leaves and stems.

~ Jane I. Brubaker

***Asclepias subverticillata* (A. Gray) Vail (syn. *Asclepias galioides*) [poison milkweed, horsetail milkweed, whorled milkweed, western whorled milkweed, bedstraw milkweed]**

*Asclepias subverticillata* was first collected by Charles Wright in Texas in 1852 and was named *Asclepias verticillata* variety *galioides* by Asa Gray in 1858. Vail renamed it *Asclepias subverticillata* in 1898.

*A. subverticillata* grows to about 15 inches tall, but it can reach nearly 4 feet tall, and is supported by a tap root. It is common in many habitats. This species is found in the U.S. in the following states: Arizona, Colorado, Idaho, Kansas, Missouri, Nebraska, New Mexico, Nevada, Oklahoma, Texas, Utah, and Wyoming.

Whorled milkweed forms feathery clumps or patches and bears white to greenish star-like flowers in round umbels and 3 to 5 very narrow leaves in whorls at nodes. The sap is milky. This plant is often found along roadsides and in other disturbed sites. It blooms for many weeks from early to late summer. It is a distinctive plant, easy to identify because of its very narrow leaves. They are thread-like, dark green, 5 inches long, with rolled edges, in whorls of 3 to 5 leaves at the stem joints. The pods are erect, slender, and 4 inches long. It is propagated from seed.

This species is found in foothills, open woodlands, grasslands, stream terraces, invading roadside, pastures, yards and gardens. It prefers sun to part shade and semi-desert soils, typical of those found in sandy or rocky plains and desert flats. It has a low requirement for water. *A. subverticillata* is a hardy perennial in Zones 5-9.

**Whorled milkweed is one of the more poisonous of the milkweeds to livestock.** It is therefore considered a weed in range areas, but it is also an important food source for the Monarch butterfly. Hopi women rubbed the crushed leaves of this plant on their breasts to produce or increase milk flow. An infusion was sometimes used both to increase milk production and for a richer milk. The Juni people gave the buds to little boys to eat. The Zuni gathered the pods when two-thirds ripe. The fibers were used for weaving clothing. The *coma* (silk or floss) was spun into cords, which could be used as fasteners for prayer sticks.

~ Nola Gildin

***Asclepias syriaca* L. [syns. *A. syriaca* L. var. *kansana*, *A. kansana* (Vail), *A. intermedia* (Vail), *A. cornuti* (Decne.)] [common milkweed, silkweed]**

This perennial plant, named for its white milky sap, is native to North America and has a long history of use as a source of fiber – bast fiber from the stems – and floss, which is the white hair attached to the seed (often called “coma”). A Canadian colonist introduced milkweed to Europe when he sent seeds to France in the early 1600s where it was grown as a garden plant. “The first recorded uses of the floss were in the 1740s in France for cloth and in Germany for stuffing material in upholstered furniture” (Woeppel, p. 172).



Photo by E. Kennel

In America, in 1785, the floss was used to make wick yarn for candles. Then in the 1940s



Photo by E. Kennel

large scale production of milkweed floss began because of military demands (World War II) for a buoyant fiber. Dr. Boris Berkman was already researching milkweed as a viable plant to reduce soil erosion in the mid-west, and was researching milkweed products. It was Berkman, president of Milkweed Products Development Corporation, formed in 1938, who convinced defense officials in Washington that milkweed floss was a buoyant fiber which could be used in the manufacture of life jackets and was a good substitute for kapok (no longer available because the Japanese had cut off the supply when they seized the Dutch East Indies). In 1943, the U.S. Navy purchased two hundred thousand pounds of milkweed floss from Dr. Berkman and issued a letter of intent for an additional one million pounds (Woeppel, p. 172). Berkman’s milkweed processing plant

in Petoskey, Michigan, operated at full capacity during World War II, but when the war ended so did the processing of milkweed floss as a substitute for kapok. Kapok was again available after the war.

Native Americans used *A. syriaca* extensively for food, medicine and for bast fibers for making thread, and cordage for bowstrings and fishing lines.

*A. syriaca*, the most common milkweed in North America, has single, sturdy, hairy stems with opposite oblong leaves with reddish veins. The leaves (dark green on the top and lighter green on the bottom) are approximately 8 inches long and 2 to 3 inches wide. The pink to purple flowers from June through September are produced in umbels which usually have 50 to 75 flowers and potentially as many as 100 per umbel. The globe-shaped, fragrant flower clusters often droop downward. Cross pollination is needed to produce seed. The seeds



Photo by Joyce Brobst

develop within a unique warty looking pod. It is 2 to 4 inches long covered with soft prickles and short wooly hairs. Other species of milkweed generally have smooth pods. When ripe, the pod bursts open and the seed is dispersed by the wind. Each seed is attached to a large tuft of white hair (*coma*) which aids in its dispersal.



Photo by Joyce Brobst

While deer and other herbivores do not eat this plant because of its bitterness (leaves contain toxic cardio-glycosides), butterflies and other insects rely on the plant as a

source of nectar, and the caterpillars of the Monarch butterfly feed on the leaves. The bitter glycosides from the plant are transferred to the adult butterfly and provide a protective advantage against bird predators.

About 1945, it was thought that *A. syriaca* and *A. speciosa* might be the same plant or produce look-alike hybrids. Research has proved that *A. syriaca* and *A. speciosa* are distinct species. *A. speciosa* has slightly smaller and more elliptical-shaped leaves with fewer flowers per umbel. However, research done in 1987 has confirmed that *A. syriaca* will produce hybrid plants with *A. speciosa* in the western United States and with *A. exalta* in the eastern United States.

*A. syriaca* forms an erect plant (stems branch near the tip) that generally grows from 2 to 4 feet in height (may reach 6 feet) with a width of about 3 feet. It is often called an aggressive weedy species. It has a rhizomatous root system.

This milkweed species, which tends to grow in patches and is easy to recognize, is common along roadsides and prefers full sun and a well-drained fertile soil, although it will grow in waste places with very poor soil quality. The soil can be moist but not soggy. *A. syriaca* is most easily grown in the spring from seed that has been stratified. Plants can be started from root division or from plants propagated in a greenhouse but they do not transplant easily. This species self-seeds and is a colonizer of disturbed soils in natural and developed habitats. While it is an attractive plant, because of its aggressive nature, it may not be suitable for small gardens or landscape plantings. Because of its resistance to many herbicides, it is becoming more common in cultivated fields and may affect crop yield. It is a perennial plant in Zones 3-9.

*A. syriaca* has both medicinal and culinary (with great caution – needs to be boiled with the water changed three times), ornamental, and economic uses. **Culinary use is not recommended** because of the toxic cardio-glycosides; however, by boiling the leaves or buds in three preparations of water Native Americans did consume this plant. **Great caution is advised.** The list of medicinal uses by Native Americans is long. Examples of some of the many uses (Moerman, p. 100) include the use of root tea as a laxative, and as a diuretic (kidney stones). Root tea was used as an expectorant and as a fever reducer (causes sweating). It was used as an anti-fertility agent and also to promote postpartum milk flow. Stalks were cooked as greens and consumed to treat rheumatism. The milky sap was used as a dermatologic aid in removing warts and treating bee stings, cuts, and ringworm. Decoctions were made to treat chest discomfort.

Early American physicians used milkweed in the treatment of asthma and rheumatism, and it was a folk remedy for the treatment of cancer.

**Because of the toxicity of the milkweed, use for self-medication is not recommended.**

The dried pods of milkweed are used in the floral industry and for craft projects.

Milkweed has gained in popularity for garden designing (butterfly gardens) and naturalizing the landscape. *A. syriaca* planted with *A. tuberosa* and *A. incarnata* provides attractive orange and pink flowers for several species of butterfly. Twelve species of Lepidoptera are known to reproduce on milkweed.

The silky seed floss has been used in pillows and as additive material for down comforters, sleeping bags, and jackets. The fibers in floss are hollow and spring back with resilience after being crushed in the same way that goose down does. This is what makes it an ideal insulating product for clothing. Modern day research continues into the potential uses for milkweed floss. It has been found that adding floss in the manufacture of tissue paper makes it softer. Because milkweed floss absorbs 75 times its weight in liquid, possible use in disposable diapers and other superabsorbent products is being investigated.

~ Joyce Brobst

### ***Asclepias tuberosa* L. [butterfly milkweed, pleurisy root]**

Native to Eastern Canada and all of the United States with the exception of the Northwestern states, *A. tuberosa* is often found growing by the side of the road.



Photo by Susan Liechty

This 1 1/2-foot tall tuberous-rooted perennial is one of the showiest native wild flowers, producing conspicuous flat-topped clusters (umbels) of orange or yellow flowers from early summer to early fall. Each flower has 5 petals, which are orange, reflexed, 1/4 inch tall, 1/8 inch wide, glabrous, and acute. The pubescent orange hoods are about 3/16 inch tall, with greenish columns and deep purple pollen masses. The two pistils are 1/16 inch long, with a few upward-facing hairs at their apex. Seeds are oval, slightly



Photo by Joyce Brobst

more than 3/16 inch long. The plant has green foliage with multiple stems. The stems grow to about 2 feet tall. The herbaceous leaves are small, and curled, mostly alternate, 1 1/2 to 2 1/4 inches long, pointed, and smooth on the edge. The dark green foliage provides a backdrop for the showy flower heads. The growth rate is slow. Mature height can be 1 to 3 feet. New growth emerges in the spring. Mature plants self-seed.

Plants will flower and produce seed in the third year. They are difficult to transplant once established. In the greenhouse seed is best sown as soon as it is ripe in the autumn or late winter. Germination usually takes place in 1 to 3 months at 68° Fahrenheit. Plants need protection against slugs until they are established. They also need full sun and are intolerant of shade. They prefer fast draining soils – dry sand or gravel – and grassy places which are acid, neutral, or alkaline. They are drought resistant. *A. syriaca* is hardy in Zones 3-9.

**Culinary use of this herb is contraindicated in pregnancy, during lactation, or with infants due to the small amount of cardiac glycosides contained within.** While most parts of this plant have been used for food, some caution is advised since large doses can cause diarrhea and vomiting. Flower buds, cooked, taste somewhat like peas. Young shoots, cooked, are an asparagus substitute. The tips of older shoots are cooked like spinach. The flower clusters can be boiled down to a sugary syrup. An edible oil is obtained from the seed. The seed is very small, however, and commercial usage would not be very viable. Medicinally, pleurisy root was used by many Native American tribes, including the Cherokee, Navajo, Delaware, Iroquois and Mohegan, to treat various ailments: breast, stomach, and internal pains; an expectorant and treatment for pleurisy; an infusion of the root for heart trouble; a poultice of pulverized root for cuts, wounds, and bruises. The root is antispasmodic, carminative, mildly cathartic, diaphoretic, diuretic, expectorant, tonic, and a vasodilator. **Use with caution.** The Omaha held a ceremony connected with the obtaining and distribution of this prized root. The mature seed pods are valued in dried flower arrangements. The plants are available in plant nurseries.

~ Jane I. Brubaker

***Asclepias variegata* L. (syn: *Biventraria variegata*) [redring milkweed, white milkweed]**

*A. variegata* is native to northern America and ranges through the north- and southeastern and the south- and north-central U.S. It is endangered in CT, NY, and PA. Redring milkweed's natural habitat includes sandy or rocky open woodlands, thickets, open slopes and ridges, savannas, and rocky streambanks. The reddish ring around the base of each flower gave rise to its specific epithet of *variegata* and to its common name of redring milkweed.



Photo by E. Kennel

*A. variegata* is an upright herbaceous perennial which can grow to 3 feet tall. Its leaves are opposite, with a smooth margin and pale underside. Small, waxy, white flowers with reddish to purple to pink centers appear in showy terminal clusters between May and July.



Photo by Kathy Schlosser

Redring milkweed prefers full to partial sun (or light shade) in well-drained, sandy to loamy soil, with dry to moderate moisture. Propagate it from seed, division, or basal cuttings. The plant is hardy in Zones 6a-8b.

*A. variegata* is useful to pollinators, wildlife, and in natural gardens. The nectar of milkweed flowers is especially valuable to native, bumble, and honey bees, and some chemical substances of the milky sap are being examined for human medical uses. Traditionally, milkweed sap was used to cure warts, and fluff from the seed pods has been used for pillow and lifejacket stuffing (Schlosser).



Photo by Ksthy Schlosser

For additional information about *A. variegata*, see The Herb Society's fact sheet on pages 35-36.

~ E. Kennel

***Asclepias verticillata* L. [whorled milkweed, eastern whorled milkweed, horsetail milkweed]**

*A. verticillata* is native to almost all of eastern North America and parts of western Canada and the United States and was used as a medicinal plant by Native Americans. It is usually found in dry soil areas of prairies and openings in rocky upland forests, sandy savannas, limestone glades, rocky bluffs along major rivers, pastures and abandoned fields, and grassy slopes along highways. Occasionally, it is found on moist gravelly banks along rivers.



Photo by Joyce Brobst

This little milkweed blooms later in the year than many other members of the genus and is good at attracting butterflies. The plant grows from a tap root, is single-stemmed, unbranched and 1 to 3 feet tall. Leaves are narrow, linear and whorled along the stem. The foliage of this plant resembles a horsetail, but the flowers reveal its membership in the milkweed family. It can be distinguished from other milkweeds by its skinny whorled leaves and greenish white flowers.

This species can reproduce vegetatively, so it does not depend on pollinators. It will thrive in relatively poor soil where competition from taller plants is minimized, but it can also form colonies and become aggressive in open areas. *A. verticillata* prefers full sun. It uses little water and adapts to various soil conditions. It is perennial in Zones 3-9. Propagate it from seed.

Hopi boiled the leaves and young shoots to be eaten with meat. Medicinally, Native Americans used the plant as follows: Choctaw used the root as a sudorific to stimulate sweating, a snakebite remedy when chewed, and a stimulant. Hopi administered an infusion of the entire plant to nursing mothers with

scanty milk flow. Lakota also used it to stimulate milk flow in nursing mothers. Navajo used the entire plant for nose and throat troubles. Hopi also used the plant as a planting stick.

All parts of the plant contain cardiac glycosides and resinoids and **toxicity is a concern if large quantities are consumed**. Symptoms include vomiting, stupor, weakness, and spasms. The plant is toxic to livestock and considered a weed in areas where livestock range. ~ Diane Schuster

***Asclepias viridiflora* Raf. [green milkweed, green comet milkweed, short green milkweed]**

A native species which is widespread on the U.S. and Canadian plains, *A viridiflora* was much loved by the Lakota who gave it a name meaning "spoon-shaped leaf." The specific epithet *viridiflora* means green-flowered in botanical Latin. The U.S. government has not listed it as endangered; however, Connecticut, New York and Florida have listed it as "threatened." In many places its natural habitat of prairie, sandy soils, and dry uplands is being taken for development.

Taxonomically, this plant has many synonyms: *Acerates viridiflora*, *Acerates viridiflora* var. *ivesii*, *Acerates viridiflora* var. *linearis*, *Asclepias viridiflora* var. *lanceolata*, *Asclepias viridiflora* var. *linearis*.

Green milkweed is a perennial which grows from a vertical rootstock. Two-foot tall stems are mostly solitary or in pairs and bear opposite leaves up to 4 inches long. Leaf edges are simple and entire. Leaves are variable in shape with plants from dry sites having long narrow leaves and those from moist sites having round leaves. Its distinctive flowers are pale green and occur in 2-inch clusters in upper leaf axils. The hermaphroditic flowers are radially symmetrical. The petals are fused into a corolla tube. The tendency of the umbels to droop makes the plant easily identifiable. As the plant matures the flowers begin to turn yellowish green or purplish green. Short green milkweed generally blooms in July. Milkweed flowers have a special mechanism to trap insect legs and cause pollen masses to be pulled from the plant. The flowers attract bumblebees and other long-tongued bees, which are the most common pollinators. Ants are also attracted to the flowers, but they are not as effective as pollinators. The pods of green milkweed are about 4 inches long and pointed at both ends. The pods lack the warts or tubercles found on other common milkweeds. When dry, the pod splits open and the seeds, attached to tufts of white "floss," are dispersed by the wind.

Stratified seed is best sown in a greenhouse as soon as it is ripe in the autumn or in late winter. Germination usually takes place in 1 to 3 months. As soon as the seedlings are large enough to handle, put them into individual pots and grow them on in the greenhouse for their first winter. Plant out when they are in active growth in late spring or early summer. Root division can be attempted in late spring, but the plant resents root disturbance. Use shoots about 4 inches long with as much of their white underground stem as possible. Pot them up individually and place them in a lightly shaded position in a greenhouse until they are rooting and growing actively. If the plants grow sufficiently, they can be put into their permanent positions in the summer. Whether seedlings or root divisions, give them some protection from slugs until they are established. Grow in full to partial sun in all but very wet soils; this species prefers dry mesic (a moderately moist soil) to dry soil conditions. It requires little water. *A. viridiflora* grows perennially in all of the contiguous states except California, Nevada, Utah, Idaho, Oregon, Washington and New England; and in all of Canada except for the Yukon and the Maritime provinces (USDA Zones 4A-10A).

Although there are no culinary uses at present, Native Americans would dry the roots and store them for the winter to be used to spice soups. The fresh roots were sometimes used for food by the Blackfoot.

This *Asclepias* was much used medicinally by Native Americans. The Blackfoot made a poultice of the chewed root and applied it to swellings, rashes, diarrhea rashes and sore eyes. For children, the root was chewed and the poultice applied to diarrhea rashes and to a nursing baby's sore gums. The Lakota pulverized the roots to give to children with diarrhea. An infusion of the whole plant was given to nursing mothers to increase their milk.  
 ~ Dawn Fry



*A. syriaca*



*A. tuberosa*



*A. incarnata*

Photos by Joyce Brobst

~~~~ ASCLEPIAS SPECIES FOR WHICH THE AUTHORS COULD ESTABLISH NO HERBAL USE ~~~~

*A. humistrata*

*A. linaria*

*A. meadii*

*A. obovata*    *A. variegata*

*Asclepias* 'Monarch Promise'<sup>TM</sup>



Photo by E. Kennel

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INDEX TO CHANGES IN TAXONOMY

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As botanists study and compare plants, they frequently discover that a plant more appropriately belongs within a different genus or species. As a result, some herbal *Asclepias* species have acquired new names. The following is a short list of those changes:

***Asclepias fruticosa* L.** [a synonym of *Gomphocarpus fruticosus* (L.) W.T. Aiton]

***Asclepias hirtella* (Pennell) Woodson** [a synonym of *Asclepias longifolia* subsp. *hirtella* (Pennell) J. Farmer & C.R. Bell]

The Herb Society of America's  
Notable Native 2014 - redring milkweed

*Asclepias variegata* L.



*Asclepias variegata*, redring milkweed  
All Photos: Kathy Schlosser

### History

Linnaeus named the genus *Asclepias* for the Greek demi-god Asclepius, the physician, because of the folk medicinal usage of milkweed. The species name *variegata* is due to the reddish ring around the base of each flower. White milkweed is the more commonly used name, but the USDA uses redring milkweed based on this feature. Linnaeus published a description in his *Species Plantarum* of 1753, "floribus albis intis purpureis."

This species is endangered in Connecticut, New York, and Pennsylvania.

### Description

Redring milkweed is an herbaceous perennial that derives its name from the showy terminal clusters of bicolored flowers in bloom from May to July.

Each white waxy flower has a reddish to purple or pink center that forms a ring at the base of the typical milkweed arrangement of horns and hoods. Dark green el-

**Family:** Apocynaceae

**Latin Name:** *Asclepias variegata* L.

**Common Name:** redring milkweed, white milkweed

**Growth:** Herbaceous perennial, to 3 feet tall, white flowers ringed with red

**Hardiness:** Zone 6a—8b

**Light:** Full to partial sun or light shade

**Soil:** Well-drained loam, sandy to loamy

**Water:** Dry to moderate moisture

**Use:** Pollinator, wildlife and natural gardens

**Propagation:** Seed, division, basal cuttings

iptical to ovate leaves range from 3 to 5 inches long and 1 to 3 inches wide, with opposite arrangement usually in 4 to 6 pairs per stem.

Generally non-branching, slender stems, which produce milky sap, can reach 3 feet in height. After floral pollination, pods (or follicles) form, which dehisce to disperse numerous seeds at maturity.



ranging from sand to loam or clay-loam. Once established, this milkweed should be quite drought tolerant.

### Propagation

Seed can be planted the season after harvest. Results shared by various gardeners show that spring planting after cold stratification, or cold/moist stratification, works well. Seed can be germinated indoors 6 to

### Culture

Redring milkweed's habitat includes sandy or rocky open woodlands, thickets, open slopes and ridges, savannas, and rocky streambanks. Native distribution extends through areas of Connecticut and New York south to Florida, and west to Illinois extending to Texas.

Although it is not widely grown in a garden setting, placement would be best in part shade to sun in a well-drained soil



8 weeks before planting date in a well-draining potting mix. Spring divisions or basal cuttings can also be made.

### Uses

This milkweed attracts native and honey bees, butterflies, moths, hummingbirds, and beneficial insects that help control insect pests. Large mammals and birds infrequently use it as a food source.

In some areas of its range it might serve as a larval food plant for monarch butterflies.

Redring milkweed is perfect for natural, wildflower and butterfly gardens.

Some chemical substances of the milky sap of milkweeds are being examined for human medical uses.

Milkweeds are found through all of the U.S. except Alaska. There are more than 70 species, many of which had important historical uses such as medicine, food or fiber. Most of the milkweeds are important food plants for developing caterpillars of the monarch butterfly. Including species that are native to your region can make your garden an important part of promoting the future of these beautiful creatures.



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~~~~~ **ASCLEPIAS FOR USE AND FOR DELIGHT** ~~~~~

Below are a few of E. Barrie Kavasch's favorite classic milkweed recipes from her book, *Native Harvests: Recipes and Botanicals of the American Indians*. (1979; 2005). Be careful to harvest the milkweed blossoms and pods conservatively, never taking more than a third from any cluster or plant. Also be mindful to cover the raw foods with fresh water, then bring just to a near-boil, then remove from the heat and drain completely; rinse; then repeat this process once again. The vegetable water may be dark lavender and smell heavenly, but should be discarded (to be safe) as it could be toxic. **Always process milkweed as a vegetable through at least two complete changes of water for the best digestibility.** Because milkweed possesses unknown qualities of heart-stimulants, it should be avoided by anyone with a susceptible condition. Some people experience dermatitis when working with milkweed.

**Young Milkweed Spears**

Serves 6

- 2 quarts young milkweed spears (picked before 10 inches tall and before leaves unfurl – plant becomes toxic as it matures)
- 1 TBSP wood ashes
- 3 cups water
- Nut butter or nut milk (for garnish)

Steam these young plant tops (do not boil) with the wood ashes in 1 cup water in a covered saucepan for 4 to 5 minutes. Pour off this first bath, rinse thoroughly, and steam again in 1 cup clear, fresh water without wood ashes for 4 to 5 minutes. Rinse and steam again in 1 cup water for 4 to 5 minutes. Serve either hot or chilled (like asparagus) with complements of nut butter or nut milk topping (Kavasch, *Native Harvests*, p. 47).

**Milkweed Buds and Blossoms**

Serves 4

- 1 quart freshly gathered milkweed buds and blossom clumps
- 1 clove wild garlic, chopped
- ½ cup water
- 1 TBSP maple syrup (optional)



Steam the milkweed buds and blossoms with the garlic in a covered saucepan for 15 minutes. Stir thoroughly and add maple syrup if desired. Serve either hot or cold; this spicy, fragrant vegetable is delicious either way. Also excellent served as a seasoning and flavor enhancer to other vegetable and fish dishes (Kavasch, *Native Harvests*, p. 47).

## Steamed Young Milkweed Pods

Serves 8

- 3 quarts young (tiny) whole milkweed pods, up to 1½ inches long only\*
- 2 cups boiling water
- 1 scallion, diced (including top)
- 2 TBSP maple syrup

Combine all ingredients in a covered saucepan and simmer (do not boil) for 25 minutes, stirring occasionally. Serve either hot or cold. These crisp, spicy pods make good garnishes and finger foods as well as a very tasty vegetable. The taste is reminiscent of okra.

\*Milkweed pods this size can be harvested for almost 6 weeks through July and early August

(Kavasch, *Native Harvests*, p. 47)

## Milkweed Pods Vinaigrette

Serves 10 to 12

- 1 quart young, whole milkweed pods (under ½-inch long)
- 1 cup milkweed buds and blossoms (optional)
- 1 cups small white onions, peeled
- 1 quart water
- ½ cup maple syrup

Combine all ingredients in an enamel pot and bring to a boil. Simmer, covered, for 25 minutes. Stir occasionally. Drain and rinse with cold water. Place ingredients in a crock and prepare marinade.

### Marinade

- 2 cups chopped pimentos
- 1 cup chopped fresh dillweed
- 1 quart cider vinegar
- ½ quart corn oil

Blend all ingredients together thoroughly and pour over mixture in the crock. Stir gently. Cover and refrigerate overnight to enhance flavors before serving. This tasty, colorful dish is a favorite in July and August, one worth putting by in extra amounts for winter enjoyment (Kavasch, *Native Harvests*, p. 48).

## Medicines from *A. tuberosa* to treat respiratory ailments



Photo by E. Kennel

## Crafting



*Floss Pictures*



*Commemorative Basket*

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### **Floss Pictures**

HSA Member Dava Stravinsky photographed these small pictures at a B&B in Hillsborough, North Carolina. The figures are painted on glass and backed by milkweed floss.

### ***Asclepias* Taxonomy**

The contributing editor relied throughout on these two sources for information:

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### **Photos of Herbarium Specimens**

Joyce Brobst photographed the herbarium specimens of *Asclepias* species at the Claude E. Phillips Herbarium, Delaware State

University, Dover, Delaware.