

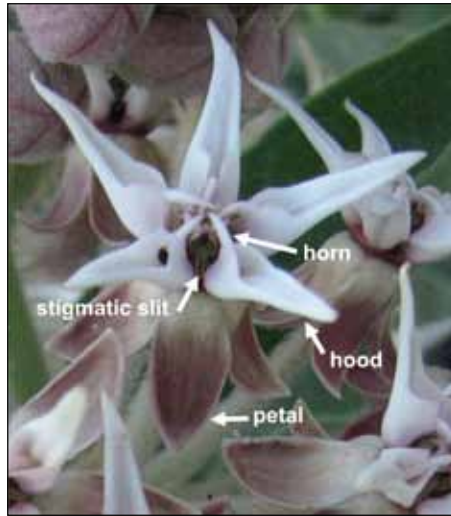
Milkweeds Are NOT Weeds

Cindy Roché and Frank Callahan

Bend and Central Point, Oregon

Milkweeds are species of the genus *Asclepias*. Botanists of a certain age learned that *Asclepias* were members of their own family, Asclepiadaceae. Now the genus has been folded into the dogbane family, Apocynaceae, which is represented in Oregon by four genera: *Apocynum*, *Asclepias*, *Cycladenia*, and *Vinca*. Linnaeus named the genus *Asclepias* in 1753, honoring Asklepios, legendary Greek physician and god of medicine.

The “milk” part of the name derives from their milky sap. The “weed” part of the name probably derives from the old English term used to denote grasses and herbs. It might also refer to the more recent meaning of weed, “toxic plants or plants having no useful value.” If we had it to do over again, perhaps we would call our *Asclepias* species “milkplants.” To those of us who appreciate native species, milkweeds are not weeds. Although they serve many useful purposes, they are valuable in their own right as part of the complex ecosystem on planet earth. Their biology and ecology are fascinating. Milkweeds are beautiful natives, important for pollinators, especially for monarch migration, and popular with gardeners. Historically, they’ve been used by Indigenous people for fiber and medicine. Milkweed occurrence has decreased due to habitat degradation, pesticide use, intensive agriculture, and climate change. This trajectory needs to be reversed. We hope to stimulate your interest in native milkweeds in Oregon and encourage you to take action to protect or restore milkweed habitat critical for monarch migration.

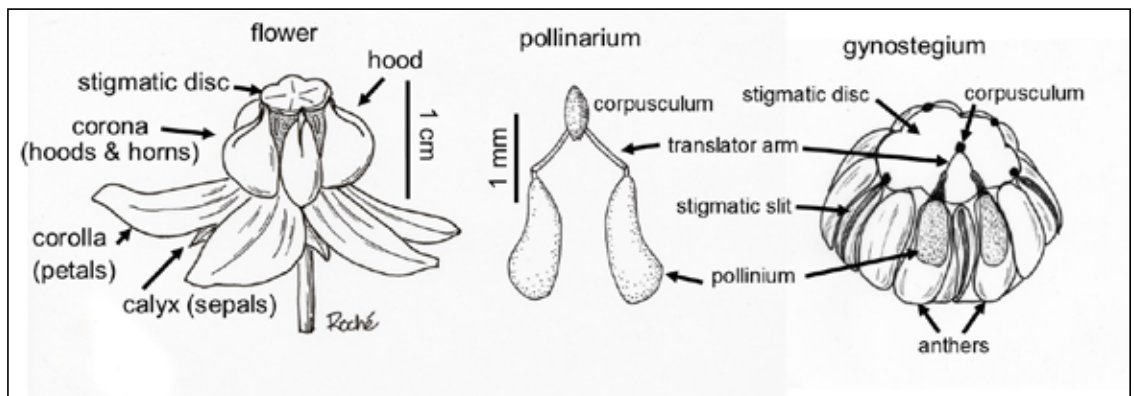


Individual flower of showy milkweed (*Asclepias speciosa*), showing petals, hoods, horns and stigmatic slit. Photo by Frank Callahan.

The structure of *Asclepias* flowers and pollination

Milkweeds have whorled or opposite leaves and flowers borne in umbels, either terminal or arising from upper leaf axils. The fruit is a follicle: a single-chambered pod that splits longitudinally. Seeds are flat and borne away on wind or water by silky parachutes.

Milkweed flowers have a morphology all their own with an extraordinary pollination mechanism. The flowers have three floral whorls around a central structure called a gynostegium (see illustrations of flower parts). Starting at the base, the first two whorls are like other flowers: the calyx (five sepals) and the corolla (five petals that are generally reflexed or spreading). The third and fourth whorls of a typical flower (stamens and pistil) are no longer easily recognized: they have been transformed into the corona and the gynostegium. The corona is made from the filaments of the stamens and the anthers are fused to the stigma and style to form the gynostegium. The corona is made up of five hoods, each of which usually has an elongate, inwardly curved appendage called a horn. The horn is fastened near the base of the hood and is either included within it or exerted from it. Horns of some species are long, while in others they are barely visible. The stigmatic disk forms the top of the gynostegium and the modified anthers form the sidewalls.



Flower parts of *Asclepias*. In *Asclepias cryptoceras*, hoods are rounded and horns are hidden inside. Illustration by Cindy Roché.

Between the anthers are the stigmatic slits where the pollen enters. Milkweeds achieve cross-pollination by means of a pollinarium that comprises pollinia from two adjacent stamens. The two pollinia are connected by a translator arm to a corpusculum, a sticky gland that aids in the transport of the pollinia. When an insect – primarily Lepidoptera (butterflies and moths) and Hymenoptera (bees, wasps, ants) – lands on the horn or disc, its leg often slips into the groove below it (the stigmatic slit). This allows the corpusculum or translator arms of the pollinarium to catch in the hairs or the tarsi of the insect’s leg. The insect moves to another flower, carrying the pollinia like saddlebags. As the translator arms of the pollinia dry, they re-orient the pollinia to be deposited in the stigmatic slit of the next flower the insect lands on. Smaller insects are not strong enough to pull their feet out of the slits and are often trapped there and die.

Nectar has two primary roles. First, as its carbohydrate composition is nearly 100% sucrose, it is the primary reward for insect visitors. Nectar flows from the stigmatic chambers into the cupped hoods of the flower, where it is available to insects. Second, nectar is the primary germination medium for milkweed pollen. The pollen falls through the stigmatic slits into a nourishing nectar bath, which stimulates it to germinate and grow pollen tubes to the ovules (Broyles and Stoj 2019). All of the seeds in a follicle share a single father (from one pollinarium), which means that seeds within a given follicle have less genetic diversity than in most other plants, where pollen derives from various fathers.

Native milkweeds in Oregon

Oregon hosts seven species of *Asclepias*, all of them native. Volume 2 of the Oregon Flora online (<https://oregonflora.org/taxa/index.php?taxon=442>) shows only five species, but two more have been recently discovered. The species will be presented in this order: first, the five included in the Oregon Flora, starting with the most abundant and working to the rarest, and second, the two newest discoveries. Distribution maps for the first five species are also available in the online flora (link above).

Showy milkweed (*Asclepias speciosa* Torr.)

John Torrey named this species in 1828 using a specimen collected by Edwin James in 1820 “on the Canadian [River]” (Ann. Lyceum Nat. Hist. New York 2:218). Showy milkweed is indeed showy, with *speciosa* meaning “beautiful” in Latin. It could be argued, however, that our other species are just as beautiful. Showy milkweed is the most widely distributed species in Oregon, occurring at least sparingly across most of the state, except along the coast north of Gold Beach.

Showy milkweed is a robust perennial from spreading rhizomes, growing to 5 feet tall. Its opposite leaves are



Flower cluster of showy milkweed (*Asclepias speciosa*). Photo by Frank Callahan.



Immature follicle of showy milkweed. Photo by Cindy Roché.

gray-green, covered in velvety hairs. From May to September it bears clusters of flowers in umbels from the upper axils of the stem. Flower petals are pink to rose, with pink hoods that are considerably longer than the petals, and somewhat divergent. The horns curve strongly inward toward the disc. The thick, leathery, one-chambered follicles are 3 to 5 inches long, with densely woolly surfaces that are rough with short, soft, horn- or wart-like projections.

Habitat

Showy milkweed grows in well-drained soil in full or nearly full sun, in pastures, meadows, forest clearings, untilled fields, roadsides, and ditch banks. Adapted to either wet or dry sites with deep, well-drained, sandy or loamy soils, it is commonly found in somewhat disturbed habitats, such as along the banks of irrigation or road ditches or untilled areas adjacent to cultivated fields.

Cultivation

Showy milkweed is the most popular milkweed species in cultivation in Oregon. Both seeds and plants are readily available for establishing pollinator gardens or restoring native habitats. For those planning to introduce it in a garden, be forewarned that it grows into a robust plant and spreads vigorously by rhizomes, so allow adequate space.



Narrowleaf milkweed (*Asclepias fascicularis*) grows in colonies from rhizomes. Photo by Frank Callahan near Jacksonville, Oregon, June 24, 2020.

Narrowleaf milkweed **(*Asclepias fascicularis* Decne.)**

French botanist Joseph Decaisne named *Asclepias fascicularis* in 1844 from a specimen collected by David Douglas in California (*Prodromus systematis naturalis regni vegetabilis* 8:569). Narrowleaf milkweed is exceptionally common in the Rogue Valley (Jackson County). It occurs less frequently in the Willamette Valley and the Columbia Gorge. It also appears in lowlands of the Willowa and Blue mountains. It is not a montane species and is seldom found above 5,000 feet elevation. It is rare in southeastern Oregon and absent along the Oregon coast. I (Callahan) have never come across this species in all my searches in southeastern Oregon and only a few voucher specimens are known from this area.

Narrowleaf milkweed is strongly rhizomatous, spreading to form small colonies. It is generally shorter than showy milkweed, growing as an erect perennial, 1 to 2.5 feet tall. In contrast to opposite leaves found in most milkweeds, narrowleaf milkweed leaves (except the uppermost ones) are in whorls of 3 to 6. The reflexed petals are a pale soft pink to darker rose, often with a white margin. The cupped hoods are creamy white, surrounding a pale pink to white disc. The horns are incurved. Mature follicles are ½ inch in diameter by 3 inches long.



Flower cluster of narrowleaf milkweed. Photo by Frank Callahan near Jacksonville.

Habitat

This species prefers full sun in dryland habitats, such as grasslands, oak savannas, and openings in pine or oak woodlands. Soils range from clay loams to sandy loams, but they must be well-drained. It spreads abundantly in disturbed soils, especially along roadsides.

Cultivation

Seeds are readily available for this species. It can also be propagated by rhizome cuttings. Native plant nurseries in the Rogue Valley offer plants for sale and claim that narrow-leaf milkweed is one of the easiest milkweeds to grow, tolerating heat, drought, and a fair amount of disturbance. Its vigorous rhizomes may cause problems if the gardener has limited space and prefers well-mannered perennials.



Flower cluster of heart-leaf milkweed (*Asclepias cordifolia*), photographed by Frank Callahan on the west-facing slope of Blackwell Hill on May 26, 2020.

counties and a population reported in Lake County, south of Lakeview.

Heart-leaf milkweed is a perennial that grows to a height 1 to 2 feet, more or less erect. Its large opposite leaves are cordate (heart-shaped). Its flowers have dark



Narrowleaf milkweed follicles releasing seeds. Photo by Frank Callahan.

Heartleaf milkweed **(*Asclepias cordifolia* (Benth.) Jeps.)**

Willis L. Jepson named this species in 1901 (Fl. W. Calif. [Jepson] 384) from an 1836 collection by German botanist Karl Theodor Hartweg in California. Although the Oregon Flora shows a second common name, purple milkweed, for this species, that name is also used for *Asclepias purpurascens*, which is native to the eastern, southern and midwestern US. Because *purpurascens* refers to purple and *cordifolia* refers to “heart-shaped leaf,” we prefer the name heart-leaf milkweed.

The center of the distribution of this species is California’s Sierra Nevada and Coast Ranges. From the Sierra Nevada it extends east into Nevada; from the California Coast Ranges it extends north into southwestern Oregon where it is commonly found on serpentine substrates. There are outlier records in eastern Douglas and Lane



Habit of heart-leaf milkweed (*Asclepias cordifolia*). Photo by Frank Callahan.

red-purple petals and cupped hoods of pale pink surrounding a creamy white center. The horns are inconspicuous. The oblong follicles are large (3 to 5 inches long) and tapering to a point. They are lighter green than the leaves, with a purplish tinge and are usually erect on the plant.

Habitat

In Jackson County, this species is abundant on open exposures on both granodiorite (Blackwell Hill) and gabbro parent material (Gold Hill). It has been reported on soils derived from ultramafic, limestone, and volcanic substrates. In California it grows in open or shaded woodland, often on rocky slopes and in mixed coniferous forest.

Cultivation

Propagation is by seed. It thrives in full sun or partial shade and is drought tolerant. It does well in medium to coarse soil, or rocky soil; it needs good drainage. Seeds are available online.

Jewel milkweed

**(*Asclepias cryptoceras* S. Watson
ssp. *davisii* (Woodson) Woodson)**

Other common names for this small milkweed are pallid milkweed or Davis milkweed. *Cryptoceras* means “hidden horn,” referring to the inconspicuous horn in the corona of this species. Sereno Watson added this species in 1871, based on a specimen collected by Thomas Nuttall near the Green River in 1834. Previously, in 1845, Torrey and Fremont named an 1844 collection by Fremont (also on the Green River) *Acerates latifolia*, a name no longer considered valid when it was recognized that the species belonged to the genus *Asclepias*.

The center of its range is the Great Basin and it is widely distributed in the Intermountain region. It grows in seven eastern Oregon counties: Baker, Crook, Grant, Harney, Malheur, Wallowa, and Wheeler, but it is uncommon in all of them.

Jewel milkweed grows as a perennial from an enlarged, woody, often fusiform root that is fleshy when young. This is one of the sprawling milkweeds, lying on the ground (prostrate) or with drooping stems (decumbent). The thick, waxy, blue-green leaves are broadly ovate and opposite on short stems. The umbels are usually terminal, bearing 5 to 10 flowers. The striking flowers have pale chartreuse-green, reflexed petals, magenta hoods, and a pale creamy center. The two lobes of the saccate hoods project at the top into two short teeth that completely enclose

the short horn. The ovoid follicles are held erect, about 1 to 2 inches long.

Habitat

Its preferred habitat in Oregon appears to be sparsely vegetated, heavy clay soils, often on steep slopes. Descriptions include the phrases “barren clay with spiny hopsage and bitterbrush,” “occasional on barren lens of cherty soil in sagebrush steppe,” and “heavy clay soil subject to slipping down a steep slope.” Some references say it grows in sandy soils, but the herbarium sheets from Oregon collections indicate a clear preference for clay soils.

Cultivation

This species is rare. Seeds, when available, are expensive (one vendor offered 15 seeds for \$40 with a limit of 2 packets, but they were sold out). Do not dig plants from the wild (refer to the NPSO Ethical Guidelines for Collecting Plants at <https://www.npsoregon.org/documents/ethics.pdf>). If you find a population large enough to safely collect a few seeds, be prepared to replicate the soils and other habitat conditions when trying to grow them.



Habit of jewel milkweed (*Asclepias cryptoceras*). Photo by Robert Korfhage in Crook County. May 2020.

Serpentine milkweed
(Asclepias solanoana Woodson)

Serpentine or Solanoa milkweed in honor of Solano, chief of the Suisunes. The type specimen was collected by C.B. Towle in Lake County, California: “on bare summit of a mountain ... not far from the Geysers.” First described by Asa Gray in 1874 as *Gomphocarpus purpurascens*, the name was changed to *Solanoa purpurascens* by Greene in 1890. Finally, Robert E. Woodson published the currently accepted name, *Asclepias solanoana*, in 1941 (Ann. Missouri Bot. Gard. 28(2): 207). I (Callahan) have visited the type location near the Geysers, and it is a barren serpentine habitat typical for the species. Until recently, serpentine milkweed was considered a California endemic, a rare species growing only in the North Coast Ranges north of San Francisco. Serpentine milkweed is known from one location in Oregon. The northernmost known population of this species is in Josephine County in the upper reaches of the Rough and Ready Creek drainage. It consists of only a few plants. I (Callahan) discovered the Oregon plants in late May 2014, after fording the creek and hiking four steep, rugged miles up the canyon without a trail.

Serpentine milkweed is one of the sprawling milkweeds, growing as a prostrate perennial. Leathery, heart-shaped or ovate leaves on short petioles attached opposite each other on smooth purple stems. The spherical inflorescences are at the end of the stems, a heavy ball of lovely rose-purple to pink flowers. Each flower has five reflexed to spreading, pink to dark rose petals below a ring of pale pink rounded hoods without horns. Follicles are up to 2 inches long and 3/8-inch thick.



Flowers of serpentine milkweed (*Asclepias solanoana*). Photo by Frank Callahan.

Habitat

The habitat in Oregon is similar to that in California, a steep slope with Jeffrey (*Pinus jeffreyi*) and knobcone (*P. attenuata*) pines growing over unweathered serpentine shards and scree. In California this species is limited to ultramafic soils of serpentine outcrops and is found in chaparral, foothill woodland and yellow pine forests.

Cultivation

Serpentine milkweed is a rare species and not available in the native plant trade. Wild plants should not be dug up. Collect seeds only in locations where it would not diminish the native population. It is not expected to grow well in gardens because it appears to be adapted to a specialized habitat of ultramafic soils.



Serpentine milkweed (*Asclepias solanoana*) from Rough and Ready Creek. Note the serpentine scree and Jeffrey pine needles. Photo by Frank Callahan, May 26, 2014.



Creamy flowers of woollypod milkweed (*Asclepias eriocarpa*). Photo by Frank Callahan, 2016.

Woollypod milkweed, Kotolo
(*Asclepias eriocarpa* Benth.)

George Bentham published the name in 1849 using a specimen collected by Hartweg in 1835 in California: “In collibus siccis juxta praedium Tularcitos in vicinibus Monterey” (Plantas Hartwegianas imprimis Mexicanas 323). The specific epithet of this species comes from the Greek words, *erion*, meaning wool and *carpos*, fruit. Woollypod milkweed is a new discovery in Oregon. In July 2016, I (Callahan) found a small population of it along the Rogue River just downstream from Bear Creek in Jackson County. It was previously known only from northern California, adjacent parts of Nevada, and Baja California. In California, it is found primarily in the Coast Ranges from Mendocino County southward into Mexico, in the Sierra foothills and in the northern part of the Central Valley.

Woollypod milkweed is an erect, single to multiple-stemmed perennial, only a bit smaller than showy milkweed. On fertile, grassy sites, it grows to a maximum of about 4 feet tall; plants on open, sun-baked soils may reach only 2 feet tall. All parts of the plant are covered with smooth, dense, white hairs. The large leaves are lance-shaped to oval, 2.5 inches wide by 8 inches long, rippled. Leaves tend to be at a 90-degree angle from the stem, either

as opposites or in whorls of 3 or 4 leaves. The flower cluster is a large umbel-like cluster of flowers. Each flower is creamy white to cream colored, often tinged with bright pink. It has a central array of rounded hoods with short horns that curve toward, but don't reach, the disc. The corolla is reflexed against the stalk. The fruit is a large, woolly follicle.

Habitat

The small population in Oregon was growing on a steep eroding bank covered with weedy grasses along the Rogue River. After the Gold Ray Dam was removed, the river is cutting the rich soils on the south side of the river and this farmland is washing away. In California it is reported to grow in yellow pine, red fir, and lodgepole pine forests, foothill woodlands, chaparral and Central Valley grasslands.

Cultivation

In the garden it makes a striking specimen, especially when massed ([https://calscape.org/Asclepias-eriocarpa-\(Kotolo-milkweed\)](https://calscape.org/Asclepias-eriocarpa-(Kotolo-milkweed))). Seeds are available from a variety of sources online.



Woollypod milkweed (*Asclepias eriocarpa*) fruits and leaves covered with short fuzz. Photographed by Frank Callahan in Jackson County, Oregon

Swamp milkweed (*Asclepias incarnata* L.)

This species was named by Linnaeus in 1753, apparently using specimens from Canada and Virginia. The specific epithet for this species *incarnata*, is from the Latin *carn*, meaning flesh and *atus*, meaning “like,” because its hue is sometimes like flesh, or it may be dusty rose in color.

Previously unknown in Oregon, this species was known to grow in eastern Canada and the US, extending as far west as Idaho (Kinter 2019) and Nevada. I (Callahan) reasoned that if it grows in Idaho, it might be found in Oregon as well. So, on September 1, 2020, Tom Fealy and I, using a boat christened the Monarch, surveyed along the Snake River in eastern Malheur County. We surveyed from the Oregon-Idaho border at State Line Road to Nyssa (about 20 miles) then north to Ontario, another 10 miles. We found a few, highly scattered populations,



Swamp milkweed (*Asclepias incarnata*) flowers and leaves. September 1, 2020. Malheur County, Oregon. Along the Snake River.

milky substance. The fragrant clusters of flowers range in color from soft mauve to pink to reddish-violet. Within each small cup-shaped hood is an upward curving horn that reaches to the center of the disc. Follicles are narrow and held erect.

Habitat

In its native habitat it grows in sunny openings of wet habitats: swamps, marshes, ditches, wet meadows, along streams and lakes. In Oregon it grows in marshy zones along the Snake River.

Cultivation

Swamp milkweed is reported to thrive in average garden soil as long as it does not dry out completely, especially in the spring. It tolerates heavy clay soils and can be grown in full sun to partial shade. As you would expect by its name, it requires more water than other milkweeds. It is a good choice for wetland pollinator gardens. Seeds are readily available but are likely to be from populations quite distant from Oregon. This widespread species is frequently cultivated, and a number of cultivars have been developed. This species is also sold as fresh cut flowers, mostly because the flowers are long lasting, but sometimes for the distinctive seed pods.



Swamp milkweed (*Asclepias incarnata*) with follicles in a bullrush marsh habitat with *Schoenoplectus acutus* along the Snake River. Photo by Frank Callahan, Malheur County, September 1, 2020.

including a plant over 5 feet tall in a tule marsh. However, plants were difficult to see because most of the flowers had matured into fruits, which blended into the massive tule populations. Tom and I also explored the Fort Boise Wildlife Management Area (1,630 acres) in Idaho, just across the Snake River from Oregon. We found plants at the mouth of the Boise River where it joins the Snake River. Some of the Oregon plants were directly across the Snake River from the Idaho populations. We did not have time to explore the mouth of the Malheur River (just south of the Wildlife area), but that is definitely prime habitat. The highest concentrations were to the south of Nyssa in Oregon, ranging from 10 to 30 plants per site.

Swamp milkweed is an erect perennial, reaching five feet tall in favorable conditions. Its smooth, narrow leaves are lance-shaped with sharp tips and occur in pairs. Sometimes the leaf edges turn inward and upward suggesting the prow of a ship. Swamp milkweed produces almost no



The Monarch botanical exploration boat. Photo by Frank Callahan.



Monarch caterpillar feeding on woollypod milkweed (*Asclepias eriocarpa*) leaves. Photo by Frank Callahan.

Milkweeds and monarchs

Monarch butterflies depend on *Asclepias* species: without their obligate milkweed host, monarchs will disappear. But the reverse is not true: milkweeds do not depend on monarchs for pollination, which is done, mostly, by other insects. Although monarch butterflies pollinate milkweeds as they draw nectar, they mostly need milkweed as a host plant for their caterpillars. The sap that lends milkweed its name ends up protecting the monarchs as well. The toxic compounds, a distasteful mix of resinoids, glycosides, and alkaloids, can cause nausea and vomiting in low doses, and death in high doses. But not for monarch larvae. When monarch larvae feed on milkweed, they sequester the toxins, so instead of making the larvae sick, they make them and the adult butterflies undesirable as food for potential predators. Monarch adult and larval coloration provides a warning that vertebrate predators learn to recognize after sampling monarch larvae or adults and finding that they taste bad and/or cause vomiting. The concentration of alkaloids varies considerably among the 73 *Asclepias* species in North America. Generally, milkweeds with narrow leaves have higher concentrations, but one broad-leaved species, woollypod milkweed, is considered to be one of the most toxic species (Panter *et al.* 2011).

Fiber, floss, and flower gardens

In addition to serving as a critical food source for Monarch butterfly caterpillars and nectar as a reward for many other pollinators, the plant's fibers have been used for a variety of purposes.

The tough fibers of many species are useful for making ropes and string, thus the common name "Indian Hemp." For example, heart-leaf milkweed was valued by the Native American Miwok tribe for its stems, which they dried and processed into string and rope. Woollypod milkweed

was used as a source of fiber and medicine by several California Indigenous peoples, including the Ohlone and Luiseno. The tuft of white, silky, filament-like hairs on the tip of milkweed seeds is known as the coma but is often referred to by other names: pappus, floss, plume, silk. The filaments are hollow and are coated with wax to allow it to float on water. The coma has been reported to be six times more buoyant than cork and five times warmer than wool; large quantities of milkweed were grown for use as stuffing in pillows and lifejackets during World War II (Kirk and Belt 2011). Apparently, it is better for insulating clothing than for pillow stuffing, lacking in fluffiness for comfort. Coma is also good for absorbing oil, with the potential for remediation of oil spills in waterways (<https://empressof dirt.net/growing-milkweed-seed/>).

More recently, milkweeds have enjoyed an unprecedented popularity among gardeners. This is not surprising, given the spectacular beauty of their flowers and their power to attract butterflies and other insects with their nectar. Milkweed is almost an obligate component of pollinator gardens and monarch advocacy groups offer seeds of almost any species of *Asclepias* (<http://www.xerces.org/milkweed/milkweed-seed-finder>). Conservation of wild habitat is critical, but garden and restoration plantings are needed to provide pathways for monarchs to access milkweeds along their migration routes when native habitats have been degraded. We have touched only briefly on cultivating milkweeds; those without experience in growing native milkweeds should consult the Xerces Society's publication: *Milkweeds, A Conservation Practitioner's Guide* (Borders and Lee-Mäder 2014). This publication covers almost everything one might need to know about collecting seeds and growing milkweeds. As tempting as exotic *Asclepias* species may be, please plant only the ones native in Oregon. There is a report that common milkweed (*Asclepias syriaca*), which is native to eastern North America, has naturalized in Oregon and also hybridizes in the wild with showy milkweed (Savonen 2016). A bright red and yellow milkweed (*Asclepias curassavica*), native to tropical America, is planted in gardens in western Oregon. Even though it is apparently staying in cultivation in Oregon, it has naturalized in California. In addition, butterfly scientists say to avoid planting this non-native because it disrupts the relationship between monarchs and a protozoan parasite, *Ophryocystis elektroscirrha*. The parasite is deposited on the leaves and caterpillars ingest the parasite as they feed. The host and parasite evolved together, so as long as parasite levels remain low, butterflies are not harmed. However, high levels of the parasite in adult monarchs lower migration success, as well as reduce body mass, lifespan, mating success, and flight ability. When native milkweeds die back after blooming, the parasite dies along with them so that each summer's monarch population feeds on fresh, parasite-free foliage. In contrast, tropical milkweed remains green through winter, allowing parasite levels to build up, so successive generations of monarch caterpillars feeding on the plant can be exposed to

dangerous levels of the parasite (<https://xerces.org/blog/tropical-milkweed-a-no-grow>). Anyone truly interested in doing the best for Oregon's native plant and monarch conservation will grow a species native to the area.

Acknowledgements

We thank Cecilia Lynn Kinter, Idaho Dept. of Fish & Game, Boise, and Donald H. Mansfield, College of Idaho, for their assistance. Kareen Sturgeon edited several iterations of the manuscript. Aaron Liston reviewed the manuscript and offered many constructive comments that improved our understanding of milkweed floral morphology. Aaron recommends Anurag Agrawal's book, *Monarchs and Milkweed: A Migrating Butterfly, a Poisonous Plant, and Their Remarkable Story of Coevolution* for further reading on this subject. We also recognize botanist and chemist Dr. Steve Northway, who co-founded Cascadia Monarchs, an organization for growing and distributing milkweed seedlings in the Willamette Valley and beyond.

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Roché has edited *Kalmiopsis* since 2001 and is always on the lookout for botanical subjects to share with NPSO members. She clearly remembers her first milkweed encounter: it was *Asclepias speciosa* in the summer of 1979 in the Colville River Valley between Colville and Kettle Falls in northeastern Washington. Four decades passed and nothing noteworthy happened with milkweeds until the summer of 2019. A botanist friend in Bend showed her a picture on her smartphone of *Asclepias cryptoceras*. Going to visit the site in 2020 sparked a new interest in milkweeds which burst into flame when her longtime friend from the Rogue Valley (Frank Callahan) sent pictures of his discoveries of other rare milkweeds in Oregon. Thus began the collaboration that resulted in this article.



Callahan is a veteran author for *Kalmiopsis*, having published five previous articles: California Buckeye (2005), Hinds Walnut in Oregon (2008), Discovering Gray Pine in Oregon (2009), Botanizers in the Land of Conifers: Oliver Matthews, Al Hobart, Eugene Parker (2013), and Cypress Species in Oregon (2013). Although his passions are big trees in general and Oregon trees in particular, Callahan's motto "Never stop discovering" applies to all things botanical. His mother, Muriel Callahan, introduced him to showy milkweed growing near an irrigation canal on their property in Bend, Oregon, many years ago. As a high school student, he was dissecting everything, including flowers, and was smitten with the intricate floral structure of *Asclepias speciosa*. In 1963, his 9th grade teacher, Dr. Gettman, introduced him to a microscope, which became an addiction leading to illustrating many flowers. This year, intrigued by the image of *Asclepias cryptoceras*, a plant that he has never seen in the wild, he accepted the offer to share his experiences with *Asclepias* species in Oregon.

