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Cover photograph: Inflorescence of milkweed. Photograph by Winthrop B. Phippen.



Nomenclature and Iconography of Common Milkweed

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INTRODUCTION

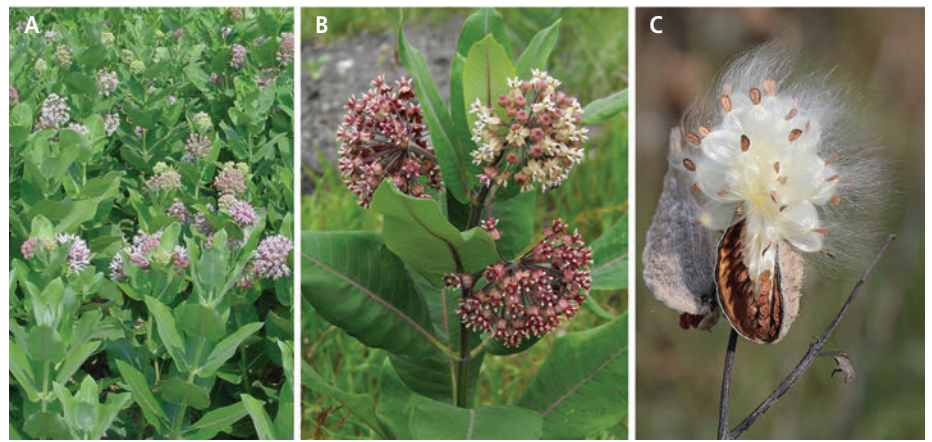
Milkweeds, members of the genus *Asclepias* L., are indigenous to North America. Because of their supposed medicinal properties, Linnaeus (1753) named the genus after *Asklepios*, the Greek God of Medicine and Healing. However, this name was originally used by Pedanius Dioscorides in his *Materia Medica* of 65 CE to refer to plants identified as *Vincetoxicum officinale* Moench, *Apocynaceae* (dogwood family of 130 genera), now generally known as swallowwort, named from the fruit which resembles the forked tail of the swallow; *Vincetoxicum* means “conquers poison.” The English translation from Dioscorides by Beck (2005, p.225) is as follows:

III, 92 ἀσκληπιᾶς [asklepias]

The swallowwort: it sends out small sprays on which the leaves are like those of ivy; it has many slender and fragrant roots, a flower that has a heavy smell, and seed like the axeweed's [*Securigera securidaca* L.]. It grows on mountains.

Drunk with wine, the roots help the colicky and those bitten by wild animals, as do also the leaves when plastered on. They are also suitable for breast and uterine malignancies.

Figure 2. Plants (A), inflorescence (B), and follicle filaments attached to the seed of milkweed (C). Source: W.B. Phippen; Nature Manitoba, T. Reaume; Provincial Park, Ontario, Canada.

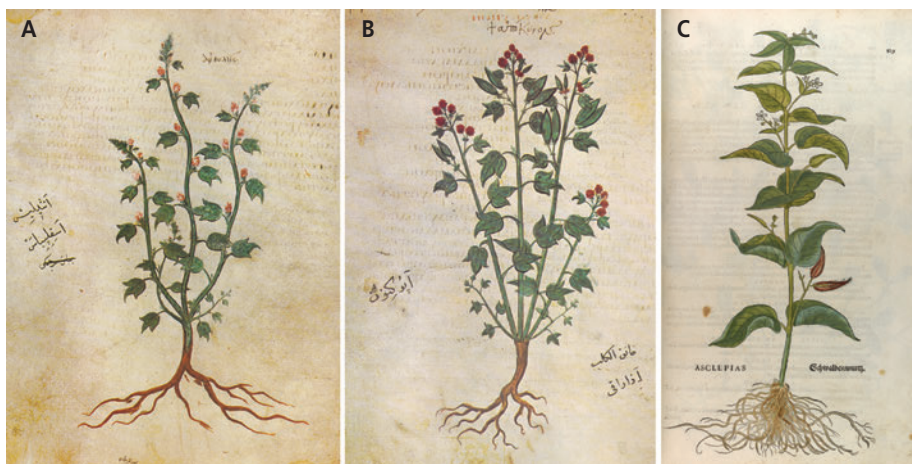


The *Juliana Anicia Codex* of 512 (Der Wiener Dioskurides, 1998, 1999) illustrating Dioscorides' *Materia Medica* has two illustrations of swallowwort. One (Fig. 1A) was identified as *Asclepias Dioscoridis* by Otto Mazal, the editor of the facsimile, and another (Fig. 1B) titled *Apocynum* (dogbane) as *Cynanchum erectum* L., whose leaves kill dogs, and according to Hortus Third is a synonym of *Vincetoxicum*; the name *Apocynum* literally means “away dog” in Greek. These figures are similar to the *Asclepias*

(*Hirundinaria*) of Fuchs (1542) identified as *Vincetoxicum hirundinaria* (Fig. 1C).

Common milkweed (*Asclepias syriaca* L., syn. *A. cornuti* Decne) is a weedy plant with milky sap and seeds with silky hairs (pappus) whose fragrant flowers are an important nectar source for insects (Fig. 2). The plant is the primary larval food source for the monarch butterfly and is routinely used in butterfly gardens and sometimes incorporated in wild landscapes. The genus previously belonged to *Asclepiadoideae* of the *Apocynaceae* whose species also contain milky juice and seeds with tufts of hair (Endress and Bruyns, 2000). *Asclepias* is known under various common names including: milkweed, silkweed, and butterfly flower. Approximately 200 species are distributed primarily in North America and Africa (Hortus Third, 1976). Carl Linnaeus in *Species Plantarum* (1753) described common milkweed, an American species, as *Asclepias syriaca* due to confusion with an *Apocynum* species from Asia Minor. The seed hairs (floss) from the follicles are hollow and coated with wax, resulting in good insulating qualities. The floss was collected during World War II as a substitute for kapok for “Mae West” life flotation devices. It has minor uses as a hypo-allergenic filling for pillows and was used as a replacement for down in jackets. Although common milkweed exudes copious amounts of white milky latex, it has less than 1.5% natural rubber

Figure 1. Illustrations of *Vincetoxicum* spp.: (A) *Asclepias*, folio 47v, and (B) *Apocynum*, folio 68v, in the *Juliana Anicia Codex* of 512 CE; (C) *Asclepias* from Fuchs' herbal, folio 129, of 1542.



content and has had no commercial success for this purpose. The plant is known to contain cardiac glycoside poisons and related species have been used to poison arrows by indigenous peoples of the New World. Gaertner (1980) has suggested that the common milkweed is the great underachiever among economic plants since it has never lived up to its potential.

The confusion between species of *Apocynum*, *Vincetoxicum*, and *Asclepias* has bedeviled their nomenclature and iconography. Dogbane (*Apocynum cannabinum* L.), a look-alike American species, can be distinguished from milkweed by the branching in the upper portions of the plant and smaller elliptical leaves compared to the elongated elliptical leaves of common milkweed. The leaves ascending the stalk of milkweed are smaller than dogbane (Thayer, 2006). Milkweed stalks are hollow and dogbane stalks are solid. Flowers of dogbane have large sepals and a five-lobed white corolla. The common milkweed inflorescence is a roundish umbel consisting of up to 130 flowers varying in color from pink to purplish to whitish yellow. Dogbane can be mistaken for milkweed when young, but the stems typically branch and are hairless. Swallowwort (*Vincetoxicum* spp.) is a perennial, herbaceous, European plant having fibrous poisonous roots (Bullock, 1958). Leaves are only 7-10 mm long and 5-7 mm wide. Flowers have five petals that are star-shaped ranging in color from white to black. Seed pods are light brown and very slender.

Milkweed has a fascinating history and convoluted nomenclature. The objective of this paper is to retrace the early steps of naming common milkweed and its associated iconography.

THE FIRST ILLUSTRATIONS OF COMMON MILKWEED

The earliest definitive illustration of milkweed is a watercolor painting (Fig. 3A) by John White (1540s-1593) that was a part of a series purchased by Sir Hans Sloane in 1715 from White's heirs and is now known as the Sloane collection of the British Museum (Sloan, 2007). White was an artist and mapmaker who sailed in the 1585 expedition to Roanoke, now North Carolina, in Sir Water Raleigh's attempt to establish an English Colony, which was famously rescued by Sir Francis Drake in June of 1586. White became governor of Roanoke in the second ill-fated voyage of 1587 to reestablish the colony (Lorant, 1946; Sloan, 2007; Janick, 2012). Note that the follicles (pods) in the White painting are smooth and the leaves more closely resemble *Apocynum* than *Asclepias*. The elements from the two species may have been combined (Merrill and Feest, 1975).

During his first voyage to Roanoke, which included a stop in Puerto Rico, John White made a large number of watercolors including maps, flora, fauna, and life among the native inhabitants at Roanoke and surrounding areas. The Indian portraits were immortalized

Figure 3. Early illustrations of milkweed: (A) Painting by John White, ca. 1585. Source: Sloan, 2007; (B) Indian Swallow woot of John Gerard(e) (1597) with woodcut based on painting of John White; (C) Milkweed from the 2nd edition of Gerard(e)'s *Herball* (1633) edited by Thomas Johnson. The illustration on the right is labeled *Apocynum Syriacum* Clusii and can be found in the 1601 edition of *Rariorum Plantarum Historia*, lib. V. lxxxvi. Cap. 1111.



in the etchings of Theodore de Bry and were published in 1590 to illustrate Thomas Hariot's 1588 Report to the investors of the expedition (Lorant, 1946). The watercolor of milkweed, probably painted in 1585 or 1586 is inscribed with White's comments as follows:

Wysauke, The herbe w[hi]ch the Savages call Wysauke wherewith theie cure their wounds w[hi]ch they receave by the poisoned arroes of their enemies.

Wysauke (wisakon, wisank) is a generic Algonquin term that means bitter (Merrill and Feest, 1975). The drawing was passed on to John Gerard (1545-1612), the herbalist and barber-surgeon, who had a woodcut prepared for his *Herball* of 1597 (Sloan, 2007). Gerard became a supporter of the Roanoke expedition and obviously knew and respected the talents of John White who is referred to as an "excellent painter who had carried very many people into Virginia" in an entry on "sarza parella." Gerard has a separate entry for swallowwort and identifies two kinds: White Swallow-wort (*Asclepias flore albo*) and Blacke Swallow-wort (*Asclepias flore nigro*) but notes that herbalists call this *Vincetoxicum*. A chapter titled Indian Swallow woot includes a woodcut derived from White's painting of wysauke (Fig. 3B) and includes the first published description of the plant (listed in the Box below; with modern orthography, the letter f changed to s, u to v, and i to j, when appropriate).

In the 1633 edition of Gerard(e)'s *Herball*, editor Thomas Johnson adds a woodcut of what appears to be common milkweed and labels it *Apocynum Syriacum* Clusii (Fig. 3C). His comments that were added to the text of Gerard(e)'s are as follows:

This Plant, which is kept in some gardens for the name of Virginia Silke Grasse, I take to be the same, or very like the Beidelsar

of Alpinus; and the *Apocynum Syriacum* of Clusius: at Padua they call it Esula India, by reason of the hot milky juyce. Bauhinus hath very unfitly named it *Lapathum Aegytiacum lactescens siliqua Asclepiadis*. But he is to be pardoned; for Johannes Carolus Rosenberghus, cap.16.p. 46. of his *Anima.& Exerc. Medica, or, Rosanobilis iatrica*, hath taken upon him the credit and invention of this absurd denomination; I may call it absurd, for that neither any way or shape or qualities if resembles or participates anything with a Docke. I have given you the figure of our author with his title, and that of Clusius with his: in the former the cods are only well exprest; in the later the leaves and floures reasonably well, but that they are too few in number, and set too far asunder.....The leaves and stalkes of this plant are very full of a milky juyce.

This added woodcut can be traced to Book V (lxxxvij) of the *Rariorum Plantarum Historia* of 1601 by Clusius (Jules-Charles de L'Ecuse). Clusius (1526-1609) born in Flanders was a botanist and teacher. He visited England and met Sir Francis Drake in 1571, 1579, and 1581 through whom he obtained plants from the New World (Arber, 1938; Willes, 2011). The associated Latin text explains that the plant named *Apocynum Syriacum* facit. by Clusius derives from seed collected by Christopher Weixius from Heiricus (likely Jericho) by the Jordan River in Palestine. This might suggest the species *Calotropis procera* (apple of Sodom) but the two pods drawn resemble milkweed with muriate pods and not the round smooth fruit of apple of Sodom. Clusius exchanged plants with Pieter Garet, an apothecary in Amsterdam who was known to have received plants from Virginia in 1591 (Egmond, 2010, p. 204). Based on these considerations, we conclude that the plant described by Clusius as *Apocynum Syriacum* must be milkweed from Virginia rather than a dogbane from Jericho.

Gerarde's Herball (1597)
Of Indian Swallow woor. Chap. 320

The description.

There growth in that part of Virginia, or Norembega, where our English men dwelled (intending there to erect a Colony) a kind of *Asclepias*, or Swallow woor, which the Savages call Wisanck: there riseth up from a single crooked roote, one upright stalk a foote high, slender, and of a greenish colour: whereupon do grow faire broade leaves sharpe pointed, with many ribs or nerves running through the same, like those of Ribwoort or Plantaine, set together by couples at certain distances. The flowers come forth at the top of the stalks, which as yet are not observed, by reason the man that brought the seeds and plants hereof did not regard them: after which, there come in place two cods (seldome more) sharpe pointed like those of our Swallow woor, but greater, stuffed full of most pure silke ribbed, are likewise most pure silk; and also the pilling of the stems, even as Flaxe is torne from his stalks. This considered; beholde the justice of God, that as he hath shut up those people and nations in infidelitie and nakedness; so hath he not as yet given them understanding to cover their nakedness, nor matter wherewith to do the same; notwithstanding the earth is covered over with this silke, which daily they tred under their feet, which were sufficient to apparel many kingdomes if they were carefully manured, and cherished.

The place.

It growth, as before is rehearsed, in the counties of Norembega, and now called Virginia by the H. Sir Walter Raleigh, who hath bestowed great summes of monie in the discoverie thereof, where are dwelling at this present English men, if neither untimely death by murdering, or pestilence, corrupt aire, bloodie flixes, or some other mortall sicknes hath not destroyed them.

The time.

It springeth up, flowreth, and flourisheth both winter and sommer, as do many or most of the plants of that countrie.

The names.

The silke is used of the people of Pomeioc, and other of the provinces adjoining —(being parts of Virginia) to cover the secret parts of woman that never tasted man, as in other places they use a white kinde of mosse Wisanck: we have thought *Aseclepias Virginiana*, or *Vincetoxicum Indiaum*, fit and proper names for it: in English Virginia Swallow woor, or the silke woor of Norembega.

The nature and vertues.

We find nothing by report or otherwaies of our own knowledge, of his phisicall vertues, but only report of the abundance of most pure silke, wherewith the whole plant is possessed.

The comments in the 1597 edition of the *Herball* indicate that Gerard did not grow the plant when he described it. Gerard's description probably comes from conversations with John White or, as suggested by Sloan (2007), from dried specimens perhaps brought to Gerard when White returned to London for additional supplies in 1587. This would explain why Gerard makes no mention of the milky latex. In Gerard's *Catalogue* of 1596 where he lists all the plants in his garden, he includes *Apocynum rectum*, *Apocynum repens*, and *Asclepias* (swallowwort). It seems unlikely that any of these are milkweed. In contrast, Johnson's additional text in the 1633 edition of the *Herball* indicates he was familiar with the plant based on the comments that the plants are very full of "milky juyce." It was this character that was to give milkweed its common name, which was to supersede silkweed or Indian Swallow woor.

No illustrations that could be identified as milkweed were found in herbals of Schoeffer, (1485), Brunfels (1534), Fuchs (1542), Tragus (Bock) (1551), Dodoens (1554), Clusius (1576, 1583), or Camerarius (1588). However, two

illustrations that resemble milkweed under different names appear in the works of John Parkinson (1567-1650), the famous English horticulturist and herbalist. In *Paradisi in Sole Paradisus Terrestris* (1629), an illustration entitled *Periploca recta*, Virginian Silke, that closely resembles common milkweed based on flower structure and leaf shape (Fig. 4) is found. On the left side of the illustration, two pods have been added that are a mirror image of White's painting and the two woodcuts of Gerard(e) (1597, 1633). The written text indicates that the "long and crooked pointed cods contain flat brownish seede, dispersedly lying with a great deale of fine, soft, and whitish browne silk very like unto the cods, seede and silk of *Asclepias*, or Swallow-wort", although the cods are larger, more crooked and with a harder outer shell. He reports that the seed was received from Virginia and thus gives it the English name Virginia silk. He notes that the whole plant, as well as leaves and stalks, being broken, yields a "pale milke." He provides the name *Periploca* rather than *Asclepias* because Parkinson is of the belief that this plant is not the same as the Indian Swallow woor of Gerard under the mistaken notion

that the plant described by Gerard "giveth no milke" (Merrill and Feest, 1975, footnote 9). In the Appendix (p.1679) Parkinson underscores his contention that the *Apocymus syriacum* described by Clusius in 1601 is not from near the river Jordan but is "naturall" to Virginia. Gerard refers to *Periploca* as dogbane and Hortus Third (1976) includes this genus under the *Asclepiadaceae*. *Periploca* flowers and leaf shape are quite different from *Asclepias*.

In Chapter XX (*Apocynum sive Periploca*. Dogs bane) of *Theatrum Botanicam*, *The Theater of Plants* of 1640, Parkinson provides a figure of "The greater and lesser American Dogs bane" (Fig. 5A) that is clearly common milkweed. Parkinson mentions that it comes from our "English plantations in America." In fact, the woodcut is identical to the copper engraving (Fig. 5B) found in the book *Canadensium Plantarum aliarumque nondum editarum Historia* and entitled *Apocynum Maius Syriac Rectum* of Jacques Philippe Cornuty (1635), a French physician who drew the plants from a garden in Paris. These illustrations can be compared with an accurate painting of milkweed by Kops et al. made in 1868 (Fig. 5C).

HISTORICAL PERSPECTIVE

The first illustrations of milkweed in Europe are associated with a fascinating period in world history that involved attempts by the French and English to gain a foothold in North America as a direct response to Spanish hegemony in the New World. French sailors reached the Americas by 1503 (Harris, 1892) and Giovanni da Verrazano explored the New World for

Figure 4. *Periploca recta Virginiana*, Virginian silke, from *Paradisi in Sole Paradisus Terrestris* (*The Garden of Pleasant Flowers*) of John Parkinson (1629, p.443) that appears to be common milkweed. Note the addition of mirror images of pods from painting of John White and woodcuts of John Gerard.



Figure 5. The common milkweed image from three sources: (A) *Apocynum rectum latifolium & angustifolium Americanum sive majus & minus*. The greater and lesser American Dogs bane from *Theatrum Botanicum* (1640, p.386) of John Parkinson. Note the addition of two pods on the left and a larger mature pod on the right; (B) *Apocynum Maius Syriac Rectum* from *Canadensium Plantarum aliarumque nondum editarum Historia...* published in Paris by Jacques Philippe Cornuty (1635); (C) *Asclepias syriaca* L. [as *Asclepias cornuti* Decne.] from Kops et al., 1868.



France seeking a northern route to the Indies in 1532. Jacques Cartier in 1533-1536 and Samuel de Champlain in 1603-1615 established colonies in what is now Canada. The ill-fated expedition of Jean Ribault to Florida in 1564-1565 underscores the struggle between France and Spain for dominance in the New World. It proved a disaster for France but a lasting unexpected cultural byproduct were the fantastic images of the Timucua Indians by Jacques Le Moyne de Morgues, the artist on the 1564 expedition to Florida led by Rene Goulaine de Laudonniere (Harvey, 2008). The contemporary notebooks of Le Moyne were lost after the rout of the French by the Spanish and his escape from Fort Caroline near present day Jacksonville, Florida. His drawings or paintings must have been made from memory after the event; and with the possible exception of one disputed painting, they have also disappeared over time. These illustrations, some of the first European images of indigenous Indian life, were purchased from Le Moyne's widow after his death in 1588 by the engraver Theodore de Bry and published in the famous work *Florida* in 1591. An image of a milkweed plant (Fig. 6) was included in an amazing representation of a gold extraction operation that so tempted the Spanish (Dickenson, 1998).

In 1584, the English made the first exploratory expedition to Virginia, the land north of Florida named for Queen Elizabeth I, the Virgin Queen. This attempt to establish colonies in North America along with government sanctioned piracy against the treasure ships of Phillip II of

Spain were the two wings of Elizabeth's policy to gain a continent on the cheap. The French had already made headway into Canada, and the struggle between the English and the French for control of North America would continue for over two centuries. A subsequent 1585 foray into the tiny island of Roanoke in ships commanded by Sir Richard Grenville consisting of a small armed force of about 200 soldiers was the next salvo in the colonial scheme promoted by Sir Walter Raleigh. The leader of the expedition, Ralph Lane, was accompanied by the scientist Thomas Hariot, a Jewish mining engineer named Joachim Gans, and the artist John White whose extraordinary talents, long underappreciated, gave visual expression to Indian life, fauna, and flora. An example of his knowledge can be seen in his painting of a Chief's wife and daughter holding a trade doll supplied by the English (Fig. 7). The girl is unclothed but wears a string girdle holding a milkweed silk pad against her genitals as suggested by Gerard although Thomas Hariot in his 1588 Report of the 1585 expedition to Roanoke indicates that moss was used for this purpose (Sloan, 2007).

Unfortunately, the expedition ended badly. The explorers returned to London in 1586 thanks to the rescue operation of Sir Francis Drake who was returning from his ferocious foray into the Spanish Main, which included attacks on Santo Domingo and Cartagena. White and his paintings reached London in 1586. By a twist of fate, White was a colleague of Jacques Le Moyne and John Gerard who later became a finan-

cial supporter of the colony. White's undated painting of milkweed probably made in 1585 or 1586 would end up in a woodcut in John Gerard's famous *Herball* of 1597 destined to be the first published image of milkweed available to the botanical world. Gerard suggested that the plant was related to the well-known swallowwort, called *Asclepias* by Dioscorides, and gave it the common name of Indian Swallowwort. Linnaeus (1753) would choose *Asclepias* for the name of the genus. Gerard mentioned the "savage" name of *Wisanck* (sic) provided by White, a generic Algonquin name for bitter substances, but this appellation did not stick. Gerard proposed the common name Virginia silkweed and was familiar with the name *Vincetoxicum*, a synonym for *Apocynum* (dogbane). He was struck with the silky seed tufts and commented extensively on this attribute but does not refer to the milky latex, suggesting his description was not made from growing plants in his garden.

Although Gerard died in 1612, his *Herball* continued to be a brisk seller without competition. The publisher, however, became aware that a certain John Parkinson was working on a new herbal and commissioned the apothecary and botanist, Thomas Johnson, to undertake a second edition in 1632 which was published in 1633. This edition became even more famous than the original with all the emendations made by Johnson indicated by symbols. Johnson's additions refer to the milky juice of Indian Swallowtail indicating that he was familiar with the growing plants. He also included a woodcut

Figure 6. Etching of gold extraction by Timucua Indians of Florida by Theodore de Bry based on a drawing by Jacques Le Moyne with milkweed and cattails in the upper left. Source: Lorant, 1946.



of *Apocynum Syriacum* of Clusius published in 1601 which closely resembles milkweed but, according to Clusius, was an *Apocynum* growing near the Jordan River and obtained from a Christopher Weixius. The precise source of the *Apocynum Syriacum* woodcut of Clusius

Figure 7. Chief's wife and her daughter by John White, 1585. Pad surrounding genitals of daughter may be milkweed silk or moss. Source: Sloan, 2007.



remains a mystery, but we are convinced it was milkweed based on the image, especially the pods and flower structure. It could have been grown in a Paris garden from sources in Virginia for it is known that Pieter Garet of Amsterdam did exchange plants from Virginia with Clusius in 1591 (Egmond, 2010). A catalogue of the Kings Garden in Paris (Robin, 1601) contains *Apocynum repens* and *Apocynum rectum* and perhaps the latter is the origin of the plant identified as *Apocynum Syriacum* by Clusius and *Apocynum Maius Syriac Rectum* from Cornuty. Linnaeus later listed *Apocynum syriacum* as a synonym for *Asclepius syriacum*.

Milkweed clearly was grown in English gardens prior to 1633 and probably distributed from Gerard's garden or from other reintroductions from Virginia. John Parkinson provides two illustrations. The first in 1629 (*The Garden of Pleasant Flowers*) indicates that he was familiar with John Gerard's 1597 *Herball* since he includes part of the pods based on White's original paintings. The second illustration was clearly copied from the copper engravings of Jacques Philippe Cornuty's 1635 work on Canadian plants. These were made in Paris from plants imported from Canada. We know milkweed grew there since a picture of milkweed is found on a 1613 map made from sketches of Champlain (Fig. 8). In 1744, a plant of milkweed was engraved by Pierre Francois Xavier de Charlevoix from Cornuty's sketches and labeled *Petit Apocynum du Canada* (Fig. 9).

The name milkweed first appears in English in 1814 when naturalist Jacob Bigelow (1787-1870) wrote that *Asclepias syriaca* was called common silk weed or milk weed. Asa Gray (1810-1888) was the first to refer to *Asclepiadaceae* as the Milkweed Family. The

Figure 8. Inset of a 1613 map of New France drawn by David Pelletier from sketches of Samuel de Champlain showing milkweed between two Native people. Source: Dickenson, 1998.



Figure 9. Milkweed labeled *Petit Apocynum du Canada* by Pierre Francois Xavier de Charlevoix (1744) from *Histoire et description générale de la Nouvelle France* engraved from Cornuty (1635). Source: Dickenson, 1998.



nomenclatural and iconographic history of milkweed is one example of the early convoluted response of botanical and horticultural science to the introduction of New World plants.

SUMMARY

Common milkweed (*Asclepias syriacus* L.), a species indigenous to North America, has a convoluted iconographic and nomenclatural history due to confusion with *Apocynum* (dogbane)

and *Vincetoxicum* (swallowwort). Casual images of milkweed can be found in an engraving by Theodore De Bry in *Florida* (1591, Plate LVI) based on a lost drawing or painting of Jacques Le Moyne de Morgues based on his sojourn in Florida between 1564 and 1565. A crude drawing of milkweed appears in a 1613 map inset of New France (Canada) based on sketches of Samuel de Champlain. The first definitive common milkweed illustration is a water color painting by John White who refers to it by an Algonquin name *Wysauke*. The painting accurately shows a single tap root and two terminal pods but the small opposite rounded leaves are atypical indicating artistic license. The White drawing was incorporated into a woodcut in the 1597 *Herball* of John Gerard(e) published in

London under the name Indian Swallow woort with a lengthy description emphasizing the silky seeds without mention of the milky juice. The woodcut was duplicated in the 1633 edition of the *Herball* edited by Thomas Johnson and paired with a woodcut of milkweed by Clusius first published in 1601 in *Rariorum Plantarum Historia* under the name *Apocynum Syriacum*. In 1635, Jacques Phillippe Cornuty engraved milkweed from plants growing in Paris under the name *Apocynum Maius Syriaca Rectum*. There are two woodcuts of milkweed in works by John Parkinson. The first from *Paradisus Terrestris* (1629) is labeled *Periploca recta*, Virginian silke; and the second from *Theatrum Botanicum* (1640) is labeled *Apocynum rectum latifolium & angustifolium Americanum sive*

majus & minus and is a remaking of the engraving of Cornuty (1635).

CONCLUSION

An examination of iconography is necessary to clarify plant taxonomy and nomenclature. In the late 1500s, French and English explorers illustrated milkweed found in North America, a plant well known to indigenous populations. English and European herbalists mislabeled this plant and misrepresented its taxonomy. A study of the descriptive literature and imagery enabled us to better understand the horticultural and botanical issues involved in the great Columbian exchange of plant species after the European encounter with America.

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