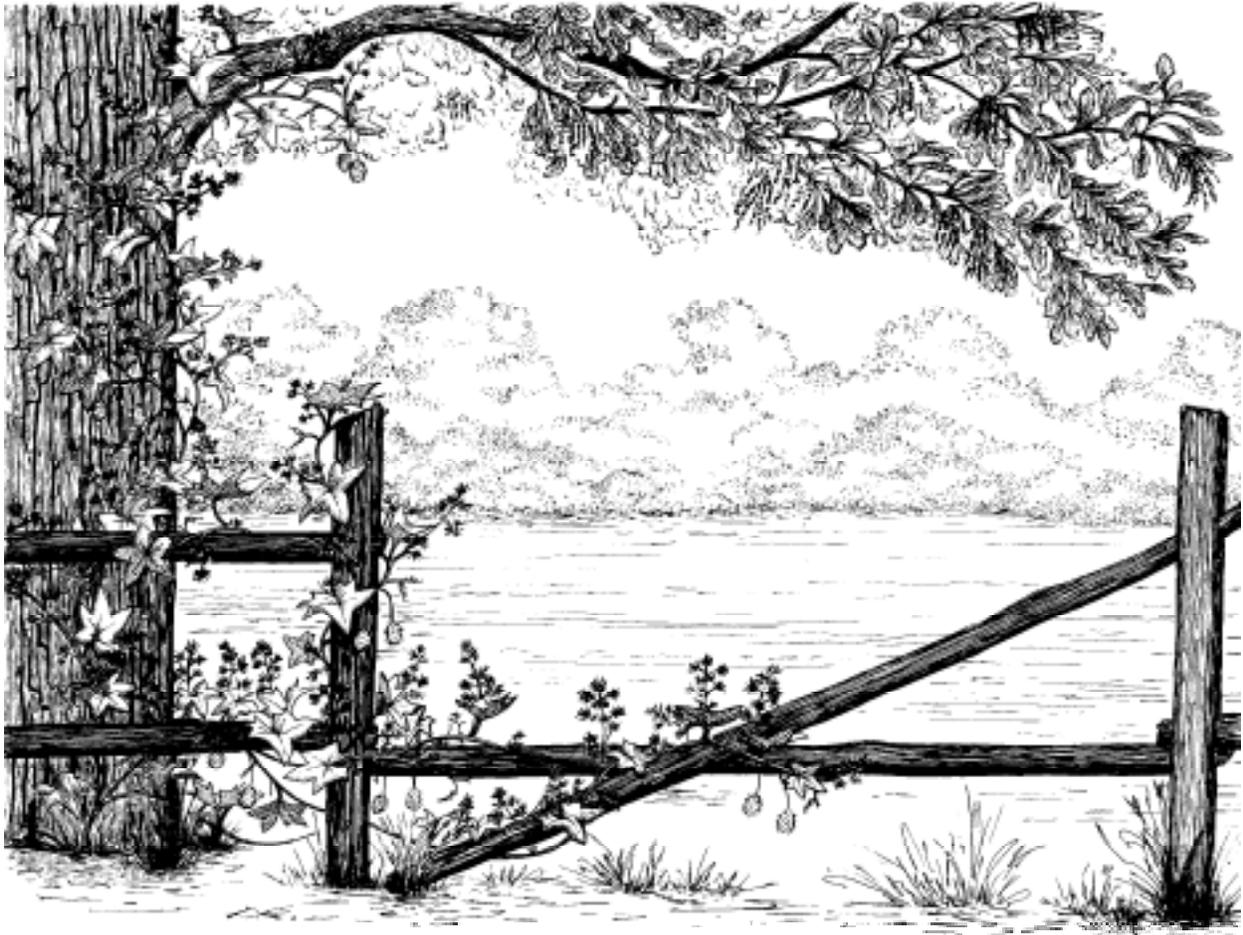


ROSACEAE

By Any Other Name

Working Draft 04 May 2015; May the fourth be with you.



ROSE FAMILY ROSACEAE

Agrimonia
Alchemilla
Amelanchier
Argentina
Aronia
Aruncus
Chaenomeles
Coumarum
Cotoneaster
Crataegus
Dasiphora
Drymocallis
Duchesna
Filipendula
Fragaria
Geum

Gillenia
Malus
Pentaphylloides
Photinia
Physocarpus
Potentilla
Prunus
Pyrus
Rhodotypos
Rosa
Rubus
Sanguisorba
Sibbaldiopsis
Sorbaria
Sorbus
Spiraea
Waldstenia

Subfamily Rosoideae

1. Filipendula

Supertribe Rosodae

2. Rosa

3. Rubus

Tribe Sanguisorbeae: 4. Agrimonia, 5. Poterium, 6. Poteridium, 7. Sanguisorba

Tribe Potentilleae: 8a. Argentina, 8b. Potentilla, inc Duchesnea, 9. Aphanes, 10. Dasiphora, 11. Drymocallis, 12. Fragaria, 13. Sibbaldia, Comarum,

Tribe Coluriae: 14. Geum

Subfamily Spiraeoideae

Tribe Amygdaleae: 15. Prunus

Tribe Neilliae: 16. Neillia, 17. Physocarpus

Tribe Sorbariae: 18. Sorbaria

Tribe Spiraeae: 19. Aruncus, 20. Spiraea

Supertribe Kerriodae

Tribe Osmaronieae: 21. Exochorda

Tribe Kerrieae: 22. Kerria, 23. Neviusia, 24. Rhodotypos

Supertribe Pyrodae

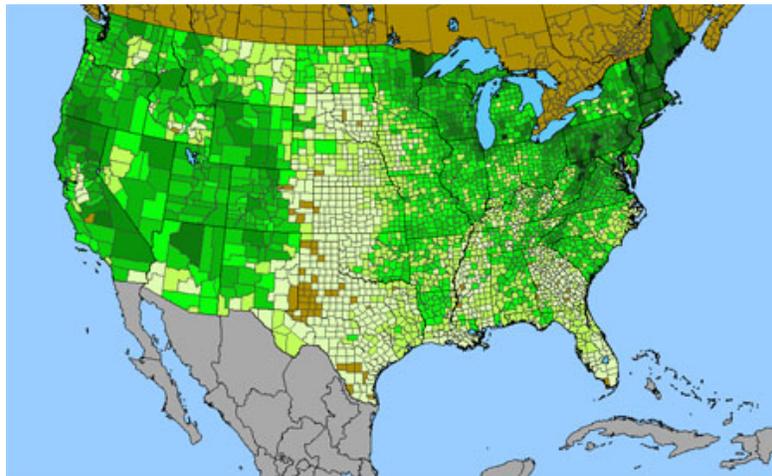
25. Gillenia (Porteranthus)

Tribe Pyreae: 26. Amelanchier, 27. Crataegus, 28. Pyracantha, 29. Sorbus, 30. Pyrus, 31. Rhamphiolepis, 32. Eriobotrya, 33. Pseudocystodonia, 34. Chaenomeles, 35. Photinia (Aronia), 36. Pourthiaea, 37. Aronia, 38. Cydonia, 39. Malus, Cotoneaster

After Weakley (2012b)

work in Alchemilla

ROSACEAE A L de Jussieu 1789 **ROSE FAMILY** *Rosa* (RO-sa) From the classic Latin name, some say whose meaning has been lost, *rosa, rosae*, f, a name for various roses, also term of endearment, a rose bush, or rose oil; through intermediate Greek & Latinate dialects from Greek ῥόδον, ῥοδέα, *rhodon, rhodea*, probably of Iranian origin; akin to the source of Persian *gul*, a rose; akin to Old English *word*, a bush. Similar to Latin *ros, roris* m, dew. About 85-95 genera & 2000-3000 spp of trees, shrubs, & herbs. Cosmopolitan, but mainly boreal & temperate. The Rose family contains several large, complex genera with edible fruit & long ethnobotanical histories. This complexity in North America, may, in part, be due to movement of spp & manipulation of spp by Native Americans. Rose family fruits can be a drupe, an achene (*achenia*), a dry or juicy *etaerio*, or a pome (Wood 1873). Economically an important group of plants in regard to delicious fruits, medicinal products, & ornamental plants. The roots & bark of many spp contain an astringent principle.



Density gradient of native spp for **ROSACEAE** within the US (data 2011). Darkest green (89 spp Coos Co, NH) indicates the highest spp concentration. ©BONAP

✂ *Malus & Prunus* seeds contain cyanogenic glucosides, including the seeds of apples, pears, cherries, plums, peaches, apricots, & almonds. An adult body can tolerate the occasional accidental cherry pit or apple seed or two. Children & pets are more susceptible because of their size. Apple seeds have a tough outer coat that usually allows the seeds to pass through a digestive tract without incident, if the seed is swallowed unchewed & intact. Crushed apple seeds are the source of the organic cyanide in apple cider. (*This edible fruit - poison seed scenario is a common ecological adaptation to promote seed dispersal. Fructivores that chew the poisonous seeds of attractive fruits are soon eliminated from the gene pool.*) If the seeds are crushed while chewing, the toxins are released upon digestion. Symptoms of mild poisoning are headache, dizziness, confusion, anxiety, & vomiting. Larger doses also cause difficult breathing, increased blood pressure & heart rate, & kidney failure, followed by coma, convulsions, & death from respiratory arrest. ALMOND JOY anyone? The toxins in almonds are broken down by roasting.

*Lizzie Borden took an axe
And gave her Rosaceae forty whacks.
And when she saw what she had done,
She gave her Asteraceae forty-one.*

The Rose family nomenclature is going through many changes. The following presents as many of the changes of which we* are aware. Some complex genera will not be thoroughly updated, including *Crataegus* & *Rubus*. Many of these “new” names are based on classifications that were made over 100 years ago that are being re-substantiated by chemical & chromosome studies.

This section could also be called Too Many Hawthorns, or *Rubus ad nauseum*, or The Death of a Thousand Synonyms.

ALPHABETICAL LIST OF PLANT MATERIALS

AGRIMONIA Linnaeus **AGRIMONY, CHURCH STEEPLES, COCKLEBUR, PHILANTHROPS, STICKWORT**
Rosaceae Agrimonia (ag-ri-MOE-nee-a) New Latin from the Latin plant name transliterated by Pliny, a name for a plant similar to the Greek agrimone or a corruption of *argemonia*, or argemone, neither of which is known, doubly misspelled as agrimonia, possibly from Greek ἀργεμον, *argemon*, cataracts, from the medicinal value of *Papaver argemone*; also from Greek *argema*, an eye-disease, because of the plants supposed medicinal value. Alternately from Greek ἀγρός, *agros*, a field, & μόνος, *monos*, alone, the one, a name of dignity for its medicinal qualities.

Hardy perennial herbs (10-15 spp) found chiefly in north temperate regions that have once pinnate compound leaves; raceme of small green/yellow flowers; & fruits are achenes included in the indurated tube of the calyx, with hooked bristles.

The genus has a long European history of folk & medical uses. Fragrant spring leaves were used for spring tea. A sprig under a pillow is said to cause a long lasting, deep sleep until it is removed. It has been used for eye ailments, diarrhea, gall bladder, liver, kidneys, healing slow healing wounds, athlete's foot, skin diseases, coughs, gynecological complaints, & as a gargle for sore throats. Medical properties are anti-inflammatory, antibiotic, & astringent (the roots) all due to tannin. (Readers Digest 1986)

Agrimonia eupatoria Linnaeus ♣ **CHURCH STEEPLES**, aka *AGRIMONE COMMUNE*, **AGRIMONY, EUPATORIA, MEDICAL AGRIMONY, STICKLEWORT**, (*eupatoria* from an old application of *Eupatorium*; historically the specific epithet was capitalized.) ☉ Sow at 20°C (68°F), if no germination in 3-4 wks, move to -4 to +4°C (34-39°F) for 2-4 wks (tchn).



328. *Agrimonia Eupatoria* L.
Agrimony; Y.

Agrimonia eupatoria

1st line drawing Walter Hood Fitch - Illustrations of the British Flora (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing public domain from Hippolyte Coste - Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes, 1901-1906.

Agrimonia gryposepala Wallroth *GA TALL AGRIMONY, aka COCKLEBUR, COMMON AGRIMONY, HOOKED AGRIMONY, TALL HAIRY AGRIMONY, TALL HAIRY GROOVEBUR, (*gryposepalus* -a -um from *grypos*, *gryp-*, curved, hooked, or hook-nosed, & *sepala*, sepal, having hooked sepals) facu+

Habitat: Mesic to dry savannas, disturbed woods & forests. “Our common sp.” (ewf55) In the se USA, mesic forests, thickets, marshes, bogs, wet meadows, & wet forests (w07).

distribution/range:

Culture: ☉Moist cold stratify 30-60 days or dormant seed. 12,757 (gn02) seeds per pound.

Description: Native, erect, herbaceous, perennial, forb, 1.0-5.0' tall; roots; culms 1.5-2.5', stout, with long hairs; leaves once pinnately-divided into 5-9 large leaflets with smaller ones in-between, coarsely toothed, mostly smooth above; inflorescence a spike-like, interrupted cluster (raceme) on a stalk with long, spreading hairs; flowers yellow, 5-merous, 0.25" wide, stalks hairy; dry seed with hooked prickles in a top-shaped cluster; N. key features: Stems with long hairs, long spreading hairs in inflorescence, leaf once pinnate 5-9 large leaflets with smaller ones between, leaves mostly smooth above, fruit with prickles in a top-shaped cluster.

Comments: status: Special concern in Georgia. phenology: Blooms 7,8,9. Seeds are stick tights.

Associates: ethnobotany: Used as medicinal plant by Ojibwa & Mascouten (sm32, 33).



Agrimonia gryposepala

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Agrimonia parviflora Aiton *CT, MA, WI SWAMP AGRIMONY, aka DOTTED AGRIMONY, HARVESTLICE, MANY-FLOWERED GROOVEBUR, SMALL-FLOWERED AGRIMONY, SOUTHERN AGRIMONY, (*parviflorus*, -a -um from Latin *parviflorus*, small flowered, from *parvus*, *parv-*, small, little, insignificant, -i-, & *florus*, *flor-*, from *floreo*, to bloom, to flower) fac+

Habitat: Fens, wet meadows, moist open ground, marshy or boggy. Bogs, moist woods, & thickets. In the se USA, marshes, bottomland forests, & wet pastures (w07). distribution/range:

Culture: Moist cold stratification required or dormant seed. Growth rate rapid. Seedling vigor medium. Vegetative spread rate none. 49,312 to 51,613 (gni), 144,642 (gnhn13) seeds per pound.

cultivation: Anaerobic tolerance low. CaCO₃ tolerance low. Drought tolerance low. Fertility requirement low. Salinity tolerance none. Shade tolerance intermediate. pH 6.0-8.0.

Description: Erect, herbaceous, perennial, native forb, up to 4.0' tall; roots 6" minimum depth; stems 1.5-2.5', occasionally 5.0', stout, densely hairy; leaves once pinnately-divided into 11-23 large leaflets with smaller ones in-between, sharply toothed, glandular below; inflorescence a spike-like, interrupted cluster (raceme) on a finely-hairy stalk; flowers small yellow, 5-merous, on short, erect stalk; dry fruit with hooked prickles in a rounded cluster; N. key features: ①Stems densely hairy, fruits with prickles in a rounded cluster, leaves once pinnate with 11-23 large leaflets & smaller ones in between. ②Lfts numerous, 9-17, crowded, linear-lanceolate; erect calyx (w73).

Comments: status: Special concern in Connecticut & Wisconsin. Endangered in Massachusetts. phenology: Blooms 7,8,9. Wetland restoration. Plant is aromatic, with a pleasant balsamic odor. Seed source remnant wetlands, Green River Lowland, & Rock River Hills, Taylor Twp, Ogle Co.

“Uncommon in moist woods & in the open. A larger plant than the above (*A gryposepala*) with much smaller flowers” (ewf55).

Associates: Fruits are pesky stick tights, dispersed by endozoochory.



Agrimonia parviflora

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Agrimonia pubescens Wallroth DOWNY AGRIMONY, aka GROOVEBUR, HAIRY AGRIMONY, ROADSIDE AGRIMONY, SOFT AGRIMONY, SOFT GROOVEBUR, (*pubescens* becoming hairy, downy, pubescent, with soft downy hair, from Latin *pubescens*, *pubescent*, from *pubesco*, I reach puberty, become pubescent, from *pubes*, youth, men; hair that appears at puberty.)

Habitat: Dry woods, partial sun. “Common in woods & thickets.” (ewf55)

distribution/range:

Culture:

Description: Native, erect, herbaceous, perennial forb, up to 40” tall; roots; stems stout with dense short hairs; leaves once pinnately-divided into 5-13 large leaflets with smaller leaflets in-between, coarsely toothed, velvety below; inflorescence a spike-like, interrupted cluster (raceme) on a stalk with dense, short hairs; flowers yellow, 5-merous, stalked; dry seed with hooked prickles in a bell-shaped cluster; N. key features: Stems with dense short hairs, hooked prickles on fruit in bell shaped cluster, leaves once pinnate into 5-13 large leaflets with smaller leaflets in-between.

Comments: status: phenology: Blooms

Associates:

VHFS: [*Agrimonia mollis* (Torr & Gray) Britt]

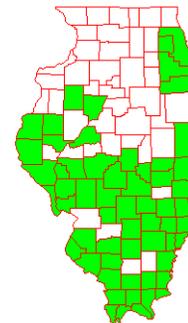


Agrimonia pubescens

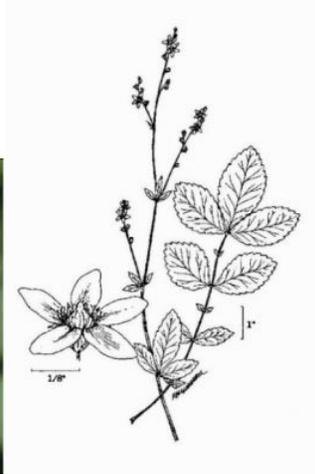
Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Agrimonia rostellata Wallroth BEAKED AGRIMONY, aka BEAKED GROOVEBUR, WOODLAND AGRIMONY, WOODLAND GROOVEBUR, (*rostellatus -a -um* from *rostr-* referring to a beak shape)

“Found in woods about as frequent as *A parviflora*, being much less common than *A gryposepala*. The fruit is round instead of turbinate. Also in Stephenson Co.” (ewf55) distribution/range:



Agrimonia rostellata



Agrimonia rostellata

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Photo Robert H Mohlenbrock USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Illinois map courtesy of ILPIN.

Agrimonia striata Michaux GROOVED AGRIMONIA, aka ROADSIDE AGRIMONY, (*striatus -a -um* striated, striped, marked with fine, longitudinal flutings or groovings, from the past participle of the Latin verb *strio, striare, -, striatus* provide with channels; groove; wrinkle.)

Habitat: Dry to moist woods. distribution/range:

Description: Native, erect, herbaceous, perennial forb, up to 40"+ tall; roots; culms stems stout hairy; leaves; inflorescence a spike-like, interrupted cluster (raceme) on a stalk with dense hairs; flowers yellow, 5-merous, short-stalked, densely crowded; dry seed with hooked prickles in a rounded cluster; N. key features: Stems hairy, fruit prickles in a rounded cluster, leaves once pinnate 7-11 large leaflets with smaller leaflet in between.

Comments: status: phenology: Blooms July to August.

Associates:

VHFS:



Agrimonia striata

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ALCHEMILLA Linnaeus **LADIES' MANTLE** *Rosaceae Alchemilla* from Arabic *al-kimiya*, or *âlkêmelyeh*, in reference to its reputed property that dew from its leaves could transmute base metals to gold (alchemy) or to the fringed leaves of some spp. ① Sow at 18-22°C (64-71°F) for 2-4 wks, move to -6 to -7°C (19-21°F) for 4-6 wks, move to 5-12°C (41-53°F) for germination (tchn).

Alchemilla monticola Opiz ♣ HAIRY LADY'S MANTLE, (*monticolus -a -um* inhabiting or growing in mountains, a mountain-dweller, growing on hills, from Latin *mons*, mountain, & *colo*, I inhabit. Mountain grown, it's the richest kind!)

distribution/range: Introduced perennial forb, rarely escaped.

Introduced, perennial herb; leaves not divided, large, kidney-shaped, lobed, grayish-green; petals none.

VHFS: [*Alchemilla pratensis* auct non FW Schmidt, *A vulgaris* auct non L, *A vulgaris* L var *pastoralis* (Buser) B Boivin, *A xanthochlora* auct non Rothm]



Alchemilla monticola

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image.

AMELANCHIER Medikus 1789 **SERVICEBERRY, SARVIS, SHADBUSH, SHAD-FLOWER, JUNE BERRY, WILD SERVICE, "MAY CHERRY", "CURRANT"** *Rosaceae Amelanchier* (a-me-LAN-kee-er) New Latin, from an old French (*Provençal*) common name for snowy-*Mespilus*, *A ovalis*, *amélanchier* shadbush, shadberry, of *A vulgaris*; or of Celtic origin, akin to Gaulish *avallo* apple, Old Irish *ubull*. Alternately, from the Savoyard name *amelancier*, for the medlar tree; note the root *melan-*, from Latin *mēlinus*, of quinces, & ancient Greek μῆλον, *melon*, apple, quince. A genus of about 20-40 (or 6-33) spp of thornless shrubs & trees of the north temperate zone, leaves not divided, with showy usually racemose white flowers followed by somewhat sweet, edible pomes resembling small apples, pomes 3 to 5-celled, cells partially divided; 2-seeded. The difficulty of *Amelanchier* as a genus is largely due to apomixis, polyploidy, & hybridization.

Fruits are fine fare for our feathered friends. *Amelanchier* is the larval host for *Satyrrium liparops*, the STRIPED HAIRSTREAK BUTTERFLY.

Fruits ripen in early to mid summer. Code B seeds will germinate upon shifting to 70°F after 90 days of cold moist stratification at 40°F, G chemical inhibitors, I seeds require scarification because of an impermeable seed coat, * seeds are hydrophilic, intolerant of dry storage. Fruits are attractive to birds, so harvest as they start to mature. Macerate and rinse clean. Seed from mature fruits may need light scarification. Seed can be immediately sown outside in the fall or stored in a ziplock until cold moist stratified for 90 days. Cutting taken 2 weeks after the flowers fade work well for many species. 2000-4000 ppm KIBA. Stoloniferous species taken with a length of the stolon can be divided in spring before buds swell. (cu02)



Amelanchier in bloom, Lake Michigan dunes, no justice here.



A. florida
Pacific serviceberry

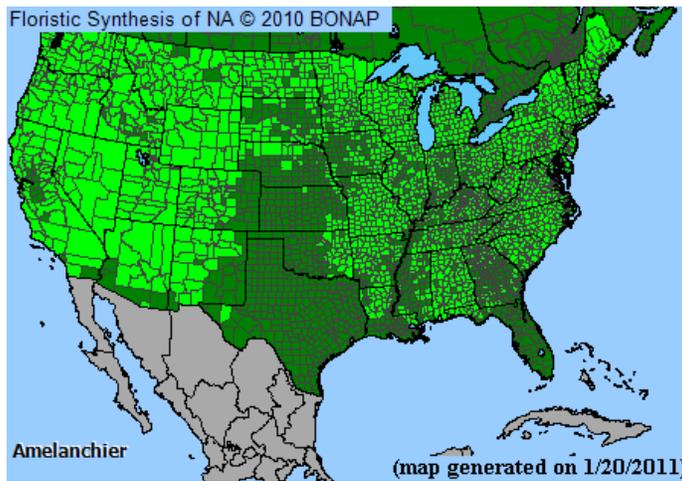
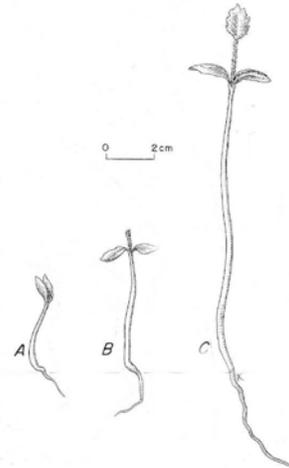


A. laevis
Allegheny serviceberry



A. alnifolia
saskatoon serviceberry

A. florida
Pacific serviceberry



Fruit & seed photos & seedling drawing courtesy of USDA Forest Service USDA-NRCS PLANTS Database. Color seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>. Genus distribution courtesy of BONAP (2010) Note the thinning in the prairie peninsula & the taxonomic vacuum that is Georgia.

Woods (1873) lists the single, variable species, *Amelanchier Canadensis* T&G, the species plus 4 varieties: β *oblongifolia* T&G (*A ovalis* Hook); γ *rotundifolia* T&G (*Pyrus ovalis* Willd); δ *alnifolia* T&G (*Aronia alnifolia* Nutt); ϵ *oligocarpa* T&G. “Fls large, white, in terminal racemes, appearing in early spring, rendering the tree quite conspicuous in the yet naked forest (w73). [Synonym *Pyrus Botryapium* L f]

Amelanchier arborea (Michaux f) Fernald, sometimes as (F Michx) Fernald JUNE BERRY, aka COMMON SERVICE BERRY, DOWNY SHADBUSH, SERVICE BERRY, SHADBLOW SERVICE BERRY, SHADBUSH, *Guzigwa 'kominaga 'wunj*, thorny wood (Ojibwa), (*arboreus -a -um* tree-like, branched, woody, from Latin *arboreus -a -um*, relating to trees; treelike, from *arbor*; *arbo*, *arboris*.)

Habitat: Moist woods & rocky uplands, steep slopes, pine barrens, mesic woods, wooded hillsides, stream banks, swamps, wet woods, dry rocky woods, bluffs, thickets, & slopes. “Dry to moist woods, mesic mixed hardwoods & pine-hardwoods, fields, thickets, roadsides; 0–1000 m” (fna in press.) “About as common as *A laevis*. Usually on streambanks as Kishwaukee River on Perryville road in Mulford woods, the Kinnikinnick Creeks, &c.” (ewf55)
distribution/range:

Culture: ☉ Best planted outdoors in the fall (pm09, 15). 75,008 (jfn04) seeds per pound.

cultivation: Optimum pH 5.4.

Description: Tall, multi-stem, deciduous, native shrub, 6-25', suckers; fall color yellow & gold; early spring blooms, edible black fruit; tolerates medium shade. $N 2n = 34, 68$.

Comments: status: phenology: Blooms April to mid-May. Berries ripe July to August.

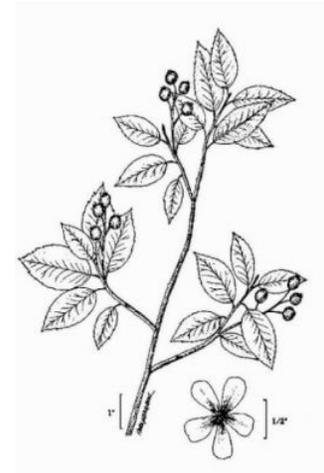
Associates: Upland game birds eat fruit & buds. Songbirds eat fruit. Aquatic furbearers eat fruit, bark, & twigs. Rabbits may girdle shoots in winter, & if snow is deep, they will eat the tops. Terrestrial furbearers, small mammals, & deer eat fruit. Used by chipmunks, squirrels, & black bear.

ethnobotany: “Berries” are available in July to August. Pomes used for food by Ojibwa, Menominee, & Iroquois. Dried for winter use, an important food (Gilmore 1933, sm23, Waugh 1916). Used as medicinal plant by Ojibwa for dysentery & diseases of women (den28).

VHFS: Formerly *Amelanchier canadensis* (L) Medic, includes *A oblongifolia* [*Amelanchier arborea* (F Michx) Fernald var *arborea*, *A oblongifolia* (Torr & Gray) M Roem, *Mespilus arborea* F Michx]

This sp may be a parent to the ‘hybrid’ spp *A interior*.

Some nurseries separate *A arborea* DOWNY SERVICE BERRY from *A canadensis* SHADBLOW, (*canadensis -is* -e (kan-a-DEN-sis) of Canada), described as 6-7', coarser branches, showy white flowers, 0.5” blue fruit, glossy deep green foliage, yellow-orange fall color (rrn97).

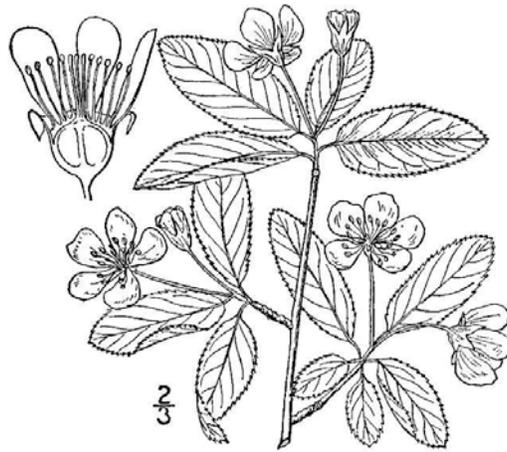


Amelanchier arborea/A canadensis

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Amelanchier arborea (F Michx) Fernald X **A laevis** Wiegand

Amelanchier bartramiana (Tausch) MJ Roemer *MA, PA BARTRAM'S JUNE BERRY, aka BARTRAM'S SHADBUSH, MOUNTAIN SERVICE BERRY, OBLONG-FRUIT SERVICE BERRY, OBLONGFRUIT SERVICE BERRY, (*bartramianus -a -um* William Bartram (1739-1823), early botanist, writer, & artist of the southeastern U.S)
distribution/range: Native north of our area.
Threatened in Massachusetts. Endangered in Pennsylvania.
VHFS: [*Pyrus bartramiana* Tausch]



Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society.

Amelanchier bartramiana (Tausch) M.J. Roemer, OBLONG-FRUITED SERVICE BERRY, DuPage Co.

Amelanchier canadensis

Best planted outdoors in the fall (pm15).

Amelanchier humilis Wiegand *IN, PA LOW SHADBUSH, aka LOW SERVICE BERRY, RUNNING SERVICE BERRY (*humilis -is -e* low growing, of low growth, dwarf, from Latin for on or near the ground, low, shallow; humble; submissive.)

Habitat: Rocky, sandy soil. distribution/range:

Culture: Transplants easily, B&B.

Description: Deciduous, native shrub to 6', colonial, good form; flowers perfect, showy; fruits are fleshy pomes, pink, turning purple black, 0.25" diameter.

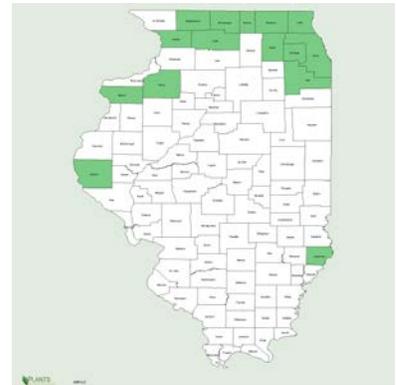
Endangered in Indiana & Pennsylvania.

Associates: Insect pollinated, probably similar to *A arborea*, which see.

Attracts songbirds, small mammals, & game mammals. High food value in early summer. Pests include several rusts, fireblight, & minor insect problems.

VHFS: Synonym of *A sanguinea*. [*Amelanchier humilis* Wiegand var *campestris* EL Nielsen, *A humilis* Wiegand var *compacta* EL Nielsen, *A humilis* Wiegand var *exserrata* EL Nielsen, *A mucronata* EL Nielsen, *A stolonifera* auct non Wiegand. pp]

Illinois map courtesy plants.usda.gov.



Amelanchier huronensis Wiegand JUNE BERRY,

Habitat: Open woods, cliffs, & shores. distribution/range: A more boreal sp.

Associates: ethnobotany: 'Berries' (pomes) available in July to August. Used as food by Menominee, dried for winter use. (sm23) Other JUNE BERRIES were probably used for food as well. *A stolonifera* was found growing at the Juntenen site.

VHFS: Also a synonym of *A sanguinea*.

Amelanchier interior EL Nielsen *IL INLAND JUNE BERRY, aka *AMÉLANCHIER DE L'INTÉRIEUR*, INLAND SERVICEBERRY, PACIFIC SERVICEBERRY, SHADBUSH, WIEGAND'S SHADBUSH, (*interior* Latin interior, inner, for an inland provenance)

Habitat: "Dry woods, bluffs above rivers, rocky areas & slopes, banks of streams, fields, thickets, & sandy areas; less often in wetlands; 0–300 m." (fna in press) "Rare", the only known station in the co being in a bog in the northern part of Shirland Twp. It is also known to occur in Lake Co." (ewf55)

distribution/range:

Culture: propagation:

Description: Native shrub or small tree; 12-36'; attractive red? fruit; N 2n = 68. key features:

Comments: status: Endangered in Illinois. phenology: Blooms May - June. Fruits ripe July-August.

Associates: Fruit attracts birds.

ethnobotany: Fruits are edible, raw or cooked.

VHFS: [*Amelanchier wiegandii* Nielsen]

http://sbe.umaine.edu/amelanchier/?page_id=163

Illinois map courtesy plants.usda.gov.



Amelanchier laevis (Michaux f) Fernald SMOOTH SERVICEBERRY, aka ALLEGHENY SERVICEBERRY, ALLEGHENY SHADBLOW, JUNE BERRY, SERVICE BERRY, (*laevis -is -e* (LIE-vis) smooth (as in not being rough), or beardless & delicate, soft, referring to the leaves)

Habitat: Dry to moist thickets, borders of woods, margins of swamps, & clearings. Lake Michigan high dunes, bogs; wooded slopes, borders of dry to moist woods. Forests.

distribution/range:

Culture: 60 days cold moist stratification, or best planted outdoors in the fall (pm15). Transplants easily, B&B.

Description: Native deciduous shrub, to 6' (19'), good form, "weeping" fine branches, young branches & buds are smooth & reddish brown, older bark graying; leaves are bronze colored as they unfold, orange-red fall color; numerous white flowers before leaves, flowers perfect, showy, fragrant; fruits are fleshy pomes, pinkish red, turning purplish black, 0.25" diameter;

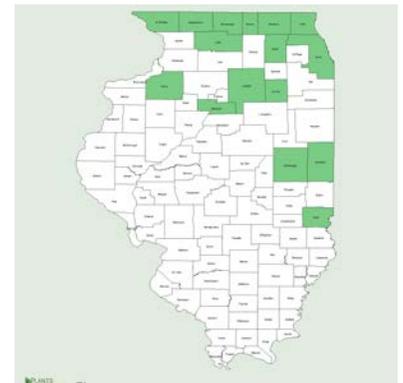
Comments: status: phenology: Blooms April-May. One of first small understory trees to bloom, excellent early spring color. 'Berries' available June to August. The fruits look like tiny apples. Snacking on a few fruits in early summer is reason enough to plant a few of this shrub. Landscaping, shady

borders, shady specimen plantings, east sides of wind brakes, moonlight gardens, & wildlife plantings. "Usually on streambanks as Hall, Kent, & the Kinnikinnick Creeks, Kishwaukee River at Mulford woods & the woods east of Roscoe. Commonly taller than *A arborea*. There are much larger trees in the sandstone ravines west of Oregon in Ogle Co than any we have seen in Winnebago, Stephenson, or Jo Daviess cos." (ewf55)

Associates: Insect pollinated, probably similar to *A arborea*. Attracts songbirds, small mammals, & game mammals. Fruits have a high food value in early summer, & are eagerly sought out by birds. Subject to several rusts, fireblight, & minor insect problems.

ethnobotany: 'Berries' available June to August. Said to be tasty. Pomes used for food by Ojibwa & Menominee, dried for winter use (sm23, 32). Bark used as medicinal plant by Ojibwa (sm32).

VHFS: Sometimes seen as *Amelanchier laevis* Wiegand.





Amelanchier laevis

Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Illinois map courtesy plants.usda.gov.

Amelanchier X neglecta Eggl ex GN Jones (pro sp) [*bartramiana* × *laevis*] SERVICEBERRY, (*neglectus* -a -um neglected, disregard, overlooked.)

distribution/range: Considered introduced & naturalized in Wisconsin.

VHFS: [*Amelanchier bartramiana* (Tausch) M Roem X *A laevis* Wiegand]

Amelanchier sanguinea (Pursh) Augustine de Candolle ROUND-LEAVED SERVICEBERRY, aka JUNE BERRY, LOW SHADBLOW, NEW ENGLAND SERVICEBERRY, SAND SERVICEBERRY, (*sanguineus* -a -um bloody, blood-red)

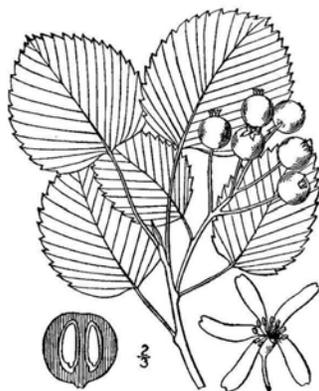
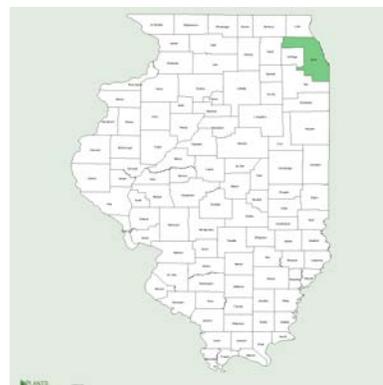
Habitat: Open woods, rocky slopes, & riverbanks. distribution/range: Rare as a wild plant in Illinois, known from Cook Co.

Culture: 60 days cold moist stratification, or best planted outdoors in the fall (pm15).

Description: Multi-stemmed, deciduous, native shrub, to 15'; leaves yellow fall color; flowers several weeks later than other *Amelanchier* spp.

Associates: ethnobotany: “Berries” available in late July & August. Used as food by Pottawatomie & other Wisconsin tribes (sm33), dried for winter use.

VHFS: [*Amelanchier humilis* Wiegand, *A humilis* Wiegand var *campestris* Nielsen, *A humilis* Wiegand var *compacta* Nielsen, *A humilis* Wiegand var *exserrata* Nielsen, *A humilis* Wiegand var *humilis*, *A humilis* Wiegand var *typica* Nielsen, *A huronensis* Wiegand, *Pyrus sanguinea* Pursh]



Amelanchier sanguinea

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

Amelanchier spicata (Lamarck) K Koch DWARF SERVICEBERRY, (*spicatus -a -um* (spee-KAH-tus) with flowers in a spike, spicate, bearing a spike, from Latin *spicatus*, past participle, *spico*, I grow ears or spikes, like corn or wheat)

distribution/range: “Not common here & in Ogle Co. We have also found it in Boone, Stephenson & Carroll Cos. There is such a variation in floral characters, growth habit, & of leaves in size, shape & serration as to suggest that we have here, & in Ogle Co, the two spp described in Gray 8th Ed as *A humulis* Wieg & *A stolonifera* Wieg. Illustrative material is in the Herbarium of the Illinois State Museum.” (ewf55)

VHFS: [*Amelanchier mucronata* Nielsen, *A stolonifera* Wieg, *Crataegus spicata* Lam]

Amelanchier stolonifera RUNNING SERVICEBERRY,

distribution/range:

Ⓞ60 days cold moist stratification, or best planted outdoors in the fall. (pm09, 15)



Amelanchier stolonifera

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

Amelanchier spp JUNE BERRY, aka SERVICEBERRY, SHADBUSH,

Associates: Ethnobotany: Fruit used for food. Stalks used to make arrows by Ojibwa “in very old times” (den29).

ARGENTINA Hill See *Potentilla* From Latin in reference to *Argentinus*, son of *Aesculanus*, the god of silver money, for the silvery white pubescence on the underside of the leaf. Part of a broadly defined *Potentilla*. *Argentina* is maintained by Mohlenbrock (2014) & Weakley (2012b).

Argentina anserina (L) Rydbg see *Potentilla anserina* Linnaeus

Creeping perennial herb, leaves pinnately divided into unequal number of leaflets, silvery, toothed, flowers yellow, 5-merous. distribution/range: Found on sandy beaches & other areas near Lake Michigan.

ARONIA Medikus 1789 (*or Medicus?*) **CHOKEBERRY** *Rosaceae Aronia* (a-RO-nee-a) from the Greek *aria*, the name for *Sorbus aria*, the Whitebeam tree, or from Greek *arōnia*, the medlar tree, or modified from *Aria*, beam-tree of Europe. A small genus of up to 65 spp of east Asia & eastern North America (3 spp) south into Central America, of attractive suckering shrubs or small trees, thornless, leaves entire, with terminal compound cymes (not racemes) of white or pink flowers in April to May, followed by black or red berry-like pomes (miniature apples). Fruit included in the fleshy calyx; testa cartilaginous. Seeds are small, dark, & comma-shaped.

Taxonomy of CHOKEBERRIES is almost hopeless, even if you get past the genus name. Some architects are, starting as of July 2006, calling Midwestern CHOKEBERRIES *Photinia* in job specifications. *Photinia* may be the genus name of choice in the future, but I’m sure someone probably said the same thing about *Pyrus*, *Aronia*, & *Sorbus*. *Aronia* has been considered part of *Sorbus* & *Pyrus* in the past. Robertson et al (1991) placed *Aronia* in *Photinia*. Kalkman in Kubitzki (2004) notes they should be combined, but points out that *Aronia* is the older name & is correct for the combined genus (w07, 11). Reznicek et al (2011) & Weakley (2012b) maintain *Aronia*. Genus is placed in *Photinia* by Mohlenbrock (2014). [*Photinia* Lindl]

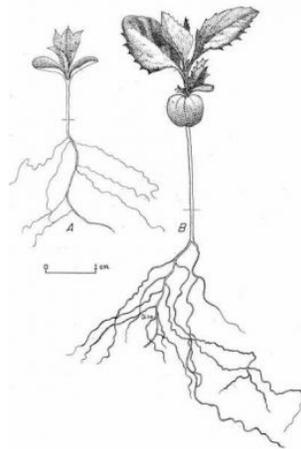
Uncopyrighted Draught

If *Photinia* is accepted, it is a genus of about 65 spp of east Asia & eastern North America, with 3 native spp & 5 introduced spp in our flora.

Aronia is distinguished from other shrubs by several small black to purplish glands or trichomes on the upper surface of the midrib, usually near the base of the leaf. Some *Malus* may have similar but reddish trichomes. (sw94, w07)

Usually sets high percent sound seed, up to five seeds per fruit. Remove seeds from fruit (macerate) before planting. C3. Rabbits will damage plants in winter.

Collect ripened fruits in the fall and mash & clean. Dried fruits can also be collected in winter and seeds extracted. Winter collected seeds require less cold moist treatment than winter harvested fruits. (*Note fruits may persist until spring or be stripped in the fall migrations.*) Code B seeds will germinate upon shifting to 70°F after 90 days of cold moist stratification at 40°F, and G chemical inhibitors. Cuttings in early summer dipped in a moderate 4000 ppm KIBA root well. (cu02).



Aronia sp.

Seedling drawing courtesy of USDA Forest Service, USDA-NRCS PLANTS Database.

Add Photinia synonyms.

Aronia arbutifolia (Linnaeus) Persoon [alternately this is *Photinia pyrifolia* (Lam) KR Robertson & Phipps] RED CHOKE BERRY, (*arbutifolius -a -m* (ar-bewt-I-FO-lee-us) arbutus-leaved, with leaves like the STRAWBERRY TREE, *Arbutus*, from Latin *arbutus* & *folium*.)

Habitat: distribution/range: Not in Illinois. Native to the eastern & southern US.

Culture: ①Cold moist stratification is required. Macerated seed cold moist stratified at 40°F in peat moss gave 8% germination (Davis & Kujawski 2001). ②Winter collected fruits (January) may be planted immediately, fruit has been naturally stratified. Growth rate moderate. Seedling vigor low. Vegetative spread rate moderate. Spreads slowly from seed. 256,000 (usda) seeds per pound.

cultivation: Tolerant of medium & fine textured soils. Anaerobic tolerance medium. CaCO₃ tolerance low. Drought tolerance low. Fertility requirement medium. Salinity tolerance low. Shade intolerant. pH 5.5-7.5.

asexual propagation: July softwood cuttings root readily with 4000 ppm. IBA solution & mist. Root cuttings in December-January work well. Softwood cuttings of “*Brilliantissima*” in June, 4000 ppm IBA, & mist in peat/perlite mix root 80%.

Description: Erect, deciduous, native shrub, to 10', fine textures branches & foliage; roots 20" minimum depth; bark; leaves red fall color; clusters of white flowers, 5-merous; fruits red, persisting through winter.

Comments: status: phenology: Blooms mid spring.

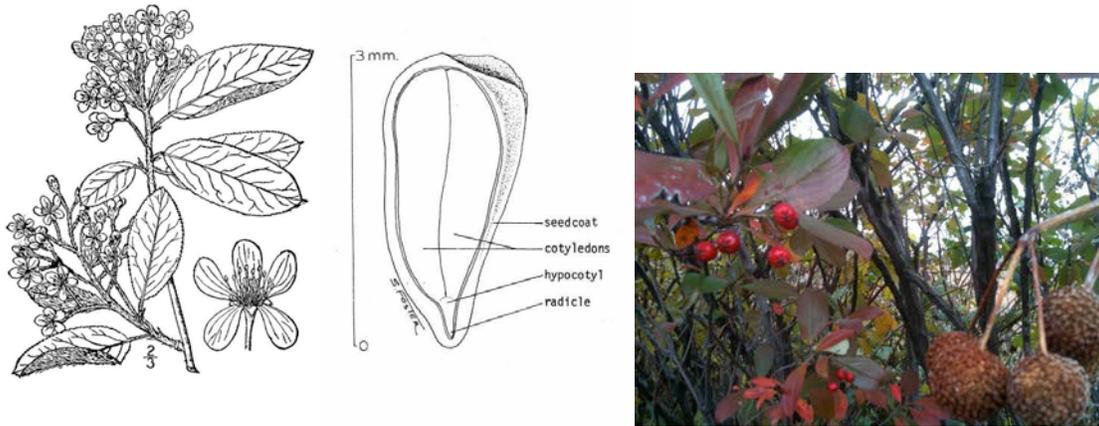
Associates: Minor food value to large mammals. Low food value to upland birds.

VHFS: “*Brilliantissima*” is a selection with large fruit. [*Aronia arbutifolia* (L) Pers, *A arbutifolia* (L) Pers var *brilliantissima* hort, *A arbutifolia* (L) Pers var *glabra* Ell, *Pyrus arbutifolia* (L) L f, *P arbutifolia* (L) L f var *glabra* Cronq, *Sorbus arbutifolia* (L) Heynh] Woods (1873) as *P arbutifolia* L f.

KM Davis & JL Kujawski, 2001. Propagation protocol for vegetative production of container *Aronia arbutifolia* plants (1 gallon container), Beltsville - National Plant Materials Center, Beltsville, Maryland. In: Native

Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 19 March 2007). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

MICHIGAN FLORA ONLINE. AA Reznicek, EG Voss, & BS Walters. February 2011. University of Michigan Web September 8, 2012. <http://michiganflora.net/species.aspx?id=2427>.



Aronia arbutifolia, nursery hedgerow, with *C. occidentalis*

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed drawing courtesy of USDA Forest Service USDA-NRCS PLANTS Database. Seed drawing courtesy of USDA Forest Service USDA-NRCS PLANTS Database.

***Aronia floribunda* (Lindl) Spach** [new nomenclature this will be *Photinia floribunda* (Lindl) Robertson & Phipps] PURPLE CHOKEBERRY,

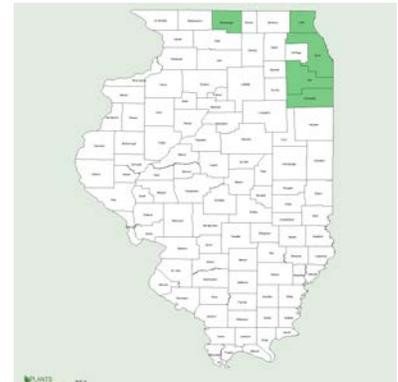
Habitat: Peaty, marshy habitats. distribution/range: Rare in Illinois, Cook, Kankakee, Lake, Will, & Winnebago cos.

Culture:

Description: Erect, deciduous, native shrub, fine textured branches & foliage, to 10'; bark; roots minimum root depth; leaves red fall color; flowers clusters of white, in a dichasium (a cymose inflorescence that produces two main axes), perfect, 5-merous; fruits red, persisting through winter; N. key features: "Glandular-serrate leaves with a row of slender glands along the midvein on the upperside; compound clusters of small flowers; lower leaf surface sometimes pubescent; fruit purple to nearly black." (Ilpin)

"Found in ?

VHFS: In Britton & Brown (1913), this is *Aronia atropurpurea*. [*Aronia arbutifolia* (L) Pers var *atropurpurea* (Britt) Seymour, *A atropurpurea* Britt, *A floribunda* (Lindl) Spach, *A prunifolia* (Marsh) Rehd, *Pyrus arbutifolia* (L) L f var *atropurpurea* (Britt) BL Robins, *P floribunda* Lindl, *Sorbus arbutifolia* (L) Heynh var *atropurpurea* (Britt) Schneid] "Brilliantissima" is a selection with large fruit.



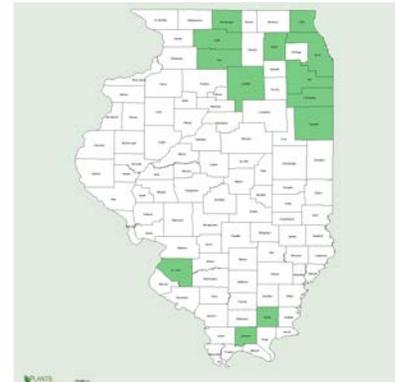
Aronia floribunda

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Illinois map courtesy plants.usda.gov.

Aronia melanocarpa (Michaux) Elliott *IA BLACK CHOKEBERRY, (*melanocarpus -a -um* (me-la-no-KAR-pus) with black fruits or dark fruits, from Greek μέλας, *melas*, black, & καρπός, *karpos*, fruit.) facw-

Habitat: Dry prairies, dry savanna, dry sandstone cliffs & ledges, swamps & low grounds, edges of bogs, peaty flatwoods, moist sandy woods, edges of bogs, & moist woods. Forests. “Found in boggy places in the sand area in the north part of the co & also in a wet place in the sand area north of Rock Cut.” (ewf55) distribution/range:

Culture: ①Macerate, then fall plant or moist cold stratify 90 days. ②100 days cold moist stratification (pm15). ③Requires prechilling at 2-5° C for > 90 days. ④Germination tests use warm moist stratification seed for 30 days at 20°/30°C alternating temperatures or constant 20°C. ⑤Nursery practice is to mash whole fruits & stratify the mass. Recommended planting depth 1.8 cm, germination epigeal (yy92). ⑥Maceration recommended with fall planting or 60 - 90 days moist cold stratification (dh87). ⑦Cold moist stratify 90 days @ 41°F. (hk83). 197,006 (gna06), 276,000 seeds per pound.



asexual propagation: A Russian source says softwood cuttings in May-June in well-ventilated frames root well. Hardwood cuttings with 2-year-old wood attached are said to root well.

cultivation: Transplants easily. Tolerant of wet soils & dry, shallow, sandy soils. Drought, salt, & pollution tolerant.

bottom line: Natural area seedlings must be dormant seeded. Drill dried ‘berries’ or surface sow cleaned seed. Germ 4.0%. Dorm 58%. Test 46 days.**

Description: Upright, deciduous, native shrub, 1.5-4.0’ (to 12’ in some parts of its range), suckering profusely; leaves red fall color; clusters of white flowers in a dichasium (a cymose inflorescence that produces two main axes), perfect, 5-merous; fruits are fleshy purplish-black pomes, 0.38” diameter, the early fall fruit color is interesting; key features: “Leaves glabrous beneath; leaf teeth with terminal gland; fruit black; compound clusters of small flowers” (Ilpin).

Reznicek et al (2011) note the completely glabrous plants have been recognized as *A melanocarpa*, but it is impossible to separate consistently from the somewhat pubescent *A prunifolia*.

Comments: status: phenology: Blooms 4,5,6. C3. BLACK CHOKEBERRY ripens from August to November & yields a good crop every second year. Landscaping, with excellent spring flowers followed by pendulous clusters of black pomes, & glossy green leaves with good fall color; woody borders, screens, naturalistic plantings, & pollinator gardens. Seed source Kane Co. This is known from sandstone cliffs, & not as a wetland plant in our NW Illinois experience, but virtually all of this plant’s former wetland habitat in NW Illinois is now corn & soybeans.

“Roughs” along “the margins of ‘sloughs,’ and along the courses of small streams.” *Aronia melanocarpa* (Michx.) Ell. (Short 1845).

Associates: Pollinator friendly. Pollinated by insects, especially bees. Attracts songbirds & upland game birds. Upland game birds (esp grouse) feed on fruit & buds, songbirds eat fruit. Small mammals eat fruit. Squirrels, rabbits, & fox eat fruit & foliage. Rabbits damage stems in winter. Deer browse twigs, foliage, & fruit. (Anon 1981) High wildlife value in early fall. Several rusts, fire blight, minor insect pests, rarely serious. Walnut tolerant.

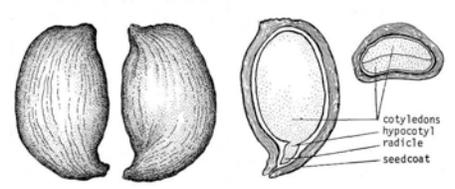
The ripe pomes in the plantings outside our home are typically stripped by mid fall. The 2011 fruit remained on the bush through the winter & through the blooming period of 2012. 2014 fruit is on the bush into February 2015.

ethnobotany: Berries (pomes) available in August to October. Pomes used as medicinal beverage by Pottawatomie (sm33). Pottawatomie also used the pomes for food (sm33).

VHFS: [*Aronia arbutifolia* (L) Elliott var *nigra* (Willd) F Seym, *A nigra* (Willd) Koehne, *Photinia melanocarpa* (Michx) KR Robertson & JB Phipps, *Pyrus arbutifolia* (L) f Pers var *nigra* Willd, *P melanocarpa* (Michaux) Willdenow, *Sorbus melanocarpa* (Michx) Heynh.]

Var *elata* (or cv *elata*) GLOSSY BLACK CHOKEBERRY, dense colonial shrub wet & dry sites, glossy foliage, bright red fall color; white flower clusters; glossy red pomes persisting into winter.

Var (cv) *grandifolia*, APPLELEAF CHOKEBERRY, larger variety, deep green leaves, fall color yellow-orange-red; 4-6" clusters of white flowers, then 0.5" black pomes.





Aronia melanocarpa, sandstone outcrops, Nachusa Grasslands, & cultivated specimens Tampico
 1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Seed drawing courtesy of USDA Forest Service USDA-NRCS PLANTS Database. Illinois map courtesy plants.usda.gov.

Aronia X prunifolia (Marshall) Rehder (pro sp) BLACK CHOKECHERRY, aka HYBRID CHOKEBERRY,
distribution/range: Weakley (2007) notes that this sp is of hybrid origin but reproduces successfully & exists in populations independent of its parents. Somewhat pubescent

Culture: *Aronia prunifolia* 2 months cold stratification, less than *A arbutifolia*.

Comments: “Found only in a shallow bog in Rockton Twp where it is in close association with the preceding (*A melanocarpa*) but there is no intergrading. This grows taller, blooms earlier & the pubescence is very definite.” (ewf55 as *A prunifolia* (Marsh) Rehd)

Reznicek et al (2011) note the completely glabrous plants have been recognized as *A melanocarpa*, but it is impossible to separate consistently from the somewhat pubescent *A prunifolia*.

VHFS: Plants.usda.gov lumps this into *Photinia floribunda* (Lindl) KR Robertson & Phipps. *Aronia arbutifolia* (L) Pers X *A melanocarpa* (Michx) Elliott

[*Aronia arbutifolia* (L) Elliott var *atropurpurea* (Britton) F Seym, *A atropurpurea* Britton, *A floribunda* (Lindl) Spach, *A prunifolia* (Marshall) Rehder, *Photinia floribunda* (Lindl) KR Robertson & JB Phipps, *Pyrus arbutifolia* (L) f Pers var *atropurpurea* (Britton) BL Rob, *P floribunda* Lindl, *Sorbus arbutifolia* (L) Heynh var *atropurpurea* (Britton) CK Schneid.]

Illinois map courtesy of ILPIN.



Aronia prunifolia

ARUNCUS Linnaeus 1758 **GOAT’S BEARD, BRIDE’S FEATHER** *Rosaceae* Aruncus (a-RUN-kus or air-UN-kiss) New Latin, from Latin, beard of a goat, from (assumed) Doric Greek *aryngos*; akin to Attic Greek *eryngos*, both from the Indo-European root **ue(s)r*, spring; alternately from Greek, originally a name used by Pliny the Elder, early Roman naturalist & author, but meaning is said to be lost. *Aruncus* was also used as the specific epithet, and was historically capitalized. Small genus of perennial herbs (1-2 spp) found in North America, Europe, Korea, & Japan, having compound leaves 2-several times 3-parted, & a showy branched cluster of tiny whitish-green flowers. Herbaceous perennial often called SPIRAEA, historically contained within *Spiraea*, & similar in appearance to *Astilbe biternata*.

Aruncus dioicus (Walter) Fernald var **pubescens** (Rydberg) Fernald GOATS BEARD, aka MIDWEST GOAT'S-BEARD, (*dioicus* -a -um (dee-o-EE-kus) two houses, dioecious, indicating that the male & female flowers are found on different plants; *pubescens*, becoming hairy, from Latin *pubescens*, *pubescent*, from *pubesco*, to reach puberty, become pubescent.) facu

Habitat: Mesic woodlands, with moisture-retaining soil. distribution/range: Northern Illinois is near the north limit of this sp eastern distribution.

Culture: ① Dormant seed or moist cold stratify, surface sow, tiny seedlings, seeds require light or GA3. Moderately difficult from seed. Code B, Code H (cu00) ② Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn). 1,314,000 seeds per pound.

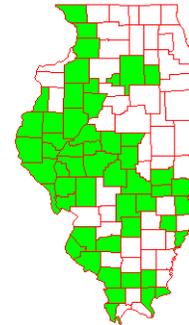
Description: Erect, herbaceous, perennial, native forb, 3.0-4.0'; attractive compound leaves similar to *Astilbe*; creamy white flowers, with male & female flowers on separate plants.

Comments: status: phenology: Blooms 5,6,7. Seeds mature early fall. Landscaping, shade gardens, open woodland, & savanna plantings. The flowers are at their peak for about one week in June. Flowers are dioecious, male & female are on separate plants. The yellow anthers of the male flower make it a bit showier, but the green-gold developing seed heads provide fall interest. "Plant more delicate than *Astilbe*" (w73).

Associates: Excellent nectar plants.

VHFS: At one time *Spiraea Aruncus* L (w73). *A dioicus* will hybridize with the Korean *A aethusifolius*. *A dioicus* (Walter) Fern var *acuminatus* (Rydbg) Rydbg ex Hara, a west coast variety, is an escape in two Wisconsin cos.

According to Robertson (1974), the varieties *dioicus* & *pubescens* intergrade completely. **varieties according to m14.**



Aruncus dioicus



Aruncus dioicus

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy of ILPIN.

CHAENOMELES Lindley 1821 **FLOWERING QUINCE** *Rosaceae Chaenomeles* from Greek for open-nose in one source, more likely split fruit, from Greek *chaen*, yawn, gape; open, split, & *-meles*, referring to an apple, or any fruit. Another source translates this as “wood-melon”. A small genus of 3-4 spp of shrubs or small trees with entire leaves & flowers orange red of montane temperate east Asia.

***Chaenomeles japonica* (Thunberg) Lindley ex Spach**

Chaenomeles speciosa (Sweet) Nakai ♣ **JAPANESE FLOWERING QUINCE**, aka **FLOWERING QUINCE**, (*speciosus* -a -um (spee-kee-O-sus) showy, spectacular, good-looking, from Latin *speciosus*, adjective, beautiful, handsome, good-looking; attractive, appealing, presentable, respectable, imposing, spectacular.)

Habitat: distribution/range: Introduced shrub, persistent & spreading. Native of China.

Near our nursery, we have an old IDOT landscape planting of FLOWERING QUINCE persisting in mowed turf, which flowers every spring at about 2-3 inches tall. A perfectly accidental bonsai. *C japonica* is C3.

VHFS: [*Chaenomeles lagenaria* (Loisel) Koidz.]



Chaenomeles speciosa flowering in mowed turf, with *Antennaria*

COMARUM see *Potentilla Rosaceae Comarum* Greek name of the *Arbutus* having a similar fruit, from Greek κόμαρος, *komaros*, the strawberry tree, which this plant resembles. Fruits are achenes, smooth, crowded upon the enlarged, ovate, spongy persistent receptacle. Part of a broadly defined *Potentilla*. See *Potentilla palustris* (Linnaeus) Scop, which is placed in this genus by Mohlenbrock (2014), formerly *Comarum palustre* Linnaeus.

Sprawling, herbaceous, perennial, native forb, 8"-24" tall, emergent, semi-aquatic; leaves long stalked, odd-pinnately divided, toothed most with 5-7 leaflets; flower dark maroon; found growing in bogs.

COTONEASTER Medik **COTONEASTER** *Rosaceae Cotoneaster* New Latin, from Latin *cotoneum*, *cydoneum*, or *cotonea*, *cotonia*, quince, & New Latin *-aster*, a reference to an inferior or wild sort or type, or an incomplete resemblance, meaning quincelike, a possible reference to the leaves or the small, seedy fruit. Palearctic genus of 70-300 spp of shrubs & trees, (apomictic micro-spp), natives of northern Europe & the Himalayan mountains, with one rare native of England. Related to *Crataegus*, *Pyracantha*, *Photinia*, & *Sorbus*. Widely used in landscaping. Rarely naturalizing shrubs, leaves entire, oval, & fruit a dark “berry.” Weakley (2012) places this genus in *Pyracantha* MJ Roemer. *Cotoneaster* has been treated grammatically masculine & feminine.

Larval hosts for moths, butterfly & bee nectar source, & fruits are eaten by blackbirds & other thrushes.



update species, add Pyracantha equivalents.

Cotoneaster divaricatus Rehder & EH Wilson ♣ SPREADING COTONEASTER, (*divaricatus -a -um* widely divergent, spreading, spread asunder, divergent.)

distribution/range: Established in ne Illinois.

Introduced escaped perennial shrub. Rabbits may devour the small stems in winter. Release the malemutes!

Cotoneaster lucidus Schlt. SHINING COTONEASTER, (*lucidus -a -um* from Latin lucid, bright, shining, clear.)

distribution/range: Established in ne Illinois.

CRATAEGUS Linnaeus 1753 **HAWTHORN, HAW, REDHAW, THORNAPPLE** *Rosaceae Crataegus* (kra-TIE-gus) from the Greek κράτος, *kratos*, strength & firmness for the hard wood, also in reference to *crataeg-*, Greek for thorn, for the many thorny spp. A genus of 100-500 spp of deciduous shrubs & small trees of north temperate & Central America, primarily in eastern North America. About 25 to 50+ spp grow in upper Great Lakes region. Fruit is a fleshy pome, containing 1 to 5 bony, 1-seeded carpels, crowned at the summit by the persistent calyx & disk. *Crataegus* is the larval host for the Striped Hairstreak butterfly. Possums & squirrels eat the fruits. God must love *Crataegus*, for he made so many of them.

Tree or shrub; usually thorny; leaves simple, often lobed; flowers corymbose; fruit small pome (drupe in one source).

“Our doubtful specimens were examined & named by Dr EJ Palmer. We have made no effort to collect hybrids of which there are doubtless many.” (ewf55)



Crataegus sp

***Crataegus* spp** HAWTHORN, aka THORNAPPLE, RED HAW, *Mine'saga'wunj*, having fruit & also spikes, (Ojibwa)

Habitat: Thickets, rocky ground, stream banks, open woods, open ground, & borders of woods.

Associates: ethnobotany: Fruits available in September & October. Used for food by Ojibwa, Pottawatomie, Sauk-Fox, & Iroquois (sm28, 32, 33, Waugh 1916). Root, fruit, & bark used as medicinal plant by Ojibwa (Gilmore 1933, sm32). Densmore (1928) lists as Ojibwa medicine for women's diseases. Thorns gathered in summer for sewing buckskin with sinew by Ojibwa (den29, sm32). Bark included in hunting medicine smoked to attract deer by Ojibwa (sm32)

Crataegus acutiserrata Kruschke (*acutiserratus* -a -um acutely serrate, sharp pointed, saw-like, serrated, saw toothed.)

Rare shrub in Wisconsin.

Crataegus anomala Sarg ANOMALOUS HAWTHORN, (*anomalus*-a -um anomalous, unusual, abnormal, out of the ordinary, irregular, deviating from the rule, unusual in relation to related plant spp.)

Crataegus apiomorpha Sarg FORT SHERIDAN HAWTHORN, (*apiomorphus* -a -um bee-shaped, from *apis*, bee, & *morphe*, form, shape, figure, appearance, beauty, grace.)

VHFS: [*Crataegus apiomorpha* Sarg var *apiomorpha*, *C apiomorpha* Sarg var *apiomorpha* f *paucispina* (Sarg) Kruschke, *C apiomorpha* Sarg var *cyanophylla* (Sarg) Kruschke, *C merita* Sarg, *C vittata* Ashe]

C arnoldiana most ornamental of the American thorns.

Crataegus beata Sarg DUNBAR'S HAWTHORN, (*beatus* -a -um from *beo* I bless, gladden to bless, gladden.)
Rare in Wisconsin.



Crataegus beata

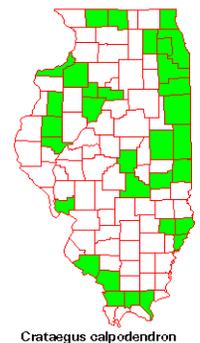
Crataegus calpodendron (Ehrh) Medikus SUGAR HAWTHORNE, aka PEAR HAWTHORNE, (*calpodendron* urn-tree, referring to the shape of the fruit, Greek *καλπις*, *kalpis*, an urn, pitcher, & *δένδρον*, *dendron*, tree.)

“Not uncommon. It is found in thickets & borders of woods, seldom in the open.

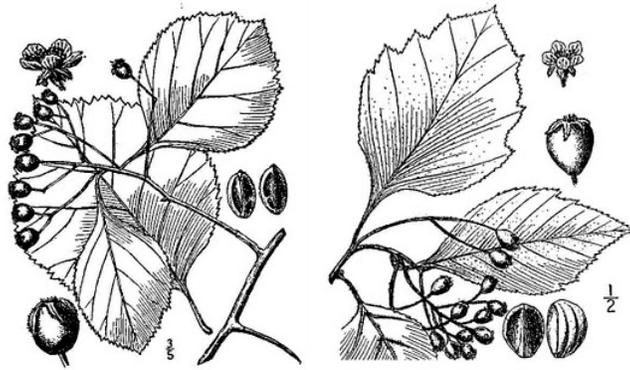
It is likely to be shrubby, seldom forming a well shaped tree.” (ewf55) “In the se USA, mixed hardwood forests, open slopes, wooded ravines, streamsides, especially over basic or calcareous rocks. Often found as a solitary specimen or in small local populations.”

(w15) distribution/range:

VHFS: [*Crataegus acanthacolonensis* Laughlin, *C calpodendron* (Ehrh) Medik var *calpodendron*, *C c* (Ehrh) Medik var *gigantea* Kruschke, *C c* (Ehrh) Medik var *globosa* (Sarg) EJ Palmer, *C c* (Ehrh) Medik var *hispida* (Sarg) EJ Palmer, *C c* (Ehrh) Medik var *hispidula* (Sarg) EJ Palmer, *C c* (Ehrh) Medik var *microcarpa* (Chapm) EJ Palmer, *C c* (Ehrh) Medik var *mollicula* (Sarg) EJ Palmer, *C c* (Ehrh) Medik var *obesa* (Ashe) EJ Palmer, *C chapmanii* (Beadle) Ashe, *C fontanesiana* (Spach) Steud, *C globosa* Sarg, *Mespilus calpodendron* Ehrh]



Crataegus calpodendron



Crataegus calpodendron

Illinois map courtesy of ILPIN.

Crataegus chrysocarpus Ashe. FIREBERRY HAWTHORN, aka ROUND-LEAVED HAWTHORN, (*chrysocarpus* -a -um golden-fruited, from Greek *chrysos*, golden & *καρπός*, *karpos*, fruit.)

Associates: ethnobotany: Fruit used as medicinal plant by Pottawatomie (sm33). Also used for food.

VHFS: Synonyms for variety *aboriginum* (Sarg) Kruschke: [*Crataegus aboriginum* Sarg, *C coccinata* Sarg, *C jackii* Sarg, *C subrotundifolia* Sarg]

Synonyms for variety *chrysocarpa*: [*Crataegus brunetiana* Sarg, *C brunetiana* Sarg var *fernaldii* (Sarg) EJ Palmer, *C chrysocarpa* Ashe var *longiacuminata* Kruschke, *C chrysocarpa* Ashe var *rotundifolia* (Moench) Sarg, *C columbiana* JT Howell var *chrysocarpa* (Ashe) Dorn, *C faxoni* Sarg, *C faxoni* Sarg var *durifruca* Kruschke, *C faxoni* Sarg var *praecoqua* (Sarg) Kruschke, *C faxoni* Sarg var *praetermissa* (Sarg) EJ Palmer, *C laurentiana* Sarg var *brunetiana* (Sarg) Kruschke, *C laurentiana* Sarg var *dissimilifolia* Kruschke, *C mercerensis* Sarg, *C rotundifolia* Moench, non L]

Synonym for variety *phoenicea* EJ Palmer: [*Crataegus caliciglabrata* Schuette]

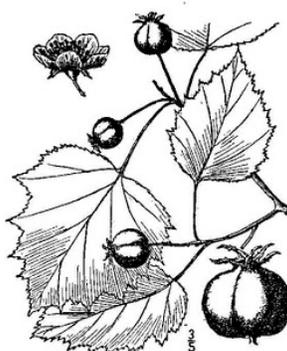


Crataegus chrysocarpus

Crataegus coccinioides Ashe KANSAS HAWTHORN (*coccineus -a -um* Latin crimson, scarlet, red, deep red, deep carmine red, from Latin *coccineus -a -um*, died scarlet, scarlet dye; scarlet, of scarlet color.)



Crataegus coccinioides



Crataegus coccinioides

Illinois map courtesy of ILPIN.

Crataegus corusca Sarg SHINING-BRANCH HAWTHORN, (*coruscus -a -um* referring to vibration, shaking, glittering; to thrust with horns.)

VHFS: [*Crataegus corusca* Sarg var *corusca*, *C corusca* Sarg var *gigantea* Kruschke, *C corusca* Sarg var *hillii* (Sarg) Kruschke, *C hillii* Sarg, *C X corusca* Sarg]

Illinois map courtesy of ILPIN.



Crataegus corusca

Crataegus crus-galli Linnaeus COCKSPUR HAWTHORNE, aka COCK-SPUR THORN, (*crus-galli* (kroos-GA-lee) a cock's spur, for the long thorns.)

Habitat: Pastures, open woods, thickets, wooded slopes. Hardy to zone 3.

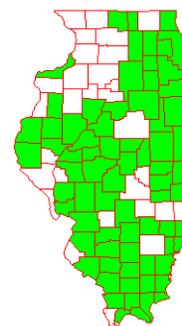
Culture: ☉Further germination pretreatments not sure? (Prairie Moon)?

Description: Deciduous, native shrub or tree, to 20'; large thorns to keep out the riffraff; rust resistant with deep green lustrous leaves; persistent red fruit.

Comments: status: phenology: "Extensively planted in Camp Grant but we have not found it native in the co." (ewf55)

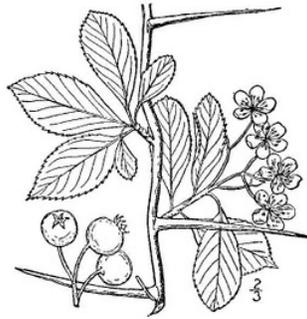
Associates: Waterfowl (esp. wood ducks) & songbirds eat fruit. Upland game birds eat fruit & buds. Small mammals eat the fruit. Aquatic furbearers eat fruit & wood. Deer eat foliage, twigs, & fruit.

Uncopyrighted Draught



Crataegus crus-galli

VHFS: Some sources list over 40 synonyms for this sp.



Crataegus crus-galli

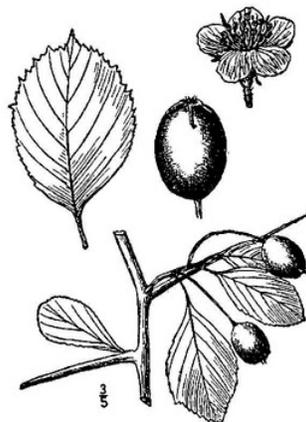
Illinois map courtesy of ILPIN.

Crataegus desueta Sarg NEW YORK HAWTHORN, (*deseutus -a -um* out of use.)

VHFS: [*Crataegus desueta* Sarg var *wausaukiensis* Kruschke]

Crataegus disperma Ashe SPREADING HAWTHORN, (*dispermus -a -um* having two seeds, from Greek *di*, two, double, & *sperma*, seed)

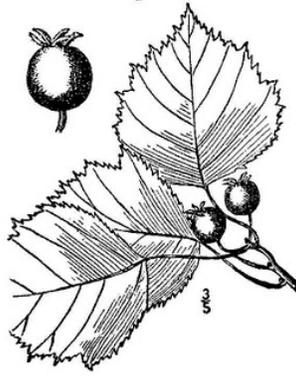
VHFS: [*Crataegus collina* Chapm var *collicola* (Ashe) EJ Palmer, *C cuneiformis* (Marshall) Eggl, *C disperma* Ashe var *peoriensis* (Sarg) Kruschke, *C peoriensis* Sarg, *C punctata* Jacq var *pausiaca* (Ashe) EJ Palmer, *C X collicola* Ashe, *C X disperma* Ashe, *C X pausiaca* Ashe]



Crataegus disperma

Crataegus dissona Sarg NORTHERN HAWTHORN, (*dissonus -a -um* from Latin *dissonus -a -um* discordant , different, disagreeing.)

VHFS: [*Crataegus disjuncta* Sarg, *Crataegus dissona* Sarg var *bellula* (Sarg) Kruschke, *Crataegus dissona* Sarg var *dissona*, *Crataegus incisa* Sarg, *Crataegus pruinosa* (H Wendl) K Koch var *brachypoda* (Sarg) EJ Palmer, *Crataegus pruinosa* (H Wendl) K Koch var *delawarensis* (Sarg) EJ Palmer, *Crataegus pruinosa* (H Wendl) K Koch var *dissona* (Sarg) Ettl, *Crataegus relicta* Sarg]



Crataegus dissona

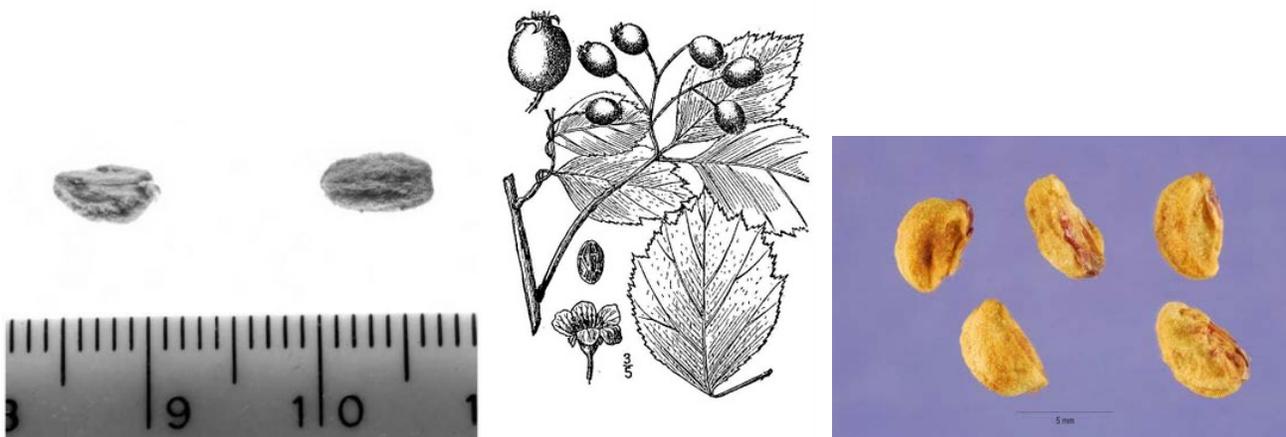
Crataegus distincta Kruschke DISTINCT HAWTHORN, (*distinctus -a -um* from Latin for separate, apart, different)

Crataegus dodgei Ashe DODGE'S HAWTHORN, (*dodgei* for Charles Keene Dodge (1844-1918))

VHFS: [*Crataegus crassifolia* Sarg, *Crataegus delosii* Sarg, *Crataegus dodgei* Ashe var *dodgei*, *Crataegus dodgei* Ashe var *flavida* (Sarg) PG Sm. & JB Phipps, *Crataegus dodgei* Ashe var *rotundata* (Sarg) Kruschke, *Crataegus flavida* Sarg, *Crataegus minutiflora* Sarg, *Crataegus rotundata* Sarg, *Crataegus X rotundata* Sarg]

Crataegus douglasii Lindl BLACK HAWTHORN, (*douglasii* for David Douglas (1798-1834))

VHFS: [*Crataegus brockwayae* Sarg]





Crataegus douglasii

Seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>.

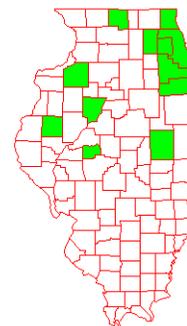
Crataegus flabellata (Bosc ex Spach) K Koch FAN-LEAF HAWTHORN, (*flabellatus -a -um* with fan-like parts.)
VHFS: [*Crataegus flabellata* (Bosc ex Spach) K Koch var *grayana* (Egg!) EJ Palmer, *C grayana* Egg!, *C parea* Ashe, *Mespilus flabellata* Bosc ex Spach]

Crataegus florifera Sarg (*floriferus -a -um* bearing flowers.)
VHFS: [*Crataegus bicknellii* Egg!, *C celsa* Sarg, *C florifera* Sarg var *celsa* (Sarg) Kruschke, *C florifera* Sarg var *shirleyensis* (Sarg) Kruschke, *C incerta* Sarg, *C shirleyensis* Sarg, *C silvestris* Sarg, *C sylvestris* Sarg, *C wisconsinensis* Kruschke, *C X celsa* Sarg, *C X shirleyensis* Sarg, *C X silvestris* Sarg]

Crataegus fluviatilis Sarg (*fluviatilis -is -e* pertaining to a river, from a river.)
VHFS: [*Crataegus roanensis* Ashe var *fluviatilis* (Sarg) Kruschke]

Crataegus fulleriana Sarg FULLER'S HAWTHORN,
VHFS: [*Crataegus chippewaensis* Sarg, *C confragosa* Sarg, *C fulleriana* Sarg var *chippewaensis* (Sarg) Kruschke, *C fulleriana* Sarg var *fulleriana*, *C fulleriana* Sarg var *gigantea* Kruschke, *C fulleriana* Sarg var *magniflora* (Sarg) EJ Palmer, *C fulleriana* Sarg var *miranda* (Sarg) Kruschke f *magniflora* (Sarg) Kruschke, *C fulleriana* Sarg var *miranda* (Sarg) Kruschke, *C holmesiana* Ashe var *chippewaensis* (Sarg) EJ Palmer, *C holmesiana* Ashe var *magniflora* (Sarg) EJ Palmer, *C illecebrosa* Sarg, *C miranda* Sarg]

Crataegus holmesiana Ashe HOLMES' HAWTHORN, (*holmesiana* for Joseph Austin Holmes (1895-1915))
VHFS: [*Crataegus holmesiana* Ashe var *amicta* (Ashe) EJ Palmer, *C holmesiana* Ashe var *holmesiana*, *C holmesiana* Ashe var *villipes* Ashe, *C lenta* Ashe, *C villipes* (Ashe) Ashe]



Crataegus holmesiana



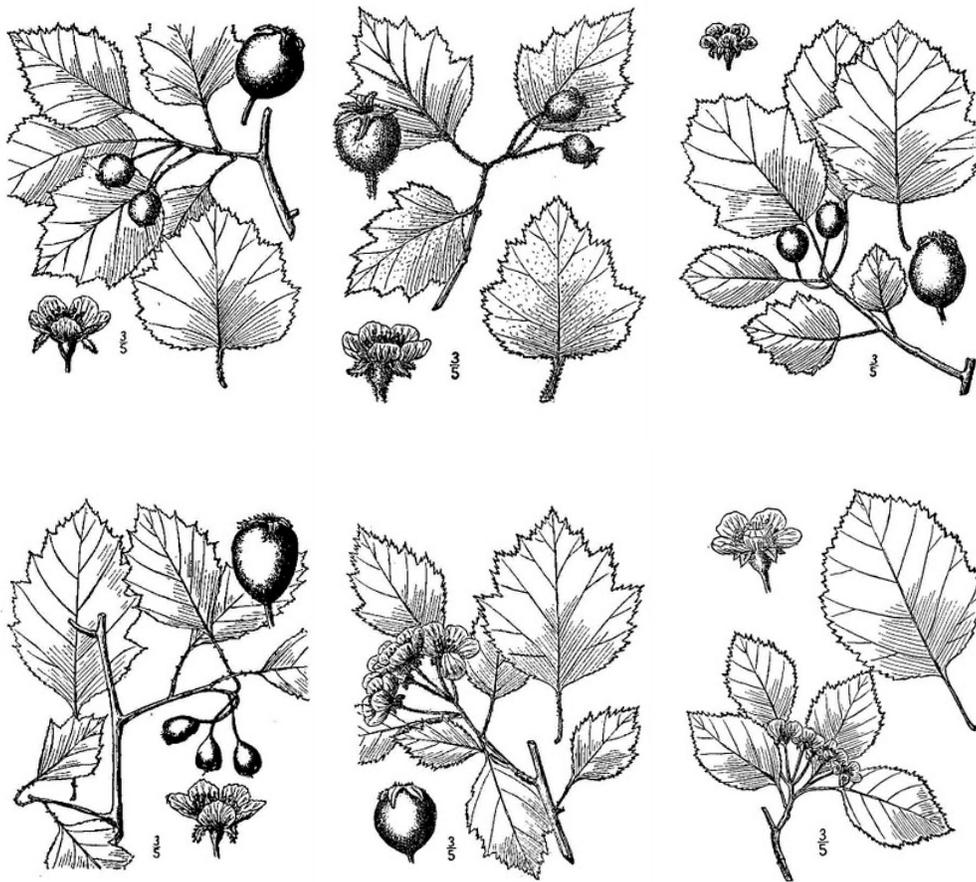
Crataegus holmesiana

Illinois map courtesy of ILPIN.

Crataegus intricata Lange BILTMORE HAWTHORN aka COPENHAGEN HAWTHORN, ENTANGLED HAWTHORNE, (*intricatus -a -um* intricate, entangled.)

Frequently shrubby, may form colonies from root sprouts.

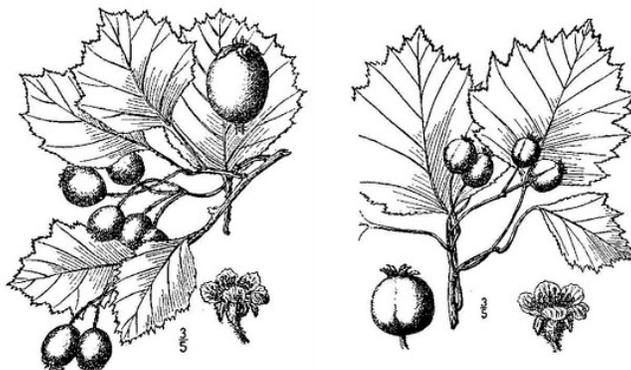
VHFS: [*Crataegus coccinea* auct non L]



Crataegus intricata

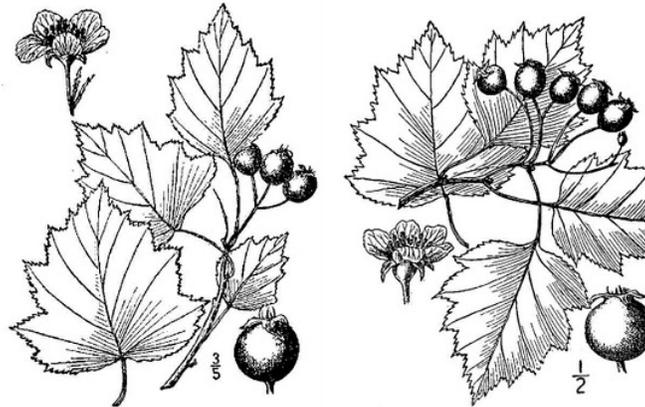
Crataegus irrasa Sarg BLANCHARD'S HAWTHORN, (*irrasus -a -um* unshaven, by implication hairy or rough.)

VHFS: [*Crataegus filipes* Ashe, *Crataegus irrasa* Sarg var *blanchardii* (Sarg) Egg1, *C irrasa* Sarg var *irrasa*, *C mansfieldensis* Sarg, *C oakesiana* Egg1]



Crataegus irrasa

Crataegus jesupii Sarg JESUP'S HAWTHORN, (*jesupii* for Henry Griswold *Jesup* (1826-1903))



Crataegus jesupii

Crataegus locuples Sarg “Not accepted by Jones as a definite sp & may be a hybrid. It resembles *C mollis*. Found in Kent Creek bottom at Fannan’s Crossing west of Rockford & in Memorial Forest Preserve east of Rockford. Not common here. (*C mollis* X *pruinosa* (?))” (ewf55)

Crataegus lucorum Sarg GROVE HAWTHORN, (*lucorum* of the groves or open woods, wood-loving, from Latin noun *lucus*, *luci* m, grove or wood, often sacred (genitive plural).)

VHFS: [*Crataegus asperata* Sarg, *C insolens* Sarg, *C X lucorum* Sarg]



Crataegus lucorum

Illinois map courtesy of ILPIN.



Crataegus lucorum

Crataegus lumaria Ashe ROUND-LEAVED HAWTHORN, (*lumarius -a -um* possibly from Latin *lumarius -a -um*, of or for thorns, from *luma*, *ae*, f a thorn.)

VHFS: [*Crataegus caesariata* Sarg, *C chrysoarpa* Ashe var *caesariata* (Sarg) EJ Palmer, *C dodgei* Ashe var *lumaria* (Ashe) Sarg]

Crataegus macracantha Lodd ex Louden HAWTHORN, (*macracanthus -a -um* large spined, from Greek *macro*, big, & *acantha* spines)

Similar to *C crus-galli*, also good rust resistance, brighter red fruit. Zone 3

VHFS: Synonym for variety *macracantha*: [*Crataegus succulenta* Schrad ex Link var *macracantha* (Lodd) Eggl]

VHFS: Synonyms for variety *occidentalis* (Britton) Eggl: [*Crataegus columbiana* JT Howell var *occidentalis* (Britton) Dorn, *C divida* Sarg, *C macracantha* Lodd ex Loudon var *divida* (Sarg) Kruschke, *C occidentalis* Britton, *C succulenta* Schrad ex Link var *occidentalis* Britton, *C X divida* Sarg]

VHFS: Synonyms for variety *pertomentosa* (Ashe) Kruschke: [*Crataegus pertomentosa* Ashe, *C succulenta* Schrad ex Link var *pertomentosa* (Ashe) EJ Palmer]



Crataegus macracantha

Crataegus macrosperma Ashe BIG-FRUIT HAWTHORN, aka FAN-LEAVED HAWTHORNE, LARGE-SEEDED HAWTHORN, (*macrospermus -a -um* large seed from Greek *μακρο*, *macros*, long; tall, high, deep, far, *-o-*, & *σπερμα*, *sperma*, seed, germ, & *-us*, Latinizing suffix.)

VHFS: [*Crataegus chadsfordiana* Sarg, *C flabellata* sensu Gleason & Cronquist (1991) & Swink & Wilhelm (1994), *C fetalis* Sarg, *C macrosperma* Ashe var *acutiloba* (Sarg) Eggl, *C macrosperma* Ashe var *eganii* (Ashe) Kruschke, *C macrosperma* Ashe var *macrosperma*, *C macrosperma* Ashe var *matura* (Sarg) Eggl, *C macrosperma* Ashe var *pastora* (Sarg) Eggl, *C macrosperma* Ashe var *pentandra* (Sarg) Eggl, *C macrosperma* Ashe var *roanensis* (Ashe) EJ Palmer, *C randiana* Sarg, *C roanensis* Ashe, *C roanensis* Ashe var *heidelbergensis* (Sarg) Kruschke, *C roanensis* Ashe var *roanensis*, *C X chadsfordiana* Sarg, *C X fetalis* Sarg, *C X randiana* Sarg]



Crataegus macrosperma

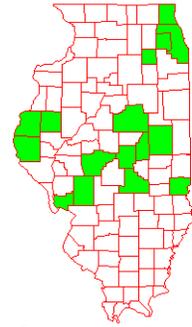


Crataegus macrosperma

Illinois map courtesy of ILPIN.

Crataegus margarettiae Ashe MARGARETT'S HAWTHORN, (*margaretta* named in 1900 for Margaret Henry Wilcox, later Mrs William Willard Ashe, a man who knew entirely too much about hawthorns.) Was Margaret like the hawthorn, beautiful in the spring of life, but with a hard heart(wood), thorny & hard to get close to, & with little, insipid fruit?

VHFS: [*Crataegus evansiana* Sarg, *C margaretta* Ashe var *angustifolia* EJ Palmer, *C margaretta* Ashe var *brownii* (Britton) Sarg, *C margaretta* Ashe var *margaretta*, *C margaretta* Ashe var *meiophylla* (Sarg) EJ Palmer, *C sicca* Sarg, *C sicca* Sarg var *glabrifolia* (Sarg) EJ Palmer, *C X evansiana* Sarg (pro sp)]



Crataegus margarettiae



Crataegus margarettiae

Illinois map courtesy of ILPIN.

Crataegus margarettia X punctata “Specimens from Memorial Forest Preserve were so named by Dr. Palmer.” (ewf55)

Crataegus mollis (Torrey & A Gray) Scheele DOWNY HAWTHORNE, (*mollis -is -e* soft, soft hairy, tender, pliant, supple, from Latin *mollis*, adjective, swaying, swinging; pliant, tender, easily moved; soft, graceful, delicate.)

Habitat: Dominant in degraded river bottoms. Clay soils. Hardy to zone 3.

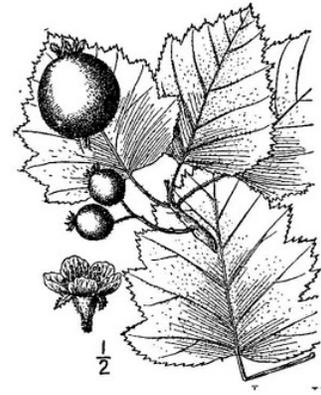
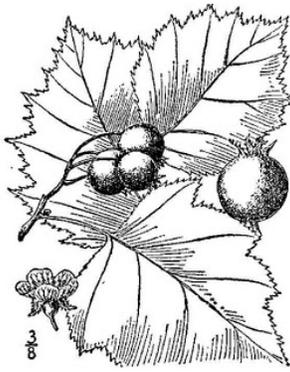
Description: Large, wide-growing, deciduous, native tree; susceptible to rust, leaves often gone by August; showy flowers, non-persistent red fruit.

“By far our most common sp & the earliest to bloom. Definitely a tree in size & shape, often growing in the open.” (ewf55) A favorite of Jens Jensen.

VHFS: [*Crataegus albicans* Ashe, *C arkansana* Sarg, *C brachyphylla* Sarg, *C cibaria* Beadle, *C coccinea* L var *mollis* T&G, *C gravida* Beadle, *C induta* Sarg, *C invisa* Sarg, *C lacera* Sarg, *C limaria* Sarg, *C mollis* (T&G) Scheele f *dumetosa* (Sarg) EJ Palmer, *C mollis* (T&G) Scheele var *dumetosa* (Sarg) Kruschke, *C mollis* (T&G) Scheele var *gigantea* Kruschke, *C mollis* (T&G) Scheele var *incisifolia* Kruschke, *C mollis* (T&G) Scheele var *mollis*, *C mollis* (T&G) Scheele var *sera* (Sarg) Eggl, *C mollis* (T&G) Scheele var *sera* (Sarg) Eggl f *mecocantha* Kruschke, *C noelensis* Sarg, *C pedicellata* Sarg var *albicans* (Ashe) EJ Palmer, *C placens* Sarg]



Crataegus mollis



Crataegus mollis

Illinois map courtesy of ILPIN.

***Crataegus monogyna* Jacq** ONE-SEEDED HAWTHORN, aka ENGLISH HAWTHORN, (*monogynus -a -um* of one pistil, single female sexual part, from Greek *monos* one, & *gyne* lady.)

Introduced, rare escape. Attractive in flower & fruit.

VHFS: [*Crataegus curvisepala* auct non Lindm, *C oxyacantha* auct non L, *C oxyacantha* L var *paulii* (Rehder) Rehder]

Illinois map courtesy of ILPIN.



Crataegus monogyna



Crataegus monogyna



Crataegus nitida (Engelm) Sargent ONTARIO HAWTHORN, (*nitidus -a -um* Latin shining; handsome, from Latin *nitidus*, shining, glittering, bright, polished, clear.)
VHFS: [*Crataegus X nitida* (Engelm) Sarg]



Crataegus nitida



Crataegus nitida

Illinois map courtesy of ILPIN.

Crataegus nitidula Sarg ONTARIO HAWTHORN, (*nitidulus -a -um* somewhat shiny, from Latin *nitidulus -a -um*, somewhat spruce, rather trim.)

VHFS: [*Crataegus limatula* Sarg, *C nitidula* Sarg var *limatula* (Sarg) Kruschke, *C nitidula* Sarg var *macrocarpa* Kruschke, *C nitidula* Sarg var *recedens* (Sarg) Kruschke, *C recedens* Sarg]

Crataegus pedicellata Sarg SCARLET HAWTHORN (*pedicellatus -a -um* having a stalk, with a pedicel.)

“Not common. Usually a tall shrub in thickets & on banks of streams. Flowers appear rather late. Ours is, according to Dr Palmer, var *robesoniana* Sarg” (ewf55)

VHFS: [*Crataegus habereri* Sarg, *C letchworthiana* Sarg, *C pedicellata* Sarg var *assurgens* (Sarg) EJ Palmer, *C putnamiana* Sarg]

Synonyms for variety *ellwangeriana* (Sarg) Eggl: [*Crataegus ellwangeriana* Sarg, *C pedicellata* Sarg var *ellwangeriana* (Sarg) Eggl f *assurgens* (Sarg) Kruschke, *C pedicellata* Sarg var *robesoniana* (Sarg) EJ Palmer, *C X ellwangeriana* Sarg]

Synonyms for variety *pedicellata*: [*Crataegus aulica* Sarg, *Crataegus coccinea* L, pro parte, *C pedicellata* Sarg var *caesa* (Ashe) Kruschke, *C pedicellata* Sarg var *sertata* (Sarg) Kruschke, *C X aulica* Sarg]

Illinois map courtesy of ILPIN.



Crataegus pedicellata

Crataegus pennsylvanica Ashe PENNSYLVANIA HAWTHORN, (*pennsylvanicus -a -um* occasionally spelled *pennsylvanicus* of Pennsylvania. Pennsylvania was an accepted alternative spelling throughout the 1700's. Plants named at that time may have a specific epithet without the double “n”.)

VHFS: [*Crataegus tatnalliana* Sarg]

Crataegus phaenopyrum (Linnaeus f) Medikus WASHINGTON'S HAWTHORNE, aka WASHINGTON'S-THORN, (*phaenopyrum* with appearance of a pear.)

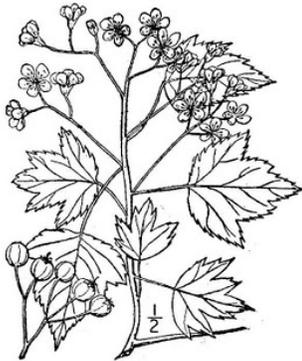
Habitat: Needs well-drained soil. Hardy to zone 3. distribution/range: Native to the eastern United States, but escapes from cultivation may be expanding its range.

Description: Upright, deciduous, native tree, 25-30', numerous short thorns; fall color yellow to orange to orange-purple, good rust resistance; good flower show before leaves appear; persistent orange to glossy red fruit.

Associates: Provides good cover for many wildlife spp. Used by fox sparrow & cedar waxwing.



Crataegus phaenopyrum



Crataegus phaenopyrum

Illinois map courtesy of ILPIN.

Crataegus pringlei Sarg PRINGLE'S HAWTHORN, (*pringlei* after Cyrus Guernsey Pringle (1838-1911), born in Vermont, collected some 500,000 specimens that were donated to the Pringle Herbarium, University of Vermont & various other herbaria.)

VHFS: [*Crataegus pringlei* Sarg var *exclusa* (Sarg) Ettl, *Crataegus pringlei* Sarg var *lobulata* (Sarg) Ettl]



Crataegus pringlei



Crataegus pringlei

Illinois map courtesy of ILPIN.

Crataegus prona Sarg ILLINOIS HAWTHORN, (*pronus -a -um* leaning forward, from classical Latin adjective *pronus*, prone.)

VHFS: [*Crataegus gravis* Ashe]

Crataegus pruinosa (H Wendl) K Koch FROSTED HAWTHORN, aka WAXY-FRUIT HAWTHORN, (*pruinosis -a -um* having a hoary bloom, frosted.)

May occur as a lone shrub or tree or colonial.

“Common, blooming early. It is likely to form thickets & is not usually a well shaped tree. Particularly common on Kishwaukee River. Besides the sp we have var *latisepala* (Ashe) Ettl” (ewf55)

VHFS: [*Crataegus aspera* Sarg, *C congesta* Sarg, *C crawfordiana* Sarg, *C deltoides* Ashe, *Crataegus formosa* Sarg, *C franklinensis* Sarg, *C gattingeri* Ashe, *C gattingeri* Ashe var *rigida* EJ Palmer, *C gaudens* Sarg, *C georgiana* Sarg, *C mackenziei* Sarg var *aspera* (Sarg) EJ Palmer, *C mackenziei* Sarg var *bracteata* (Sarg) EJ Palmer, *C platycarpa* Sarg, *C pruinosa* (H Wendl) K Koch var *congesta* (Sarg) JB Phipps, *C pruinosa* (H Wendl) K Koch var *latisepala* (Sarg) Ettl, *C pruinosa* (H Wendl) K Koch var *pachypoda* (Sarg) EJ Palmer, *C vicinalis* Beadle, *C X formosa* Sarg]

VHFS: Synonyms for var *leiophylla* (Sarg) JB Phipps [*Crataegus leiophylla* Sarg, *C pruinosa* (H Wendl) K Koch var *rugosa* (Ashe) Kruschke, *C rugosa* Ashe]

VHFS: Synonyms for var *pruinosa*: [*Crataegus horridula* Sarg, *C perampla* Sarg, *C pruinosa* (H Wendl) K Koch var *grandiflora* Kruschke, *C pruinosa* (H Wendl) K Koch var *grandiflora* Kruschke f *mecocantha* Kruschke, *Mespilus pruinosa* H Wendl]



Crataegus pruinosa



Crataegus pruinosa

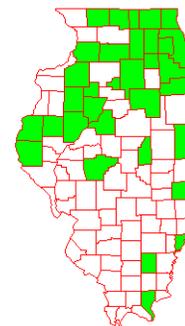
Illinois map courtesy of ILPIN.

Crataegus punctata Jacquin DOTTED HAWTHORNE, (*punctatus -a -um* from Latin punctate, spotted, dotted, from Latin *punctum*, noun, something that is pricked; a puncture; a small spot; a small portion, *-atus*, adjectival suffix for nouns: possessive of or likeness of something, or with, shaped, made.)

Horizontal branch pattern, brick red fruit, showy in fall, Zone 3.

“A common well shaped tree that has long flexuous branches. It blooms profusely, the flowers appearing early.” (ewf55)

VHFS: [*Crataegus punctata* Jacq f *aurea* (Aiton) Rehder, *C punctata* Jacq var *aurea* Aiton, *C punctata* Jacq var *canescens* Britton, *C punctata* Jacq var *microphylla* Sarg, *C punctata* Jacq var *punctata*, *C punctata* Jacq var *punctata* f *canescens* (Britton) Kruschke, *C punctata* Jacq var *punctata* f *intermedia* Kruschke]



Crataegus punctata



Crataegus punctata

Illinois map courtesy of ILPIN.

Crataegus scabrada Sarg ROUGH HAWTHORN, (*scabridus -a -um* rough, from Latin *scabridus*, rough, rugged.)
VHFS: [*Crataegus balkwillii* Sarg, *C brainerdii* Sarg var *asperifolia* (Sarg) Eggl, *C brainerdii* Sarg var *cyclophylla* (Sarg) EJ Palmer, *C brainerdii* Sarg var *egglestonii* (Sarg) BL Rob, *C brainerdii* Sarg var *scabrada* (Sarg) Eggl, *C dunbarii* Sarg, *C hadleyana* Sarg, *C improvisa* Sarg, *C iterata* Sarg, *Crataegus pinguis* Sarg, *C scabrada* Sarg var *asperifolia* (Sarg) Kruschke, *C scabrada* Sarg var *balkwillii* (Sarg) JB Phipps, *C scabrada* Sarg var *cyclophylla* (Sarg) Kruschke, *C scabrada* Sarg var *dunbarii* (Sarg) Kruschke, *C scabrada* Sarg var *egglestoni* (Sarg) Kruschke, *C scabrada* Sarg var *hadleyana* (Sarg) JB Phipps, *C scabrada* Sarg var *honesta* (Sarg) Kruschke, *C scabrada* Sarg var *improvisa* (Sarg) JB Phipps, *C X improvisa* Sarg (pro sp.)]

Crataegus schuettei Ashe SCHUETTE'S HAWTHORN, (*schuettei* for Joachim Heinrich Schuette (1821-1908).)
VHFS: [*Crataegus alnorum* Sarg, *C basilica* Beadle, *C ferrissii* Ashe, *C schuettei* Ashe var *basilica* (Beadle) JB Phipps, *C schuettei* Ashe var *cuneata* Kruschke, *C schuettei* Ashe var *ferrissii* (Ashe) Kruschke, *C schuettei* Ashe var *gigantea* Kruschke, *C schuettei* Ashe var *schuettei*, *C tortilis* Ashe]



Crataegus schuettei

Crataegus submollis Sarg QUEBEC HAWTHORN, (*submollis -is -e* from *sub*, below, almost, less so than a similar plant, & *mollis* for soft, soft hairy, tender, pliant, supple, from Latin *mollis -is -e*, adjective, swaying, swinging; pliant, tender, easily moved; soft, graceful, delicate.)



Crataegus submollis

Crataegus succulenta Schrader ex Link FLESHY HAWTHORN, (*succulentus* –a -um succulent, fleshy, markedly juicy.)

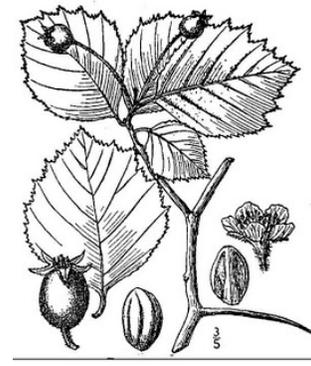
“Rather common. It is usually of shrubby growth but the thick glossy leaves make it attractive. The red bud-scales are often conspicuous before the flowers open. Ours is var *pertomentosa* (Ashe) Palmer.” (Fell 1955)

VHFS: [*Crataegus ambrosia* Sarg, *C. arduha* Sarg, *C. chrysocarpa* Ashe var *bicknellii* (Eggl) EJ Palmer, *C. ferta* Sarg, *C. florifera* Sarg var *mortonis* (Laughlin) Kruschke, *C. florifera* Sarg var *virilis* (Sarg) Kruschke, *C. gemmosa* Sarg, *C. laxiflora* Sarg, *C. macracantha* Lodd ex Loudon var *colorado* (Ashe) Kruschke, *C. neofluvialis* Ashe, *C. pisifera* Sarg, *C. rutila* Sarg, *C. saeva* Sarg, *C. succulenta* Schrad ex Link var *gemmosa* (Sarg) Kruschke, *C. succulenta* Schrad ex Link var *laxiflora* (Sarg) Kruschke, *C. succulenta* Schrad ex Link var *michiganensis* (Ashe) EJ Palmer, *C. succulenta* Schrad ex Link var *neofluvialis* (Ashe) EJ Palmer, *C. succulenta* Schrad ex Link var *pisifera* (Sarg) Kruschke, *C. succulenta* Schrad ex Link var *rutila* (Sarg) Kruschke, *C. succulenta* Schrad ex Link var *succulenta*, *C. venulosa* Sarg, *C. virilis* Sarg]



Crataegus succulenta





Crataegus succulenta

Illinois map courtesy of ILPIN.

CYDONIA P Miller 1754 **QUINCE** Cydo`nia named for the town of Cydonia, Crete, where the quince originated.



Cydonia oblonga

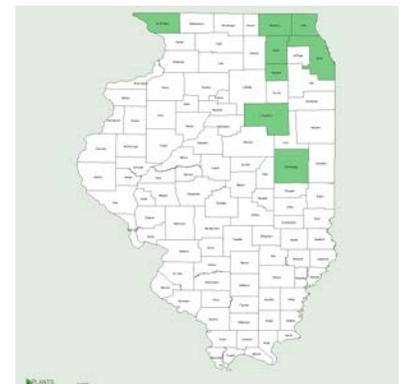
DALIBARDIA Linnaeus **FALSE VIOLET** named by Linnaeus, in honor of *Dalibard*, a French botanist.

DASIPHORA Rafinesque 1840 **SHRUBBY CINQUEFOIL** *Rosaceae* (see *Potentilla fruticosa*) Molecular phylogenetic studies place this genus closer to *Alchemilla*, *Aphanse*, *Drymocallis*, *Fragaria*, *Sibbaldiopsis* & other genera than to *Potentilla*. Formerly part of a broadly defined *Potentilla*. Some authors include this in *Pentaphylloides*. Yellow flowered shrub, stems reddish, with leaves pinnately divided into 5-7 parts, growing in bogs, meadows, & on shores. *Dasiphora* is maintained by Mohlenbrock (2014).

Dasiphora fruticosa (Linnaeus) Rydberg ssp **floribunda** (Pursh) Kartesz, or departures there of, formerly *Potentilla fruticosa* Linnaeus, locally & briefly *Pentaphylloides floribunda* (Pursh) A Löve

*IA, PA SHRUBBY CINQUEFOIL, aka BUSH CINQUEFOIL, GOLDEN-HARDHACK, SHRUBBY FIVE-FINGERS, SHRUBBY POTENTILLA, WIDDY, (*fruticosus -a -um fruticòsus* (froo-ti-KO-sus) shrubby, bushy, from Latin *fruticosus*, bushy, shrubby, from *fruticosus -a -um*, bushy or full of bushes, from *frutex*, a shrub.) Habitat: Calcareous habitats, boggy fens, dry hill prairies, interdunal ponds close to Lake Michigan (sw), wet open areas, bogs, & dry prairies, likes calcareous soil (pph) bogs, dunes, & lime shorelines of Lake Michigan; interdunal ponds, fens, gravel prairies, limestone cliffs. distribution/range: “Known to us in Lake, Jo Daviess & Carroll cos. Reliably reported to grow in this co but we have not found it. It is used to some extent in perennial gardens in Rockford.” (ewf55)

Culture: ①60 days cold moist stratification (pm09). 60 days cold moist stratification, or best planted outdoors in the fall (pm15). ②Seeds germinate after about 60 days of cold moist stratification. Seeds germinate most successfully in cool soil. Sow in early winter through early spring. (he99) ③Sow at +2 to +4°C (34-39°F) for 12 wks, move to 20°C (68°F) for germination (tchn).



availability: Potted plants are widely available, seldom as local or wild material. Many selections.

asexual propagation: #1-4, division, cutting taken in late summer & placed in closed cold frame over winter; can use cuttings in early summer; layering (pph)

Potentilla spp. Propagation is usually by cuttings, but seed & division can be used. Cuttings are taken from early summer through fall. Rooting is best under light mist with bottom heat. Rooting hormones are helpful.

cultivation: Transplants easily. Wet to dry open calcareous habitats. Drought tolerant & wet soil tolerant. pH circum-neutral, 6.8-7.2. Hardy to zone 2.

Description: Erect, perennial, shrub, 1.0-3.0' tall; foliage gray-green; flowers bright yellow, perfect, 5-merous, 0.75" wide; fruits is a dry hard head, seeds are small achenes;

Comments: status: Threatened in Iowa. Endangered in Pennsylvania. phenology: Blooms June to October (till frosts). Collect seeds in se Wisconsin in September - October (he99). This sp has become a common landscape plant, with many cultivars available at any mass-marketer in the Midwest, but of unknown provenance.

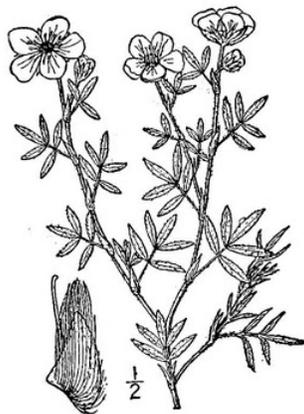
Landscaping, low maintenance shrub, butterfly garden, & rain garden. Attractive flowers, resembling buttercups.

"Other common plants, which presented themselves at different places on our route through the prairies."

Potentilla fruticosa L. (Short 1845).

Associates: Pollinator friendly. Butterfly nectar plant. Pollinated by insects, especially *Hymenoptera* & *Diptera*. Attracts songbirds & small mammals, but of low wildlife value; of low food & cover value for terrestrial birds. Deer resistant? Generally pest free.

VHFS: Formerly *Potentilla fruticosa* Linnaeus. In Britton & Brown (1913), this taxon is treated as *Dasiphora fruticosa* & *D floribunda*. [*Dasiphora fruticosa* auct non (L) Rydbg, *Pentaphylloides fruticosa* auct non (L) O Schwarz, *Potentilla floribunda* Pursh, *P fruticosa* auct non L, *P floribunda* Pursh, *P fruticosa* spp *floribunda* (Pursh) Elkington, *P fruticosa* L var *tenuifolia* Lehm]



319. *Potentilla fruticosa* L.
Shrubby P. ; Y.



Dasiphora fruticosa

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. 3rd line drawing Walter Hood Fitch - *Illustrations of the British Flora* (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. 4th line drawing public domain from Hippolyte Coste - *Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes*, 1901-1906. Illinois map courtesy plants.usda.gov.

Dryas drummondii, integrifolia, octopetala, & x suendermanii, ①sow at max 5°C (41°F), germination irregular, often several months (tchn).

DRYMOCALLIS Fourier ex Rydberg 1908 **DRYMOCALLIS, WOOD-BEAUTY** *Rosaceae* (see *Potentilla arguta*, TALL WOOD-BEAUTY) *Drymocallis* Drymocal'lis (dry-mo-KAL-is) wood beauty, New Latin, from Greek *drymos*, forest (from δρυς, δρύος, *drys, dryos*, tree), & κάλλος, *kallos*, beauty, beautiful. A genus of ca 30 spp separated from *Potentilla*. Molecular phylogenetic studies place this genus closer to *Alchemilla*, *Aphanse*, *Dasiphora*, *Fragaria*, *Sibbaldiopsis*, & other genera than to *Potentilla*. *Drymocallis* is maintained by m14 & w12b. At one time *Bootia* Bigelow.

Drymocallis arguta (Pursh) Rydberg, TALL DRYMOCALLIS, TALL WOOD-BEAUTY See *Potentilla arguta*

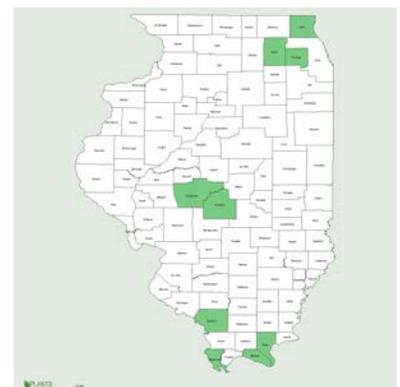
DUCHESNEA JEO Smith 1811 **INDIAN STRAWBERRY** *Rosaceae* New Latin for Antoine N *Duchesne*, 1747-1827, French botanist. Sometimes included in *Potentilla*. “*Duchesnea* is apparently not closely related to *Fragaria*, & is best combined with *Potentilla*, which does have other spp with accrescent fruits (Eriksson, Donoghue, & Hibbs 1998). The strawberry-like fruit is not sweet; it can also be distinguished from *Fragaria* by its whitish interior flesh. The leaves are more coarsely toothed than *Fragaria*.” (w12) Transferred to *Potentilla* in w2b.

Duchesnea indica (Andrews) Focke [new nomenclature this will be *Potentilla indica* (Andrews) T. Wolf] ♣ FALSE STRAWBERRY, aka INDIAN STRAWBERRY, (*indicus -a -um* Indian, the subcontinent, of or from or referring in some way to India. Epithet was formerly capitalized.)

Habitat: Disturbed areas. distribution/range: Native of Asia. Locally introduced.

Culture: ①Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn).

Description: Creeping, herbaceous, perennial, introduced forb; roots short rhizomes; stems thin, with a few leaves from the nodes; leaves long stalked, 3-parted, divisions alike, toothed, basal, oval to elliptical; flowers yellow, 5-merous, 0.50" wide, 5 sepals alternating with & shorter than the large, leaf-like, 3 toothed bracts below the flower; fruit is a red berry, inedible, not juicy; N. key features: 3 toothed bracts below the flower, a red berry that is not juicy or edible.



Comments: status: Naturalized from Eurasia. phenology: Blooms April to August. Looks like a small-fruited strawberry, with the fruit subtended by 5 large leaf-like bracts.

Associates:

VHFS: [*Fragaria indica* Andrews] In w73 *F Indica* Ait, with synonyms *Duchesnia Indica* Smith & *Potentilla Durandh* T&G.

T Eriksson, MJ Donoghue, & MS Hibbs. 1998. Phylogenetic analysis of *Potentilla* using DNA sequences of nuclear ribosomal internal transcribed spacers (ITS), & implications for the classification of *Rosoideae* (*Rosaceae*). *Pl Syst Evol* 211: 155-179.



Duchesnea indica

Credit: Photo by Leo Michels - Source: <http://www.imagines-plantarum.de/> Public domain image. Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

FILIPENDULA P Miller 1754 **QUEEN, QUEEN-OF-THE-PRAIRIE** *Rosaceae* (fi-li-PEN-dew-la) from Latin *filum*, a thread, & *pendulus*, hanging, referring to the threadlike roots connecting the tubers of some sp. A genus of about 15 spp of perennial herbs, large, pinnate leaves, flowers small, white or pink, in large branched clusters, of north temperate in eastern & northwestern North America, Europe & Asia. At one time included in *Spiraea*.

Lateral leaflets lobed & toothed; flowers pink; fruit straight; rootstock with long subterranean runners..... *F rubra*

Lateral leaflets merely coarsely toothed; flowers white; fruit twisted; rootstock short, without runners..... *F ulmaria*
(adapted from w10)

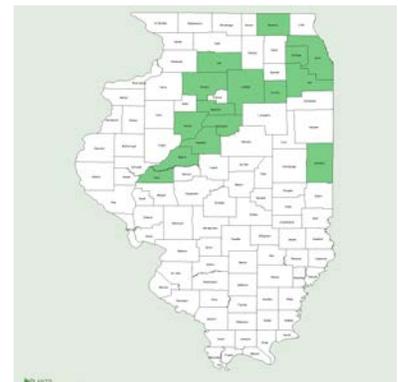
Filipendula rubra (Hill) BL Robinson *IL ,IA, MD, MI, NJ, NC **QUEEN OF THE PRAIRIE**, aka **PRIDE OF THE MEADOW**, (*ruber, rubra, rubrum* red, ruddy, from Latin *ruber, rubr-*, & *rufus* red, ruddy, Latin *ruber*, Greek *erythros* red, Sanskrit *rohita* red, reddish, *rudhira* red, bloody.) [obl] [section *Albicoma*]

Habitat: Sandy or peaty fens. Wet sands, calcareous, humus soils.

distribution/range: Considered an introduction in Wisconsin (fh). The most closely related spp are in northeast Asia.

Culture: ①“Moist cold treat, or fall sow. Very light to no cover. Tiny seeds. Generally very poor germination.” (mfd93) ②90 days cold moist stratification (pm15).

Sow seeds outdoors in fall (he99). ③Sow seeds just below moist soil surface at 70°F for 3 month. Move to 30°F for 3 month, then bring back to 50°F. (ew11) ④Sow at 18-22°C (64-71°F) for 12 wks, move to +2 to +4°C (34-39°F) for 12 wks, move to 5-12°C (41-53°F) for germination, sow immediately after harvest (tchn). ⑤Cu00 notes a multi-cycle dormancy mechanism & recommends planting fresh seed immediately for germination the following spring. Code D.



seed counts & rates: 150,000 (jfn04), 259,200 (ew11), 368,000 (pm14), 608,000 (aes12) seeds per pound.

asexual propagation: Division of mature plants. Single node stem cuttings & rhizome cuttings.

cultivation: Space plants 1.5-2.0'. Full sun, wet soils; tolerates half-day shade. Plant in well-tilled, rich, moist, but well-draining, highly organic soils that have been augmented with compost & well-rotted manure, & irrigate during dry spells. The basal foliage creates an attractive ground cover.

bottom line: Preliminary test datum indicates seed can be nondormant. Plant dormant or spring. Germ 48%. Dorm 0.0%.**

greenhouse & garden: Moist cold stratify (90 days) or dormant seed, light.

Description: Erect, perennial, herbaceous, native forb, tall, smooth; culms 3.0-6.0 (7)'; leaves once pinnately-divided, side leaflets 3-5 lobed; end leaflet kidney-shaped in outline, up to 8.0" wide, deeply cut into 5-9 parts; inflorescence a 4.0"-8.0" wide, branched, tall, dense, astilbe-like clusters (panicle) of stalked, flowers; flowers pink-rose, showy, fragrant, 5-merous, 0.13"-0.33" wide, circle of 5-15 pistils; seed dry, smooth, straight, erect, oblong seed; N. key features: ①Bruised foliage has a cucumber-like fragrance. Fruit smooth, straight. Leaves once pinnately-divided, side leaflets 3-5 lobed; end leaflet kidney-shaped. ②Lateral leaflets of 3 lanceolate lobes, terminal one large, pedately 7-9-parted, flowers deep rose-pink (w73).

Comments: status: Endangered in Illinois, Maryland, New Jersey, & North Carolina. Threatened in Iowa & Michigan. phenology: Blooms 6-8. Seeds mature late summer. In northern Illinois, collect seeds in September - October. Collect seeds in se Wisconsin in October (he99). "An herb of exquisite beauty in meadows and prairies... Flowers numerous and exceedingly delicate." (w73)

This sp is endangered or threatened in most Midwestern states, yet it is routinely specified for jobs, usually in hot, dirty, surface water wetlands, not cool, clean water fens. QUEEN OF THE PRAIRIE is often listed in wet to mesic or wet mesic prairie seed mixes. It is not a plant of wet to mesic, mesic to wet, or wet-mesic prairies. It is a fen plant! So little is known of this plant in the wild, we should respect the local genetics for this sp, planting only local genetic material in clean, ground water wetlands with dedicated, long-term stewardship. It may be used in well-managed, clean, rich soil, wet rain gardens. Listing this sp in urban wetland seed mixes is simply self-aggrandizement. Nothing more.

Sp may self-sow or spread from rhizomes. Ours has hop scotched around our wetland, & is now at home where we pipe the clean runoff from a 270' by 90' greenhouse structure into rich, *in situ*, 250-bushel corn-producing, black soil, in other words, a big honking rain garden. Attractive, cotton-candy-like, cut flowers, landscaping, aggressively rhizomatous in good locations. Seed source nursery production.

There are reports that some colonies do not flower. The plant is strongly rhizomatous in rich soils. Unfortunately, these combined characteristics are signs of a plant on its way out, on the road to extinction. It is becoming a clonal sp. The sp may have lost important pollinators or seed dispersers. QUEEN OF THE PRAIRIE may soon exist solely in a "gardened" state, as will most other Midwest native plants.

Associates: Attracts butterflies. Reported to be deer resistant.

VHFS: [*Spiraea filipendula* L, *S lobata* L, *Ulmaria rubra* Hill]



Filipendula rubra

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

Filipendula ulmaria (Linnaeus) Maximowicz subsp ***ulmaria*** ♣ QUEEN-OF-THE-MEADOW, aka DOUBLE MEADOW SWEET, MEADOWSWEET, (*ulmarius -a -um* elm-like) [section *Filipendula*]

Habitat: Disturbed areas, persisting in & escaping from old plantings.

distribution/range: A rare introduced escape, potentially invasive. Native of Europe.

Culture: ☉ Sow at 18-22°C (64-71°F) for 12 wks, move to +2 to +4°C (34-39°F) for 12 wks, move to 5-12°C (41-53°F) for germination, sow immediately after harvest (tchn).

Description: Erect, herbaceous introduced perennial forb, 3'-7' tall; roots; culms; leaves once pinnately-divided, side leaflets doubly-toothed, end leaflet round in outline to 2.0-6.0" wide, deeply cut into 3-5 parts; inflorescence a branched, dense cluster (panicle) of stalked flowers; flowers white, 5-merous, 0.13"-0.33" wide, circle of 5-15 pistils; fruit dry, smooth seed spiraling about half a turn; N. key features: Fruit smooth, spiraling. Leaves once pinnately-divided, side leaflets doubly-toothed; end leaflet round.

Comments: status: phenology: Blooms June - August.

Associates:

VHFS: [*Filipendula ulmaria* (L) Maxim. var *ulmaria*, *Spiraea ulmaria* L]

Woods (1873) lists under *Spiraea*, 1) L. (sic) *filipendula* L., PRIDE OF THE MEADOW, with leaflets pinnatifidly serrate and flowers white, noting "a very delicate herb, often cultivated. Other species of this beautiful genus are sometimes cultivated." & 2) *S. ulmaria* L., DOUBLE MEADOW SWEET, with lateral leaflets ovate-lanceolate, terminal one much larger, palmately 5-7 lobed, flowers white, "in gardens, where the numerous white flowers are mostly double."



Filipendula ulmaria



Filipendula ulmaria

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FRAGARIA Linnaeus 1753 **Strawberry** *Rosaceae* *Fragaria* *Fraga* r'ia (fra-GAH-ree-a) from Pliny, from *fraga*, *fragorum*, (*fragum*, *fragi* n.) strawberry & New Latin *-ia*. "*Fraga* (akin to Sanscrit root *ghra*, *odorari*), the fragrant things: hence Strawberries." --Whites Lat. Dict 1869 quoted in Alcock. In one source as from the Latin *fraga*, *fragum*, or *fragrans*, fragrant, referring to the scent of the fragrant fruit, as in the verb *fragro*, I smell strongly. A genus of about 10 spp of perennial herbs with leaves, trifoliate, toothed, nearly similar, flower white, & edible fruit, of temperate Eurasia, North America, & South America. The 'fruit' is a glandetum, a multiple fruit of indehiscent carpels that mature on an enlarged receptacle, the fruitlets embedded in the receptacle (sk08). The 'fruit' is also a conocarp, a collection of carpels arranged upon a conical center. The fruits are achenes, smooth, affixed to a large, pulpy, deciduous receptacle. C3.

The GARDEN STRAWBERRY, *Fragaria X ananassa* Thuillier (pro sp) [*chiloensis* X *virginiana*], occasionally persists near old gardens.

Fragaria vesca Linnaeus subsp ***americana*** (Porter) Staudt ALPINE STRAWBERRY, aka ENGLISH STRAWBERRY, HILLSIDE STRAWBERRY, SOW-TEAT STRAWBERRY, THIN-LEAVED STRAWBERRY, WOOD STRAWBERRY, WOODLAND Uncopyrighted Draught

STRAWBERRY, (*vescus -a -um* vescus (VES-kus) little, small, weak, thin, feeble from Latin *vescus -a -um* (active) consuming; (passive) wasted, thin.)

Habitat: Rocky woods & openings. North facing woods, in rich soil. Forests.
distribution/range:

Culture: ① Sow at max 5°C (41°F), germination irregular, often several months (tchn).

availability: There are no known commercial sources of seeds or plants of non-European genetic materials.

Description: Erect, herbaceous, perennial, native forb, 4"-6" tall; roots spreads by runners; culms; leaves basal, 3-parted, toothed; end tooth usually wider than the side teeth & often longer; leaflets mostly stalkless; inflorescence with a few to several flowers on stalks taller than the leaves; flowers white, 5-merous, yellow centers, 0.5" wide; fruits red, edible, juicy; elliptical berry; seeds near the surface; N. key features: ① Flower stalks taller than leaves. Fruit edible, elliptical, seeds near the surface of the fruit. The end tooth of the leaflet is usually wider than the side teeth & often longer; leaflets are mostly stalkless. ② Achenes superficial on the conical or hemispherical receptacle which is without pits (w73).

Comments: status: phenology: Blooms 4-6. Fruits 6-7. Sun-ripened fruits are fragrant & delicious. Ground cover for shady woodlands & forests.

“Much less common than the next (*F virginiana*). Found in shaded outcrops & gravel banks. The long runners are conspicuous. (*F vesca* L var *americana* Porter)” (ewf55 as *Fragaria americana* (Porter) Britton)
Associates: Pollinator friendly. Butterfly nectar plant, an important early bloomer. Walnut tolerant.

ethnobotany: Fruits available in early summer. Much used by Pottawatomie (sometimes dried) & Ojibwa in season & Iroquois (sm33, Gilmore 1933, Waugh 1916). Root used as medicinal plant by Pottawatomie (sm33).

VHFS: [*Fragaria americana* (Porter) Britton, *Fragaria vesca* L var *americana* Porter]

Synonyms for variety *vesca*: [*Fragaria vesca* L f *alba* (Ehrh) Rydbg, *F vesca* L f *rosea* Rostrup, *F vesca* L var *alba* (Ehrh) Rydbg, *F vesca* L var *vesca*]

Numerous selections of European varieties. “Numerous varieties are cultivated in gardens, where the fruit is sometimes an ounce or more in weight” (w73).



Ilpin lists this as *Fragaria americana* (Porter) Britt., HILLSIDE STRAWBERRY; leaflets are sessile, teeth sharp. ascending hairs on peduncles & petioles; bloom 5-8, C3, distributed on rocky banks; fruit is edible, but dry & without flavor.

The species is mapped from Lake Co; introduced from Europe.





Fragaria vesca

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Fragaria virginiana Duchesne (or P Miller) WILD STRAWBERRY, aka THICK-LEAVED STRAWBERRY, VIRGINIA STRAWBERRY, *Ode'imindjibik*, heart berry root (Ojibwa), (*virginianus -a -um* of or from Virginia. Epithet was formerly capitalized.) fac-

Habitat: Grows in a variety of open habitats, wet to mesic prairies, savannas, & woods. Grasslands, roadsides, pastures. distribution/range:

Culture: ①No pre-treatment needed. Sowing outdoors in the spring is the easiest method (he99). ②Sow at +2 to +4°C (34-39°F) for 12 wks, move to 20°C (68°F) for germination (tchn). ②WILD STRAWBERRY can be established in restorations by throwing ripe fruits around.

seed counts & rates: 926,400 (aes12) seeds per pound.

availability: Seed is practically (or totally) nonexistent in the trade.

asexual propagation: Easy by division or separation of runners.

cultivation: Tolerates clay soils.

Description: Erect, herbaceous, native perennial, 4.0-6.0" tall forb; roots; culms sprawling vine, rapidly spreading; leaves basal, 3-parted, toothed; end tooth usually half as wide & shorter than the side teeth; leaflets stalked; flowers white, 5-merous; N. key features: ①Achenes imbedded in pits in the globose receptacle (w73).

Comments: status: phenology: Blooms (3)4,5,6. Fruits 4-7. In northern Illinois, collect seeds in June - July. Collect seeds in se Wisconsin in June - July (he99). Great in landscaping, wild gardens, pollinator gardens, forms a good ground cover that may be a bit aggressive near other low plants, quickly forming large colonies. Does not perform well with tall competition. Excellent, small, sweet, fruit. Fruit source nursery remnants.

“Our common wild strawberry. We do not know of the cultivated strawberry escaping in northern Illinois.” (ewf55) “Highly fragrant & delicious when ripened in the sun” (w73).

Associates: Pollinator friendly. Butterfly nectar plant, an important early bloomer. Pollinated by long-tongued bees, short-tongued bees, other *Hymenoptera*, *Diptera*, *Lepidoptera*. Attracts small mammals, songbirds, & game birds. The seed is dispersed by birds or small mammals, with new stands appearing up to 1000 feet from known plants. Walnut tolerant.

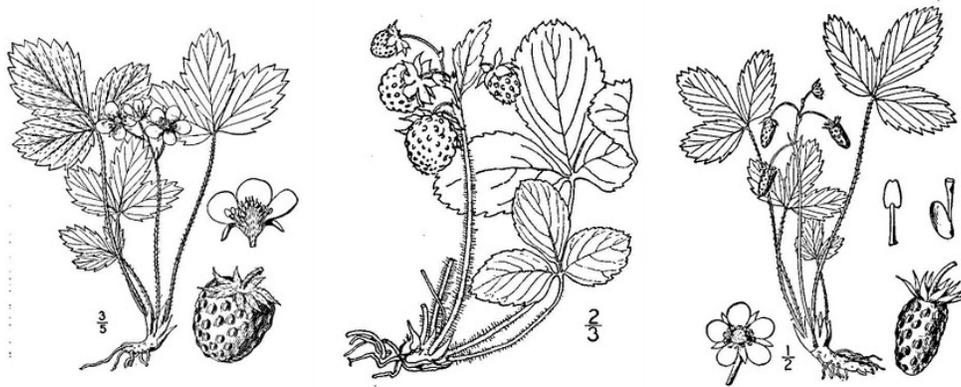
Once established, birds & small mammals will slowly spread this sp around a site, sometimes moving it 500 to 1000 feet at a time.

ethnobotany: Root used as medicinal plant by Ojibwa (sm32). Ojibwa medicine for cholera-infantum, leaves slightly astringent, roots diuretic (den28). Also used for food. Bet ya can't eat just one.

VHFS: Illinois has the sp & ssp *glauca* & *grayana*. Add variety m14.



Fragaria virginiana



F virginiana, ssp. *grayana*, & ssp. *virginiana*.

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>. Illinois map courtesy of ILPIN.

GEUM Linnaeus 1753 **AVENS** *Rosaceae* *Geum* (GAY-um) New Latin, from Latin *gaeum*, *geum*, herb bennet, from γεύμ, *geum*, to taste well, in reference to the roots of a sp, an ancient name used by Pliny for this group. The common name avens is adopted from Old French *avenice*, from Medieval Latin *avencia*, *-ancia*, *-antia*; of unknown origin. A genus of 40-60 spp of perennial herbs with pinnate or lyrate leaves, lower pinnate to 3-parted to not divided near the top; end leaflet often larger, flowers white, yellow, or purple, with long plumose persistent styles, fruits are achenes with hairs or hooks. Some authorities place *Waldstenia* in *Geum*.

Seeds germinate easily after cold moist stratification. Code B, seeds will germinate upon shifting to 70°F after 90 days of cold moist stratification at 40°F. (cu00)

Seeds of *Geum* germinate without pretreatment, but are sensitive to drying during testing (AOSA 1970). Seeds of *Geum aleppicum strictum* require light, & should be incubated at 60 - 80°. 30 days for total germ. (Wade says cold moist stratification for *G aleppicum*). *Geum rivale* poor germinator. Some germination with incubation at 65-80°. Cold moist stratification did not improve germination. (Lincoln 1983) (yy92)

Geum seeds germinate in 3-4 weeks at 68-86° F. Division in spring or fall.

Geum aleppicum Jacquin var **strictum** (Aiton) Fernald *MD YELLOW AVENS, (*aleppicus -a -um* of Aleppo (now Beroea, Syria), a leading city of north Syria, on the caravan route between the Euphrates & the Mediterranean. Beroea was made a Macedonian city by Seleucus Nicator between 301 & 281 BC. It was sacked by Chosroes I in AD 540.; *strictus -a -um* strict, upright, erect, from Latin *strictus*, drawn tight, bound up.) fac+

Habitat: Fens, wet meadows, & upland swamps. Bogs & boggy meadows. In Michigan, "Usually in moist places: meadows, marshy ground, along streams, thickets & swamps (coniferous & deciduous), deciduous, mixed, & coniferous forests, especially along trails & in clearings; ditches & roadsides" (rvw11). distribution/range: Circumboreal.

Culture: ①60 days cold moist stratification (pm09). ②Seeds germinate after about 60 days of cold moist stratification (he99).

seed counts & rates: 320,000 (pm02, aes12) seeds per pound.

bottom line: Genesis initial datum suggests seeds are nondormant. Plant dormant or spring. Germ 95%. Dorm 0.0%. Test 29 days.**

greenhouse & garden: Moist cold stratify or dormant seed, light.

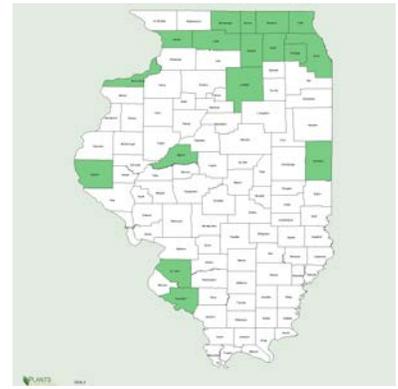
Description: Erect, herbaceous, perennial, native forb, 2.0-3.5' tall; culms stems stout & very hairy; leaves pinnately-divided, 3-parted, or undivided; toothed, end & side segments of basal leaves mostly alike; inflorescence of erect flowers on long stalks, about 200 or more hooked, dry seeds per head; flowers yellow, 5-merous, 0.5" wide, spreading petals only slightly longer than the sepals; N. key features: Stems very hairy, petals only slightly longer than the sepals, leaflets are toothed, & the 3 segments are mostly alike.

Comments: status: Endangered in Maryland. phenology: Blooms May - July. In northern Illinois, collect seeds in August - September. Collect seeds in se Wisconsin in September - October (he99). Calcareous & acidic soils.

Associates:

VHFS: American plants are separated from Eurasian plants as variety *strictum* (Aiton) Fernald.

[*Geum aleppicum* Jacq subsp *strictum* (Aiton) RT Clausen, *G aleppicum* Jacq var *strictum* (Aiton) Fern, *G strictum* Aiton, *G strictum* Aiton var *decurrens* (Rydb) Kearney & Peebles]



Geum aleppicum

Seed photo Tracy Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Geum canadense Jacquin WHITE AVENS, aka AVENS, WOOD AVENS, (*canadensis* -is -e of Canada or northeast USA.) FAC

Habitat: Woodlands, disturbed woodlands, increases in disturbed woods, common in wooded floodplains. Dry to moist woods, disturbed sites.

“Common in thickets & moist places.” (ewf55) distribution/range: In all Illinois cos.

Culture: ☉ Fall plant or cold stratify at 40°F for 1 month for best results. Sow on the soil surface at 70°F & water. (ewf11)

seed counts & rates: 357,480 (gnae08), 400,000 (usda, ecs), 480,000 (ew11) seeds per pound.

cultivation: Space plants 1.25-2.0'. Full sun to woodland, mesic soils. Anaerobic tolerance none. CaCO₃ tolerance medium. Drought tolerance low. Fertility requirement medium. Salinity tolerance none. Shade tolerant. pH 4.5-7.5.

bottom line: Plant spring or dormant. Genesis test data indicate modest to zero dormancy. Germ 88.7, 90, na, sd 5.8, r81-99 (18)%. Dorm 5.3, 3.0, na, sd 5.6, r0.0-13 (13)%. Test 27, 27, na, r24-29 days.**

Description: Erect, herbaceous, perennial, native forb; roots 4" minimum depth; culms 1.5-4.0'; leaves mostly 3-parted to undivided, toothed; long-stalked basal leaves with the end & side segments mostly alike; inflorescence of erect flowers on long stalks in a branched cluster or corymb; flowers white, 5 petaled with small fuzzy center, 0.5" wide, spreading petals nearly as long or longer than the sepals; fruit is hooked, dry seeds in a roundish cluster; N. key features: Flowers 0.5" wide, petals nearly as long or longer than the sepals, leaflets toothed, with the end & side segments mostly alike.

Comments: status: phenology: Blooms 5-7. Seed production nursery woodlands.

Associates: ethnobotany: Ojibwa medicine for diseases of women (den28).

VHFS: Var *camporum* (Rydbg) Fern & Weath, with more than 60 achenes per head, is in our area. Gleason (1963) said var is scarcely worthy of recognition, & is reduced to synonymy by some. Var *canadense* is also in our area. Var *texanum* Fern & Weatherby, TEXAN AVENS, grows in Texas, Oklahoma, & Louisiana. Some varieties may not warrant recognition.





Geum canadensis

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Geum fragarioides (Michaux) Smedmark. See *Waldstenia fragarioides* (Michaux) Trattinick subsp *fragarioides*.

Geum laciniatum Murray var **trichocarpum** Fernald *RI, TN ROUGH AVENS, aka HAIRY HERB-BENNET, (*laciniatus -a -um* lacinate, torn, deeply cut, slashed or lacerated, from Latin *lacinia*, noun, small piece of cloth to be sewn on a garment for lapels, &c, & *-atus*, adjectival suffix for nouns, possessive of or likeness of something, with, shaped, made, generally referring to the deeply for cut leaves; *trichocarpus -a -um* hairy-fruited, from Greek *trichos*, a hair, & *karpos*, fruit.) facw

Habitat: Somewhat weedy, wet meadows, mesic savanna, & upland swamps. Marsh borders, woodland borders, thickets, & roadside ditches. "Common in moist ground in woods, thickets, & in the open." (ewf55) distribution/range:

Culture: ☉ Fall plant or cold stratify at 40°F for 1 month for best results. Sow on the soil surface at 70°F & water. (ew11) Moist cold stratify or fall plant. Growth rate rapid. Seedling vigor medium. Vegetative spread rate none. 400,000 (usda, ecs), 480,000 (ew11), 483,751 (gnaec03) seeds per pound.

cultivation: Space plants 1.5-2.0'. Full sun to partial shade, mesic soils. Anaerobic tolerance low. CaCO₃ tolerance medium. Drought tolerance low. Fertility requirement medium. Salinity tolerance none. Shade tolerance intermediate. pH 5.0-7.0.

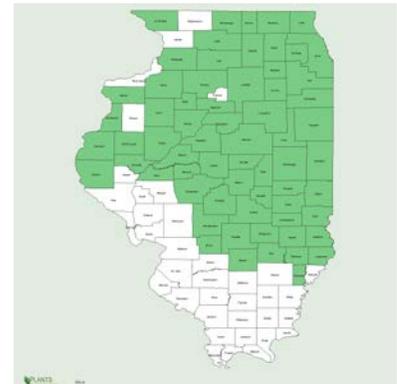
bottom line: Plant spring or dormant. Genesis test data indicate modest to zero dormancy. Germ 68-69%. Dorm 0.0-14%. Test 39 days.**

Description: Erect, herbaceous, perennial, native forb; roots; culms 1.0-3, multiple hairy stems; inflorescence of erect flowers on long stalks; leaves undersides silvery from fine hairs; basal leaves long-stalked, pinnately-divided into lobed & toothed segments, end & side segments mostly alike; upper leaves 3-parted; flowers white, tiny petaled, with large fuzzy center, maturing reddish brown, 5-merous, 0.33" wide, spreading petals much shorter than the sepals; N. key features: Flowers 0.33" wide, petals much shorter than sepals; fruit is hooked, dry seeds in a roundish cluster, leaves pinnately divided, with the end & side segments mostly alike.

Comments: status: Historical in Rhode Island. Special concern in Tennessee. phenology: Blooms 5,6,7. Seed source Whiteside Co. In 8 months storage lost only 2% viability, with lab noted zero percent dormancy. (abs/gni).

VHFS: Variety *laciniatum* has glabrous achenes. Var *trichocarpum* Fern, with achenes sparsely to densely pubescent with long stiff trichomes, is the common element in northeast Illinois. Many authors feel the latter is not a meaningful taxon. **reconcile vars m14.**

[*Geum laciniatum* Murray var *laciniatum*, *G laciniatum* Murray var *trichocarpum* Fern]





Geum laciniatum

Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Photo Robert H Mohlenbrock USDA-NRCS PLANTS Database - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Geum macrophyllum Willdenow * WI LARGE-LEAVED AVENS, aka BIG-LEAVED AVENS, (*macrophyllum* -a -um with large leaves, having elongated leaves or leaflets, from Greek μακρος, *macro*s, long; tall, high, deep, far, -o-, & φυλλον, *phylon*, leaf, foliage, & -us, Latinizing suffix.)

Habitat: Moist woods, rocky ledges. distribution/range: Native northeast, north, northwest, & west of our area. Boreal & montane.

Culture: ①Sow at 20°C (68°F), germinates in less than two wks (tchn).

availability: There are no commercial sources of seeds or plants.

Description: Erect, herbaceous, perennial, native forb; roots; culms 40" tall, hairy stems; leaves basal leaves long-stalked, end segment round to kidney-shaped, often 3-lobed, much larger than the side segments; upper leaves usually 3-parted; flowers yellow, 5-merous; N. key features: ①Flowers 0.33-0.50" wide, petals somewhat longer than sepals, end leaflet much larger than the side segments; inflorescence of erect flowers; fruit hooked dry seeds. ②Radical leaves lyrate-pinnate, the terminal leaflet much the largest (w73).

Comments: status: Special Concern in Wisconsin. phenology: Blooms May - June.

Associates:

ethnobotany: Used as medicinal plant by Ojibwa (sm32).

VHFS: Synonyms for variety *perincisum* (Rydbg) Raup; [*Geum macrophyllum* Willd subsp. *perincisum* (Rydbg) Hultén, *G macrophyllum* Willd var *rydbergii* Farw, *G perincisum* Rydbg, *G perincisum* Rydbg var *intermedium* B Boivin, *G urbanum* L subsp. *oregonense* Scheutz, *G oregonense* (Scheutz) Rydbg]



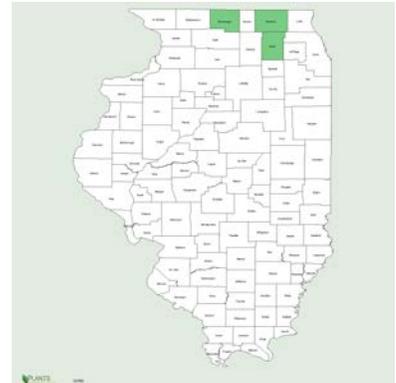


Geum macrophyllum

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Geum rivale Linnaeus *IN, WA PURPLE AVENS, aka CURE ALL, DROOPING AVENS, NODDING AVENS, WATER AVENS, WATER FLOWER, (*rivalis -is -e* pertaining to brooks, growing by streams.)

Habitat: Wet meadows, wet forests, & swamps. WHITE CEDAR fens, bogs, marshes, & soggy meadows (Hilty). In the southeast US, calcareous bogs, swamps, seepages, & wet meadows (w10). distribution/range: Circumboreal. In Illinois, Kane, McHenry, & Winnebago cos. We are at the southern edge of its range. It has not been observed in natural areas in decades, & may be extirpated in Illinois.



Culture: ① Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn). ② Seeds need no treatment (lbj). ③ “Seed - sow spring or autumn in a cold frame. When they are large enough to handle, prick the seedlings out into individual pots & plant them out in the summer.

Division in spring or autumn. This should be done every 3 - 4 years in order to maintain the vigor of the plant (Huxley 1992). Very easy, larger clumps can be replanted direct into their permanent positions, though it is best to pot up smaller clumps & grow them on in a cold frame until they are rooting well. Plant them out in the spring.”

availability: The sp is listed in AES (2010). At one time, plants were available from The Natural Garden. Availability is very limited for plants. Seeds are not in the trade.

cultivation: For ground cover, space plants 1.0’ on center. Wet to moist soils, full sun to partial shade, cool to mild summers. Acidic to calcareous soils.

Description: Native, erect, herbaceous, perennial, native forb, hairy; roots; culms 1’-2’ tall; basal leaves to 12", 3-5 parted, cauline leaves lobed; end leaflet oval to roundish, toothed & 3-lobed; stem leaves much smaller; inflorescence of several nodding flowers in an open cluster; flowers purple & yellow, 5-merous, 0.5-0.75" long, bell-shaped, petals yellowish with purple veins & a little shorter than the purple sepals; fruits are hooked dry spreading seeds; N. key features: ① Petals yellowish a little shorter than the purple sepals, nodding flowers. ② Flowers nodding, purple; petals erect cal segment (w73).

Comments: status: Endangered in Indiana. Sensitive in Washington. phenology: Blooms May - July. Occasionally cultivated in gardens. WATER AVENS produces a nodding flower similar to *Geum triflorum*, but a bit showier. Plant is self fertile. Very good in landscaping, woodland edges, savanna gardens, bog gardens, & ground cover.

Associates: Pollinated by bumblebees. Honeybees, Syrphid flies (*Rhingia sp*), & sap beetles seek nectar or pollen. The hooked-at-the-tip, long-styled achenes are an adaptation for bird or mammal epizoochory.

ethnobotany: Root aromatic & astringent. Native Americans used the root to treat diarrhea, dysentery, coughs, colds, fevers, & spitting of blood. Dried roots repel moths.

VHFS: Hybridizes with *Geum urbanum*. Improved selections are available.

www.pfaf.org/user/Plant.aspx?LatinName=Geum+rivale



Geum rivale

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Geum strictum Aiton YELLOW AVENS, aka UPRIGHT AVENS, “Less common than the two preceding (*G canadense* & *G laciniatum* & found in the same places.” (ewf955) Lumped with *Geum aleppicum*. Radical leaves pinnate (w73).



Geum strictum

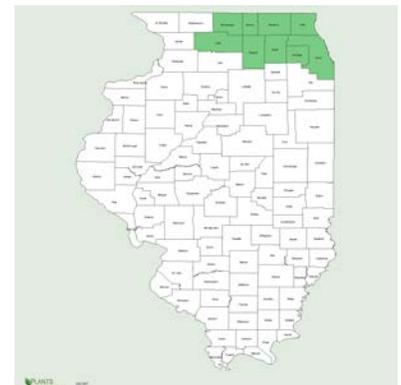
Geum triflorum Pursh *MI, NY PRAIRIE SMOKE, aka 3-FLOWERED AVENS, OLD MAN’S BEARD, OLD-MAN’S-WHISKERS, PRAIRIE AVENS, PURPLE AVENS, TORCH FLOWER, *Ne’baneya’nekweag’*. “it is one sided” (Ojibwa), (*triflorus -a -um* three-flowered.) [upl]

Habitat: Dry, sandstone & limestone prairies, calcareous & dolomitic gravel hill prairies. Full sun, dry to moderate moisture; prairies, woods; in sandy, loamy soils (fh). Dry-moist prairies & open woods, thrives in poor soil (pph).

“Common on high gravel & also on low prairies. It grows in large patches & blooms early so is very conspicuous on the gravel hills that border Rock River & the low prairies in Coon, Kent, & Grove Creek bottoms.” (ewf55)

distribution/range: Only in the top 2-3 tiers of cos in Illinois, more common north. Also known but not mapped from Lee Co.

Culture: ①Seeds have physiological dormancy, 5 months outdoor cold moist stratification or a minimum of 30 days cold moist stratification for Glacier National Park ecotype (Wick et al 2008). ②Cold moist stratification (Wade 1995). ③“Sow seed upon ripening & over winter flats, or fall sow. If not possible, try moist cold treatment. Light cover. Watch overwatering. Variable germination.” (mfd93). ④60 days cold moist stratification (pm09). ⑤Sow seeds immediately when ripe, or seeds germinate after about 60 days of cold moist stratification (he99). ⑥“30 days moist stratification improves germination, but not needed for good greenhouse crop. Field sow fall, early spring, fresh seed” (pnnd). ⑦Fall plant or cold stratify at 40°F for 1 month



for best results. Sow on the soil surface at 70°F & water. (ew11) Ⓢ Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn). Ⓢ Best results when planted immediately. Keep on drier side to avoid damping off. Sensitive to spring fires. Seeds need no treatment (pph). Ⓢ Germination poor. (tlw) Ⓢ Dry stratification or fresh seed. Seed sown in flats (as opposed to the ground) because seedlings grow slowly the first year. Remove seedlings from flats & transplant when leaves are 2 to 2.5 inches long. (tpg) Ⓢ Debearding facilitates handling of the seed but is not necessary to grow plants (cu00).

seed counts & rates: 432,000 (pm02), 488,000 (ew11), 528,000 (jfn04), 544,000 (shirley), 558,427 (gna04), 752,000 (aes12), 756,000; 759,799* (gnhm11), 859,848 (gna06) seeds per pound. Availability is limited to the extent this sp should not be part of any general seed mix.

availability: Seed & plants are available from many vendors. Seed may sell out late in the season. Plants may sell out mid season.

“*Geum triflorum* Dry hill prairie. Blooms late April & early May; RED SEPALS PINK PETALS. Harvest June. 1'; method #1, or sow seeds as soon as collected. Successful by SEEDLING TRANSPLANT. Sensitive to spring fires; can thrive in poor soils without grass. Best planted with small neighbors to avoid excessive damage by fires; flowers 2nd year.” (rs ma)

asexual propagation: Clump division in spring, carefully dividing rhizomes. To prevent overcrowding, divide clumps after 2 or 3 years of flowering. (tlp) Division easier. Separate transplants with light colored root from those with heavy black lateral roots. Including small sections of coarse old root on transplants will increase survival in dry areas.

cultivation: Space plants 1.0-1.25'. Needs sun & well-drained sandy soil with pH of 6.0 to 7.0. Plants spread rapidly, divide underground stems in late summer. (tlw) Easily transplanted, adults are drought resistant. Plant where grass is not heavy. (tlp) Adding lime helps. (tpg)

bottom line: Best from plugs. Hand seed in gravelly or sandy soils and lightly rake in a dedicated area where no grass or heavy forb matrix has been sown. Flip flop of late. Germ 60.5, 65, na, sd 24.2, r21-88 (67)%. Dorm 25.2, 12.5, na, sd 24.5, r2.0-71 (69)%. Test 32, 24, na, r24-35 days. (#12)**

greenhouse & garden: Fresh seed, or moist cold stratify or fall plant. Bottom heat helps in the greenhouse. Seeds need light to germinate, light soil cover. Easy by fresh or dry stratified seed.

Description: Erect, herbaceous, perennial, native forb; roots; culms 0.5-1.0' leaves basal 4"-8" long, pinnately-divided into 7-17 progressively larger leaflets; stem with a few small leaves; inflorescence of several flowers, nodding when young, becoming erect in seed; flowers inconspicuous reddish or pink to purple (purplish-white), 5-merous, 1.0" long, petals longer than the sepals; dry seeds with long, thread-like styles, seed is a plumed achene; N.

key features: Ⓢ Petals longer than the sepals, long, thread-like styles, leaves pinnately divided into 7-11 leaflets.

Ⓢ Bractlets linear, longer than the sepals (w73).

Comments: status: Threatened in Michigan & New York. phenology: Blooms 4-5. In northern Illinois, collect seeds in May - early-June. Collect seeds in se Wisconsin in May - June (Heon et al 1999). Landscaping, rock gardens, xeriscaping, attractive, coarsely-ferny foliage & feathery dried seed heads that are great in dried arrangements if picked before overly mature. Keep away from tall, aggressive neighbors. Sp slowly spreads by its roots, forming a ground cover of sorts. Seed source nursery production plots, genetic source Lee Co.

Associates: Pollinated by long-tongued bees, short-tongued bees, other *Hymenoptera*, *Diptera*, *Coleoptera*. Attracts upland gamebirds & songbirds. Reported as deer resistant.

ethnobotany: Used as medicinal plant by Ojibwa as a tonic & stimulant (den28).

VHFS: Formerly *Sieversia ciliata* (Pursh) Rydbg. In some recent works, this is *Erythrocoma triflora* (Pursh) Greene.

[*Erythrocoma grisea* Greene, *E triflora* (Pursh) Greene, *Geum ciliatum* Pursh var *griseum* (Greene) Kearney & Peebles, *G triflorum* Pursh f *pallidum* Fassett, *Sieversia triflora* (Pursh) RBr]

D Wick, T Luna, J Evans. 2008. Propagation protocol for production of container *Geum triflorum* (Pursh) Fassett plants (160 ml containers), USDI NPS - Glacier National Park, West Glacier, Montana. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 17 November 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Geum triflorum

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>. Illinois map courtesy plants.usda.gov.

Geum urbanum Linnaeus HERB BENNET, aka AVENS, (*urbanus -a -um* city-loving, from the city, urban, of towns)

Adventive, erect perennial forb. ☉ Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn).



Geum urbanum

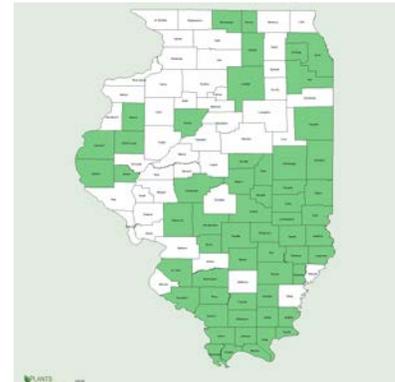
1st line drawing Walter Hood Fitch - Illustrations of the British Flora (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing public domain from Hippolyte Coste - Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes, 1901-1906.

Geum vernum (Rafinesque) Torrey & A Gray SPRING AVENS, (*vernus -a -um* vernal, of spring, from *vernus* pertaining to spring, from *vēr, vēris*, spring.)

Habitat: Woods, in rich soil. “Sp is distributed in shaded woodland paths; weedy areas” (Ilpin). In the se USA, “seepages, swamps, roadsides, disturbed areas; common (uncommon in DE, NC, & VA), probably both native & introduced in our area, the native occurrences now being supplemented by its spread along roads from further west” (w11). **distribution/range:** Occasional or rare in the northern ½ of Illinois.

Culture: There are no commercial sources of seeds or plants.

Description: Erect, herbaceous, perennial, native forb, 12-24” tall; roots; culms; some basal leaves long-stalked, almost undivided, stem leaves pinnately-divided to 3-parted; in short stalked cluster; flowers yellow to white, 5-merous, 0.13” wide, petals the same length as the sepals; fruit is dry achene;



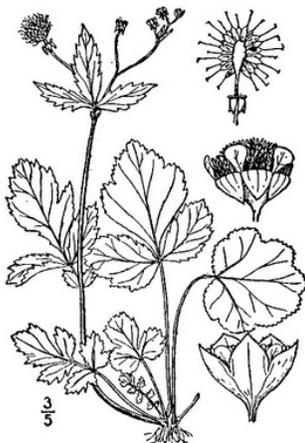
N. key features: ①Petals same length as the sepals, fruit in a short stalked cluster, some basal leaves almost undivided (fh). ②“Receptacle is stalked in the calyx” (Ilpin). ③Flowers yellow, erect, very small, sepals reflexed (w73).

Comments: **status:** Endangered in New York. **phenology:** Blooms April - May (June). C3.

“SPRING AVENS is an inconspicuous, early flowering, woodland plant which is common further south. We have found it in DeKalb Co close to our southern border & in Boone Co on our east border but not in Winnebago Co.” (ewf55)

Associates:

VHFS: [*Stylypus vernus* Raf] (*Stylypus vernus* Raf in w73).



Geum vernum

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Illinois map courtesy plants.usda.gov.

Geum virginianum Linnaeus CREAM AVENS, aka AVENS, CREAM-COLORED AVENS, (*virginianus* -a -um of Virginia. Epithet formerly capitalized.)

Dry woods rocks; common. In the southeast USA, bottomland forests, moist slope forests, swamp forests, & extending upslope to mesic or even dry sites, especially over mafic rocks (w10). distribution/range: erect perennial, 1.5' - 3' tall, flower greenish to yellow, 5-parted, 0.25-0.50" wide, petals shorter than the sepals;

availability: There are no commercial sources of seeds or plants.

Blooms June-Aug.



Geum virginianum

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image.

GILLENIA Moench 1802 **INDIAN PHYSIC, BOWMAN'S ROOT** *Rosaceae Gillenia* (gi-LEN-ee-a) in honor of Arnold Gillen, or Gill (*Gillenius*), 17th century German botanist; alternately from Greek γέλαω, *galeo*, to laugh, alluding to its exhilarating qualities. There is controversy about the fact *Gillenia* is a homonym or a paronym of *Gillena*, an older name. The genus name *Gillena*, as a synonym for *Clethra*, was never properly published by Michel Adanson in 1763. *Gillenia* is older than *Porteranthus* & should be used. 2 eastern North American spp of perennial rhizomatous herbs (subshrubs), having trifoliate leaves & white or pale rose flowers; leaves trifoliate, doubly serrate; fruits are follicles 2-valved, 2 to 4-seeded. *G aggregata* is a biennial (?) (pots 2000). The roots of some spp have been used as an emetic, cathartic, or tonic. x = 9. [*Porteranthus* (Britton ex Small)] Weakley (2015) maintains *Gillenia*. Mohlenbrock (2014) place these species in *Porteranthus*.

Seeds ripen early fall, small lobed capsules that crack when ripe. Easy by cold moist stratification. Code B seeds will germinate upon shifting to 70°F after 90 days of cold moist stratification at 40°F. (cu00)

Gillenia stipulata (Muhlenberg) Trelease *MD [also as *Gillenia stipulata* (Muhlenberg ex Willdenow) Nuttall, or as (Muhl ex Willd) Baill.] **INDIAN PHYSIC, aka AMERICAN IPECAC, BOWMAN'S ROOT, MIDWESTERN INDIAN PHYSIC, WESTERN INDIAN PHYSIC,**

Habitat: Dry or moist upland woods. Dry to mesic woodlands & forests.

Rocky slopes. In southeast USA, “dry to mesic woodlands & forests, especially over circumneutral soils derived from diabase (in NC) or greenstone (in VA)” (w11). distribution/range: Illinois is at a northwest limit of the sp range.

Culture: ①(Code C Ken Schaal) ②60 days cold moist stratification (pm09). ③Sow at 18-22°C (64-71°F) for 2-4 wks, move to +2 to +4°C (34-39°F) for 4-6 wks, move to 5-12°C (41-53°F) for germination (tchn).

seed counts & rates: 133,333 (gn) seeds per pound.

availability: There are few commercial sources of seeds or plants.

Availability is very limited.

Description: Flowers rose colored. key features: ①“Stipules are large & leaf-like; petals are strap-shaped” (Ilpin). ②Stipules leafy, ovate, doubly incised, clasping; readily distinguished from the former by the large clasping stipules (w73).

Comments: status: Endangered, extirpated in Maryland. phenology: SE USA blooms 5-6, fruits 7-10. Blooms 5-7. C3.

“Other common plants, which presented themselves at different places on our route through the prairies” (Short 1845).

Roots are said to be emetic, cathartic, or tonic, according to the dose (w73).

VHFS: [*Porteranthus stipulatus* B & B Small, Rydbg, *P stipulatus* (Muhlenberg ex Willdenow) Britton]



Gillenia stipulata

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

***Gillenia trifoliata* (Linnaeus) Moench** *MI BOWMAN’S ROOT, aka MOUNTAIN INDIAN-PHYSIC

Habitat: Dry to moist, upland woods & rocky banks. “Moist forests, roadbanks, forest edges” (w15). distribution/range: known from Wabash Co in southeast Illinois. (Ozarkian-Appalachian?)

Culture: Propagation: ①Sow at 18-22°C (64-71°F) for 2-4 wks, move to +2 to +4°C (34-39°F) for 4-6 wks, move to 5-12°C (41-53°F) for germination (tchn). ②From seed planted in early spring (lbj).

availability: Commercially available but limited.

asexual propagation: Root division in early spring.

cultivation: Well-drained, rich, rocky, acid soil, partial shade to shade. Tolerates lime, pH >6.8.

bottom line:

greenhouse & garden:

Description: flowers white to occasionally pink, 1.0”; key features: Stip. linear-setaceous, entire (w73).

Comments: status: Threatened in Michigan. phenology: Blooms April - June. Seed ripens early fall. Ripen Aug-Oct (w15).

Associates:



Porteranthus trifoliatus

ethnobotany: Roots are said to be emetic, cathartic, or tonic, according to the dose. Seeds brown, bitter.
VHFS: *Porteranthus trifolius* (Linnaeus) Britton.



Gillenia trifoliata

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy of ILPIN.

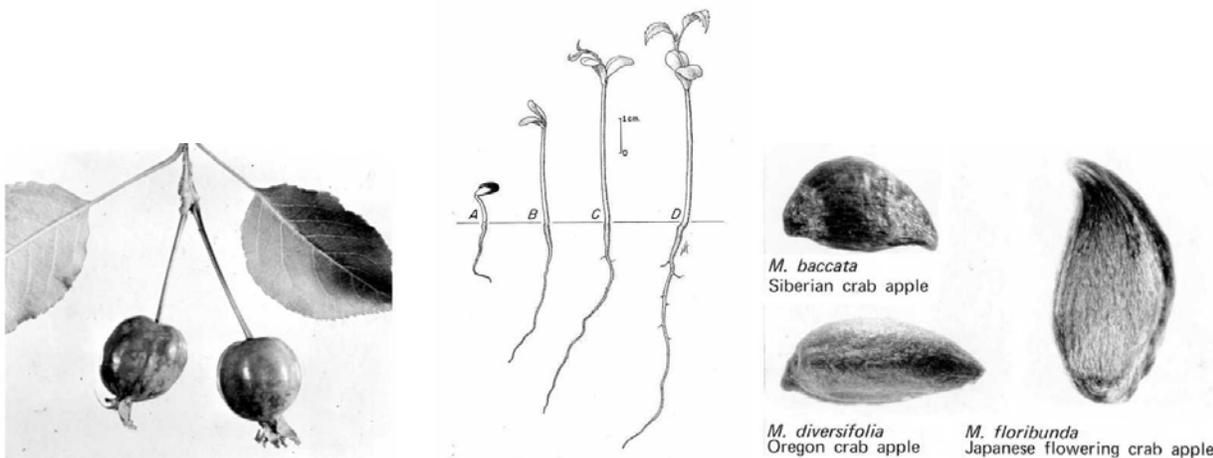
KERRIA AP de Candolle 1818 **KERRIA** for William Kerr, ob. 1814, Scottish horticulturalist at Kew Gardens, London, and plant collector in China.

Kerria japonica (Linnaeus) AP de Candolle or plain old DC JAPAN GLOBE FLOWER, (Epithet formerly capitalized.) Native of China or in some sources Japan.

MALUS P Miller 1754 **APPLE, CRABAPPLE** *Rosaceae Malus* (MAH-lus) from the Latin name for apple, *malus*, -*malus* from *mālus*, *māli* f, Latin an apple; bad, evil, wrong, from Greek *mēlea*, an apple tree. *Mālus* is apple, *mālus* is evil (from *mālus* -*a* -*um*, adjective, from *mālum*, *māli* n. anything bad, evil, mischief). A genus of 30-50 spp of north temperate zone trees & shrubs, not thorny, leaves not divided, flowers not in racemes, fruit is a pome. Woods, thickets, fencerows. Upland game birds eat fruit, seeds, & buds. Songbirds eat fruit & seeds. Terrestrial furbearers & small mammals eat fruit & bark. Rabbits damage young trees in winter. Deer eat twigs, foliage, fruit. Many ornamental selections are adversely impacted by *Popillia japonica*, JAPANESE BEETLES, many trees are almost entirely defoliated.

Malus × soulardii (LH Bailey) Britton (pro sp.) [*ioensis* × *pumila*] SOULARD CRAB, is known from Cook Co. *Malus angustifolia* (Aiton) Michx, SOUTHERN CRAB APPLE, is known from Hardin, Jackson, & Pope cos in Illinois [*Pyrus angustifolia* Ait]. **reconcile other spp with m14.**

☞ Apple seeds contain cyanogenic glucosides.



Fruit & seed photos & seedling drawing courtesy of USDA Forest Service, USDA-NRCS PLANTS Database. Seedlings line drawing courtesy of LH USDA-NRCS PLANTS Database.

Malus coronaria (Linnaeus) P Miller *NY SWEET CRABAPPLE, aka AMERICAN CRAB APPLE, CRAB APPLE, SWEET CRAB, SWEET-SCENTED CRAB-TREE, WILD CRAB APPLE, (*coronarius -a -um* coronaria used in or belonging to garlands, of crowns or wreaths, from Latin *corona*, *coronae*, crown, chaplet or wreath, fillet or circlet of gold or other material.) Subgenus *Chloromeles*.

Habitat: Clearings, woodlands & fencerows, bottoms, wooded slopes, thickets, & clearings. Stream banks; open woods; woodland edges. distribution/range:

Culture: propagation: ①Seed dormancy can be overcome by cold stratification (37-41° F for 30-120 days) (lbj).

availability: There are very few commercial sources of seeds or plants.

Description: Erect, deciduous native shrub or small tree, 12-36'; white & gray winter bark; flowers pure pink followed by green (yellow-green) fruit; very susceptible to leaf scab & rust that can often defoliate trees in late summer.

Comments: status: Endangered in New York. phenology: Blooms May-June. Fr as large (1 to 1 ½" diam) as a small apple, yellowish, hard & sour but esteemed for preserves (w73).

Associates: Of special value to native bees, honey bees, & bumble bees. Provides nesting sites, shelter & food for large & small birds.

ethnobotany: Fruit available about October. Good crop every 2-4 years. Used as food by Ojibwa, Menominee, & Iroquois (Reagan 1928, Morse 1822, Waugh 1916).

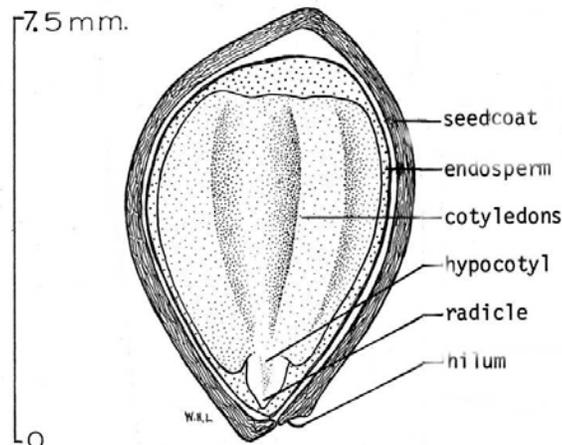
VHFS: [*Malus coronaria* (L) Mill var *dasycalyx* Rehder, *Pyrus coronaria* Linnaeus]



Malus coronaria



Malus coronaria



Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Seed drawing courtesy of WHL, courtesy of USDA Forest Service, USDA-NRCS PLANTS Database. Illinois map courtesy of ILPIN.

Malus ioënsis (AW Wood) Britton IOWA CRAB, aka IOWA CRAB APPLE, KLEHM'S BECHTEL CRAB, PRAIRIE CRAB, PRAIRIE CRAB APPLE, WESTERN CRAB APPLE, UPL Subgenus *Chloromeles*.

Habitat: Dry & sand prairies, mesic savanna, abandoned pastures, woodland edges, forest & prairie edge. "Our only wild crab. Abundant in woods, fence-rows, &c." (ewf55) distribution/range: In 101 Illinois cos.

Culture: Macerate to remove seed from fruit, cold moist stratify, 30-120 days or fall plant. There are few commercial sources of seeds or plants.

cultivation: Said to be very fire tolerant (AES (2010)). Hardy to zone 4.

Description: Deciduous, native shrub; flowers clear pink followed by sticky green apples, 6-15' (20).

Comments: status: phenology: Blooms 4-5. Shrub with tangled branches, gray bark during winter, usually covered in lichens, said to be aggressive(?). Attractive early spring color, followed by great texture. Apples from west of Walnut taste horrible; bad enough microbes won't eat them. Fresh fruits from that site do not spoil, they mummify. These 'apples' may have the texture, appeal, & chew-ability of a pine 2X4.

Associates: Wildlife eats fruits. Susceptible to leaf diseases.

ethnobotany: Fruits make fine jelly. Native Americans used the fruits as food, dried some for winter use, & made jelly (? Huron Smith 1928). The Mesquakie used the plant medicinally against smallpox.

VHFS: [*Malus ioënsis* (AW Wood) Britton var *bushii* Rehder, *M ioënsis* (AW Wood) Britton var *palmeri* Rehder, *Pyrus ioënsis* (AW Wood) LH Bailey]

The BECHTEL FLOWERING CRAB, aka BECHTEL'S CRAB, VIOLET-SCENTED CRABAPPLE, (variety 'PLENA') is derived from the IOWA CRAB & has large, double pink blossoms.



Malus ioënsis

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

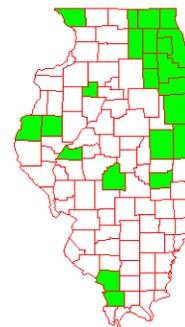
Malus pumila Mill CULTIVATED APPLE, aka *APFEL* (G), *APFELBAUM* (G) COMMON APPLE, COMMON APPLE TREE, PARADISE APPLE, POMMIER PARADIS (F), PARADIES-APFEL (G), (*pumilus* -a -um New Latin, small, dwarf, dwarvish, low or little, from *pumilus*, *pumili* m, Latin dwarf, the same as *nanus*.) Subgenus *Malus*.

“A rather common escape in Sugar River sand area; an uncommon escape elsewhere.” (ewf55) Native of Asia.

VHFS: [*Malus communis* Poir, *M domestica* (Borkh) Borkh, *M sylvestris* Mill, sensu Lange (1998), *Pyrus malus* auct non L, *P pumila* (Mill) K Koch]

In Woods (1873), this sp is *Pyrus Malus* L. “Fls expanding with the lvs, fragrant, large, clothing the tree in their light roseate hue, making ample amends for its roughness & deformity.---The Romans had 22 varieties (Pliny) but the number is now greatly increased. Probably nearly 1000 varieties are cultivated in the US.” 9w73)

Get more names at <http://www.plantnames.unimelb.edu.au/Sorting/Malus.html#pumila>



Malus pumila



Malus pumila

Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN.

Malus sieboldii (Regel) Rehder JAPANESE CRAB, aka TORINGO CRAB, TORINGO CRABAPPLE, (*sieboldii* for Philipp Franz van Siebold (1796-1866), German doctor, in Japan from 1823-1830, who introduced many Japanese plants into European gardens & publishing works on Japanese plants.)

VHFS: Now included in *Malus toringo* (Siebold) Siebold ex de Vriese. [*Pyrus sieboldii* Regel]



Malus sieboldii

Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image.

Pentaphylloides floribunda (Pursh) A Löve see *Dasiphora fruticosa* & *Potentilla fruticosa* (*Pentaphylloides* like *Pentaphyllon*, resembling five leaf, from Greek πεντα-, *penta*-, five, & φυλλον, *phyllon*, leaf, & -oides, Greek adjectival suffix indicating resemblance, having the form or nature of. *Pentaphyllon* is the Greek equivalent of the essentially Latin common name cinquefoil.) Sometimes included in *Dasiphora*, which see.

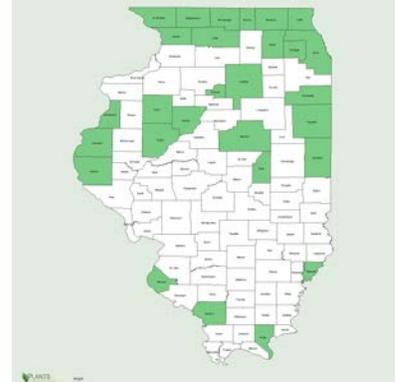
PHOTINIA Lindley 1821 **PHOTINIA, REDTIP** *Rosaceae Photinia* New Latin, from Greek *phōteinos* shining, bright, from φῶς, φῶτος, *phōs*, *phōtus*, light, & New Latin -ia, because of the brilliant, glossy foliage. Many authors include *Aronia* in this genus, but Weakley (2012b) maintains them separately. A genus of about 35 spp of trees &

shrubs of Central America & Asia. Usually considered an Asian genus, some include northwestern & Midwestern chokeberries in this genus, as does Mohlenbrock (2014). Woods (1873) lists *P arbutifolia* as a California native.

PHYSOCARPUS (Cambessèdes) Rafinesque 1838 **NINEBARK** *Rosaceae* *Physocarpus* (fi-so-KAR-pus) bladder fruit, from ancient Greek *φῦσα*, *phusa*, *phusa*, a pair of bellows, bladder, bubble & *καρπον*, *karpon* a fruit, for the inflated, bladder-like fruits. A genus of 3-5 spp of deciduous shrubs with leaves lobed, flowers white, head rounded cluster, exfoliating bark, thornless, of North America & northeast Asia. [*Physocarpus* Maximowicz]

Physocarpus opulifolius (Linnaeus) Maximowicz *FL, NY COMMON NINEBARK, aka ATLANTIC NINEBARK, EASTERN NINEBARK, NINEBARK, (*opulifolius -a -um* opulifolius (op-ew-li-FO-lee-us) New Latin opulus-leaved, with leaves like *Viburnum opulifolius*, or with leaves like *opulus*, the guelder-rose, a type of maple.)

Habitat: Dry woodlands, flood plains, borders of wetlands, shores, rocky banks, & thickets. Moist, sandy or rocky soil, especially along streambanks & shores, rocky slopes, margins of lakes & pond; rocky slopes & banks, moist swales, gravel bars, limestone cliffs. distribution/range: This plant used to grow in shallow soils developed on bedrock on a north-facing roadcut by Meiner's Wetland (a Lee Co record) & on the floodplain of Tomahawk Creek north of LaSalle.



Culture: Viable seed set is typically low. ①60 days cold moist stratification (pm09). ②Seeds germinate after about 60 days of cold moist stratification (he99). ③Untreated seed can be fall planted, or cms seed spring planted (yy92). ④Untreated seeds germinate without pretreatment (dh87). ⑤Fresh seed germinates best (63%) when started at 70° F. Fresh seed started at 40°F germinated 27%. Dry stored seed started at 70° F did not germinate. Dry stored seed started at 40° F germinates 42%. (nd91).

seed counts & rates: 300,000 (pm02), 544,000 (jfn04), 907,200 (aes10) seeds per pound.

availability: Seed sources are very limited in quantity & genetics. Commercial availability of plants is very good, but almost no local ecotype materials.

asexual propagation: Softwood cuttings.

cultivation: Transplants easily BR or B&B. Clay soil tolerant. Calcareous soils.

bottom line: Pending. Best established from containerized materials.

greenhouse & garden: Dry storage (180), moist cold stratify or dormant seed.

Description: Large, deciduous, native shrub, (3-)5-10'; arching branches, exfoliating winter bark; leaves yellow orange fall color; flowers perfect, creamy-white, followed by reddish seed capsules in attractive clusters; fruits are diverging follicles, smooth, shiny, purplish, 0.25" long in clusters of 3-5, with 2 hard shiny tan seeds; key features: ①Leaves roundish, 3-lobed (w73).

Comments: status: Endangered in Florida & New York. phenology: Blooms 5,6. NINEBARK ripens from late August to early October. Collect seeds in se Wisconsin in July - August (he99). Landscaping, specimen plants, naturalizing, pollinator gardens, rain gardens, spring white flowers & exfoliating multi-colored bark.

"Not common in the co. It occurs occasionally in boggy places as in the Searle Tract & more frequently on stream banks, especially Kishwaukee River in its course through this & Boone cos. Also known in Stephenson Co. it is used in shrubbery plantings but we do not know of it escaping." (ewf55)

Associates: Pollinator friendly. Butterfly nectar plant. Pollinated by insects, especially *Diptera*. Attracts insects, attracts upland game birds, small mammals, intermediate wildlife value. Few diseases or pests. Walnut tolerant.

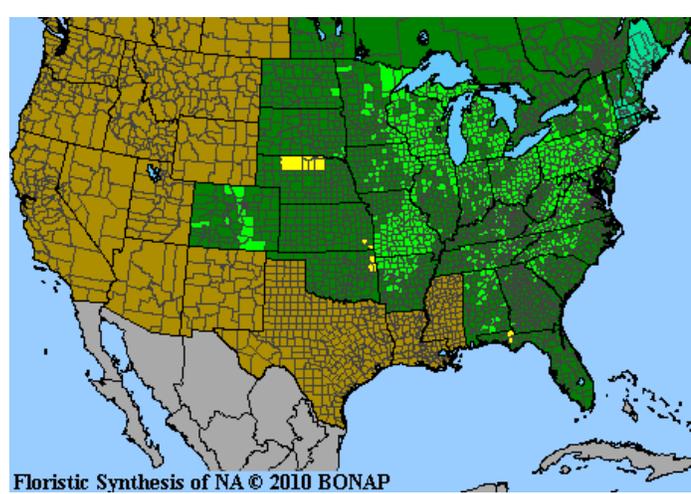
ethnobotany: Used as medicinal beverage by???

VHFS: Formerly *Spiraea opulifolia* Linnaeus. The form "nana" is listed in some catalogues. Several other horticultural varieties are known, some based on foliage color. Typically available at your local box store.

For variety *intermedius* (Rydb) BL Rob: MIDWESTERN NINEBARK, ATLANTIC NINEBARK, with follicles stellate-pubescent [*Opulaster intermedius* Rydbg, *Physocarpus intermedius* (Rydbg) CK Schneid.]

For variety *opulifolius*: EASTERN NINEBARK, COMMON NINEBARK, with follicles glabrous, growing on stream banks, riverside thickets, rock outcrops, cliffs, especially over mafic or calcareous rocks (w10), [*Opulaster alabamensis* Rydbg, *O australis* Rydbg, *O opulifolius* (L) Kuntze, *O stellatus* Rydbg, *Spiraea opulifolia* L]

Ironically, ATLANTIC NINEBARK is an essentially land locked sp, growing in only 2 states that border the Atlantic, while COMMON NINEBARK grows in 13 states & 3 Canadian provinces that border the Atlantic.



Floristic Synthesis of NA © 2010 BONAP

Physocarpus opulifolius

Black & white seed photos courtesy of USDA-NRCS PLANTS Database, not copyrighted images. Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Seed color photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov. North America map courtesy of BONAP (2010)



Varieties *opulifolius* & *intermedius* respectively.

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image (variety *intermedius*).

POTENTILLA Linnaeus 1753 **Cinquefoil, Five-fingers, Potentilla** *Rosaceae* *Potentilla* from Latin, *potentia*, diminutive of *potens*, *potentis*, powerful, for the potent medicinal properties of this genus. Depending on the definition, a genus of 400-500 spp of perennial herbs (& formerly shrubs), leaves pinnately or palmately divided, toothed most with 5 leaflets, flowers yellow, fruit small, hard, 1-seeded achenes. Many spp are attractive butterfly nectar sources that should be included in pollinator gardens.

Yet another hacked up genus, now split into at least 5-7 genera. Some spp are now placed in *Argentina*, *Comarum*, *Drymocallis*, *Dasiphora* (or *Pentaphylloides*), *Horkelia*, *Ivesia*, or *Sibbaldiopsis*. *Sibbaldiopsis* for Dr. Robert Sibbald, 17th century professor at Edinburgh & Greek οψις, *opsis*, appearance, sight, view, referring to similarity to *Sibbaldia*.

Seeds ripen in summer, turning from green to brown. Easy by cold moist stratification. Code B. Stoloniferous spp are easy from offsets. Clump-type spp can be divided. (cu00) Seeds of *P recta*, *P norvegica*, & *P glandulosa* require light for germination. *P recta* germinates between 60-80° F (yy92).



Potentilla biennis & *P glandulosa*

Seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>.

Potentilla anserina Linnaeus *IN, IA, PA [new nomenclature this will be *Argentina anserina* (L) Rydbg] SILVERWEED, aka GOOSE GRASS, SILVERWEED CINQUEFOIL, (*anserinus* -a -um anserinus meadow-loving, loved by geese, or belonging to geese, or growing on land grazed by geese from Latin *anser*, a goose, & -inus, adjective suffix for nouns: belonging to or resembling; of or pertaining to geese, goose-grease, goose down, from Greek *anser*, a goose sacred to Juno.) facw+

Habitat: Characteristic of dry soils of the beaches & pannes of Lake Michigan, sand banks, & gravel bars. distribution/range: Circumboreal. A boreal & alpine sp. The south end of Lake Michigan is at the southern limit of the sp range. Introduced in Tennessee. “A fine species, on wet shores & meadows, N Eng to Arc Am” (w73).

Culture: ①Montana ecotype seed is physiologically dormant; cool dry stored seed needs no treatment (Winslow 2002). ②Seeds germinate after about 60 days of cold moist stratification. Seeds germinate most successfully in cool soil. Sow in early winter through early spring. (he99) Growth rate rapid. Seedling vigor high. Vegetative spread rate rapid. Spreads rapidly from seed.

seed counts & rates: 1,200,000 (usda) seeds per pound.

availability: There are no commercial sources of seeds or plants.

asexual propagation: Easily propagated from offsets.

cultivation: Sand sp, tolerant of coarse, medium & fine textured soils. Anaerobic tolerance medium. CaCO3 tolerance medium. Drought tolerance low. Fertility requirement low. Salinity tolerance low. Shade tolerant. pH 7.0-8.0.

Description: Native decumbent, herbaceous, perennial forb; stoloniferous, 6” minimum root depth; culms 2.0-6.0(-8.0)” tall, stems long, runners, with small leaf clusters & flower stalks arising from the nodes; leaves to 12” long, pinnately divided, leaflets sharply toothed, silvery below with long hairs; flowers yellow, 5-merous, 0.75” wide, solitary on thin, leafless stalks, axial or from the mother plant; fruit dry, deeply grooved, seeds as thick as wide; N 2n = 28, 42 (China). key features: ①Long, pinnately divided leaves, silvery hairy below. ②Leaves interruptedly pinnate; leaflets many pairs, canescent beneath (w73).



Potentilla anserina

Comments: status: Threatened in Indiana, Iowa, & Pennsylvania. phenology: Blooms (5)6-9. Collect seeds in se Wisconsin in September to October (he99). Calcareous soils, rock gardens, stoloniferous, forms colonies, ground cover in harsh soils. Does not tolerate grassy competition.

VHFS: [*Argentina anserina* (L) Rydbg var *concolor* Rydbg, *A argentea* (L) Rydbg, *Potentilla anserina* L, *P anserina* L f *anserina*, *P anserina* L f *sericea* (Hayne) Hayek, *P anserina* L var *concolor* Ser., *P anserina* L var *sericea* Hayne, *P anserina* L var *yukonensis* (Hultén) B Boivin, *P egedii* Wormsk. subsp. *yukonensis* (Hultén) Hultén, *P yukonensis* Hultén]

SR Winslow, 2002. Propagation protocol for production of *Argentina anserina* seeds; USDA NRCS - Bridger Plant Materials Center, Bridger, Montana. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 14 September 2007). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Potentilla anserina

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora:*

Uncopyrighted Draught

Field office illustrated guide to plant spp USDA Natural Resources Conservation Service. Not copyrighted image. 3rd line drawing Walter Hood Fitch - Illustrations of the British Flora (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Credit: Photo by Leo Michels - Source: <http://www.imagines-plantarum.de/> Public domain image. Illinois map courtesy of ILPIN.

Potentilla argentea Linnaeus ♣ SILVERY CINQUEFOIL, aka HOARY FIVE-FINGERS, SILVERY FIVE-FINGERS, (*argenteus -a -um* argenteus Greek silver; silvery.)

Habitat: Dry disturbed sites; introduced, naturalized from Europe. “Common in dry places that are sandy or gravelly.” (ewf55) **distribution/range:**

Culture: ① Sow at 20°C (68°F), germination slow (tchn).

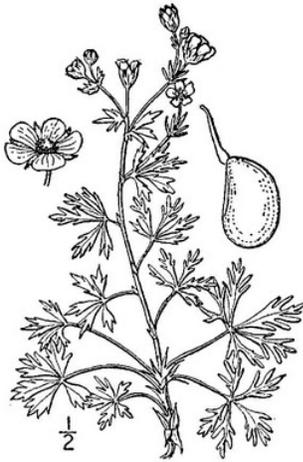
Description: Erect perennial branching forb; culms 1” to 20”, leaves palmately-lobed into about 5 narrow leaflets; deeply toothed; undersides of leaves silvery from fine hairs; flowers yellow, 5-merous, 0.25-0.33" wide, petals about the same size as the sepals; inflorescence a branched cluster or cyme; fruits are dry smooth seeds; N. **key features:** ① Petals about the same size as the sepals, underside of the leaves silvery. ② Leaflets oblong-cuneiform, silvery canescent beneath; flowers in a cymous corymb (w73).

Comments: **status:** **phenology:** Blooms June - September.

“A pretty plant, on dry or rocky hills, Canada and N States, remarkable for the silvery whiteness of the lower surface of the leaves” (w73).

Associates:

VHFS:



Potentilla argentea

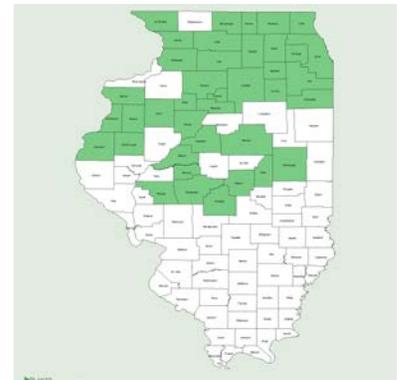
1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Credit: Photo by Leo Michels - Source: <http://www.imagines-plantarum.de/> Public domain image. Line drawing public domain from Hippolyte Coste - Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes, 1901-1906.

Move to Drymocallis?

Potentilla arguta Pursh *AR, CT, OH [new nomenclature his will be *Drymocallis arguta* (Pursh) Rydberg, TALL DRYMOCALLIS, TALL WOOD-BEAUTY] PRAIRIE CINQUEFOIL, aka CINQUEFOIL, TALL CINQUEFOIL, TALL POTENTILLA, (*argutus -a -um* argutus, sharp, fine pointed, sharply toothed, serrated, from Latin *argutus*, that which becomes acute to the senses; sharp, fiery, shrill, clear, pungent, pointed, referring to the sharp teeth on the leaves.)
facu

Habitat: Dry rocky or gravelly soil of woods & dry mesic prairies. Mesic, dry, hill, gravel, & sand prairies; dry & sand savannas. “Common on dry prairies especially the gravelly areas in the Rock River valley.” (ewf55) In the se USA greenstone barrens (w07). Tolerant of medium textured soils. Anaerobic tolerance medium. CaCO₃ tolerance low. Drought tolerance low. Fertility requirement low. Salinity tolerance none. Shade tolerance intermediate. pH 6.0-8.0. **distribution/range:**

Culture: ① “Moist cold treatment, or fall sow. Germinates better in cooler soils; sow very early spring or late fall. Very light to no cover. Very good germinator.” (mfd93) ② Moist cold stratify, cool soils (Wade95). ③ Surface



Uncopyrighted Draught

sow, seeds are very small or need light to naturally break dormancy & germinate. Seeds germinate most successfully in cool soil. (pm09). ④Seeds germinate after about 60 days of cold moist stratification. Seeds germinate most successfully in cool soil. Sow in early winter through early spring. (he99) ⑤“30 days moist stratification required for germination. Field sow fall.” (pnnd). ⑥Sow at +2 to +4°C (34-39°F) for 12 wks, move to 20°C (68°F) for germination (tchn). ⑦Bb02 report the seed to have physiological dormancy, & recommend cold moist stratification for 120 days with germination at 18 to 21°C. Moist cold stratify or dormant seed, light, cool soils. Growth rate moderate. Seedling vigor low. Vegetative spread rate none. Spreads slowly from seed.

seed counts & rates: 1,808,000 (sh94, aes10), 1,814,400 to 2,800,000 (jfn04), 2,802,469 (gnh14), 3,006,623 (gnh02), 3,141,869 (gna06), 3,219,858 (gna05), 3,478,927 (gna11), 3,680,000 (pm02), 4,403,883 (usda) seeds per pound.

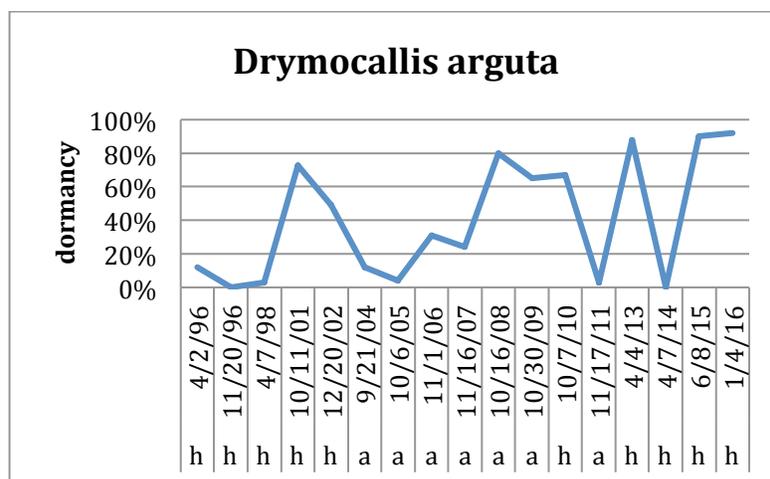
availability: Seed & plugs are generally widely available. Bare root plants in season. Plugs may be in short supply late summer through fall.

“*Potentilla arguta* General prairie. Blooms early July to early August; WHITE. Harvest October. 2 1/2'; easy by method #1, SEEDLING TRANSPLANT, SPRING BROADCAST. Even though seeds small, emergence & growth good; blooms 2nd year; a good garden ornamental, but susceptible to aphids.” (rs ma)

asexual propagation: Division of mature plants.

cultivation: Space plants

bottom line: Dormant seeding is best. Dormancy varies from year to year, results are possible from spring seeding, but 50+% of lots are significantly to strongly dormant. For good field results dormant seed or cold moist stratify for greenhouse crops. Flipflop, germ & dorm highly variable. Germ 45.4, 47, 49, sd 30.1, r5.0-96.5 (91.5)%. Dorm 40.7, 31, 12, sd 34.9, r0.0-92 (92)%. Test 33, 32, 30 r24-43 days. (#17:3)**



Description: Erect herbaceous, perennial, native forb (subshrub), covered with fine brownish hairs; roots 10” minimum root depth; culms 1.5-3.0', culms unbranched to the inflorescence; leaves pinnately divided; basal leaves long-stalked & with 7-11 leaflets; upper leaves with usually only 5 leaflets flowers white-yellow, 5-merous, 0.50-0.75" wide, petals slightly longer than the sepals; inflorescence a branched, tight cluster or cyme; fruits are dry seeds; N. key features: ①Plant covered with fine brown hairs, petals slightly longer than sepals, inflorescence a tight cyme, basal leaves compound with 7-11 leaflets. ②Grayish, flowers in dense terminal cymes (w73).

Comments: status: Threatened in Arkansas. Special Concern in Connecticut. Endangered in Ohio. phenology: Blooms (5)6,7,8. In northern Illinois, collect seeds in late August through mid-October. Collect seeds in se Wisconsin in October (he99). Attractive cut flowers & dried seed heads. Useful in landscaping, xeriscaping. Seed source nursery production plots genetic source CNW RR at Nelson, Lee Co, & Big Rock Twp, Kane Co (Horlock).

Bob Horlock was Seedsman for The Natural Garden in the 1980s & early 1990s, & a pioneer in this industry. We were fortunate to have a friendly business relationship with Bob during the early years of our nursery. Bob’s seeds were collected in DuPage, Kane, & Will Cos. We traded seeds back & forth with him, & several of our production plots originate from his collections. Bob passed away in the early 1990s.

“Other common plants, which presented themselves at different places on our route through the prairies”

Potentilla arguta Pursh as *Boottia sylvestris* Bigel. (Short 1845).

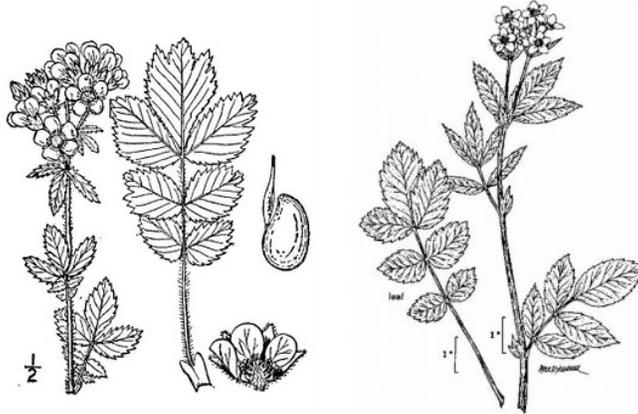
Associates: Pollinated by bees. Reported as deer resistant.

ethnobotany: Used as medicinal plant by Ojibwa (den28). Common name FIVE FINGER, *Gi'tciode'imini'dji'bik*, meaning big heart-berry root, used as Ojibwa headache medicine.

VHFS: Placed in *Drymocallis* by Mohlenbrock (2014). Densmore's 1928 reference is to *Drymocallis arguta* (Pursh) Rydbg.

In Britton & Brown (1913), this is *Drymocallis agrimonioides*. Woods (1873) lists synonyms *P. confertiflora* Hitchcock & *Bootia sylvestris* Bw. [*Drymocallis agrimonioides* (Pursh) Rydbg, *D arguta* (Pursh) Rydberg, *Geum agrimonioides* Pursh, *Potentilla arguta* Pursh var *arguta*] Ours is the widespread ssp *arguta*. Ssp *convallaria*, CREAM CINQUEFOIL, grows in the western USA.

CC Baskin & JM Baskin, 2002. Propagation protocol for production of container *Potentilla arguta* Pursh plants; University of Kentucky, Lexington, Kentucky. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 26 April 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Potentilla arguta

1st line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image.

Potentilla canadensis Linnaeus DWARF CINQUEFOIL, aka FIVE-FINGERS, HAIRY FIVE-FINGERS, RUNNING FIVE-FINGERS, (*canadensis* –is -e canadensis (kan-a-DEN-sis) of Canada or NE USA. Epithet formerly capitalized.) Common in fields & thickets (w73). Next to, but not in Illinois (humorous to Quad City insiders only). Mapped from Kentucky, Missouri, Iowa, & Wisconsin. ☉Sow at +2 to +4°C (34-39°F) for 12 wks, move to 20°C (68°F) for germination (tchn).

key features: Ped. axillary, solitary (w73).



Potentilla canadensis

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society.

Potentilla fruticosa Linnaeus see *Dasiphora fruticosa* (Linnaeus) Rydberg ssp *floribunda* (Pursh) Kartesz, or departures there of.

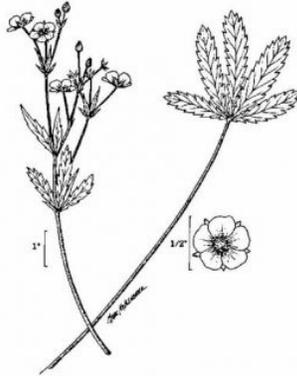
Potentilla gracilis Douglas ex Hook. var **flabelliformis** (Lehm) Nutt ex Torr & A Gray ♣ COMB FIVE-FINGERS, aka NORTHWEST CINQUEFOIL, (*gracilis* -is -e Latin slender, graceful.)

Introduced perennial forb, rare in northern Wisconsin.

Leaves alternate, entire, with prominent midvein.

Sp is of special value to native bees.

VHFS: [*Potentilla flabelliformis* Lehm]



Potentilla gracilis

Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Photo Robert LH Mohlenbrock USDA-NRCS PLANTS Database - Not copyrighted image. 2nd seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>

Potentilla inclinata Vill ♣ ASHY CINQUEFOIL, (*inclinatus* -a -um bent-downward, inclined)

Adventive perennial forb

VHFS: [*Potentilla canescens* Besser, *P intermedia* L var *canescens* (Besser) Rupr.]



Potentilla inclinata



Potentilla inclinata

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society.

***Potentilla intermedia* L** DOWNY CINQUEFOIL, (*intermedius -a -um* intermediate, indicating that a sp was halfway between two other spp in regard to one or more characteristics.)

Introduced perennial forb.



Potentilla intermedia

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society.



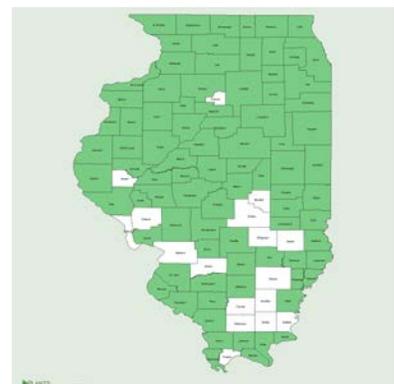
Potentilla intermedia

***Potentilla norvegica* Linnaeus ssp *monspeliensis* (L) Asch. & Graebn.** ROUGH CINQUEFOIL, aka NORWEGIAN CINQUEFOIL, STRAWBERRY-WEED, (*norvegicus -a -um* yumpin yimminy, Norwegian, of or from Norway. Epithet formerly capitalized.)

Habitat: Dry disturbed sites. “Common, usually in moist places. (*P norvegica* L)” (ewf55 as *P monspeliensis* L) distribution/range: In spite of the name, the ssp is native. A complex circum-boreal sp complex with native & introduced elements (w11).

Culture: There are no commercial sources of seeds or plants.

Description: Erect, herbaceous, annual to perennial native forb; roots; culms 1' - 3' stems very leafy, stout, finely hairy, mostly branched; leaves 3-parted, elliptical to widely oval to 3" long, with rounded teeth; inflorescence with many flowers in a tight, branched cluster or cyme; flowers yellow, 5-merous, 0.33" wide, petals nearly as long as the sepals; fruits are dry seeds; N. key features: ①Petals are nearly as long as the sepals, leaves are 3-parted.



②Hirsute, calyx exceeding the emarginate petals (w73).

Comments: status: phenology: Blooms June - August.

Associates: ethnobotany: Used as medicinal plant by Ojibwa & Pottawatomie (sm32, 33). Ojibwa medicine for sore throat (den28).

VHFS: Referred to by some as *Potentilla monspeliensis* Linnaeus, including Britton & Brown (1913). Ssp *norvegica* is introduced.

[*Potentilla hirsuta* Michx, *P labradorica* Lehm, *P monspeliensis* L, *P norvegica* L subsp *hirsuta* (Michx) Hyl, *P norvegica* L var *hirsuta* (Michx) T&G, *P norvegica* L subsp *monspeliensis* (L) Asch & Graebn, *P norvegica* L var *labradorica* (Lehm) Fern]



Potentilla norvegica

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Color illustration Jacob Sturm, Johann Georg Sturm - *Deutschlands Flora in Abbildungen* (1796). Copyright expired. Source: www.biolib.de.

Potentilla palustris (Linnaeus) Scopoli [revised nomenclature this will be *Comarum palustre* L, as it was in nlb05] MARSH CINQUEFOIL, aka MARSH LOCKS, PURPLE MARSHLOCKS, *Bine 'bub*, prairie chicken or grouse leaf, (Ojibwa) (*palustris -tris -tre* (pa-LUS-tris) marsh-living, of swamps, marshes, or growing in bogs, marsh loving, from Latin *paluster -tris -tre* marshy, boggy)

Habitat: Bogs, swamps, streambanks, & sphagnum swamps; in mucky, peaty soils. In Michigan, "bogs & conifer swamps, swales & marshes, shores & stream borders, usually in quite wet situations" (rvw11). distribution/range: Rare in Illinois, Cook, Lake, & McHenry cos. Boreal, northern Illinois is at the southern limit of the sp range.

Culture: ①60 days cold moist stratification. Surface sow, seeds are very small or need light to naturally break dormancy & germinate (pm09). ②Sow at max 5°C (41°F), germination irregular, often several months (tchn).

availability: There are very few commercial sources of seeds or plants.

Availability is strictly limited, sometimes sold as an aquarium or pond plant.

Description: Sprawling, herbaceous, perennial, native forb, 8"-24" tall, emergent, semi-aquatic; roots from long rhizomes; culms stems reddish-brown, coarse, somewhat woody below; leaves long stalked, odd pinnate, 5-7 leaflets, oblong to elliptical, sharply toothed; inflorescence a few-flowered, leafy cluster; flowers red to purple (purple, dark maroon, bordeaux), 5-merous, 0.75" wide, petals half as long as the sepals; fruit enlarged, ovate, spongy, persistent, dry head, seeds smooth, dry; N. key features: Petals ½ as long as the sepals, leaves pinnate into 5-7 leaflets.

Comments: status: phenology: Blooms June - August.

Associates: ethnobotany: Used as medicinal plant by Ojibwa (sm32). Ojibwa medicine for dysentery. Roots are bitter & astringent, but apparently not used in white medicine (den28)

VHFS: Some current authorities place this in the genus *Comarum*.

[*Potentilla palustris* (L) Scop, *P palustris* (L) Scop var *parvifolia* (Raf) Fern & BLH Long, *P palustris* (L) Scop var *villosa* (Pers) Lehm] *Coumarum palustre* L in w73.



Potentilla palustris



Potentilla palustris

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. 3rd line drawing Walter Hood Fitch - Illustrations of the British Flora (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. 4th line drawing public domain from Hippolyte Coste - *Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes*, 1901-1906.

***Potentilla pensylvanica* Linnaeus PENNSYLVANIA CINQUEFOIL, & PRAIRIE CINQUEFOIL,**

Habitat: distribution/range: Reported from Illinois by plants.usda.gov. Mapped from McHenry Co by BONAP. Greenland to Alaska, south to new Hampshire & Nevada.

Culture: propagation: ① Sow at 20°C (68°F), germinates in less than two wks (tchn). ② Untreated seeds, Sprague Lake, Colorado ecotype, germinated near 100%, 70° day 55° night (Butler & Frieswyk 2001).

Description: Erect, perennial forb, silvery-hairy; tap-rooted; stems 1.0-2.0'; leaves 5-15, with long petioles, twice pinnately divided, edges of the leaflets rolled under, cauline opposite, small & scattered, green or silvery-hairy, especially below; inflorescence a cyme; flowers yellow, 0.25" wide, 5-merous; followed by many, tiny ribbed nutlets; **key features:** ① Cyme fastigiate, at length expanding (w73).

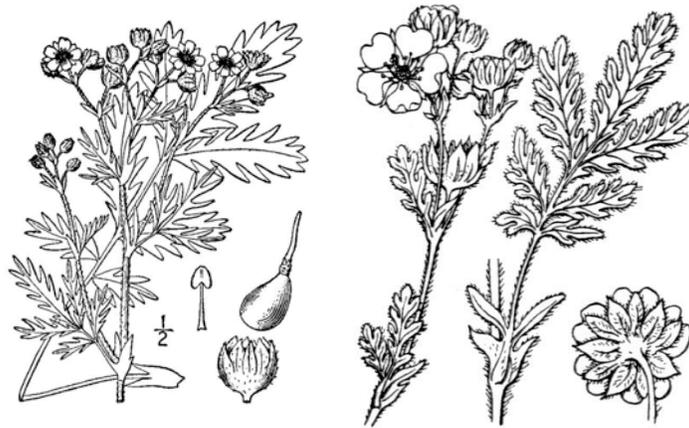
Comments: status: Threatened in Iowa & Michigan. phenology: Blooms June - August.

Associates: Sp is of special value to native bees.

ethnobotany:

VHFS: Formerly *P. pensylvanica* L, with synonym *P. pectinata* Fisch.

J Butler & C Frieswyk. 2001. Propagation protocol for production of *Potentilla pensylvanica* seeds; USDI NPS - Rocky Mountain National Park, Estes Park, Colorado. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 17 April 2012). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Potentilla pensylvanica

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Potentilla recta Linnaeus *NOX CO, MT, NV, OR, WA ♣ ROUGH-FRUITED CINQUEFOIL, aka ERECT CINQUEFOIL, SULPHUR CINQUEFOIL, SULPHUR FIVE-FINGERS, (*rectus -a -um* réctus upright, erect, straight.)

Habitat: Dry disturbed sites. distribution/range: Naturalized from Europe. "Cultivated & sparingly naturalized, N Eng to Ohio" (w73).

Culture: ① Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn).

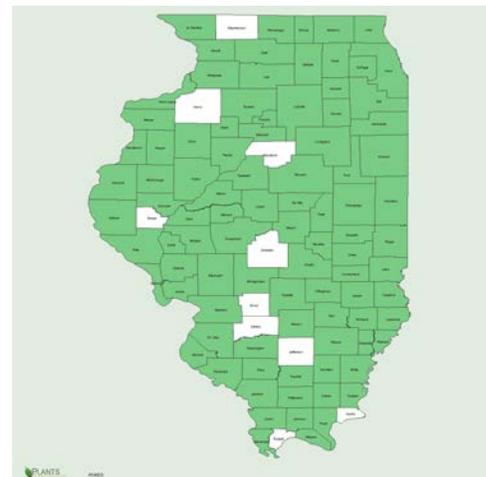
Description: Erect, herbaceous, perennial, forb, 16" -32" tall, hairy; roots; culms unbranched to the inflorescence; leaves palmately-divided, deeply-toothed; lower leaves long-stalked with 5-7 leaflets; upper leaves smaller, shorter stalked & with 3 leaflets; inflorescence of many flowers in flattened, branched cluster or cyme; flowers pale yellow, 5-merous, 0.75" wide; fruits are dry seeds; N. key features: Culms are unbranched to the inflorescence, flattened branched cyme, leaves palmately-divided into 5-7 leaflets.

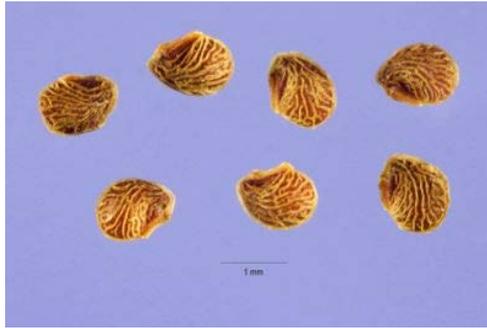
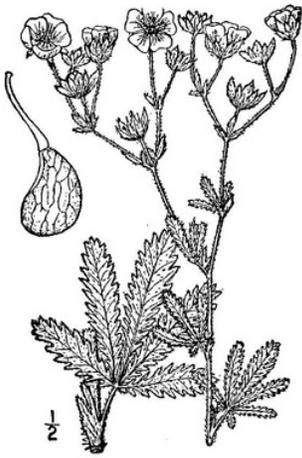
Comments: status: Naturalized from Europe. Variously noxious in Colorado, Montana, Nevada, Oregon, & Washington. Some feel this sp can be weedy or invasive in part of its range or in certain applications. (Assorted authors. 200_. State noxious weed lists for 46 states, Stubbendieck et al 1994, Whitson et al 1996). phenology: Blooms June - August.

"Common in waste places, in pastures & along roads. The synonym *P sulphurea* Lam seems more appropriate." (ewf55)

Associates:

VHFS: [*Potentilla pilosa* Willd, *P recta* L var *obscura* (Nestl) WDJ Koch, *P recta* L var *pilosa* (Willd) Ledeb, *P recta* L var *sulphurea* (Lam) Peyr, *P sulphurea* Lam] *P recta* Willd in w73.





Potentilla recta

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Color illustration Jacob Sturm, Johann Georg Sturm - *Deutschlands Flora in Abbildungen* (1796). Copyright expired. Source: www.biolib.de.

***Potentilla reptans* L** ♣ CREEPING CINQUEFOIL, aka CREEPING FIVE-FINGERS, (*reptans* creeping, having creeping & rooting stems, from Latin *reptans*, from *repto*, to creep, crawl) Introduced perennial forb, locally established. distribution/range: In Illinois, known from DeKalb Co.



Potentilla reptans



314. *Potentilla reptans* L.
Cinquefoil; Y.



Potentilla reptans



Line drawing Walter Hood Fitch - *Illustrations of the British Flora* (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Color illustration Jacob Sturm, Johann Georg Sturm - *Deutschlands Flora in Abbildungen* (1796). Copyright expired. Source: www.biolib.de. 2nd line drawing public domain from Hippolyte Coste - *Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes*, 1901-1906.

Potentilla rivalis Nuttall var **millegrana** (Engelmann ex Lehmann) S Watson *IL BROOK CINQUEFOIL, aka BROOK FIVE-FINGERS, (*rivalis* -is -e pertaining to brooks, growing by streams; *millegranus* -a -um New Latin, with a thousand or many grains.)

distribution/range: Rare in Illinois, known from Cook, Johnson, St. Clair, & Union cos (usda & bonap). (Ilpin Cook only).

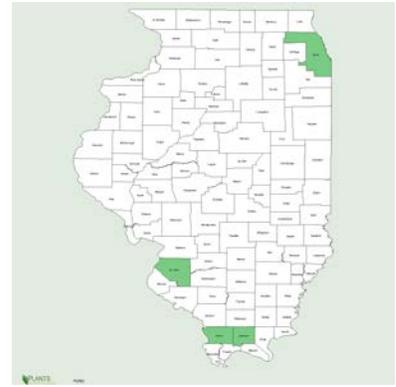
Endangered in Illinois.

VHFS: In Britton & Brown (1913), this is listed under *Potentilla pentandra* & *P millegrana*.

[*Potentilla leucocarpa* Rydbg, *P millegrana* Engelm ex Lehm]



Potentilla rivalis



Potentilla rivalis

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy of ILPIN. 2nd Illinois map courtesy plants.usda.gov.

Potentilla simplex Michaux COMMON CINQUEFOIL, aka OLD-FIELD FIVE-FINGERS, OLDFIELD CINQUEFOIL, (*simplex* unbranched, simple; of one piece or simple, as opposed to compound.)

Habitat: Sterile soils, open woodlands, dry prairies, dry woodlands & meadows.

“Common in moist & in dry places.” (ewf55) distribution/range: Ubiquitous in Illinois.

Culture: There are very few commercial sources of plants. There are no sources of seed.

Drought tolerant.

Description: Native erect to creeping perennial forb; roots minimum depth; culms thin stems trailing along the ground, 2.0-12” tall, smooth, with long spaces between the rooting nodes; leaves palmately-divided into 5 toothed leaflets; inflorescence of axillary, solitary flowers, on a thin stalk from the leaf axils; flowers yellow, 5-merous, 0.33”-0.55” wide; N. key features: ①Sp has hairy stems & lower surface of leaflets; 5 leaflets.” (Ilpin) ②Creeping thin stems trailing along the ground, flowers solitary, 0.33-0.50” wide, from leaf axils.

Comments: status: phenology: Blooms 5,6,7. C3. Forms dense ground cover in full sun but grows more openly in shade. Nice contrast between the foliage & the red stems.

Associates: Pollinator friendly. Walnut tolerant.

ethnobotany:

VHFS: The following varieties are sometimes reduced to synonymy.

①*Potentilla simplex* Michx var *argyrisma* Fern, spreading, hairy stems; lower surface of leaflets is densely silvery-silky. ②*P simplex* Michx var *calvescens* Fern, glabrous stems & lower surface of leaflets. ③*P simplex* Michx var *typica* Fern, hairy stems & lower surface of leaflets?

Formerly *Potentilla Canadensis* L *simplex* T&G (w73).



Potentilla simplex



Potentilla simplex

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Photo Jennifer Anderson - USDA-NRCS PLANTS Database - Not copyrighted image

Potentilla tridentata Aiton (or Soland) * CT, GA, IA, NJ, PA, NC, RI, TN, VA [new nomenclature *Sibbaldiopsis tridentata* (Aiton) Rydberg, or *Sibbaldia tridentata* (Aiton) Paule & Soják] THREE TOOTHED CINQUEFOIL, aka MOUNTAIN CINQUEFOIL, MOUNTAIN WHITE POTENTILLA, SHRUBBY FIVEFINGERS, WHITE SIBBALDIA, WINE-LEAF CINQUEFOIL, WINE-LEAF POTENTILLA, (*tridentatus*)

Habitat: Gravel ridges & rocky acid soil, often in crevices of rocks. Forest & shores in gravelly & rocky shores. In the se USA, “grassy balds, crevices of rock outcrops at high (rarely moderate) elevations, high elevation glades; rare (though sometimes very locally abundant)” distribution/range: What ever genus you chose, it was recorded from Cook Co in 1895.

Culture: ☉Sow at max 5°C (41°F), germination irregular, often several months (tchn).
availability: There is one commercial source of plants (RRN). Availability very limited.

cultivation: Hardy to zone 2.

Description: Native, creeping, evergreen, perennial forb (subshrub), 4-12” tall; leaves palmately 3-foliolate, burgundy red in winter; flowers small white, 5-merous, 0.38” wide.

key features: ①“Leaves are 3-toothed at tip; has a caudex; evergreen” (Ilpin).

②Smooth, leaflets entire, with 3 large teeth at the apex (w73).

Comments: status: Endangered in Connecticut, Georgia, Iowa, New Jersey, & Pennsylvania. Watch List in North Carolina. Historical in Rhode Island. Special concern in Tennessee. Rare in Virginia. phenology: Blooms 6-9. Fruits mature July-September. C3. This sp appears herbaceous, but is an evergreen subshrub. Showy in flower & when in rich burgundy fall color. Creeping evergreen ground cover. Alpine & acidic rock gardens.

Associates:

VHFS: Sometimes placed in *Sibbaldia* or *Sibbaldiopsis*. [*Sibbaldiopsis tridentata* (Aiton) Rydberg, *Potentilla tridentata* Aiton, *P tridentata* Aiton f *hirsutifolia* Pease]



Potentilla tridentata



Potentilla tridentata

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy of ILPIN.

PRUNUS Linnaeus 1753 **CHERRY, PLUM, SLOE, PEACH, APRICOT, WILD BULLACE** *Rosaceae* *Prunus* (PRO-
nus) from the classical Latin name for the plum tree. A genus of about 200 spp of deciduous trees & shrubs, nearly
cosmopolitan. Several native plums are valuable wildlife plants. *Prunus* is the larval host for the *Satyrrium titus*
CORAL HAIRSTREAK, *Papillio glaucus* EASTERN TIGER SWALLOWTAIL, the STRIPED HAIRSTREAK, & Viceroy
butterflies. *Prunus* is also a nectar source for *Papillio glaucus* EASTERN TIGER SWALLOWTAIL. WILD PLUM
flowers are a nectar source for *Atlides halesus* GREAT PURPLE HAIRSTREAK BUTTERFLY.

Tree or shrub; leaves not divided, often convolute or conduplicate in veneration; fruit drupe. In old *Cerasus*,
CHERRIES, drupe globous, succulent, very smooth, without glaucous bloom, stone subglobous, smooth, with no
border. In old *Prunus*, PLUM or APRICOT, drupe ovate, fleshy, generally clothed with a glaucous bloom or with a
soft pubescence; nucleus compressed, smooth. In old *Persica*, PEACH or NECTARINE, drupe fleshy, tomentose or
smooth; nucleus somewhat compressed, ovate, acute, rugosely furrowed & perforated on the surface. In old
Amygdalus, ALMOND, drupe not fleshy, compressed; nucleus perforate & furrowed, ovate, compressed, one edge
acute, the other broad, obtuse.

Of *Prunus* species: "several dwarf kinds of plumb" growing in "roughs" along "the margins of 'sloughs,'
and along the courses of small streams" (Short 1845).

Prunus americana Marshall *NH, VT WILD PLUM, aka AMERICAN PLUM, RED PLUM, YELLOW PLUM,
Bu'gesana'tig (Ojibwa), (*americana* Epithet formerly capitalized.) upl

Habitat: Open woodlands, thickets, thickets & borders of streams, swamps, & woods, edges of woods, fencerows,
streambanks, roadsides. Thickets, woodlands, fencelines, roadsides, hedges, &
low woods. distribution/range:

Culture: ①120 days cold moist stratification. Or, plant fresh seed or keep
moist. Refrigerate clean seed in a ziplock bag until planting or starting other
treatment, or best planted outdoors in the fall (pm09, 15). ②Double dormant,
sow fresh seed in nursery bed in late fall for germination in two years. Moist
warm stratify 35 days, followed by moist cold stratify 90-180 days or dormant
seed. 832 (aes10), 840 seeds per pound.

cultivation: Transplants easily, BR or B&B. Optimum pH 7.6. Hardy
to zone 3.

Description: Native, colonial shrub or small tree up to 20(-30)', suckers
profusely forming great thickets, thorny; dense clusters of white flowers in
May, flowers perfect, followed by edible yellow red (reddish orange) plums (drupes) with tart yellow flesh, 1.0-
1.25" diameter. Drupes are nearly destitute of bloom

Comments: status: Threatened in New Hampshire & Vermont. phenology: Blooms April-May. Fruits ripen
August to October, sweet & pleasant. "Common, usually as thickets, seldom attaining tree size." (ewf55)

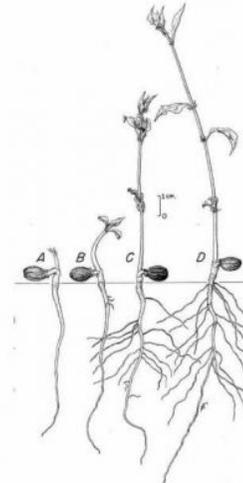
Associates: Pollinated by long-tongued bees, short-tongued bees, other *Hymenoptera*, *Diptera*, *Lepidoptera*,
Coleoptera. AMERICAN PLUM is a larval host for *Satyrrium liparops* STRIPED HAIRSTREAK BUTTERFLY. Attracts



upland gamebirds, songbirds, game mammals, high wildlife value. Songbirds & terrestrial furbearers eat fruit. Very important food, used by ruffed grouse, grosbeaks, robins, starling, brown thrasher, thrush, cedar waxwing, black bear, chipmunk. Sp has many potential pest problems, but none apparently serious. Adversely impacted by *Popillia japonica* JAPANESE BEETLES, with many bushes almost defoliated.

ethnobotany: Fruits available in August to October (usually a good crop annually). Used for food Ojibwa, Sauk-Fox, & Iroquois (den28, sm28, Waugh 1916). Dried for winter use. Used as medicinal plant by Ojibwa as disinfectant (den28). Fruits can be used to make wine, jam, or jelly.

VHFS: [*Prunus americana* Marshall f *americana*, *P americana* Marsh var *americana*, *P americana* Marsh var *lanata* Sudw, *P mexicana* S Watson, sensu Gleason & Cronquist (1991)]



Prunus americanum

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Seedling line drawing courtesy of LH USDA-NRCS PLANTS Database. Illinois map courtesy plants.usda.gov.

***Prunus avium* Linnaeus** ♣ SWEET CHERRY, aka *BIGAREAU*, BING CHERRY, DUKE CHERRY, ENGLISH CHERRY, MAZZARD CHERRY, OX-HEART, (*avius -a -um av`ium* of the birds, relating to birds. Epithet formerly capitalized.)

distribution/range: Introduced from Eurasia. Known from Jackson Co Illinois.

Drupes various shades of red, firm but juicy.

VHFS: [*Cerasus avium* (L) Moench, *C Avium* Moench in w73]



Prunus avium

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image.

***Prunus cuneata* Rafinesque** SAND CHERRY, now treated as a variety of *P susquehanae*, which see.

distribution/range: "With us sand cherries are rare & are confined to the flat, sandy, low prairie west of Sugar River Yale bridge. This, the wide leaved, more branching form, is more common than the next (*P pumila*). It grows in a brushy fence-row along a drainage ditch." (ewf55)

Uncopyrighted Draught

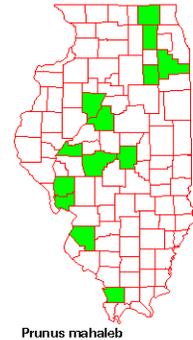
In Britton & Brown (1913), this is *Prunus cuneata*.

Prunus lanata (Sudworth) Mackenzie & Bush *OH WILD PLUM, aka BIGTREE PLUM, MEXICAN PLUM, distribution/range: “Similar to the preceding (*P americana*), differing in the pubescence of the foliage.” (ewf55) Now included in *P mexicana*, which see.

Prunus mahaleb Linnaeus ♣ MAHALEB CHERRY, aka PERFUMED CHERRY, ST. LUCIE CHERRY, (*mahaleb* from an Arabic name, Arabic *mahlab*, from *halaba*, to milk; see *hlab* in Semitic roots; an aromatic spice made from the seeds of *Prunus mahaleb*, added to breads, cheese, cookies, & biscuits, aka مَحْلَب, مَحْلَب, *mahlab*, *mahalab*, *mahleb*, מַהְלֵב, *mahaleb*, *mahlep*, *mahalep*, μαχλέπι, *mahlepi*, *machlepi* or *makhlep*; or Arabic *mahlab*, denoting the tree, its fruit, & the kernels of the fruit. Compare post-classical Latin *almahaleb* (1479; *almachareb* (1471)), *mahaleb* (1593), Italian *macalepo* ‘a kinde of perfume or sweete smell’ (Florio 1598)

distribution/range:

VHFS: [*Cerasus mahaleb* (L) Mill]



Prunus mahaleb



Prunus mahaleb



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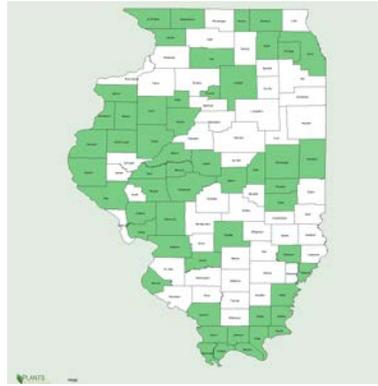
Prunus mexicana S. Watson MEXICAN PLUM, aka BIG TREE PLUM, Presumed Extirpated in Ohio.

“This may be indistinguishable from *P. americana* var. *lanata*. Petioles, lower surface of leaves, sepals are persistently and softly hairy; hypanthium sometimes glabrous; fruit shades of blue, lavender, or rose covered with a gray-glaucous bloom when ripe; yellow or glaucous-green when young; usually doesn't form colonies.” (Ilpin)

The maps indicate a small difference in what this species really is.



Prunus mexicana



Prunus mexicana

Seed photos Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN. 2nd Illinois map courtesy plants.usda.gov.

Prunus nigra Aiton *IA, OH CANADA PLUM, aka CANADIAN PLUM, (*nigra* Latin black, dark, in reference to the dark branches.)

Habitat: In rich alluvial soil, along streams, in thickets, & along borders of woods, more common in north. Moist woods & thickets. distribution/range: The northern most native plum.

“Less common than the two preceding (*P americana* & *P lanata*). It is usually a tall shrub in woods seldom being tree size but not often forming thickets.” (ewf55)

cultivation: Partial shade to shade, rich moist soils, alkaline, pH > 7.2. Fast growing, short-lived.

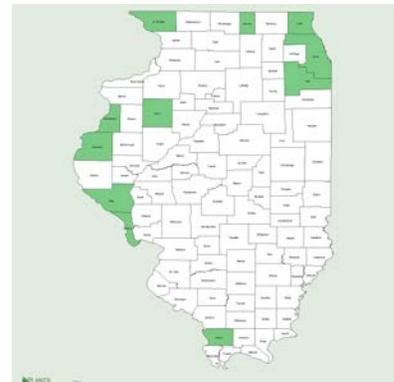
Endangered in Iowa. Presumed Extirpated in Ohio. Blooms April-May.

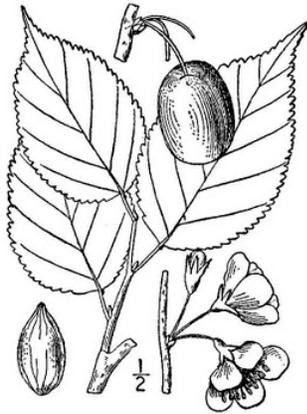
Flowers attractive & fragrant.

Associates: Sp is of special value to native bees. Birds & other wildlife eat the fruits.

ethnobotany: Fruits available in August to September. Used for food by Ojibwa, Sauk-Fox, & Iroquois (sm28, 32, Waugh 1916). Used as dye by Ojibwa (sm32). Seeds have been found in numerous archaeological sites. The bark & roots have been used medicinally. There are some reports of children dying from swallowing the stones while eating the fruits. All parts of all plum plants except the skin & flesh of the fruit contain hydrocyanic acid.

VHFS: [*Prunus americana* Marshall var *nigra* (Aiton) Waugh]





Prunus nigra

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Prunus pensylvanica Linnaeus f (or Linnaeus) FIRECHERRY, aka *FEUERKIRSCH*E, PINCHERRY, BIRD CHERRY, RED CHERRY, WILD RED CHERRY, (*pensylvanicus -a -um pensylvanicus* of Pennsylvania. Epithet formerly capitalized.) Double n in w73.)

Habitat: Sand-lands, recent burns, dry woods, roadsides, hillsides, & clearings, sandy soil. Needs full sun. Optimum pH 5.5 hardy to zone 2.

distribution/range: North ½ of Illinois.

Description: Small colonial, deciduous native tree, 25-40', shiny red-brown "varnished" bark; peach-like leaves; good fall color, bright red to yellow-red; flowers white, small, abundant; followed by tiny light red sour cherries. key features: ①Leaves oblong-ovate, acuminate, smooth (w73)

Comments: status: phenology: Fruits ripen 7-8.

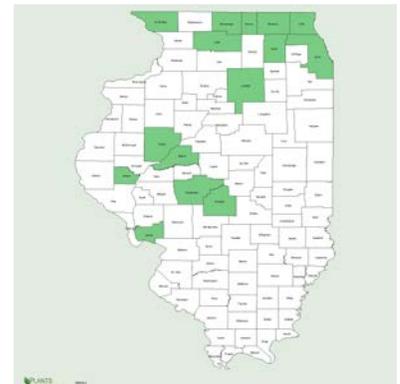
"A coarse shrub with erect branches growing in groups of 25 or 50 or more, only the individuals in the middle of the group attaining small tree size. It is profuse in flower but scant in fruit, only occasionally yielding an abundant crop. Not found in many places in the co: most plentiful in low places on the sandy prairies about Camp Grant but also in boggy places in the north part of the co & there at times as roadside thickets. Also known in Boone Co." (ewf55)

"This tree is of rapid growth, & quickly succeeds a forest clearing, if neglected" (w73).

Associates: Important food for ruffed grouse, grosbeaks, robin, starling, thrasher, thrush, cedar waxwing, black bear, & chipmunk.

ethnobotany: Berries (drupes) available in July to August. Bark used as medicinal beverage by Ojibwa & Pottawatomie (sm32, 33). Ojibwa, Pottawatomie, & Iroquois used the berry for food (sm32, 33, Waugh 1916). Fruit red, very acid (w73).

VHFS: [*Cerasus Pensylvanica* Ait, *Prunus borealis* Ph]





Prunus pensylvanica

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society.

Prunus persica (Linnaeus) Batsch ♣ PEACH, (*persicus -a -um* Latin a peach; referring to Persia or Iran)
distribution/range:

Drupe tomentous. Var *laevis* with a glabrous drupe is the NECTARINE.

VHFS: [*Amygdalus persica* L, *Persica vulgaris* Mill]



Prunus persica

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Color illustration Otto Wilhelm Thomé: *Flora von Deutschland, Österreich und der Schweiz* (1885) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de

Prunus pumila Linnaeus SAND CHERRY, aka EASTERN SANDCHERRY, (*pumilus -a -um* pumila small, dwarf.)

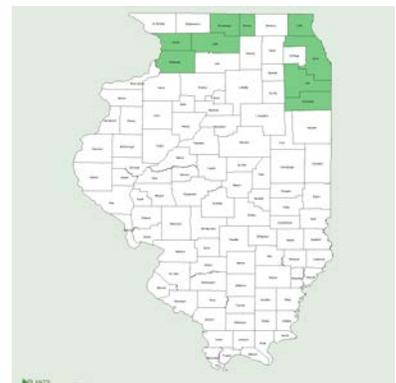
Habitat: Sandy & gravelly shores, thickets, wet soil, rocky situations, & sandy forest openings. distribution/range:

Hardy to Zone 3.

Culture: ①Plant fresh seed or keep moist. Refrigerate clean seed in a ziplock bag until planting or starting other treatment (pr09, 15).

Description: Native, sprawling, deciduous shrub, 4.0-6.0'; with dark green leaves followed by good red fall color; flowers white followed by 0.75" black cherries. key features: Leaves oblanceolate or obovate, acute, paler beneath (w73).

Comments: status: phenology: Blooms May. "This, the narrow leaved form, has slender, erect, willow like stems which branch but little. It closely resembles the sand cherries in Beach State Park at Waukegan & in the Indiana Dunes State Park. It grows sparingly in a low prairie west of Sugar River Yale



bridge where the only other shrubs are low willows. This & the above???? are not separated by Jones.” (ewf55)
Associates: ethnobotany: Ojibwa, Menominee, & Pottawatomie used the fruit as food (sm28, 32, 33). Seeds found archaeologically at 3 locations at Juntunen (possibly *P virginiana*) “Fruits small, dark red, acid but agreeable to the taste” (w73).

VHFS: Variety *besseyi* (LH Bailey) Gleason BESSEY'S CHERRY, aka SAND CHERRY, WESTERN SAND CHERRY
 Var *depressa* (Pursh) Bean CREEPING SANDCHERRY, aka GREAT LAKES SAND CHERRY, SAND CHERRY is a prostrate form, with somewhat larger leaves. Zone 3.

Variety *pumila* GREAT LAKES SAND CHERRY, aka SAND CHERRY [*Cerasus pumila* (L) Michx, *Prunus pumila* L var *typica* Groh & Senn]

Variety *susquehanae* (hort ex Willdenow) LH Jaeger DWARF SANDCHERRY, aka SUSQUEHANA SAND CHERRY, SAND CHERRY, known from sandy soils, with round leaves, black cherries, fire red fall color. Zone 2.

Move to *P susquehanae*

[*Cerasus pumila* Mx & *Prunus depressa* Ph (syn) in w73]



Prunus pumila, right variety *besseyi*

Line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database.
 - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Prunus serotina Ehrh WILD BLACK CHERRY, aka BLACK CHERRY, RUM CHERRY, WILD CHERRY, *Ikwe'mic*, (*serotinus -a -um* late in the year, autumnal, blooming in autumn, late flowering or late ripening, from Latin *serum*, late.)

Habitat: Dry woods & fence lines, rich, moist, soil, dry gravelly or sandy soils, margins of woods, fencerows, roadsides, waste ground. “A common forest sized tree of woods & fence-rows.” (ewf55) Zone 3. distribution/range:

Culture: ① Best planted outdoors in the fall, or 120 days cold moist stratification. (pm09, 15).

Description: Large, deciduous, native tree; with dark green foliage, fall color typically yellow to yellow red occasionally red; raceme of white flowers followed by 0.33” black cherries;

Associates: BLACK CHERRY is the larval host plant for the Tiger Swallowtail & the Red-spotted Purple Butterfly. Upland game birds (esp ring-necked pheasants) eat fruit & buds.

Songbirds eat the fruit, esp. evening grosbeaks, robins, starlings, & cedar waxwings. Important food for ruffed grouse, grosbeaks, robin, starling, thrasher, thrush, cedar waxwing. Terrestrial furbearers eat fruit & bark. Aquatic furbearers eat fruit, bark, & wood. Small mammals eat fruit. Deer eat twigs & foliage. Important food for black bear, chipmunk, deer.

“Fruit nearly black when mature, bitterish, yet pleasant to the taste, and is greedily devoured by birds” (w73).

Known to chemically inhibit red pine & red maple (Chick & Kielbaso 1998). In a Wisconsin pine plantation, water extracts of leaves from *Prunus serotina* BLACK CHERRY, *Rubus idaeus* RED RASPBERRY, *Eurybia macrophylla* BIGLEAF ASTER, *Lonicera tatarica* TATARIAN HONEYSUCKLE, *Solanum dulcamara* CLIMBING NIGHTSHADE, & *Solidago gigantea* GIANT GOLDENROD reduced red pine height growth, number of secondary



Prunus serotina

needle fascicles, weight increments of roots & shoots, & radicle elongation of red pine seedling (Norby & Kozlowski 1980)

ethnobotany: Fruit available in August to September: good crop every year. Black summer fruit used for jelly & wine. Used as medicinal beverage by Ojibwa (sm32). Menominee & Pottawatomie as medicine (sm23). Ojibwa medicine for digestive troubles (den28) dried bark tonic, sedative, pectoral, & astringent (den28). Ojibwa, Menominee, Pottawatomie, & Iroquois used the berry as food (Sm23, 32, 33, Waugh 1916). The wood is compact, fine-grained, takes a fine polish, & is prized for fine furniture & cabinetry.

VHFS: [*Cerasus serotina* DC, *Prunus serotina* Ehrh var *serotina*]

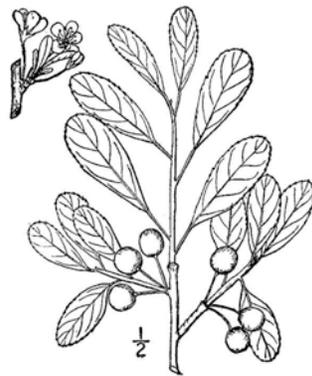
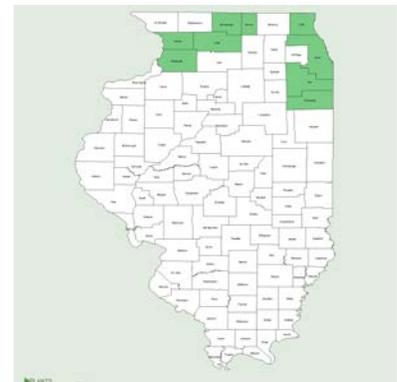


Prunus serotina

Illinois map courtesy of ILPIN.

***Prunus susquehanae* hort ex Willdenow *OH, RI SESQUEHANA SANDCHERRY**

Threatened in Ohio. Special concern in Rhode Island.
In Britton & Brown (1913), this is *Prunus cuneata*.



Prunus susquehanae

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

***Prunus tomentosa* Thunb.** ♣ NANKING CHERRY, (*tomentosus -a -um* (to-men-TO-sus) modern Latin *tōmentōsus*, with down or short hairs, pubescent, tomentose, woolly, densely woolly, pubescent, densely covered with short, soft, tangled hairs. In entomology & anatomy, flocculent, flossy, woolly.)

distribution/range:

Introduced rarely escaped tree/shrub.

***Prunus virginiana* Linnaeus var *virginiana* CHOKECHERRY, aka BITTER-BERRY, VIRGINIA BIRD CHERRY, *A'sisuwe'minaga'wunj* (Ojibwa), (*virginianus -a -um* of Virginia.) Epithet formerly capitalized.**

Habitat: Fence lines, hedgerows, thickets, shores, & edges of woods. distribution/range:

Culture: Plant fresh seed or keep moist. Refrigerate clean seed in a ziplock bag until planting or starting other treatment (pm15). 4,800 (gran), 6,080 (aes10) seeds per pound.

asexual propagation: Propagated by soft wood cuttings.

cultivation: Clay soil tolerant. Optimum pH 5.5. Coarse to moderately fine soils. Best in neutral, but grows in acidic or basic soils. Zone 2. Does not do well with annual burning. Suckers may need to be removed.

Description: Large, deciduous, colonial, native shrub or small tree, may form small thickets, 20-30' (?) 5-30', dark green leaves, occasional good red fall color; raceme of white flowers in summer followed by purple to black cherries.

key features: Leaves not shining, with sharp, subulate serratures (w73).

“Common in wet or dry situations, edges of woods, roadsides, fence-rows, railroads, &c. Our most common form is without pubescence. On the high prairie in the east part of the co there is a slightly pubescent form that has no other distinctive characters, but on boggy places north of Shirland is a very definitely pubescent form that has larger racemes & thicker peduncles & pedicels (f *deamii* GN Jones). The fruit of the choke-cherry is subject to an infection that causes distortion.” (ewf55)

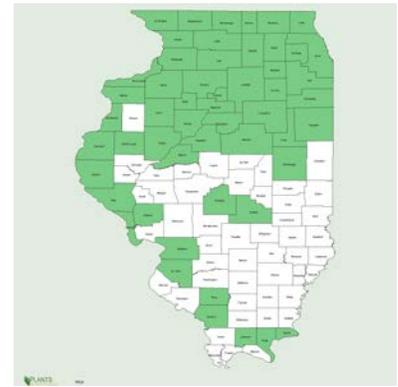
Comments: status: phenology: Blooms White flowers in dense clusters, followed by red to black fruit in summer. Attractive in flower & fruit. Flowers fragrant. Great for naturalizing, borders, edible landscaping. Plants in unburned areas do not aggressively sucker.

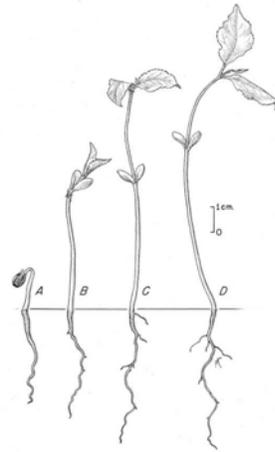
Associates: Pollinator friendly. Butterfly host plant, *Paonias myops* SMALL-EYED SPHINX MOTH, *Satyrrium titus* CORAL HAIRSTREAK BUTTERFLY, & COLUMBIA SILKMOTH. Important food for ruffed grouse, grosbeaks, robin, starling, thrasher, thrush, cedar waxwing, black bear, & chipmunk. Valuable cover for wildlife. Somewhat browsed by livestock & wildlife, ♀ but the leaves contain cyanide are toxic, especially new growth, or when frosted or wilted. Walnut tolerant.

ethnobotany: Cherries available in July to August. Dark purple fruit used for wine, jellies, jams, pies, & sauces. The cherries make a passable homemade wine. Used as medicinal beverage by Ojibwa (sm23, 32, 33). Ojibwa, Menominee, Pottawatomie, Mascouten, Sauk-Fox, Winnebago, & Iroquois used the berry for food (sm23, 28, 33, Skinner 1926, Radin 1923, Waugh 1916). Cherries dried for winter use. Ojibwa medicine for digestive troubles, fruit very astringent (den28). Found growing at Juntunen & several enclosures (ry64). Fruits are high in anthocyanins. ♀ Children have died from eating the fruit. “Fruit (cherries) abundant, of a dark-red color, very astringent to the taste, yet on the whole agreeable” (w73).

VHFS: In Britton & Brown (1913), this is listed as *Padus virginiana* & *Padus nana*. Illinois has the sp & variety *demissa* (Nuttall) Torrey, WESTERN CHOKEBERRY. [*Cerasus Virginiana* DC. *Padus nana* (Du Roi) M Roem, *P virginiana* (L) Mill, *Prunus virginiana* L f *deamii* GN Jones, *P virginiana* L f *virginiana*]

Cv ‘Schubert’ medium height tree with leaves that start green but turn to a deep maroon most of the growing season. Flower & fruit the same. Will sucker & form colonies. Zone 3.



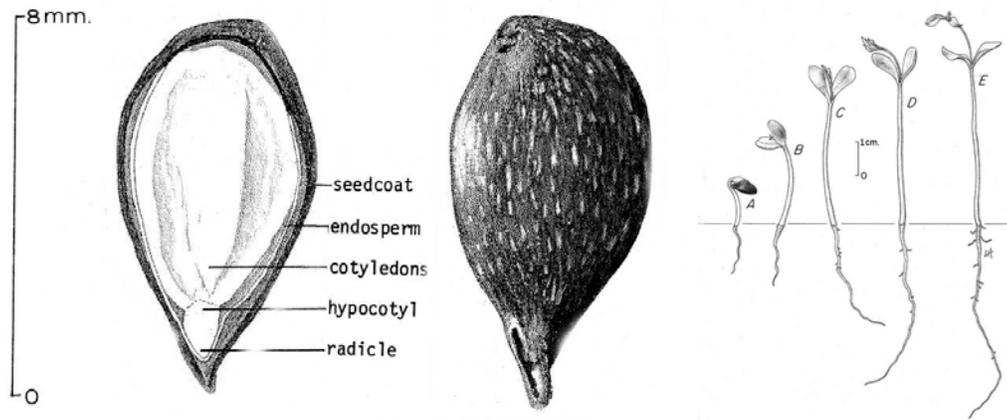


Prunus virginiana

1st & 2nd line drawings Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 3rd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. Wetland flora: Field office illustrated guide to plant spp USDA Natural Resources Conservation Service. Not copyrighted image. Twig photo provided by National Agricultural Library, courtesy of USDA-NRCS PLANTS Database. Seedling line drawing WHL courtesy of USDA-NRCS PLANTS Database. Color seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>. Illinois map courtesy plants.usda.gov.

PYRUS Linnaeus **PEARS & MOUNTAIN ASH** *Rosaceae* *Pyrus* (PI-rus) New Latin a pear, according to the OED, from medieval & modern Latin, an erroneous spelling of ancient Latin *pirus*, *piri*, n, a pear-tree, *pirum*, *piri*, n, a pear, cognate with Celtic *peren*; Anglo-Saxon *pere*; French *poire*; English *pear*; somewhat alternately, New Latin, from Latin *pyrus*, *pirus* pear-tree; akin to Latin *pyrum*, *pirum* pear, of non-Indo-European origin; akin to the source of Greek *apios*, pear tree, *apion* pear. Adopted by Linnæus as the genus name. The letter y was a late addition to the Roman alphabet from Greek *upsilon* to write Greek loan words, making the *pir*- forms older, more classical, & more appropriate.

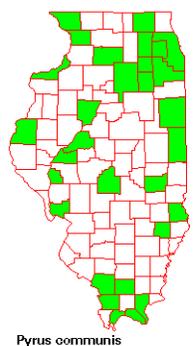
In the narrow sense, a genus of about 10-20 spp of deciduous trees Eurasia & north Africa. Tree or shrub, not thorny, leaves not divided, toothless, flowers not racemes, fruit pear. Formerly, the PEAR (PYRUS), COMMON APPLE, CRAB APPLES (MALUS), CHOKE BERRIES (ARONIA), & MOUNTAIN ASH (SORBUS) were placed in *Pyrus*. Fruit is a pome, closed, 5-carpeled, fleshy or baccate, carpels cartilaginous, 2-seeded. Old *Pyrus* fruit, check. 4 spp naturalized in Illinois. **Elaborate.**



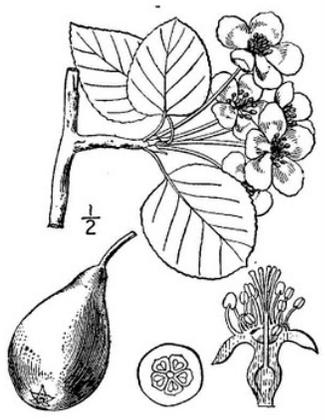
Seed drawing courtesy of USDA Forest Service, USDA-NRCS PLANTS Database. Seedling line drawing courtesy of LH USDA-NRCS PLANTS Database.

Pyrus communis Linnaeus ♣ PEAR, (*communis* -is -e common, universal, general, growing in a society or community, for its colonial habit.) *pirum, piri*; *pirus piri* the Latin name, *pirus, piri*, for a pear tree. The English word pear came from Common West Germanic *pera*, from Vulgar Latin *pirum* pl. *pira*, related to Greek *ἄπιος* *apios*, from Mycenaean *ápisos* that may be of Semitic origin.

distribution/range: Introduced escaped tree, native in Europe, where in the wild, the fruit is small & unpalatable. The winter silhouette with strongly ascending branches is distinctive. “Found infrequently as an escape on roadsides & occasionally in woods.” (ewf55)



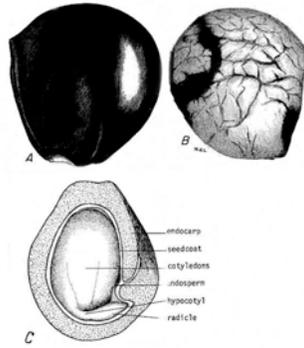
Pyrus communis



Pyrus communis

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Line drawing public domain from Hippolyte Coste - *Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes*, 1901-1906. Illinois map courtesy of ILPIN.

RHODOTYPOS Siebold & Zuccarini 1841 **JETBEAD** *Rosaceae* *Rhodotypos* New Latin, from Greek *rhod*, & *typos*, model, having the character of a rose. A monotypic shrub genus of Japan & China.



Seed drawing courtesy of WHL, courtesy of USDA Forest Service, USDA-NRCS PLANTS Database.

Rhodotypos scandens (Thunberg) Makino ♣ BLACK JET-BEAD, (*scandens* scandent, climbing, from Latin *scandent-*, *scandens*, present participle of *scandere* to climb) The common name is in reference to the jet black seeds.

Introduced & locally established shrub. distribution/range: Native of east Asia. Recorded from Cook & DuPage cos.

Introduced shrub. Distinguished by its opposite leaves & black, bead-like fruits.

VHFS: [*Rhodotypos tetrapetalus* (Siebold) Makino]



Rhodotypos scandens



Rhodotypos scandens

Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN.

ROSA Linnaeus 1753 **ROSE, BRIER, ROSE BUSH, ROSIER, WILD ROSE**, *Kenukatia-minš*, Chippewa, *Og&ini'minaga'wûnj*, Chippewa ROSE BERRIES *Rosaceae Rosa* (RO-sa) from the classic Latin name, whose original meaning is said to have been lost, *rosa, rosae*, a name for various roses; through intermediate Greek & Italian dialects from Greek ῥόδον, ῥοδέα, *rhodon, rodea*, probably derived from Iranian origin; akin to the source of Persian *gul*, a rose; akin to Old English *word*, a bush, & Celtic *rhos*, red. Similar to Latin *ros, roris*, dew.

A genus of 100+ (140, 200) spp of perennial, woody shrubs & vines of mainly north temperate regions. Roses are one of the most successful & widespread shrubs in the northern hemisphere, with about 22 spp in North America. Our spp are shrubs, usually thorny or prickly; leaves odd pinnate, 3-9 leaflets, stipules mostly adnate to the petiole; flowers 5-petaled, wild spp usually pink or white, often showy, large, spreading; “fruit” several seeded, inflated, often red “hip”, persisting into winter, containing many bony achenes. Wild roses may be difficult to identify because of their variability, ease of hybridization & numerous fertile hybrid offspring.

Some upland spp are very drought resistant with roots to 6.5 feet. Many are short, bushy, & colonial, which combine to reduce wind speeds & causes blowing snow to accumulate, creating a more favorable microhabitat.

Rose hips should be collected as soon they start to ripen, & the hips sliced open & the achenes removed. Excess drying, in the barn or if the hips are left on the plant & picked in late fall, increases dormancy (dh87). Treat the achenes as recalcitrant, cleaning quickly & refrigerating them in ziplock bags until receiving further treatments. The achenes may be removed from the hips by hand or by macerating or hammer milling the hips when they are dry & brittle. Take care to protect yourself from the hairs inside the hips. Brief detergent soaks before macerating or other treatments may help eliminate oil-soluble germination inhibitors in some spp. The achenes should then be floated & the light achenes & any remaining pulp composted or scattered in restorations. Scarify & then dormant seed. Seed into a sturdy galvanized flats & place in an unheated cold-frame or lathe house. As a genus, germination occurs largely at 40° F & extends in an erratic manner over several cycles (Deno 1991). If properly handled, seedlings emerge 1st & 2nd spring. Some spp may require warm moist stratification before cold moist stratification. Native spp germinate well, but disdain life in a greenhouse, & should be moved into a lathe house when frost is past. Seedlings should grown in a partially-sunny- breezy area, & not watered late in the day to avoid powdery mildew. Pink flowers in 2-3 years. Flowers are born on older canes or new wood, depending on spp. Plants to be overwintered should be cut back to 3 inches. Code B, G, I* (Cullina 2002). Roses should be grown where there is good, natural air circulation & watered only in the morning.

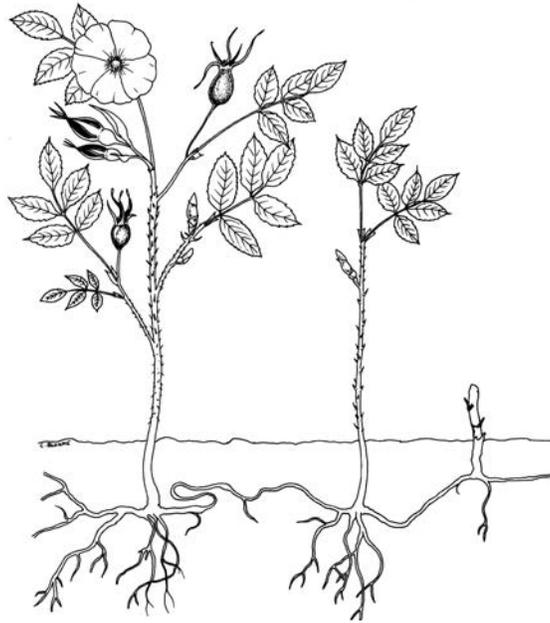
WILD ROSE flowers are open & bowl-shaped, allowing access to a wide range of insect pollinators. Most spp lack nectar. The hips are typically red to orange, but may range from black to dark purple. Some spp are grown for the ornamental value of their attractive, large hips. The hips, or haws, are eaten & the seeds (achenes) dispersed by birds & mammals.

The petals of *Rosa damascene* produce the fragrant oil called *attar of rose*. The hips are a good source of Vitamin C, & are used for tea, jam, jelly, marmalade, syrup, soup, pies, bread, & alcoholic beverages, including wine, mead, & *Palinka* (Hungarian fruit brandy). Hips are included in some potpourris for their aromatic essential oils. The hairs inside the hips have been used in itching powder. Densmore (1928) lists *Rosa* spp as *Ogini' minaga' wunj*, rose berries, as an Ojibwa medicine for diseases of eyes.

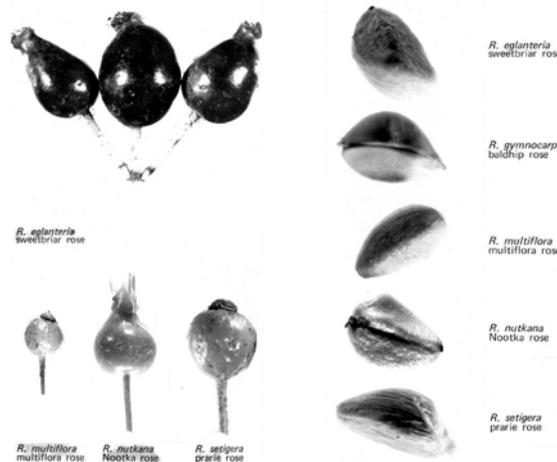
Roses are a good example of the dilemma some have as to what is the fruit & what is the seed. Most native plant geeks would say “what dilemma?”, & they are right. Everyone knows that the fruits of roses are rose hips, or are they? Experts have other thoughts.

“The fruit of the rose, esp. of any of several wild or dog roses, which is a small rounded pome, typically orange red in colour, with a variety of uses including the making of preserves & syrup. A rose hip is a pseudocarp, (a false fruit) consisting of a hollow receptacle containing numerous achenes.” (oed) Pseudocarp is from ancient Greek ψευδο-, *pseudo-*, false, & Greek καρπός, *karpos*, fruit. The hip is properly called a *pometum*, technically “a multiple fruit of carpels embedded in a hypanthium or receptacle that is not divided into more than one cavity” (sk08). “Fruits” are fleshy or pulpy hips surrounding the actual fruits, the many bony, hispid, achenes, included in & attached to the inside or the fleshy tube of the calyx. The seed is encased in a hard pericarp. Confused? Some authors create the same dilemma with the capitulum (head), cypsela (achene) & seed of the sunflower family. & you thought it was hard to tell your fruits from your vegetables. An orange is a fruit, & so are a tomato & pepper, but green beans? Come on! Okra?

“A Rose-hip may be likened to a strawberry turned inside out.” A Gray, First Lessons Bot xix 125.
Cold-moist stratification is required to break the dormancy of Midwestern native rose spp.



Schematic of a typical wild rose, with older to younger shoots from left to right. Drawing by Chris Bloome, liberated without permission from “Galls Induced by Cynipid Wasps of the Genus *Diplolepis* (Hymenoptera: Cynipidae) on the Roses of Canada’s Grasslands” by Joseph D Shorthouse Department of Biology, Laurentian University Sudbury, Ontario, Canada P3E 2C6.



“Fruit & seed” photos & seedling drawing courtesy of USDA Forest Service, USDA-NRCS PLANTS Database.



Rosa gymnocarpa, *R. nutkana*, & *R. spithamea* Seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>.

Native Roses for Dummies (like me)

acicularis prickly stems & internodes flws often solitary, on 2nd year side branches, sepals persistent 5-7 leaflets
 Uncopyrighted Draught

arkansana densely prickly stems & internodes flws terminal new wood & last years side branches sepals persistent 9-11 leaflets

blanda almost w/o thorns flws solitary, on last years side branches 5-7 leaflets, pubescent

carolina unbranched thorns near nodes flws solitary, on new growth sepals deciduous 3-7 leaflets

palustris downward curving stout thorns sepals becoming deciduous 7 finely toothed leaflets your feet are wet

setigera thorns along stems short, stout, slightly curved flowers terminal sepals deciduous 3-5 leaflets w/ long pointed tip hips glandular stipules not barbed

Rosa acicularis Lindley *IL, IA, MA, NH, NY, VT BRISTLY ROSE, aka PRICKLY ROSE, PRICKLY WILD ROSE, ROSE, SAY'S ROSE, *Bi'jikiwi'ginig*, cattle rose (Ojibwa), (*acicularis -is -e* (a-kik-ew-LAH-ris) needle-like, from Latin *acicula*, a small pin for a head-dress, & *-aris*, from *-alis*, Latin suffix meaning of or pertaining to, as in needle-shaped, needle pointed, slender, in reference to the prickles.) facu

Habitat: Upland woods, hills, & rocky banks. distribution/range: Said to be the most widely distributed rose sp in the world. Circumpolar, boreal forests & northern prairies. In Illinois, native in Jo Daviess Co only.

Culture: There are very few commercial sources of seeds or plants. Limited availability.

Description: Erect, perennial, clone-forming, native shrub, up to 40" tall; stems & branches usually green, occasionally red densely prickly throughout the stem & internodes, prickles long, straight, unequal; leaves pinnately-divided with 5 or 7 elliptical to oval, often twice-toothed leaflets; flowers pink to dark rose, 5-merous, 1.0-2.33" wide, only on last year's side branches, the sepals persistent; flowers usually solitary; fruits purplish smooth berry-like hips; N = ?. Hexaploid (& octoploid?). key features: Prickly stems & internodes, flowers only on last years side branches; sepals persistent, flowers usually solitary, 5 or 7 leaflets.

Comments: status: Endangered in Illinois, Iowa, Massachusetts, New Hampshire, New York, & Vermont.

phenology: Blooms June-July. C3.

Associates: Pollen does not cause hay fever.

VHFS: Synonyms for subsp *sayi* (Schwein) WH Lewis: [*Rosa acicularis* Lindl var *bourgeauiana* (Crép) Crép, *R acicularis* Lindl var *sayana* Erlanson, *R bourgeauiana* Crép, *R collaris* Rydbg, *R engelmannii* S Watson, *R sayi* Schwein]

CC Baskin & JM Baskin, 2002. Propagation protocol for production of container *Rosa acicularis* Lindl plants; University of Kentucky, Lexington, Kentucky. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 26 April 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.





Rosa acicularis

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Flower & hip photos Steve Hillebrand, U.S. Fish & Wildlife Service, public domain images. Illinois map courtesy plants.usda.gov.

Rosa arkansana Porter *OH SUNSHINE ROSE, aka ARKANSAS ROSE [ARKANSA ROSE], DWARF PRAIRIE ROSE, LUNELL'S ROSE, PRAIRIE ROSE, PRAIRIE WILDROSE, PRAIRIE WILD ROSE, WILD PRAIRIE ROSE, WILD ROSE, *Bi'jikiwi'ginig* Chippewa, CATTLE ROSE (*arkansanus -a -um* of Arkansas in the USA) (*suffultus -a -um* in botany propped up, supported, from Latin *suffultus*, past participle of *suffulcīre* to prop, confused with *suffarcināre* to stuff.)

Habitat: Thickets, woods. Sun to partial sun. In Canada, on dry soil in disturbed sites such as along roadsides. distribution/range: The sp is native of the western USA (Ilpin), & is known from Jackson Co in southern Illinois. Variety *suffulta* (Greene) Cockerell is the common variety.

Culture: ①Seeds exhibit physiological dormancy, cold moist stratify for 90 days, germinate at 25°C (bb00) ②Seeds need scarification. 60 days cold moist stratification. Seeds need a cold, moist period followed by a warm, moist period followed by a 2nd cold, moist period, or sow outside & allow 2 years for germination? (pm09, 15) ③“Fall plant or cold stratify for 2 to 3 months for best results. Sow seeds just below the soil surface at 65°F & water.” (ew12) 35,247 (gnam11), 40,000 (pm02, ew12), 874,400 (sh94) seeds per pound.

There are very few commercial sources of seeds or plants, availability is very limited. Bare root plants in spring. Some seed lots may be of low viability due to recalcitrance & seed parasites.

cultivation: Space plants 1.5-3.0'. Medium to dry soils, full sun to light shade. Allow plenty of room to naturalize.

bottom line: Treat the seeds as recalcitrant. Dormant seed for field establishment. Spring planted seed may carry over. For greenhouse crops, *vide supra*, or cold moist stratify for 300 days. Germ 1.0, 1.0, na, r0.0-2%. Dorm 41.5, 41.5, na, r 31-52%. Test 33, 33, na r32-34 days.*

Description: Erect, shrubby, perennial, native forb under 40" tall, clone-forming shrub;), roots spreading by rhizomes with widely spaces new culms (in Canadian prairies may tend toward single stems, not in clones; stems red brown with little branching, densely prickly on most of the stem & internodes, thorns straight & unequal, stems tending to die down to the ground in winter; leaves pinnately-divided with 9 or 11 oval to oblong, sharply toothed



leaflets, often fuzzy beneath; inflorescence a wide cluster or corymb of stalked flowers; flowers pink to rose, 5-merous, at the top of this year's branches & often on last year's side branches, the sepals persistent; N = ? Tetraploid. key features: ①Stems & internodes prickly, flowers at top of current branches & last years side branches, sepals persistent, inflorescence a corymb, 9 or 11 leaflets (fh). ②Leaflets are glabrous (Ilpin). Comments: status: Presumed extirpated in Ohio. This sp is considered weedy or invasive by some wackadoodle authorities in some areas or in some applications (Stubbendieck et al 1994). phenology: Blooms June, July. Hips may be retained into the following spring or summer. Flowers fragrant, good for cut flowers, but this may remove enough foliage to damage the plant. WILD ROSE is the floral emblem of Iowa & North Dakota. *Rosa pratincola* Greene is the most often cited taxon in Iowa. Once established, this sp is vigorously rhizomatous, forming sizeable, open clones. A poor mans groundcover.

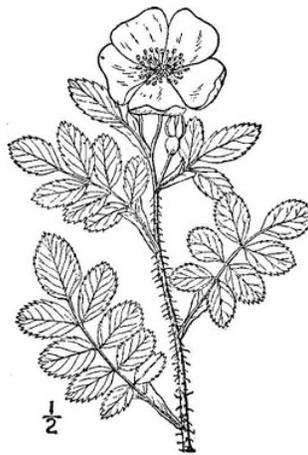
We have a small clone of this sp (one genetic individual) in our home landscape. While cleaning the hips, most had few full but many aborted seeds. It was at least 600 feet to the next flowering, fertile rose, minimizing out-crossing. This sp may be at least partly self-sterile.

Associates: Attracts butterflies. Sp is often eaten to the ground in winter by rabbits. The seeds are commonly parasitized, ultimately indicated by the small exit hole in the achene.

Ethnobotany: Used as medicinal plant by Ojibwa as tonic (den28).

VHFS: Synonyms for variety *arkansas*: [*Rosa lunellii* Greene, *R rydbergii* Greene]

Synonyms for variety *suffulta* (Greene) Cockerell: [*Rosa alcea* Greene, *R conjuncta* Rydbg, *R pratincola* Greene, *R relict*a Erlanson, *R suffulta* Greene, *R suffulta* Greene var *relict*a (Erlanson) Deam]



Rosa arkansas var *suffulta*

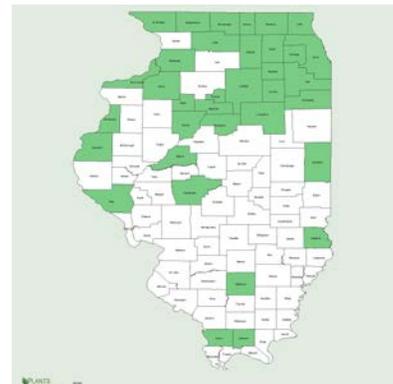
Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

Rosa blanda Aiton MA, MD, OH EARLY WILD ROSE, aka BLAND ROSE, DAMASKE ROSE, EARLY WHITE ROSE, EARLY WILD ROSE, MEADOW ROSE, NORTHERN ROSE, PALE ROSE, PALE WILD ROSE, PRAIRIE ROSE, SMOOTH ROSE, SMOOTH WILD ROSE, SWAMP ROSE, WILD ROSE, (*blandus -a -um* alluring, from Latin adjective *blandus -a -um*, flattering, caressing, smooth, soft, alluring, tempting, pleasant, mild.) facu

Habitat: Mesic & dry savanna, woods, open areas, wet thickets, & moist sites.

distribution/range:

Culture: ①Seeds need scarification. 60 days cold moist stratification. Seeds need a cold, moist period followed by a warm, moist period followed by a 2nd cold, moist period, or sow outside & allow 2 years for germination? (pm09, 15). ②Sp has 'double dormant' seeds requiring alternating moist cold & warm periods, sow outside & allow 2 years for germination. Seeds need scarification. (he99) ③"Double Dormant. Field sow fall." (pnnd) ④Seeds should be removed from the hip as soon as possible, the pulp floated off, & the seeds dried for one week. Scarify by pouring boiling water over the seeds & steep for 24 hours. Place seed & an equal volume of moist perlite or vermiculite in an airtight container & store at room temperature for 1 month followed by cold moist stratification for 4 months at 33-42°F. (Schultz et al 2007)



seed counts & rates: 26,883 (gnh14), 33,382 (gnh11), (41,600 (pm), 52,717 (gn12), 60,800 (pn02), 75,600 seeds per pound.

availability: There are few commercial sources of seeds or plants. Plants as bare root in season, few potted sources.

asexual propagation: Soft wood cuttings can be rooted, careful division of mature plants.

cultivation: Optimum pH 6.5. Zone 3.

bottom line: Dormant seed for field establishment. Double dormant/multiple cycles and/or recalcitrant (?). Germ 0.9, 0.0, 0.0, sd 0.8, r0.0-2.0 (2.0)%. Dorm 92, 82, 84, sd 15.7, r40-92 (52)%. Test 32, 31, 29, r24-40 days. (#7:3)**

greenhouse & garden: Scarify, dormant seed, double dormant. Moist cold stratify (300 days) is reported. Dormant seed in galvanized flats protected with hardware cloth in a lathe house.

Description: Erect, shrubby, native rose with few thorns; colonial roots; culms 3-4(5-6)', stems mostly without thorns or with thin thorns only at the bottom internodes; leaves odd pinnate 5 or 7 oblong, coarsely-toothed leaflets; flowers clear pink, occasionally white, 5-merous, 1.50"- 2.33" wide, only on last year's side branches, the sepals persistent; inflorescence either solitary or in a wide cluster (corymb) of stalked flowers; N = ? Diploid. key features: ① Stems mostly without thorns, flowers on last years side branches, sepals persistent, 5 or 7 leaflets. (fh) ② "Flowers are also solitary; prickles absent on flowering branches, although often present near base of plant, leaflets pubescent" (Ilpin).

Comments: status: Special Concern in Maine. Endangered in Maryland. Threatened in Ohio. phenology: Blooms 5,6,7. C3. In northern Illinois, collect seeds in September. Collect seeds in se Wisconsin in October (he99).

Landscaping, shrub, aggressive. Seed source DeKalb Co.

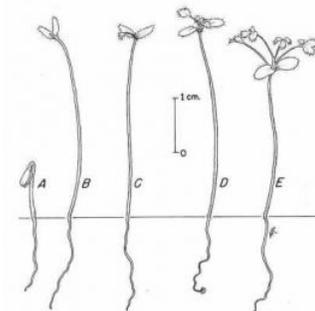
"Not common. Usually in thickets or the brushy edge of woods. West of Shirland near Winslow bridge & in a thicket near "north ledges" of Kinnikinnick Creek. Rather tall, erect, not much branched, few prickles. Sepals erect in fruit which is smooth." (ewf55)

Associates: Attracts butterflies, upland game birds & songbirds. Used by grouse, prairie chicken, & deer. Cover for nesting & roosting.

ethnobotany: Root used as medicinal plant by Ojibwa & Pottawatomie (sm32, 33).

VHFS: [*Rosa blanda* Aiton f *alba* (Schuette ex Erlanson) Fernald, *R b* Ait f *carpohipida* (Schuette) WH Lewis, *R b* Ait var *alba* Schuette, *R b* Ait var *blanda*, *R b* Ait var *carpohipida* Schuette, *R b* Ait var *glandulosa* Schuette, *R b* Ait var *hipida* Farw, *R b* Ait var *nuda* Schuette, *R b* Ait var *subgeminata* (Schuette) Erlanson, *R b* Ait var *subgeminata* Schuette]

J Schultz, P Beyer, & J Williams, 2007. Propagation protocol for production of container *Rosa blanda* Aiton plants; USDA FS - Hiawatha National Forest, Marquette, Michigan. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 26 April 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Rosa blanda

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Rosa canina Linnaeus ♣ DOG ROSE, (*caninus -a -um* pertaining to a dog, with sharp teeth or thorns.)

distribution/range: A rarely escaped introduced shrub, native of Europe, often planted for its attractive hips.

“Rusty resinous glands are sometimes present on lower leaf surface; receptacle, pedicels are glabrous.” (Ilpin)

VHFS: [*Rosa canina* L var *dumetorum* Baker]



Rosa canina



Rosa canina

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Rosa carolina Linnaeus PASTURE ROSE, aka CAROLINA ROSE, DOG ROSE, FALSE EGLANTINE(?), HIP TREE, *ROSIER DE CAROLINE*, SAND ROSE, SWAMP ROSE, WILD ROSE, WILD VIRGINIAN ROSE, (*carolinus -a -um* referring to or from the Carolinas. Epithet formerly capitalized.) facu-

Habitat: Mesic, dry, hill, sand, & mesic prairies, dry woods, fields. Full sun, dry to moderate moisture, upland woods, prairies, inland sands, & roadsides. distribution/range:

Uncopyrighted Draught

Culture: ①Seeds need scarification. 60 days cold moist stratification. Seeds need a cold, moist period followed by a warm, moist period followed by a 2nd cold, moist period, or sow outside & allow 2 years for germination? (pm09, 15). ②Seeds germinate after about 60 days of cold moist stratification (he99). ③“Double dormant. Field sow fall.” (pn). ④“Fall plant or cold stratify for 2 to 3 months for best results. Sow seeds just below the soil surface at 65°F & water.” (ew12) ⑤Flood et al (2001) report cold moist stratification 3-4 months at 34-36°F. ⑥Grabowski (2001) with fresh, barely ripe seed from Mississippi, scarification in concentrated sulfuric acid for 45 minutes, & cold moist stratification for 3 months.



seed counts & rates: 33,236 (gnh13), 40,000 (pm02), 43,200 (ew12), 44,470 (gnhac12), 46,400 (pn02, jfn04), 800,000 (aes10), 874,400 seeds per pound.

availability: There are several commercial sources of seeds or plants, but availability may be limited. Plants bare root in season, few potted sources.

“*Rosa carolina* General prairie. Blooms late May to mid July; PINK. Harvest October. 2'; taxonomically a complex. SEEDLING TRANSPLANT. Retain seed flat until 2nd spring, when most emergence occurs; spreads by rhizomes forming loose colonies. Flowers on old wood.” (rs ma)

asexual propagation: Soft wood cuttings or division, some say best from cuttings versus seed.

cultivation: Space plants 1.5-3.0'. Medium to dry soils, full sun to light shade. Allow room for plants to spread, or do not plant near anything special. Plants should be watered in the morning to allow the foliage to dry to avoid powdery mildew.

bottom line: Dormant seed for field establishment. Double dormant or recalcitrant (?). Germ 2.0, 2.0, 2.0, sd0.0, r2.0-2.0%. Dorm 40.5, 31.5, na, sd24.7, r19-80%. Test 32, 31, na, r26-41 days.**

greenhouse & garden: Fall plant, double dormant. Moist cold stratify (300 days) is reported.

Description: Erect, perennial, flowering, native shrub, 0.5-4.0' tall, clone-forming, usually unbranched or with only a few branches; roots minimum root depth; culms stems with straight, slender, rounded thorns near the nodes; leaves pinnately-divided with 3-7 oblong to rounded, coarsely toothed leaflets; flowers white to pink, solitary, 5-merous, 1.50"-2.33" wide, on this year's stems, the sepals deciduous; N = ? Tetraploid. key features: Stems usually unbranched, rounded thorns near nodes, flowers on this years stems, sepals deciduous, 3-7 leaflets (fh). “Flowers are solitary; lower leaf surface is glabrous or sparsely pubescent; leaves are coarsely toothed.” (Ilpin)

Comments: status: phenology: Blooms 6,7,8. C3. In northern Illinois, collect seeds in late August - September. Collect seeds in se Wisconsin in October (he99). Various shades of pink, landscaping, naturalized plantings, zones of human exclusion. Plant near a path, drive, or parking space where their beauty can be appreciated. Small colonial rose with few thorns, nice red fall color, & bright red hips thru the winter. Seed source railroad remnants Binghampton, Lee Co & Big Rock, Kane Co.

“The most common rose throughout except on dry prairies where *R suffulta* is more frequent. It is very stoloniferous & has infrastipular prickles which are straight.” (ewf55)

Associates: Larval host *Sphinx gordius* APPLE SPHINX MOTH & *Sphinx poecila* POECILA SPHINX MOTH. Pollinated by bees & *Coleoptera*. Sp is of special value to bumble bees & other native bees. Attracts butterflies, upland game birds, songbirds, & ungulates. Seeds are dispersed by birds & mammals.

VHFS: [*Rosa carolinensis* Marsh] Var or f *alba* flowers bluish pink in bud, opening white, fruit not as colorful. (*R Carolina* L in Woods (1873) is called Swamp Rose, 4-8' tall, swamps & damp woods, forming thickets) RM Flood, G Blessman, & DJ Horvath, 2001. Propagation protocol for production of container *Rosa carolina* L plants (1+0 container plugs), Illinois Department of Natural Resources - Mason State Nursery, Topeka, Illinois. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 26 April 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

JM Grabowski, 2001. Propagation protocol for vegetative production of container *Rosa carolina* L plants; USDA NRCS - Coffeetown/Jamie L Whitten Plant Materials Center, Coffeetown, Mississippi. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 26 April 2009). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.



Rosa carolina

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Rosa centifolia Linnaeus ♡ CABBAGE ROSE, aka HUNDRED-LEAVED ROSE, PROVENS ROSE, (*centifolius -a -um* New Latin hundred-leaved,)

distribution/range: Escaped, introduced shrub. Fls fragrant.

VHFS: [*Rosa X centifolia* L]



Rosa centifolia

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Rosa cinnamomea Linnaeus CINNAMON ROSE, aka ROSA CANELLA, (*cinnamomeus -a -um* (kin-a-MO-mee-us) cinnamon-brown, resembling cinnamon, light brown with red & yellow.)
distribution/range:



Rosa cinnamomea

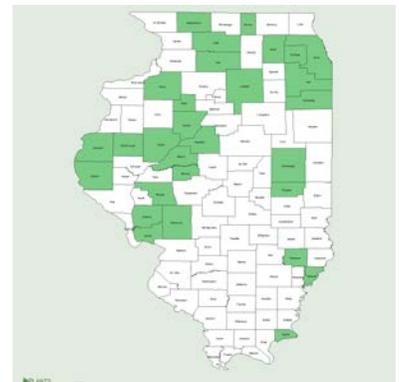
Color illustration Jan Kops, F W van Eeden - Flora Batava of Afbeelding en Beschrijving van Nederlandsche Gewassen, XVI Deel. , Volume 16 (1881) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de

Rosa X dulcissima Lunell (pro sp) (*Rosa blanda* Aiton X *R woodsii* Lindl)

distribution/range: Known from Iowa, Minnesota, North Dakota, South Dakota, & Wisconsin, plus Manitoba & Saskatchewan.

Rosa eglanteria Linnaeus ♣ SWEETBRIAR, aka *BEDEGUAR*, *EGLANTERE*, EGLANTINE, EGLANTINE ROSE, HIP BRIER, HIP ROSE, KITCHEN ROSE, PRIMROSE, SWEET BREER, SWEET BRIAR [SWEETBRIAR, SWEET BRIER, SWEETBRIER, SWEET BRYER], SWEETBRIAR ROSE [SWEETBRIER ROSE], WILD BRIER, (*eglantaria* from old English name for the SWEET-BRIAR ROSE, *Eglantine* which is from old French *aiglantine* from vulgar Latin *aguilentum* for "prickly; alternately French *eglantine*, Provençal *aiglentina*, from Old French *aiglent*, of the same meaning, probably from Latin type **aculentus* prickly, from *acus* needle + *-lentus* suffix, as in *viru-lentus*, *luculentus*; compare *aculeus* sting, prickle (oed).)

distribution/range: Introduced from Europe. 43 of the lower 48 states & 6 Canadian provinces.



“Leaflets have many rusty glandular dots on both surfaces; calyx is persistent on fruit; sometimes flowers are single” (Ilpin)

“An escape which is not uncommon on roadsides & prairies & in pastures.” (ewf55)
 In Britton & Brown (1913) as *Rosa rubingosa*. [*Rosa rubiginosa* L]



331. *Rosa eglantheria* L.
R. rubiginosa L.
 Sweetbriar; Fl.

Rosa eglantheria

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***Rosa gallica* Linnaeus** ♣ FRENCH ROSE, aka APOTHECARY ROSE, COMMON FRENCH ROSE, ESSIG-ROSE, HUNGARIAN ROSE, OFFICIAL ROSE, OFFICINAL ROSE, RED ROSE, RED-ROSE-OF LANCASTER, *ROSA SERPEGGIANTE*, *ROSIER DE FRANCE*, *ROSIER DE PROVINS*,

distribution/range: Introduced from Europe, rarely escaping cultivation. Known from the eastern USA. In Illinois, Jackson & Piatt cos.

Flowers red. “Sp has solitary, often double-petaled flowers.” (Ilpin)

“The common red rose of gardens, from which we have originated not less than 300 varieties, known in cultivation, as the *Velvet*, *Carmine*, *Carnation*, &c. Many of them are beautifully variegated, as the *Tricolor*, *York & Lancaster*, *Nosegay*, *Picotée*, &c. The dried petals are used in medicine & from them are extracted tinctures for cooking. (w73)

[*Rosa gallica* L var *gallica*, *R gallica* L var *officinalis* Thory, *R gallica* L var *versicolor* L]



Rosa gallica



Rosa gallica, second seed photo variety *officinalis*

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***Rosa majalis* Herrmann** ♥ DOUBLE CINNAMON ROSE, aka CINNAMON ROSE, MAI-ROSE, MAY ROSE, *ROSA CANELLA*, *ROSIER CANELLE*, *ROSIER DE MAI*, *ZIMT-ROSE*, (*majalis* -is -e referring to the month of May, the flowering period, Maytime.)

distribution/range: Introduced shrub, rarely escaped, ne USA, Connecticut, Michigan, New York, Ohio, Vermont, & Wisconsin.

VHFS: [*Rosa cinnamomea* sensu L 1759, non 1753]



Rosa majalis



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Rosa micrantha Borrer ex Smith ♣ EGLANTINE, aka *KLEINBLÜTIGE ROSE*, *ROSA BALSAMINA MINORE*, SMALLFLOWER ROSE, SMALLFLOWER SWEETBRIER, SMALLFLOWERED SWEETBRIER, SWEETBRIER, (*macranthus -a -um* small-flowered, from Greek *micro*, small, & *anthos*, flower.)

distribution/range: Introduced from Europe. Flowers red or white.

“Sometimes flowers are single; calyx falling from fruit; leaflets have only a few rusty glandular dots on surfaces.” (Ilpin)



Rosa micrantha



Rosa micrantha

Photos by Brunello Pierini, http://luirig.altervista.org/photos/r/rosa_micrantha.htm. Line drawing public domain from Hippolyte Coste - *Flore descriptive et illustrée de la France, de la Corse et des contrées limitrophes*, 1901-1906. Illinois map courtesy of ILPIN.

Rosa moschata J Herm. ♣ MUSK ROSE,

distribution/range: Known from Alabama, Illinois (Perry Co), & Puerto Rico.



Rosa moschata



Rosa moschata

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Uncopyrighted Draught

Rosa multiflora Thunberg ex Murray *AL, CT IN, IA, KY, MA, MS, NH, PA, SD, WV, WI ♣ MULTIFLORA ROSE, aka BABY ROSE, CATHAY ROSE, CRIMSON RAMBLER, JAPAN ROSE, JAPANESE ROSE, MANY-FLOWERED ROSE, NATIONAL ROSE, RAMBLER ROSE, ROSIER MULTIFLORE, SEVEN-SISTERS ROSE, *VIELBLÜTIGE ROSE*, *YE QING WEI*, (*multiflorus -a -um* many-flowered.)

Habitat: Sun to partial shade, pastures & woods. distribution/range:

Introduced from Asia. Probably more abundant than the map indicates.

Culture: Rude & uncultured. Germination is enhanced by passing through a birds digestive tract.

Description: Arching perennial, introduced shrub, 5'-12' tall forming dense clones; roots minimum depth; stems bright green to reddish, very prickly with curved thorns; leaves pinnately-divided with 5-11 elliptical, toothed, leaflets to 1" long; inflorescence panicle of many stalked flowers in large, branched clusters; flowers white (white, varying through roseate to purple), 5-merous, 0.50-1.25" wide, sepals becoming deciduous; fruits are smooth, red berry-like hips; N. key features: ①Stems very prickly, stems bright green to reddish, white flowers, sepals becoming deciduous, 5-11 leaflets (fh). ②“Styles are united into a column; many flowered inflorescence; stems are climbing or scrambling; prickly; 7-9 leaflets” (Ilpin). ③Stipules barbed. ④Stipules pectinate, fimbriate (w73).



Comments: Noxious Weed in Alabama, Iowa, Kentucky, Missouri, Pennsylvania, West Virginia, & Wisconsin. Banned, prohibited, or regulated in Connecticut, Indiana, Massachusetts, New Hampshire, & South Dakota. status: Introduced - escaped; ecologically invasive & nuisance weed. phenology: Blooms May - June. Growth is quite rapid, a 2 year old plant may be 1.5' tall & 3.0' in diameter. “Shrub with luxuriant shoots, easily trained to the neight of 15 to 20f. ---- Among its varieties are the Seven Sisters, Boursalt’s, etc.” (w73)

“A hardy native of Asia which has recently been extensively planted in the co for hedges & for wildlife purposes. Particularly in prairie areas it tends to spread rapidly & will doubtless soon become established.” (ewf55)

To eradicate, burn, cut & herbicide, treat foliage with brush herbicide, or pull or dig young plants

Associates: Provides cover for songbirds, pheasants, bobwhite quail, & cottontail rabbits. Provides food for songbirds. Any positive habitat qualities this sp may present are better provided by native roses, especially *Rosa setigera*.

ethnobotany: Species has shown antimicrobial properties, particularly against *Salmonella typhimurium* (Frey & Meyers 2010).

VHFS: [*Rosa cathayensis* (Rehder & EH Wilson) LH Bailey, *Rosa gentiana* (*Rosa cathayensis* (Rehder & EH Wilson) LH Bailey), *Rosa multiflora cathayensis* (*Rosa cathayensis* (Rehd & Wilson) Bailey, *R multiflora* Thunb. ex Murray var *cathayensis* Rehder & EH Wilson)] Also seen as *R multiflora* Seringe in w73.

FM Frey & R Meyers, 2010, Antibacterial activity of traditional medicinal plants used by Haudenosaunee peoples of New York State, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2989932>



Rosa multiflora

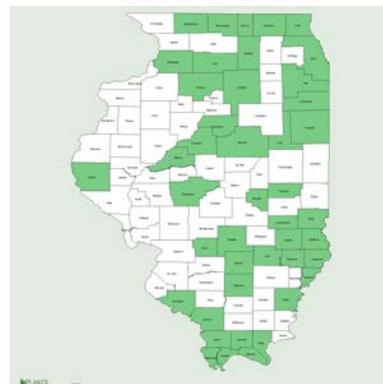
Hip photo courtesy of USDA-NRCS PLANTS Database - Not copyrighted image. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Flower photo by Leo Michels - Source: <http://www.imagines-plantarum.de/> Public domain image. Illinois map courtesy plants.usda.gov.

Rosa X palustriformis Rydbg (pro sp) *Rosa blanda* Aiton X *R palustris* Marshall
distribution/range: Known from Maine, Michigan, New York, Ohio, & two cos in ne Wisconsin
VHFS: [*Rosa X michiganensis* Erlanson, *Rosa X schuetteana* Erlanson]

Rosa palustris Marshall *IA SWAMP ROSE, (*paluster -tris -tre* (pa-LUS-tris) of marshes or swamps, by usage marsh-living, marsh-loving, swamp loving, or growing in bogs, bog-loving, from Latin *paluster -tris -tre* marshy, boggy, of swampy ground, from *palus*, *paludis* f, a swamp or marsh.) obl

Habitat: Fens & borders of wetlands, swamps, bogs, & wet thickets; marshy shores of streams, ponds, & lakes. “Not unusual on streambanks & other wet places” (ewf55). distribution/range: Most of eastern North America east of the Great Plains.

Culture: ①Seeds need a cold, moist period followed by a warm, moist period followed by a 2nd cold, moist period, or sow outside & allow 2 years for germination? (pm09). Seeds need scarification. Seeds germinate best after a cold moist period, 60 days (pm12). Seeds need scarification. 60 days cold moist stratification. Seeds need a cold, moist period followed by a warm, moist period followed by a 2nd cold, moist period, or sow outside and allow 2 years for germination (pm15). Clone (he99). ②“Fall plant or cold stratify for 2 to 3 months for best results. Sow seeds just below the soil surface at 65°F & water.” (ew12) ③Hips can be collected as soon as they are ripe & the achenes extracted immediately by macerating the hips in water & recovering the seeds by flotation. Cleaned achenes should be planted immediately in the open or stratified before planting. (lbj) Growth rate moderate. Seedling vigor medium. Vegetative spread rate slow. Spreads slowly from seed.



seed counts & rates: 25,600 (pm02, jfn04, ew12, aes10), 100,576 (gnihm06), 112,500 (gnhm12), 167,380 (gnhe13) seeds per pound.

availability: There are few commercial sources of seeds or plants, & availability is limited.

asexual propagation: Soft wood cuttings. Propagated by stem cuttings or division of rootstock; softwood cuttings should be taken with a heel & treated with hormone (lbj)

cultivation: Space plants 2.0-3.0'. Aggressively rhizomatous. Do not plant in small gardens or near any special plants. Tolerates rich mesic soils that do not dry out to consistently wet soils. Tolerant of medium & fine textured soils. Anaerobic tolerance medium. CaCO₃ tolerance low. Drought tolerance low. Fertility requirement medium. Salinity tolerance none. Shade tolerant. pH 4.0-7.0.

bottom line: Dormant seed for field establishment. Some germination 1st spring. Germ 6.0, 1.0, 1.0, sd 10.6, r0.0-33 (33)%. Dorm 77.3, 82.5, na, sd 17.1, r46-97 (51)%. Test 36, 36, na, r20-50 days. (#11)**

greenhouse & garden: Moist cold stratify (60) or fall plant. Easier from seed than some spp. Seeds need scarification. 60 days cold moist stratification.

Description: Erect, perennial, native shrub (subshrub), 3.0-7.0', with many branches; roots 18" minimum depth; culms stems with stout, downward-curving thorns usually only near the nodes; leaves pinnately-divided with usually 7 finely-toothed leaflets, yellow-orange to red fall color; inflorescence solitary or in small, wide clusters or corymbs of stalked flowers; flowers deep rich pink (red/pink), 5-merous, 1.50"-2.33" wide, sepals becoming deciduous; fruits smooth, red berry-like hips, 0.5-1.0" (?), diameter persisting thru winter; N = ? Diploid. key features: ①“Thorns downward curving, stout; thorns only near the nodes; sepals becoming deciduous; leaflets 7, finely toothed” (fh).

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②“Sepals reflexed after flowering, rarely persisting on mature fruit; stout thorns; mostly 7-leaflets” (Ilpin).

Comments: status: phenology: Blooms 6,7,8. C3. Collect seeds in se Wisconsin in October (he99). Aggressive, rhizomatous, thorny, arching stems, profuse flowering. Good for cut flowers. Landscaping, specimen plantings, wet borders & wet hedges, moist human exclusion zones, wildlife plantings, rain gardens, bog gardens, pond margins, & wetland restoration.

Associates: Pollinator friendly. Sp is of value to bumble bees & other native bees. Butterfly nectar source.

Wildlife eat the fruits. Low palatability to browsing animals. Walnut tolerant. Susceptible to fungal problems.

VHFS: [*Rosa carolina* L var *inermis* Regel, *R dasistema* Raf, *R floridana* Rydbg, *R lancifolia* Small, *R palustris* Marshall f *inermis* (Regel) WH Lewis, *R palustris* Marshall var *dasistema* (Raf) EJ Palmer & Steyerem.



Rosa palustris

Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. 1st Photo by Robert H Mohlenbrock USDA-NRCS PLANTS Database - Not copyrighted image. Illinois map courtesy plants.usda.gov.

***Rosa rubrifolia* Vill** ♣ RED-LEAVED ROSE,

Introduced from Europe.

“Species is incorrectly spelled *R. rubifolia* Vill on listing - *R. rubifolia* is Ait. and synonymous with *R. setigera* Michx. var. *tomentosa* Torr. & Gray. Species has purplish foliage and stems; few prickles.” (Ilpin)



Rosa rubrifolia



Rosa rubrifolia

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Rosa X rudiuscula Greene (pro sp) ROUGH ROSE, (*rudiusculus -a -um* wildish, roughish, from *rudis is -e*, Latin adj, undeveloped, wild, not tilled, rough, coarse, and *-culus -a -um*, little, small, adj diminutive suffix used with adjectival bases (or nouns of any declension).)

Rosa arkansana Porter var *suffulta* (Greene) Cockerell X *R carolina* L.

distribution/range: Midwestern hybrid, known from Iowa, Illinois, Missouri, Ohio, Oklahoma, & Wisconsin.

Rosa rugosa Thunberg ♣ BEACH ROSE, aka JAPANESE ROSE, RUGOSA ROSE, RUGOSE ROSE, TURKESTAN ROSE, *MEI GUI*, *ROSIER DU JAPON*, *KARTOFFEL-ROSE*, *HAEDANGHWA*, *VRESROS*, (*rugosus -a -um* (roo-GO-sus) rugose, wrinkled, rough, from Latin *rugosus*, adj, full of wrinkles, folds, or creases, from *ruga*, *rugae*, wrinkle, crease)

Introduced shrub rarely escaped. distribution/range: Native of eastern Asia. Naturalized in Australasia, Europe, & North America. In Illinois, known as an escape from Kane Co.



Rosa rugosa

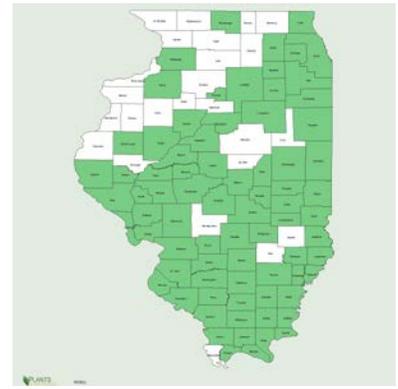


Rosa rugosa

Photo USDA not copyrighted image. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN.

Rosa setigera Michaux *MI ILLINOIS ROSE, aka CLIMBING PRAIRIE ROSE, CLIMBING ROSE, CLIMBING WILD ROSE, MICHIGAN ROSE, PRAIRIE QUEEN ROSE, PRAIRIE ROSE, PRAIRIE WILD ROSE, ROSE BLUSH, (*setigerus -a -um* modern? Latin, bearing bristles, bristly, from Latin *saeta*, *saetae* f, (or *seta*, *setae*, f), bristle, & *gero*, *gerere*, *gessi*, *gestus*, bear, carry, alternately from Latin *saetiger -gera -gerum*, having bristles, bristly; m. as a substantive, a boar. Facu+

Habitat: Sand & mesic prairies, sandy barrens, mesic savannas with little competition, & occasionally in sedge meadows, woods, floodplain thickets, & clearings. Quite often, we have seen this plant at the break in slope at the base of bluff bordering a sedge meadow or on a stream bank in a sedge meadow. “Very uncommon, we having found it only in the lower end of Killbuck bottom in the forest preserve & in the adjacent slough area.” (ewf55) distribution/range: Known but not mapped from Bureau, Knox, & Stark cos. Considered introduced in Wisconsin.



Culture: ①60 days cold moist stratification (pm09, 15). ②Seeds germinate after about 60 days of cold moist stratification (he99). Growth rate rapid. Seedling vigor high. Vegetative spread rate none. Spreads slowly from seed.

seed counts & rates: 50,000 (usda), 72,000 (aes10), 73,168; 94,523 (gnhm12), 160,000 (pm02) seeds per pound.

availability: There are few commercial sources of seeds or plants. Availability may be limited, at least seasonally.

asexual propagation: Some say best grown from cuttings, but *contraire*, Mooseface! Some growers prefer to use soft wood cuttings taken after flowering over seed, but, as a rule of thumb, & in light of the fact the sp is cryptically dioecious, these cuttings should be taken from a number of genetically different individuals in production beds known to produce viable seed.

cultivation: This sp responds well to cultivation, mulch, irrigation & fertilizer. Tolerant of coarse & medium textured soils. Anaerobic tolerance none. CaCO₃ tolerance medium. Drought tolerance high. Fertility requirement medium. Salinity tolerance none. Shade tolerance none or partial shade. pH 5.0-7.0. Hardy to zone 4.

bottom line: Dormant seed for field establishment. Some germination 1st spring. Cryptically dioecious. Germ 0.0, 0.0, 0.0, r0.0%. Dorm 91.5, 91.5, na, r92-94%. Test 28, 27.5, na, r27-28 days.**

greenhouse & garden: Moist cold stratify or fall plant, one of the easier roses from seed. Our propagation experience with this sp has been approximately 50% germination the first spring after dormant seeding. GA3 on dry stratified northern Illinois seed seems to work well (gni greenhouse notes).

Description: Erect to arching, native shrub, 2.0-6.0(-8+); 6” minimum root depth; at least some leaves with three leaflets, stipules not barbed; long sprays of clear pink (rarely white) flowers, 5-merous; petals remain on the flowers of female plants for three days. key features: ①“Prickles are sparse; styles are in a column; 3-5 leaflets.” (Ilpin) ②Stip. narrow, adherent, acuminate (w73).

ILLINOIS ROSE can grow into a very large plant, & may be mistaken to be the invasive *R multiflora*. Besides pink flowers, it differs by almost always having at least a few leaves with 3 leaflets & the stipules are not barbed. The hips & seeds are much larger than those of *R multiflora*.

Comments: status: phenology: Blooms 6,7. C3. In northern Illinois, collect seeds in October. Collect seeds in se Wisconsin in October (Heon et al 1999). Useful in landscaping, specimen plants, rain gardens, borders, property lines, & human exclusion zones. A climbing, rambling rose, with arching canes like a BLACKBERRY, rooting at the tips. Although Jock at LaFayette Home Nursery first made this sp available in the 1970’s with stock from McCune Sand Prairie, the USDA website disavows any knowledge of commercial availability. *Kudos* for keeping up with the industry. Several magnificent specimens grew in Bohl’s Sedge Meadow, Garden Plain Road, Morrison, Whiteside Co. The sp seems at its best on the change of slope between wooded bluffs & sedge meadow, or along channels incised into sedge meadows. We have seen wetland specimens to 8+’, & this rose rambling up a tree to 15’ in the Spoon River floodplain near Elmira, Stark Co. Small specimens are known from Doc Frymire’s Savannah, Wataga, Knox Co,

It takes two to tangle. For hip & seed production, it is necessary to plant several seed grown plants (not plants from random cuttings). *R setigera* is cryptically dioecious. On any plant or clone, the flowers will have both male & female organs, but one set of organs in the plant will be sterile. It takes *the right two* genetically different individuals to set fertile seed. Female flowers are receptive to pollen for the three days the petals remain on the flowers, but most pollination occurs the first morning the flowers are open (Kemp 1994). At McCune Sand Prairie, Bureau Co, there are some ancient, massive specimens on the classic break in slope between a dune base & a wetland. These plants produce almost no seed. They may be the same genetic individual or the same sex, but they have never had a prescribed burn or a renewing cut.

“About 20 varieties are enumerated in cultivation, among which is the *Baltimore Belle*. They are hardy, of rapid growth, and capable of being trained 12 to 20 feet. Fls in very large clusters, changeable in hue, nearly scentless, & of short duration.” (w73)

Associates: Pollinated by long-tongued bees, short-tongued bees, *Diptera*, & *Coleoptera*. Attracts butterflies & songbirds. This rose has the clumping structure & large stature of the invasive *R multiflora* & old plants provide important songbird & small mammal habitat.

VHFS: [*Rosa rubifolia* R Br] Variety *serena* Palmer & Steyermark is synonymous with var *setigera*. Var *tomentosa* T&G, CLIMBING ROSE, FUZZY PRAIRIE ROSE, is known from southern Illinois & Wisconsin.

JR Kemp, 1994, Flower Morphology & Pollination biology of *Rosa setigera* Michaux, PhD dissertation, University of Guelph, 217pp.



Rosa setigera

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed line drawing Suzanne Foster courtesy of the US Forest Service USDA-NRCS PLANTS Database. 3rd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Hip photo courtesy of USDA Forest Service, USDA-NRCS PLANTS Database. Leaf photo Robert H Mohlenbrock USDA-NRCS PLANTS Database - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Rosa spinosissima Linnaeus ♣ SCOTCH ROSE, aka *BIBERNELL-ROSE*, BURNET ROSE, *MI CI QIANG WEI*, *ROSIER D'ECOSSE*, *ROSIER À FEUILLES DE PIMPRENELLE*, SCOTCHBRIAR, SCOTTISH ROSE, SCOTTISH-BRIAR, (*spinosissimus* -a -um Latin superlative adjective, very spiny, the spiniest.)

distribution/range: Introduced shrub, rarely escaped, native of Scotland & other parts of Europe. In Illinois Iroquois, LaSalle, & Vermillion cos.

Fls white, red or yellow.

VHFS: [*Rosa pimpinellifolia* L, *R sibirica* Tratt]



Rosa spinosissima



Rosa spinosissima

Line drawing Walter Hood Fitch - Illustrations of the British Flora (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Color illustration Jan Kops, F W van Eeden - Flora Batava of Afbeelding en Beschrijving van Nederlandsche Gewassen, XVI Deel. , Volume 16 (1881) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de Illinois map courtesy of ILPIN.

Rosa suffulta Greene *OH SUNSHINE ROSE, aka ARKANSAS ROSE, PRAIRIE ROSE, PRAIRIE WILD ROSE, WILD PRAIRIE ROSE, WILD ROSE, *Onzhinzhintka* Dakota, *Onzhinzhintka-hu* translates as ROSE BUSH, *Pahatu* Pawnee, red, *Wazhide* Omaha-Ponca, (*suffultus* -a -um in botany propped up, supported, from Latin *suffultus*, past participle of *sulficio*, *suffulcīre*, *suffulsi*, *suffultum*, to prop, often confused with *suffarcināre* to stuff)

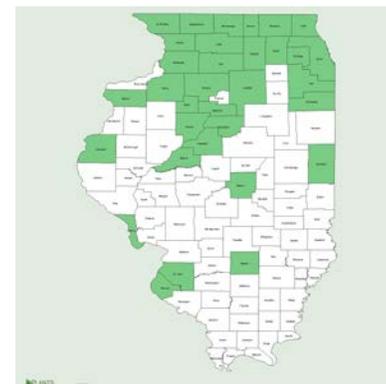
Habitat: distribution/range: *Rosa arkansana suffulta* is the common variety in Illinois.

Culture: Remove seed from fresh hips, scarify, cold moist stratify seed.

asexual propagation: Division of rootstock & softwood cuttings with a heel treated with hormone. There are no or few commercial sources of seeds or plants, some plants are available as *R pratincola*.

Description: Erect, spreading, shrubby, perennial native forb; stems prickly branched, less woody than other *Rosa* spp, often dying back to the ground annually; leaves pinnate compound, turning maroon in fall. Tetraploid. key features: “Sp is prickly; leaves are pubescent (Ilpin).

Comments: status: Presumed extirpated in Ohio. Some feel this sp can be weedy or invasive in part of its range or in certain applications (Stubbendieck et al 1994). Potentially a weed of economic consequence. phenology: Blooms 6-7. C3. Attractive in flower & fruit; great for xeriscaping & naturalizing where it can run freely. Very low profile.



WILD ROSE is the floral emblem of Iowa. No specific taxon was named, but “*R pratincola*” is the most often cited.

“The most common rose on dry prairie. It is half hardy, is low & branched, but no prickles & the flowers are large. (*R pratincola* Greene) (*R arkansana* Porter var *suffulta* Greene)” (ewf55)

Associates: “Fruits” are eaten by small birds. Deer eat the fruit, leaves, stems, & buds. Seeds are dispersed by mammalian & avian endozoochory.

VHFS: New nomenclature this will be *Rosa arkansana* Porter var *suffulta* (Greene) Cockerell. [*Rosa alcea* Greene, *R conjuncta* Rydbg, *R pratincola* Greene, *R relictata* Erlanson, *R suffulta* Greene, *R suffulta* Greene var *relictata* (Erlanson) Deam.]



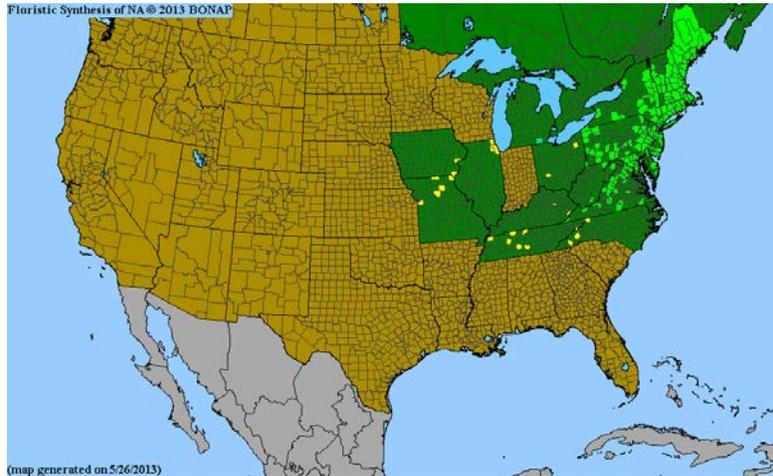
Rosa arkansana suffulta

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Tracey Slotta USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Rosa virginiana Miller VIRGINIANA ROSE, aka COMMON WILD ROSE, PASTURE ROSE, VIRGINIAN ROSE, VIRGINISCHE ROSE, WILD ROSE,

Tetraploid. distribution/range: Native west, south, & east of our area. Adventive along a railroad in Lake Co, Illinois. Sp should be looked for in nw Illinois. To 6’;





Rosa virginiana

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. North America map courtesy of BONAP (2016)

Rosa wichuriana Crépin ♣ MEMORIAL ROSE, aka WICHURA'S ROSE,
Seen as *R wichuraiana*.

distribution/range: Known from Jackson Co, Illinois.

“Style is pubescent; fewer flowers than *R multiflora*; semi-evergreen trailer & climber” (Ilpin). C3.



Rosa wichuriana

Photo by permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de Illinois map courtesy of ILPIN.

Rosa woodsii Lindl var **woodsii** WESTERN ROSE, aka LOW ROSE, WESTERN WILD ROSE, WOODS' ROSE, (*woodsii* New Latin, from Joseph *Woods* (1776-1864) English botanist, author, & architect, & New Latin *-ia*)

distribution/range: Native in southwest Wisconsin & eastern Iowa, & further west & north. Next to, but not in Illinois.

Much-branched shrub, 1.5-3.0', stems woody, brownish-red, branches often becoming grayish; the ends of the floral branches have scattered prickles longer than 5 mm, straight or slightly curved, with enlarged bases.

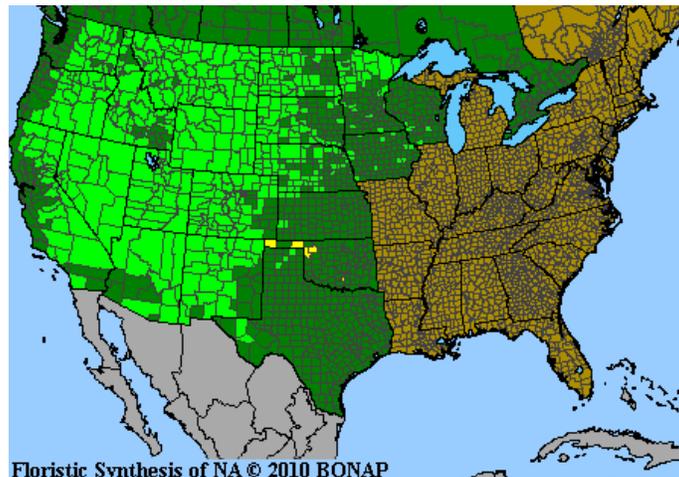


Photo Clarence A Rechenhain USDA-NRCS PLANTS Database - Not copyrighted image. Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>. North America map courtesy of BONAP (2010)



Rose leaf galls may resemble very thorny rose hips. These galls are caused by Cynipid Wasps of the genus *Diplolepis*.

RUBUS Linnaeus 1753 **BLACKBERRIES, BRAMBLE, BRAMBLE-BERRY, CLOUDBERRY, DEWBERRIES, FLOWERING RASPBERRY, RASPBERRIES, RASPBERRY BUSH, RONCE, SALMONBERRY, THIMBLEBERRY, WILD RASPBERRY** *Rosaceae Rubus* (RUB-us) from the Latin *rubus*, bramble, probably from the same base as *ruber*, red, alternately from Celtic *rub*, red, both for the color of the variously ripe or unripe fruit of some spp. A few herbs, mostly deciduous & evergreen shrubs. usually thorny, leaves divided or not, lobed, fruit multi-seeded ‘berry’. “Achenia pulpy, drupaceous, aggregated into a compound berry” (Woods 1873) In blackberries, the fruit is inseparable from the juicy, deciduous receptacle. In raspberries, the fruit separates from the dry, persistent receptacle. Blackberry flowers are a nectar source for *Battus philenor* PIPEVINE SWALLOWTAIL.

You may want to take a bathroom break & brew some fresh coffee before you start in on this genus. Formerly *Rubacer* Rydbg, *Rubus* (Tournefort) L



Seed photos courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>.

Rubus spp “We have made no effort to separate the doubtless numerous varieties & forms of the Rubus complex. An excellent study of a small area is found in Hanes’ Flora of Kalamazoo Co Michigan. Our experience suggests that such extensive splitting does not occur in northern Illinois except possibly in the *Hispidus* group. The *Flagellares* & *Alleghenienses* are less variable.” (ewf55)

Rubus abactus LH Bailey (*abact* Latin driven away, send away.)

Rubus ablatus LH Bailey (*ablatus* remove, withdraw; steal, obtain.)

Rubus adirondackensis LH Bailey (*adirondackensis* -is -e of or pertaining to the Adirondack Mountains.)

Rubus adjacens Fernald PEATY DEWBERRY (*adjacens* neighboring, adjacent to.)

VHFS: [*Rubus* X *adjacens* Fernald]

Rubus allegheniensis Porter ex LH Bailey X **R canadensis** L

Rubus allegheniensis Porter ex LH Bailey COMMON BLACKBERRY, aka ALLEGHENY BLACKBERRY, BLACKBERRY, CLOUDBERRY, COMMON BLACKBERRY, FINGERBERRY, Highbush Blackberry, Mountain Blackberry, Sow-teat Blackberry, Thimbleberry, Wild Blackberry, *Tetega-min*, Chippewa, (*allegheniensis* -is -e of or referring to the Allegheny Mountains.)

Habitat: Dry clearings & thickets, usually abundant, roadsides, fencerows, thickets, & woods. Hardy to zone 3.

Culture: Division.

Description: Erect to arching, thorny caned, native shrub, 2'-7' roots minimum root depth; culms first year's cane erect, not rooting, thorns large & nearly straight; leaves 3-5 parted, leaflets deeply toothed; inflorescence usually many stalked flowered in a long cluster or raceme; flowers white, 5-merous, 0.75" wide, stalk with glandular hairs, petals longer than the sepals; fruits black berry, 0.5", longer than wide; N. key features:

Comments: status: phenology: Blooms May - July, followed by black fruit in July-August.



“Roughs” along “the margins of ‘sloughs,’ and along the courses of small streams.” As *Rubus villosus* *sensu* Short, &c, non Thunb. (1784) (Short 1845).

“Our common tall blackberry having glandular leaves & pedicles.” (ewf55)

Associates: Berries available in July to August. The berries are said to ripen at the perfect time to be food for quail chicks.

ethnobotany: Roots used as medicinal beverage by Ojibwa (sm32) & Mascouten (sm33). Berries also used as food by Ojibwa, Menominee, Sauk-Fox & Pottawatomie. Dried for winter use (Gilmore 1933, sm28, 23, 33) .

VHFS: [*Rubus auroralis* LH Bailey, *R longissimus* LH Bailey]

The synonyms for the variety *allegheniensis* are (*if you didn't before, you may want to go to the bathroom before starting to read this list*): [*Rubus allegheniensis* Porter ex LH Bailey f *albinus* (LH Bailey) Fernald, *R allegheniensis* Porter ex LH Bailey f *calycosus* (Fernald) Fernald, *R allegheniensis* Porter ex LH Bailey f *rubrobaccus* LP Wolfe & Hodgdon, *R allegheniensis* Porter ex LH Bailey var *albinus* (LH Bailey) LH Bailey, *R allegheniensis* Porter ex LH Bailey var *calycosus* (Fernald) Fernald, *R allegheniensis* Porter ex LH Bailey var *nigrobaccus* (LH Bailey) Farw, *R allegheniensis* Porter ex LH Bailey var *plausus* LH Bailey, *R allegheniensis* Porter ex LH Bailey var *populifolius* Fernald, *R attractus* LH Bailey, *R avipes* LH Bailey, *R bractealis* LH Bailey, *R campester* LH Bailey, *R canadensis* L var *pergratus* (Blanch) LH Bailey, *R congruus* LH Bailey, *R floricomus* Blanch, *R latens* LH Bailey, *R montanus* (Porter) Porter, *R nigrobaccus* LH Bailey, *R nigrobaccus* LH Bailey var *albinus* (LH Bailey) LH Bailey, *R nigrobaccus* LH Bailey var *calycosus* Fernald, *R nigrobaccus* LH Bailey var *sativus* (LH Bailey) LH Bailey, *R nuperus* LH Bailey, *R par* LH Bailey, *R paulus* LH Bailey, *R pergratus* Blanch, *R pergratus* Blanch var *pergratus*, *R rappii* LH Bailey, *R sativus* (LH Bailey) Brainerd, *R separ* LH Bailey, *R villosus* of Amer authors, not Aiton nor Thunb, *R villosus* Aiton var *albinus* LH Bailey, *R villosus* Aiton var *engelmannii* Focke, *R villosus* Aiton var *montanus* Porter, *R villosus* Aiton var *sativus* LH Bailey, *R villosus* Aiton var *villigerus* Focke]

Synonyms for variety *gravesii* Fernald: [*Rubus marilandicus* LH Bailey, *R tumularis* LH Bailey, *R uber* LH Bailey, *R virginianus* LH Bailey] Perhaps Bailey was a splitter? He was at least a prolific namer?
Illinois map courtesy of ILPIN.

Rubus allegheniensis Porter ex LH Bailey X **R rosa** LH Bailey

Rubus alumnus LH Bailey OLD-FIELD BLACKBERRY, (*alumnus -a -um* well nourished, flourishing, strong; also foster child, pupil, nursling.)

VHFS: [*Rubus apianus* LH Bailey, *R bellobatus* LH Bailey, *R corei* LH Bailey, *R facetus* LH Bailey, *R fernaldianus* LH Bailey, *R impos* LH Bailey, *R licitus* LH Bailey, *R miriflorus* LH Bailey, *R ostryifolius* LH Bailey, non Rydb, *R parcifrondifera* LH Bailey, *R pubifolius* LH Bailey, *R tennesseanus* LH Bailey]

Illinois map courtesy of ILPIN.



Rubus alumnus

Rubus baileyanus Britton BAILEY'S DEWBERRY, (*baileyi* Liberty Hyde Bailey (1858-1954), author & Professor of Horticulture at Cornell University & founder of Bailey Hortorium.)

VHFS: [*Rubus flagellaris* Willd var *humifusus* (Torr & A Gray) B Boivin, *R housei* LH Bailey, *R uniflorifer* LH Bailey]

Rubus canadensis Linnaeus SMOOTH BLACKBERRY, aka DEWBERRY, NORTHERN DEWBERRY, (*canadensis -is -e* (kan-a-DEN-sis) of Canada or NE USA.)

Habitat: Thickets & clearings

VHFS: [*Rubus argutus* Link var *randii* (LH Bailey) LH Bailey, *R besseyi* LH Bailey, *R canadensis* L var *imus* LH Bailey, *R forestalis* LH Bailey, *R illustris* LH Bailey, *R irregularis* LH Bailey, *R laetabilis* LH Bailey, *R millspaughii* Britton, *R randii* (LH Bailey) Rydbg, *R villosus* Aiton var *randii* LH Bailey]

Season of availability: Berries available in August & early September

Food & beverage use: Berries used as food by Ojibwa & Iroquois (Gilmore 1933, Waugh 1916)

Rubus cauliflorus LH Bailey (*cauliflorus -a -um* bearing flowers on the stem.)

VHFS: [*Rubus limulus* LH Bailey]

Rubus celer LH Bailey BOLTING DEWBERRY, (*celer, celeri* Latin swift, often referring to rapid growth.)

VHFS: [*Rubus maltei* LH Bailey]

Rubus curtipes LH Bailey SHORT-STALK DEWBERRY (*curtipes* with shortened feet or stalks, from Latin *curti*-short, & *-pes*, referring to a foot or stalk.)

VHFS: [*Rubus cordifrons* LH Bailey, *R inobvius* LH Bailey, *R obsessus* LH Bailey var *unilaris* LH Bailey, *R prosper* LH Bailey var *cordifrons* LH Bailey, *R subtentus* LH Bailey]

Rubus dissensus LH Bailey (*dissensus -a -um* disagreeing.)

Rubus elegantulus Blanch SHOWY BLACKBERRY, (*elegantulus -a -um* diminutive of elegant.)

VHFS: [*Rubus amabilis* Blanch, *R amicalis* Blanch, *R canadensis* L var *elegantulus* (Blanch) Farw, *R proprius* LH Bailey]

Rubus enslenii Tratt. ONE-FLOWERED DEWBERRY, aka SOUTHERN DEWBERRY, (*enslenii* honoring Aloysius *Enslen*, Austrian botanical explorer of the southeastern U.S. in early 19th century.)

VHFS: [*Rubus bonus* LH Bailey, *R nefrens* LH Bailey, *R serenus* LH Bailey, *R tenuicaulis* LH Bailey, *R villosus* Aiton var *enslenii* (Tratt) W Stone]

Illinois map courtesy of ILPIN.



Rubus enslenii

Rubus exsularis LH Bailey FENCELINE DEWBERRY, (*exsularis -is -e* of or belonging to exile or to exiles.)

Rubus fecundus LH Bailey DC DEWBERRY, (*fecundus* fruitful, prolific.)

Rubus ferrofluvius HA Davis, AM Fuller & T Davis (*ferrofluvius* rust colored in part?, one would think rusty flowing water.)

Rubus flagellaris Willd COMMON DEWBERRY, aka DEWBERRY, NORTHERN DEWBERRY, (*flagellaris -is -e* whip-like.)

Habitat: Dry woods & forests, bogs, in rocky or sandy soils. distribution/range:

Culture: Encourage natural stands by reducing shade. Controlled burns.

Description: Trailing perennial native shrub, low growing with stems up to 8' long; roots minimum root depth; culms first year's canes normally rooting at the tip, small thorns stout, curved to somewhat hooked, & with a wide base; leaves 3-parted into toothed leaflets; inflorescence with 1 to 5 terminal, stalked flowers often with small leaflets below; flowers white, 5-merous, 0.75" wide; N. key features: trailing close to the ground, 1st year canes rooting at the tips, thorns stout, curved to somewhat hooked with a wide base. "Non-flowering branches are trailing, large prickles; leaf under surface not velvety." (Ilpin)

Comments: status: phenology: Blooms May - June, 4-6. C3. "Less variable than the next (*R hispida*)."
(ewf55)

Associates: Seeds dispersed by birds.

VHFS: [*Rubus alacer* LH Bailey, *R dissitiflorus* Fernald, *R exemptus* LH Bailey, *R felix* LH Bailey, *R frustratus* LH Bailey, *R geophilus* Blanch, *R jaysmithii* LH Bailey var *angustior* LH Bailey, *R longipes* Fernald, *R neonefrens* LH Bailey, *R occultus* LH Bailey, *R subuniflorus* Rydbg, *R tetricus* LH Bailey, *R tracyi* LH Bailey, *R urbanianus* LH Bailey]



Rubus flagellaris



Rubus flagellaris

Illinois map courtesy of ILPIN.

Rubus frondosus Bigelow YANKEE BLACKBERRY, (*frondosus -a -um* leafy, by usage leaf-like, leaf-bearing, covered with foliage.)

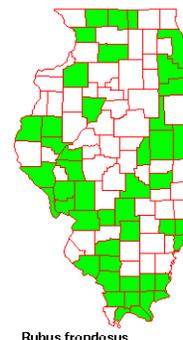
VHFS: [*Rubus brainerdii* Fernald, *R fandus* LH Bailey, *R folioflorus* LH Bailey, *R pensilvanicus* Poir. var *frondosus* (Bigelow) B Boivin, *R pratensis* LH Bailey, *R sativus* Brainerd, *R villosus* Aiton var *frondosus* (Bigelow) Torr]

“Our other tall blackberry; perhaps less common & it is not glandular.” (Fell 1955)

Associates: ethnobotany: Densmore (1928) lists *Rubus frondosa* Bigel as Ojibwa medicine for lung trouble.

According to Jones & Fuller this is *R pennsylvanicus* Poir. *R frondosa* is correct according to Mohlenbrock (date?).

Illinois map courtesy of ILPIN.



Rubus frondosus

Rubus fulleri LH Bailey

VHFS: [*Rubus exter* LH Bailey, *R rotundior* (LH Bailey) LH Bailey, *R setosus* Bigelow var *rotundior* LH Bailey]

Rubus glandicaulis Blanch GLAND-STEM BLACKBERRY, (*glandicaulis* having a glandular stem,)

VHFS: [*Rubus acadensis* LH Bailey, *R atwoodii* LH Bailey, *R bracteoliferus* Fernald, *R grandidens* LH Bailey, *R montpelierensis* Blanch, *R X glandicaulis* Blanch, *R X montpelierensis* Blanch]

Rubus groutianus Blanch (*groutianus -a -um* for the Grout family who were pioneer settlers in the type-region of *Rubus groutianus*.)

VHFS: [*Rubus discretus* LH Bailey, *R setosus* Bigelow var *groutianus* (Blanch) LH Bailey, *R tectus* LH Bailey]

Rubus gulosus Bailey NEW BRUNSWICK BLACKBERRY, (*gulosus* from Latin *gulosus*, glutinous)

Rubus hispidus Linnaeus DEWBERRY, aka BRISTLY DEWBERRY, SWAMP DEWBERRY, (*hispidus -a -um* (HIS-pi-dus) Latin bristly, fine hairy, hairy rough, with stiff hairs or bristles.)

Habitat: Swamps, acidic woods, bogs; poor sandy soils. distribution/range: “Common in the boggy places in Coon Creek bottom, in Shirland Twp, in a low sandy place south of Rock Cut, & in the sandy woods east of Roscoe.” (ewf55)

Culture: Root cuttings.

Description: Native trailing, low growing, perennial shrub; roots; culms first year's canes normally rooting at the tip, small thorns thin & mostly straight; leaves 3 or 5 parted into toothed leaflets; dark green & shiny; inflorescence of several to many short-stalked flowers in raceme-like cluster; flowers white, 5-merous, 0.5"-0.75" wide; fruit is small reddish-black, sour berry; N. key features: 1st year canes rooting at the tip, thorns small, thin, & mostly straight, leaflets dark green & shiny

Comments: status: phenology: Blooms June - August. Low-growing blackberry, can be evergreen when under snow, wine purple winter color, Zone 3.

Associates:

VHFS: [*Rubus hispidus* L var *cupulifer* LH Bailey, *R hispidus* L var *obovalis* (Michx) Fernald, *R obovalis* Michx, *R obovatus* Pers, *R sempervirens* Bigelow]

Illinois map courtesy of ILPIN.



Rubus hispidus

Ilpin lists *R idaeus* L as the cultivated European Red Raspberry often escaping from cultivation.

Rubus idaeus canadensis NORTHERN RASPBERRY, (*canadensis -is -e* (kan-a-DEN-sis) of Canada or NE USA.) Common colonial raspberry, red fruit, Zone 3, divisions.

Rubus idaeus L var **strigosus** (Michaux) Maximowicz AMERICAN RED RASPBERRY, aka RED RASPBERRY, WILD RED RASPBERRY, (*idaeus* of Mt Ida, in Asia Minor, or of Mount Ida in Crete where Jupiter was hidden as an infant, application uncertain.)

Habitat: In Wisconsin, dry to moist woods, fields, & roadsides. distribution/range:

Uncopyrighted Draught

Culture:

Description: Native erect to drooping, perennial shrub, to 7' tall; roots minimum depth; culms first year's canes normally not rooting at the tip, a few to many fine, straight thorns with narrow bases; leaves 3 or 5 parted into sharply-toothed leaflets, underside strongly whitened with soft gray fuzz; inflorescence of 2-5 flowers in an umbel-like cluster (cyme) & also solitary from the upper leaf axils; flowers white to greenish flowers 5-merous, petals shorter than the sepals; fruit is red, 0.25"-0.33" thick, round berry with a hollow center; N. key features: 1st year canes not normally rooting at the tip,

Comments: status: phenology: Blooms

Associates: In a Wisconsin pine plantation, water extracts of leaves from *Prunus serotina* BLACK CHERRY, *Rubus idaeus* RED RASPBERRY, *Eurybia macrophylla* BIGLEAF ASTER, *Lonicera tatarica* TATARIAN HONEYSUCKLE, *Solanum dulcamara* CLIMBING NIGHTSHADE, & *Solidago gigantea* GIANT GOLDENROD reduced red pine height growth, number of secondary needle fascicles, weight increments of roots & shoots, & radicle elongation of red pine seedling (Norby & Kozlowski 1980).

VHFS: [*Rubus carolinianus* Rydbg, *R idaeus* L f *inermis* Kaufm., *R idaeus* L subsp. *melanolasius* Focke, *R idaeus* L subsp. *sachalinensis* (H Lév) Focke, *R idaeus* L subsp. *strigosus* (Michx) Focke, *R idaeus* L var *aculeatissimus* Regel & Tiling, *R idaeus* L var *canadensis* Richardson, *R idaeus* L var *gracilipes* ME Jones, *R idaeus* L var *melanolasius* (Dieck) RJ Davis, *R idaeus* L var *melanotrachys* (Focke) Fernald, *R melanolasius* Focke, *R strigosus* Michx, *R strigosus* Michx var *acalyphacea* (Greene) LH Bailey, *R strigosus* Michx var *arizonicus* (Greene) Kearney & Peebles, *R strigosus* Michx var *canadensis* (Richardson) House]

Rubus ithacanus LH Bailey ITHACA BLACKBERRY, (*ithacanus -a -um* of Ithaca)

VHFS: [*Rubus florenceae* LH Bailey, *R latens* LH Bailey, pro parte, *R pauper* LH Bailey, *R pityophilus* S.J Sm., *R pohlii* LH Bailey, *R schoolcraftianus* LH Bailey]

Rubus junceus Blanch HERBACEOUS BLACKBERRY, (*junceus -a -um* from Latin *iunceus*, made of rushes, juncus-like, like a rush; stiff)

Rubus kennedyanus Fernald KENNEDY'S BLACKBERRY, (*kennedyanus -a -um* for Rae Baldwin Kennedy (1879-?), who discovered *Rubus kennedyanus*.)

VHFS: [*Rubus decor* LH Bailey, *Rubus ignarus* LH Bailey, *Rubus kelloggii* LH Bailey]

Rubus meracus LH Bailey DRYSLOPE DEWBERRY, (*meracus -a -um* unmixed, from Latin adjective *meracus -a -um*, pure, unmixed; undiluted, neat, as in a scotch, neat.)

VHFS: [*Rubus decor* LH Bailey, *R ignarus* LH Bailey, *R kelloggii* LH Bailey]

Rubus miscix LH Bailey (*miscix* changeable, inconsistent.)

VHFS: [*Rubus peculiaris* Blanch, *R X miscix* LH Bailey, *R X peculiaris* Blanch]

Rubus missouricus LH Bailey MISSOURI DEWBERRY, (*missouricus -a -um* (mi-sur-REE-cus) of or from Missouri.)

VHFS: [*Rubus mediocris* LH Bailey, *R schneideri* LH Bailey]

Rubus multifler LH Bailey KINNICKINNICK DEWBERRY, (*multifer* divided many times?.)

VHFS: [*Rubus polybotrys* LH Bailey]

Rubus multifloris Blanch VARIABLE BLACKBERRY, (*multiformis -is -e* with many forms.)

VHFS: [*Rubus multifloris* Blanch var *delicatior* Blanch, *R peracer* LH Bailey]

Rubus navus LH Bailey GRAND LAKE BLACKBERRY, (*navus (gnavus) -a -um* zealous, energetic, active industrious. Adv *naviter (gnaviter)*, energetically, diligently, wholly, completely.)

Rubus X neglectus Peck *Rubus idaeus* L var *strigosus* (Michx) Maxim X *R occidentalis* L (*neglectus -a -um* neglected, disregard, overlooked, unobserved, insignificant.)

VHFS: [*Rubus neglectus* Peck]

Rubus occidentalis Linnaeus BLACK RASPBERRY, aka BLACK CAP, THIMBLE BERRY, *Oda'tagago'minaga'wing* (Ojibwa), (occidenta'lis (ok-ki-den-TAY-lis, or ok-si-den-TAY-lis) of the west, western, from Latin *occidens*, *occidentis*, the west, towards the setting sun, & *-alis*, adjective suffix of or pertaining to, as opposed to *oriens*, *orientis*, daybreak, dawn, or sunrise; the east, sunrise quarter of the sky; the East or the Orient, hence *orientalis*, of the east or China.)

Habitat: Rich thickets, ravines, borders of woods, & waste grounds, thickets, roadsides. "Our common wild raspberry." (ewf55) Zone 4.

Description: Erect to low arching canes, forming vegetative colonies; roots minimum root depth; culms first year's canes sometimes rooting at the tip, whitened; a few fine thorns with wide bases; leaves divided to 3-5 parted with deep, irregular teeth; underside covered with soft gray or white fuzz; inflorescence of 3-7 flowers in a dense, umbel-like cluster (cyme) & also 1 or 2 from the upper leaf axils; flowers white, 5-merous, 0.5" wide, petals shorter than the sepals; fruit black or purple/black, 0.33" thick, round *berry* with a hollow center; N. key features: 1st year canes sometimes rooting at the tips; petals shorter the sepals; fruit purple black; leaflets with deep, irregular teeth.

Comments: status: phenology: Blooms 5-6. Fruits ripening 7-8. Low arching canes, rooting where the tips touches the ground, forms vegetative colonies.

Associates:

ethnobotany: Berries available in July to August. Good crop almost annually. Used for food by Ojibwa, Menominee, Sauk-Fox, & Iroquois. Dried for winter use (Gilmore 1933, sm23, Waugh 1916). Root used as medicinal plant by Ojibwa & Menominee (den28, sm23). Ojibwa medicine for diseases of women (den28). *Rubus* spp seeds found at Goldsmith Feurt sites in Ohio, Manitoulin Island, Ontario, & at 10 locations at Juntunen. Found growing at Wexford co sites.

VHFS: [*Rubus occidentalis* L f *pallidus* (LH Bailey) BL Rob, *R occidentalis* L var *pallidus* LH Bailey]



Rubus occidentalis



Rubus occidentalis pallidus

Illinois map courtesy of ILPIN.

Rubus odoratus Linnaeus PURPLE FLOWERED RASPBERRY, aka FLOWERING RASPBERRY, MULBERRY, THIMBLE BERRY, (*odoratus -a -um* (o-do-RAH-tus) scented, odorous, fragrant.)

Habitat: Forests. distribution/range: Northern 1/5 of Illinois.

Clay soil tolerant.

Description: Native, low shrub; flowers magenta (red/pink), large, in clusters of 5- 75?

Blooms May, June. Aggressively rhizomatous

Pollinator friendly. Walnut tolerant.



Rubus odoratus



Rubus odoratus

Illinois map courtesy of ILPIN.

Rubus orarius Blanch (*orarius -a -um* Latin adjective, of or belonging to the coast, coasting, used along a coast.)

Rubus parviflorus Nutt THIMBLEBERRY, (*parviflorus -a -um* small flowers, or by inference with flowers smaller than the type, from *parvus -a -um*, small, little, insignificant, *-i-*, & scientific Latin *-florus*, from *floreo*, *florere*, *florui*, flourish, blossom, be prosperous; be in one's prime.)

Habitat: Partial sun, moderate moisture, woods & forests. distribution:

Culture:

Description: Native, erect, perennial shrub, 18" to 40"; roots minimum depth; culms stems with no prickles; leaves round to kidney-shaped, maple-like, 4"- 8" wide, with 5 shallow, toothed, pointed lobes; inflorescence of a few flowers in cyme-like, long-stalked cluster; flowers white, 5-merous, 1.0"-1.5" wide; , fruit is a round, fuzzy 0.5" red berry; N. key features: Stems with no prickles; leaves maple-like, 4"-8" wide, with 5 shallow lobes.

Comments: status: phenology: Blooms June - July.

Associates:

VHFS: [*Rubacer parviflorum* (Nutt) Rydbg, *Rubus parviflorus* Nutt f *adenius* Fassett, *R parviflorus* Nutt f *bifarius* (Fernald) Fassett, *R parviflorus* Nutt f *glabrifolius* Fassett, *R parviflorus* Nutt f *heteradenius* (Fernald) Fassett, *R parviflorus* Nutt f *hypomalacus* (Fernald) Fassett, *R parviflorus* Nutt f *micradenius* Fassett, *R parviflorus* Nutt f *trichophorus* Fassett, *R parviflorus* Nutt var *bifarius* Fernald, *R parviflorus* Nutt var *genuinus* Fernald, *R parviflorus* Nutt var *grandiflorus* Farw, *R parviflorus* Nutt var *heteradenius* Fernald, *R parviflorus* Nutt var *hypomalacus* Fernald, *R parviflorus* Nutt var *parviflorus*, *R parviflorus* Nutt var *parvifolius* (A Gray) Fernald]

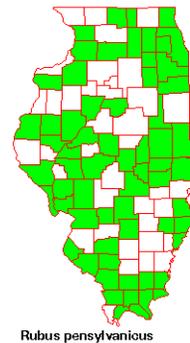


Rubus parviflorus

Seed photo courtesy of Bend Seed Extractory, Seeds of Success, <http://seedsofsuccess.smugmug.com>.

Rubus pensilvanicus Poiret PENNSYLVANIA BLACKBERRY, aka YANKEE BLACKBERRY, (*pensilvanicus -a -um* of Pennsylvania.)

Illinois map courtesy of ILPIN.



Rubus pensilvanicus

Rubus permixtus Blanch THICKET DEWBERRY, (*permixtus -a -um* much mixed, from *per*, through, extra, very, & *mixtus* to mix (bad Latin), alternately from *permixtus -a -um*, Latin adjective promiscuous; confused; from the past participle of *permisceo*, *permiscere*, *permiscui*, *permixtus*, mix or mingle together; confound; embroil; disturb thoroughly.)

VHFS: [*Rubus distinctus* LH Bailey, *R elongatus* Brainerd & Pietersen, *R laevior* (LH Bailey) Fernald, *R permixtus* Blanch var *laevior* LH Bailey, *R sharpii* LH Bailey, *R vegrandis* LH Bailey, *R X laevior* (LH Bailey) Fernald, *R X permixtus* Blanch]

Rubus perspicuus LH Bailey GREAT LAKES DEWBERRY, (*perspicuus -a -um* transparent, translucent, pale, clear, bright, evident; manifest, perspicuous from *per* through, extra, very, & *specio*, *spicio*, to look, look at (bad Latin 1st singular not the infinitive!; alternately from *perspicio*, *perspicere*, *perspexi*, *perspectus*, see through; examine; observe.)

Rubus philadelphicus Blanch PHILADELPHIA BLACKBERRY, (*philadelphicus -a -um* of the Philadelphia region.)

Rubus plicatifolius Blanch PLAIT-LEAF DEWBERRY, (*plicatifolius -a -um* from *plicatus* folded, pleated, plicate, plaited, & *folius* leaves)

VHFS: [*Rubus botruosus* LH Bailey, *R coloniatus* LH Bailey, *R exutus* LH Bailey, *R prior* LH Bailey, *R problematicus* LH Bailey, *R rhodinsulanus* LH Bailey, *R rosendahlia* LH Bailey, *R semierectus* Blanch, *R victorinii* LH Bailey]

Rubus plus LH Bailey HAIRY-LEAVED DEWBERRY, (*plus* Latin more, in addition; more but not the last, from *plus*, (gen.), *pluris*, more; several, many. The comparative of *multus*, *-a -um*, much, many, great.)

VHFS: [*Rubus hispida* L f *pleniflorus* Nieuwl, *R kalamazoensis* LH Bailey]

Rubus pubescens Raf DWARF RED RASPBERRY, aka DWARF RASPBERRY, PLUMBOY, EYEBERRY, (*pubescens*, becoming hairy, from Latin *pubescens*, *pubescent*, from *pubesco*, to reach puberty, become pubescent.)

Habitat: Damp slopes, rocky shores, low thickets, bogs & springy places. Wet woods, bogs, cedar swamps. "Known only in the shallow bogs in Rockton Twp." (ewf55)

Description: Native perennial, non-woody forb, 6" to 20"; culms main stems creeping along the ground then putting up erect stems with no prickles; leaves; flowers white, 5-merous, 0.25-0.50" wide, sepals facing downward; inflorescence of 1-3 flowers at the top & sometimes with 1 or 2 from the leaf axil, fruit small, dark-red, 0.25"-0.33" thick berry; N. key features: Non-woody; not prickly; sepals facing downward.

Comments: status: phenology: Blooms 5-7. Berries ripen 7-8.

Associates:

ethnobotany: Berries available in July to August. Used by Ojibwa & Iroquois.

Dried for winter use (Gilmore 1933, Waugh 1916).

VHFS: [*Cylactis pubescens* (Raf) WA Weber, *Rubus americanus* Britton, *R pubescens*

Raf var *pilosifolius* AF Hill, *R pubescens* Raf var *pubescens*, *R saxatilis* L var *canadensis* Michx, *R triflorus* Richardson]

Rubus parviflorus is closely related with a northern & western distribution.

Illinois map courtesy of ILPIN.



Rubus pubescens

Rubus quaesitus LH Bailey PRINCE EDWARD ISLAND BLACKBERRY, (*quaesitus -a -um* a seeking, searching, investigation, from Latin *quaesitus*, *a, um*, participle, from *quaeso*, *quaesere*, seek, beg or ask for; alternately from *quaero*, *quaerere*, search for, seek.)

Rubus recurvans Blanch RECURVED BLACKBERRY, (*recurvans* recurved.)

VHFS: [*Rubus difformis* LH Bailey, *R heterogeneus* LH Bailey, *R recurvans* Blanch var *subrecurvans* Blanch, *R wiegandii* LH Bailey]

Rubus recurvicaulis Blanch ARCHING DEWBERRY, aka BLANCHARD'S DEWBERRY, (*recurvicaulis* with the stem recurved)

VHFS: [*Rubus recurvicaulis* Blanch var *inarmatus* Blanch]

Rubus regionalis LH Bailey WISCONSIN DEWBERRY, (*regionalis -is -e* regional.)

VHFS: [*Rubus junceus* Blanch var *regionalis* (LH Bailey) LH Bailey, *R vermontanus* Blanch var *viridiflorus* Blanch, *R viridifrons* LH Bailey, *R X viridifrons* LH Bailey]

Rubus roribaccus (LH Bailey) Rydbg LUCRETIA DEWBERRY, (*roribaccus -a -um* dewberry, from Latin *roidus -a -um*, bedewed, dewy, from *ros*, *roris*, m, dew, & Latin *bacca*, a berry, a succulent fruit.)

Introduced perennial shrub in Wisconsin.

[*Rubus canadensis* L var *roribaccus* LH Bailey, *R flagellaris* Willd var *michiganensis* (Card ex LH Bailey) LH Bailey, *R flagellaris* Willd var *occidualis* LH Bailey, *R flagellaris* Willd var *roribaccus* (LH Bailey) LH Bailey, *R imperiorum* Fernald, *R michiganensis* (Card ex LH Bailey) LH Bailey, *R occidualis* (LH Bailey) LH Bailey, *R pauperrimus* LH Bailey, *R procumbens* Muhl. var *roribaccus* (LH Bailey) LH Bailey, *R*



Rubus roribaccus

villosus Aiton var *michiganensis* Card ex LH Bailey, *R villosus* Aiton var *roribaccus* (LH Bailey) LH Bailey]
Illinois map courtesy of ILPIN.

Rubus rosa LH Bailey ROSE BLACKBERRY, (*Rosa* (RO-sa) from the classic Latin name, whose meaning has been lost.)

VHFS: [*Rubus eriensis* LH Bailey, *Rubus X rosa* LH Bailey]

Rubus satis LH Bailey (*satis* one source cites this as cultivated, as in *sativus*, but it is generally translated as enough, sufficient, satisfactory, from *satis*, Latin adverb, enough, adequately; sufficiently; well enough, quite; fairly, pretty.)

VHFS: [*Rubus densipubens* LH Bailey, *R dives* LH Bailey, *R onustus* LH Bailey]

Rubus semisetosus Blanch SWAMP BLACKBERRY, (*semisetosus -a -um* somewhat bristly, from *semi-*, half, imperfectly, & *setosus*, very hairy, bristly.)

VHFS: [*Rubus benneri* LH Bailey]

Rubus setosus Bigelow BRISTLY BLACKBERRY, aka SETOSE BLACKBERRY, (*setosus -a -um* bristly hairy.)

VHFS: [*Rubus condignus* LH Bailey, *R hispidus* L var *suberectus* Peck, *R junior* LH Bailey, *R nigricans* Rydbg, *R ribes* LH Bailey, *R significans* LH Bailey, *R udus* LH Bailey]

Rubus spp Used by Mascouten & Huron. Dried for winter use. (Skinner 1926, Raddisson 1885)

Rubus spectatus LH Bailey SPHAGNUM BLACKBERRY, (*spectātus -a,-um* participle & P a. of *specto*, to look at, behold; to gaze at, watch, observe.)

VHFS: [*Rubus oriens* LH Bailey]

Rubus steelei LH Bailey STEELE'S DEWBERRY,

VHFS: [*Rubus austrinus* LH Bailey, *R connixus* LH Bailey, *R cordialis* LH Bailey, *R currulis* LH Bailey]

Rubus stipulatus LH Bailey BIG HORSESHOE LAKE DEWBERRY, (*stipulatus -a -um* stipuled, with or having stipules, from Latin *stipula*, noun, a stalk, stem, blade, & *aceus*, adjective suffix, resembles, of., ...like.)

Rubus superioris LH Bailey (*superioris -is -e* possibly from the Lake Superior region.)

VHFS: [*Rubus perdebilis* LH Bailey]

Rubus strigosus Michaux RASPBERRY, aka RED RASPBERRY, RED WILD RASPBERRY, *Mis'kominaga'wunj*, having red berries, (Ojibwa), (*strigosus -a -um* bristly, strigose, covered with *strigae*, or stiff, straight, flat-lying hairs, closely covered with pointed bristles, New Latin *strigosus*, from *striga* bristle, furrow, swath of hay or corn, flute of a column & Latin *-osus -ose*.)

Habitat: Thickets, clearings, & borders of woods, bogs & swampy woods. "Quite uncommon. Edge of sandy woods east of Roscoe & edge of the woods on Cunningham road near Fannan's Crossing west of Rockford." (ewf55)

Description: Blooms May to June.

Associates: ethnobotany: Berries available in July to August. Used for food by Ojibwa, Menominee, Pottawatomie, Mascouten, & Iroquois (Gilmore 1933, sm23, 33, Skinner 1926, Waugh 1916). Fruits used for flavoring (den28). Root used as medicinal plant by Ojibwa, Menominee, & Pottawatomie (sm23, 32, 33). Ojibwa medicine for diseases for eye, diseases of women, & dysentery (den28).

VHFS: [*Rubus idaeus* Linnaeus var *strigosus*]

Illinois map courtesy of ILPIN.



Rubus uniformis LH Bailey THORNLESS DEWBERRY, aka UNIFORM BRAMBLE, (*uniformis -is -e* one form.)

Rubus uvidus LH Bailey KALAMAZOO DEWBERRY, (*uvidus -a -um* moist, damp, dank, humid; also drunken, rapid)

VHFS: [*Rubus associus* Hanes, *R humilior* LH Bailey, *R jejunos* LH Bailey, *R licens* LH Bailey, *R localis* LH Bailey]

Rubus vagus LH Bailey RAMBLING DEWBERRY, (*vagus -a -um* Latin strolling about, rambling, roving, roaming, wandering; from root *vagh-*; Sanskrit *vāhas*; Greek *ochos*, wagon.)

Rubus variispinus LH Bailey VICKSBURG BLACKBERRY, (*variispinus -a -um* of various or variable spines.)

Rubus vermontanus Blanch VERMONT BLACKBERRY, (*vermontanus -a -um* of or from Vermont.)

VHFS: [*Rubus abbrevians* Blanch, *R deaneanus* LH Bailey, *R malus* LH Bailey, *R singulus* LH Bailey, *R unanims* LH Bailey]

Rubus wheeleri (LH Bailey) LH Bailey WHEELER'S BLACKBERRY, (*wheeleri* after George Montague Wheeler (1842-1905), born in Massachusetts & graduated from the United States Military Academy in 1866, Lt. & member of the U.S. Army Corps of Engineers director of U.S. Army surveys of the western U.S. 1869-1879.)

VHFS: [*Rubus comos* LH Bailey, *R fassettii* LH Bailey, *R potis* LH Bailey, *R rowleei* LH Bailey, *R semisetosus* Blanch var *wheeleri* LH Bailey, *R univocus* LH Bailey]

Rubus wisconsinensis LH Bailey WISCONSIN BLACKBERRY, (*wisconsinensis -is -e* of or from Wisconsin.)

VHFS: [*Rubus latifoliolus* LH Bailey, *R minnesotanus* LH Bailey, *R setospinosus* LH Bailey]

Rubus adinfinitum see *R adnauseum*. (*ad infinitum* indefinitely, from Latin until infinite, & *ad nauseum* endlessly, from Latin until sickness.)

SANGIUSORBA Linnaeus 1753 **BURNET** *Rosaceae Sangiusorba* from Latin *sanguis*, *sanguinis*, blood, & *sorbeo*, *sorbere*, *sorbui*, *sorbitus*, absorb, drink, soak up, from the plants styptic qualities, its ability to stop bleeding. Some spp are esteemed vulneraries. 15 or more spp of herbs native to Eurasia, North Africa, & North America, with odd-pinnate stipulate leaves & dense terminal spikes or clusters or small apetalous white or red flowers with 4 stamens, & fruit a dry achene included in the calyx.

Sanguisorba canadensis Linnaeus *GA, IL, IN, KY, ME, MD, MI, NC, RI, TN, VA AMERICAN or CANADA BURNET, aka CANADIAN BURNET, *HERBE À PISSER*, WHITE BURNET, WILD BURNET, (*canadensis -is -e* (kan-a-DEN-sis) of Canada or northeast USA.) facw+

Habitat: Very rare. Moist prairies, wet meadows. In Michigan, “Wet prairies, sedge meadows, and fens. A striking late blooming species, very local, but often abundant where found.” (rvw11) In the se USA, “fens, seepage over mafic or ultramafic rocks (such as amphibolite, greenstone, serpentinite), spray zones around waterfalls, other seepage wetlands, wet meadows; rare” (we11). distribution/range: Native in many states east of the Mississippi & in Alaska, Idaho, Oregon, & Washington. In Illinois, known from Cass, LaSalle, & Will cos. Many Midwest cultivated plants are derived from the Will Co population.

Culture: ①Cold moist stratification (wade95). ②Sow at 20°C (68°F), if no germination in 3-4 wks, move to +2 to +4°C (34-39°F) for 2-4 wks (tchn).

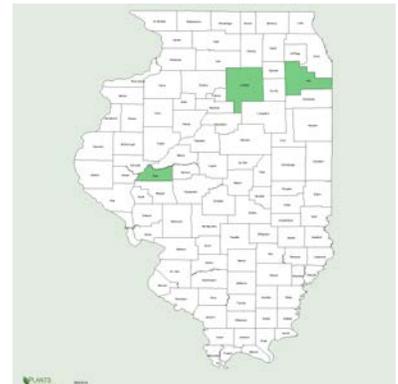
③Propagate by seed in pots in a cold frame in spring or autumn (rhs).

seed counts & rates: 566,992 seeds per pound.

availability: There are few commercial sources of seeds or plants.

asexual propagation: Root cuttings. Propagate by division in spring or autumn (rhs).

Description: Erect, herbaceous, perennial, native forb, 4.0-5.0'; terminal spike of small white flowers;



Comments: status: Threatened in Georgia. Endangered in Illinois, Indiana, & Kentucky. Threatened in Maine, Maryland, & Michigan. Rare in North Carolina. Endangered in Rhode Island & Tennessee. Rare in Virginia.
phenology: Blooms 7,8,9. Flowers are showy, good for fresh cut flowers or dried flowers.



Sanguisorba canadensis, but the seed is *Sanguinaria canadensis*, from USDA website!

<http://plants.usda.gov/core/profile?symbol=SACA14>

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy plants.usda.gov.

Sanguisorba minor Scopoli ♣ SALAD BURNET, aka *BIBINELLA*, GARDEN BURNET, *KLEINER WIESENKNOPF*, LITTLE BURNET, PETIT *PIMPRENELLE*, *PIMPINELA*, *PIMPINELA MENOR*, *PIMPINELLA MENOR*, *PIMPRENELLE*, *SALVASTRELLA MINORE*, SMALL BURNET, (*minor* Latin less, smaller, lesser; hangover, threaten, from *minor*, *minoris*, comparative form of *parvus* -a -um; q.v; or from *minor* -ari dep., to jut out, project, hangover. By transference to threaten, menace, with dative.)

Introduced, ♣ adventive, perennial forb. distribution/range:

①Germinates without pretreatment (AOSA 1970). ②Sow at 20°C (68°F), germinates in less than two wks thin cover, needs light (tchn).

Weakley (2011, FNA in press) considers this *Poterium sanguisorba* Linnaeus ssp *muricatum* (Spach) Rouy,



Sanguisorba minor



Sanguisorba minor

Line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN.

SIBBALDIA Linnaeus 1753 **SIBBALDIA, MOUNTAIN-CINQUEFOIL** *Rosaceae* (see *Potentilla tridentata*) *Sibbaldia* for Dr. Robert *Sibbald*, 17th century professor at Edinburgh. A circumboreal genus of 5-7 spp of northern Eurasia & northern & alpine North America (1-2 spp). Weakley (2011) in reference to *Potentilla tridentata*, "Our single sp, has been variously also treated in *Potentilla* & *Sibbaldiopsis*. Many recent studies (see references) have shown that it is not closely related to *Potentilla*, & falls into a group of genera including *Sibbaldia*, *Comarum*, *Alchemilla*, *Aphanes*, *Drymocallis*, *Dasiphora*, & *Fragaria* (Lundberg et al 2009; Potter et al 2007; Eriksson et al 2003). I here follow Lundberg et al (2009) & Paule & Soják (2009), who further demonstrate that *Sibbaldiopsis* is embedded in *Sibbaldia* & is best transferred there. References: Paule & Soják (2009)=Z; Lundberg et al (2009), Potter et al (2006), Eriksson, Donoghue, & Hibbs (1998), Eriksson et al (2003), Kalkman in Kubitzki (2004)."

See *Potentilla tridentata*.

Sibbaldia tridentata (Aiton) Paule & Soják MOUNTAIN-CINQUEFOIL, aka THREE-TOOTHED CINQUEFOIL, MOUNTAIN WHITE POTENTILLA, WINE-LEAF CINQUEFOIL, WHITE SIBBALDIA, distribution/range: *Vide infra*.

SIBBALDIOPSIS Rydberg 1901 **MOUNTAIN CINQUEFOIL** *Rosaceae* (see *Potentilla tridentata*) *Sibbaldiopsis* for Dr. Robert *Sibbald*, 17th century professor at Edinburgh & *opsis*, like, referring to a similarity to the genus *Sibbaldi*. A genus of several subshrubs of North America & northeast Asia, closely related to &, by some authorities, included in *Sibbaldia*, with leaves palmately 3-parted mostly near the base, & flowers white. Molecular phylogenetic studies place this genus closer to *Alchemilla*, *Aphanse*, *Dasiphora*, *Drymocallis*, *Fragaria* & other genera than to *Potentilla*. Mohlenbrock (2014) maintains *Sibbaldiopsis*.

See *Potentilla tridentata*.

Sibbaldiopsis tridentata (Aiton) Rydbg ♣ SHRUBBY FIVEFINGERS, distribution/range:

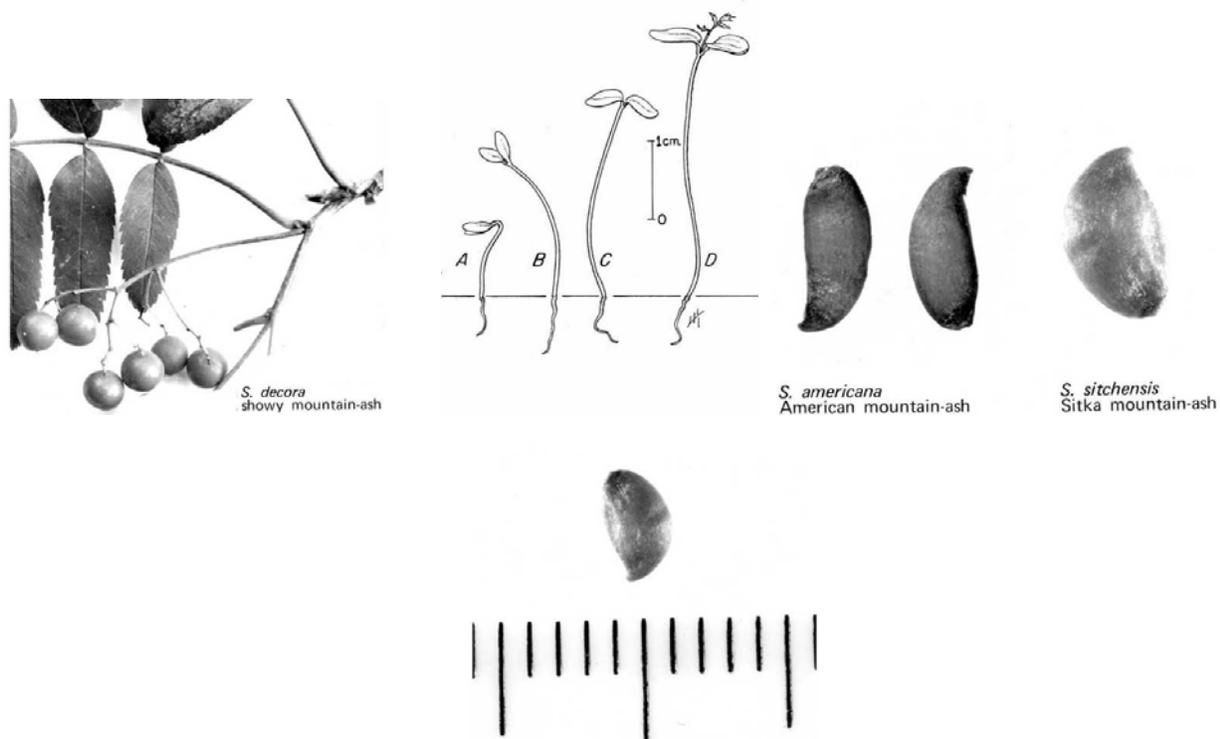
SORBARIA (Seringe) A Braun 1860 *Rosaceae* *Sorbaria* from Latin *sorbum* meaning to resemble the genus *Sorbus*. A genus of 4 spp of shrubs of central & eastern Asia.

Sorbaria sorbifolia (L) A Braun FALSE SPIRAEA, (*sorbifolius -a -um* sorbus-leaved, leaves like *Sorbus*.) distribution/range: Introduced perennial shrub, leaves pinnate, dense clusters of white flowers. VHFS: [*Schizonotus sorbifolius* (L) Lindl, *Spiraea sorbifolia* L]

SORBUS Linnaeus **MOUNTAIN ASH, SERVICE TREE, ROWAN** *Rosaceae* *Sorbus* (SOR-bus) from the classical Latin name for the Service Tree, *Sorbus domestica*. About 250 spp of deciduous trees & shrubs, mainly temperate
Uncopyrighted Draught

Northern Hemisphere, with leaves pinnately divided, round or flattened cluster of white flowers, with fruit showy red berries (pomes).

MOUNTAIN ASH is a larval host for the *Papilio glaucus* EASTERN TIGER SWALLOWTAIL.



Photos courtesy of USDA-NRCS PLANTS Database - Not copyrighted images. Seedling line drawing courtesy of LH USDA-NRCS PLANTS Database.

Sorbus americana Marshall *IL AMERICAN MOUNTAIN ASH, aka AMERICAN MOUNTAIN-ASH, AMERICAN ROWAN, AMERICAN ROWAN TREE, MOUNTAIN ASH, MOUNTAIN-ASH, WITCHWOOD, (*americanus -a -um* (a-me-ri-KAH-nus) of the New World, American.)

Habitat: Moist soil on riverbanks, borders of cold swamps, rocky hillsides & mountains, rocky woods. In the se USA, “high elevation forests, balds, & high elevation rock outcrops, often with *Picea*, *Abies*, &/or *Betula alleghaniensis*” (w11). “A small tree in mountain woods, N Eng & Mid States” (w73). distribution/range: Newfoundland west to Minnesota, south mainly in the Appalachians, Alleghenies, & Blue Ridge mountains, & in the Midwest south to northern Illinois. Northern Illinois is the southern limit of the sp range in the Midwest.

Culture: propagation: 60 days cold moist stratification (pm15).

cultivation: Optimum pH 5.6. Needs moist open site to show well.

Adaptable. Hardy to zone 2.

Description: Native, small to medium, flat-topped tree, 10-20’; branches & lower leaf surfaces glabrous, or inconspicuously & sparsely pubescent, bright orange-red fall color, winter buds glutinous; inflorescence large, terminal corymbs at ends of branches; flowers creamy white, followed by flat clusters of BB sized brilliant orange red pomes, persisting into winter.

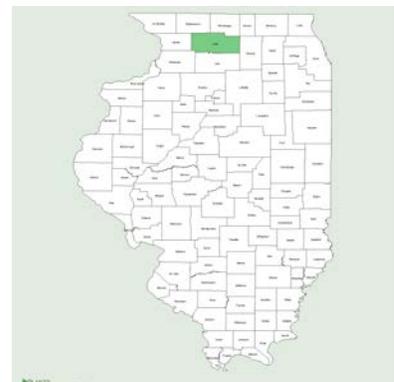
key features:

Comments: status: Endangered in Illinois. phenology: Blooms June-July. Fruits ripen September to October, persisting into winter. Attractive in the landscape, with creamy-white flower clusters in summer, bright orange-red fall color, & red berries in winter.

“Slow grower. It is used in highway & in ornamental planting & all the trees that we have seen in Winnebago Co & in Ogle Co that have plainly been planted. We have been unable to find it in the sand area of Sugar River where it was reported by Gleason.” (ewf55)

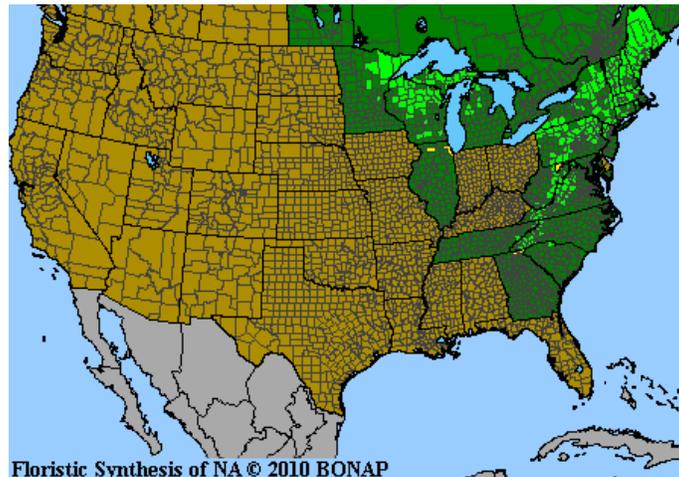
Associates:

Uncopyrighted Draught



ethnobotany: Bark used as medicinal plant by Ojibwa & Pottawatomie (Reagan 1928, sm33). Wood used for canoe ribs, snowshoe frames, lacrosse racquets, &c, by Ojibwa because it can be bent into any form (Reagan 1928)

VHFS: [*Pyrus americana* (Marshall) DC, *P americana* (Marshall) DC var *microcarpa* (Pursh) T&G, *P microcarpa* (Pursh) DC, *Sorbus microcarpa* Pursh] Woods (1873) as *P Americana* DC.



Sorbus americana

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Leaf & fruit photo provided by National Agricultural Library, courtesy of USDA-NRCS PLANTS Database. Illinois map courtesy plants.usda.gov. North America map courtesy of BONAP (2010)

Sorbus aucuparia Linnaeus ♣ EURASIAN MOUNTAIN-ASH, aka *EBERESCHE*, ENGLISH MOUNTAIN ASH, EUROPEAN MOUNTAIN ASH, EUROPEAN MOUNTAINASH, QUICKBEAM, ROWAN, ROWAN-BERRY, *SERBAL DE CAZADORES*, *SORBIER DES OISELEURS*, *SORBO DEGLI UCCELLATORI*, *SORVIERA*, *VOGELBEERBAUM*, (*aucuparius -a -um* bird catching, of bird catchers, the MOUNTAIN ASH, a decoy for birds; from Latin *aucupor*, *aucupari* (*aucupare*), go fowling, from *auceps*, *aucupis* (*aucipis*) m., a bird catcher, a fowler, or *aviceps*, a bird-catcher, from *avis*, a bird, & *capio*, *capere*, to catch (using fruit as a bait). Also as from Latin *aucupor*, *aucupare*, *aucupatus*, go fowling, lay in wait or lay a trap.)

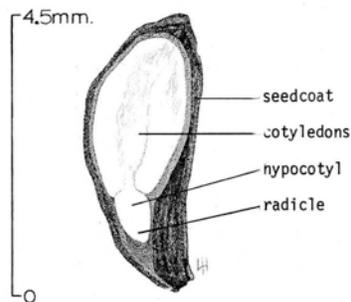
distribution/range: Native of northern Europe. An introduced tree, rarely escaped, sometimes appearing naturalized (w11), potentially invasive. Recorded from 8 cos in northern Illinois.

“Much used in highway & ornamental planting & occasionally escapes though much less frequently than in Lake Co where it is rather common.” (ewf55)

VHFS: [*Pyrus aucuparia* (L) Gaertn, *Pyrus aucuparia* (L) in w73.]



Sorbus aucuparia



Seed line drawing courtesy of LH USDA-NRCS PLANTS Database. Color illustration Otto Wilhelm Thomé: *Flora von Deutschland, Österreich und der Schweiz* (1885) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Illinois map courtesy of ILPIN.

Sorbus decora (Sargent) CK Schneid. *IN, MA, OH, PA ♡SHOWY MOUNTAIN ASH, aka NORTHERN MOUNTAIN ASH, WESTERN MOUNTAIN-ASH, (*decorus -a -um decor'us* (de-KOR-us) elegant, comely, becoming, beautiful, decorative.)

Habitat: Wet to mesic woods; cool, moist slopes; lake shores (lbjwfc). distribution/range: See the discussion in sw94 for ne Illinois records & compare with BONAP (2010).

Culture: propagation: 90 days cold moist stratification (pm90).

cultivation: Partial shade to shade, moist soils,. Any poor- to well-drained, wet to mesic soil. pH circumneutral, 6.8-7.2. Weak-wooded.

Description: Medium sized, deciduous tree, 36-72'; narrow crown & ascending branches, branching low to the ground; leaves pinnate, blue-green in summer, fall color yellow-orange to reddish purple; inflorescences terminal, flowers white, followed by glossy, red to orange "berries". key features:

Comments: status: Native. Extirpated in Indiana. Endangered in Massachusetts, Ohio, & Pennsylvania.

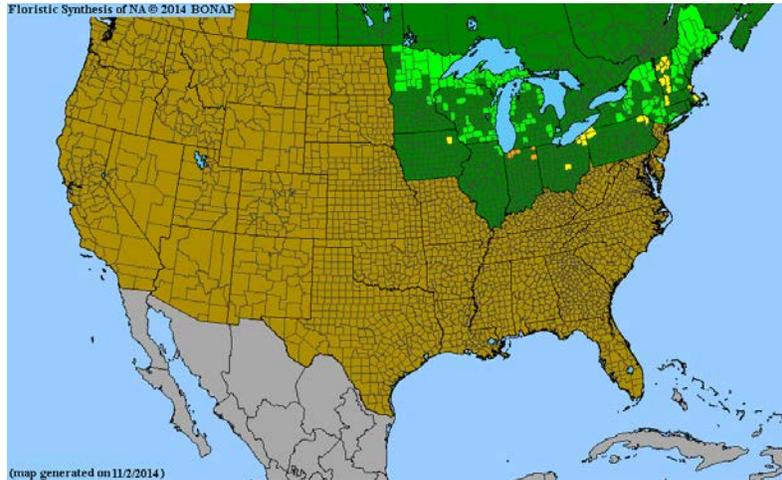
phenology: Blooms May - June. Much like AMERICAN MOUNTAIN ASH, but coarser tree, to 45', larger flowers & fruit clusters. Pomes deep red. Fall color red.

Associates: Seeds are eaten by songbirds, waterfowl, & small mammals.

ethnobotany: Seeds are toxic & can be fatal to children. Native Americans used a decoction of inner bark or peeled sticks for back pain or rheumatism.

VHFS: [*Pyrus americana* (Marshall) DC var *decora* Sarg, *P decora* (Sarg) Hyl.]





Sorbus decora

Photo P Freeman Heim. Provided by [National Agricultural Library](#). Originally from [US Forest Service](#). United States, WI, Nicolet National Forest. 1971. 2nd photo E. F Keller provided by [National Agricultural Library](#). Originally from [US Forest Service](#). United States, NY, 1901, courtesy of USDA-NRCS PLANTS Database.

SPIRAEA Linnaeus 1753 **SPIRAEA, MEADOWSWEET, HARDHACK** *Rosaceae* *Spiraea* (spee-RIE-a) a plant used in garlands, from Latin *spīraea*, Greek σπειραία, *speiraira*, apparently from σπείρα (σπείρα), *speira*, spire, a wreath spiraled or twisted, for the twisted seed pods of some spp, or in reference to the flowers use in garlands; cognate with aspirin. Also spelled *Spirea*. A genus of about 80-120 spp of deciduous shrubs of north temperate regions, especially Asia. Shrubs or perennial herbs; leaves not divided, flowers small, white or pink in dense, never yellow branched clusters; no thorns; carpels follicular, 1-celled, 1 to 2-valved, 1 to 10-seeded. Several spp, selections, & hybrids are cultivated & may be found persisting or escaping. “Fall sow or moist cold treatment, very light cover, good to fair germination. (mfd 1993) Historically, *Spiraea* included *Aruncus*, *Filipendula*, & *Physocarpus*.

The archetype of Midwest landscaping has shifted from the historic, majestic, & graceful *Spiraea X vanhouttei* BRIDAL WREATH foundation & specimen plantings to the obligatory, butt-ugly, chloritic but, salt tolerant, pink-flowered, dwarf *Spiraea* seen in every fast-food drive-through & box store parking lot, *ad nauseum*.

The genus is a larval host for *Celastrina ladon* SPRING AZURE BUTTERFLY. Nectar source *Euphyes bimacula* TWO-SPOTTED SKIPPER, *Limenitis arthemis* RED-SPOTTED PURPLE BUTTERFLY, *Satyrium acadica* ACADIAN HAIRSTREAK BUTTERFLY, *Satyrium calanus* BANDED HAIRSTREAK BUTTERFLY, *Satyrium edwardsii* EDWARDS' HAIRSTREAK BUTTERFLY, *Satyrium liparops* STRIPED HAIRSTREAK BUTTERFLY.



Spiraea betulifolia

Spiraea alba Du Roi MEADOWSWEET, aka NARROW-LEAVED MEADOWSWEET, NARROW-LEAVED MEADOW-SWEET, NORTHERN MEADOW-SWEET, PIPESTEM, SPIREA, WHITE MEADOW SWEET, WHITE MEADOWSWEET, WILLOW LEAVED MEADOW SWEET, (*albus -a -um* (AL-bus) From Latin white, *albus -a -um*, adjective, particularly a dull rather than a glossy white, or, dead white; pale; bright)
facw+

Habitat: Wet meadows & ditches; wet prairies, open habitats with wet soil.
“Sp is distributed in marshy meadows; ditch edges; peaty or boggy soils; sunny areas” (Ilpin). In the se USA, “bogs, boggy streambanks, seepages” (w15).
“Common in moist ground in sand & prairie areas.” (ewf55)

distribution/range:

Culture: ①60 days cold moist stratification. Surface sow, seeds are very small or need light to naturally break dormancy & germinate (pm09, 15). ②Seeds germinate after about 60 days of cold moist stratification (he99). ③*S betulifolia* is fall sown & germinates the following spring (yy92). ④No pretreatment necessary, good germination upon sowing (dh87).

⑤Germination best with dry stored seed started at 70°F in the dark. Fresh & dry stored seed germination after 90 days cms 40° F. Fresh seed at 70°F germinates low. (Deno 1991) 144,000 (shirley), 238,736; 300,000 (pm03), 4,800,000 (?pm), 6,080,000 (aes10), 6,250,000 (jfn04), 9,557,894 (gnae11), 11,350,000 (gnhe13) seeds per pound. There are few commercial sources of seeds or plants. Availability may be limited.

asexual propagation: No-brainer by cuttings, hardwood cuttings, softwood cuttings, or division of mature plants in early spring. MEADOWSWEET is usually propagated from cuttings but from stratified seed is a no-brainer too.

cultivation: Medium water requirements. Humus soils. Sun, partial, shade, or shade, moist to wet soils. Soils circumneutral, pH 6.8-7.2. Transplants easily. Specimens growing in mesic soils are weakened & eventually killed by annual burning. Some salt tolerance noted by AES (2010).

bottom line: Genesis test data indicate seed is nondormant to slightly dormant (7%) and can be spring or dormant seeded on top of the ground. In the greenhouse, easy from cold moist stratified seed. Germ 74-84%. Dorm 0.0- 7.0%. Test 34 days.**

greenhouse & garden: Dry storage 70°F (180 days) or moist cold stratify (90 days), fall plant gives some results, scarify may help. Occasionally self sows.

Description: Erect perennial native shrub, suckering colonial, 1.0-3.5(6.0-12'!); roots minimum depth; stems dull brown, new bark red in winter; leaves alternate, not divided or lobed, oblong to lance-like, 3 to 4 times as long as wide, smooth, edges with fine, sharp teeth, yellow red (golden-yellow) fall color; inflorescence a 5" terminal, branched panicle-like cluster; flowers white, 5-merous, 0.25" wide, slightly fuzzy, flowers perfect; fruits are pod-like follicles, 0.13" long in clusters of 5, with many tiny seeds; N. key features: ①Flowers white, leaves not divided or lobed, 3-4 X as long as wide, smooth. ②“Sp has glabrous twigs, leaves; inflorescence finely pubescent” (Ilpin). ③Nearly glabrous, raceme forming a more or less dense, terminal panicle (w73).

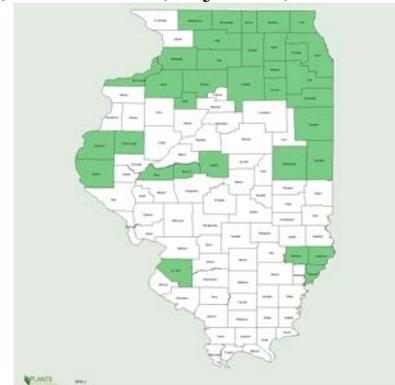
Comments: status: Endangered in Kentucky & Tennessee. Presumed Extirpated in Ohio. phenology: Blooms (6)7,8,9. C3. Terminal “cones” of white flowers. Landscaping, rain gardens, pollinator gardens, wet borders, good naturalizing shrub in wetlands. Can be aggressively rhizomatous. Seed source nursery production, genetic sources St Mary Prairie, Maytown, Lee Co & wet ditches & railroads, Green River Lowland, Whiteside Co.

“Roughs” along “the margins of ‘sloughs,’ and along the courses of small streams.” *S. alba* DuRoi. as *Spiraea salicifolia sensu auct, non L.* (Short 1845).

Associates: Pollinated by various insects, esp *Diptera* & *Hymenoptera*, primarily bees. Sp is of special value to native bees. Larval host of *Celastrina ladon* SPRING AZURE BUTTERFLY. Flowers provide nectar for *Satyrrium acadica* ACADIAN HAIRSTREAK, *Satyrrium edwardsii* EDWARD’S HAIRSTREAK. Attracts upland gamebirds, low wildlife value. “Prairie chickens eat the seeds & browse buds; cover for cottontail rabbits, woodcock; food for rabbits” (Ilpin). Subject to fire blight & other problems, none seriously damaging.

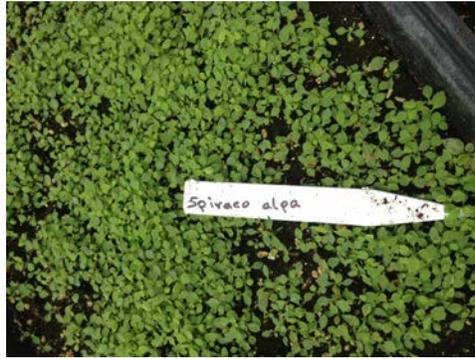
ethnobotany: Chippewa name means “pipe-stem wood”. Root used as a trapping medicine by Ojibwa (sm32). The leaves were used to make tea. The leaves, stems, & dried, powdered roots were used medicinally for side pain & to ease nausea & vomiting. Pollen may cause hayfever

VHFS: “There is considerable disagreement over whether *S alba* & *S latifolia* represent two spp with some introgression in areas of overlap, two varieties, or a variable or clinal sp” (w15).



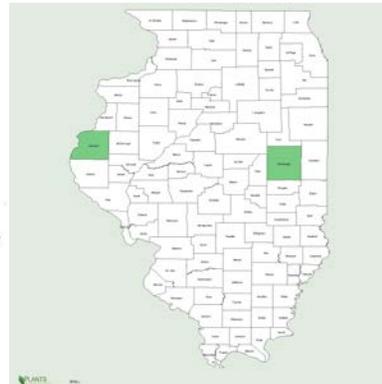
Illinois has the sp & variety *latifolia* (Aiton) Dippel. The variety is considered introduced in Illinois, purple-brown or red-brown twigs; glabrous shrub; blooms 6-7, C3.
W73 as *S salicifolia* L with synonym *S alba* Bw.





Spiraea alba

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. 2nd line drawing Mark Mohlenbrock, USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant spp* USDA Natural Resources Conservation Service. Not copyrighted image. 1st photo Robert H Mohlenbrock USDA-NRCS PLANTS Database - Not copyrighted image. Illinois map courtesy plants.usda.gov.



Spiraea alba variety *latifolia*

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Illinois map courtesy plants.usda.gov.

Spiraea X bumalda Burven ♣ JAPANESE SPIRAEA, *Spiraea albiflora* (Miq.) Zabel X *S. japonica* Lf
distribution/range: Introduced perennial shrub, persisting & spreading. Known from Pennsylvania, Utah, Virginia, & Wisconsin.

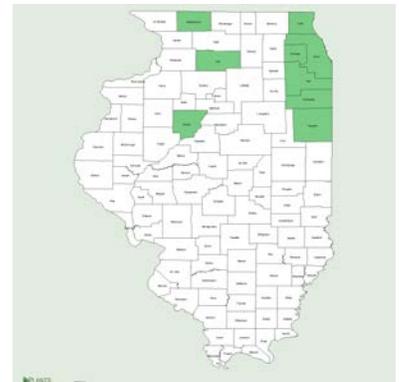
Spiraea tomentosa Linnaeus var ***rosea*** (Rafinesque) HARDHACK, aka STEEPLEBUSH, HARDHACK SPIRAEA, (*tomentosus -a -um* tomentòsus (to-men-TO-sus) tomentose, densely woolly, pubescent)

Habitat: Sterile low grounds & pastures, bogs, moist thickets, rare. Marsh, streambank, & waters edge sp; bogs, moist thickets & meadows, wet sandy swales. distribution/range:

Culture: ①60 days cold moist stratification. Surface sow, seeds are very small or need light to naturally break dormancy & germinate (pm09, 15). ②Cold moist stratify 60 days (Wade nd) ③Seeds germinate after about 60 days of cold moist stratification (he99). 238,736?; 4,480,000 (pm), 6,080,000 (aes10), 14,400,000 (pm02) seeds per pound. There are few commercial sources of seeds or plants. Availability may be limited.

cultivation: Transplants easily. Tolerant of acidic soils.

Description: Erect, perennial, native shrub; 2.0'- 3.5' tall, colonial roots, minimum depth; culms; leaves alternate, not divided or lobed, oblong to lance-like, green above, whitish-orange fuzz beneath, edges with fine, sharp teeth; inflorescence a 5" terminal, branched panicle-like cluster; flowers clear pink to rose purple, 5-merous, 0.13" wide, perfect; fruits are woolly, pod-like follicles, 0.13" long in clusters of 5, with many tiny seeds; N. key features: ①Flowers pink, follicle woolly, leaves not divided or lobed, undersides with
 Uncopyrighted Draught



whitish-orange fuzz (fh). ② Raceme a dense slender terminal panicle (w73).

Comments: status: phenology: Blooms July - September. Collect seeds in se Wisconsin in October (he99). Attractive foliage, leaves woolly beneath, stems brown. Seed source nursery production originally from Will, DuPage, & Kane Co.

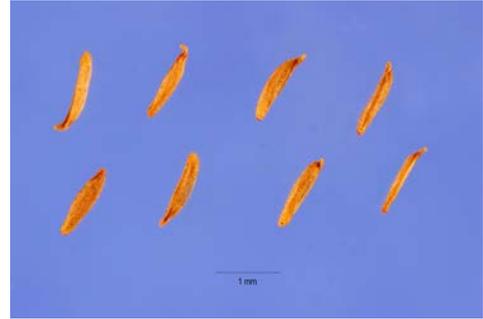
“Roughs” along “the margins of ‘sloughs,’ and along the courses of small streams.” *Spiraea tomentosa* L. (Short 1845). It is odd that there are no records of this species in the area travelled by Short.

Alphonso Wood, Class-book of Botany, “A small shrub, common in pastures & low grounds, Can & US, particularly eastward. Stem very hard, brittle, consequently troublesome to the scythe of the haymaker. Leaves dark green above, rusty white, with a dense tomentum beneath, crowded, on short petioles. Flowers small, very numerous, with conspicuous stamens, light purple, forming a slender pyramidal cluster of some beauty. The persistent fruit in winter furnishes food for the snowbird.”

Associates: Pollinated various insects, esp *Diptera* & *Hymenoptera*. Subject to fire blight & other problems, none seriously damaging.

ethnobotany: Used as medicinal beverage by Ojibwa (sm32).

VHFS: Includes var *rosea* (Raf) Fern.





Spiraea tomentosa

Photo L Scott Ranger. USDA SCS. 1991. *Southern wetland flora: Field office guide to plant spp* South National Technical Center, Fort Worth. Courtesy of [USDA NRCS Wetland Science Institute](https://www.nrcs.usda.gov/wetland-science). USDA-NRCS PLANTS Database. Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. Seed photo Steve Hurst USDA-NRCS PLANTS Database. - Not copyrighted image. Last photo James Brunus Alwill. Illinois map courtesy plants.usda.gov.

Spiraea x vanhouttei (C Briot) Zabel (or (C Briot) Carrière) *Spiraea cantoniensis* Lour. x *S. trilobata* L

● BRIDAL-WREATH, aka BRIDAL-WREATH SPIRAEA, VAN HOUTT'S SPIREA,

Cultivated, escaping, or sometimes persistent around old dwelling sites. Both parent spp are from Asia. (w15)

Then God said, "Let the land produce vegetation: seed-bearing plants & trees on the land that bear fruit with seed in it, according to their various kinds." & it was so. & God saw it was good. (Genesis 1:11)

WALDSTEINIA Willdenow 1799 **BARREN STRAWBERRY, DRY STRAWBERRY** *Rosaceae* New Latin, from Franz A von *Waldstein*, Austrian botanist (alternately Francis Adams, Count of Waldstein-Wartenburg, German; or Franz de Waldstein) died 1823 & New Latin *-ia*. The common name comes from the plant's resemblance to a strawberry & its lack of an edible fruit, as a barren woman that can not conceive a child. A genus of about 5 spp of perennial acaulescent herbs of the North America, southern Europe, & Korea, resembling strawberries but having yellow flowers that have terminal styles & few, dry carpels & are seated on a short hairy receptacle. Weakley (2007) notes that this genus is "evolutionarily embedded" in *Geum*, probably best submerged in it. Mohlenbrock (2014) maintains this in *Waldsteinia*.

Herbaceous perennial, acaulescent; leaves 3-parted, lobed & toothed, narrowing at base; flower yellow; fruits are achenes, few (or 1-seeded), hard, dry, on a dry receptacle.

Plants may or may not be self-sterile. Seeds ripen in early summer & require moist cold stratification. Code B?. Separation of the crowns produced by the wiry rhizomes is easy. (cu00)

In new nomenclature, this may be *Geum fragarioides* (Michaux) Smedmark. **Move to Geum?**

Waldsteinia fragarioides (Michaux) Trattinick subsp **fragarioides** *CT, IL, IN, ME, MA, NH BARREN STRAWBERRY, aka APPALACHIAN BARREN STRAWBERRY, NORTHERN BARREN STRAWBERRY, (*fragarioides* strawberry-like, resembling *Fragaria*, from Latin *fraga*, *fragorum*, (*fragum*, *fragi* n.) strawberry, & ancient Greek - οειδής, *-oeides*, adjectival suffix indicating having the form or likeness of, resembling.)

Habitat: Sandstone ledge, Pope Co, Illinois; moist to dry pine forests & clearings, northern Wisconsin. Forests. In the se USA, forests & streambanks, rare (w11). distribution/range: Largely absent from the Prairie Peninsula. Illinois has a disjunct population of a northern sp.

cultivation: Ground cover growing in partial sun to full shade in loamy & sandy soils. Tolerates clay soils.

Description: Native, erect, herbaceous, perennial forb, 4.0-6.0" tall; rhizomatous, mat-forming; culms; leaves basal, wider at the top, on stalks about the same length as the leaves, 3-parted into toothed & shallow-lobed leaflet; inflorescence a few to several stalked flowers; flowers yellow, 5-merous, 0.33"-0.75" wide; fruits are dry seeds (achenes).

Comments: status: Special Concern in Connecticut & Massachusetts. Endangered in Illinois & Maine. Rare in Indiana. Threatened in New Hampshire. phenology: Blooms (late March) April-May. Fruits ripen May-June. C3. In the landscape use in borders, rock gardens, shade gardens, or as an edging plant.

Associates: Deer resistant.

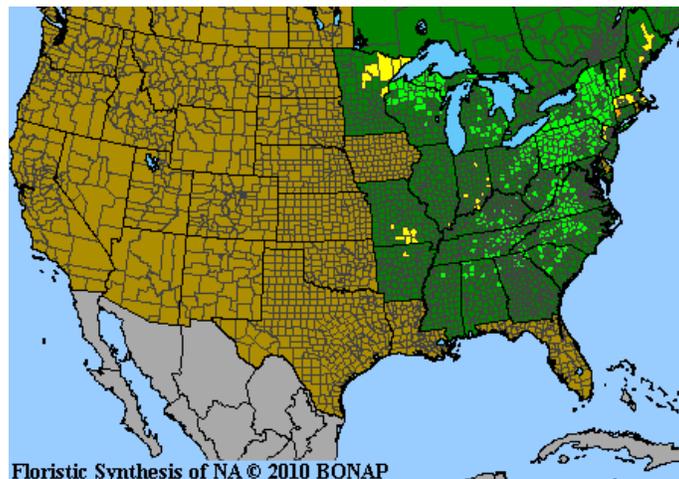
VHFS: [*Dalibarda fragarioides* Michx, *Geum fragarioides* (Michaux) Smedmark, *Waldsteinia fragarioides* (Michx) Tratt var *fragarioides*] In Woods (1873) as *W fragarioides* Traut.

Illinois has subsp *fragarioides*. Ssp *doniana* is often treated as a sp.



Waldsteinia fragarioides

Line drawing Britton & Brown (1913) courtesy of Kentucky Native Plant Society. 2nd line drawing ssp *doniana*.



Floristic Synthesis of NA © 2010 BONAP

Omnia dicta fortiora si dicta Latina

Endnotes & abbreviations. The following math functions violate Abbey's 1st Law, which see.

++ The listed numbers are seed count mean, seed count median, seed count mode, seed count standard deviation, seed count max, seed count min, seed count range.

** The listed numbers are Germ mean, germ median, germ mode, germ standard deviation, germ range (range); Dorm mean, dorm median, dorm mode, dorm standard deviation, dorm range (range); Test mean, test median, test mode, test range. (#germ test : tz etc)

Reference abbreviations May 04 2014

- CEPPC California Exotic Pest Plant Council
- CIPC California Invasive Plant Council
- SEPPC Southeast Exotic Pest Plant Council
- SWSS Southern Weed Science Society
- RBG Kew RBG Kew, Wakehurst Place
- aes10 (AES 2010)
- afvp (Atlas of Florida Vascular Plants)
- anef (Angelo & Boufford: Atlas of New England flora)
- apl (Applewood)
- asfg (Audubon Society Field Guide)
- wade (Alan Wade, nd, various years, 95, &c)
- bsh (Baker Seed Herbarium, California)
- bb02 (Baskin & Baskin 2002, 2001, &c.)
- nlb05 Britton 1905
- cb03 (CC Baskin 2003, 2001, &c.)
- crfg California Rare Fruit Growers
- csvd (Currah, Smreciu, & Van Dyk 1983)
- tchn tomclothier.hort.net (-4°C 24°F stratification being corrected)
- cu00 (or cu02, &c, Cullina 2000, 2002, 2008)
- nd91 (Norm Deno, 1991, 1993)
- den28 (Densmore 1928)
- do63 (Dobbs 1963)
- mfd93 (Mary Fisher Dunham 1993)
- dh87 (Dirr & Heusser 1987)
- drwfp (Directory of Resources on Wildflower Propagation)
- ecs (Ernst Conservation Seeds catalog)
- ew12 (Everwilde 2012) also ew11
- ewf55 (Egbert W Fell 1955)
- ewf59 (Egbert W Fell 1959)
- fh (Robert W Freckmann Herbarium)
- fna (Flora of North America project)
- foc (Flora of China online)
- fop (Flora of Pakistan online)
- gni (Genesis Nursery, Inc)
- gc63 (Gleason & Cronquist 1963, 1991)
- gran (Granite Seeds)
- he99 (Heon et al 1999)
- hk83 (Hartman & Kester 1983)
- hpi (Hill Prairies of Illinois
(Hilty website))
- Ilpin (Illinois Plant Information network)
- jf55 (Jones & Fuller 1955)

jlh (JL Hudson, Seedsman, (if the phone doesn't ring its me))
 kpw (Kansas Prairie Wildflowers)
 krr (Kenneth R Robertson)
 lbj (Lady Bird Johnson Wildflower Center Native Plant Information Network)
 m14 (Mohlenbrock 2014) also m86, m99, m02, m05, m06, &c
 mbg (Missouri Botanic Garden)
 msue (Michigan State University Extension)
 nae Native American Ethnobotany (Moerman, University of Michigan Dearborn)
 now36 (Nowosad et al 1936)
 nyfa (New York Flora Atlas)
 orghp (Ontario Rock Garden Hardy Plant Society)
 ppc (Philips Petroleum Company)
 pots (Plants of the Southwest 2000)
 pm09 (Prairie Moon 2009) also pm02, pm11, &c
 pnnd (Prairie Nursery no date)
 ppH (Prairie Propagation Handbook)
 ppi (Prairie Plants of Illinois)
 psdg (Plants of South Dakota Grasslands)
 pug13 (plants.usda.gov accessed 2013, 2014)
 oed Oxford English Dictionary online
 rain (Ranier Seeds)
 rrn97 (Reeseville Ridge Nursery 1997)
 rvw11 (Reznicek et al 2011)
 rs ma (Ray Schulenburg Morton Arboretum)
 rhs Royal Horticultural Society
 sh94 (Shirley Shirley 1994) & don't call me Shirley
 sk08 (Stuppy & Kessler 2008)
 sm23 (Smith 1923) also sm32, sm33, sm28, &c.
 sw79 (Swink & Wilhelm 1979)
 sw94 (Swink & Wilhelm 1994)
 tlp (Time Life Perennials)
 tlw (Time Life Wildflowers)
 tpg The Prairie Garden
 uconn (UConn Plant Database)
 us97 (USDA 1997)
 w12b (Weakley Nov 2012) also w07-12
 wfatp (Vance & Vance 1979)
 wfn (Wildflowers of Nebraska)
 wfnp Wildflowers northern prairies)
 ws92 (Wilhelm & Swink 1992)
 w73 (Alphonso Wood 1873)
 ry64 (Richard Yarnell 1964)
 yy92 (Young & Young 1992)
Reliquum etiam non scriptum est.