

Achillea Millefolium L. Yarrow.
Milfoil.

Achillea Millefolium L. Sp. Pl. 899. 1753.

Perennial from horizontal rootstocks; flowering stems pubescent, or nearly glabrous, simple, or corymbosely branched above, 1°-2° high. Basal leaves, and those of the numerous short sterile shoots, mostly petioled, sometimes 10' long and ½' wide, those of the stem sessile, all narrowly oblong or lanceolate in outline and finely dissected into narrow pinnatifid segments, tomentose, pubescent or nearly glabrous; heads numerous, 2"-3" broad, in terminal compound dense, somewhat convex or nearly flat-topped corymbs; involucre ovoid-cylindric, its bracts oblong, obtusish, pubescent; rays 4-6, white, or often pink or purple, less than 2" broad.

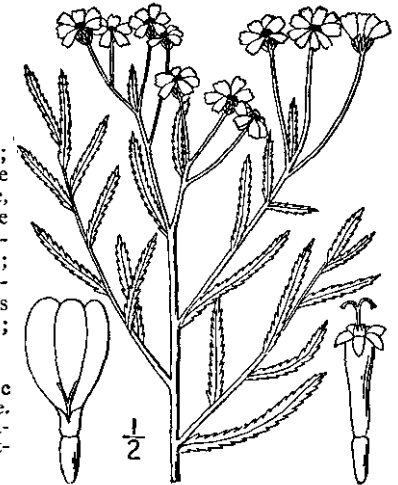
In various situations throughout eastern North America, often occurring as a naturalized weed. Native also of Europe and Asia. Old names, sanguinary, thousand-leaf, nosebleed, old-man's-pepper, soldier's-woundwort, gordaldo. June-Nov.

Achillea Ptarmica L. Sneezewort. White Tansy. Sneezewort-Yarrow.

Achillea Ptarmica L. Sp. Pl. 898. 1753.

Perennial from horizontal or creeping rootstocks; stem glabrous, or slightly pubescent, nearly or quite simple, 1°-2° high. Leaves linear or linear-lanceolate, sessile and slightly clasping at the base, acute at the apex, regularly and closely serrate, sometimes pubescent on the veins beneath, 1"-2½' long, 1½"-3" wide; heads not very numerous, 5"-9" broad; peduncles puberulent; involucre broadly campanulate, its bracts ovate-oblong, obtuse or obtusish, slightly tomentose; rays 5-15, white, rather large.

In moist soil, Newfoundland, New Brunswick and Quebec to Massachusetts and Michigan. Naturalized from Europe. Native also of northern Asia. Goose-tongue. Wild, bastard-european pellitory. Fair-maid-of-France. Sneezewort-tansy. July-Sept.

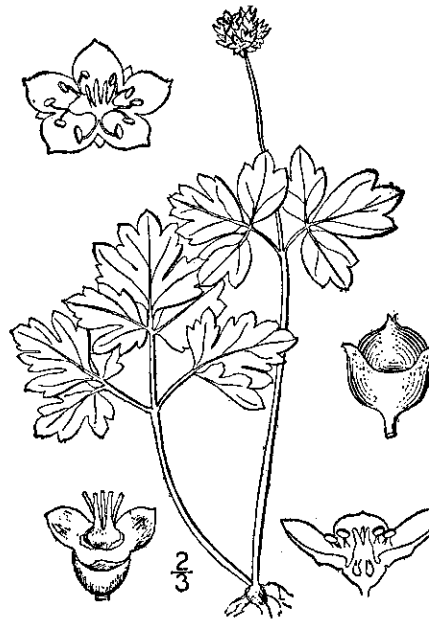


Adenocaulon bicolor Hook. Adenocaulon.

Adenocaulon bicolor Hook. Bot. Misc. 1: 19. pl. 15. 1830.

Stem floccose-woolly, or at length glabrous, 1°-3° high, leafless and mostly paniculately branched above. Leaves all basal or nearly so, deltoid-ovate, obtuse or acute at the apex, deeply cordate at the base, coarsely repand-toothed or lobed, thin, green and glabrous above, densely and persistently white-woolly beneath, 2'-6' long and broad, with slender narrowly margined petioles; heads numerous, very slender-peduncled, small; bracts of the involucre 4 or 5, ovate to lanceolate, reflexed in fruit, at length deciduous; achenes 3"-4" long, ½" thick, the upper part beset with nail-shaped glands.

In moist woods, northern Michigan and Lake Superior to British Columbia, Montana and California. May-July.

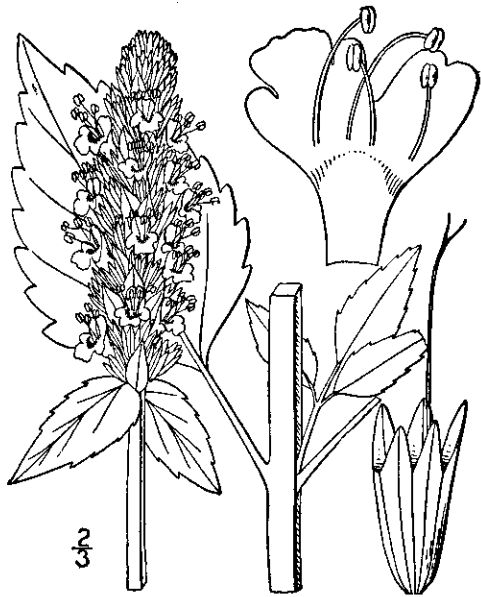


Adoxa Moschatellina L. Musk-root.
Hollow-root. Moschatel.

Adoxa Moschatellina L. Sp. Pl. 367. 1753.

Stems simple, weak, erect, 3'-6' high, bearing a pair of opposite ternate leaves usually above the middle. Basal leaves 1-4, long-petioled, ternately compound, the segments broadly ovate or orbicular, obtuse, thin, 3-cleft or 3-parted, the lobes obtuse and mucronulate; head 3"-4" in diameter, composed of 3-6-flowers; corolla of the terminal flower 4-5-lobed, those of the others usually 5-6-lobed; drupe green, bearing the persistent calyx-lobes above the middle.

In shaded rocky places, Arctic America, south to Iowa, Wisconsin, South Dakota and Colorado. Also in northern Europe and Asia. Other English names are bulbous fumitory, glory-less, musk-crowfoot or wood-crowfoot. Odor musky. May.

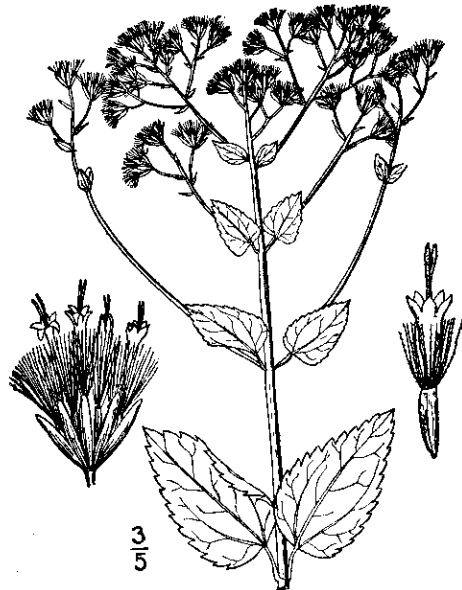


Agastache nepetoides (L.) Kuntze.
Catnep Giant-Hyssop.

Hyssopus nepetoides L. Sp. Pl. 569. 1753.
Lophanthus nepetoides Benth. Bot. Reg. under
pl. 1282. 1829.
Vleckia nepetoides Raf. Fl. Tell. 3: 89. 1836.
A. nepetoides Kuntze, Rev. Gen. Pl. 511. 1891.

Glabrous, or slightly puberulent; stem stout, 2°-5° high, branched, at least above, sharply 4-angled. Leaves ovate or ovate-oblong, acuminate or acute at the apex, rounded, cordate or the upper narrowed at the base, mostly thin, coarsely dentate, 2'-6' long; spikes 3'-18' long, usually very dense; petioles of the lowest leaves often 2' long; bracts ovate, acute or acuminate; calyx-teeth oblong or ovate-oblong, obtuse or subacute, sometimes purplish; corolla greenish yellow, about 4" long, scarcely exceeding the calyx.

In woods and thickets, Quebec and Vermont to South Dakota, south to Georgia, Tennessee, Kansas and Arkansas. July-Sept.



Ageratina aromatica (L.) Spach

Smaller White Snake-root.

Eupatorium aromaticum L. Sp. Pl. 839. 1753.

Puberulent or glabrate, slender, branched at the summit, 1°-2° high. Leaves opposite, petioled, firm, obtuse or acutish at the apex, rounded, cordate or sometimes narrowed at the base, crenate-dentate, 1½'-3' long, 9"-18" wide, 3-nerved and veiny; petioles 2"-8" long; inflorescence usually compact; heads 10-25-flowered; receptacle flat; involucre campanulate, 1½"-2" high, its bracts linear, generally obtuse, in 1 or 2 series; flowers white.

In dry soil, Massachusetts to Florida, Pennsylvania, West Virginia, Tennessee and Mississippi. Blooms rather later than the preceding species where the two grow together, near New York. Called also poolroot, poolwort, and wild hoarhound. Aug.-Oct.



Agastache scrophulariaefolia
(Willd.) Kuntze. Figwort
Giant-Hyssop.

Hyssopus scrophulariaefolius Willd. Sp. Pl. 3:
48. 1801.
Lophanthus scrophulariaefolius Benth. Bot.
Reg. under pl. 1282. 1829.
Vleckia scrophulariaefolia Raf. Fl. Tell. 3: 89.
1836.
Agastache scrophulariaefolia Kuntze, Rev.
Gen. Pl. 511. 1891.

Similar to the preceding species, but commonly taller, strong-scented, the obtusely 4-angled stem, the petioles and lower surfaces of the leaves more or less pubescent, sometimes villous. Leaves nearly identical with those of *V. nepetoides* in size and outline; spike sometimes interrupted, 3'-18' long; bracts broadly ovate, abruptly acuminate; calyx-teeth lanceolate or ovate-lanceolate, very acute or sometimes acuminate, whitish or purplish; corolla purplish, 5'-6" long, considerably exceeding the calyx.

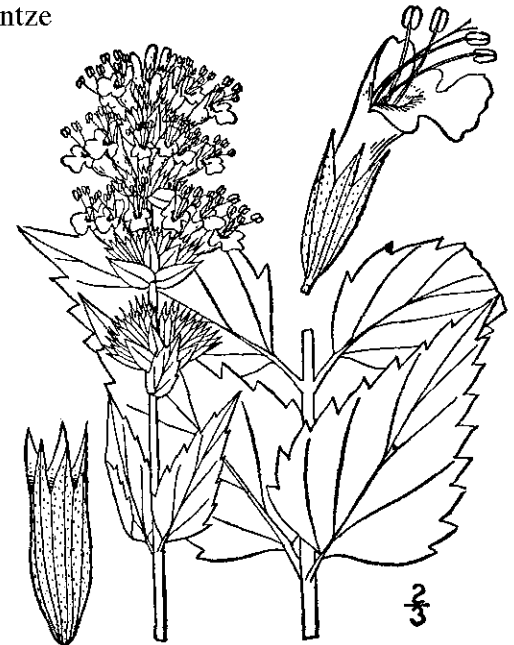
In woods and thickets, New Hampshire to Ontario, Wisconsin, North Carolina, Kentucky and Missouri. July-Oct.

Agastache foeniculum (Pursh) Kuntze
Britton. Fragrant Giant-Hyssop.

Hyssopus anethiodorus Nutt. Fras. Cat. 1813.
Hyssopus anisatus Nutt. Gen. 2: 27. 1818.
Lophanthus anisatus Benth. Bot. Reg. under pl.
1282. 1829.
Vleckia anisata Raf. Fl. Tell. 3: 89. 1836.
Vleckia anethiodora Greene, Mem. Torr. Club
5: 282. 1894.
A. anethiodora Britton in Britt. & Brown, Ill.
Fl. 3: 85. 1898.

Glabrous, or minutely puberulent; stem rather slender, leafy, usually branched, 2°-4° high. Leaves ovate or triangular-ovate, firm, mostly short-petioled, acute or acuminate at the apex, truncate, obtuse or sometimes subcordate at the base, sharply serrate, green above, pale and minutely canescent beneath, 2-3' long, anise-scented; spikes dense or interrupted, seldom 6' long; bracts broadly ovate, abruptly acuminate; calyx-teeth ovate to lanceolate, acute, purple; corolla blue, 4"-5" long, somewhat exceeding the calyx.

On prairies and plains, Minnesota to Manitoba, Alberta, Illinois, Nebraska and Colorado. July-Sept. Anise-hyssop.



Ambrosia artemisiifolia L.

Ragweed. Roman
Wormwood. Hogweed. Wild Tansy.

Ambrosia elatior L. Sp. Pl. 987. 1753.
Ambrosia artemisiaefolia L. Sp. Pl. 988. 1753.

Annual, pubescent, puberulent or hirsute, paniculately branched, 1°-6° high. Leaves thin, 1-2-pinnatifid, petioled, 2'-4' long, the upper alternate, the lower mostly opposite, pale or canescent beneath, the lobes oblong or lanceolate, obtuse or acute; uppermost leaves of the branches sometimes linear-lanceolate and entire; racemes of sterile heads very numerous, 1'-6' long, the involucre hemispheric, crenate, the receptacle chaffy; fertile heads obovoid or subglobose, mostly clustered, 1½"-2" long, short-beaked, 4-6-spined near the summit, sparingly pubescent.

In dry soil, often a pernicious weed in cultivated fields, Nova Scotia to Florida, west to British Columbia and Mexico. Bermuda. Introduced into Europe as a weed. Consists of several slightly differing races. Also called bitterweed, stickweed, stammerwort, carrot-weed, black, or tassel-weed, hay-fever weed. July-Oct.



Ambrosia psilostachya DC. Western Ragweed.

Ambrosia psilostachya DC. Prodr. 5: 526. 1836.

Similar to the preceding species, but perennial by long rootstocks, the leaves thick, the pubescence strigose or hispid. Stems usually much branched, 2°-6° high, rather stout; leaves 1-2-pinnatifid, 2'-5' long, the lobes acutish; racemes of sterile heads several or numerous, 2'-6' long, the involucre campanulate, the receptacles chaffy; fertile heads mostly solitary, ovoid or obovoid, reticulated, short-pointed, unarmed, or with about 4 short tubercles, pubescent, 1½"-2" long.

In moist open soil, Illinois to Saskatchewan, Texas, Mexico and California. July-Oct.



Ambrosia trifida L. Horse-cane. Bitterweed. Great Ragweed.

Ambrosia trifida L. Sp. Pl. 987. 1753.
A. integrifolia Muhl.; Willd. Sp. Pl. 4: 375. 1805.
Ambrosia trifida integrifolia T. & G. Fl. N. A. 2: 290. 1841.

Annual, scabrous or hispid, or nearly glabrous, branched, 3°-17° high. Leaves all opposite, petioled, 3-nerved, deeply 3-5-lobed, or undivided, the lobes lanceolate or ovate, serrate, acute or acuminate; lower leaves often 1° wide; racemes of sterile heads 3'-10' long, their involucre saucer-shaped, 3-ribbed on the outer side, crenate-margined or truncate, their receptacles naked; fertile heads usually clustered in the axils of the upper bract-like leaves, turbinate to obovoid, 5-7-ribbed, conic-beaked, 3"-4" long, each rib bearing a tubercle near the summit.

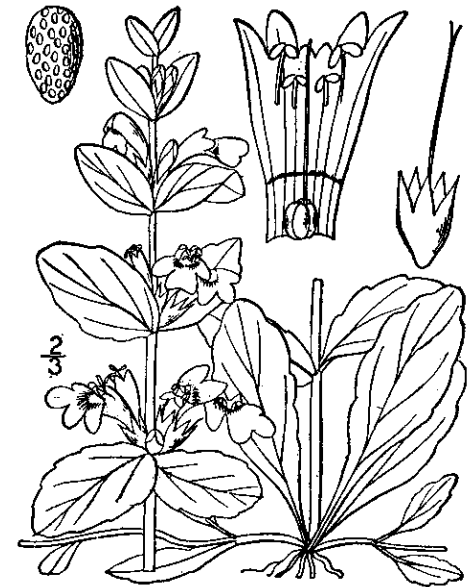
In moist soil, Quebec to Florida, west to Manitoba, Nebraska, Colorado and New Mexico. Tall ambrosia. Richweed. Wild hemp. Horse-weed. Buffalo-weed. Hay-fever weed. July-Oct.

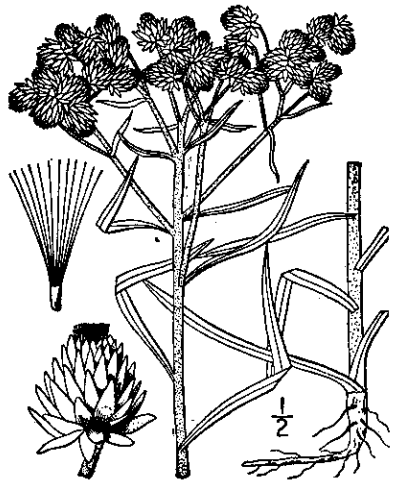
Ajuga reptans L. Bugle.

Ajuga reptans L. Sp. Pl. 561. 1753.

Perennial, sparingly pubescent or glabrous, producing slender creeping stolons sometimes 1° long; stem erect, rather stout, 6'-15' tall. Basal leaves tufted, obovate, rounded at the apex, crenate or undulate, 1'-3' long, tapering into margined petioles; leaves of the stem oblong or oblanceolate, much smaller, sessile or nearly so, those of the stolons mostly petioled; upper flower-clusters often forming a short spike, the lower commonly distant and axillary; corolla blue or nearly white, about ¼ long.

In fields, Quebec and Maine to southern New York, locally naturalized from Europe. Brown bugle. Middle comfrey. Carpenter's-herb. Sickletwort. May-June.





Anaphalis margaritacea (L.) Benth. & Hook. Pearly or Large-flowered Everlasting.

Gnaphalium margaritaceum L. Sp. Pl. 850. 1753.
Antennaria margaritacea Hook. Fl. Bor. Am. 1: 329. 1833.
A. margaritacea Benth. & Hook. Gen. Pl. 2: 303. 1873.

Stem floccose-woolly, corymbosely branched at the summit, leafy, 1°-3° high. Leaves linear-lanceolate, narrowed to a sessile base, revolute, green, but mostly more or less pubescent above, woolly beneath, 3'-5' long, 2"-4" wide, the lowest shorter, spatulate, usually obtuse; corymb compound, 2'-8' broad; heads very numerous, short-peduncled or sessile, about 3" high, 4" broad when expanded; involucre campanulate, its bracts ovate-lanceolate, obtuse, finely striate, pearly white, mostly glabrous; pappus-bristles of the fertile flowers distinct and falling away separately.

Dry soil, Newfoundland to Alaska, Pennsylvania, Kansas, Oregon and northern Asia. Recorded south to North Carolina. Adventive in Europe. Silver-leaf. Life-everlasting. Moonshine. Cotton-weed. None-so-pretty. Lady-never-fade. Indian-posy. Ladies'-tobacco. Poverty-weed. Silver-button. July-Sept.

Anaphalis occidentalis (Greene) Heller, occurring from Alaska to California and in Newfoundland and Quebec, differs by its mostly broader leaves being green and glabrous.



Antennaria howellii ssp. **canadensis** (Greene) Bayer
 Canadian Cat's-foot.

Antennaria canadensis Greene, Pittonia 3: 275. 1898.

Stems 8'-12' high, slender. Basal leaves and those of the ends of stolons spatulate to oblanceolate, obtuse or apiculate, 1'-1½' long, 6" wide or less, gradually tapering from above the middle to a long narrow base, 1-nerved or with two faint lateral nerves, bright green and glabrous above, lanate beneath; stolons short, leafy, assurgent; stem-leaves linear-lanceolate, distant, about 1' wide; inflorescence capitate to racemose-corymbose; fertile involucre about 4½" high, its outer bracts oblong, obtuse, the inner lanceolate, acute to attenuate; bracts of the staminate involucre white-tipped.

In dry soil, Newfoundland to Connecticut, Manitoba and Michigan. May-July.

The Old World **Antennaria dioica** (L.) Gaertn., with stem leaves close together and rose-colored involucre bracts, is recorded as long ago found at Providence, R. I.

Antennaria plantaginifolia (L.) Richards. Plantain-leaf Everlasting.

Gnaphalium plantaginifolium L. Sp. Pl. 850. 1753.
Antennaria plantaginifolia Richards. App. Frank. Journ. Ed. 2, 30. 1823.

Floccose-woolly, stoloniferous, forming broad patches; flowering stems of fertile plant 4'-20' high, slender or stout, sometimes with glandular hairs. Basal leaves obovate, spatulate, or broadly oval, obtuse or acutish, distinctly 3-ribbed, petioled, dull dark green and arachnoid above, silvery beneath, 1½'-3' long, 5"-18" wide; stem-leaves sessile, oblong or lanceolate, the upper usually small and distant; heads in corymbose or often subcapitate clusters, 4"-5" broad; involucre 3"-4½" high, its bracts greenish-white, linear to lanceolate, acute or acutish; achenes minutely glandular; sterile plant smaller, 3'-8' high; basal leaves somewhat smaller; heads smaller, 3"-4" broad; bracts oblong, obtuse.

In dry soil, especially in open woods, Quebec to Florida, Minnesota, Nebraska and Texas. Spring- or early everlasting. White plantain. Pussy-toes. Ladies'-tobacco. Dog-toes. Four-toes. Love's-test. Indian- or woman's-tobacco. Poverty-weed. Pearly mouse-ear everlasting. Consists of many races differing in size, leaf-form, leaf-size, size of heads and shape of involucre bracts; these have been variously regarded by authors as species and as varieties. April-June.



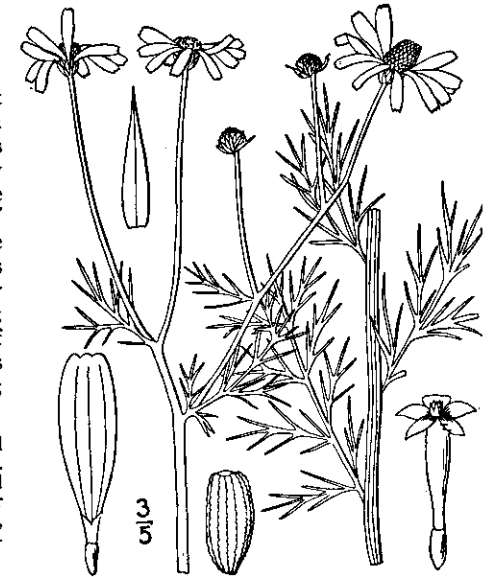
Anthemis Cótula L. Mayweed. Dog's or Fetid Camomile.

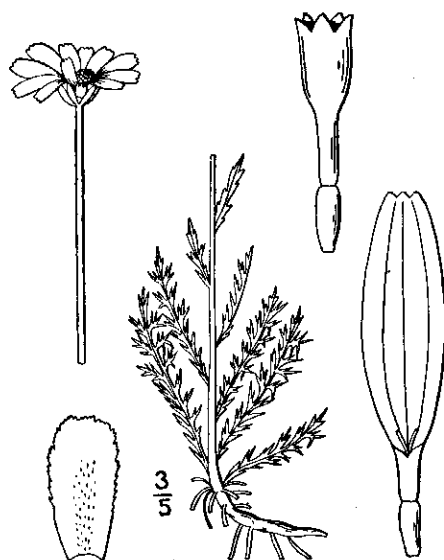
Anthemis Cotula L. Sp. Pl. 894. 1753.

Maruta Co'ula DC. Prodr. 6: 13. 1837.

Annual, glabrous, or sometimes pubescent above, glandular and with a fetid odor and acrid taste, much branched, 1°-2° high. Leaves mostly sessile, 1'-2' long, finely 1-3-pinnately dissected into narrow, or almost filiform, acute lobes; heads commonly numerous, about 1' broad; bracts of the involucre oblong, obtuse or obtusish, usually somewhat tomentose; rays 10-18, white, at length reflexed, neutral, or rarely with abortive pistils, mostly 3-toothed; receptacle convex, becoming oblong, its chaff bristly, subtending the central flowers; achenes 10-ribbed, rugose or glandular-tuberculate; pappus none.

In fields, waste places and along roadsides, all over North America except the extreme north. Naturalized from Europe, and widely distributed as a weed in Asia, Africa and Australia. Other names are mather, dog- or hog's-fennel, dog-finkle, morgan. Dog-daisy. Pig-sty-daisy. Maise. Chigger-weed. Balders. June-Nov.





Anthemis nobilis L. Garden, Scotch,
White or Low Camomile.

Anthemis nobilis L. Sp. Pl. 894. 1753.

Perennial, pubescent, aromatic, much branched, 6'-18' high, the branches procumbent. Leaves numerous, 1'-2' long, finely and compactly dissected into nearly filiform lobes and segments; heads about 1' broad; bracts of the involucre obtuse, pubescent, their scarios margins broad; rays 12-18, white, spreading, pistillate, 2-3-toothed; chaff of the conic receptacle broad, membranous, obtuse; achenes oblong, obtusely 3-angled; pappus none.

Sparingly escaped from gardens, Rhode Island to Delaware, Michigan and Wyoming. Adventive from Europe. June-Aug.

Apocynum cannabinum L. Indian Hemp.
Amy-root.

Apocynum cannabinum L. Sp. Pl. 213. 1753.
A. cannabinum glaberrimum DC. Prodr. 8: 439. 1844.
A. nemorale G. S. Miller, Proc. Biol. Soc. Wash. 13: 87. 1899.
Apocynum urceolifer G. S. Miller, loc. cit.

Root deep, vertical, soon branching. Stem extensively branched, the branches erect or ascending, glabrous or nearly so, more or less glaucous. Leaves oblong, lanceolate-oblong or ovate-oblong, acute or obtuse and mucronate at the apex, narrowed or rounded at the base, glabrous above, sometimes pubescent beneath, 2'-6' long, ½'-3' wide; petioles 1"-6" long, or sometimes none; cymes dense; pedicels short, bracteolate at the base; calyx-segments about as long as the tube of the greenish-white corolla; corolla-lobes nearly erect; follicles similar to those of the preceding species.

In fields and thickets, Connecticut to Wisconsin, Alabama, Tennessee, Missouri and Kansas, perhaps extending farther north. Rheumatism-root. Wild cotton.

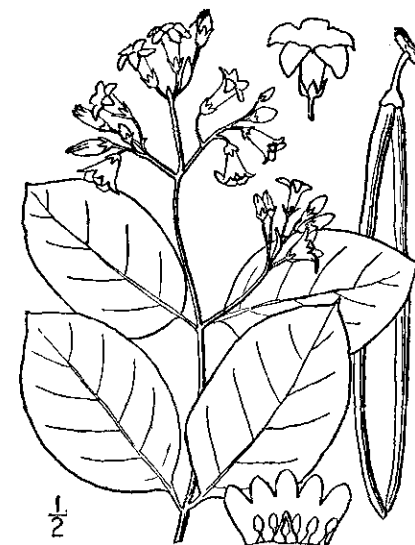


Apocynum androsaemifolium L.
Spreading Dogbane.

Apocynum androsaemifolium L. Sp. Pl. 213. 1753.
Syst. Ed. 10, 946. 1759.
A. divergens Greene, Leaflets 1: 56. 1904.

Rootstock horizontal; stem 1°-4° high; branches broadly spreading, mostly glabrous. Leaves ovate or oval, acute or obtuse and mucronate at the apex, rounded or narrowed at the base, glabrous above, pale and usually more or less pubescent beneath, 2'-4' long, 1'-2½' wide; petioles 2"-4" long; cymes loose; pedicels 2"-3" long, subulate-bracted at the base; flowers about 4" broad; calyx-segments shorter than the tube of the pinkish corolla; corolla-lobes revolute; follicles about 4' long, narrowed at the apex.

In fields and thickets, Anticosti to British Columbia, south to Georgia, Missouri, Nebraska and Arizona. Ascends to 3500 ft. in Virginia. Honey-bloom. Bitter-root or -dogbane. Rheumatism-wood. Wild ipecac. Wandering milk-weed. Western wall-flower. Fly-trap. June-July. Linnaeus inadvertently failed to affix a binominal specific name in the first edition of his "Species Plantarum," but corrected this six years later.



Arctium Lappa L. Great Bur, Burdock or Clotbur.

Arctium Lappa L. Sp. Pl. 816. 1753.

Lappa major Gaertn. Fruct. & Sem. 2: 379, pl. 162. 1802.

Stem much branched, 4°-9° high. Leaves thin, broadly ovate, pale and tomentose-canescens beneath, obtuse, entire, repand or dentate, mostly cordate, the lower often 18' long; petioles solid, deeply furrowed; heads clustered or subcorymbose, sometimes long-peduncled, 1'-1½' broad; bracts of the involucre glabrous or nearly so, their spines all spreading, the inner ones equalling or exceeding the flowers; corolla-tube longer than the limb.

In waste places, New Brunswick and Ontario to southern New York, and locally in the interior. Not nearly as common as the next species in the Middle States. Naturalized from Europe. Other names are cockle-bur, cockle-button, cuckold-dock, hurr-bur, stick-button, hardock, bardane, beggar's-buttons. July-Oct.





Arctium minus Schk. Common Burdock.

Arctium minus Schk. Bot. Handb. 3: 49. 1803.

Lappa minor DC. Fl. Fran. 4: 77. 1805.

Arctium Lappa var. *minus* A. Gray, Syn. Fl. 1: Part 2, 397. 1884.

Smaller than the preceding species, seldom over 5° high. Leaves similar, the lower deeply cordate; petioles hollow, not deeply furrowed; heads numerous, racemose on the branches, short-peduncled or sessile, 6"-9" broad; bracts of the involucre glabrous or slightly cottony, the spines of the outer ones spreading, those of the inner erect and shorter than the flowers; corolla-tube about as long as the limb.

In waste places, common nearly throughout our area, extending west to Colorado. Naturalized from Europe. Called also cuckoo-button. Leaves rarely lacinate or pinnatifid. July-Nov.

Arctium tomentosum (Lam.) Schk.
Woolly or Cottony Burdock.

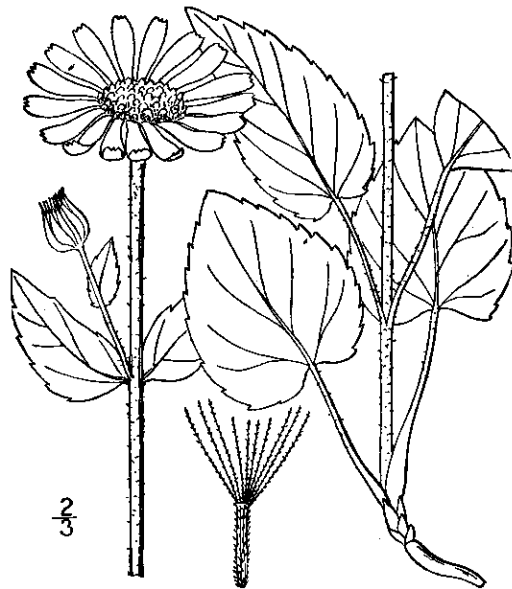
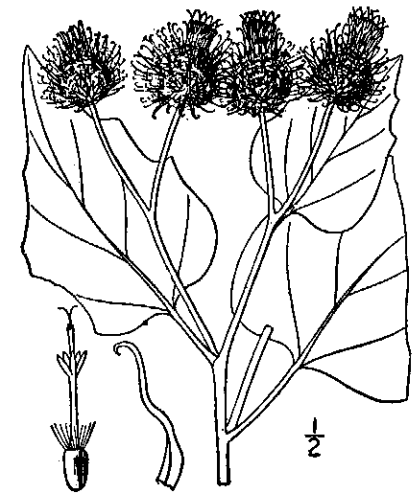
Lappa tomentosa Lam. Encycl. 1: 377. 1783.

Arctium tomentosum Schk. Bot. Handb. 3: 49. 1803.

Arctium Lappa var. *tomentosum* A. Gray, Syn. Fl. 1: Part 2, 397. 1884.

Similar to the following species; heads 8"-10" broad, corymbose at the ends of the branches, mostly long-peduncled; bracts of the involucre densely cottony, the inner ones erect and somewhat shorter than the flowers.

In waste places, Massachusetts to southern New York. Adventive from Europe. July-Aug.



Arnica cordifolia Hook. Heart-leaf Arnica.

Arnica cordifolia Hook. Fl. Bor. Am. 1: 331. 1833.

Villous or pubescent; stem simple or sparingly branched, glandular above, 1°-2° high. Basal and lower leaves ovate to nearly orbicular, obtuse or acute, deeply cordate at the base, dentate, 1'-3' long, with slender sometimes margined petioles; stem leaves 1-3 pairs, ovate to oblong, sessile or short-petioled, much smaller; heads 1-8, 2'-3' broad; bracts of the involucre acute or acuminate, villous, 6"-10" long; rays 12-16, toothed at the apex; achenes hirsute-pubescent, or glabrous at the base; pappus barbellate, white.

Lake Superior to North Dakota, Yukon, Montana, New Mexico and California. Recorded from western Nebraska. May-July.



Arnica mollis Hook. Hairy Arnica.

Arnica mollis Hook. Fl. Bor. Am. 1: 331. 1833.

Villous-pubescent; stem simple, or little branched, 1°-2½° high, bearing 1-6 heads at the summit. Leaves oblong or oblong-lanceolate, dentate or entire, acute or obtuse, 2'-5' long, 3"-9" wide, the lower and basal ones narrowed into petioles, the upper sessile, and usually somewhat connate by a broad or narrowed base, those of the stem 3-5 pairs, usually with some alternate small ones on the branches; heads 1'-2' broad; bracts of the involucre acute; rays 10-15, 3-toothed; achenes hirsute-pubescent; pappus yellow-brown, plumose.

Mountains of northern New York, New Hampshire and Maine to New Brunswick, west to Lake Superior, British Columbia and California, south in the Rocky Mountains to Utah and Colorado. Included, in our first edition, in the northwestern *A. Chamissonis* Less. June-Aug.

Artemisia Abrótanum L. Southernwood.

Artemisia Abrotanum L. Sp. Pl. 845. 1753.

Perennial, somewhat shrubby; stem puberulent or glabrous, much branched, 2°-4° high, the branches short, erect or ascending. Leaves glabrous or somewhat pubescent, 1'-3' long, 1-3-pinnately parted into linear obtuse entire lobes about 1/2" wide, or the uppermost linear and entire, the lowest petioled; heads several-flowered, yellow, very numerous, nodding, racemose-paniculate, 2"-2 1/2" broad; involucre nearly hemispheric, pubescent, its outer bracts lanceolate, acute, the inner ones obovate; receptacle glabrous; central flowers fertile.

In waste places, Massachusetts to western New York, southern Ontario, and Nebraska. Adventive from continental Europe. Old English names, lad's-love, boys'-love, slovenwood, old-man, sweet benjamin.

Artemisia prócera Willd., a similar species, but with glabrous involucre, is recorded as escaped from gardens at Buffalo, N. Y.

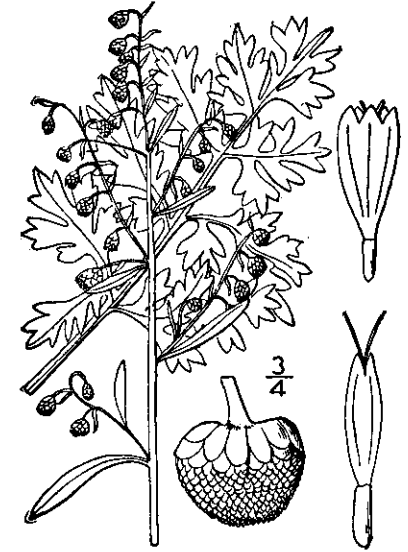


Artemisia Absínthium L. Common Wormwood. Absinth.

Artemisia Absinthium L. Sp. Pl. 848. 1753.

Shrubby, finely canescent; stem much branched, 2°-4° high. Leaves 2'-5' long, 1-3-pinnately divided into numerous linear to obovate, obtuse lobes, the lower long-petioled, the upper short-petioled or sessile, the uppermost commonly linear and entire; heads numerous, yellow, racemose-paniculate, drooping, short-peduncled, 2"-2 1/2" broad; involucre hemispheric, its outer bracts linear, the inner much broader, scarious-margined; receptacle pilose-pubescent; central flowers fertile, the marginal ones pistillate, fertile or sterile.

In waste places, Newfoundland and Hudson Bay to Massachusetts, Pennsylvania, North Carolina, western Ontario, New York, North Dakota and Montana. Naturalized or adventive from Europe, mostly escaped from gardens. Old English names, madderwort, mugwort, mingwort, warmot. Boys'-love. July-Oct.

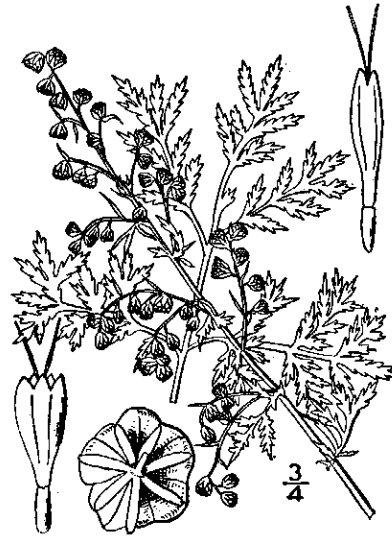


Artemisia ánnua L. Annual Wormwood.

Artemisia annua L. Sp. Pl. 847. 1753.

Annual, glabrous throughout, much branched, 2°-5° high. Leaves 2'-6' long, finely 2-3-pinnately dissected into very narrow short, obtuse lobes, the lower and basal ones slender-petioled, the upper sessile and less divided, but none of them entire; heads very numerous, about 1" broad, drooping, borne on very slender peduncles of about their own length or less; involucre hemispheric, glabrous, its bracts few, ovate to oblong; receptacle glabrous; flowers commonly all fertile.

In waste places, Ontario to New Hampshire, Virginia, West Virginia, Tennessee, Kansas and Arkansas, a bad weed in some places. Adventive or naturalized from Asia. Summer.

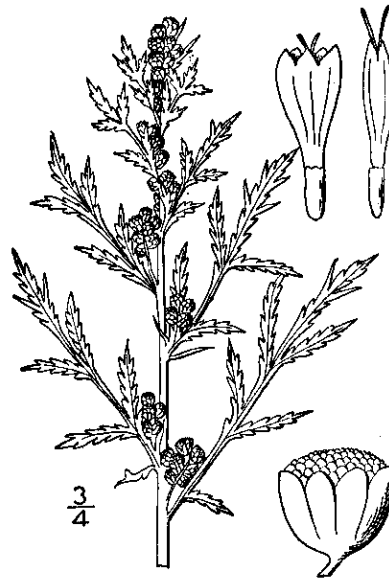


Artemisia biénnis Willd. Biennial Wormwood.

Artemisia biennis Willd. Phytogr. 11. 1794.

Annual or biennial, glabrous throughout; stem very leafy, usually branched, 1°-4° high, the branches nearly erect. Leaves 1'-3' long, 1-2-pinnately divided into linear or linear-oblong, acutish, serrate or incised lobes, the lowest petioled, the uppermost less divided or rarely quite entire; heads about 1 1/2" broad, not drooping, sessile and exceedingly numerous in axillary glomerules which are crowded, forming a compound spicate inflorescence, the subtending leaves much exceeding the clusters; involucre nearly hemispheric, its bracts green, scarious-margined; receptacle naked; central flowers fertile.

Native from Tennessee to Nebraska, Manitoba, British Columbia and California, now widely distributed as a weed from Manitoba to Nova Scotia, south to Missouri, Kentucky and Delaware. Aug.-Oct.



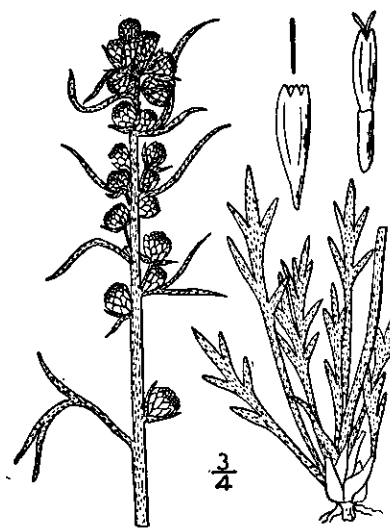


Artemisia Bigelovii A. Gray. Bigelow's Sage-Bush.

Artemisia Bigelovii A. Gray, Pac. R. R. Rep. 4: 110. 1856.

Perennial, shrubby, silvery-canescens throughout, 8'-15' high, much branched, the branches erect. Leaves narrowly cuneate, or oblong, obtuse, truncate, or 3-5-toothed at the apex, 5''-9'' long, about 1'' wide; heads very numerous, about 1'' broad, densely glomerate-spicate in a narrow virgate panicle, 2-5-flowered, 1 or 2 of the marginal ones pistillate, the others perfect and fertile; involucre short-oblong, canescent or tomentose, its bracts obtuse; receptacle naked.

Kansas (according to Smyth); Colorado to Texas and Arizona. Aug.-Oct.



Artemisia campestris ssp. *borealis* var. *purshii* (Hook.) Cronq.,

Northern Wormwood.

Artemisia borealis Pall. Iter. 129. pl. hh, f. 1. 1771.

Artemisia groenlandica Wormsk. Fl. Dan. pl. 1585. 1818.

Perennial, 5'-15' high, densely silky-pubescent all over, resembling small forms of the following species. Leaves less divided, the basal and lower ones petioled, 1'-2½' long, the upper sessile, linear and entire or merely 3-parted; heads about 2'' broad in a dense terminal rarely branched thyrsus; involucre nearly hemispheric, its bracts brown or brownish, pilose-pubescent or nearly glabrous; receptacle convex, naked; disk-flowers sterile.

Quebec to Greenland, west through arctic America to Alaska, south in the Rocky Mountains to Colorado. Also in northern Asia. Apparently erroneously recorded from Maine. July-Aug.



Artemisia cana Pursh. Hoary Sage-bush.

Artemisia cana Pursh, Fl. Am. Sept. 521. 1814.

Shrubby, densely white-canescens; stem much branched, 1°-2½° high. Leaves linear, linear-oblong or narrowly lanceolate, sessile, acute at both ends, 1'-2' long, 1½''-3'' wide, usually quite entire, rarely with 2 or 3 acute teeth or lobes; heads numerous, about 1½'' broad, glomerate or sometimes solitary in the axils of the leaves, or crowded into a naked thyrsus at the summit, 5-9-flowered; involucre oblong, canescent, its inner bracts oblong or lanceolate, obtuse, usually with 1-3 shorter outer ones; receptacle naked; flowers all perfect and fertile.

Plains, Nebraska and Colorado to North Dakota, Montana and Saskatchewan. July-Sept.

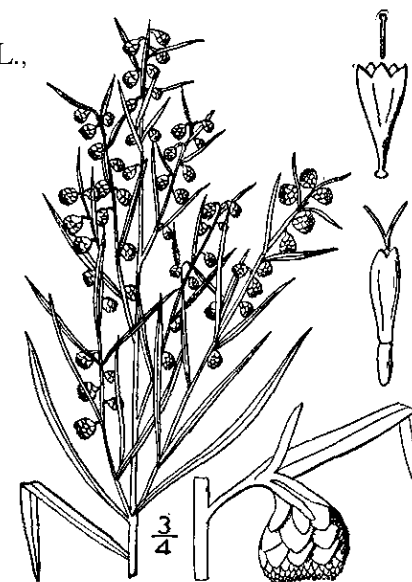
Artemisia dracunculus ssp. *dracunculus* L.,

Linear-leaved Wormwood.

A. dracunculoides Pursh, Fl. Am. Sept. 742. 1814.

Perennial, glabrous; stem somewhat woody, usually much branched, 2°-4° high, the branches nearly erect. Leaves linear, 1'-3½' long, 1''-2'' wide, acute, entire, or the lower and basal ones sometimes 3-cleft or even more divided; heads very numerous, 1''-1½'' broad, nodding, very short-peduncled, racemose-paniculate; involucre nearly hemispheric, its bracts ovate or oblong, green, scarious-margined; receptacle hemispheric, naked; central flowers sterile.

Dry plains and prairies, Manitoba to British Columbia, Illinois, Missouri, Nebraska, Texas, Chihuahua, New Mexico and California. July-Nov.



Artemisia filifolia Torr. Silvery Worm-wood.

Artemisia filifolia Torr. Ann. Lyc. N. Y. 2: 211. 1827.

Shrubby, finely silvery-canescens throughout; stem branched, 1°-3° high, the rigid branches nearly erect. Leaves 1'-2' long, nearly all 3-parted into filiform entire segments less than ½" wide, or the uppermost undivided; heads exceedingly numerous, about ½" broad, racemose-paniculate, very short-peduncled, 3-5-flowered; involucre oblong, its bracts densely canescent; receptacle small, naked or slightly fimbriate; central 1-3 flowers sterile.

On dry plains, Nebraska to Utah, Wyoming, Nevada, Texas, Mexico and Arizona. Wormwood-sage. July-Oct.



Artemisia frigida Willd. Pasture Sage-Brush. Wormwood Sage.

Artemisia frigida Willd. Sp. Pl. 3: 1838. 1804.

Perennial, woody at the base, densely silky-canescens all over; stem branched or simple, 10'-20' high. Leaves ½'-1½' long, ternately or 5-nately divided into numerous short acutish mostly entire lobes less than ½" wide, the lower and basal ones petioled, and often with a pair of entire or 3-cleft divisions near the base of the petiole, the upper sessile and less divided; heads rather numerous, racemose or racemose-paniculate, short-peduncled, nodding, about 2" broad; involucre hemispheric, its bracts oblong, canescent or tomentose; receptacle villous-pubescent; central flowers fertile.

On dry plains and in rocky soil, Minnesota to Saskatchewan, Yukon, Idaho, Nebraska, Texas and Arizona. Wild sage. July-Oct.

Artemisia ludoviciana Nutt. Dark-leaved Mugwort.

Artemisia ludoviciana Nutt. Gen. 2: 143. 1818.

Perennial, 2°-4° high; stem woolly, branched above. Leaves linear to obovate, 3' long or less, white-woolly beneath, at length dark green and glabrous, or very nearly so above, the base commonly narrowly cuneate, at least the lower ones pinnately lobed or toothed, their lobes lanceolate, acuminate; upper leaves often linear and entire; heads numerous, spicate-paniculate, 1"-1½" broad; involucre oblong, tomentose; receptacle naked; central flowers fertile.

In dry soil, Missouri to Texas, Wyoming, Colorado and Arizona. Aug.-Nov.

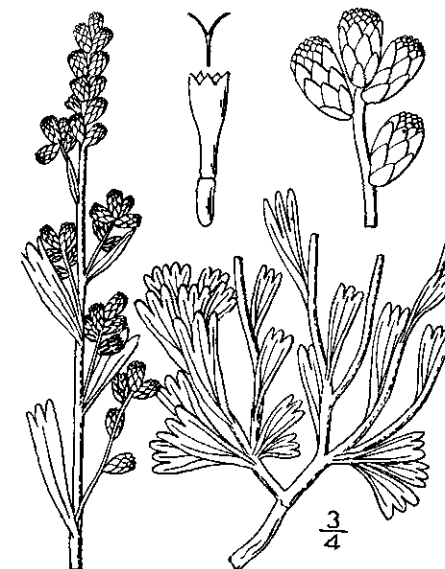


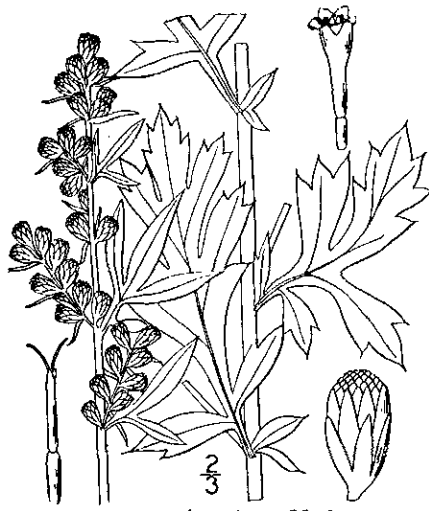
Artemisia tridentata Nutt. Common Sage-bush. Sage-brush. Sage-wood. Mountain Sage.

Artemisia tridentata Nutt. Trans. Am. Phil. Soc. (II) 7: 398. 1841.

Shrubby, silvery-canescens; stem much branched, 1°-12° high. Leaves narrowly cuneate, ½'-1½' long, 1"-3" wide, sessile, 3-7-toothed at the truncate apex; heads very numerous, 5-8-flowered, about 1½" broad, sessile, or very nearly so, in large dense panicles; involucre oblong, tomentose, its inner bracts oblong, the outer short, ovate, all obtuse or obtusish; receptacle naked; flowers all perfect and fertile.

On dry plains and in rocky soil, western Nebraska to Colorado, Utah and California, north to Montana and British Columbia. July-Sept.





native of arctic America. Motherwort. Green ginger. July-Oct.

Artemisia vulgaris L. Common Mugwort.

Artemisia vulgaris L. Sp. Pl. 848. 1753.

Perennial; stem glabrous or nearly so, much branched, 1°-3½° high. Leaves 1'-4½' long, deeply pinnatifid, into linear, oblong or somewhat spatulate, pinnatifid, toothed or entire lobes, densely white-tomentose beneath, dark green and glabrous above, the lower petioled and often with 1 or 2 pairs of small lateral divisions at or near the base of the petiole, the upper sessile, the uppermost sometimes linear and entire; heads numerous, erect, about 2" broad, in paniced, simple or compound spikes; involucre oblong-campanulate, its bracts oblong, obtusish, scarious-margined, tomentose or glabrous; receptacle naked; central flowers fertile.

In waste places, Nova Scotia to Ontario, Michigan, New Jersey, Pennsylvania and Georgia. Naturalized from Europe. Native also of Asia. Reported as



Asclepias asperula ssp. capricornu

Decumbent Milkweed.

Ananthrix decumbens Nutt. Trans. Am. Phil. Soc. (II.) 5: 202. 1833-37.
Asclepiodora decumbens A. Gray, Proc. Am. Acad. 12: 66. 1876.

Stems decumbent or ascending, rough-puberulent, 10'-2° long. Leaves firm, linear to lanceolate, glabrous above, puberulent on the veins beneath, acuminate at the apex, narrowed at the base, 3'-7' long, 2'-8" wide; umbel solitary, many-flowered; peduncle 1'-5" long; pedicels stout, ½'-1' long; corolla depressed-globose in the bud, greenish, its segments, when expanded, ovate or broadly oval, longer than the hoods; hoods purple, obtusely 3-lobed on the ventral margins, about 3" long, their tips incurved; anther-wings broad, angled above; follicles nearly erect on the recurved fruited pedicels, 3'-4" long, puberulent, at least when young, with or without soft projections.

In dry soil, Kansas to Texas and Mexico, west to Utah and Arizona. April-June.



Asclepias brachystephana Engelm. Short-crowned Milkweed.

Asclepias brachystephana Engelm.; Torr. Bot. Mex. Bound. Surv. 163. 1859.

Puberulent when young, soon glabrate; stems clustered, often branched, spreading or ascending, 6'-12' long. Leaves mostly opposite, lanceolate or linear-lanceolate, thick, long-acuminate at the apex, rounded, subcordate or narrowed at the base, 2'-5' long, 2'-6" wide, or the lowest shorter; petioles 1"-4" long; umbels several, terminal and axillary, few-flowered; peduncles short; pedicels densely woolly, equalling or longer than the peduncles; corolla greenish-purple, its segments about 2" long; column very short or none; hoods ovate, obtuse, shorter than the anthers, the short erect-incurved horn slightly exserted; follicles erect on the spreading or decurved fruiting pedicels, downy or hoary, acuminate, 2'-3½' long.

In dry soil, Kansas (according to B. B. Smyth), Wyoming to Texas, Arizona and Mexico. June-Aug.



Asclepias incarnata L. Swamp Milkweed.

Asclepias incarnata L. Sp. Pl. 215. 1753.

Stem slender, glabrous, or puberulent in 2 lines above, branched or rarely simple, 2°-4° high, leafy to the top. Leaves lanceolate or oblong-lanceolate, acuminate at the apex, narrowed, obtuse or sometimes subcordate at the base, 3'-6' long, ½'-1½' wide, the primary nerves not wide-spreading; petioles 3"-6" long; umbels usually numerous, corymbd, many-flowered; pedicels pubescent, 5"-10" long; corolla red or rose-purple, rarely white, its lobes oblong, about 2" long; column more than one-half as long as the obtuse pink or purplish hoods; horns slender, incurved, longer than the hoods; anther-wings entire, or obscurely notched at the base; fruiting pedicels erect or incurved; follicles erect, 2'-3½' long, sparingly puberulent.

In swamps, New Brunswick to Ontario, Saskatchewan, Tennessee, Louisiana and Colorado. Ascends to 3000 ft. in West Virginia. Rose- or swamp-silkweed. Water nerve-root. White Indian-hemp. July-Sept.

Asclepias latifolia (Torr.) Raf. Broad-leaved Milkweed.

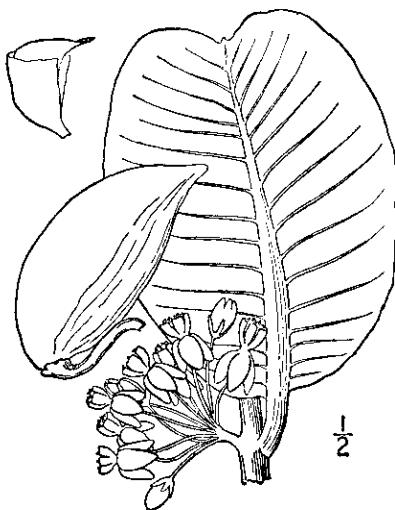
Asclepias obtusifolia var. *latifolia* Torr. Ann. Lyc. N. Y. 2: 117. 1826.

Asclepias latifolia Raf. Atl. Journ. 146. 1832-33.

A. Jamesii Torr. Bot. Mex. Bound. Surv. 162. 1859.

Minutely puberulent when young, glabrous when old; stem stout, usually simple, 1°-2½° high, very leafy. Leaves very thick, oval to orbicular, sessile or nearly so, commonly broadly emarginate and mucronulate at the apex and cordate or subcordate at the base, 4'-6' long and nearly as wide, primary nerves very wide-spreading; umbels 2-4, many-flowered, short-peduncled in the upper axils or rarely terminal; pedicels slender, canescent, nearly 1' long; corolla-segments ovate, acute, 4'-6" long, greenish; column short and thick; hoods truncate, about equaling the anthers, the horn projecting from a short crest over the edge of the stigma; follicles erect on deflexed pedicels, ovoid, acutish, 2'-3' long, about 1' thick.

On dry plains, Nebraska to Colorado, Texas and Arizona. July-Sept.

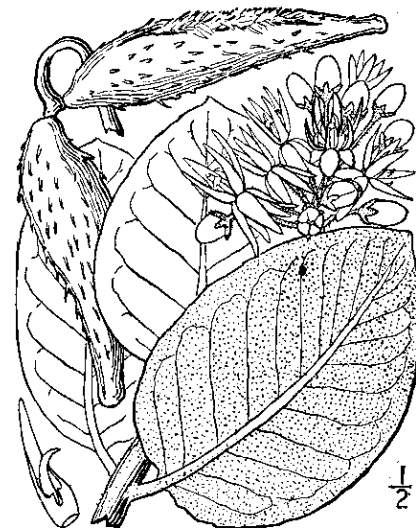


Asclepias speciosa Torr. Showy Milkweed.

Asclepias speciosa Torr. Ann. Lyc. N. Y. 2: 218. 1826.
A. Douglasii Hook. Fl. Bor. Am. 2: 53, pl. 152. 1834.

White-tomentose or canescent all over, or glabrate below, pale; stem simple, stout, 1°-2½° high. Leaves thick, broadly ovate or oval, obtuse and cuspidate or acute at the apex, subcordate, rounded or narrowed at the base, petioled, 3'-8' long, 2'-4' wide; peduncles 1'-3' long; umbels several or rarely solitary, many-flowered; pedicels stout, 9"-18" long; corolla purple-green, its segments oblong or ovate-oblong, 4"-6" long, tomentose on the outer face; column very short or none; hoods lanceolate, 5"-7" long, obtusish, expanded and with 2 blunt teeth below, the apex ligulate, 5-7 times as long as the anthers; horn short, inflexed; follicles erect or spreading on the recurved fruiting pedicels, 3'-4' long, densely woolly and covered with soft spinose processes.

In moist soil, Minnesota to British Columbia, south to Kansas, Utah and California. May-July.



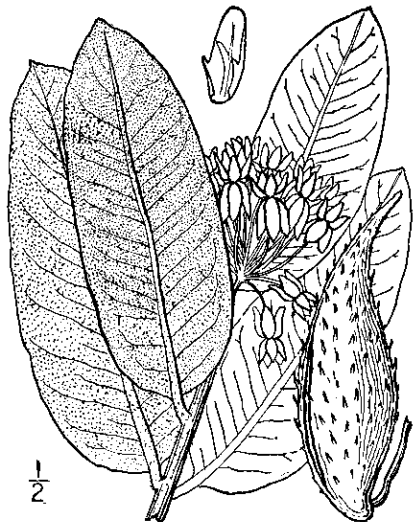
Asclepias syriaca L. Common Milkweed. Silkweed.

Asclepias syriaca L. Sp. Pl. 214. 1753.

Asclepias Cornuti Dec. in DC. Prodr. 8: 564. 1844.

Stem stout, usually simple, 3°-5° high, finely pubescent at least above. Leaves oblong, oval or ovate, finely and densely pubescent beneath, soon glabrous above, acute or obtuse and cuspidate at the apex, obtuse, narrowed or subcordate at the base, 4'-9' long, 2'-4½' wide, the primary nerves wide-spreading; petioles stout, 3"-8" long; umbels several or numerous; peduncles pubescent or tomentose, 1½-3½' long; pedicels 1'-2' long; corolla green-purple or greenish-white, its segments oblong-lanceolate, 3"-4" long; column short and thick, the hoods ovate-lanceolate with a tooth on each side, longer than the anthers and the incurved horn; follicles 3'-5' long, erect on recurved pedicels, tomentose and covered with short soft processes.

In fields and waste places, New Brunswick to Saskatchewan, North Carolina and Kansas. Leaves rarely lanceolate. Silky swallow-wort. Virginia silk. Wild cotton. June-Aug.



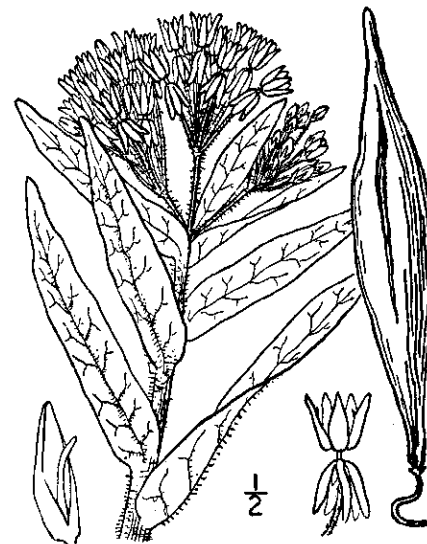
Asclepias kansana Vail, of Kansas, differs by erect-spreading hoods of the corolla and more densely tomentose follicles.

Asclepias tuberosa L. Butterfly-weed or -flower. Pleurisy-root.

Asclepias tuberosa L. Sp. Pl. 217. 1753.

Hirsute-pubescent; stems stout, simple, or branched near the summit, ascending or erect, very leafy, 1°-2° high, the milky sap scanty. Leaves alternate, lanceolate or oblong, acute or sometimes obtuse at the apex, narrowed, rounded or cordate at the base, sessile or short-petioled, 2'-6' long, 2"-12" wide; umbels cymose, terminal, many-flowered; peduncles shorter than the leaves; pedicels ½-1' long; corolla-segments about 3" long, greenish orange; corona-column about ½" long; hoods erect, oblong, bright orange, or yellow, 2-3 times as long as the stamens, longer than the filiform horns; fruiting pedicels decurved; follicles nearly erect, finely pubescent, 4'-5' long.

In dry fields, Maine and Ontario to Minnesota, Florida, Texas, Chihuahua and Arizona. Consists of numerous races, differing in shape and size of the leaves and color of the flowers. June-Sept. Wind-or orange-root. Canada-, flux-, tuber- or white-root. Orange swallow-wort. Yellow milkweed. Indian-posy.



Asclepias viridis Walt.

Oblong-leaved Milkweed.

Asclepias viridis Walt. Fl. Car. 107. 1788.

Asclepiodora viridis A. Gray, Proc. Am. Acad. 12: 66. 1876.

Stem erect, puberulent above, simple, 1°-2° high. Leaves oblong to ovate-lanceolate, rather thin, obtuse and mucronulate or acute at the apex, narrowed or rounded at the base, short-petioled, 2½'-5' long, ½'-1½' wide; umbels 2-4, or sometimes solitary; peduncles 1½'-2' long; pedicels slender, about ½' long; corolla greenish, its segments, when expanded, oblong, obtuse or acute, 4'-6' long, 2-3 times as long as the purplish or violet entire-margined hoods; anther-wings narrow, scarcely angled above; fruiting pedicels twice bent; follicles ascending, puberulent, 2'-3' long, sometimes with soft spinose projections.

In dry soil, Illinois to Kansas, Texas, South Carolina and Florida. May-July.

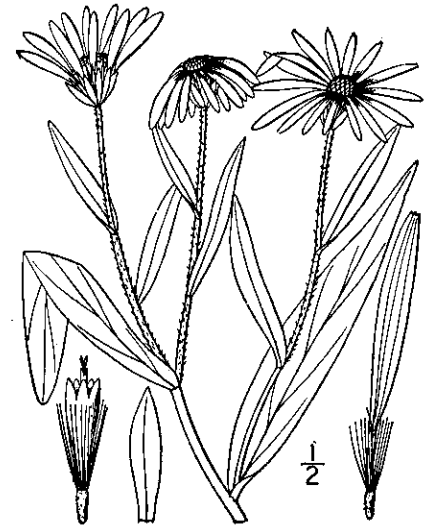


Aster foliaceus Lindl. Leafy-bracted Aster.

Aster foliaceus Lindl. in DC. Prodr. 5: 228. 1835.

Stem usually stout, sparingly pubescent in lines, 2°-3° high, branched above, the branches ascending. Leaves lanceolate, acute at the apex, entire, or with a few small distant teeth, glabrous on both sides, very rough-margined, 2'-4' long, ½'-1' wide, the upper clasping at the base, the lowest petioled; heads few, 1' broad or more; involucre hemispheric, its bracts green, foliaceous, oblong, the inner narrower and acute; rays about 30, violet, 4'-5" long; pappus nearly white; achenes pubescent.

Mountains of Quebec; Oregon to Alaska. July-Sept. The figure of this species in our first edition was erroneously stated to have been drawn from specimens collected in western Nebraska.



Aster macrophyllus L. Large-leaved Aster.

Aster macrophyllus L. Sp. Pl. Ed. 2, 1232. 1763.

Rough; rootstocks long, thick; stem reddish, angular, 2°-3° high. Basal leaves forming large colonies, 3 or 4 to each stem, broad, cordate with a large irregular sinus, rough above, harsh, thick, the teeth broad, curved, pointed, the petioles long, narrow; upper stem leaves oblong with short broadly winged petioles, the uppermost sessile, acute; inflorescence strigose and glandular, broadly corymbose, irregular; heads 5"-6" high; peduncles rigid, thickish; rays about 16, 5"-7" long, chiefly lavender, sometimes violet, rarely pale; bracts conspicuously green-tipped, the lower acute, the inner oblong, obtuse; disk turning reddish brown; florets short-lobed.

In moderately dry soil, in shaded places, Canada to Minnesota and North Carolina. Here regarded as consisting of numerous slightly differing races, perhaps including the five following described as species. Aug.



Aster novae-angliae L. New England Aster.

Aster novae-angliae L. Sp. Pl. 875. 1753.

A. roseus Desf. Cat. Hort. Paris, Ed. 3, 401. 1812.

Stem stout, hispid pubescent, corymbosely branched above, 2°-8° high, very leafy. Leaves lanceolate, entire, rather thin, acute, pubescent, 2'-5' long, 6"-12" wide, clasping the stem by an auriculate or broadly cordate base; heads numerous, 1'-2' broad, clustered at the ends of the branches; involucre hemispheric, its bracts linear-subulate, somewhat unequal, green, spreading, pubescent and more or less glandular, viscid; rays 40-50, linear, 5"-8" long, violet-purple, rarely pink or red, or white; achenes pubescent; pappus reddish-white.

In fields and along swamps, Quebec to Saskatchewan, South Carolina, Alabama, Kansas and Colorado. One of the most beautiful of the genus. Aug.-Oct.

Aster oblongifolius Nutt. Aromatic Aster.

Aster oblongifolius Nutt. Gen. 2: 156. 1818.
Aster oblongifolius var. *rigidulus* A. Gray, Syn. Fl. 1: Part 2, 179. 1834.
Aster Kunleimii Fries; Rydb. Fl. Colo. 354. 1906.

Stem much branched, hirsute-pubescent, 1°-2½° high, the branches divaricate or ascending. Leaves crowded, oblong, or oblong-lanceolate, sessile by a broad, partly clasping base, usually rigid, entire, acute or mucronulate at the apex, rough or hispidulous on both sides, rough-margined, those of the stem 1'-2' long, 2"-4" wide, those of the branches gradually smaller; heads corymbose, nearly 1' broad; involucre hemispheric, its bracts much imbricated, glandular, aromatic, linear or linear-oblong, the acute green tips spreading; rays 20-30, violet-purple, rarely rose-pink, 3"-5" long; pappus light brown; achenes canescent.

On prairies and bluffs, central Pennsylvania to Minnesota, North Dakota, Nebraska, Colorado, Virginia, Tennessee and Texas. Races differ in leaf-form and pubescence. Plant odorous. Aug.-Oct.



Aster prenanthoides Muhl. Crooked-stem Aster.

A. prenanthoides Muhl.; Willd. Sp. Pl. 3: 2046. 1804.
Aster prenanthoides porrectifolius Porter, Mem. Torr. Club 5: 326. 1894.

Stem glabrous, or pubescent in lines above, flexuous, much branched, 1°-2° high. Leaves thin, oblong to ovate-lanceolate, or lanceolate, sharply and coarsely serrate, scabrous above, glabrous or nearly so beneath, 3'-8' long, 9"-18" wide, acuminate at the apex, abruptly narrowed below into a broad margined entire petiole, the base auriculate-clasping; heads usually numerous, 1' broad or more; involucre hemispheric, its bracts linear, acute, green, spreading, imbricated in 3 or 4 series, the outer shorter; rays 20-30, violet, 4"-6" long; pappus tawny; achenes pubescent.

In moist soil, Massachusetts to Minnesota, Virginia, Kentucky and Iowa. Aug.-Oct.

Aster schistösus Steele, of West Virginia, is intermediate in characters between this species and *A. Lowrieanus* Porter, and may be a hybrid.

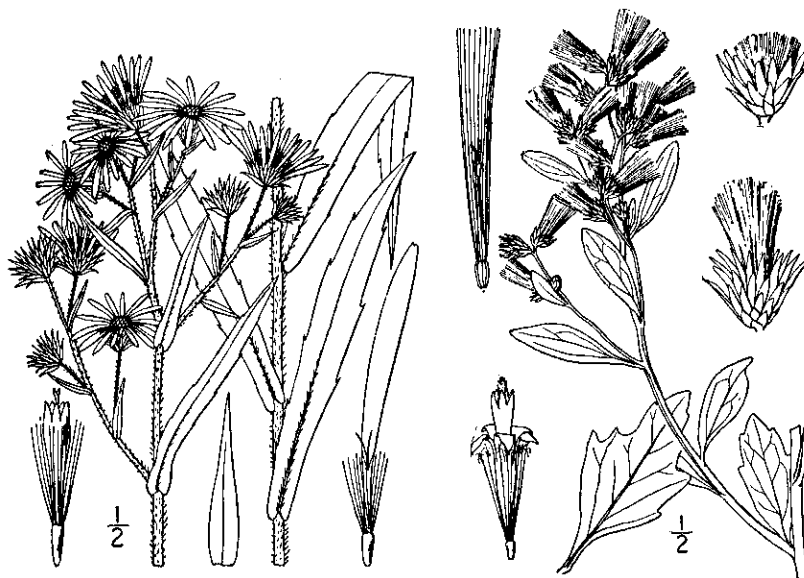


Aster puniceus L. Red-stalk or Purple-stem Aster.

Aster puniceus L. Sp. Pl. 875. 1753.

Stem usually stout, reddish, corymbosely or racemosely branched above, hispid with rigid hairs to glabrous, 3°-8° high. Leaves lanceolate to oblong-lanceolate, acuminate, sessile and clasping by a broad or narrowed base, sharply serrate, or entire, usually very rough above, pubescent on the midrib or glabrous beneath, 3'-6' long, ½'-1½' wide; heads generally numerous, 1'-1½' broad; involucre nearly hemispheric, its bracts linear or oblong, attenuate, imbricated in about 2 series, glabrous or ciliate, green, loose, spreading, nearly equal, sometimes broadened; rays 20-40, violet-purple or pale (rarely white), 5"-7" long, showy; pappus nearly white; achenes pubescent.

In swamps, Newfoundland to Ontario, Manitoba, Minnesota, Georgia, Tennessee, Ohio and Michigan. Races differ in pubescence, leaf-form and leaf-serration. Early purple aster. Swan-weed. Cocash. Meadow-scabish. July-Nov.



Baccharis halimifolia L. Groundsel-tree or -bush. Pencil-tree.

Baccharis halimifolia L. Sp. Pl. 860. 1753.

A branching glabrous shrub, 3°-10° high, the branchlets angled, sometimes minutely scurfy. Leaves thick, those of the stem and larger branches obovate or deltoid-obovate, obtuse, petioled, coarsely angular-dentate, 1'-3' long, ½'-2' wide, those of the branchlets oblanceolate, short-petioled or sessile, entire, or few-toothed toward the apex; heads in peduncled clusters of 1-5, those of the sterile plant nearly globose when young, the bracts of the involucre oblong-ovate, obtuse, glutinous, appressed, the inner ones of the pistillate heads lanceolate, acute or acutish; fertile pappus bright white, 3"-4" long, of 1-2 series of capillary bristles, much exceeding the involucre.

Along salt marshes and tidal rivers, extending beyond saline influence, Massachusetts to Florida and Texas. Bahamas; Cuba. The white pappus is very conspicuous in autumn. Cotton-seed tree. Ploughman's-spikenard. Sept.-Nov.

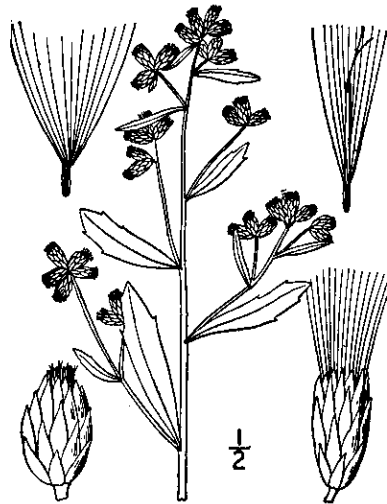
Baccharis glomeruliflora Pers., which has larger heads glomerate in the axils of the upper leaves, is doubtfully reported from southern Virginia, but occurs along the coast from North Carolina to Florida, and in Bermuda.

Baccharis salicina T. & G. Willow Baccharis.

Baccharis salicina T. & G. Fl. N. A. 2: 258. 1841.

A glabrous glutinous much-branched shrub, 3°-6° high, the branches ascending. Leaves firm, oblong-lanceolate or somewhat oblanceolate, more or less conspicuously 3-nerved, mostly obtuse at the apex, narrowed into a cuneate sessile base, 1'-1½' long, 2"-6" wide, sparingly repand-dentate, or entire; heads in peduncled clusters of 1-7, the involucre of both sterile and fertile ones campanulate, 2½"-3" high, its bracts ovate or ovate-lanceolate, acute or subacute; pappus usually but a single series of nearly white capillary bristles.

Western Kansas and eastern Colorado to Texas and New Mexico. May-July.



Bacopa monnieri (L.) Pennell

Monnier's Hedge-Hyssop.

Gratiola Monniera L. Cent. Pl. 2. 1756.
Herpestis Monniera H.B.K. Nov. Gen. 2: 366. 1817.
M. Monniera Britton, Mem. Torr. Club 5: 292. 1894.
Bacopa Monniera Wettst. in Engler & Prantl, Nat. Pfl. 4th: 77. 1891.
Bramia Monniera Drake, Fl. Polyn. Franc. 142. 1892.

Perennial, glabrous, fleshy; stem creeping, rooting at the nodes, branched, 6'-18' long. Leaves spatulate or cuneate-obcordate, sessile, rounded at the apex, entire, or sparingly denticulate, 3"-10" long, 1"-2½" wide; peduncles mainly in alternate axils, slender, 2-bracteolate at the summit, in fruit longer than the leaves; flowers pale blue, 5" long; upper calyx-segment ovate, acute; corolla obscurely 2-lipped; stamens nearly equal; stigma slightly 2-lobed; capsule ovoid, acute, shorter than the calyx.

On shores, near the coast, Maryland to Florida, Texas and Mexico. Widely distributed in tropical regions of the Old World and the New. June-Oct. Herb-grace. Water-hyssop.



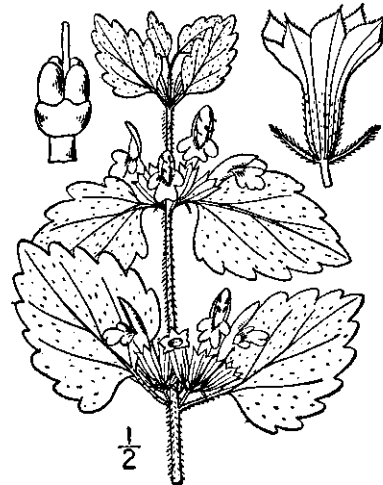
Ballota nigra L.

Black or Fetid Hoarhound.

Ballota nigra L. Sp. Pl. 582. 1753.

Herbaceous, puberulent or pubescent, ill-scented; stem usually branched, erect, 1½°-3° high, its hairs mostly reflexed. Leaves slender-petioled, ovate, or the lower nearly orbicular, acute or obtuse at the apex, coarsely dentate, thin, narrowed, truncate or subcordate at the base, 1'-2' long; clusters numerous, several-flowered, dense; bractlets subulate, somewhat shorter than the calyx; calyx about 4" long, its teeth lanceolate, sharp, bristle-pointed, spreading in fruit; corolla 6"-9" long, reddish-purple to whitish, its upper lip pubescent on both sides; nutlets shining.

In waste places, eastern Massachusetts to Pennsylvania. Naturalized from Europe. June-Sept. Black archangel. Hairhound. Henbit. Bastard-hoarhound.



Bidens bipinnata L. Spanish Needles.
Cuckolds.

Bidens bipinnata L. Sp. Pl. 832. 1753.

Annual; stem quadrangular, erect, freely branched, rather slender, 1°-5° high. Leaves thin, acuminate, petioled, 1-3-pinnately dissected into ovate or oblong, toothed or lobed segments, the lower often 8' long; heads usually numerous, long-peduncled, 2"-4" broad; involucre narrow, its outer bracts linear, ascending, nearly as long as the broader erect inner ones; rays 3-4, yellow, short, sometimes none; achenes linear, 4-angled, slightly pubescent, narrowed upward into a beak, 5"-9" long, the outer ones commonly shorter and thicker than the inner; pappus of 2-4 (usually 4), downwardly barbed, slightly unequal, spreading awns, much shorter than the achene.

In various situations, often a weed in cultivated fields, Rhode Island to Florida, Ohio, Nebraska, Kansas and Arizona. Introduced as a weed into southern Europe and Asia. July-Oct.





Bidens cernua L. Smaller or Nodding Bur-Marigold.

Bidens cernua L. Sp. Pl. 832. 1753.
Coreopsis Bidens L. loc. cit. 908. 1753.

Annual; stems glabrous, or hispid, usually erect, branched, 3'-3° high. Leaves sessile and commonly somewhat connate-perfoliate at the base, lanceolate to oblong-lanceolate, usually coarsely and sharply serrate, glabrous, acuminate, 3'-6' long, 1/2'-1' wide; heads numerous, globose, short-peduncled, 1/2'-1' broad, nodding after or during flowering; rays 6-10, short (3''-6''), or none; involucre depressed-hemispheric, its outer bracts commonly ciliate, often large, foliaceous and much exceeding the broad, yellowish-margined membranous inner ones; achenes cuneate, 2'' long, retrorsely hispid on the margins; pappus of 2-4 (usually 4), downwardly barbed awns, about half as long as the achene.

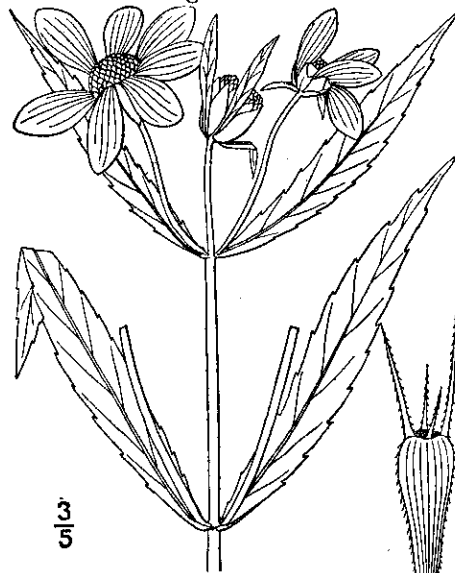
In wet soil, Nova Scotia to Hudson Bay and British Columbia, North Carolina, Missouri and California. Also in Europe and Asia. Consists of many races, differing in size. Water-agrimony. Double-tooth. Pitch-forks. July-Oct.

Bidens laevis (L.) B.S.P. Larger or Smooth Bur-Marigold.

Helianthus laevis L. Sp. Pl. 906. 1753.
Bidens chrysanthemoides Michx. Fl. Bor. Am. 2: 136. 1803.
Bidens laevis B.S.P. Prel. Cat. N. Y. 29. 1888.
Bidens laevis Greene, Pittonia 4: 254. 1901.

Annual; glabrous throughout; stems branched, erect or ascending, 1°-3° high. Leaves sessile, lanceolate, evenly serrate or serrulate, acuminate at the apex, narrowed to the sometimes connate-perfoliate base, 3'-8' long, 1/2'-1' wide; heads numerous, short-peduncled, erect in flower, often declined in fruit, 1'-2 1/2' broad; rays very showy, golden yellow; involucre hemispheric, its outer bracts linear-oblong or spatulate, equalling or exceeding the broader, ovate or oblong, membranous inner ones, shorter than the rays; rays 8-10, obovate-oblong, obtuse; achenes cuneate, truncate, 2''-4'' long, retrorsely hispid on the margins; pappus of 2-4 (usually 2), rigid downwardly barbed awns, shorter than the achene.

In swamps and wet meadows, Massachusetts to Illinois, Kansas, Florida, Louisiana and Mexico. Northern records of this species apply to *Bidens cernua*. Aug.-Nov.



Bidens frondosa L. Beggar-ticks.
 Stick-tight.

Bidens frondosa L. Sp. Pl. 832. 1753.
B. melanocarpa Wiegand, Bull. Torr. Club 26: 405. 1899.

Annual; stem erect, branched, glabrous, or nearly so, often purplish, 2°-3° high. Leaves thin, but not membranous, slender-petioled, pinnately 3-5-divided or the uppermost undivided, the segments lanceolate or oblong-lanceolate, sharply serrate, acuminate at the apex, narrowed at the base, usually slightly pubescent beneath, stalked, 2'-4' long, 1/2'-1' wide; heads usually numerous, long-peduncled, about 6'' high, 5''-10'' broad; involucre campanulate, becoming hemispheric, its outer bracts 4-8, more or less foliaceous, often much exceeding the ovate-lanceolate, scarious-margined inner ones; rays none or rudimentary and inconspicuous; disk-corollas orange; achenes flat, narrowly cuneate, nearly black, 3''-5'' long, ciliate, the two slender awns downwardly barbed, or sometimes upwardly hispid.

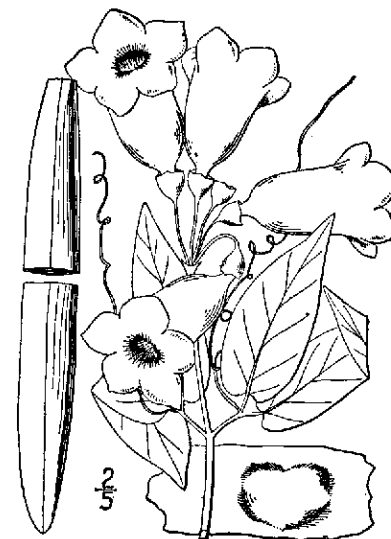
In moist soil, often a weed in fields, Nova Scotia to Florida, British Columbia, Texas, Colorado and California. Introduced as a weed into southern Europe. Rayless marigold. Beggar-lice. Devil's-pitchfork. Stick-seed. Common bur-marigold. Old-ladies clothes-pins. Cuckles. July-Oct.

Bignonia capreolata L.
 Tendirilled Trumpet-flower.
 Crossvine.

? *Bignonia crucigera* L. Sp. Pl. 624. 1753.
Bignonia capreolata L. loc. cit. 1753.
Doxanthe capreolata Miers, Proc. Roy. Hort. Soc. 3: 190. 1863.
Anisostichus capreolata Bureau, Mon. Bigon. Atlas 8, pt. 6. 1864.

A glabrous woody vine, often climbing to the height of 40°-60°, the stems sometimes 4' in diameter, exhibiting a conspicuous cross in the transverse section. Leaves petioled, commonly with small, simple, stipule-like ones in their axils, 2-foliolate, terminated by a branched tendril; leaflets stalked, oblong or ovate, entire, acute or acuminate at the apex, cordate at the base, pinnately veined, 3'-7' long; cymes numerous, short-peduncled, 2-5-flowered; pedicels 1'-2' long; calyx membranous; corolla 2' long, orange and puberulent without, yellow within; capsule 5'-7' long, 8''-10'' broad, very flat, each valve longitudinally 1-nerved; seeds broadly winged laterally, narrowly winged above and below, 1 1/2' broad.

In moist woods, Virginia to Florida, Louisiana, Ohio and southern Illinois. Quarter vine. April-June.

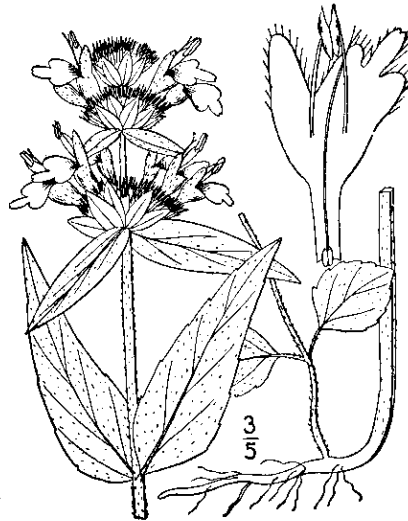


Blephilia ciliata (L.) Raf. Downy Blephilia.

Monarda ciliata L. Sp. Pl. 23. 1753.
Blephilia ciliata Raf. Journ. Phys. 89: 92. 1819.

Stem puberulent, or short-villous above, commonly simple, 1°-2° high. Lower leaves and those of sterile shoots ovate or oval, slender-petioled, crenate-denticulate, 1'-2' long, the upper lanceolate or oblong-lanceolate, short-petioled or sessile, mostly acute, longer and narrower, nearly entire; flower-clusters in a terminal spike and in the uppermost axils; outer bracts ovate to lanceolate, acuminate, usually purplish, pinnately veined, ciliate; calyx hirsute, the teeth of the upper lip about one-third longer than those of the lower; corolla purple, villous-pubescent, 5"-6" long; stamens exserted or included.

In dry woods and thickets, Vermont to Minnesota, south to Georgia, Alabama and Missouri. June-Aug. Ohio horse-mint.

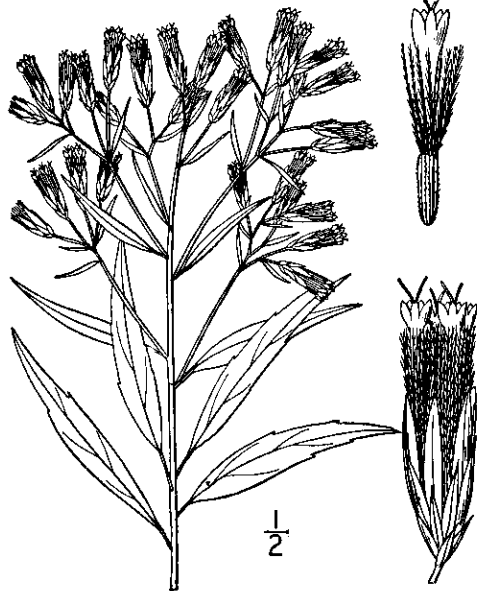
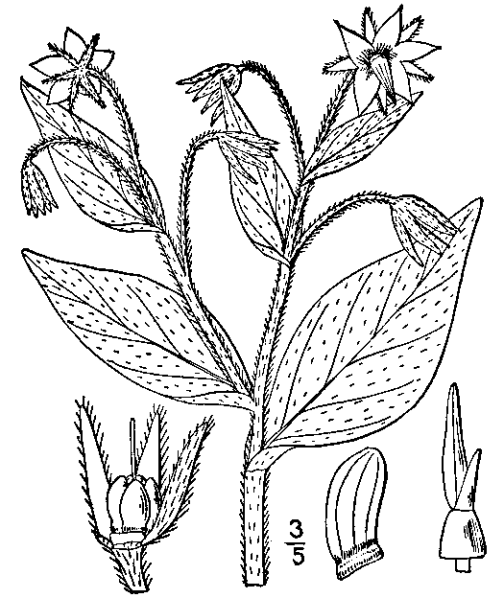


Borago officinalis L. Borage.

Borago officinalis L. Sp. Pl. 137. 1753.

Stem erect, branched, 1°-2½° high, the branches spreading or ascending. Leaves oblong to obovate, acute or obtuse at the apex, 2'-5' long, narrowed into margined petioles, or the upper smaller, ovate-lanceolate, sessile or partly clasping; flowers 8"-10" broad, pedicels rather stout, 1½'-2' long, spreading or recurving; calyx-segments lanceolate, nearly erect in fruit; corolla bright blue, the lobes ovate-lanceolate; the cone of anthers darker, about 3" long; nutlets 2" high.

In waste places, escaped from gardens, Nova Scotia to Ontario and Pennsylvania, but probably not persistent within our range. Native of southern Europe. June-Sept.



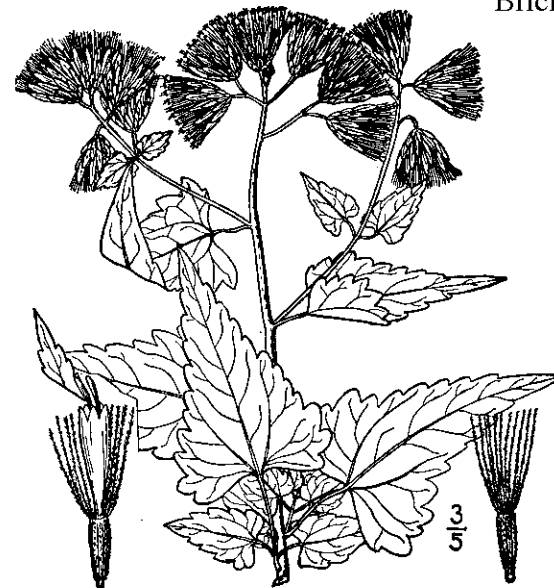
Brickellia eupatorioides (L.) Shinnors
False Boneset.

Kuhnia eupatorioides L. Sp. Pl. Ed. 2, 1662. 1763.

Eupatorium alternifolium Ard. Spec. Bot. 2: 40. pl. 20. 1764.

Erect, puberulent and resinous, 1°-3° high, branched above. Leaves lanceolate or linear-lanceolate, acute or obtusish at the apex, narrowed at the base, sparingly dentate, or entire, the upper sessile, the lower usually short-petioled; heads several or numerous, peduncled, 4"-5" high, loosely clustered; outer bracts of the involucre lanceolate or ovate-lanceolate, acuminate, the inner much longer, linear, cuspidate; pappus tawny, or sometimes nearly white.

In dry soil, New Jersey to Georgia, Ohio, Minnesota, West Virginia and Texas. Ascends to 3300 ft. in West Virginia. Aug.-Sept.



Brickellia grandiflora (Hook.) Nutt.
Large-flowered Thoroughwort.

Eupatorium grandiflorum Hook. Fl. Bor. Am. 2: 26. 1834.

Brickellia grandiflora Nutt. Trans. Am. Phil. Soc. (II.) 7: 287. 1841.

Coleosanthus grandiflorus Kuntze, Rev. Gen. Pl. 328. 1891.

C. umbellatus Greene, Pittonia 4: 238. 1901.

Erect, glabrous or puberulent, much branched, 2°-3° high. Leaves slender-petioled, deltoid-ovate, cordate at the base, acuminate at the apex, coarsely crenate-dentate, 2'-4' long, 1'-2' wide; petioles shorter than the leaves; inflorescence cymose-paniculate; heads short-peduncled, 6'-7" long; peduncles pubescent; involucre campanulate, 30-45-flowered, the outer bracts ovate, pubescent, usually abruptly acuminate or subulate-tipped, the inner linear, glabrous, striate, obtuse or acute; pappus bristles scabrous.

Montana to Wyoming, Missouri, New Mexico, Washington and Arizona. Aug.-Sept. Tassel-flower.

Cacalia atriplicifolia L.

Pale Indian Plantain.

Cacalia atriplicifolia L. Sp. Pl. 835. 1753.
Senecio atriplicifolius Hook. Fl. Bor. Am. 1: 332. 1833.

Mesadenia atriplicifolia Raf. New Fl. 4: 79. 1836.

Stem terete, glabrous and glaucous, 3'-6' high. Leaves thin, angulate-lobed, palmately veined, glaucous beneath, the lower and basal ones slender-petioled, sometimes 6' wide, the upper reniform, fan-shaped, or triangular with a nearly truncate base, the uppermost commonly small, lanceolate or oblong and entire; heads very numerous, about 1 1/2" broad, in large, loose compound corymbs; involucre 3"-4" high, its bracts linear-oblong, scarious-margined, with or without 1-3 minute outer ones.

In woods, New Jersey to Indiana, Minnesota, south to Florida, Tennessee, Missouri and Kansas. Recorded from Ontario. Called also wild caraway. July-Sept.



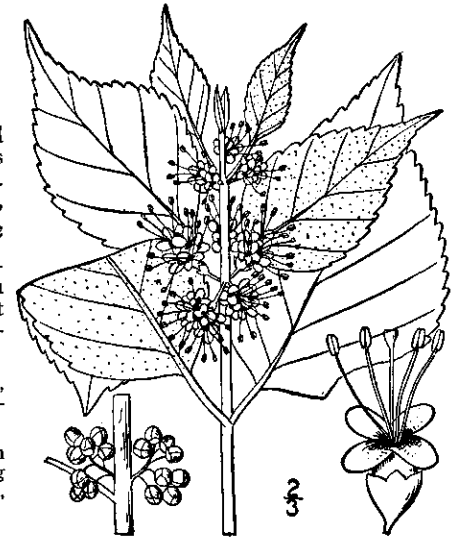
Callicarpa americana L. French or Bermuda Mulberry.

Callicarpa americana L. Sp. Pl. 111. 1753.

A shrub, 2°-5° high, the twigs, petioles and young leaves stellate-scurfy, the mature leaves becoming nearly glabrous and glandular-dotted. Twigs terete; leaves thin, ovate, pinnately veined, slender-petioled, acute or acuminate at the apex, crenate-dentate nearly to the entire base, 3'-6' long, 1 1/2'-3' wide; cymes many-flowered, short-peduncled; pedicels very short; calyx-teeth much shorter than the tube; corolla pale blue, about 1 1/2" long; fruit violet-blue, globose, 1 1/2" in diameter, very conspicuous in autumn.

In moist thickets, Virginia to Florida, Missouri, Arkansas and Texas. Bermuda. June-July. Sour-bush.

Callicarpa purpurea Juss., an Asiatic shrub often planted for ornament, with pink flowers and long leaves, has been observed in a swamp at Wilmington, Delaware.



Campanula americana L. Tall Bellflower.

Campanula americana L. Sp. Pl. 164. 1753.

Annual or biennial, more or less pubescent; stem erect or nearly so, rather slender, simple or rarely with a few long branches, 2°-6° high. Leaves thin, ovate, oblong, or lanceolate, serrate, acuminate at the apex, narrowed at the base, petioled, or the upper sessile, 3'-6' long, the lowest sometimes cordate; flowers in a loose or dense terminal sometimes leafy spike, which is often 1°-2° long; lower bracts foliaceous, the upper subulate; corolla rotate, blue, or nearly white, about 1' broad, deeply 5-cleft; calyx-lobes linear-subulate, spreading, style declined and curved upward, long-exserted; capsule narrowly turbinate, ribbed, erect, 4"-5" long, opening near the summit.

In moist thickets and woods, New Brunswick to Ontario and South Dakota, south to Florida, Kentucky, Kansas and Arkansas. Rare near the coast in the Middle States and New England. Ascends to 3000 ft. in West Virginia. July-Sept.



Campanula rotundifolia L. Harebell. Blue Bells of Scotland.

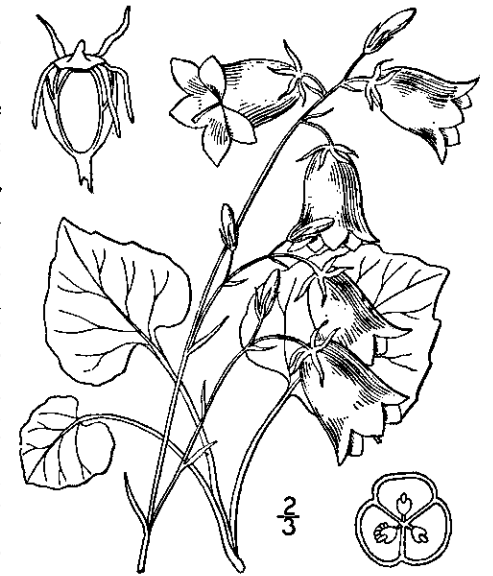
Campanula rotundifolia L. Sp. Pl. 163. 1753.
Campanula rotundifolia velutina DC. Fl. France 6: 432. 1815.

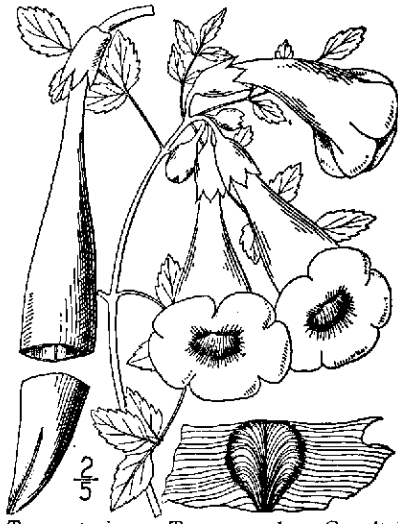
C. linifolia var. *Langsdorfiana* A. DC. Prodr. 7: 471. 1839.

Campanula rotundifolia Langsdorfiana Britton, Mem. Torr. Club 5: 309. 1894.

Perennial by slender rootstocks, glabrous or nearly so or sometimes pubescent or canescent; stems erect or diffuse, often several from the same root, simple or branched, 6'-3° high. Basal leaves nearly orbicular or broadly ovate, usually cordate, slender-petioled, 1/4'-1' wide, dentate or entire, often wanting at flowering time; stem leaves linear or linear-oblong, acute, mostly entire, sessile, or the lower narrowed into short petioles and somewhat spatulate; flowers several or numerous, racemose or sometimes solitary, drooping or spreading, slender-pedicelled; calyx-lobes subulate to filiform, spreading, longer than the short-turbinate tube; corolla blue, campanulate, 7"-12" long; capsule obconic or ovoid, pendulous, ribbed, opening by short clefts near the base.

On moist rocks and in meadows, Labrador to Alaska, south to New Jersey, Pennsylvania, Illinois, Nebraska, in the Rocky Mountains to Arizona and in the Sierra Nevada to California. Also in Europe and Asia. Consists of many races, differing in pubescence, number and size of flowers; arctic and alpine plants are usually 1-few-flowered. Other English names are thimbles, lady's-thimble, heath- or witches'-bells, round-leaved bellflower. June-Sept.





Campsis radicans (L.) Seem. ex Bureau
 Trumpet-flower. Trumpet-creeper.

Bignonia radicans L. Sp. Pl. 624. 1753.
Tecoma radicans DC. Prodr. 9: 223. 1845.
Campsis radicans Seem. Journ. Bot. 5: 362. 1867.
 A woody vine, climbing to the height of 20°-40° or prostrate if meeting no support. Leaves petioled, odd-pinnate, not tendril-bearing, 8'-15' long; leaflets 7-11, ovate to lanceolate, short-stalked, sharply serrate, reticulate-veined, glabrous, or pubescent on the veins beneath, acute or acuminate at the apex, narrowed at the base, 1½-3' long; flowers corymbose, short-pedicelled; corymbs 2-9-flowered; calyx coriaceous, about 1' long; corolla scarlet, 2½' long, the tube veined within, 3 times as long as the limb, anther-sacs glabrous; stigma spatulate; capsule stalked, 4'-6' long, 10" in diameter, narrowed at both ends, little flattened, ridged above and below by the margins of the valves; seeds in several rows on each surface of the broad partition, broadly winged laterally, the wing eroded.

In moist woods and thickets, southern New Jersey and Pennsylvania to Florida and Texas, north to Illinois and Iowa. Escaped from cultivation further north.

Trumpet-vine. Trumpet-ash. Cow-itch. Cross-vine. Aug.-Sept.

Carphephorus odoratissimus
 (J.F. Gmel.) Herbert

Vanilla-leaf. Vanilla-plant. Dog's-tongue. Carolina Vanilla.

Anonymos odoratissima Walt. Fl. Car. 198. 1788.
Liatris odoratissima Michx. Fl. Bor. Am. 2: 93. 1803.
Trilisa odoratissima Cass. Dict. Sci. Nat. 55: 310. 1828.

Rather stout, glabrous, 2°-3° high. Leaves thick, entire, or sometimes dentate, the lower oblanceolate, oblong or spatulate, obtuse, 4'-10' long, 1'-1½' wide, those of the stem gradually smaller, oblong, ovate or oval, the uppermost bract-like; heads corymbose-paniculate, about 3" high; bracts of the involucre oblong, obtusish; achenes glandular-pubescent.

In pine-barrens, North Carolina to Florida and Louisiana. Recorded from Virginia, and to be looked for in the southeastern part of that state. Deer's- or hound's-togue. Aug.-Sept.

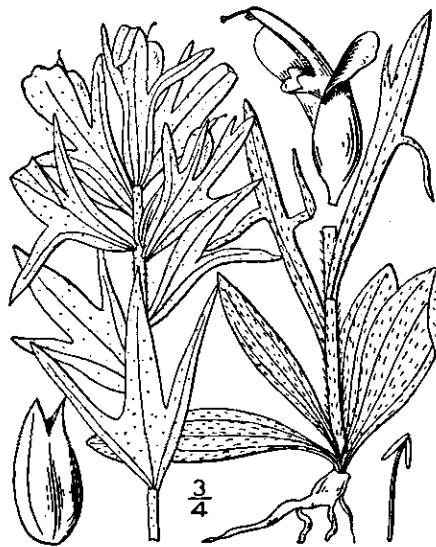


Castilleja coccinea (L.) Spreng. Scarlet Painted-cup. Indian Paint-brush or Pink. Prairie-fire.

Bartsia coccinea L. Sp. Pl. 602. 1753.
Castilleja coccinea Spreng. Syst. 2: 775. 1825.

Annual or biennial, villous-pubescent; stem rather slender, simple, or with few erect branches, 1°-2° high. Leaves sessile, parallel-veined, the basal oblong, obovate, or linear, tufted, mostly entire, 1'-3' long, those of the stem deeply 3-5-cleft into linear obtusish segments, the bracts broader and shorter, 3-5-lobed or cleft, bright red or scarlet, conspicuous; flowers sessile, 10"-12" long, usually not exceeding the bracts; calyx cleft both above and below into 2 dilated entire or retuse oblong and obtuse lobes, sometimes scarlet; corolla greenish-yellow, its tube shorter than the calyx, its upper lip much longer than the lower; capsule oblong, acute, 5"-6" long.

In meadows and moist thickets, Maine and Ontario to Manitoba, North Carolina, Tennessee, Kansas and Texas. Ascends to 4000 ft. in Virginia. Bracts and calyx rarely yellow. Red indians. Election-posies. Wickawee. Bloody-warrior. Nose-bleed. May-July.

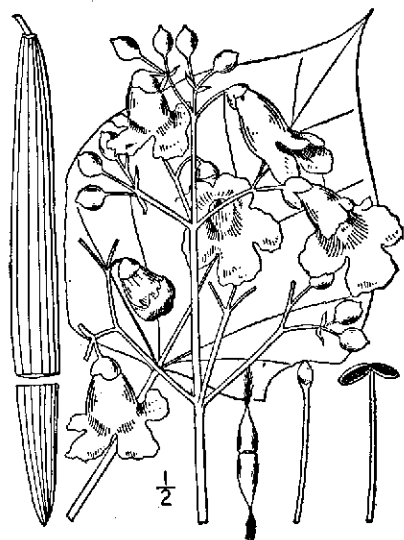


Castilleja sessiliflora Pursh. Downy Painted-cup.

Castilleja sessiliflora Pursh, Am. Sept. 738. 1814.

Perennial, cinereous-pubescent all over; stems stout, simple, or branched from near the base, 6'-15' high, densely leafy. Leaves sessile, 1'-2' long, the lowest commonly linear, obtuse and entire, the others laciniate into narrow, entire or cleft segments; bracts green, similar to the upper leaves, shorter than the sessile flowers; calyx deeper cleft on the lower side than on the upper, its lobes linear-lanceolate, acute; corolla yellowish, 1½' long, the upper lip about twice as long as the lower, the lobes of the latter linear; capsule oblong-lanceolate, acute, 6"-8" long.

On dry prairies, Illinois to Manitoba, Saskatchewan, Nebraska, Wyoming and Texas. May-July.



Catalpa bignonioides Walt.
Catalpa. Indian or Smoking Bean.

Candle-tree. Bean-tree.

Bignonia Catalpa L. Sp. Pl. 622. 1753.
Catalpa bignonioides Walt. Fl. Car. 64. 1788.
Catalpa Catalpa Karst. Deutsch. Fl. 927. 1880-83.

A tree, with thin flaky bark, reaching a maximum height of about 60° and a trunk diameter of 4°, the branches spreading. Leaves strong-scented, broadly ovate, entire, or 3-lobed, acute or acuminate at the apex, densely pubescent beneath, becoming glabrous above, obtuse at the base, 6'-12' long, the lobes, when present, acuminate; petioles stout, nearly as long as the blade; flowers white, numerous, mottled with yellow and purple within, 1'-1½' long, in large terminal erect panicles; capsules 6'-18' long, 4"-7" thick, thin-walled, drooping, the partition narrow.

In woods in the Gulf States. Escaped from cultivation northward as far as Pennsylvania and southern New York. Wood brown, soft, weak, durable in contact

with the soil. Weight per cubic foot 28 lbs. June-July. Cigar-tree. Indian cigar-tree. Catawba.

Centaurium calycosum (Buckley) Fernald. Buckley's Centaury.

Erythraea calycosa Buckley, Proc. Acad. Phil. 1862: 7. 1863.

Centaurium calycosum Fernald, Rhodora 10: 54. 1908.

Annual, corymbosely branched or sometimes simple, 2° high or less, the branches ascending or spreading. Leaves oblong to spatulate or linear, ½'-1½' long, acute, sessile; pedicels as long as the calyx or longer; calyx 4"-5" long, its lobes narrowly linear; corolla pink, its tube a little longer than the calyx, its oval or oblong obtuse lobes nearly as long as the tube.

In wet or moist soil, Missouri to Texas, Mexico and New Mexico. April-June.



Centaurium erythraea Rafn

Lesser or European Centaury. Bitter-herb.
Bloodwort.

Gentiana Centaurium L. Sp. Pl. 229. 1753.
Erythraea Centaurium Pers. Syn. 1: 283. 1805.
C. Centaurium W. F. Wight, Contr. Nat. Herb. 11: 449. 1906.

Annual, glabrous, erect, usually branched, 6'-15' high. Leaves oblong, apex obtuse, the base narrowed; the lower forming a basal tuft, 1'-2½' long, 3"-6" wide; stem leaves smaller, distant, rounded at the sessile or slightly clasping base; flowers numerous, 6"-8" long, nearly sessile, in compound terminal mostly dense bracteolate cymes; corolla-lobes obtuse, 2½"-3" long, about as long as the calyx-segments and one-third to one-half as long as the corolla-tube; stigmas oval.

In waste places, Nova Scotia and Quebec to Massachusetts, Illinois and Michigan. Naturalized from Europe. Earth-gall.



Sanctuary. June-Sept.

Centaurium exaltatum (Griseb.) W. F. Wight.
Tall or Western Centaury.

Cicendia exaltata Griseb. in Hook. Fl. Bor. Am. 2: 69, pl. 157. 1834.

Erythraea Douglasii A. Gray, Bot. Cal. 1: 480. 1876.

Erythraea exaltata Coville, Contr. Nat. Herb. 4: 150. 1893.

C. exaltatum W. F. Wight, Contr. Nat. Herb. 11: 449. 1906.

Annual, erect, glabrous, branched, 6'-18' high, the branches few, erect, slender. Leaves oblong or linear-oblong, sessile, mostly acute at both ends, 5"-10" long, distant, the basal not tufted; flowers few, terminal and axillary, all slender-pedicelled, 6"-8" long; tube of the corolla about one-third longer than the calyx-segments, the lobes oblong, obtuse, 1½"-2" long.

In sandy soil, western Nebraska to Wyoming, Washington, Arizona and California. May-Sept.



Centaurium pulchellum (Sw.) Druce. Branching Centaury.



Gentiana pulchella Sw. Act. Holm. 1783: 84. f. 8, 9. 1783.
Gentiana ramosissima Vill. Hist. Pl. Dauph. 2: 530. 1787.
Erythraea ramosissima Pers. Syn. 1: 283. 1805.
Erythraea pulchella Fries, Novit. 74. 1828.
C. pulchellum Druce, Fl. Oxf. 342. 1897.

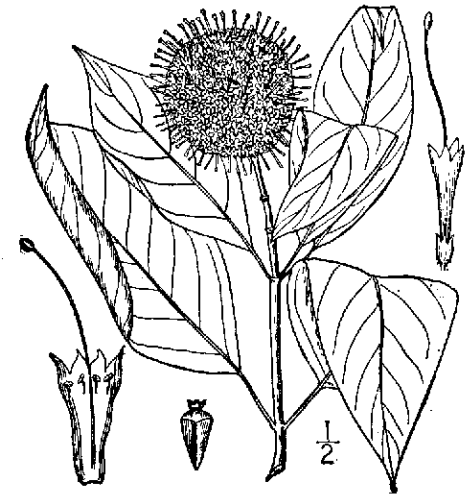
Annual, glabrous, much branched, 3'-8' high. Leaves oval, ovate or lanceolate, the lower mostly obtuse, 3''-8'' long, the upper usually acutish or acute and smaller; no basal tuft of leaves; flowers pink, cymose-paniculate, all or nearly all of them short-pedicelled, 5''-6'' long; tube of the corolla 1½-2 times longer than the calyx-segments, its lobes oblong, obtuse, 1½''-2'' long; stigma oval; anthers oblong.

In fields and waste places, southern New York to Pennsylvania, Illinois and Maryland; also in the West Indies. Naturalized from Europe. June-Sept.

Cephalanthus occidentalis L. Button-bush. Button-tree. Honey-balls. Globe-flower.

Cephalanthus occidentalis L. Sp. Pl. 95. 1753.
 A shrub 3°-12° high, or sometimes a tree, up to 20° high, with opposite or verticillate leaves and branches, glabrous, or somewhat pubescent. Leaves petioled, ovate or oval, entire, acuminate or acute at the apex, rounded or narrowed at the base, 3'-6' long, 1'-2½' wide; peduncles 1'-3' long; heads globose, about 1' in diameter, the receptacle pubescent; flowers sessile, white, 4''-6'' long; style very slender, about twice the length of the corolla; calyx-tube prolonged beyond the ovary.

In swamps, and low grounds, New Brunswick to western Ontario and Wisconsin, Florida, Texas, Arizona and California. Pond dogwood. Button-wood shrub. Box. Pin-ball. Little snowball. Button- or crane willow. Swamp-wood. River- or crouper-bush. June-Sept.

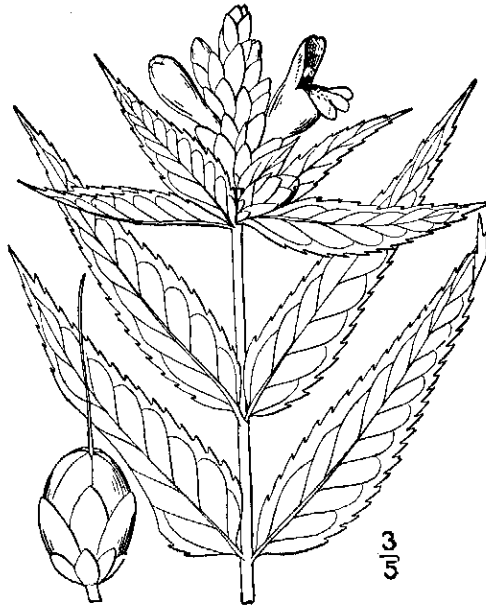


Chelone glabra L. Snake-head. Turtle-head.

Chelone glabra L. Sp. Pl. 611. 1753.

Stem slender, erect, obtusely 4-sided, simple or sometimes branched, strict, 1°-3° high, the branches erect. Leaves linear-lanceolate to ovate-lanceolate, sharply serrate with low appressed teeth, acuminate at the apex, narrowed at the base, short-petioled, 3'-6' long, ½'-1¼' wide, the principal veins about 10 on each side of the midvein; flowers white or faintly pink, about 1' long; bracts glabrous, not ciliolate; calyx-segments ovate-oblong, obtuse; capsule ovoid, obtuse, about ½' high, twice as long as the calyx.

In swamps and along streams, Newfoundland to Florida, Manitoba, Alabama and Kansas. Ascends to 3000 ft. in the Adirondacks. Shell-flower. Cod-head. Bitter-herb. Balmomy. Salt-rheum weed. Turtle-bloom. Fish-mouth. Lower leaves sometimes broadly oval. July-Sept.

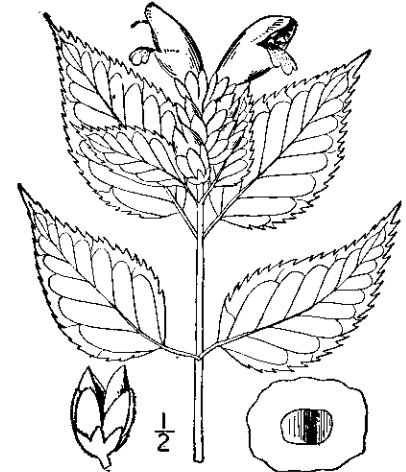


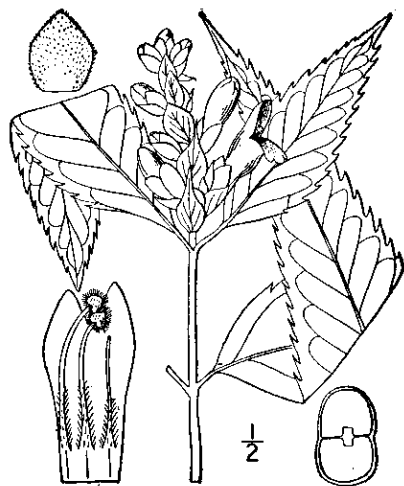
Chelone Lyoni Pursh. Lyon's Turtle-head.

Chelone Lyoni Pursh, Fl. Am. Sept. 737. 1814.

Stem slender, erect or nearly so, simple or branched, 1°-3° high. Leaves ovate, acuminate at the apex, rounded, truncate or subcordate at the base; 3'-7' long, 1'-4' wide, usually slender-petioled, sharply serrate with divergent teeth, the principal veins 8-10 on each side; flowers red or rose-purple, about 1' long; bracts and calyx-segments ciliolate and puberulent.

In swamps and wet thickets, mountains of Virginia, North Carolina and Tennessee to Georgia. July-Sept.





Chelone obliqua L. Red Turtle-head.

Chelone obliqua L. Syst. Ed. 11, no. 4. 1767.

Stem slender, ascending, 1°-2° high, usually branched, the branches spreading or ascending. Leaves oblong, or broadly lanceolate, acuminate at the apex, mostly narrowed at the base, petioled, sharply serrate with somewhat spreading teeth, or lacinate, 2'-6' long, 1/2'-2 1/2' wide; petioles 2''-6'' long; principal veins about 10 on each side; flowers red or rose-purple, about 1' long; bracts and calyx-segments ciliate and usually puberulent; capsule similar to that of the preceding species.

In wet thickets and along streams, Virginia to Illinois, south to Florida. July-Sept.

Cichorium Intybus L. Chicory. Wild Succory.
Blue Sailors. Bunk

Cichorium Intybus L. Sp. Pl. 813. 1753.
Cichorium Intybus divaricatum DC. Prodr. 7: 84. 1838.

Perennial from a long deep tap-root; stems slightly hispid, stiff, much branched, 1°-3° high. Basal leaves spreading, runcinate-pinnatifid, dentate or lobed, spatulate, 3'-6' long, narrowed into long petioles; upper leaves much smaller, lanceolate or oblong, lobed or entire, clasping and auricled at the base; heads numerous, 1'-1 1/2' broad, 1-4 together in sessile clusters on the nearly naked or bracted branches, or sometimes peduncled; inner bracts of the involucre about 8; flowers blue, or sometimes white.

Roadsides, fields and waste places, Nova Scotia to Minnesota, Washington, North Carolina, Kansas, Colorado and California. Bermuda. The ground-up root is used as a substitute or adulterant for coffee. Heads usually closed by noon. The flowers sometimes bear supplementary rays. Blue daisy or dandelion. Coffee-weed. Bachelor's-buttons. Consists of several races. July-Oct.

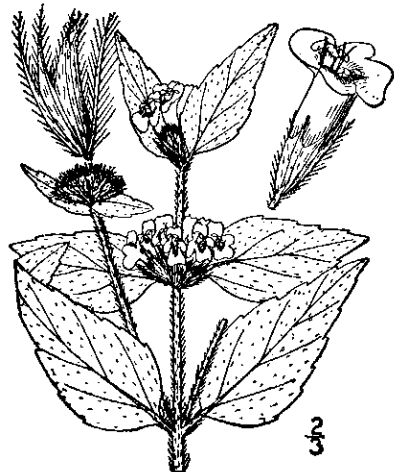


Clinopodium vulgare L. Field or Wild Basil. Basil-weed.

Clinopodium vulgare L. Sp. Pl. 587. 1753.
Melissa Clinopodium Benth. Lab. Gen. & Sp. 393. 1834.
Calamintha Clinop. Benth. in DC. Prodr. 12: 233. 1848.

Perennial by short creeping stolons, hirsute; stem slender, erect from an ascending base, usually branched, sometimes simple, 1°-2° high. Leaves ovate or ovate-lanceolate, petioled, obtuse or acutish, entire, undulate or crenate-dentate, rounded, truncate or sometimes narrowed at the base, thin, 1'-2 1/2' long; flowers in dense axillary and terminal capitate clusters about 1' in diameter; bracts setaceous, hirsute-ciliate, usually as long as the calyx-tube; calyx pubescent, somewhat gibbous, the setaceous teeth of its lower lip rather longer than the broader ones of the upper; corolla purple, pink, or white, little exceeding the calyx-teeth.

In woods and thickets, Newfoundland to North Carolina, Tennessee, Minnesota and Manitoba, in the Rocky Mountains to New Mexico and Arizona. Ascends to 4000 ft. in Virginia. Also in Europe and Asia. Stone-basil. Bed's-foot. Field- or horse-thyme. Dog-mint. June-Oct.



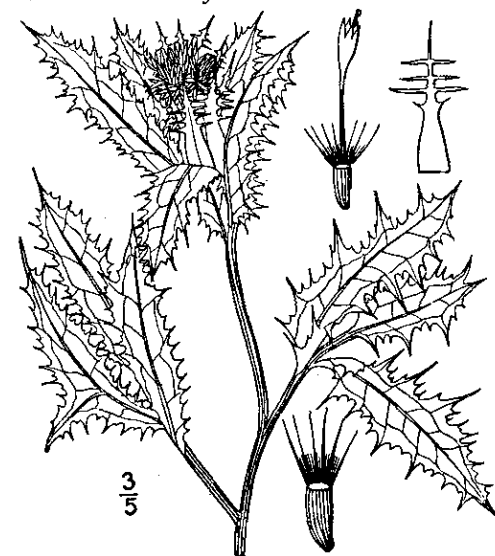
Cnicus benedictus L. Blessed Thistle. Our Lady's Thistle.

Cnicus benedictus L. Sp. Pl. 826. 1753.
Centaurea benedica L. Sp. Pl. Ed. 2, 1296. 1763.

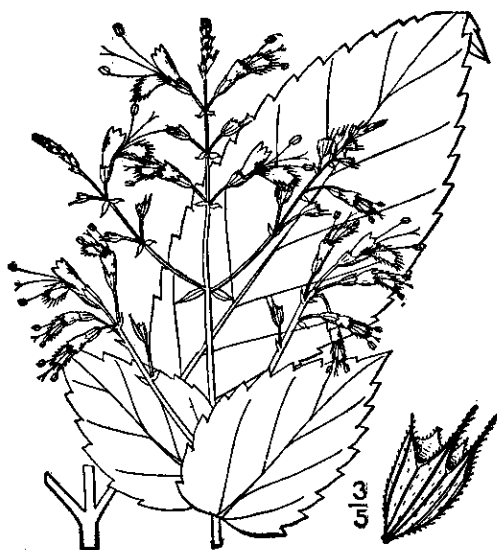
Hirsute or pubescent, much branched, seldom over 2 1/2° high. Leaves oblong-lanceolate in outline, rather thin, reticulate-veined, 3'-6' long, the upper clasping, the basal and lower ones narrowed at the base and petioled; heads about 2' broad, subtended by several large lanceolate to ovate-lanceolate leaves; bristles of the receptacle soft, long; outer awns of the pappus alternating with the inner.

In waste places, Nova Scotia and New Brunswick to Maryland, Pennsylvania, Alabama and Michigan, and on the Pacific Coast. Adventive from southern Europe. Holy- or bitter thistle. Sweet-sultan. St. Benedict's-thistle. May-Aug.

Echinops sphaerocephalus L., a tall spinose plant, with large clusters of 1-flowered involucre, the flowers white or bluish, occasionally escapes from cultivation into waste grounds. It is native of Europe.



Collinsonia canadensis L. Horse- or Ox-balm. Citronella. Rich-weed.



Collinsonia canadensis L. Sp. Pl. 28. 1753.

Stem stout, erect or ascending, branched, 2°-5° high, glabrous, or glandular-pubescent above. Leaves ovate or ovate-oblong, acuminate at the apex, narrowed, obtuse or sometimes cordate at the base, the lower slender-petioled, 6'-10' long, the upper nearly sessile, much smaller, all coarsely dentate; racemes numerous, in terminal panicles sometimes 1° long; pedicels ascending, 3'-6" long in fruit, subulate-bracteolate at the base; flowers lemon-scented; calyx-teeth subulate, those of the lower lip much longer than the upper; corolla light yellow, 5"-7" long; anther-bearing stamens 2, the upper pair rudimentary; fruiting calyx ribbed, 3"-4" long.

In moist woods, Quebec and Ontario to Wisconsin, south to Florida, Alabama and Arkansas. Root large, thick, woody. Knob- or horse-weed. Knob-grass or -root. Collinson's-flower. Rich leaf. Stone-root. July-Oct.



Convolvulus arvensis L. Small Bindweed.

Convolvulus arvensis L. Sp. Pl. 153. 1753.

Glabrous, or nearly so; stems trailing or decumbent, very slender, 1°-2½° long, simple or branched. Leaves slender-petioled, ovate or oblong, entire, obtusish and mucronulate or acutish at the apex, sagittate or somewhat hastate at the base, 1'-2' long, the basal lobes spreading, acute or obtuse; peduncles 1-4-flowered (commonly 2-flowered), shorter than the leaves, 1-3-bracted at the summit, usually with another bract on one of the pedicels; sepals oblong, obtuse, 1½" long; corolla pink or nearly white, 8"-12" broad; calyx not bracted at the base; stigmas linear.

In fields and waste places, Nova Scotia to Ontario, Montana, New Jersey, Pennsylvania, Kansas, New Mexico and California. Naturalized from Europe. Native also of Asia. May-Sept. Hedge-bells. Bearbind. Corn-lily. Withwind. Bellbine. Corn-bind. Lap-love. Sheep-bine.

Conopholis americana (L. f.) Wallr.
Squaw-root.

Orobanche americana L. f. Suppl. 88. 1767.
Conopholis americana Wallr. Orobanch. 78. 1825.

Plants 3'-10' high from a thickened base, light brown, usually clustered, covered all over with stiff imbricated scales. Upper scales lanceolate or ovate, acute, 6"-10" long, the lowest much shorter; flowers about ½' long, exceedingly numerous in the dense spike which is 6"-10" thick; corolla pale yellow, somewhat exceeding the calyx; anthers sagittate; capsule ovoid-globose, 4"-5" high.

In rich woods at bases of trees, Maine to Ontario, Michigan, Florida, Alabama and Tennessee. Cancer-root. Earth-club. Clap-wort. April-Aug.



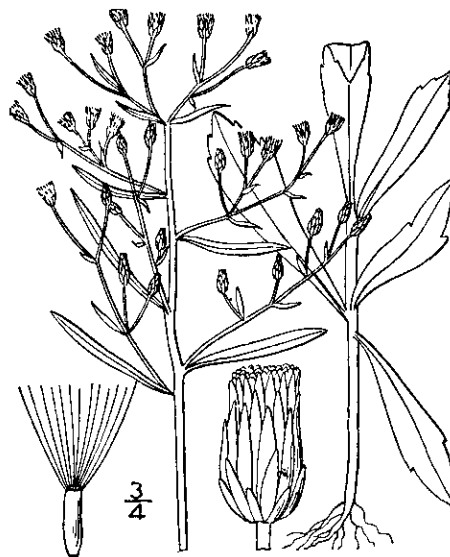
Conyza canadensis (L.) Cronq.
Horse-weed. Canada Fleabane.

Erigeron canadensis L. Sp. Pl. 863. 1753.

Leptilon canadense Britton, in Britt. & Brown, III.
Fl. 3: 391. 1898.

Stem hispid-pubescent or glabrate, 3'-10° high, the larger plants paniculately much branched. Leaves usually pubescent or ciliate, the basal and lower spatulate, petioled, incised, dentate or entire, 1'-4' long, obtuse or acutish, those of the stem linear and mainly entire; heads usually very numerous; about 2" broad; involucre campanulate, 1'-1½" high, its bracts linear, acute, glabrate, the outer shorter; rays numerous, white, shorter than the pappus and mostly shorter than their tubes.

In fields and waste places, a common weed throughout North America except the extreme north. Widely distributed as a weed in the Old World, the West Indies and South America. Butter-weed. Prideweed. Fireweed. Blood-staunch. Cow's-, mare's- or colt's-tail. Hogweed. Bitter-weed. June-Nov.



Conyza ramosissima Cronq.

Low Horse-weed. Purple Horse-weed.

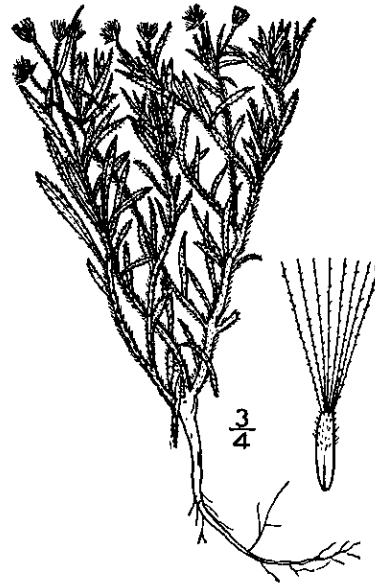
Dwarf Fleabane.

Erigeron divaricatus Michx. Fl. Bor. Am. 2: 123. 1803.

Leptilon divaricatum Raf. Am. Month. Mag. 2: 268. 1818.

Stem diffusely much branched, 3'-12' high, pubescent or hirsute. Leaves all linear or subulate, entire, 4"-12" long, about 1/4" wide, the uppermost minute; heads numerous, about 2" broad; involucre campanulate, 1" high, its bracts linear, acute, pubescent, the outer shorter; rays purplish, shorter than their tubes.

In sandy soil, especially along rivers, Indiana to Minnesota, Tennessee, Louisiana, Nebraska and Texas. June-Oct.



Crepis runcinata (James) T. & G.
Naked Stemmed Hawksbeard.

Hieracium runcinatum James in Long's Exp. 1: 453. 1823.

Crepis runcinata T. & G. Fl. N. A. 2: 487. 1843.

Crepis perplexans Rydb. Bull. Torr. Club 32: 134. 1906.

Perennial, similar to the preceding species, but not glaucous or scarcely so, often pubescent below; stem leafless or with 1 or 2 small leaves, 1°-3' high. Basal leaves spatulate, obovate, or oblong, obtuse or acute, entire, repand, dentate, or rarely runcinate-pinnatifid, 2'-6' long, 1/2'-1 1/2' wide; heads several, long-peduncled, nearly 1' broad; peduncles glabrous or glandular-pubescent; involucre campanulate, pubescent or glandular, its principal bracts linear-lanceolate, acute, outer ones short, lanceolate, appressed; achenes linear-oblong, somewhat narrowed above, 10-ribbed.

In moist soil, Iowa to North Dakota, Manitoba, Alberta, Utah and Montana. June-July.

Crepis riparia A. Nelson, with broadly obovate basal leaves and larger flowers, is recorded from Nebraska.



Cryptantha crassisepala (T. & G.) Greene. Thick-sepaed Cryptanthe.

Eritrichium crassisepalum T. & G. Pac. R. R.

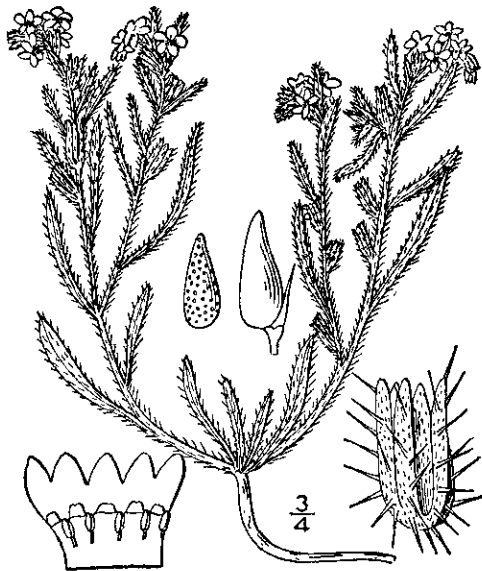
Rep. 2: 171. 1854.

Krynitzkia crassisepala A. Gray, Proc. Am. Acad. 20: 268. 1885.

Cryptanthe crassisepala Greene, Pittonia 1: 112. 1887.

Densely hispid, at length much branched, 3'-6' high. Leaves linear, or linear-spatulate, 1/2'-1 1/2' long, sessile, or the lower narrowed into petioles; spikes very densely flowered; flowers about 2" broad, sessile, bracteolate, the bractlets slightly longer than the calyx; fruiting calyx 3" long, closing over the fruit, its segments linear, obtusish, their midribs much thickened; fruit of 3 finely muciculate nutlets, and 1 larger smooth and shining nutlet about 1" long, attached to the receptacle from the base to near the middle.

In dry soil, Saskatchewan to Nebraska, Kansas, Texas and New Mexico. Rosita. June-Aug.



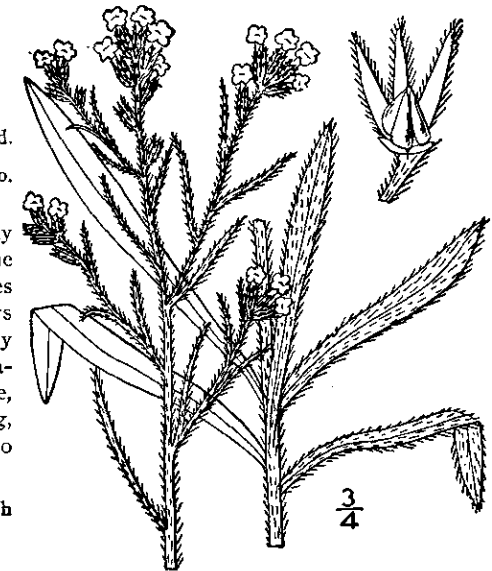
Cryptantha Fendleri (A. Gray)
Greene. Fendler's Cryptanthe.

Krynitzkia Fendleri A. Gray, Proc. Am. Acad. 20: 268. 1885.

Cryptanthe Fendleri Greene, Pittonia 1: 120. 1887.

Erect, hispid; stem slender, paniculately branched, 6'-15' high. Leaves linear, or the lowest linear-spatulate, 1'-2 1/2' long; spikes slender, bracteolate only at the base; flowers sessile, 1"-2" broad; fruiting calyx nearly closed, its segments linear, leaf-like, herbaceous, about 2" long; nutlets 4, all alike, brown, smooth and shining, less than 1" long, attached to the receptacle from the base to about the middle.

In dry soil, Saskatchewan to Washington, south to Nebraska and Arizona. June-Aug.



Cucurbita foetidissima Kunth

Missouri Gourd. Calabazilla. Wild Pumpkin.

Cucurbita foetidissima H.B.K. Nov. Gen. 2: 123. 1817.
Cucumis perennis James in Long's Exp. 2: 20. 1823.
Cucurbita perennis A. Gray, Bost. Journ. Nat. Hist. 6: 193. 1850.

Stem stout, rough, hirsute, trailing to a length of 15°-25°. Root large, carrot-shaped. Petioles stout, 3'-8' long, very rough; leaves ovate-triangular, thick and somewhat fleshy, cordate or truncate at the base, acute at the apex, 4'-12' long, usually slightly 3-5-lobed, denticulate, rough above, canescent beneath; peduncles 1'-2' long; flowers mostly solitary; corolla 2½'-4' long; pepo globose or globose-ovoid, 2'-3' in diameter, smooth, its pulp fibrous and bitter.

Dry soil, Missouri and Nebraska to Texas and Mexico, west to southern California. May-Sept.

Pumpkins, Squashes, Cucumbers and Melons, cultivated in many races belong to this genus. Gourds belong to *Cucurbita Lagenaria* L., the type of the genus *Cucurbita*.



Cunila origanoides (L.) Britton. Stone Mint. Sweet Horse-Mint. American Dittany. Wild Basil.

Satureia origanoides L. Sp. Pl. 568. 1753.
Cunila Mariana L. Syst. Ed. 10, 1359. 1759.
Hedyosmos origanoides Kuntze, Rev. Gen. Pl. 520. 1891.
Cunila origanoides Britton, Mem. Torr. Club 5: 278. 1894.

Plant very aromatic; stem slender, stiff, branched, glabrous, or pubescent at the nodes, erect, 8'-20' high, the branches ascending. Leaves ovate, sessile or very short-petioled, acute at the apex, sharply serrate, rounded, truncate or subcordate at the base, ½'-1½' long, densely punctate; flowers nearly ½' long, numerous in terminal loose cymose clusters; corolla purple-pink, one-half as long as the stamens; posterior pair of stamens usually rudimentary.

In dry woods and thickets, southern New York to Florida, west to Ohio, Missouri, Arkansas and Texas. Aug.-Sept.

Cuscuta Gronovii Willd. Gronovius' Dodder. Love-vine.

C. Gronovii Willd.; R. & S. Syst. 6: 205. 1820.
Cuscuta vulgivaga Engelm. Am. Journ. Sci. 43: 338. pl. 6. f. 12-16. 1842.

Stems yellow to orange, slender, high-climbing; flowers usually short-pedicelled, numerous in dense cymes. Calyx not bracted, its lobes ovate, obtuse, shorter than the corolla-tube; corolla campanulate, about 1½" long, the lobes ovate, obtuse, rounded, spreading, nearly as long as the tube, the scales narrow, equalling or longer than the tube, thickly fringed about the summit and sparingly along the sides with long slender processes; styles slender, not as long as the ovary; stigmas capitate; capsule globose, short-pointed or pointless, 1½" in diameter, enveloped or capped by the withering deciduous corolla.

On herbs and low shrubs, Nova Scotia to Manitoba, Montana, Florida and Texas. Scald-weed. Devil's-gut July-Aug.



Cuscuta pentagona var. pentagona Engelm. Field Dodder. Love-vine.

Cuscuta arvensis Beyrich; Hook. Fl. Bor. Am. 2: 77. As synonym. 1834.

Plant pale yellow; stems filiform, the flowers nearly sessile in small clusters. Calyx broad, 5-lobed, the lobes broad, obtuse; corolla nearly campanulate, 5-lobed, the lobes acute or acuminate, as long as the tube, their tips reflexed, its scales large, ovate, as long as or longer than the tube, densely fringed all around with short irregular processes; stamens not exerted; style shorter than the ovary; stigmas capitate; capsule depressed-globose, indehiscent, the withering corolla and usually the stamens persistent at its base.

On various herbs and low shrubs, Massachusetts to Manitoba, Florida, Texas, Mexico and California. Also in the West Indies and South America. July-Aug.



Cynoglossum officinale L. Hound's-tongue. Gipsy Flower.



Cynoglossum officinale L. Sp. Pl. 134. 1753.

Biennial, pubescent; stem erect, leafy to the top, stout, usually branched, 1½-3° high. Basal and lower leaves oblong or oblong-lanceolate, slender-petioled, sometimes obtuse, 6'-12' long, 1'-3' wide; upper leaves lanceolate, acute or acuminate, sessile, or the uppermost clasping; racemes several or numerous, bractless or sparingly bracted, simple or branched, much elongated in fruit; pedicels 3''-6'' long; calyx-segments ovate-lanceolate, acute; corolla reddish-purple or rarely white, about 4'' broad; fruit pyramidal, about 5'' broad, each of the 4 nutlets forming a side of the pyramid, flat on their upper faces, margined, splitting away at maturity, but hanging attached to portions of the subulate style.

In fields and waste places, Quebec and Ontario to Manitoba, South Carolina, Alabama, Kansas and Montana. Often a troublesome weed. Naturalized from Europe. Native also of Asia. Called also dog's-tongue, rose

noble. Canadian or dog-bur. Sheep-lice. Tory-weed. Wood-mat. May-Sept.

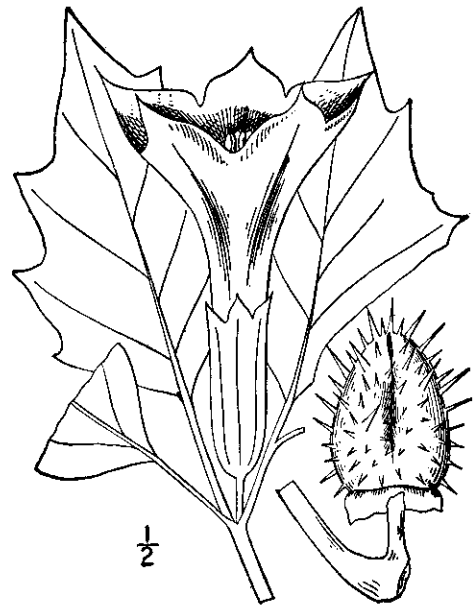


Datura Metel L. Entire-leaved Thorn-Apple.

Datura Metel L. Sp. Pl. 179. 1753.

Annual, densely and finely glandular-pubescent; stem stout, much branched, 4°-8° high. Leaves broadly ovate, acute at the apex, inequilateral, rounded or subcordate at the base, 4'-10' long, entire or merely undulate; petioles 1'-3' long; flowers white, 6'-7' high, the limb 3'-4' broad; calyx tubular, about one-half as long as the corolla; capsule globose or ovoid-globose, obtuse, prickly and pubescent, 1'-1½' in diameter.

In waste places, escaped from gardens, Rhode Island to Florida. Native of tropical America. July-Sept.



Datura Stramonium L. Stramonium. Jamestown or Jimson-weed. Thorn-Apple.

Datura Stramonium L. Sp. Pl. 179. 1753.

Datura Tatula L. Sp. Pl. Ed. 2, 256. 1762.

Annual, glabrous or the young parts sparingly pubescent; stem green to purple, stout, 1°-5° high. Leaves thin, ovate in outline, acute or acuminate at the apex, mostly narrowed at the base, 3'-8' long, irregularly sinuate-lobed, the lobes acute; petioles 1'-4' long; flowers white or violet, about 4' high, the limb 1½'-2' broad; calyx prismatic, less than one-half the length of the corolla; capsule ovoid, densely prickly, about 2' high, the lower prickles shorter than the upper or all about equal.

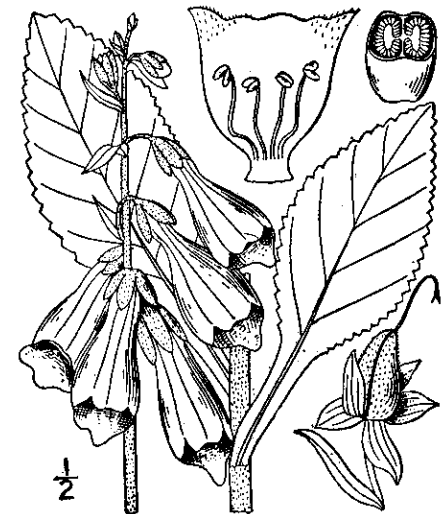
In fields and waste places, Nova Scotia to Florida, west to Minnesota and Texas. Naturalized from tropical regions. June-Sept. Peru-, mad- or devil's-apple. Devil's-trumpet. Jamestown-lily. Fire-weed. Dewtry. Races differ in color of flowers and in length of the prickles on the pods.

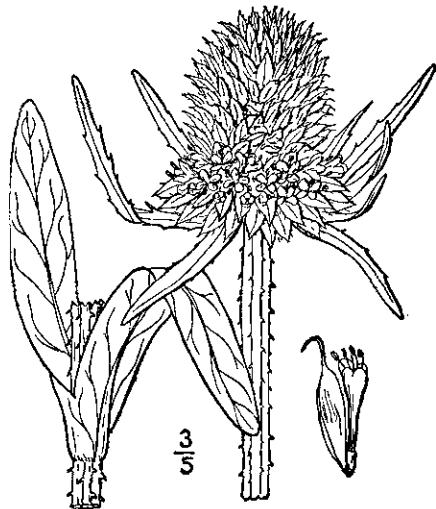
Digitalis purpurea L. Purple Fox-glove. Thimbles. Fairy Cap.

Digitalis purpurea L. Sp. Pl. 621. 1753.

Usually biennial, pubescent; stem stout, erect, 2°-5° high. Basal and lower leaves ovate or ovate-lanceolate, 6'-10' long, slender-petioled, acute at the apex, narrowed at the base, dentate; upper leaves similar, smaller, sessile; racemes 1' long or more, dense, 1-sided; flowers purple to white, 1½'-2' long, drooping; upper calyx-segment narrower than the four other foliaceous ones; corolla spotted within.

Cape Breton Island and New York, naturalized from Europe, sparingly escaped from cultivation; also from Washington to California. June-Aug. Among some 60 English names are folk's-glove [by corruption fox-glove], i. e., fairy's-glove, fairy-thimbles, -fingers, -weed, fairy-bells, pop-dock, or -glove. Rabbit's-flower. Cottagers. Lion's-mouth. Scotch mercury. Throatwort. Lady-fingers, -glove, -thimble. Dog's-finger. Witches'-thimbles.





Dipsacus laciniatus L., with pinnatifid or bipinnatifid ciliate leaves, those of the involucre spreading, has been found at Albany, New York. Fugitive or adventive from Europe.

***Dipsacus fullonum* L.** Fuller's or Draper's Teasel. Fuller's Thistle.

Dipsacus fullonum L. Sp. Pl. 97. 1753.
Dipsacus fullonum var. *sativus* L. Sp. Pl. Ed. 2, 1677. 1763.

Similar to the preceding species. Leaves of the involucre, or some of them, shorter than the heads, spreading or at length reflexed; scales of the receptacle with hooked tips, about equalling the flowers, which are usually paler than in *D. sylvestris*.

About wool mills, Eastern and Middle States, rare. Fugitive from Europe, and perhaps nowhere permanently established within our range. Other English names are clothiers' brush, Venus'-bath or -cup. Generally regarded as probably a cultivated variety of the preceding species, as it is not found wild, except as an evident escape.

***Dracocephalum moldavica* L.**

Moldavian Dragon-head or Balm.

Dracocephalum Moldavica L. Sp. Pl. 595. 1753.

Annual, puberulent; stem erect, usually widely branched, 1°-2½° high. Leaves oblong or linear-oblong, dentate or somewhat incised, obtuse at the apex, usually narrowed at the base, 1'-2' long, 2"-6" wide; clusters loose, few-flowered, commonly numerous, mostly axillary; bracts narrowly oblong, usually shorter than the calyx, deeply pectinate with aristate teeth; pedicels 2"-4" long; calyx slightly curved, the 2 lower teeth somewhat shorter than the 3 broader equal upper ones; corolla 2-3 times as long as the calyx.

In a cañon near Spring View, Nebr. Also in northern Mexico. Introduced from central Europe. June-Aug.



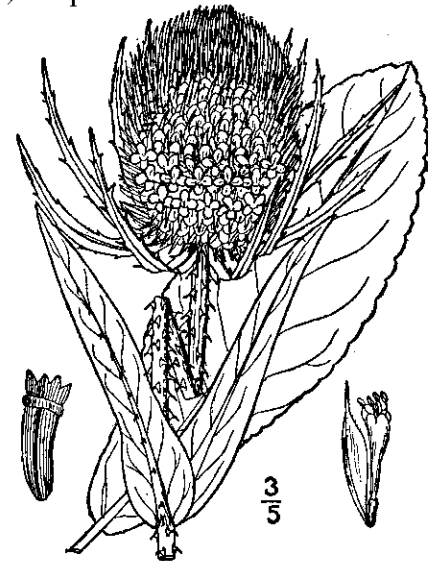
***Dipsacus fullonum* ssp. *syvestris* (Huds.) Clapham**

Wild, Common or Card Teasel.

Dipsacus fullonum L. Sp. Pl. 97. In part. 1753.
Dipsacus sylvestris Huds. Fl. Angl. 49. 1762.

Biennial, stout, with numerous short prickles on the stem, branches, peduncles, midribs of the leaves and involucre, otherwise glabrous or nearly so, 3°-6° high. Leaves sessile, or the upper ones connate-perfoliate, lanceolate or oblong, the upper acuminate and generally entire, the lower obtuse or obtusish, crenate or sometimes pinnatifid at the base, often 1° long; heads at first ovoid, becoming cylindric, at length 3'-4' long; flowers lilac, 4"-6" long; leaves of the involucre linear, curved upward, as long as the head or longer; scales of the receptacle ovate, tipped with a long straight subulate barbed awn, usually exceeding the flowers.

In waste places, Maine and Ontario to North Carolina, west to Michigan. Naturalized from Europe and native also of Asia. July-Sept. Other English names are Venus'-bath or -cup; wood- or church-brooms; shepherds'-staff; card- or water-thistle; gipsy-combs; hutton-weed. Indian's-thistle. Prickly-back. Adam's-flannel.



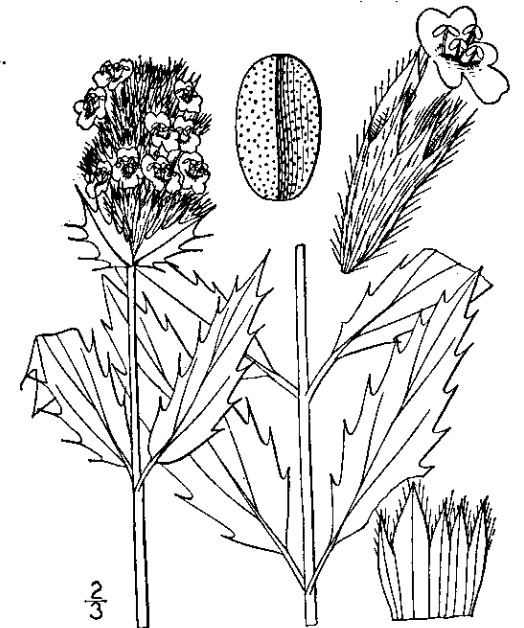
***Dracocephalum parviflorum* Nutt.**

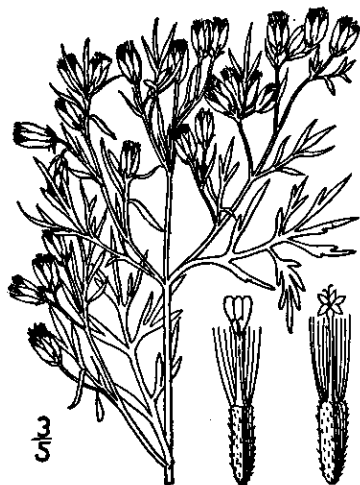
American Dragon-head.

Dracocephalum parviflorum Nutt. Gen. 2: 35. 1818.

Annual or biennial, somewhat pubescent, or glabrous; stem rather stout, usually branched, 6'-2½° high. Leaves lanceolate, ovate, or oblong, slender-petioled, serrate, or the lower incised, acute or obtuse at the apex, rounded or narrowed at the base, thin, 1'-3' long; clusters dense, many-flowered, crowded in dense terminal spikes, and sometimes also in the upper axils; bracts ovate to oblong, pectinate with awn-pointed teeth, shorter than or equalling the calyx; pedicels 1"-2" long; upper tooth of the calyx ovate-oblong, longer than the narrower lower and lateral ones, all acuminate; corolla light blue, scarcely longer than the calyx.

In dry gravelly or rocky soil, Quebec and Ontario to Alaska, New York, Iowa, Missouri and Arizona. May-Aug.



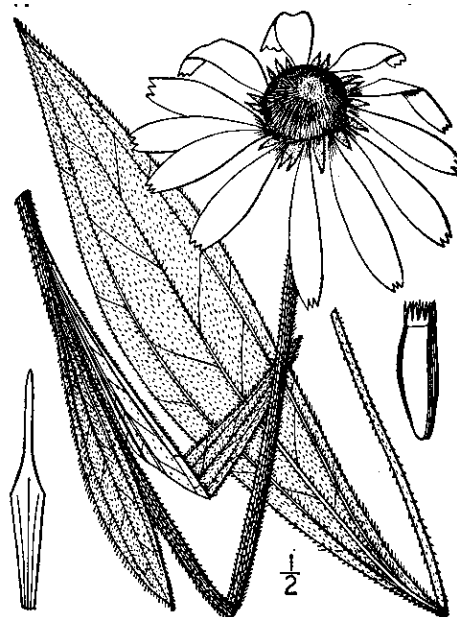


Dysodia papposa (Vent.) A.S. Hitchc.
Fetid Marigold. False Dog-fennel.

Tagetes papposa Vent. Hort. Cels. pl. 36. 1800.
Boebera chrysanthemoides Willd. Sp. Pl. 3: 2125. 1804.
Dysodia chrysanthemoides Lag. Gen. et Sp. Nov. 29. 1816.
D. papposa Hitchc. Trans. St. Louis Acad. 5: 503. 1891.
B. papposa Rydb.; Britton, Manual 1012. 1901.

Annual, very leafy, glabrous or finely pubescent, gland-dotted, much branched, 6'-18' high, the branches diffuse or erect. Leaves sessile, or short-petioled, 1'-1½' long, pinnately parted into linear or slightly spatulate, sharply serrate or incised segments; heads numerous, short-peduncled, 3"-5" broad; involucre campanulate, of 8-10 appressed, oblong, obtuse, green or purplish, glabrous or ciliate bracts, with several narrow shorter outer ones; rays few, not longer than the width of the disk; receptacle and achenes pubescent.

Along streams and roadsides, Ohio to Minnesota, Montana, Louisiana, Mexico and Arizona. Occasionally found as a weed in waste places in the Eastern and Middle States, and in Ontario. Prairie-dogweed. July-Oct.



Echinacea angustifolia DC. Narrow-leaved Purple Cone-flower.

Echinacea angustifolia DC. Prodr. 5: 554. 1836.
Brauneria angustifolia Heller, Muhlenbergia 1: 5. 1900.

Stem hispid or hirsute, slender, often simple, 1°-2° high. Leaves lanceolate, oblong-lanceolate, or linear-lanceolate, hirsute, acute and about equally narrowed at each end, strongly 3-nerved and sometimes with an additional pair of marginal less distinct nerves, entire, 3'-8' long, 4"-12" wide, the lower and basal ones slender-petioled, the upper short-petioled or sessile; heads and flowers similar to those of the preceding species, but the rays usually shorter, spreading.

In dry soil, especially on prairies, Minnesota to Saskatchewan, Nebraska and Texas. Confused with the following species in our first edition. June-Oct. Comb.

Echinacea pallida (Nutt.) Britton.
Pale Purple Cone-flower.

Rudbeckia pallida Nutt. Journ. Acad. Phila. 7: 77. 1834.
Brauneria pallida Britton, Mem. Torr. Club 5: 333. 1894.

Similar to the preceding species, but often taller, sometimes 3° high. Leaves elongated-lanceolate or linear-lanceolate, entire; rays narrow, linear, elongated, drooping, 1½'-3' long, 1½"-3" wide, rose-purple or nearly white.

In dry soil on prairies, Illinois to Michigan, Alabama and Texas. May-July.



Echinacea paradoxa (Norton) Britton. Bush's Cone-flower.

Brauneria atrorubens Boynton & Beadle, Biltmore Bot. Stud. 1: 11. 1901. Not *Rudbeckia atrorubens* Nutt.
Brauneria paradoxa Norton, Trans. Acad. St. Louis 12: 40. 1902.

Stem glabrous to somewhat hispid, 1°-2½° high. Leaves smooth or sparingly rough-hairy, lanceolate to linear-lanceolate, the lower ones petioled, sometimes 1° long, ½'-1' wide, 3-5-nerved, the upper smaller and nearly sessile; involucre about 1' high and broad, the disk-flowers brown; rays bright yellow, drooping or somewhat spreading, 1½'-2½' long.

Prairies and barren soil, Missouri to Texas. June.



Echinacea purpurea (L.) Moench.
Purple Cone-flower. Black Sampson.

Rudbeckia purpurea L. Sp. Pl. 907. 1753.

Echinacea purpurea Moench, Meth. 591. 1794.

Brauneria purpurea Britton, Mem. Torr. Club 5: 334. 1894.

Stem glabrous, or sparingly hispid, usually stout, 2°-5° high. Lower and basal leaves slender-petioled, ovate, mostly 5-nerved, acute or acuminate at the apex, abruptly narrowed or rarely cordate at the base, commonly sharply dentate, 3'-8' long, 1'-3' wide; petioles mostly winged at the summit; upper leaves lanceolate or ovate-lanceolate, 3-nerved, sessile or nearly so, often entire; rays 12-20, purple, crimson, or rarely pale, 1½'-3' long, spreading or drooping.

In moist, rich soil, Pennsylvania to Alabama, Georgia, Michigan, Kentucky, Louisiana and Arkansas. Called also Red sunflower. July-Oct.



Echium vulgare L. Viper's Bugloss. Blue-weed.

Echium vulgare L. Sp. Pl. 140. 1753.

Bristly-hairy, biennial; stem erect, at length much branched, 1°-2½° high. Leaves oblong, linear-oblong, or linear-lanceolate, obtuse or acute, entire, 2'-6' long, sessile, or the lower and basal ones narrowed into petioles; flower-buds pink; flowers bright blue, varying to violet purple, 8"-12" long, numerous in short 1-sided spikes, forming a narrow thyrsus; calyx-segments much shorter than the corolla; limb of the corolla oblique, the lobes very unequal.

In fields and waste places, Nova Scotia to North Carolina, Ontario and Nebraska. A troublesome weed in some sections of the North. Naturalized from Europe. Native also in Asia. June-July. Viper's-herb. Viper's-grass. Snake-flower. Blue thistle. Blue stem or cat's-tails. Blue devils. Adder's-wort.

Echinocystis lobata (Michx.) Torr. & Gray

Wild Balsam Apple. Mock Apple.

Momordica echinata Muhl. Trans. Am. Phil. Soc. 3: 180. Name only. 1793.

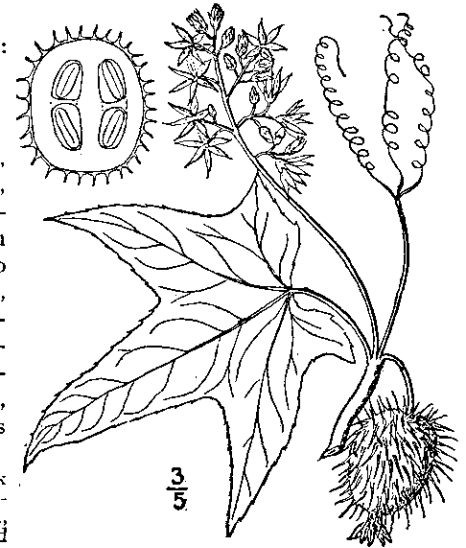
Sicyos lobata Michx. Fl. Bor. Am. 2: 217. 1803.

Echinocystis lobata T. & G. Fl. N. A. 1: 542. 1840.

Micranpeltis lobata Greene, Pittonia 2: 128. 1890.

Stem nearly glabrous, angular and grooved, branching, climbing to a height of 15°-25°, sometimes villous-pubescent at the nodes. Petioles 1'-3' long; leaves thin, roughish on both sides, deeply cordate at the base, 3-7-lobed to about the middle, the lobes triangular-lanceolate, acute or acuminate, the margins remotely serrulate; staminate flowers very numerous in narrow compound racemes; pistillate flowers solitary, or rarely 2 together; fruit ovoid, green, about 2' long, armed with slender spines; seeds flat.

Along rivers, and in waste places, New Brunswick to Ontario, Manitoba, Montana, Virginia, Pennsylvania, Kentucky, Kansas and Texas. Eastward, mostly occurring as an introduced plant. Wild cucumber. Creeper. Creeping Jenny. July-Sept.



Eclipta prostrata (L.) Yerba de tajo.

Verbesina alba L. Sp. Pl. 902. 1753.

Eclipta erecta L. Mant. 2: 286. 1771.

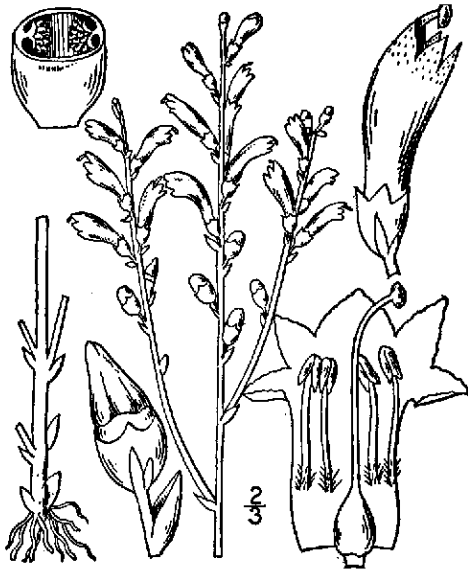
Eclipta procumbens Michx. Fl. Bor. Am. 2: 129. 1803.

Eclipta alba Hassk. Pl. Jav. Rar. 528. 1848.

Annual, rough with appressed pubescence, erect or diffuse, 6'-3° high. Leaves lanceolate, oblong-lanceolate or linear-lanceolate, acute or acuminate, denticulate or entire, narrowed to a sessile base, or the lower petioled, 1'-5' long, 2"-10" wide; heads commonly numerous, 3"-6" broad, nearly sessile, or slender-peduncled; rays short, nearly white; anthers brown; achenes 4-toothed, or at length truncate.

Along streams, and in waste places, Massachusetts to Illinois, Nebraska, Florida, Texas and Mexico. Naturalized from the south in its northeastern range and widely distributed in warm regions as a weed. July-Oct.





Epifagus virginiana (L.) W. Bart.

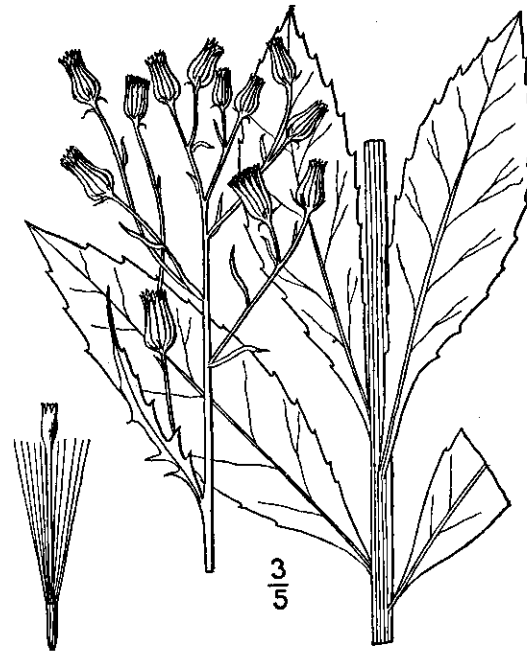
Beech-drops.

Orobanche virginiana L. Sp. Pl. 633. 1753.
Epifagus americana Nutt. Gen. 2: 60. 1818.
Epiphegus virginiana Bart. Comp. Fl. Phil. 2: 50. 1818.

Leptamnium virginianum Raf.; A. Gray, Syn. Fl. 2: Part 1, 314. 1878. As synonym.

Plant 6'-2° high from a thick scaly base, the roots brittle, fibrous. Stem paniculately branched, the branches straight, ascending; scales very few and small; corolla of the upper flowers 4"-5" long and 1" thick, striped with purple and white, the limb not at all spreading; stamens about as long as the corolla; style slightly exserted; lower flowers 1½" long, the corolla resembling the calyptra of a moss; capsule 3" high, somewhat oblique and compressed, many-seeded.

In beech woods, Nova Scotia and New Brunswick to Florida, west to Ontario, Michigan, Missouri and Louisiana. Cancer-root or -drops. Virginia brown-rape. Aug.-Oct.

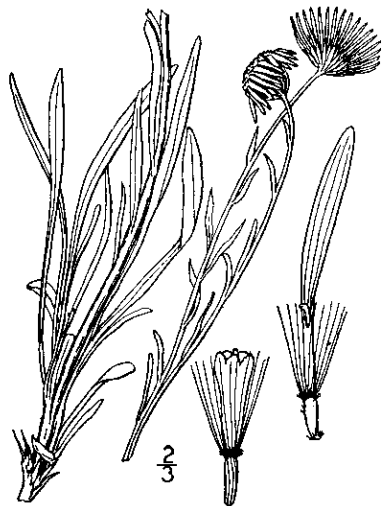


Erechites hieracifolia (L.) Raf.
Fire-weed.

Senecio hieracifolius L. Sp. Pl. 866. 1753.
E. prealta Raf. Fl. Ludov. 65. 1817.
Erechites hieracifolia Raf. DC. Prodr. 6: 294. 1837.

Annual, glabrous, or somewhat hirsute; stem striate, succulent, usually branched, 1°-8° high. Leaves thin, lanceolate or ovate-lanceolate, dentate and often deeply incised, 2'-8' long, the upper sessile or auriculate-clasping, mostly acuminate, the lower usually narrowed into petioles; heads 6"-10" long, about 3" in diameter, the involucre conspicuously swollen at the base before flowering, its bracts numerous, striate, green, with narrow scarious margins; pappus bright white.

In woodlands, thickets and waste places, very abundant after fires, Newfoundland to Florida, Ontario, Saskatchewan, Nebraska and Texas. Also in Mexico, the West Indies and South America. Pilewort. July-Sept.



Erigeron canus A. Gray. Hoary Erigeron.

Erigeron canus A. Gray, Mem. Am. Acad. (II) 4: 67. 1849.

Perennial by a deep woody root, resembling the preceding species; stems slender, erect, tufted, appressed-canescens, 6'-10' high, simple, or branched above. Leaves narrow, entire, canescent, the basal and lower ones narrowly spatulate, petioled, 2'-4' long, the upper linear, sessile, acute, gradually smaller; heads solitary, or 2-4, peduncled, 6"-8" broad; involucre hemispheric, its bracts linear, acute, densely canescent; rays 40-50, purple or white, 2"-3" long; achenes glabrous, 8-10-nerved; pappus double, the outer row of bristles rather conspicuous.

In dry soil, South Dakota to western Nebraska, Wyoming, Colorado and New Mexico. June-Aug.

Erigeron divergens T. & G. Spreading Fleabane.

Erigeron divergens T. & G. Fl. N. A. 2: 175. 1841.

Annual or biennial, diffusely branched, 6'-15' high, densely cinereous-pubescent or hirsute. Basal and lower leaves spatulate or oblanceolate, acute or obtuse, mostly petioled, entire, dentate or lobed, 1'-2' long, 2"-5" wide, the upper sessile, linear or narrowly spatulate, usually acute, gradually smaller; heads slender-peduncled, 8"-12" broad, usually numerous; involucre hemispheric, about 2" high, its bracts linear, acute, hirsute or canescent; rays about 100, purplish, violet or nearly white, 2"-4" long; pappus double, the shorter outer row of bristles subulate.

In moist soil, Montana to Nebraska, Texas, Mexico, Washington and California. April-Sept.





Erigeron flagellaris A. Gray. Running Fleabane.

Erigeron flagellaris A. Gray, Mem. Am. Acad. (II) 4: 68. 1849.

Appressed-pubescent, sometimes densely so, perennial by decumbent rooting stems or stolons; root slender; stem slender, branched, the branches elongated. Leaves entire, the basal and lower ones spatulate or oblong, obtuse or acute, 1'-2' long, narrowed into long petioles, the upper sessile, linear or linear-spatulate, much smaller; peduncles solitary, elongated; heads about 1' broad and 1/4' high; involucre hemispheric, its narrow bracts pubescent; rays very numerous, white to pink; pappus double, the outer series of subulate bristles.

In moist soil, South Dakota to Wyoming, Utah, western Texas and New Mexico. May-July.



Erigeron philadelphicus L. Philadelphia Fleabane. Skevish.

Erigeron philadelphicus L. Sp. Pl. 863. 1753.

Perennial by stolons and offsets, soft-pubescent or sometimes nearly glabrous; stems slender, mostly branched above, 1°-3° high. Basal and lower leaves spatulate or obovate, obtuse, dentate, 1'-3' long, narrowed into short petioles; upper stem leaves clasping and often cordate at the base, obtuse or acute, dentate or entire; heads several or numerous, corymbose-paniculate, 5"-12" broad, slender-peduncled; peduncles thickened at the summit; involucre depressed-hemispheric, its bracts linear, usually scarious-margined; rays 100-150, 2"-4" long, light rose-purple to pinkish; pappus simple; achenes puberulent.

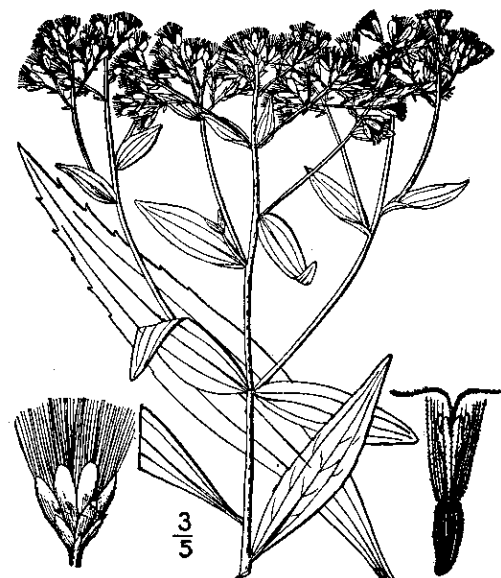
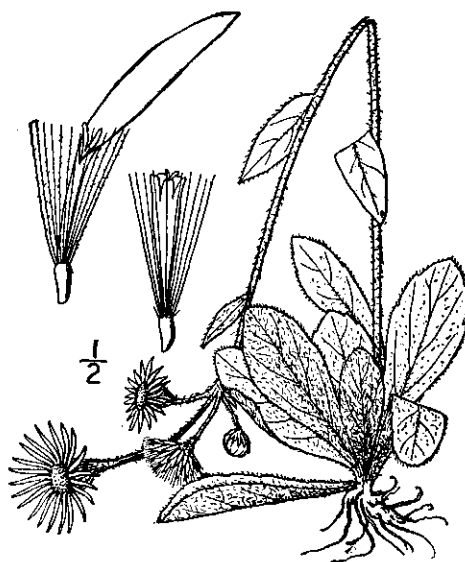
In fields and woods, Labrador to British Columbia, Florida and California, but locally rare. Races differ in leaf-form and pubescence. Buds drooping. Sweet scabious. Daisy-fleabane. April-Aug.

Erigeron pulchellus Michx. Robin's or Poor Robin's Plantain. Fig. 4369.

E. pulchellus Michx. Fl. Bor. Am. 2: 124. 1803.
E. bellidifolius Muhl.; Willd. Sp. Pl. 3: 1958. 1804.

Perennial by stolons and offsets, villous-pubescent; stems simple, slender, 10'-24' high. Basal leaves tufted, spatulate or obovate, somewhat cuneate at the base, narrowed into short margined petioles, obtuse at the apex, 1'-3' long, 1/2'-2' wide, dentate or serrate; stem leaves sessile, partly clasping, oblong, lanceolate or ovate, mostly acute, entire, or sparingly serrate; heads 1-6, slender-peduncled, 1'-1 1/2' broad; involucre depressed-hemispheric, its bracts linear, acuminate, villous; rays numerous, violet or purplish, 4"-7" long; achenes nearly glabrous; pappus simple.

On hills and banks, Maine to Ontario and Minnesota, Kansas, Florida and Louisiana. Recorded from Quebec and Nova Scotia. Rose-petty. Robert's-plantain. Blue spring-daisy. April-June.



Eupatorium altissimum L. Tall Thoroughwort.

Eupatorium altissimum L. Sp. Pl. 837. 1753.

Densely and finely pubescent, corymbosely much-branched above, 4°-8° high. Leaves lanceolate, acuminate at the apex, tapering below into a short petiole, roughish, rather thick, sparingly dentate above the middle, or some of them entire, strongly 3-ribbed, 2'-5' long, 5"-12" wide; inflorescence densely cymose-paniculate; heads about 5-flowered, 3'-4" high; involucre campanulate, its bracts oblong, obtuse or truncate, densely pubescent, imbricated in about 3 series, the outer shorter; flowers white.

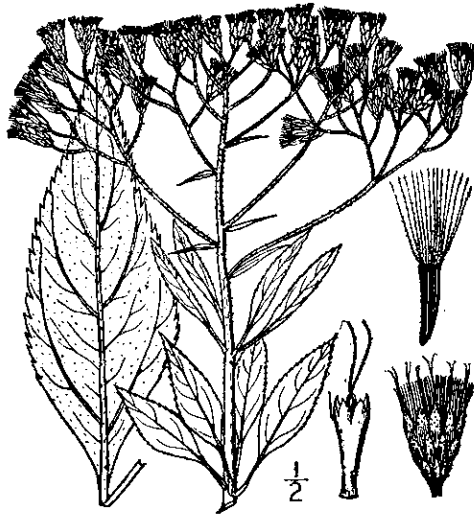
In dry open places, Pennsylvania to North Carolina, Alabama, Illinois, Minnesota, Nebraska and Texas. Sept.-Oct.

Eupatorium maculatum L. Spotted Joe-Pye Weed.

E. maculatum L. Moen. Acad. 4: 288. 1755.
Eupatorium purpureum var. *maculatum* Darl. Fl. Cest. 453. 1837.
Eupatorium maculatum amoenum Britton, Mem. Torr. Club 5: 312. 1894.

Similar to the two following species, scabrous or pubescent, often densely so, 2°-6° high. Stem usually striate, often rough and spotted with purple; leaves thick, ovate or ovate-lanceolate, coarsely dentate, verticillate in 3's-5's, or the upper ones opposite; inflorescence depressed, cymose-paniculate; pedicels and outer scales of the involucre pubescent; flowers pink or purple.

In moist soil, Newfoundland to New York, Kentucky, British Columbia, Kansas and New Mexico. Spotted bonset. Perhaps to be regarded as a race of *E. purpureum*. Aug.-Sept.

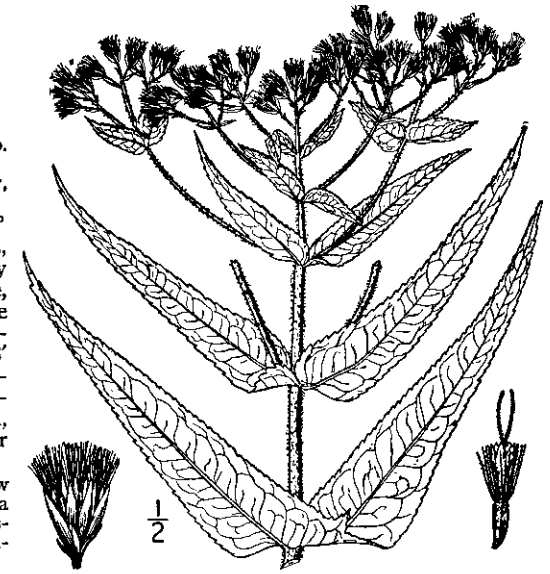


Eupatorium perfoliatum L. Common Thoroughwort. Bonset. Indian Sage.

E. perfoliatum L. Sp. Pl. 838. 1753.
Eupatorium truncatum Muhl.; Willd. Sp. Pl. 3: 1751. 1804.
Eupatorium perfoliatum truncatum A. Gray, Syn. Fl. 1: Part 2, 99. 1804.

Pubescent, stout, branched above, 2°-5° high. Leaves opposite, or rarely in 3's, connate-perfoliate, or the upper, rarely all, truncate and separated at the base, divaricate, lanceolate, long-acuminate with a slender apex, finely crenate-serrate, rugose and pubescent beneath, 4'-8' long, 1'-1½' wide; heads crowded, 10-16-flowered, 2''-3'' high; involucre campanulate, its bracts lanceolate, acutish, in 2 or 3 series, pubescent, the outer shorter; flowers white, rarely blue.

In wet places, Nova Scotia and New Brunswick to Manitoba, Florida, Nebraska and Texas. Called also ague-weed, crosswort, wild sage, thorough-wax, thorough-grow, thorough-stem. July-Sept.

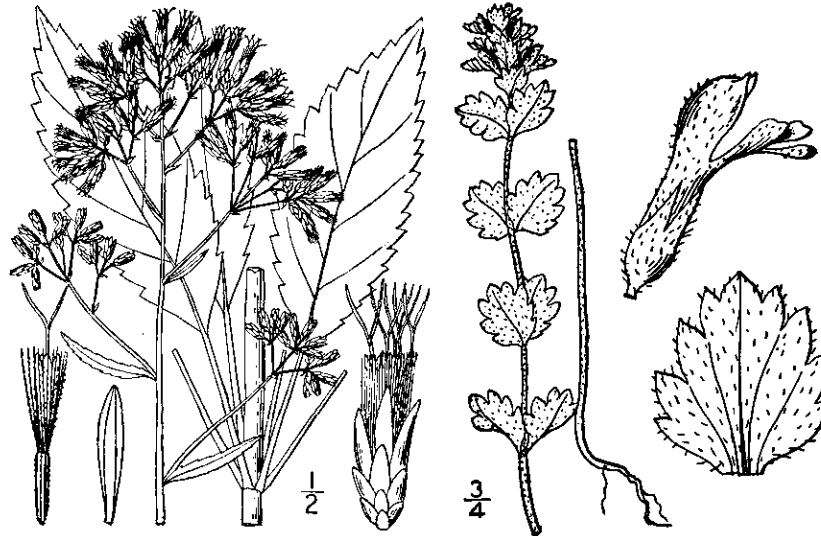


Eupatorium purpureum L. Joe-Pye or Trumpet-weed. Gravel-root.

Eupatorium purpureum L. Sp. Pl. 838. 1753.
E. falcatum Michx. Fl. Bor. Am. 2: 99. 1803.
Eupatorium purpureum var. *angustifolium* T. & G. Fl. N. A. 2: 82. 1841.
Eupatorium purpureum falcatum Britton, Mem. Torr. Club 5: 312. 1894.

Glabrous or sparingly pubescent, simple or branched at the summit, 3°-10° high. Stem green or purple, terete or striate, usually smooth; leaves thin, verticillate in 3's-5's, ovate, oval, ovate-lanceolate or narrowly lanceolate, petioled, acuminate, serrate, 4'-12' long, 6''-3' wide, glabrous or slightly pubescent along the veins on the lower surface; inflorescence usually elongated; heads very numerous; involucre cylindrical, its bracts pink, oblong, obtuse, imbricated in 4 or 5 series, the outer shorter; flowers pink or purple, occasionally white.

In moist soil, New Brunswick to Manitoba, Florida and Texas. Kidney-root. Skunk-weed. Indian gravel-root. Marsh-milk weed. Nigger-weed. Quillwort. Motherwort. King- or queen-of-the-meadow. Aug.-Sept.



Euphrasia nemorosa (Pers.) Wallr.

Hairy Eyebright. Eyebright.

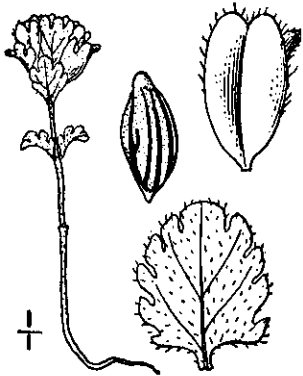
Euphrasia americana Wettst. Mon. Euph. 127. 1896.
E. canadensis Townsend, Journ. Bot. 36: 1. 1898.

Annual, stem pubescent with crisped hairs, often at length much branched, 4'-10' high. Leaves glabrous, or sparingly pubescent, ovate to oval, obtuse or acutish at the apex, 3-5-toothed on each side, 3''-6'' long, 1½''-4½'' wide, the teeth acute; bracts cuneate or obtuse at the base, dentate, pubescent, not glandular, slightly shorter than the flowers; calyx-teeth lanceolate, acuminate; corolla 3''-4'' long, purplish or nearly white, the somewhat spreading lobes of its lower lip emarginate; capsule narrow, cuneate, 2''-3'' high, about equalling the calyx.

In fields and on hills, Maine and New Hampshire to New Brunswick and Newfoundland. Summer.

Euphrasia officinalis L. is not known from North America.

Euphrasia Oakesii Wettst. Oakes' Eyebright.



Euphrasia Oakesii Wettst. Mon. Euph. 142. 1896.

Stem erect or ascending, very slender or filiform, simple, 1'-2' high, somewhat pubescent. Stem leaves 2 or 3 pairs. Bracts and leaves orbicular or broadly oval, narrowed or nearly truncate at the base. 2''-3'' long, obtuse, pubescent, not glandular, with 2-5 blunt teeth on each side; spike short, capitate, only 3''-5'' long, the bracts densely imbricated; calyx-teeth triangular-lanceolate, short; corolla 1½''-2'' long, purplish-white with a yellow eye; capsule oblong-elliptic, ciliate, longer than the calyx.

White Mountains of New Hampshire and on Mt. Katahdin, Maine. July-Aug.

Eustoma Russellianum (Hook.) Griseb.
Russell's Eustoma.

Lisianthus Russellianus Hook. Bot. Mag. pl. 3626. 1839.

Lisianthus glaucifolius Nutt. Trans. Am. Phil. Soc. (II.) 5: 197. 1833-37. Not. Jacq. 1786.

E. Russellianum Griseb. in DC. Prodr. 9: 51. 1845.

Stem terete, rather stout, 1°-2½° high. Leaves oblong or ovate-oblong, 3-5-nerved, the upper usually acute at the apex, cordate-clasping at the base, 1½'-3' long, the lower usually obtuse at the apex and narrowed to a sessile or slightly auricled base; peduncles 1'-4' long, stout, bracted at the base, the bracts lanceolate-subulate, small; flowers 2'-3' broad; calyx-lobes long-acuminate, shorter than the purple corolla; corolla-lobes obovate, about 4 times as long as the tube; style slender; anthers remaining nearly straight; capsule oblong, pointed.

On prairies, Nebraska to Louisiana, Colorado, Texas, New Mexico and Mexico. Canada pest. May-Aug.



Euphrasia Rándii Robinson.

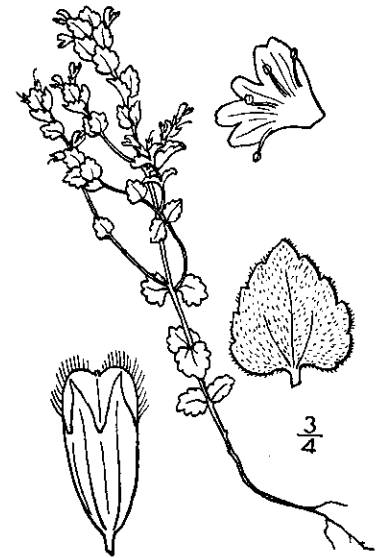
Rand's Eye bright.

Euphrasia Randii Robinson, Rhodora 3: 273. 1901.

E. Randii var. (?) *Farlowii* Robinson, loc. cit. 274. 1901.

Annual; stem simple or branched, erect or decumbent, 3'-20' long, purplish, covered with whitish hairs. Leaves ovate to suborbicular or fan-shaped, finely pubescent on both sides, 4-6-toothed on each margin, the teeth obtuse or acutish; flowers spicate-racemose; calyx pubescent, its teeth triangular-lanceolate; corolla about 2'' long, violet to nearly white, with a yellow eye; capsule oblong-elliptic, ciliate, notched.

Thickets and grassy places, Newfoundland to Quebec and Maine. July-Aug.



Frasera carolinensis Walt.

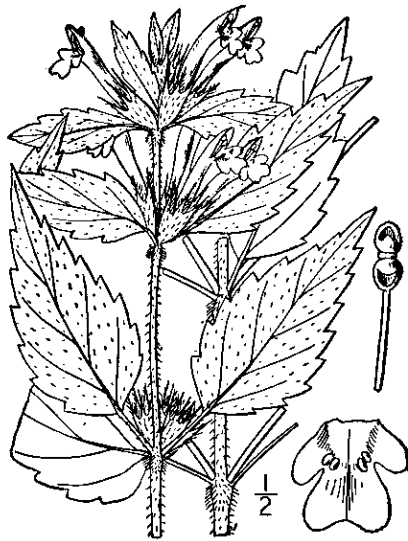
American Columbo.

Frasera carolinensis Walt. Fl. Car. 87. 1788.

Stem 3°-7° high, stout. Leaves mostly verticillate in 4's, those of the stem lanceolate or oblong, acute or acutish, 3'-6' long, the basal ones spatulate or oblanceolate, usually much larger, the uppermost small and bract-like; inflorescence thyrsoid-paniculate, large, often 2° long; flowers slender-pedicelled, about 1' broad; corolla yellowish white with brown-purple dots, its lobes broadly oblong, bearing a large circular long-fringed gland at or below the middle; style 2''-3'' long; stigma 2-lobed; capsule much compressed, 6'-8' high, longer than the calyx.

In dry soil, western New York and Ontario to Wisconsin, south to Georgia and Tennessee. Yellow gentian. Pyramid-flower or -plant. June-Aug.





Galeopsis Tetrahit L. Hemp-Nettle. Hemp Dead Nettle. Ironwort.

Galeopsis Tetrahit L. Sp. Pl. 579. 1753.

A coarse and rough-hairy herb, the stem rather stout, branched, 1'-3' high, swollen under the joints. Leaves ovate, membranous, slender-petioled, acuminate at the apex, rounded or narrowed at the base, coarsely dentate, 2'-5' long, 3'-2 1/2' wide; flower-clusters axillary, dense, or in a short leafy-bracted spike; calyx-teeth needle-pointed, bristly, as long as or longer than the tube; corolla 8'-12" long, pink or pale purple variegated with white, about twice the length of the calyx.

In waste places, Newfoundland to British Columbia and Alaska, south to North Carolina, West Virginia and Michigan. Naturalized from Europe. Native also of Asia. Bee-, dog- or blind-nettle. Stinging or flowering nettle. Nettle-, wild- or bastard-hemp. Simon's-weed. June-Sept.

Galium boreale L.

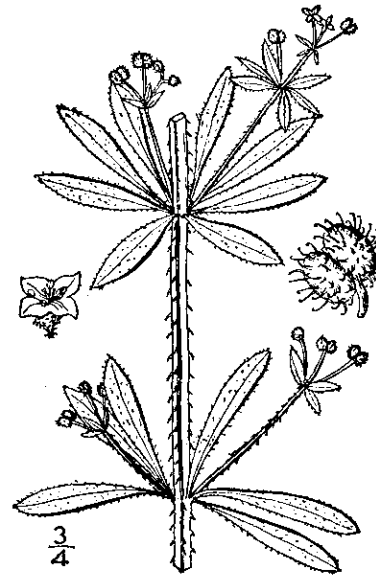
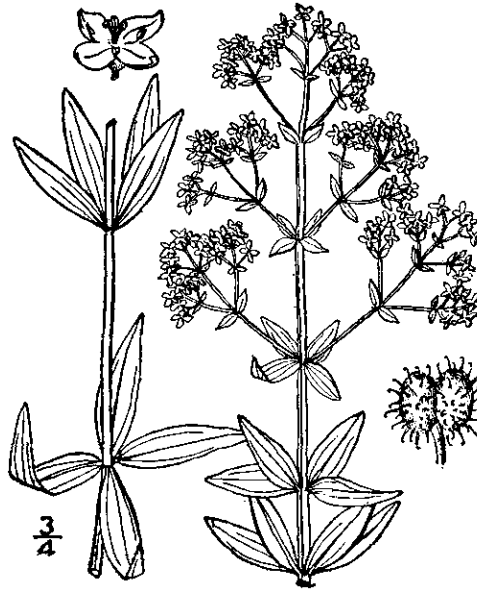
Northern Bedstraw.

Galium boreale L. Sp. Pl. 108. 1753.

Galium septentrionale R. & S. Syst. 3: 253. 1818.

Erect, perennial, smooth and glabrous, strict, simple, or branched, leafy, 1'-2 1/2' high. Leaves in 4's, lanceolate or linear, 3-nerved, obtuse or acute, 1'-2 1/2' long, 1"-3" wide, the margins sometimes ciliate; panicles terminal, dense, many-flowered, the flowers white, paniced, in small compact cymes; fruit hispid, at least when young, sometimes becoming glabrate when mature, about 1" broad.

In rocky soil or along streams, Quebec to Alaska, south to New Jersey, Pennsylvania, Michigan, Missouri, New Mexico and California. Also in Europe and northern Asia. May-Aug.



Galium Aparine L. Cleavers. Goose-grass. Cleaver-wort.

Galium Aparine L. Sp. Pl. 108. 1753.

Annual, weak, scrambling over bushes, 2'-5' long, the stems retrorsely hispid on the angles. Leaves in 6's or 8's, oblanceolate to linear, cuspidate at the apex, 1'-3' long, 2"-5" wide, the margins and midrib very rough; flowers in 1-3-flowered cymes in the upper axils; peduncles 5"-12" long; fruiting pedicels straight; fruit 2"-3" broad, densely covered with short hooked bristles.

In various situations, New Brunswick to Ontario, South Dakota, Florida and Texas. Bermuda. Apparently in part naturalized from Europe. Widely distributed in temperate regions as a weed. May-Sept. Among some 70 other English names are catchweed, beggar-lice, burhead, cleaver-grass, cling-rascal, scratch-grass, wild hedge-burs, hairif or airif, stick-a-back, or stickle-back, gosling-grass, gosling-weed, turkey-grass, pigtail, grip or grip-grass, loveman, sweet-hearts, scratch-weed, poor robin.

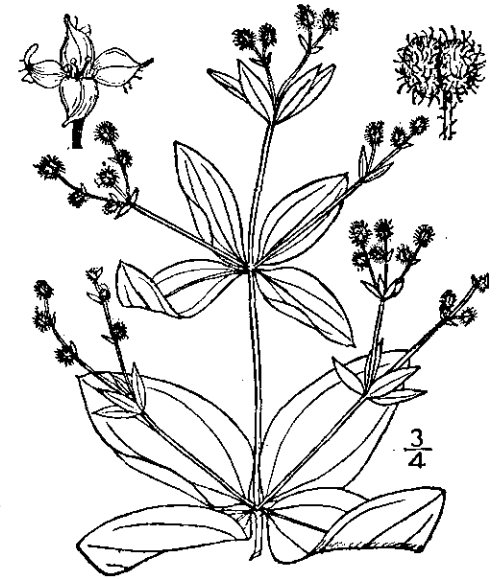
Galium circaezans Michx. Wild Liquorice. Cross-Cleavers.

G. circaezans Michx. Fl. Bor. Am. 1: 80. 1803.

Galium circaezans glabellum Britton, Mem. Torr. Club 5: 303. 1894.

Perennial, more or less pubescent, or glabrate, branched, 1'-2' high. Leaves in 4's, oval, oval-lanceolate or ovate, obtuse or obtusish at the apex, 3-nerved, 6"-18" long, 4"-8" wide, usually somewhat pubescent on both surfaces, ciliolate, the lower smaller; cymes divaricately branched; flowers sessile or nearly so, greenish; corolla hirsute without, or glabrous, its lobes acute; fruit hispid, similar to that of the preceding species, at length deflexed.

In dry woods, Quebec and Ontario to Minnesota, Florida, Kansas and Texas. May-July.



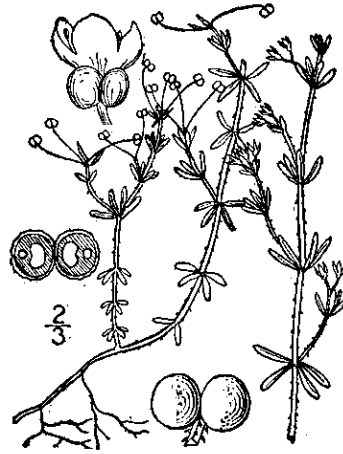
Galium trifidum L. Small Bedstraw. Small Cleavers.

Galium trifidum L. Sp. Pl. 105. 1753.

G. trifidum var. *pusillum* A. Gray, Man. Ed. 5, 209. 1867.

Perennial by slender rootstocks, very slender and weak; stem ascending, 16' long or less, much branched and intertangled; stem sharply 4-angled, rough; branches commonly in 2's; leaves in 4's, linear-spatulate, 2½"-7" long, obtuse, cuneate at the base, 1-nerved, dark green and dull on both surfaces, scarcely papillose, the margins and midrib retrorse-scabrous; flowers small, on lateral or terminal pedicels which are capillary and much longer than the leaves, commonly two at each node or three terminal; corolla very small, white, ⅔" long, trifid, its lobes broadly oval, very obtuse; fruit glabrous; seed spherical and hollow, annular in cross-section

Sphagnum bogs and cold swamps, Newfoundland to New York, British Columbia, Ohio, Nebraska and Colorado. Europe and Asia. Summer.



Galium triflorum Michx. Sweet-scented or Fragrant Bedstraw.

Galium triflorum Michx. Fl. Bor. Am. 1: 80. 1803.

Perennial, diffuse, procumbent, or ascending, glabrous or nearly so, shining, fragrant in drying, the stems and margins of the leaves sometimes roughened. Leaves in 6's, narrowly oval or slightly oblanceolate, 1-nerved, cuspidate at the apex, narrowed at the base, 1'-3½' long, 2"-6" wide; peduncles slender, terminal and axillary, often exceeding the leaves, 3-flowered or branched into 3 pedicels which are 1-3-flowered; flowers greenish; fruit 1½"-2" broad, hispid with hooked hairs; seed almost spherical, the groove obsolete.

In woods, Greenland to Alaska, south to Florida, Louisiana, Colorado and California. Also in northern Europe, Japan and the Himalayas. June-Aug. Three-flowered bedstraw.



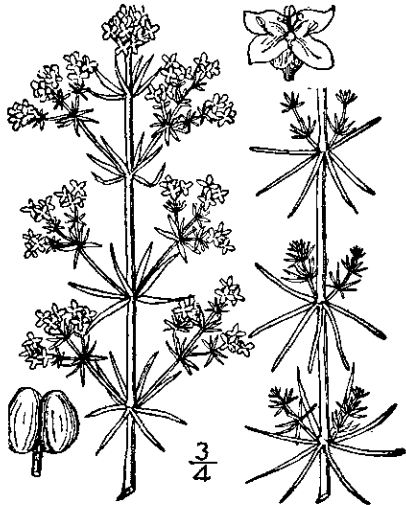
Galium verum L. Yellow Bedstraw. Lady's Bedstraw.

Galium verum L. Sp. Pl. 107. 1753.

Perennial from a somewhat woody base, erect or ascending, simple or branched, 6'-2½' high. Stems smooth or minutely roughened; leaves in 6's or 8's, narrowly linear, 4"-12" long, about ¼" wide, rough on the margins, at length deflexed; flowers yellow, the cymes in dense narrow panicles; lower branches of the panicles longer than the internodes at anthesis; fruit usually glabrous, less than 1" broad.

In waste places and fields, Maine and Ontario to Massachusetts, southern New York, New Jersey and Pennsylvania. Adventive or naturalized from Europe. Native also of Asia. May-Sept. Cheese-rennet. Curdwort. Bedflower. Fleawort. Maids'-hair. Yellow cleavers. Our Lady's-bedstraw.

Galium Wirtgeni F. Schultz, differs in having the lower branches of the panicle very short at anthesis, and is recorded as established in a meadow at Norfolk, Connecticut.



Gentiana affinis Griseb.

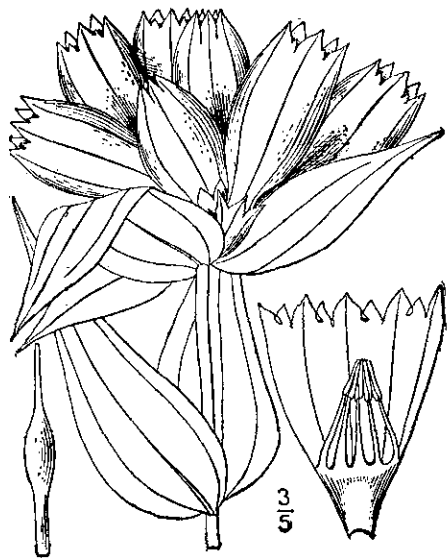
Oblong-leaved Gentian.

Gentiana affinis Griseb. in Hook. Fl. Bor. Am. 2: 56. 1834. *D. affinis* Rydb. Bull. Torr. Club 33: 149. 1906.

Perennial; stems clustered from deep roots, minutely puberulent, simple, 6'-18' high. Leaves linear-oblong to lanceolate-oblong, obtuse or acutish, rounded or narrowed at the base, firm, roughish-margined, indistinctly nerved, ½'-1½' long, the floral smaller; flowers few, numerous, or rarely solitary, 5-parted, sessile and solitary or clustered in the axils of the upper leaves, about 1' high, not bracted under the calyx; calyx-lobes linear or subulate, unequal, the longer about equalling the tube, the smaller sometimes minute; corolla narrowly funnelliform, blue, its lobes ovate, acute or mucronate, entire, spreading, with lacinate appendages in the sinuses; anthers separate; seeds broadly winged.

In moist soil, Minnesota to British Columbia, south in the Rocky Mountains to New Mexico. Aug.-Oct.





Gentiana alba Muhl. ex Nutt.

Yellowish Gentian.

G. flavida A. Gray, Am. Journ. Sci. (II.) 1: 80. 1846.
G. alba A. Gray, Man. 360. 1848. Not Muhl. 1818.

Perennial; stem stout, terete, glabrous, simple, erect or ascending, 1°-3° high. Leaves ovate-lanceolate or oblong-lanceolate, smooth-margined, acuminate at the apex, subcordate, clasping or rounded at the base, 2'-5' long, 1'-2' wide; flowers several or numerous in a sessile terminal cluster and sometimes 1 or 2 in the upper axils, 1½'-2' high, 2-bracteolate under the calyx; calyx-lobes ovate, acute, smooth or minutely rough-margined, shorter than the tube, at length spreading; corolla campanulate-funnelform, open, greenish or yellowish white, its lobes ovate, acute or obtuse, twice as long as the erose-denticulate appendages; anthers cohering in a tube; capsule stipitate; seeds winged.

In moist soil, Ontario to Minnesota, Missouri, Virginia and Kentucky. Aug.-Oct.

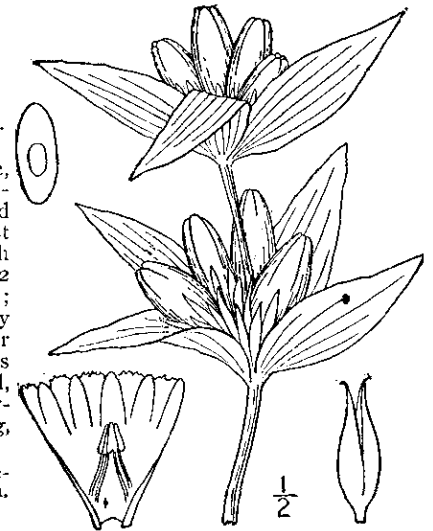
Gentiana andrewsii Griseb.

Closed Blue or Blind Gentian.

?*Gentiana alba* Muhl. Cat. Ed. 2, 29. 1818.
 ?*Gentiana clausa* Raf. Med. Fl. 1: 210. 1832.
G. Andrewsii Griseb. in Hook. Fl. Bor. Am. 2: 55. 1834.
D. Andrewsii Small, Fl. SE. U. S. 930. 1903.

Perennial; stout, glabrous, 1°-2° high, simple, leafy. Leaves ovate to lanceolate, 3-7-nerved, acuminate at the apex, narrowed or sometimes rounded at the base, 2'-4' long, rough-margined, the lowest oblong or obovate, smaller; flowers 1'-1½' high in a terminal sessile cluster and commonly 1 or 2 in the upper axils, 2-bracteolate under the calyx; calyx-lobes lanceolate or ovate, ciliate, usually spreading; corolla oblong, club-shaped, blue, or occasionally white, nearly or quite closed, its lobes obsolete, the intervening appendages very broad, light colored, opposite the stamens; anthers cohering in a tube; capsule stipitate; seeds oblong, winged.

In moist soil, Quebec to Manitoba, Georgia and Nebraska. Cloistered-heart. Bottle- or barrel-gentian. Aug.-Oct.



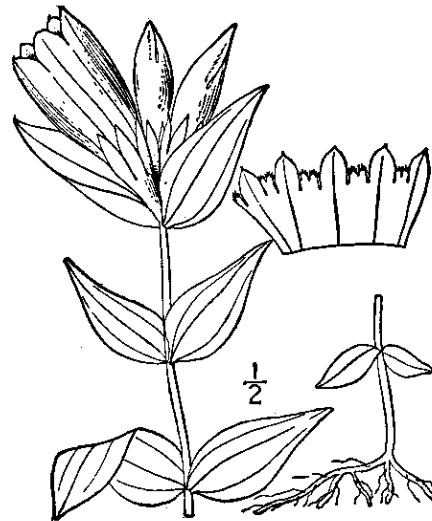
Gentiana catesbaei Walt.

Elliott's Gentian.

?*Gentiana rigida* Raf. Med. Fl. 1: 212. 1832.
Gentiana Elliottii Chapm. Fl. S. States, 356. 1860.
 Not Raf.
 ?*Gentiana scaberrima* Kusnezow, Act. Hort. Petrop. 13: 59. 1893.
D. parvifolia Small, Fl. SE. U. S. 930. 1903.
D. latifolia Small, Fl. SE. U. S. 930. 1903.

Perennial; roots a cluster of thick fibres; stems slender, leafy, terete, minutely rough-puberulent, simple, 8'-2° high. Leaves ovate or lanceolate, acute or acutish at the apex, rounded or narrowed at the base, thin, roughish-margined, 1'-2' long, 3-nerved, or the lower much smaller and obtuse; flowers 1-4, terminal, or rarely 1 or 2 in the upper axils, about 2' long, sessile, 2-bracteolate under the glabrous calyx; calyx-lobes oblong or lanceolate, foliaceous, longer than the tube; corolla campanulate-funnelform, blue, its lobes ovate, obtuse, sometimes mucronate, entire, 3"-4" long, about twice as long as the fimbriate or toothed appendages; anthers cohering in a tube; seeds oblong, broadly winged.

In moist soil, Virginia to Florida. Sampson snake-root. Sept.-Oct.



Gentiana porphyrio J.F. Gmel.

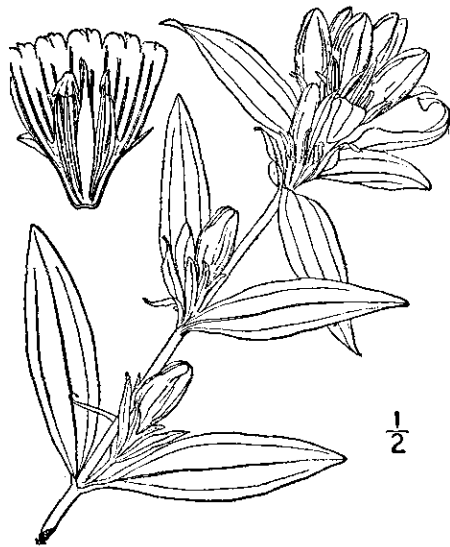
One-flowered Gentian.

Gentiana purpurea Walt. Fl. Car. 109. 1788. Not. L. 1753.
Gentiana Porphyrio J. F. Gmel. Syst. 2: 462. 1791.
Gentiana angustifolia Michx. Fl. Bor. Am. 1: 177. 1803.
D. Porphyrio Small, Fl. SE. U. S. 931. 1903.

Perennial, glabrous; stem erect or ascending, simple or branched, 6'-18' high. Leaves linear, firm, acute or blunt at the apex, 1'-2' long, 1"-2" wide, or the upper and lower shorter; flowers solitary at the ends of the stem or branches, short-peduncled, about 2' high, not bracteolate under the calyx; calyx-lobes linear, longer than the tube; corolla funnelform, bright blue, sometimes brown-dotted within, its lobes ovate, acutish, spreading, 5"-7" long, three times as long as the conspicuously lacinate appendages, or more; seeds oblong, wingless.

In moist pine barrens, New Jersey to Florida. Aug.-Oct.





Gentiana saponaria L.
 Soapwort or Blue-Gentian.

Gentiana Saponaria L. Sp. Pl. 228. 1753.
Gentiana Catesbaei Walt. Fl. Car. 109. 1788.
D. Saponaria Small, Fl. SE. U. S. 930. 1903.

Perennial; stem erect or ascending, terete, slender, simple or with short erect axillary branches, glabrous, or minutely rough-puberulent above, 1°-2½° high, leafy. Leaves lanceolate, ovate-lanceolate or oblong, usually acute at both ends, 3-5-nerved, roughish-margined, 2'-4' long, the lowest obovate and smaller; flowers 1'-2' high, in sessile terminal and usually also axillary clusters of 1-5, 2-bracteolate under the calyx; calyx-lobes oblong or spatulate, ciliolate; corolla blue, club-shaped, its lobes erect, obtuse, equalling or longer than the cleft or lacerate appendages; anthers cohering in a tube; capsule stipitate; seeds broadly winged.

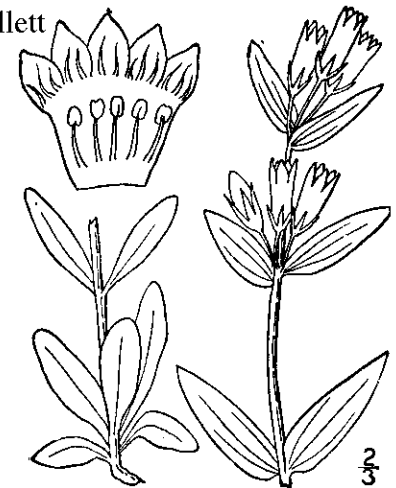
In wet soil, Ontario to Minnesota, Connecticut, Florida and Louisiana. Calathian violet. Harvest-bells. Rough or marsh-gentian. Sampson snake-root. Aug.-Oct.

Gentianella amarella ssp. acuta (Michx.) J. Gillett
 Northern Gentian.

Gentiana acuta Michx. Fl. Bor. Am. 1: 177. 1803.
Gentiana Amarella var. *acuta* Herder, Act. Hort. Petrop. 1: 428. 1872.

Annual; stem leafy, slightly wing-angled, simple or branched, 6'-20' high. Basal and lower leaves spatulate or obovate, obtuse, the upper lanceolate, acuminate or acute at the apex, rounded or subcordate at the base, sessile, or somewhat clasping, ½'-2' long; flowers numerous, racemose-spicate, 5'-8" high, the pedicels 2"-6" long, leafy-bracted at the base; calyx deeply 5-parted (rarely 4-parted), its lobes lanceolate; corolla tubular-campanulate, 5-lobed (rarely 4-lobed), blue, its lobes lanceolate, acute, each with a fimbriate crown at the base; capsule sessile.

In moist or wet places, Labrador to Alaska, Maine, Minnesota, south in the Rocky Mountains to Arizona and Mexico. Also in Europe and Asia. Closely resembles the Old World *G. Amarella*. Felwort. Bastard-gentian. Bald-money. Summer.



Gentianopsis crinita (Froel.) Ma
 Fringed Gentian.

Gentiana crinita Froel. Gen. 112. 1796.

Annual or biennial; stem leafy, usually branched, 1°-3¼° high, the branches erect, somewhat 4-angled. Basal and lower leaves obovate, obtuse, the upper lanceolate or oblong-lanceolate, 1'-2' long, acute or acuminate at the apex, sessile by a rounded or subcordate base; flowers mostly 4-parted, several or numerous, about 2' high, solitary at the ends of the usually elongated peduncles; calyx-lobes lanceolate, acuminate, unequal, their midribs decurrent on the angles of the tube; corolla bright blue, rarely white, narrowly campanulate, its lobes obovate, rounded, conspicuously fringed all around their summits, scarcely fringed on the sides, spreading when mature; capsule spindle-shaped, stipitate; seeds scaly-hispid.

In moist woods and meadows, Quebec to Ontario, Minnesota, south to Georgia and Iowa. Sept.-Oct.



Gentianopsis procera (Holm) Ma
 Smaller Fringed Gentian.

Gentiana procera Holm, Ottawa Nat. 15: 11. 1901.

Annual; similar to the preceding species but smaller; stem simple, or little branched, 3'-18' high. Basal and lower leaves spatulate, obtuse, the upper linear or linear-lanceolate, 1'-2½' long, 2"-4" wide; flowers 1-6, solitary at the ends of elongated erect peduncles, mostly 4-parted, about 1½' high; calyx-lobes lanceolate, acuminate, their midribs decurrent on the tube; corolla narrowly campanulate, bright blue, its lobes spatulate-oblong, strongly fringed on both sides, entire or somewhat fimbriate or toothed around the apex; capsule short-stipitate; seeds scaly-hispid.

In wet places, New York and Ontario to Minnesota, South Dakota and Manitoba. July-Sept. Previously confused with *G. detonsa* Rottb. and with *G. serrata* Gunner, Old World species. Northwestern and Rocky Mountain plants formerly referred to this species prove to be distinct from it.

Gentiana nesophila Holm, of Anticosti, differs in merely denticulate corolla-lobes.



Gilia aggregata (Pursh) Spreng. Scarlet Gilia.

Cantua aggregata Pursh, Fl. Am. Sept. 147. 1814.
Gilia aggregata Spreng, Syst. 1: 626. 1825.

Biennial, pubescent or puberulent; stem simple or sparingly branched, 2^o-4^o high, leafy at least below. Leaves alternate, the basal often tufted, mostly petioled, 1'-3' long, pinnately parted into narrowly linear segments; inflorescence narrowly thyrsoid-paniculate, often 12' long; flowers sessile or very nearly so in small peduncled clusters, scarlet or red; corolla tubular-funnelform, the tube 1'-1½' long, slightly thicker upward, the limb cleft into ovate or lanceolate acute or acuminate spreading or recurved lobes; stamens unequally or about equally inserted in the throat; ovules numerous; seeds mucilaginous and emitting spiral threads when wetted.

In dry soil, western Nebraska (according to Coulter) to Texas and Mexico, west to British Columbia and California. June-Aug.



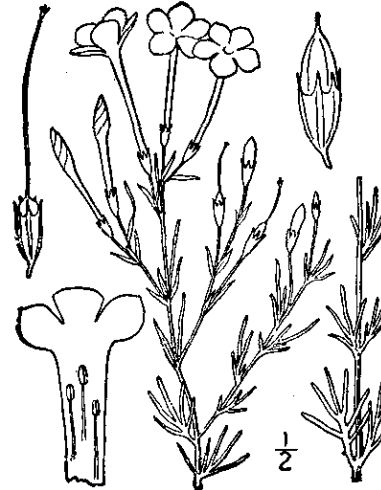
Gilia longiflora (Torr.) Don. White-flowered Gilia.

Cantua longiflora Torr. Ann. Lyc. 2: 221. 1827.
Gilia longiflora Don, Gard. Dict. 4: 245. 1838.
Collomia longifl. A. Gray, Proc. Am. Acad. 8: 261. 1870.

Annual, glabrous, paniculately branched, 1^o-2^o high. Leaves all alternate, sessile, 1'-2½' long, pinnately divided into linear-filiform segments or the uppermost entire; flowers numerous, white, paniculate, about 2' long; calyx-teeth triangular-lanceolate, acuminate, shorter than the tube; corolla salverform, its tube narrow, 4 or 5 times as long as the orbicular or ovate, rounded or pointed, spreading lobes; stamens unequally inserted; ovules 8-12 in each cell; capsule narrowly oblong, exceeding or equalling the calyx; seed-coat mucilaginous and emitting spiral threads when wetted.

In dry soil, Nebraska and Colorado to Texas and Arizona. May-Sept.

Gilia rubra (L.) Heller (*Gilia coronopifolia* Pers.), a related species with less spreading corolla-lobes, is commonly cultivated, and rarely escapes from gardens to roadsides and waste grounds.



Glandularia bipinnatifida (Nutt.) Nutt.

Small-flowered Verbena.

Verbena bipinnatifida Nutt. Journ. Acad. Phila. 2: 123. 1821.
Glandularia bipinnatifida Nutt. Trans. Am. Phil. Soc. (II.) 5: 184. 1833-37.
Verbena ambrosiaefolia Rydb.; Small, Fl. SE. U. S. 1011. 1903.

Perennial, producing suckers, hirsute or hispid; stems rather stout, mostly branched, erect, 6'-18' high. Leaves firm, petioled or the uppermost sessile, broadly ovate in outline, deeply 1-2-pinnatifid into linear or linear-oblong, obtuse or subacute lobes and segments; spikes peduncled or sessile, solitary at the ends of the branches, thick, dense, at first short and capitate, becoming 2'-4' long in fruit; bracts linear-subulate, about as long as or somewhat exceeding the calyx; calyx-teeth filiform-subulate; corolla 6"-9" long, purple or lilac, the limb 4"-7" broad, the lobes emarginate or obcordate; fruit 1½"-2" long.

On dry plains and prairies, South Dakota to Missouri, Texas and Chihuahua, west to Colorado and Arizona. May-Sept.

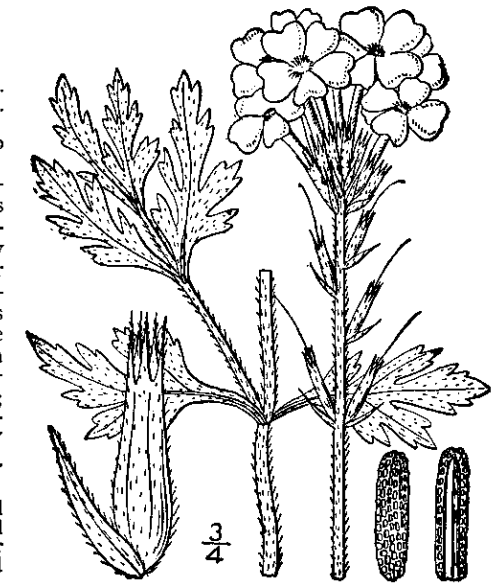
Glandularia canadensis (L.) Nutt.

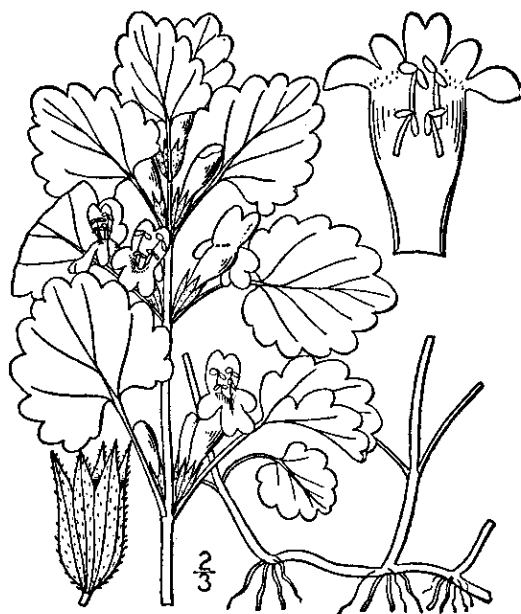
Large-flowered Verbena.

Buchnera canadensis L. Mant. 88. 1767.
V. Aubletia Jacq. Hort. V. 2: 82. pl. 176. 1772.
Glandularia carolinensis J. G. Gmel. Syst. 2: 920. 1796.
Verbena canadensis Britton, Mem. Torr. Club 5: 276. 1894.

Perennial, pubescent or glabrate; stem slender, usually branched, 8'-20' high, the branches ascending. Leaves membranous, ovate in outline, petioled, 1'-3' long, truncate or broadly cuneate at the base, irregularly toothed, or pinnately incised, often 3-cleft, the lobes dentate; spikes peduncled, solitary at the ends of the branches, dense, short and capitate when in early flower, becoming 2'-4' long in fruit; bracts linear-subulate, mostly shorter than the calyx; calyx-teeth filiform-subulate; corolla 10'-12" long, blue, purple, white or in cultivation variegated, its limb 7"-12" broad, the lobes oblong or obovate, emarginate or obcordate; fruit 2½"-3" high.

In dry soil, Illinois to Tennessee, Virginia and Florida, west to Kansas and Texas. This and the next the source of many garden and other hybrids. Cut-leaved races have been referred to *V. Drummondii* (Lindl.) Baxter. May-Aug.



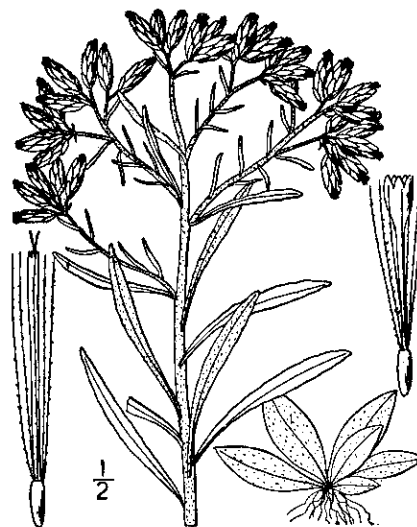


Glecoma hederacea L. Ground Ivy. Gill-over-the-Ground. Field Balm.

Glecoma hederacea L. Sp. Pl. 578. 1753.
N. Glechoma Benth. Lab. Gen. & Sp. 485. 1834.
N. hederacea B.S.P. Prel. Cat. N. Y. 43. 1888.

Perennial, pubescent, the creeping stems leafy, sometimes 18' long, the branches ascending. Lower petioles commonly longer than the leaves; leaves green both sides, $\frac{1}{2}$ '-1 $\frac{1}{2}$ ' in diameter; clusters few-flowered, the flowers 7''-10'' long, short-pedicelled; bractlets subulate, shorter than the calyx; calyx puberulent, its teeth acute or lanceolate-acuminate, about one-third as long as the tube; corolla-tube 2-3 times as long as the calyx; upper pair of stamens much longer than the lower.

In waste places, woods and thickets, Newfoundland to Ontario, Minnesota, Oregon, Georgia, Tennessee, Kansas and Colorado. Old names, alehoof, cat's-foot, gill, gill-ale, gill-go-by-the-ground, hayhofs, haymaids, hove, tunhoof, creeping charlie, robin-run-away, gill-run-over, crow-vituals, wild snake-root, hedge-maids. March-May.

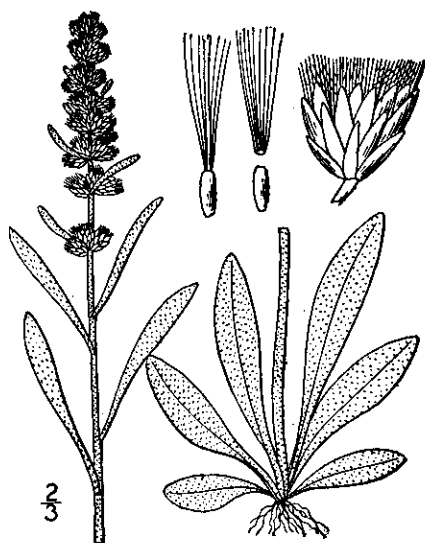


Gnaphalium obtusifolium L. Sweet or White Balsam. Sweet or Fragrant Life Everlasting.

Gnaphalium obtusifolium L. Sp. Pl. 851. 1753.
G. polycephalum Michx. Fl. Bor. Am. 2: 127. 1803.

Annual or winter-annual, fragrant; stem erect, simple, or branched above, tomentose, 1'-3' high. Leaves lanceolate or linear-lanceolate, sessile, acute or acutish, or the lower obtuse at the apex, narrowed at the base, densely white-woolly beneath, glabrate and commonly dark green above, 1'-3' long, 2''-4'' wide, the margins undulate; heads in numerous corymbose or paniculate clusters of 1-5, about 3'' high; bracts of the involucre white, or tinged with brown, oblong, thin and scarios, obtuse, the outer woolly at the base; pappus-bristles distinct, separately deciduous; achenes glabrous.

In dry, mostly open places, Nova Scotia to Florida, Manitoba, Kansas and Texas. Jamaica. Poverty, chafe- or balsam-weed. Old-field balsam. Indian-posy. Feather-weed. Fussy-gussy. Rabbit-tobacco. Life-of-man. Moonshine. Leaves of rosettes oblong. Aug.-Sept.

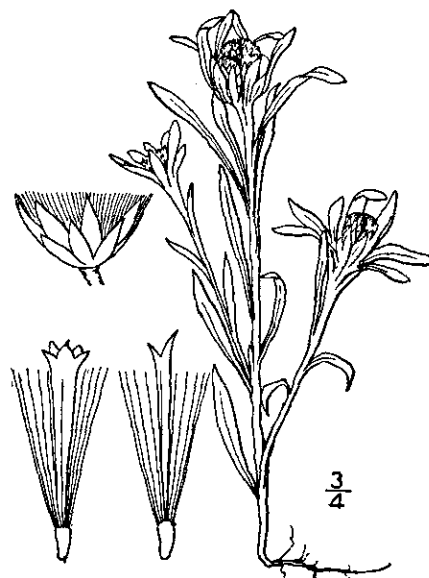


Gnaphalium purpureum L. Purplish Cudweed.

Gnaphalium purpureum L. Sp. Pl. 854. 1753.

Annual or biennial, simple and erect or branched from the base and the branches ascending, 2'-2° high. Leaves spatulate, or the uppermost linear, mostly obtuse, mucronulate, woolly beneath, usually green and glabrous or nearly so above when old, sessile, or the lowest narrowed into petioles, 1'-2' long, 2''-6'' wide; heads 2''-2 $\frac{1}{2}$ '' high in a terminal, sometimes leafy, often interrupted spike, or the lowest ones distant and axillary; bracts of the involucre yellowish brown or purplish, lanceolate-oblong, acute or acutish, the outer woolly at the base; pappus-bristles united below; achenes roughish.

In dry sandy soil, eastern Maine to Florida, Pennsylvania, West Virginia, Kentucky, Kansas and Texas. Bermuda; Jamaica; Mexico. Far western plants formerly referred to this species prove to be distinct. May-Sept.

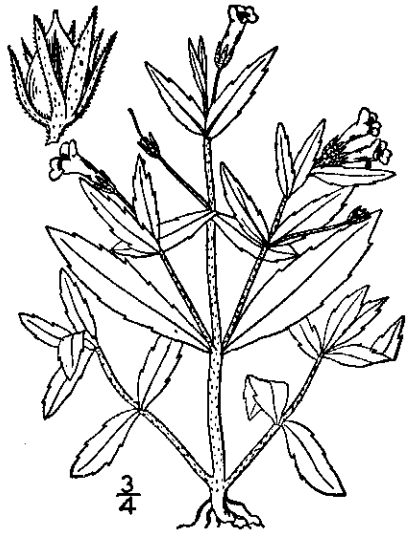


Gnaphalium uliginosum L. Low or Marsh Cudweed. Wartwort. Mouse-ear.

Gnaphalium uliginosum L. Sp. Pl. 856. 1753.

Annual; diffusely branched from the base, or the stems sometimes erect or ascending, appressed-woolly all over, 2'-8' high. Leaves sessile, spatulate-linear, linear, or the lower oblanceolate or spatulate and narrowed into petioles, all obtuse or obtusish, generally mucronulate, 1'-1 $\frac{1}{2}$ ' long; heads about 2'' high, numerous in dense leafy-bracted terminal glomerules; bracts of the involucre oblong or oblong-lanceolate, brown, the outer obtuse or obtusish and more or less woolly, the inner acute; pappus-bristles distinct, separately deciduous.

In damp soil, Newfoundland to Virginia, west to western Ontario, Saskatchewan, British Columbia and Oregon, and Indiana. Also in Europe. July-Sept.



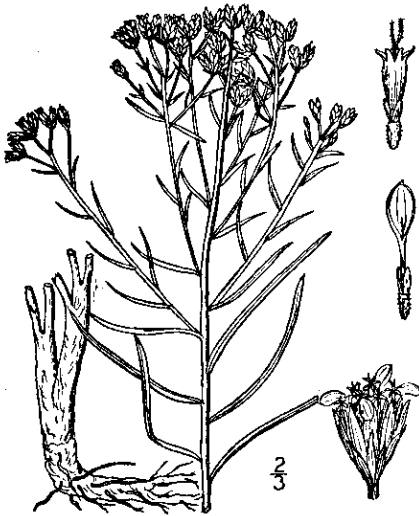
Gratiola virginiana L. Clammy Hedge-Hyssop.

Gratiola virginiana L. Sp. Pl. 17. 1753.

Annual; stem erect, at length widely branched, glandular-puberulent, at least above, 3'-12' high. Leaves oblong or oblong-lanceolate, sessile, narrowed to both ends, denticulate, 1'-2' long, 2''-5'' wide, glabrous or nearly so; peduncles slender, glandular, shorter than or equalling the leaves; flowers 4''-5'' long; bractlets as long as the calyx, or longer; calyx about one-half as long as the yellowish corolla-tube; limb of the corolla short, white; sterile filaments minute or none; anther-sacs transverse, separated by a broad connective; capsule broadly ovoid, 2'' high, as long as the calyx.

In wet places, Quebec to British Columbia, south to Florida, Texas and California. Ascends to 3000 ft. in Virginia. Water jessamine. May-Oct.

Gutierrezia Sarothrae (Pursh) Britton and Rusby. Broom-weed.



Solidago Sarothrae Pursh, Fl. Am. Sept. 540. 1814.
Gutierrezia Euthamiae T. & G. Fl. N. A. 2: 193. 1841.
Gutierrezia Sarothrae Britton & Rusby, Trans. N. Y. Acad. Sci. 7: 10. 1887.

Glabrous or minutely pubescent, bushy, woody at the base, 1/2°-1 1/2° high, the branches rigid, ascending. Leaves linear, 1/4'-1 1/4' long, 1/4''-1'' wide, acute; heads oblong, 1 1/2''-2'' high, few-flowered, usually in clusters of 2-5 at the ends of the numerous branches; rays 1-6, scarcely 1'' long; scales of the pappus linear-oblong, subulate or acuminate; achenes pubescent.

In dry or rocky soil, Manitoba and Minnesota to western Nebraska, Kansas, Texas and Sonora, west to Alberta and Utah. Adventive at Rochester, N. Y. Far western plants formerly referred to this species prove to be distinct. Rabbit-brush. Aug.-Sept.

Gutierrezia linearis Rydb., of the Rocky Mountain region, ranging eastward into Kansas and Nebraska, differs in being more woody and has somewhat wider leaves.

Grindelia squarrosa (Pursh) Dunal.
 Broad-leaved Gum-plant.

Donia squarrosa Pursh, Fl. Am. Sept. 559. 1814.
Grindelia squarrosa Dunal in DC. Prodr. 5: 315. 1836.
G. grandiflora Hook. Bot. Mag. pl. 4628. 1852.
Grindelia nuda Wood. Bot. Gaz. 3: 50. 1878.
Grindelia squarrosa nuda A. Gray, Syn. Fl. 1: 118. 1884.

Glabrous, erect or ascending, branched, 10'-2° high. Leaves oblong or oblong-spatulate, obtuse, more or less clasping at the base, sharply spinulose-dentate, sometimes lacinate, 1/2'-1 1/2' long, 3'-6'' wide; heads 10''-15'' broad, very glutinous; bracts of the involucre linear-lanceolate, subulate-tipped, strongly squarrose; achenes truncate, those of the outer flowers usually thicker than those of the inner; rays up to 1' long or wanting; pappus of 2 or 3 awns.

In dry soil, Illinois and Minnesota to Manitoba, Missouri, Texas, Arizona and Mexico. Adventive in southern New Jersey, Pennsylvania and New York. June-Sept.



Halenia deflexa (J. E. Smith) Griseb. Spurred Gentian.

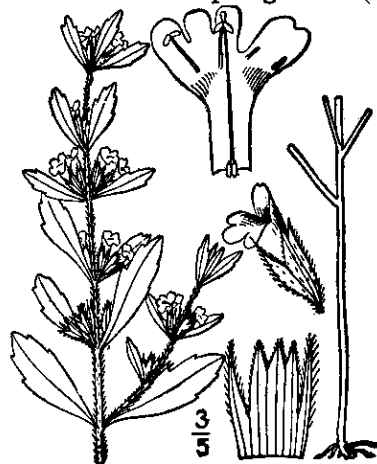


Swertia deflexa J. E. Smith in Rees' Cyclop. no. 8. 1816.
Halenia deflexa Griseb. in Hook. Fl. Bor. Am. 2: 67. pl. 155. 1834.
H. Brentoniana Griseb. in Hook. Fl. Bor. Am. 2: 68. 1834.
H. heterantha Griseb. loc. cit. 1834.
Tetragonanthus deflexus Kuntze, Rev. Gen. Pl. 431. 1891.

Annual or biennial; stem simple or branched, slender, erect, 6'-20' high, usually with long internodes. Basal leaves obovate or spatulate, obtuse, narrowed into petioles; stem-leaves ovate or lanceolate, acute, sessile, 3-5-nerved, 1'-2' long, the uppermost much smaller; calyx-segments lanceolate or spatulate, acute or acuminate; corolla purplish or white, about 4'' high, its lobes ovate, acute, the spurs flexed or descending, one-fourth to one-half the length of the corolla or none; capsule narrowly oblong, 6''-7'' long, about twice as long as the calyx.

In moist woods and thickets, Newfoundland and Labrador to Massachusetts, New York, Saskatchewan, Montana, Michigan and South Dakota. Races differ in size of the plant and of the flowers and in the development of the corolla-spurs. Recorded from the "Indian Territory" (Oklahoma), apparently erroneously. July-Aug.

Hedeoma pulegioides (L.) Pers. American Pennyroyal.

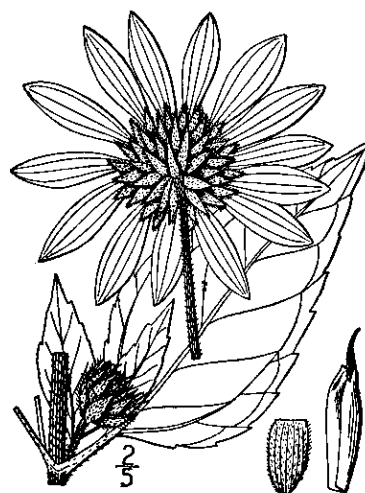


Melissa pulegioides L. Sp. Pl. 593. 1753.
Cunila pulegioides L. Sp. Pl. Ed. 2, 30. 1762.
Hedeoma pulegioides Pers. Syn. 2: 131. 1807.

Annual; stem very slender, erect, much branched, finely soft-pubescent, 6'-18' high, the branches ascending. Leaves ovate to obovate-oblong, petioled, sparingly serrate, mostly obtuse at the apex and narrowed at the base, glabrous, or sparingly pubescent, thin, ½'-1½' long, 2''-8'' wide, the upper smaller; clusters few-flowered, axillary, rather loose; pedicels pubescent, shorter than or equalling the calyx; calyx pubescent, gibbous, oblong-ovoid in fruit, its 3 upper teeth triangular, acute, not exceeding the 2 subulate hispid lower ones; corolla bluish-purple, about 3'' long; rudimentary stamens manifest, capitate at the summit, or rarely anther-bearing.

In dry fields, Cape Breton Island to Ontario and Minnesota, Florida, Alabama, Arkansas and Nebraska. Also called tick-weed and squaw-mint. July-Sept.

Helianthus ánnuus L. Common Sunflower.



Helianthus ánnuus L. Sp. Pl. 904. 1753.
Helianthus lenticularis Dougl. Bot. Reg. pl. 1265. 1829.

Stem hispid or scabrous, stout, branched above, 3°-6° high, or in cultivated races sometimes 15° high. Leaves all but the lower alternate, broadly ovate, petioled, 3-nerved, dentate or denticulate, acute at the apex, rough on both sides, sometimes pubescent beneath, the lower cordate at the base, 3'-12' long; heads in the wild plant 3'-6' broad; disk dark purple or brown, 10''-2'' broad; involucre depressed, its bracts ovate to ovate-lanceolate, usually long-acuminate or aristate, hispid-ciliate; chaff of the flat receptacle 3-cleft; achenes obovate-oblong, appressed-pubescent, or nearly glabrous.

On prairies, etc., Minnesota to North Dakota, Idaho, Missouri, Texas and California. Recorded north to Saskatchewan. Much larger in cultivation; an occasional escape in the east. Golden. Larea-bell. Comb-flower. Its flowers yield honey and a yellow dye; its leaves fodder, its seeds, an oil and food; and its stalks a textile fibre. July-Sept.

Helianthus Maximiliàni Schrad. Maximilian's Sunflower.



Helianthus Maximiliani Schrad. Ind. Sem. Hort. Goett. 1835.

Perennial by fleshy roots and thickened rootstocks; stems stout, scabrous or hispid below, 2°-12° high. Leaves sessile or short-petioled, long-lanceolate, folding in drying, alternate or the lower opposite, very rough on both sides, rigid, acuminate or acute at both ends, denticulate or entire, 3'-7' long, ½'-1½' wide; heads few or numerous, 2'-3' broad on stout densely rough-pubescent peduncles; involucre hemispheric, its bracts lanceolate, acuminate, squarrose, densely strigose-pubescent, often 9'' long; disk yellowish; rays 15-30; chaff linear, acute, pubescent above; achenes linear-oblong, glabrous or nearly so; pappus commonly of 2 lanceolate awns.

On dry prairies, Minnesota and Manitoba to Saskatchewan, Missouri, Nebraska and Texas. Locally adventive eastward. Aug.-Oct.

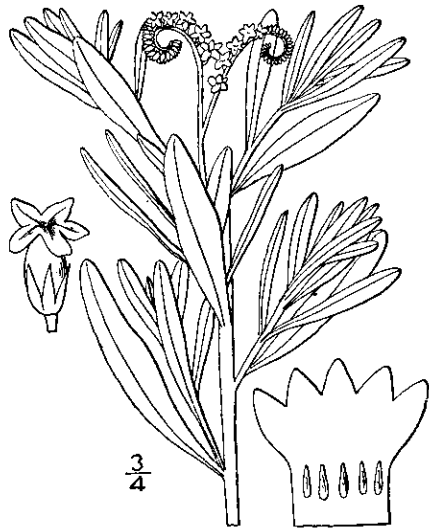
Helianthus petiolàris Nutt. Prairie Sunflower.

H. petiolaris Nutt. Journ. Acad. Phila. 2: 115. 1821.
H. aridus Rydb. Bull. Torr. Club 32: 127. 1905.

Annual, similar to the preceding species, but smaller and with smaller heads; stem strigose-hispid or hirsute, 1°-3° high. Leaves all but the lowest alternate, petioled, oblong, ovate, or ovate-lanceolate, rough on both sides, usually paler beneath than above, sometimes canescent beneath, 1'-3' long, entire, or denticulate, obtuse or acutish at the apex, mostly narrowed at the base; heads 1½'-3' broad; disk brown, mostly less than 10'' broad; involucre depressed-hemispheric, its bracts lanceolate or oblong-lanceolate, densely canescent, sometimes hispid-ciliate, acute or short-acuminate; achenes villous-pubescent, at least when young.

On dry prairies, Minnesota to Saskatchewan, Oregon, Iowa, Missouri, Texas and California. Found rarely in waste places farther east. Races differ in leaf-form, size and pubescence. June-Sept.





Heliotropium curassavicum L.

Seaside Heliotrope.

Heliotropium curassavicum L. Sp. Pl. 130. 1753.

Annual, fleshy, glabrous throughout, more or less glaucous, branched, diffuse, the branches 6'-18' long. Leaves linear, or linear-oblong, entire, very inconspicuously veined, 1'-2' long, 1 1/2"-3" wide, obtuse at the apex, narrowed into petioles, or the upper sessile, sometimes with smaller ones fascicled in the axils; scorpioid spikes densely flowered, bractless, mostly in pairs; flowers about 2" broad; calyx-segments lanceolate, acute; corolla white with a yellow eye or changing to blue; stigma umbrella-shaped; anthers acuminate; fruit globose, at length separating into 4 nutlets.

On sandy seashores, Delaware to Texas and Mexico. Widely distributed in saline and maritime soil in the West Indies, South America and the Old World. In ballast about the northern seaports. May-Sept.

Heterotheca subaxillaris (Lam.) Britton & Rusby. Heterotheca.



Inula subaxillaris Lam. Encycl. 3: 259. 1799.

Heterotheca Lamarckii Cass. Dict. Sci. Nat. 21: 131. 1821.

Heterotheca subaxillaris Britton & Rusby, Trans. N. Y. Acad. Sci. 7: 10. 1887.

Biennial or sometimes annual, 1°-3° high. Basal and lower leaves petioled, ovate or oblong, 2'-3' long, the upper ones oblong, sessile or clasping, smaller, all acutish or obtuse, dentate; heads rather numerous, 6"-9" broad; involucre nearly hemispheric, 3"-5" high, its bracts linear, or slightly dilated above, the inner with scarious margins; rays 10-25; inner bristles of the pappus of the disk-flowers about 2" long.

In dry soil, Delaware to Florida, Louisiana, Kansas, Arizona and Mexico. In ballast, at Philadelphia. July-Sept.

Hieracium venosum L. Rattlesnake-weed. Poor Robin's Plantain.



Hieracium venosum L. Sp. Pl. 800. 1753.

Stems solitary or several from the same root, slender, glabrous, or with a few hispid hairs near the base, or also above, leafless or with 1-3 leaves, paniculately branched above, 1°-3° high. Basal leaves tufted, spreading on the ground, obovate, oval or oblong-spatulate, mostly obtuse, narrowed at the base, sessile or petioled, 1'-4" long, 1/2"-1 1/2" wide, usually purple-veined, glabrous or more or less hirsute, pale beneath, some or all of them glandular-denticulate; heads commonly numerous, 5"-8" broad, 15-40-flowered, slender-peduncled; peduncles glabrous, or slightly glandular; involucre about 3" high, its principal bracts in 1 series, glabrous or nearly so, with a few short outer ones; achenes columnar, truncate; pappus brown, not copious.

Dry woods and thickets, Maine to Ontario and Manitoba, south to Georgia, Kentucky and Nebraska. Ascends to 4200 ft. in North Carolina. Early or vein-leaf hawkweed. Striped bloodwort. Snake-plantain. Hawkbit. Adder's-tongue. May-Oct.

Helianthus tuberosus L. Jerusalem Artichoke. Earth Apple.



Helianthus tuberosus L. Sp. Pl. 905. 1753.

Helianthus tuberosus subcanescens A. Gray, Syn. Fl. 1: Part 2, 280. 1884.

Perennial by fleshy thickened rootstocks, bearing tubers; stems hirsute or pubescent, branched above, 6°-12° high. Leaves ovate or ovate-oblong, rarely ovate-lanceolate, firm, 3-nerved near the base, narrowed, or the lower rounded, truncate or subcordate at the base, acuminate at the apex, rather long-petioled, scabrous above, finely pubescent or canescent beneath, serrate, 4'-8' long, 1 1/2'-3' wide, the upper alternate, the lower opposite; heads several or numerous, 2'-3 1/2' broad; involucre hemispheric, its bracts lanceolate, acuminate, hirsute or ciliate, squarrose; disk yellow; rays 12-20; chaff of the receptacle acute and pubescent at the summit; achenes pubescent.

In moist soil, Nova Scotia and Ontario to Manitoba, Georgia and Arkansas and Kansas. Often occurs along roadsides in the east, a relic of cultivation by the aborigines. Now extensively grown for its edible tubers. Canada potato. Girasole. Topinambour. Sept-Oct.

Hydrophyllum virginianum L.

Virginia Water-leaf.

H. virginianum L. Sp. Pl. 146. 1753.

Perennial by scaly rootstocks; stems slender, glabrous or nearly so, simple or sparingly branched, ascending or erect, rather weak, 1°-3° long. Lower and basal leaves long-petioled, 6'-10' long, pinnately divided into 5-7 oblong ovate or ovate-lanceolate, acute or acutish, sharply toothed or incised segments 1'-2' long, glabrous or with few scattered hairs; upper leaves similar, short-petioled, smaller, with fewer segments; cymes slender-peduncled, simple or forked, dense or at length open; flowers white or violet, purple, darkest at high altitudes, short-pedicelled; pedicels strigose-pubescent; calyx-segments narrowly linear, hispid, spreading, the sinuses not appendaged; corolla about 4" long, its segments erect; capsule globose, nearly 2" in diameter.

In woods, Quebec to Ontario, South Dakota, South Carolina and Kansas. Ascends to 5000 ft. in North Carolina. Brook-flower. May-Aug.



Hyoscyamus niger L. Black Henbane. Hog's-bean.

Hyoscyamus niger L. Sp. Pl. 179. 1753.

Annual or biennial, villous and viscid, of an ill odor; stem stout, 1°-2½° high. Leaves ovate, lanceolate, or oblong in outline, 3'-7' long, acute or acuminate at the apex, sessile, or the upper clasping the stem, irregularly lobed, cleft or pinnatifid; flowers very short-pedicelled, 1'-2' broad; calyx-lobes triangular-ovate, acute; corolla greenish-yellow, strongly reticulated with purple veins, its lobes ovate, obtusish; capsule globose-oblong, about 5" high.

In waste places, Nova Scotia to Ontario, New York and Michigan. Naturalized from Europe. Fetid nightshade. Insane-root. Belene. Chenile. Poison-tobacco. June-Sept.

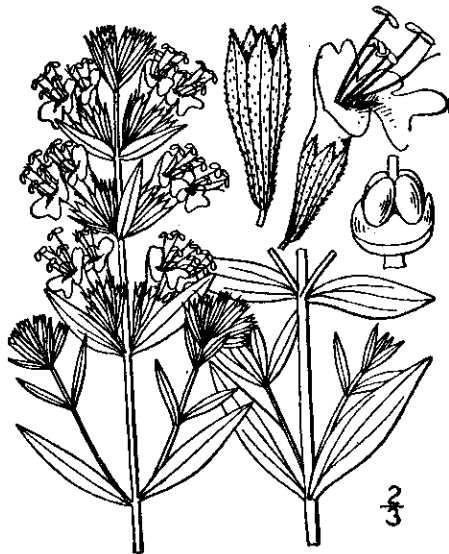


Hyssopus officinalis L. Hyssop.

Hyssopus officinalis L. Sp. Pl. 569. 1753.

Stems usually several together from the woody base, slender, strict, puberulent, simple or branched, 1°-3° high, the branches upright or ascending. Leaves linear to oblong, sessile or very nearly so, firm, acute at both ends or the lower obtuse at the apex, puberulent or glabrate, faintly veined, 1½'-2' long, 1"-3" wide, sometimes with smaller ones or short leafy branches in their axils; spike sometimes 1-sided, dense, ½'-1' broad; pedicels short, puberulent; outer bracts as long as the calyx; calyx-teeth lanceolate, acute, one-fourth to one-third as long as the tube; corolla 4"-5" long, its tube exceeding the calyx.

Along roadsides and in waste places, Ontario and Maine to North Carolina, and on the Pacific Coast. Naturalized from Europe. June-Sept.



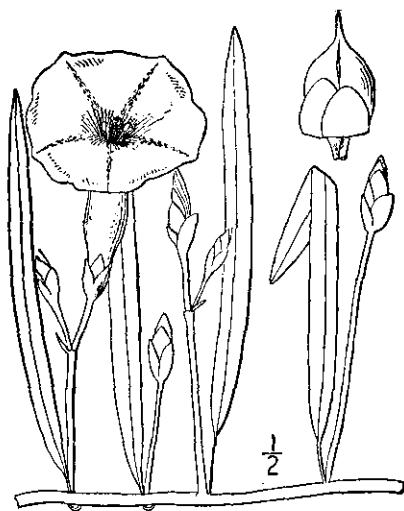
Inula Helènum L. Elecampane. Horseheal.

Inula Helenium L. Sp. Pl. 881. 1753.

Stems tufted from large thick roots, simple or rarely somewhat branched, 2°-6° high, densely pubescent above. Leaves large, broadly oblong, rough above, densely pubescent beneath, denticulate, the basal ones acute at each end, long-petioled, 10'-20' long, 4'-8' wide; stem leaves sessile, or cordate-clasping at the base, acute at the apex, smaller; heads solitary or few, terminal, stout-peduncled, 2'-4' broad; involucre hemispheric, nearly 1' high, its outer bracts ovate, foliaceous, pubescent; rays numerous, linear; achenes glabrous, 4-sided.

Along roadsides and in fields, Nova Scotia to Ontario and Minnesota, south to North Carolina and Missouri. Naturalized from Europe. Native also in Asia. Scabwort. Horse-elder. Yellow starwort. Elf-dock. Elfwort. Wild sunflower.





***Ipomoea leptophylla* Torr.**

Bush Morning-glory.

Ipomoea leptophylla Torr. in Frem. Rep. 95. 1845.

Perennial from an enormous root, which sometimes weighs 25 lbs., glabrous throughout; stems erect, ascending or reclining, rather stout, 2°-4° long, much branched. Leaves narrowly linear, entire, acute, 2'-5' long, 1"-3" wide; petioles very short; peduncles stout, nearly erect, usually shorter than the leaves, 1-4-flowered; pedicels shorter than the peduncles; sepals broadly ovate, obtuse, 3"-4" long, or the outer shorter; corolla funnelform, purple or pink, about 3' long, the limb scarcely lobed; capsule ovoid, acute, 8"-12" long, 2-celled, much longer than the sepals; seeds pubescent.

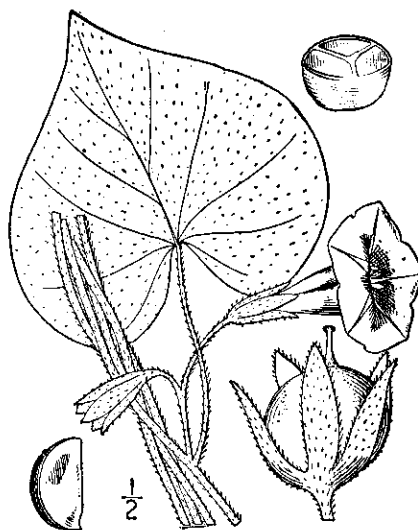
In dry soil, South Dakota to Nebraska, Wyoming, Texas and New Mexico. Man-root. May-July.

***Ipomoea purpurea* (L.) Lam. Morning-glory.**

Convolvulus purpureus L. Sp. Pl. Ed. 2, 219. 1762.
Ipomoea purpurea Lam. Tabl. Encycl. 1: 466. 1791.
Pharbitis purpurea Voigt. Hort. Sub. Calcutta 354. 1845.

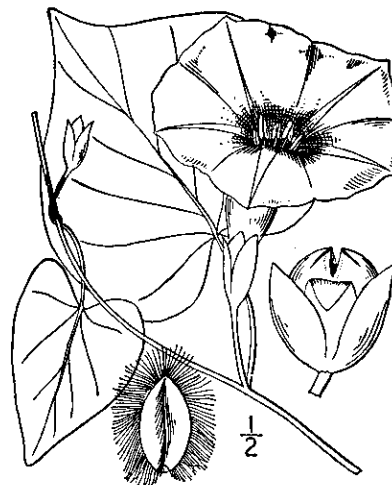
Annual, pubescent; stem retrorsely hairy, twining or trailing, 4°-10° long. Leaves broadly ovate, deeply cordate, acute or acuminate, 2'-4' wide, slender-petioled; peduncles slender, 1-5-flowered, often longer than the petioles; sepals lanceolate or oblong, acute, pubescent or hirsute near the base, 6"-8" long; corolla funnelform, blue, purple, pink, variegated or white, 2'-2½' long; ovary 3-celled (rarely 2-celled); stigmas 3 (rarely 2); capsule depressed-globose, about 5" in diameter, shorter than the sepals.

In waste places, commonly escaped from gardens, Nova Scotia to Florida, west to Ontario, Nebraska and Texas. There is a double-flowered form in cultivation. Adventive or naturalized from tropical America. Ropewind. July-Oct.



***Ipomoea pandurata* (L.) Meyer. Wild Potato Vine.**

Convolvulus panduratus L. Sp. Pl. 153. 1753.
I. pandurata Meyer, Prim. Fl. Esseq. 100. 1818.



Perennial from an enormous fleshy root, glabrous or puberulent; stems trailing or feebly climbing, 2°-12° long. Leaves broadly ovate, cordate, acuminate at the apex, 2'-6' long, slender-petioled, entire, sometimes contracted in the middle, or some of the later ones rarely angulate-dentate or 3-lobed; peduncles 1-5-flowered, much elongated in fruit; sepals oblong, obtuse or acutish, 6"-8" long, glabrous; corolla funnelform, white, or with pinkish purple stripes in the throat, 2'-3' long, the limb 5-lobed; ovary 2-celled; capsule ovoid, 2-valved, 2-4-seeded, the seeds densely woolly on the margins and pubescent on the sides.

In dry soil, in fields or on hills, Ontario to Connecticut, Florida, Michigan, Kansas and Texas. Occurs rarely with double flowers. Man-of-the-Earth. Mecha-meck (Indian). Wild sweet potato. Man-root. Wild jalap. Scammony. May-Sept.

***Lactuca canadensis* L.**

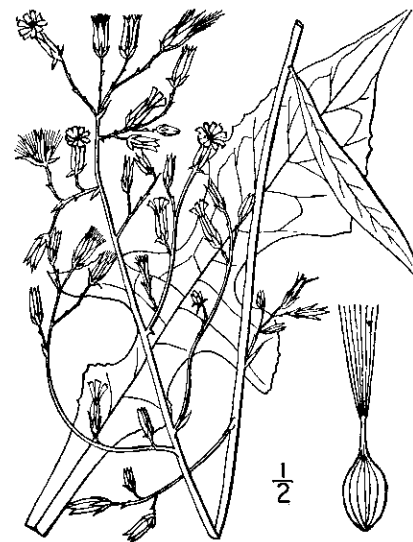
Wild or Tall Lettuce. Wild Opium.

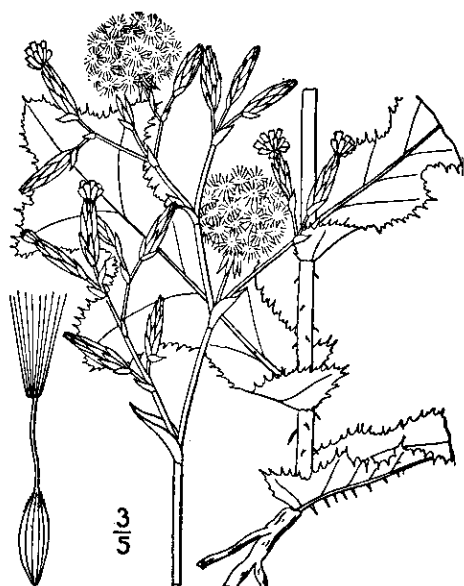
Lactuca canadensis L. Sp. Pl. 796. 1753.
Lactuca elongata Muhl.; Willd. Sp. Pl. 1525. 1804.
Lactuca canadensis montana Britton, in Britton and Brown, Ill. Fl. 3: 274. 1898.

Biennial or annual, glabrous throughout, somewhat glaucous; stem leafy up to the inflorescence, 3°-10° high, branching above into a narrow panicle. Leaves mostly sinuate-pinnatifid, those of the stem sessile or auriculate-clasping, 2'-8' long, the uppermost smaller, often lanceolate, acuminate and entire, sometimes all lanceolate and entire, the basal often 12' long, narrowed into petioles; heads numerous, 2"-3" broad; involucre cylindric, 4"-6" high, its outer bracts shorter than the inner; rays yellow; achenes oval, flat, about as long as the filiform beak; pappus white.

In moist, open places, Nova Scotia to British Columbia, Georgia, Alabama, Louisiana, Arkansas and Colorado. Santo Domingo. Trumpetweed, trumpet-milkweed, trumpets, and fire-weed. Butter- or horse-weed. Devil's-weed. Devil's-iron-weed. June-Nov.

Lactuca Mörssii Robinson, with blue rays, and achenes 3 or 4 times longer than their filiform beaks, may be a hybrid with *L. spicata*.





Lactuca serriola L.

Prickly or Wild Lettuce.

Lactuca virosa L. Sp. Pl. 795. 1753.

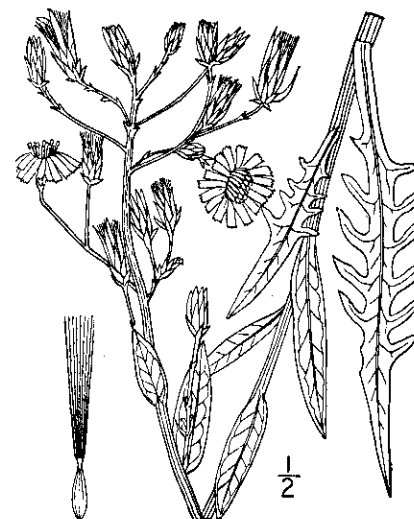
Lactuca Serriola L. Cent. Pl. 2: 29. 1756.

Lactuca Scariola L. Sp. Pl. Ed. 2, 1119. 1763.

Biennial, green and glaucous; stem stiff, leafy, usually paniculately branched, glabrous throughout, or bristly-hirsute at the base, 2°-7° high. Leaves oblong or oblong-lanceolate, spinulose-margined, denticulate or pinnatifid, sessile or auriculate-clasping, the lowest sometimes 10' long and 3' wide, the upper much smaller; midrib spinulose or hispid; heads 2"-4" broad, 6-12-flowered; very numerous in an open panicle; involucre cylindric, 1"-1½" thick, its outer bracts about one-third the length of the inner; rays yellow; achenes obovate-oblong, about as long as the filiform beak; pappus white.

In fields and waste places, Vermont to Georgia, west to the Pacific Coast. A troublesome weed. Naturalized from Europe. Consists of several

racess, differing in the form, lobing and position of the leaves. Aug.-Sept. Milk- or horse-thistle.



Lactuca tatarica var. *pulchella* (Pursh) Breitung

Large-flowered Blue Lettuce.

Sonchus pulchellus Pursh, Fl. Am. Sept. 502. 1814.

Lactuca integrifolia Nutt. Gen. 2: 124. 1818.

Lactuca pulchella DC. Prodr. 7: 134. 1838.

Perennial, glabrous throughout, somewhat glaucous; stem rather slender, leafy up to the corymbose-paniculate inflorescence, 1°-3° high. Leaves linear-lanceolate, lanceolate or oblong, acute, entire, dentate, lobed or pinnatifid, those of the stem sessile or partly clasping, 2'-8" long; 2"-18" wide, the lowest and basal ones sometimes petioled; heads mostly numerous, 6"-10" broad; branches and peduncles scaly; involucre well imbricated, 8"-10" high, its outer bracts successively shorter, ovate-lanceolate; rays bright blue or violet; achenes oblong-lanceolate, flat, twice as long as their tapering beaks; pappus white.

In moist soil, western Ontario to British Columbia, Michigan, Iowa, Kansas, New Mexico and California. June-Sept.

Lamium maculatum L. Spotted Dead Nettle. Variegated Dead Nettle.

Lamium amplexicaule L. Henbit.
Greater Henbit. Henbit Dead Nettle.

Lamium amplexicaule L. Sp. Pl. 579. 1753.

Biennial or annual, sparingly pubescent; stems branched from the base or also from the lower axils, slender, ascending or decumbent, 6'-18" long. Leaves orbicular or nearly so, coarsely crenate, ½'-1½" wide, rounded at the apex, the lower slender-petioled, mostly cordate, the upper sessile and more or less clasping; flowers rather few in axillary and terminal clusters; calyx pubescent, its teeth erect, nearly as long as the tube; corolla purplish or red, 6"-8" long, its tube very slender, the lateral lobes of its lower lip very small, the middle one spotted; upper lip somewhat pubescent; flowers sometimes cleistogamous.

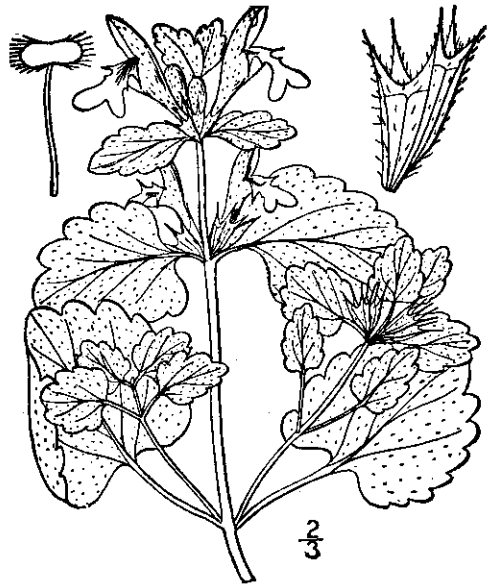
In waste and cultivated ground, New Brunswick to Ontario, Minnesota, British Columbia, Florida, Arkansas and California and in Bermuda and Jamaica. Naturalized from Europe. Native also of Asia. Feb.-Oct.



L. maculatum L. Sp. Pl. Ed. 2, 809. 1763.

Perennial, somewhat pubescent; stems mostly slender, commonly branched; decumbent or ascending, 8'-13" long. Leaves crenate or incised-crenate, all petioled, usually longitudinally blotched along the midrib, broadly ovate or triangular-ovate, acute or obtuse, truncate or cordate at the base, 1'-2" long, or some of the lower ones much smaller and nearly orbicular; clusters few-flowered, mainly axillary; calyx-teeth lanceolate-subulate, as long as or longer than the tube, spreading; corolla 10"-12" long, purple-red, its tube short, contracted near the base, with a transverse ring of hairs within, the lateral lobes of its lower lip very small.

Along roadsides, escaped from gardens, Maine and Vermont to Virginia. Native of Europe and Asia. May-Oct.

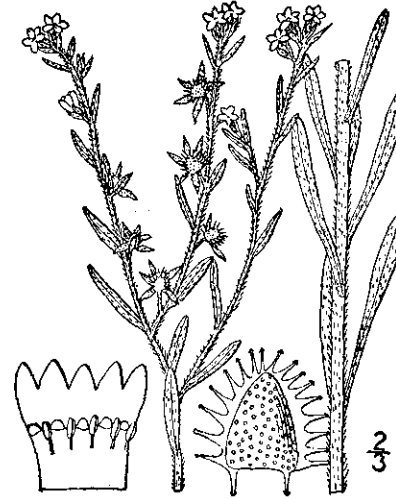


Lamium purpureum L. Red Dead Nettle.

Lamium purpureum L. Sp. Pl. 579. 1753.

Annual, slightly pubescent, branched from the base and sometimes also above; stems stout or slender, decumbent, 6'-18' long. Leaves crenate or crenulate, the lower orbicular or broadly ovate, slender-petioled, rounded at the apex, cordate at the base, the upper ovate, short-petioled, sometimes acute at the apex, 3'-14' long; flowers in axillary and terminal clusters; calyx teeth narrowly lanceolate, acuminate, slightly longer than the tube, spreading, at least in fruit; corolla purple-red, rarely exceeding 1/2 long, its tube rather stout, the lateral lobes of its lower lip reduced to 1 or 2 short teeth, its middle lobe spotted; upper lip very pubescent.

In waste and cultivated soil, Newfoundland to Pennsylvania, North Carolina and Missouri. Also in ballast about the northern seaports. Naturalized or adventive from Europe. Native also of Asia. Old names, red or sweet archangel; day-, dog-, french- or deaf-nettle. Rabbit-meat. April-Oct.



Lappula texana (Scheele) Britton. Hairy Stickseed.

Cynoglossum pilosum Nutt. Gen. 1: 114. 1818. Not R. & P. 1794.

Echinosperrnum texanum Scheele, Linnæa 25: 260. 1852.

Echinosperrnum Redowskii var. *cupulatum* A. Gray in Brewer & Wats. Bot. Cal. 1: 530. 1876.

Lappula texana Britton, Mem. Torr. Club 5: 273. 1894.

L. Redowskii occidentalis Rydb. Contr. Nat. Herb. 3: 170. 1895.

Annual, similar to the preceding species, 6'-2° high, paniculately branched, the branches ascending or erect. Leaves linear or linear-oblong, mostly obtuse, the lower narrowed into petioles; racemes leafy-bracted; pedicels short, not deflexed in fruit; flowers about 1" broad; nutlets papillose-tuberculate on the back, the margins armed with a single row of flat, usually more or less confluent bristles, or these united into a cup.

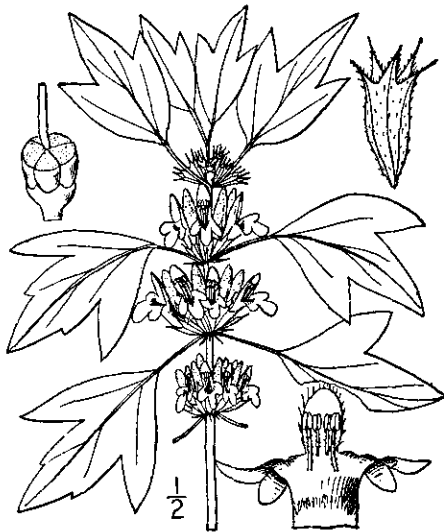
In dry soil, Ontario to Manitoba, British Columbia, south to Nebraska, Texas and Arizona. Found also in ballast at Atlantic seaports. Nutlets with nearly distinct bristles and others with bristles united into a cup sometimes occur on the same fruit. April-Aug.

Leonurus Cardiaca L. Motherwort.

Leonurus Cardiaca L. Sp. Pl. 584. 1753.

Perennial, puberulent; stem rather stout, strict, commonly branched, 2°-5° tall, the branches straight and ascending. Leaves membranous, slender-petioled, the lower nearly orbicular, palmately 3-5-cleft, 2'-4' broad, the lobes acuminate, incised or dentate; upper (floral) leaves narrower, oblong-lanceolate or rhombic, 3-cleft, or the uppermost merely 3-toothed; flower-clusters numerous, exceeded by the petioles; calyx-teeth lanceolate, subulate, somewhat spreading, nearly as long as the tube; corolla pink, purple or white, 3"-5" long, its tube with an oblique ring of hairs within, its upper lip slightly concave, densely white-woolly without, the lower lip mottled; anther-sacs parallel.

In waste places, Nova Scotia to North Carolina, South Dakota, Montana, Kansas and Utah. Naturalized from Europe. Native also of Asia. Also called cowwort. Lion's-ear. June-Sept.

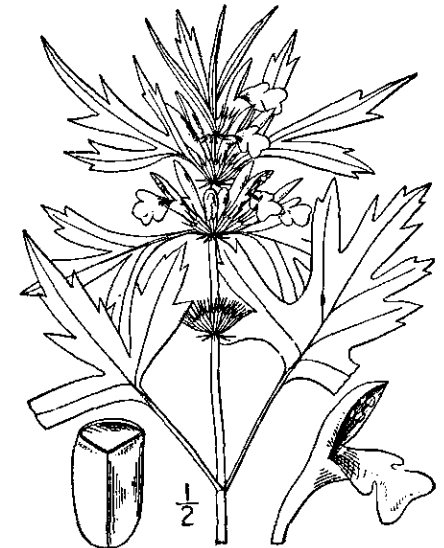


Leonurus sibiricus L. Siberian Motherwort or Lion's-tail.

Leonurus sibiricus L. Sp. Pl. 584. 1753.

Biennial, puberulent or glabrate; stem stout, branched, 2°-6° high, the branches slender. Leaves long-petioled, deeply 3-parted into ovate or lanceolate, more or less cuneate, acute or acuminate deeply cleft and incised segments, the lobes lanceolate or linear, acute; lower leaves sometimes 6' wide, the uppermost linear or lanceolate, slightly toothed or entire; clusters numerous, dense, usually all axillary; calyx campanulate, 3" long, glabrous or minutely puberulent, its bristle-shaped teeth slightly spreading, shorter than the tube; corolla purple or red, densely puberulent without, 4"-6" long, its tube naked within, the upper lip arched; anther-sacs divergent.

In waste and cultivated soil, southern Pennsylvania and Delaware. Bermuda. Naturalized from eastern Asia. Widely distributed in tropical America as a weed. May-Sept.





Leucanthemum vulgare Lam.

White-weed. White, Field or Ox-eye Daisy.

C. Leucanthemum L. Sp. Pl. 388. 1753.
Leucanthemum vulgare Lam. Fl. Fr. 2: 137. 1778.

Perennial; stems glabrous, or sparingly puberulent, simple or little branched, 1°-3° high, often tufted, the branches nearly erect. Basal leaves obovate, oblong, or spatulate, coarsely dentate, incised or pinnatifid, narrowed into long slender petioles; stem leaves mostly sessile and partly clasping, 1'-3' long, linear-spatulate or linear, pinnately incised or toothed, the uppermost very small and nearly entire; heads few or solitary, 1'-2' broad, on long naked peduncles; rays 20-30, white, spreading, slightly 2-3-toothed; bracts of the involucre oblong-lanceolate, obtuse, mostly glabrous, with scarios margins and a brown line within the margins; pappus none.

In pastures, meadows and waste places, common throughout our area as a weed, but less abundant in the south and west. Bermuda. Naturalized from Europe. Native also of Asia.

Rays rarely short and tubular. Disk bright yellow. May-Nov.

Liatris punctata Hook.

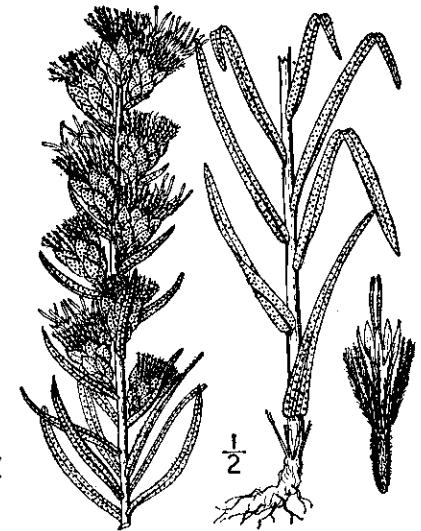
Dotted Button-Snakeroot.

Liatris punctata Hook. Fl. Bor. Am. 1: 306. pl. 55. 1833.

Lacinaria punctata Kuntze, Rev. Gen. Pl. 349. 1891.

Glabrous, or sparingly pubescent, 6'-30' high; root-stock stout, branching, or globose. Leaves linear, rigid, very punctate, 2'-6' long, about 1" wide, or the lower 2", the upper gradually shorter, all erect or ascending; heads 3-6-flowered, 6"-8" long, sessile, crowded into a dense spike; spike commonly leafy below; involucre narrowly campanulate, acute or acutish at the base, its bracts oblong, cuspidate or acuminate, often ciliate on the margins, sometimes woolly, imbricated in 4 or 5 series; flowers purple; pappus very plumose.

In dry soil, Minnesota to Manitoba, Saskatchewan, Montana, Missouri, Texas, New Mexico and Sonora. Recorded from Ohio. Aug.-Oct.



Liatris scariosa (L.) Willd. Large Button-Snakeroot.

Serratula scariosa L. Sp. Pl. 818. 1753.
Lacinaria scariosa Hill, Hort. Kew. 70. 1769.
Liatris scariosa Willd. Sp. Pl. 3: 1635. 1804.
Liatris squarrulosa Michx. Fl. Bor. Am. 2: 92. 1803.

Finely pubescent, at least above, 1°-6° high. Lower leaves oblanceolate, spatulate or oblong-lanceolate, narrowed into a margined petiole, acute or obtusish at the apex, often 1° long and 1½' wide; upper leaves linear or linear-lanceolate, acute, or sometimes very obtuse, much smaller, all densely punctate; heads hemispheric, ½'-1' broad, 15-45-flowered, on stout peduncles 2"-2' long, or sometimes sessile; bracts of the involucre imbricated in 5 or 6 series, spatulate-linear, oblanceolate or obovate, rounded at the apex, appressed, their tips dry and scarios, often colored; flowers bluish purple; pappus barbellate.

In dry soil, Maine to Florida, western Ontario, Manitoba, Nebraska and Texas. Consists of many races, differing in leaf-form and size of heads. Called also blue blazing-star, gray feather, rattle-snake-master, devil's-bite. Aug.-Sept.



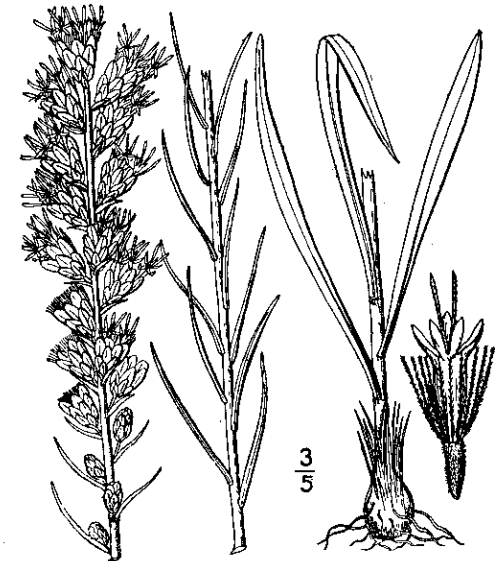
Liatris spicata (L.) Willd.

Dense Button-Snakeroot. Gay Feather. Devil's Bit.

Serratula spicata L. Sp. Pl. 819. 1753.
Liatris spicata Willd. Sp. Pl. 3: 1636. 1804.
 ?*Liatris pumila* Lodd. Bot. Cab. pl. 147. 1821.
L. spicata Kuntze, Rev. Gen. Pl. 349. 1891.

Glabrous or nearly so, 2°-6° high. Lower leaves linear-lanceolate or linear-oblong, usually blunt-pointed, sometimes 1° long and 5" wide, the upper linear or even subulate, somewhat or obscurely punctate; spike generally dense, 4'-15' long; heads short-oblong or cylindric, 5-13-flowered, 2"-4" broad, mostly sessile; involucre subcampanulate, rounded or obtuse at the base, its bracts appressed, oblong, obtuse and scarios-margined at the apex, obscurely punctate, imbricated in 4-6 series; flowers blue-purple, occasionally white; pappus roughened or barbellate.

In moist soil, Massachusetts to Florida, Ontario, Wisconsin, Kentucky, Louisiana and Arizona. Called also rough- or backache-root, throat-wort, prairie-pine, colic-root. Aug.-Oct.



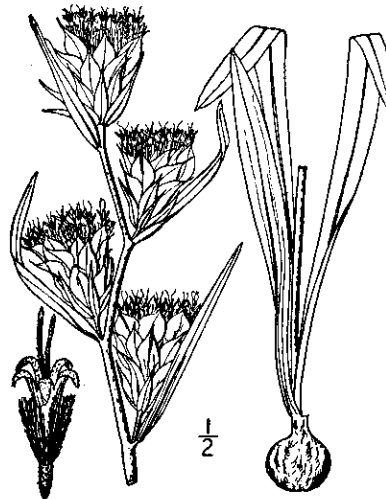
Liatris squarrosa (L.) Michx.

Scaly Blazing Star. Colic-root.

Serratula squarrosa L. Sp. Pl. 818. 1753.
Lacinaria squarrosa Hill, Hort. Kew. 70. 1769.
Liatris squarrosa Willd. Sp. Pl. 3: 1634. 1804.
Liatris intermedia Lindl. Bot. Reg. pl. 948. 1825.
Lacinaria squarrosa intermedia Porter, Mem. Torr. Club 5: 314. 1894.
Liatris squarrosa var. *intermedia* DC. Prodr. 5: 129. 1836.

Usually stout, $\frac{1}{2}$ °-2° high, pubescent or glabrous. Leaves narrowly linear, rigid, sparingly punctate, 3'-6' long, 1"-2 $\frac{1}{2}$ " wide; heads sessile or short-peduncled, 15-60-flowered, usually few, or sometimes solitary. $\frac{1}{2}$ '-1 $\frac{1}{2}$ ' long, 4"-8" thick; bracts of the involucre imbricated in 5-7 series, lanceolate, rigid, acuminate, glabrous or pubescent, their tips more or less spreading when old; flowers purple; pappus very plumose.

In dry soil, western Ontario to Pennsylvania, Virginia, Florida, South Dakota, Nebraska and Texas. Called also rattlesnake-master. Races differ in pubescence and in size of the heads. June-Sept.



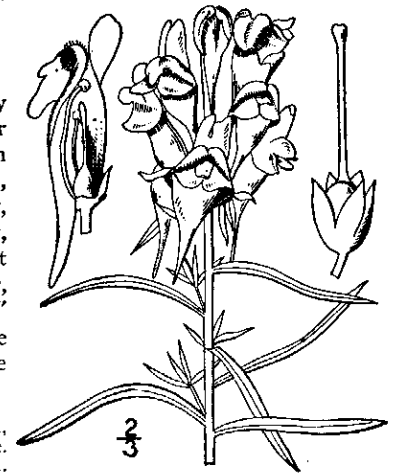
Linaria vulgaris P. Mill. Butter-and-Eggs.

Antirrhinum Linaria L. Sp. Pl. 616. 1753.
Linaria vulgaris Hill, Brit. Herb. 108. 1756.
Linaria Linaria Karst. Deutsch. Fl. 947. 1880-83.

Perennial by short rootstocks, pale green and slightly glaucous; stems slender, erect, very leafy, glabrous, or sparingly glandular-pubescent above, simple or with few erect branches, 1°-3° high. Leaves linear, sessile, entire, acute at both ends, mostly alternate, $\frac{1}{2}$ '-1 $\frac{1}{2}$ ' long, 1"-1 $\frac{1}{2}$ " wide; flowers densely racemose, light yellow, 1'-1 $\frac{1}{2}$ ' long, the spur of the erect corolla somewhat darker, the palate orange-colored; pedicels 2"-4" long, nearly erect; calyx-segments oblong, acutish, about 1 $\frac{1}{2}$ " long; spur subulate, nearly as long as the body of the corolla; middle lobe of the lower lip shorter than the other two; capsule ovoid, the seeds rugose, winged.

In fields and waste places, Newfoundland to Oregon, Virginia and New Mexico. Naturalized from Europe. Native also of Asia. June-Oct. Brideweed. Flaxweed.

Eggs and bacon. Yellow toad-flax. Impudent lawyer. Jacob's-ladder. Rancid. Wild flax or tobacco. Devil's flax. Snap-dragon. Devil's-flower. Dead men's bones. Bread and butter. Continental weed. Gallwort. Rabbit-flower. Widely distributed in temperate regions as a weed.



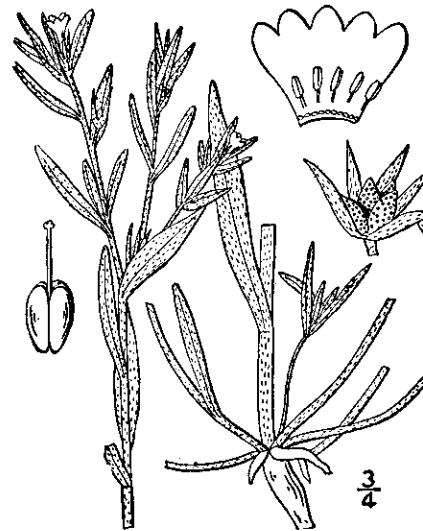
Linnaea borealis L.

Twin-flower.

Linnaea americana Forbes, Hort. Woburn. 135. 1825.
L. borealis var. *americana* Rehder, Rhodora 6: 56. 1904.

Branches slender, slightly pubescent, trailing, 6'-2° long. Petioles 1"-2" long; leaves obscurely crenate, thick, 3"-8" wide, sometimes wider than long; peduncles slender, erect, 2-bracted at the summit, 2-flowered (or rarely proliferously 4-flowered); pedicels filiform, 3"-10" long, 2-bracteolate at the summit; flowers nodding, 4"-6" long, fragrant; corolla funnelform; calyx-segments about 1" long; ovary subtended by a pair of ovate glandular scales which are connivent over the fruit or adnate to it.

In cold woods, mountains of Maryland, New Jersey, Long Island, north to Newfoundland, west through British America to Alaska and Vancouver, south to Michigan, in the Rocky Mountains to Colorado and in the Sierra Nevada to California. Has been considered identical with the similar *L. borealis* L. of Europe and Asia, which has a nearly bell-shaped corolla and longer calyx. Twin sisters. Two-eyed berries. June-Aug.



Lithospermum arvense L. Bastard Alkanet. Corn Gromwell.

Lithospermum arvense L. Sp. Pl. 132. 1753.

Annual or biennial, appressed-pubescent; stem erect, usually branched, 6'-20' high. Leaves bright green, lanceolate, linear or linear-oblong, sessile or the lowest short-petioled, mostly appressed, obtuse or acutish at the apex, narrowed at the base, indistinctly veined, $\frac{1}{2}$ '-1 $\frac{1}{2}$ ' long, $\frac{1}{2}$ '-3" wide, the uppermost smaller; flowers sessile or very nearly so in the spikes, becoming distant, white, about 3" long; calyx-segments linear-lanceolate, longer than or equalling the corolla-tube; corolla funnelform, puberulent in the throat but not crested; nutlets brown, wrinkled and pitted, glabrous, about 1" high, convex on the back, keeled on the inner side, one-third to one-half the length of the calyx-segments.

In waste places and fields, Quebec to Ontario and Michigan, south to Georgia and Kansas. Naturalized from Europe. Native also of Asia. Pearl-plant. Salfern-stoneseed. May-Aug.



Lithospermum officinale L. Gromwell.

Lithospermum officinale L. Sp. Pl. 132. 1753.

Perennial, finely puberulent; stem usually much branched, 2°-4° high, leafy. Leaves lanceolate or oblong-lanceolate, acute at the apex, narrowed at the base, few-veined, sessile, 1½'-4' long, 3"-12" wide, the upper surface rough, the lower pubescent; flowers yellowish-white, about 2" long, sessile; calyx-segments linear-lanceolate, about equaling the corolla-tube; corolla funnellform, crested in the throat; style about as long as the stamens; nutlets, when mature, white, smooth, shining, about 1½" high, ovoid, obtuse, more than one-half as long as the calyx-segments, seldom all ripening.

In fields and waste places, Quebec to southern New York, New Jersey and Minnesota. Plant grayish. Naturalized from Europe. Native also of Asia. Graymile. Littlewale. Pearl-plant. May-Aug.



**Lobelia cardinalis L. Cardinal-flower.
Red Lobelia. Red Betty.**

Lobelia cardinalis L. Sp. Pl. 930. 1753.

Perennial by offsets; stem slightly pubescent, or glabrous, leafy, simple or rarely branched, 2°-4½° high. Leaves oblong, oval, ovate-lanceolate, or lanceolate, thin, glabrous or sparingly pubescent, 2'-6' long, ½'-1½' wide, acuminate or acute at both ends, crenulate or denticulate, the upper sessile, the lower petioled; flowers racemose, commonly numerous, bright scarlet or red (rarely white), 1'-1½' long; bracts usually glandular; calyx glabrous or pubescent, its lobes linear, elongated, acute; corolla-tube nearly or quite 1' long; larger anthers glabrous.

In moist soil, New Brunswick to Florida, Ontario, Kansas, Colorado and Texas. Slink-weed. Hog-physic. July-Sept.



**Lobelia inflata L. Indian or Wild
Tobacco. Eyebright.**

Lobelia inflata L. Sp. Pl. 931. 1753.

Annual, pubescent or hirsute, very acrid; stem leafy, commonly paniculately branched, 1°-3° high. Leaves thin, repand-dentate or denticulate, the lower oval or obovate, obtuse, 1'-2½' long, narrowed into short petioles, the upper sessile, oval, oblong, ovate, or ovate-lanceolate, obtuse, or the uppermost acute; flowers light blue, 2"-3" long, usually distant in somewhat spike-like racemes; lower bracts foliaceous, the upper subulate; pedicels 2"-5" long in fruit; calyx glabrous or nearly so, its subulate lobes about as long as the corolla; capsule inflated, 3"-4" long, finely transversely veined between the ribs.

In fields and thickets, usually in dry soil, Labrador to Saskatchewan, Georgia, Kansas and Arkansas. Gag-root. Puke-weed. Asthma-weed. Low-belia. Emetic-weed. Bladder-pod lobelia. July-Nov.

**Lobelia Kalmii L. Brook or Kalm's
Lobelia.**

Lobelia Kalmii L. Sp. Pl. 930. 1753.

Perennial by short offsets, glabrous throughout, or sparingly pubescent below; stem leafy, erect, paniculately branched, rarely simple, slender, 6'-20' high. Lower and basal leaves spatulate, obtuse, narrowed into short petioles, sparingly repand-denticulate, or entire, 6"-12" long, 1½'-2½' wide; upper leaves sessile, usually longer and narrower, linear, linear-oblong, or narrowly spatulate, the uppermost acute; flowers light blue, 4"-5" long, in loose racemes; lower bracts linear-lanceolate, the upper subulate; pedicels nearly filiform, 4"-12" long, usually 2-glandular or 2-bracteolate near the middle; calyx-lobes lanceolate-subulate, longer than the turbinate tube, the sinuses not appendaged; capsule wholly inferior, not inflated, campanulate or subglobose, about 2" long.

On wet banks, and in wet meadows, Nova Scotia to New Jersey, west to Ontario, Manitoba, Ohio, Michigan and Iowa. July-Sept.



Lobelia spicata Lam. Pale Spiked Lobelia.



Lobelia spicata Lam. Encycl. 3: 587. 1789.
L. spicata hirtella A. Gray, Syn. Fl. 2: 6. 1878.
L. spicata parviflora A. Gray, Syn. Fl. 2: 6. 1878.

Perennial or biennial, puberulent, smooth or roughish; stem strict, simple, leafy, 1°-4° high. Leaves thickish, pale green, repand-dentate, crenulate, or entire, the basal ones commonly tufted, broadly oblong, oval, or obovate, very obtuse, narrowed into short petioles, 1'-3½' long; 1'-2' wide; stem leaves sessile, oblong, lanceolate, or spatulate, obtuse, the uppermost gradually smaller and acutish; flowers pale blue, 3"-5" long, densely or distantly racemose-spicate, the inflorescence sometimes 2° long; bracts linear, entire; pedicels very short, ascending; calyx-tube turbinate, usually glabrous, shorter than its subulate spreading, sometimes hirsute or ciliate lobes, the sinuses usually not at all appendaged; corolla-tube about 2½" long and 1" thick.

In dry, mostly sandy soil, or in meadows. Prince Edward Island to Saskatchewan, North Carolina, Alabama, Louisiana and Arkansas. Races differ in pubescence and in size of flowers. Ascends to 2500 ft. in Virginia. June-Aug.

Lobelia syphilitica L. Great Lobelia.
 Blue Cardinal-flower.

Lobelia syphilitica L. Sp. Pl. 931. 1753.
Lobelia syphilitica ludoviciana A. DC. Prodr. 7: 377. 1839.

Perennial by short offsets; stem sparingly pubescent, rather stout, very leafy, usually simple, 1°-3° high. Leaves glabrous or sparingly puberulent, 2'-6' long, ½'-2' wide, oval, oblong, or lanceolate, acute or acuminate at the apex, narrowed at the base, repand-denticulate, irregularly crenate-dentate or nearly entire, sessile, or the lower obovate, obtuse and narrowed into petioles; flowers bright blue, or occasionally white, 10'-12" long, densely racemose, leafy-bracted; calyx-lobes lanceolate, acuminate, pubescent or ciliate, the sinuses appendaged by large deflexed auricles; corolla-tube 5'-6" long, about 2" thick, the lobes of its larger lip oblong-oval, obtuse or acutish, glabrous; larger anthers glabrous.

In moist soil, Maine and Ontario to South Dakota, Colorado, Georgia, Louisiana and Kansas. Hybridizes with the preceding species. High-belia. July-Oct.

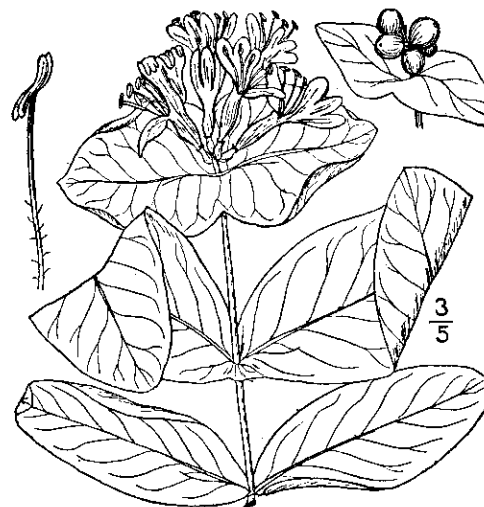
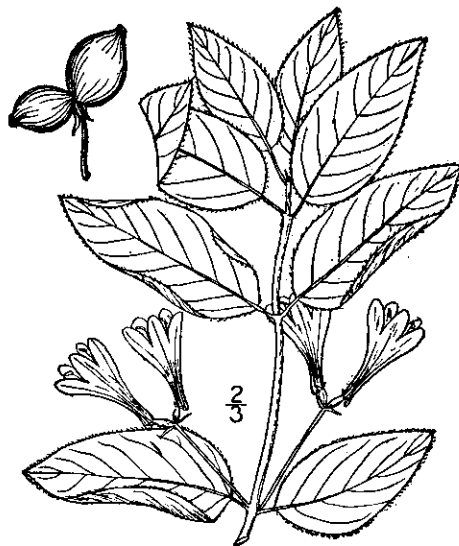


Lonicera canadensis Marsh. American Fly-Honeysuckle.

Vaccinium album L. Sp. Pl. 350. 1753. Not *L. alba* L.
Lonicera canadensis Marsh. Arb. 81. 1785.
Lonicera ciliata Muhl. Cat. 23. 1813.

Shrubby, 3°-5° high, the twigs glabrous. Petioles 2"-3" long, very slender; leaves thin, 1'-4" long, bright green on both sides, ovate or sometimes oval, acute or acutish at the apex, rounded or cordate at the base, villous-pubescent beneath when young, glabrous or nearly so when mature, but the margins strongly ciliate; flowers in pairs from the axils, greenish-yellow, about 8' long; peduncles long-filiform; bracts very small, subulate; corolla-limb nearly regular, its lobes short; berries separate, ovoid, light red, about 3" thick.

In moist woods, Nova Scotia to Saskatchewan, Connecticut, Pennsylvania, Indiana, Michigan and Minnesota. Medaddy-bush. May.

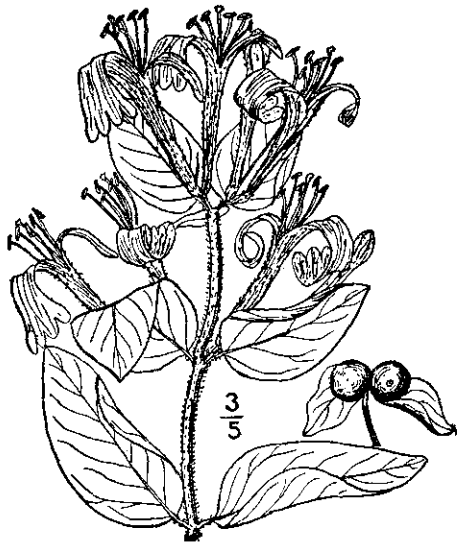


Lonicera dioica L. Smoothed-leaved or Glaucous Honeysuckle.

Lonicera dioica L. Syst. Ed. 12, 165. 1767.
L. glauca Hill, Hort. Kew. 446. pl. 18. 1769.
L. parviflora Lam. Encycl. 1: 728. 1783.

Glabrous throughout, twining or shrubby, 3°-10° long. Leaves very glaucous beneath, 1½'-3' long, the upper connate-perfoliate, oval, obtuse, the lower sessile or short-petioled, narrower; flowers several in a terminal cluster, yellowish green and tinged with purple, glabrous without, pubescent within, the tube 3"-4" long, gibbous at the base, scarcely longer than the 2-lipped limb; stamens hirsute below, exerted with the style; berries red, 3"-4" in diameter.

In rocky and usually dry situations, Quebec to Manitoba, south, especially along the mountains to North Carolina, and to Ohio and Missouri. Ascends to 3500 ft. in North Carolina. All the leaves of young shoots are sometimes connate-perfoliate. Small yellow or crimson honeysuckle. Small woodbine. May-June.

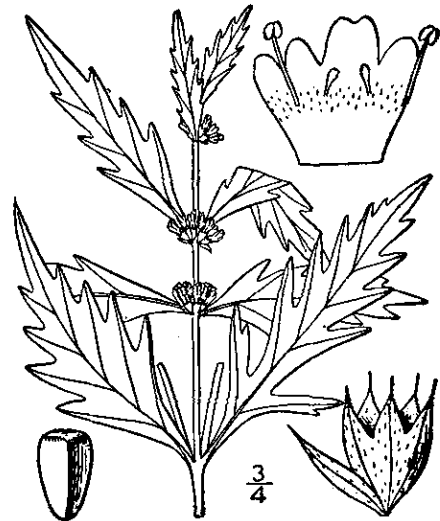


Lonicera japonica Thunb. Japanese or Chinese Honeysuckle.

Lonicera japonica Thunb. Fl. Jap. 89. 1784

Pubescent, climbing high or trailing. Leaves all short-petioled, ovate, entire, 1'-3' long, acute at the apex, rounded at the base, dark green and glabrous above, pale and usually sparingly pubescent beneath; flowers in pairs from the upper axils, peduncled, leafy-bracted at the base, white or pink, fading to yellow, pubescent without, the tube nearly 1' long, longer than the strongly 2-lipped limb; stamens and style exserted; berries black, 3"-4" in diameter.

Freely escaped from cultivation, Connecticut, New York and Pennsylvania to North Carolina, Florida and West Virginia. Naturalized from eastern Asia. June-Aug.



Lycopus americanus Muhl. Cut-leaved Water Hoarhound.

L. americanus Muhl.; Bart. Fl. Phil. Prodr. 15. 1815.

Lycopus sinuatus Ell. Bot. S. C. & Ga. 1: 26. 1817.

Lycopaenus europaeus var. *sinuatus* A. Gray, Man. Ed. 5, 346. 1867.

Puberulent or glabrous, perennial by suckers; stem stiff, erect, simple or branched, 1°-2° high. Leaves lanceolate or ovate-lanceolate in outline, petioled, acuminate at the apex, incised, pinnatifid or the uppermost merely serrate, 2'-4' long; bracts subulate, the outer ones sometimes exceeding the calyx; calyx-teeth triangular-subulate, cuspidate, rigid; corolla little exceeding the calyx; rudimentary posterior stamens thickened at their tips; nutlets much shorter than the calyx.

In wet soil, Newfoundland to British Columbia, south to Florida, Texas, Utah and California. Gipsywort. Bitter bugle. Paul's-betony. June-Oct.



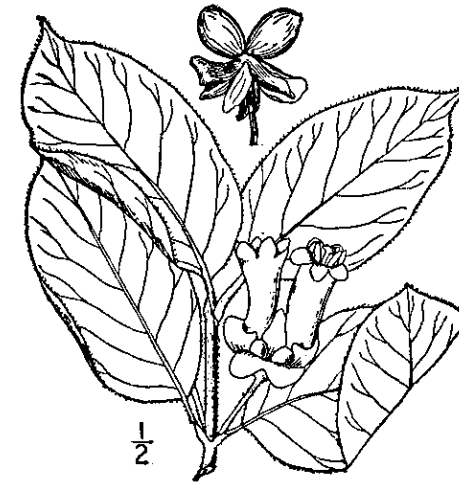
Lycopersicon esculentum P. Mill.

Karst. Tomato. Love Apple. Cherry Tomato.

Solanum Lycopersicum L. Sp. Pl. 185. 1753.
L. esculentum Mill. Gard. Dict. Ed. 8. 1768.
Lycopersicum Lycopersicum Karst. Deutsch. Fl. 966. 1880-83.

Viscid-pubescent, much branched, 1°-3° high, the branches spreading. Leaves petioled, pinnately divided, 6'-18' long, the segments stalked, the larger 7-9, ovate or ovate-lanceolate, mostly acute, dentate, lobed or again divided, 2'-4' long, with several or numerous smaller, sometimes very small ones interspersed; clusters several-flowered; peduncles 1'-3' long; flowers 5"-8" broad; calyx-segments about equalling the corolla; berry the well-known tomato or love-apple.

Escaped from cultivation and occasionally spontaneous from New York and Pennsylvania southward. Jews' ear. June-Sept.



Lonicera involucrata (Richards.) Banks. Involucrated Fly-Honeysuckle.

Xylosteum involucratum Richards. App. Frank. Journ. Ed. 2, 6. 1823.

Lonicera involucrata Banks; Richards. loc. cit. 1823.

Distegia involucrata Rydb. Bull. Torr. Club 33: 152. 1906.

A glabrate or pubescent shrub, 3°-10° high. Leaves short-petioled, ovate, oval, or obovate, 2'-6' long, acute or acuminate at the apex, narrowed or rounded at the base, more or less pubescent, at least when young; peduncles axillary, 1'-2' long, 2-3-flowered; bracts foliaceous, ovate or oval, often cordate; bractlets also large, at length surrounding the fruit; flowers yellow; corolla pubescent, funnelliform, the limb nearly equally 5-lobed; lobes short, little spreading; stamens and style slightly exserted; berries separate, globose, or oval, nearly black, about 4" in diameter.

In woodlands, New Brunswick and Quebec to western Ontario and Michigan, west to British Columbia and Alaska, south to Arizona, Utah and California. June-July.

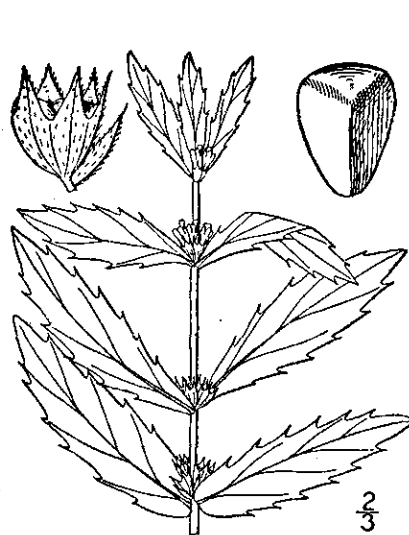
Lycopus asper Greene.

Western Water Hoarhound.

Lycopus asper Greene, Pittonia 3: 339. 1898.
Lycopus lucidus var. *americanus* A. Gray, Proc. Am. Acad. 8: 286. 1870.

Pubescent or glabrate, perennial by stolons; stem usually stout, erect, strict, leafy, simple, or sometimes branched, 1°-3° high. Leaves oblong-lanceolate, acute at the apex, narrowed or rounded at the base, sessile, or very short-petioled, 2'-6' long, ¼'-1½' wide, sharply serrate with acute ascending teeth; bracts ovate or lanceolate, acuminate-subulate, the outer ones often as long as the flowers; calyx-teeth 3, subulate-lanceolate, nearly as long as the tube; corolla little longer than the calyx; rudimentary stamens slender, thickened at the tips; nutlets much shorter than the calyx.

In wet soil, Michigan to Kansas, west to Manitoba, British Columbia, California and Arizona. Regarded in the first edition of this work as the same as *L. lucidus* Turcz. of NW. America and NE. Asia. July-Sept.

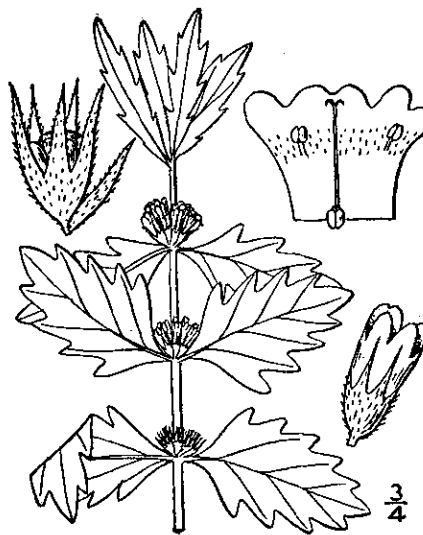


Lycopus europæus L. Water or Marsh Hoarhound. Gipsy-wort. Gipsy-herb.

Lycopus europæus L. Sp. Pl. 21. 1753.

Puberulent or pubescent, perennial by suckers; stems stout, at length widely branched, 1°-2½° high. Leaves ovate, ovate-oblong, or oblong-lanceolate, short-petioled, or the upper sometimes sessile, coarsely dentate, or the lower incised at the base, 1'-3' long, ½'-1' wide; bracts subulate-lanceolate, the outer shorter than or equalling the flowers; calyx-teeth subulate-spinulose; corolla scarcely longer than the calyx; rudimentary posterior stamens obsolete; nutlets shorter than the calyx.

In waste places, Massachusetts to Virginia. Naturalized from Europe. Green archangel. Bitter bugleweed. July-Sept.



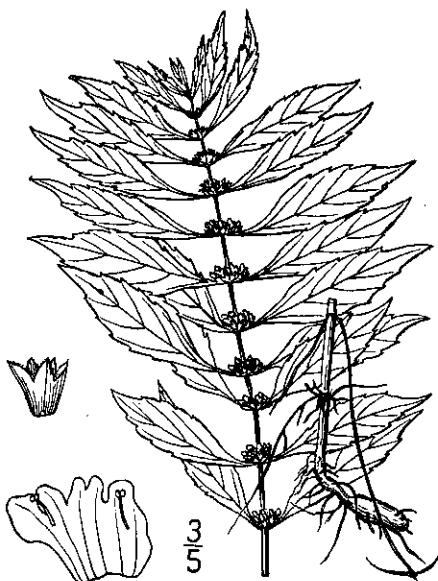
Lycopus uniflorus Michx. Northern Bugle-weed.

Lycopus uniflorus Michx. Fl. Bor. Am. 1: 14. 1803.
Lycopus communis Bicknell, Britton Man. 803. 1901.

Green or sometimes purplish, mostly less puberulent than *L. virginicus*; stems rather slender, simple or sparingly branched, 4'-2½° tall, rather acutely angled, tuberous at the base, the stolons rarely tuber-bearing. Leaves oblong or oblong-lanceolate, acute or acuminate at the apex, serrate, ¾'-3¾' long, sessile or nearly so; calyx-teeth 4 or 5, triangular, ovate or ovate-oblong, rather obtuse; corolla about 1½" long, less than twice as long as the calyx; rudimentary posterior stamens obsolete or minute; nutlets about as long as the calyx, oblique at the apex.

In low grounds, Newfoundland to British Columbia, North Carolina, Nebraska and Oregon. Summer and fall.

Lycopus membranaceus Bicknell, with thinner, often coarsely-toothed, longer-petioled and larger leaves, appears to be a race of this species.

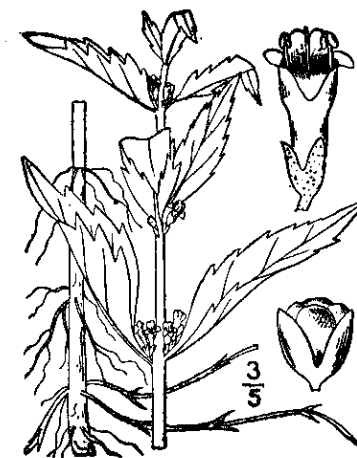


Lycopus virginicus L. Bugle-weed.

Lycopus virginicus L. Sp. Pl. 21. 1753.

Perennial by long filiform leafy stolons, glabrous or puberulent; stem slender, erect or ascending, simple or branched, 6'-2° high. Leaves ovate or ovate-lanceolate, acuminate at the apex, sharply dentate, narrowed or cuneate at the base, petioled, or the upper sessile, dark green or purple, 1½'-3' long, ½'-1½' wide; bracts short, oblong; calyx-teeth 4, or sometimes 5, ovate or ovate-lanceolate, obtuse or subacute; corolla about 1" broad, narrow, nearly twice as long as the calyx, or longer; rudimentary posterior stamens minute; nutlets longer than or about equalling the calyx.

In wet soil, New Hampshire to Florida, Alabama, Missouri and Nebraska. Northern Asia. Sometimes called wood betony. July-Sept.





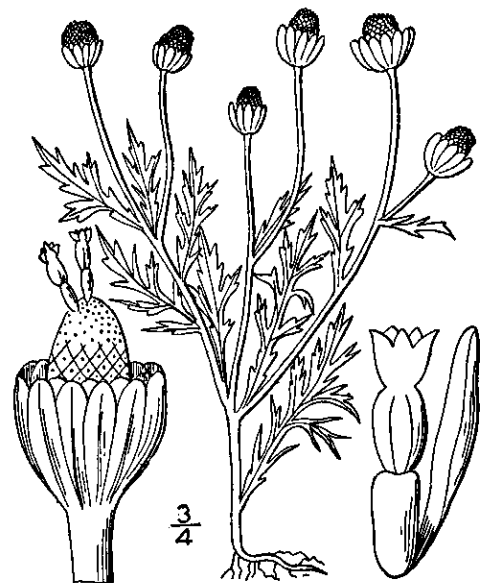
Malacothrix sonchoides (Nutt.) T. & G.
Malacothrix.

Leptosiris sonchoides Nutt. Trans. Am. Phil. Soc. (II.) 7: 439. 1841.

Malacothrix sonchoides T. & G. Fl. N. A. 2: 486. 1843.

Annual, glabrous throughout, or slightly glandular; stem branched, 6'-12' high. Leaves somewhat fleshy, oblong or linear-oblong in outline, pinnatifid and the lobes dentate with mucronate-pointed teeth, the basal ones 1½'-3' long, narrowed into short broad petioles, those of the stem smaller, sessile; heads several or numerous, 8"-13" broad; principal bracts of the involucre linear, acute, scarious-margined, the outer short, oblong, obtuse, or acutish; achenes linear-oblong, margined at the summit by a 15-denticulate white border; pappus-bristles all deciduous.

On dry plains, western Nebraska and Kansas to California and Arizona. May-Aug.



Matricaria discoidea DC.

Rayless Camomile. Wild Marigold.

Santolina suaveolens Pursh, Fl. Am. Sept. 520. 1814. Not *M. suaveolens* L. 1755.

Artemisia matricarioides Less. Linnæa 6: 210. 1831.

Matricaria discoidea DC. Prodr. 6: 50. 1837.

Matricaria matricarioides Porter, Mem. Torr. Club 5: 341. 1894.

M. suaveolens Buchenau, Fl. Nord. Tief. 496. 1894.

Annual, glabrous; stem very leafy, at length much branched, 6'-18' high. Leaves 2-3-pinnately dissected into linear acute lobes; heads numerous, 3"-4" broad, peduncled; bracts of the involucre oval or oblong, green, with broad white scarious margins, much shorter than the ovoid yellow disk; rays none; receptacle conic; achenes oblong, slightly angular, faintly nerved; pappus an obscure crown, sometimes produced into 2 coriaceous oblique auricles.

In waste places, in ballast and along railroads, Missouri to Massachusetts and Maine. Adventive from the Pacific coast. Naturalized as a weed in northern Europe. May-Aug.

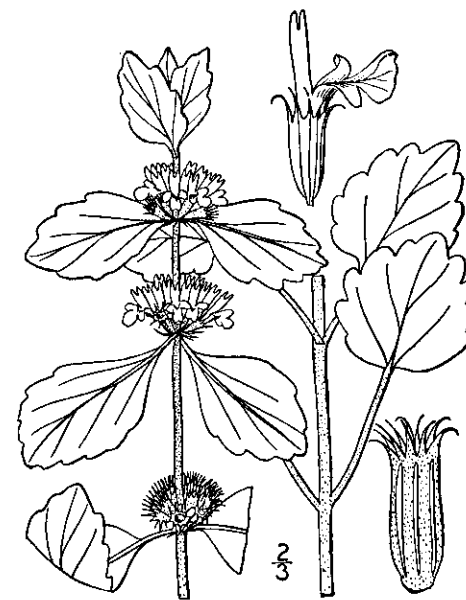
Marrubium vulgare L.

White or Common Hoarhound.

Marrubium vulgare L. Sp. Pl. 583. 1753.

Stem erect, stout, woolly, especially below, 1°-3° high, the branches ascending. Leaves oval, broadly ovate or nearly orbicular, rugose-veined, obtuse at the apex, crenate-dentate, rounded, narrowed or subcordate at the base, 1'-2' long, rough, whitish above, woolly beneath; petioles ½'-1' long, usually exceeding the flowers; clusters all axillary, densely many-flowered; flowers whitish; calyx-teeth usually 10, subulate, more or less recurved, glabrous above, woolly below.

In waste places, Maine and Ontario to Minnesota and British Columbia, North Carolina, Alabama, Texas, Mexico and California. Also in South America. Naturalized from Europe. Native also of Asia. Old names, houndbene, marrube, marvel.



Matricaria recutita L.

Wild or German Camomile.

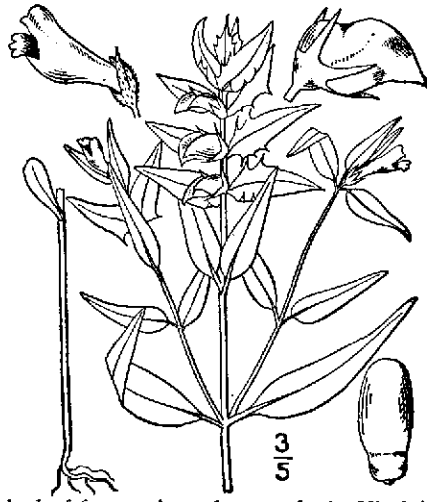
Matricaria Chamomilla L. Sp. Pl. 891. 1753.

Annual, glabrous, much branched, 1°-2° high. Leaves aromatic, finely 2-3-pinnately dissected into numerous linear lobes; heads numerous, 8"-12" broad, slender-peduncled at the ends of the branches; bracts of the involucre oblong, obtuse, green, or with brownish margins; rays 10-20, white, spreading; receptacle ovoid, becoming conic and hollow; achenes nearly oblong, or somewhat obovoid, faintly 3-5-ribbed; pappus none.

In waste places and on ballast, southern New York to Pennsylvania. Adventive or fugitive from Europe. Horse-gowan. Summer.



Melampyrum lineare Lam. Narrow-leaved Cow-Wheat.



in leaf-form. Ascends 3500 ft. in Virginia. May-Aug.

Melampyrum lineare Lam. Encycl. 4: 22. 1797.
M. americanum Michx. Fl. Bor. Am. 2: 16. 1803.

Puberulent; stem slender, obscurely 4-sided above, at length widely branched, 6'-1½° high. Leaves lanceolate or linear-lanceolate to ovate, short-petioled, acuminate or acute at the apex, narrowed, obtuse, or the upper truncate at the base, 1'-2½' long, 1½"-6" wide, the lower entire, the upper floral ones ovate or lanceolate, with 2-6 bristle-pointed teeth near the base or entire; flowers short-peduncled, 4"-6" long; calyx about one-third the length of the corolla, its subulate teeth longer than its tube; corolla white or whitish, puberulent, the lower lip yellow; capsule 4"-5" long, about 2" wide, twice as long as the calyx, long-beaked.

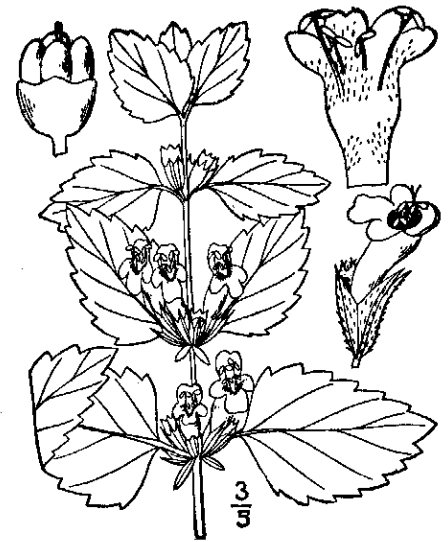
In dry woods and thickets, Nova Scotia to British Columbia, south to Georgia, Tennessee, Iowa, Montana and Idaho. Consists of several races, differing

Melissa officinalis L. Garden or Lemon Balm. Bee-balm.

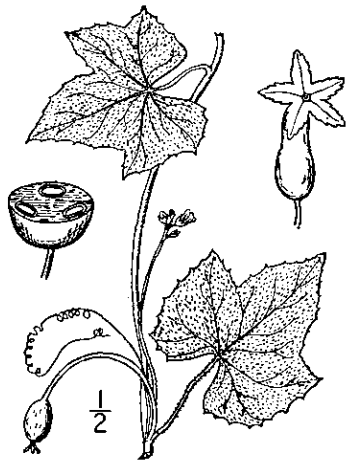
Melissa officinalis L. Sp. Pl. 592. 1753.

Perennial, pubescent; stem rather stout, erect or ascending, 1°-2½° high. Leaves ovate, petioled, mostly obtuse at both ends, sometimes cordate, pinnately veined, coarsely dentate or crenate-dentate, 1'-2½' long; flowers several in the axillary clusters; pedicels shorter than the calyx; calyx about 3" long, the teeth of its lower lip slightly exceeding those of the upper; corolla white, 5"-7" long.

In waste places, thickets and woods, Maine to Georgia, West Virginia, Missouri and Arkansas, also in Oregon and California. Naturalized from Europe. Plant lemon-scented. Balm-leaf or -mint. Honey-plant. Pimentary. Goose-tongue. Dropsy-plant. Lemon-lobelia. Sweet-mary. June-Aug.



Melothria pendula L. Creeping Cucumber.



Melothria pendula L. Sp. Pl. 35. 1753.

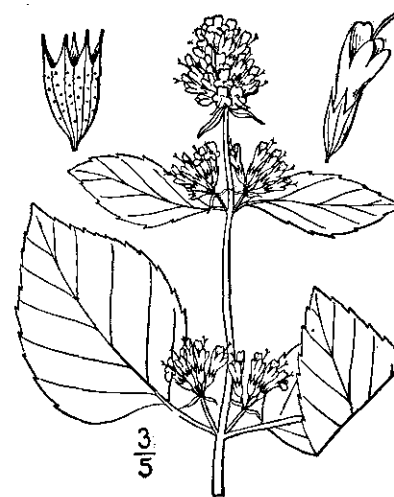
Root perennial. Stem slender, climbing to a height of 3°-5°, branched, glabrous, grooved; petioles ½'-2½' long; leaves nearly orbicular in outline, finely pubescent or scabrous on both sides, cordate at the base, 5-lobed or 5-angled, denticulate or dentate; tendrils puberulent; staminate flowers 4-7, racemose, borne on a peduncle ½'-1' long; fertile flowers solitary, slender-peduncled; corolla greenish white, about 2" broad; fruit smooth, ovoid, green, 4"-6" long.

In thickets, Pennsylvania (Schweinitz, according to Cogniaux); Virginia to Florida, west to Indiana, Kentucky, Missouri and northern Mexico. June-Sept.

Mentha aquatica L.

Bergamot Mint.

Mentha citrata Ehrh. Beitr. 7: 150. 1792.



Perennial by leafy stolons, glabrous throughout; stem weak, branched, decumbent or ascending, 1°-2° long. Leaves petioled, thin, ovate or ovate-orbicular, obtuse or the upper acute at the apex, rounded or subcordate at the base, sharply serrate with low teeth, the larger about 2' long, 1'-1½' wide; whorls of flowers in terminal dense thick obtuse spikes, and commonly also in the uppermost axils; spikes scarcely more than 1' long in fruit; calyx glabrous, its teeth subulate, one-half as long as the tube, or longer; corolla glabrous.

In wet soil, Connecticut to New York, Ohio, Michigan and Missouri. Naturalized from Europe. Also in Bermuda and Porto Rico. July-Sept.

Mentha arvensis L. Corn Mint. Field Mint.

Mentha arvensis L. Sp. Pl. 577. 1753.

Perennial by suckers, pubescent or glabrate; stems erect or ascending, simple or branched, 6'-2° high, slender. Leaves oblong-lanceolate, oval or ovate, petioled, acute at the apex or the lower obtuse, crenate-serrate with bluntish teeth, rounded at the base, 1'-2½' long, ½'-1' wide, the upper not much smaller than the lower; whorls of flowers all axillary, usually about equalling the petioles; calyx pubescent, campanulate, its teeth triangular, about as long as the width of their base, acute or sometimes obtuse, one-third as long as the tube.

In dry waste places, New Brunswick to northern New York, New Jersey, Pennsylvania and Florida. Also in California and Mexico. Naturalized from Europe. Lamb's-tongue. Wild pennyroyal. July-Sept.



Mentha canadensis L. American Wild Mint.

Mentha canadensis L. Sp. Pl. 577. 1753.
Mentha borealis Michx. Fl. Bor. Am. 2: 2. 1803.
Mentha canadensis var. *glabrata* Benth. in DC. Prodr. 12: 173. 1848.

Perennial by suckers; stem more or less pubescent with spreading or scarcely reflexed hairs, or glabrate, erect, simple, or branched, usually slender, 6'-2½° high. Leaves oblong or ovate-oblong, or oblong-lanceolate, slender-petioled, acute at the apex, or the lower obtuse, sharply serrate, narrowed to a somewhat cuneate acute or obtuse base, glabrous or very sparingly pubescent, the larger 2'-3' long, ½'-1' wide; whorls of flowers all axillary, often shorter than the petioles; calyx oblong-campanulate, densely or sparingly pubescent all over, its teeth one-fourth to one-third as long as the tube.

In moist soil. New Brunswick to Manitoba, British Columbia, Virginia, Nebraska, New Mexico and Nevada. Consists of several races, differing in pubescence, leaf-form and size. Odor like Pennyroyal. July-Oct.



Mentha spicata L. Spearmint. Lamb or Common Mint. Our Lady's Mint.

Mentha spicata L. Sp. Pl. 576. 1753.
Mentha spicata var. *viridis* L. loc. cit. 1753.
Mentha viridis L. Sp. Pl. Ed. 2, 804. 1763.

Glabrous, perennial by leafy stolons; stem erect, branched, 1°-1½° high. Leaves lanceolate, sessile or short-petioled, sharply serrate, acute or acuminate at the apex, narrowed at the base, the largest about 2½' long; whorls of flowers in terminal narrow acute usually interrupted spikes, which become 2'-4' long in fruit, the one terminating the stem surpassing the lateral ones; bracts subulate-lanceolate, ciliate, some of them usually longer than the flowers; calyx campanulate, its teeth hirsute or glabrate, subulate, nearly as long as the tube; corolla glabrous.

In moist fields or waste places, Nova Scotia to Ontario, Minnesota, Washington, Florida, Texas and California. Naturalized from Europe. Also in Bermuda. Native also of Asia. Garden-, brown- or mackerel-mint. Sage-of-bethlehem. July-Sept.



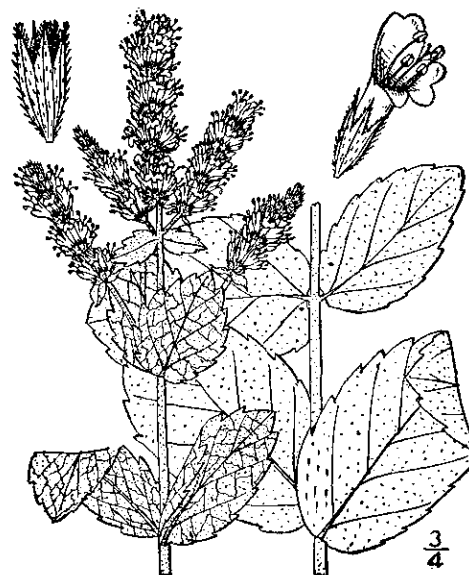
Mentha suaveolens Ehrh.

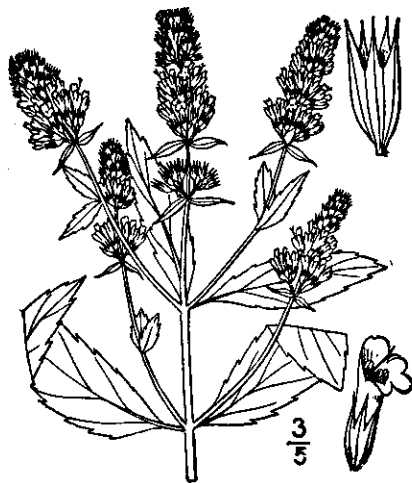
Round-leaved Mint.

Mentha spicata var. *rotundifolia* L. Sp. Pl. 576. 1753.
Mentha rotundifolia Huds. Fl. Angl. 221. 1762.

Perennial by leafy stolons, canescent or tomentose-puberulent, somewhat viscid; stems ascending or erect, simple or branched, usually slender, 1½°-2½° high. Leaves elliptic, or ovate-oblong, short-petioled, or sessile and somewhat clasping by the subcordate or rounded base, obtuse at the apex, crenate-serrate with low teeth, 1'-2' long, 9''-15'' wide, more or less rugose-reticulated beneath; whorls of flowers in terminal dense or interrupted spikes which elongate to 2'-4' in fruit; bracts lanceolate, acuminate, commonly shorter than the flowers; calyx-teeth setaceous, usually about one-half as long as the tube; corolla puberulent.

In waste places, Maine to Florida, Ohio, Arkansas, Texas and Mexico. Bermuda. Patagonia- or apple-mint. Horse-mint. Wild mint. Naturalized from Europe. July-Sept.





Mentha X piperita L. (pro sp.)
Peppermint.

Mentha piperita L. Sp. Pl. 576. 1753.

Perennial by subterranean suckers; stems glabrous, mostly erect, branched, 1°-3° high. Leaves lanceolate, petioled, dark green, acute at the apex, rounded or narrowed at the base, rather firm, sharply serrate, glabrous on both sides, or pubescent on the veins beneath, the larger 1½'-3' long, 1'-1½' wide; whorls of flowers in terminal dense or interrupted spikes, which are thick and obtuse, and become 1'-3' long in fruit, the middle one at length overtopped by the lateral ones; bracts lanceolate, acuminate, not longer than the flowers, or the lower occasionally foliaceous; calyx tubular-campanulate, glabrous below, its teeth subulate, ciliate, one-half as long as the tube or more; corolla glabrous; style occasionally 3-cleft.

In wet soil, Nova Scotia to Ontario and Minnesota, south to Florida, Tennessee and Arkansas. Also in California, Bermuda and Jamaica. Naturalized from Europe. Lamb- or brandy-mint. July-Sept.

Mertensia maritima (L.) S.F. Gray

Sea Lungwort. Sea Bugloss. Oyster Plant.

Pulmonaria maritima L. Sp. Pl. 136. 1753.
P. maritima Hill, Veg. Syst. 40. pl. 37. f. 3. 1764.
Mertensia maritima S. F. Gray, Nat. Arr. Brit. Pl. 354. 1821.

Pale green, the branches spreading or ascending, 3'-15' long. Leaves thick, ovate, obovate, or oblong, 1'-4' long, acute or obtuse at the apex, narrowed at the base, the lower and basal ones contracted into margined petioles, the uppermost smaller; flowers blue or nearly white, about 3" long, all pedicelled; pedicels very slender, 5"-18" long; calyx shorter than the corolla-tube; corolla with a crest in the throat opposite each lobe; nutlets about as long as the calyx-lobes when mature.

On sea-beaches, Long Island (?), Massachusetts to Newfoundland and Greenland, Oregon to Alaska. Also on the coasts of Europe and Asia. May-Sept.



Menyanthes trifoliata L. Buckbean.
Marsh or Bean Trefoil. Bog-bean
or -myrtle.

Menyanthes trifoliata L. Sp. Pl. 145. 1753.

Rootstock thick, scaly, sometimes 1° long, marked by the scars of bases of former petioles. Leaves 3-foliolate; petioles sheathing at the base, 2'-10' long; leaflets oblong or obovate, entire, obtuse at the apex, narrowed to the sessile base, pinnately veined, 1½'-3' long; raceme borne on a long scape-like naked peduncle, arising from the rootstock, 10-20-flowered; pedicels stout, 3"-12" long, bracteolate at the base; flowers 5'-6" long; calyx shorter than the white or purplish corolla, which is bearded with white hairs within; stamens shorter than the corolla and style exerted, or longer and style nearly included; capsule ovoid, obtuse, about 4" long.

In bogs, Greenland to Alaska, south to Long Island, Pennsylvania, Minnesota, Nebraska and California. Also in Europe and Asia. Water- or bitter trefoil. Water-shamrock. Moon-flower. Marsh-clover. Bitter worm. Bog-nut. Brook-bean. May-July.



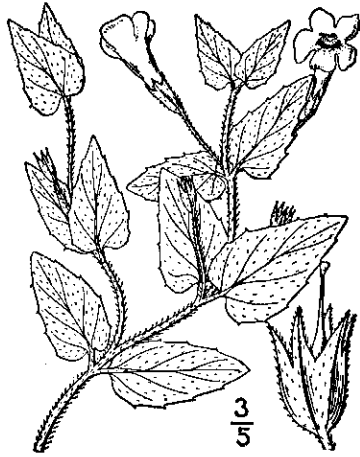
Mertensia virginica (L.) DC. Virginia
Cowslip. Tree Lungwort. Roanoke-
bells.

Pulmonaria virginica L. Sp. Pl. 135. 1753.
Mertensia virginica DC. Prodr. 10: 88. 1846.

Glabrous; stem erect, or ascending, simple or sometimes branched, 1°-2° high, rather stout. Leaves oblong, oval, or obovate, pinnately veined, obtuse at the apex, 2'-5' long, the uppermost sessile, the lower narrowed into margined petioles; racemes short, corymb-like; pedicels 2'-6" long; flowers blue-purple, very showy, about 1' long; calyx-lobes oblong-lanceolate, obtusish, 1" long or less; corolla trumpet-shaped or nearly salverform, its tube cylindric, a little expanded above, longer than the 5-lobed plaited limb, pubescent at the base within, not crested in the throat; disk with two opposite linear lobes; filaments filiform, much longer than the anthers; nutlets not shining, rounded.

In low meadows and along streams, southern Ontario to New Jersey and South Carolina, Minnesota, Nebraska and Kansas. Blue bells. March-May.





Mimulus moschatus Dougl. Musk-flower.
Musk-plant.

M. moschatus Dougl.; Lindl. Bot. Reg. pl. 1118. 1827.

Perennial, villous-pubescent, viscid, musk-scented; stems creeping and ascending, branched, slender, 6'-12' long. Leaves ovate or oblong, short-petioled, acute or obtuse at the apex, denticulate, rounded or subcordate at the base, 1'-2' long, 5''-12'' wide; peduncles slender, longer than the calyx; flowers 1' long or less; calyx-teeth lanceolate, acuminate, nearly equal; corolla yellow, 2-3 times as long as the calyx.

In wet places, Newfoundland to Pennsylvania, Ontario and Michigan; apparently introduced from western North America, where it is widely distributed. June-Sept.

Mazus japonicus (Thunb.) Kuntze, a low herb with mostly basal, slender-petioled obovate repand leaves and racemose violet flowers, the campanulate calyx not angled, has been found at Washington, D. C., and abundantly about New Orleans, La. It is native of eastern Asia.



Mimulus ringens L. Square-stemmed
Monkey-flower.

Mimulus ringens L. Sp. Pl. 634. 1753.

Glabrous, perennial by rootstocks; stem erect, 4-sided or somewhat 4-winged, usually much branched, 1°-3° high. Leaves oblong, lanceolate, or oblong-lanceolate, pinnately veined, acuminate or acute at apex, serrate, auriculate-clasping at the base, or the lower merely sessile, 2'-4' long, ½'-1' wide; peduncles slender, 1'-2' long in fruit, 2-4 times as long as the calyx; calyx-teeth lanceolate-subulate; corolla violet, rarely white, about 1' long, the throat narrow, exceeding the calyx; base of lower lip puberulent within; fruiting calyx oblong, 6''-8'' long; seeds oblong, minute, reticulated.

In swamps and along streams, Nova Scotia to Virginia, Tennessee, Manitoba, Nebraska and Texas. Ascends to 3000 ft. in Virginia. June-Sept.

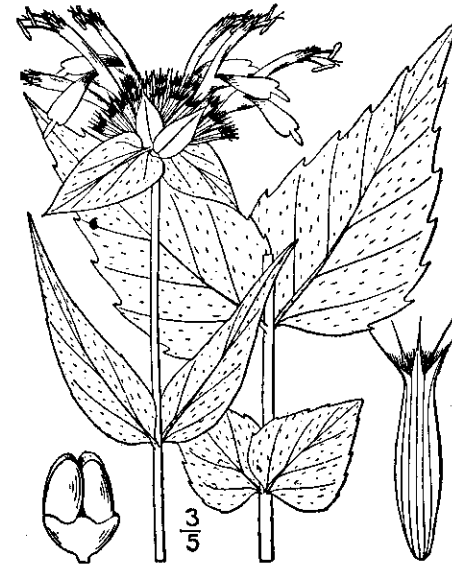
Mitchella repens L. Partridge-berry. Twin-berry.



Mitchella repens L. Sp. Pl. 111. 1753.

Stems slender, trailing, rooting at the nodes, 6'-12' long, branching, glabrous, or very slightly pubescent. Leaves ovate-orbicular, petioled, obtuse at the apex, rounded or somewhat cordate at the base, 3''-10'' long, pinnately veined, dark green, shining; peduncles shorter than the leaves, bearing 2 sessile white flowers at the summit; corolla 5''-6'' long; drupes red (rarely white), broader than high, 2''-4'' in diameter, persistent through the winter, edible.

In woods, Nova Scotia to Florida, west to western Ontario, Minnesota, Arkansas and Texas. April-June, sometimes flowering a second time in the autumn. Hive- or squaw-vine. Checker-berry. Deer-berry. Fox- or box-berry. Partridge-vine. Winter-clover. Chicken-, pigeon-, snake- or tea-berry. Two-eyed- or one-berry. Squaw-plum. Leaves often whitish-veined; flower-buds pink. Ascends to 5000 ft. in Virginia.

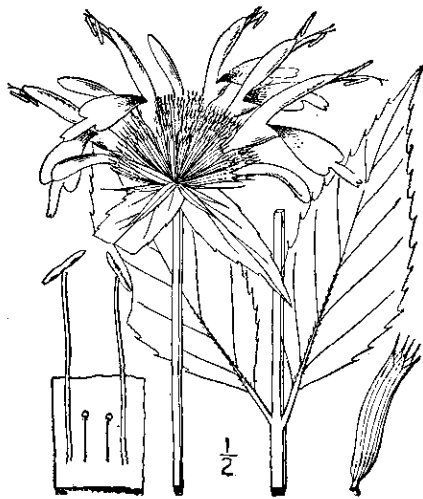


Monarda Bradburiana Beck. Brad-
bury Monarda.

Monarda Bradburiana Beck, Am. Journ. Sci. 10: 260. 1826.

Perennial, sparingly villous or glabrate; stem slender, often simple, 1°-2° high. Leaves rather thin, bright green, ovate or ovate-lanceolate, sessile, or very nearly so, or partly clasping by the cordate or subcordate base, acuminate at the apex, serrate, 2'-3½' long; flower-clusters solitary and terminal; bracts green or purplish; calyx glabrous outside, hirsute within and narrowed at the throat, its teeth long, bristle-pointed, divergent, longer than the diameter of the tube; corolla pink or nearly white, about 1' long, its upper lip pubescent or puberulent, the lower commonly purple-spotted; stamens exerted.

On dry hills or in thickets, Indiana to Alabama, west to Kansas and Arkansas. May-July.



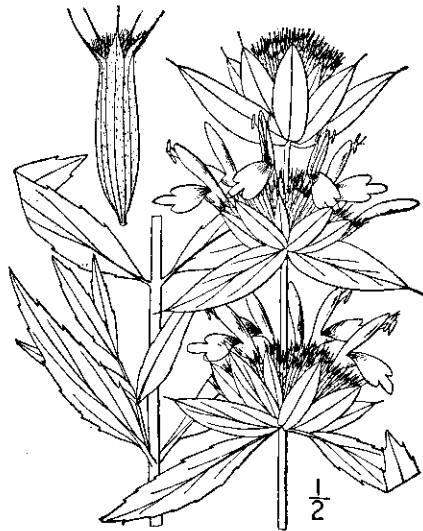
Monarda didyma L. Oswego Tea.
American Bee Balm.

Monarda didyma L. Sp. Pl. 22. 1753.

Perennial; stem stout, villous-pubescent, or glabrate, 2°-3° high. Leaves thin, ovate or ovate-lanceolate, petioled, dark green, usually pubescent beneath, hairy above, acuminate at apex, rounded or narrowed at the base, sharply serrate, 3'-6' long, 1'-3' wide; lower petioles often 1' long; flower-clusters almost always solitary, terminal; bracts commonly red; calyx glabrous without, glabrous or slightly hirsute in the throat, its teeth subulate, nearly erect, about as long as the diameter of the tube; corolla scarlet, 1½'-2' long, puberulent; stamens exerted.

In moist soil, especially along streams, Quebec to Ontario and Michigan, south to Georgia and Tennessee. Ascends to 5200 ft. in North Carolina. Red, low or fragrant balm. Horse- or mountain-mint. Indian's-plume. July-Sept.

Monarda pectinata Nutt. Plains Lemon Monarda.



M. pectinata Nutt. Proc. Acad. Phila. (II.) 1: 182. 1848.

Annual, puberulent; stem stout, simple or branched, 1°-2° high. Leaves lanceolate or oblong-lanceolate, mostly sharply serrate or serrulate, acute at the apex, narrowed at the base, 1'-3' long, 2''-6'' wide; flower-clusters axillary and terminal, several or numerous; bracts pale, usually grayish or brownish, gradually awned at the tip; calyx-tube nearly glabrous, the throat densely villous, the teeth bristle-pointed, barbed, lax, nearly half as long as the tube; corolla pink or nearly white, not spotted, nearly or quite glabrous, 8''-10'' long; stamens not exerted.

On dry plains, Nebraska and Colorado to Texas and Arizona. Prairie-bergamot. June-Sept.

Monarda citriodora Cerv., of Mexico, to which this was referred in our first edition, differs by long narrow reflexed bracts and shorter calyx-teeth.

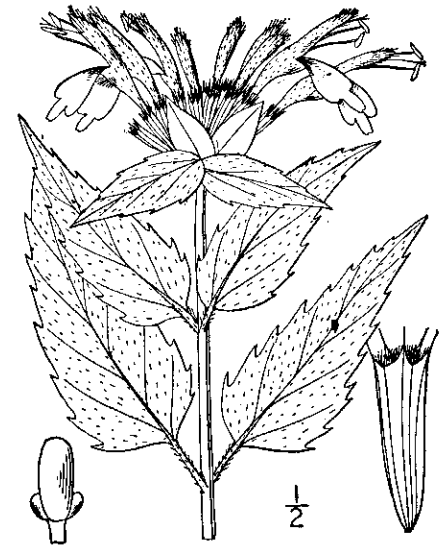
Monarda tenuiaristata (A. Gray) Small [*M. aristata* Nutt., not Hook.] of the south-central States, with narrower bracts and longer plumose calyx-teeth, ranges northward into Kansas.

Monarda fistulosa L. Wild Bergamot.

Monarda fistulosa L. Sp. Pl. 22. 1753.

Perennial, villous-pubescent or glabrate; stem slender, usually branched, 2°-3° high. Leaves thin but not membranous, green, usually slender-petioled, lanceolate, ovate or ovate-lanceolate, acuminate at the apex, serrate, rounded, narrowed or sometimes cordate at the base, 1½'-4' long, ¾'-2½' wide; clusters solitary and terminal, or rarely also in the uppermost axils; bracts whitish or purplish; calyx puberulent or glabrous, densely villous in the throat, its subulate teeth rarely longer than the diameter of the tube; corolla pubescent, especially on the upper lip, yellowish-pink, lilac or purplish, 1'-1½' long; stamens exerted.

On dry hills and in thickets, Maine and Ontario to Minnesota, Florida, Louisiana and Kansas. Ascends to 2500 ft. in Virginia. Oswego-tea. June-Sept.

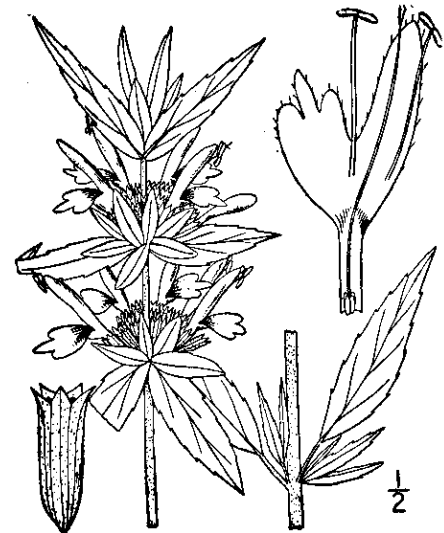


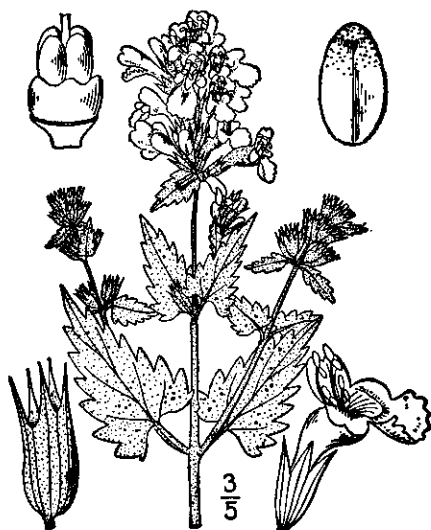
Monarda punctata L. Horse-mint.

Monarda punctata L. Sp. Pl. 22. 1753.

Perennial, usually rather densely pubescent or downy; stem usually much branched, 2°-3° high. Leaves lanceolate, linear-lanceolate or narrowly oblong, serrate with low teeth, or nearly entire, usually acute at both ends, green, manifestly petioled, 1'-3' long, 2''-7'' wide, often with smaller ones fascicled in their axils; flower-clusters axillary and terminal, numerous; bracts white or purplish, conspicuous, acute; calyx puberulent, villous in the throat, its teeth short, triangular-lanceolate, acute, not longer than the diameter of the tube; corolla yellowish, purple-spotted, about 1' long, the stamens equalling or slightly surpassing its pubescent upper lip.

In dry fields, southern New York to Florida, west to Minnesota, Kansas and Texas. Rignum. July-Oct.





Nepeta Cataria L. Catmint. Catnep.
Nep.

Nepeta Cataria L. Sp. Pl. 570. 1753.

Perennial, densely canescent, pale green; stem rather stout, erect, branched, 2°-3° high, the branches straight, ascending. Leaves ovate to oblong, petioled, acute at the apex, coarsely crenate-dentate, mostly cordate at the base, 1'-3' long, greener above than beneath; flower-clusters spiked at the ends of the stem and branches, the spikes 1'-5' long; bracts small, foliaceous; bractlets subulate; calyx puberulent, its teeth subulate, the upper about one-half the length of the tube; corolla nearly white, or pale purple, dark-dotted, puberulent without, 5''-6'' long, its lobe a little longer than the calyx, the broad middle lobe of its lower lip crenulate.

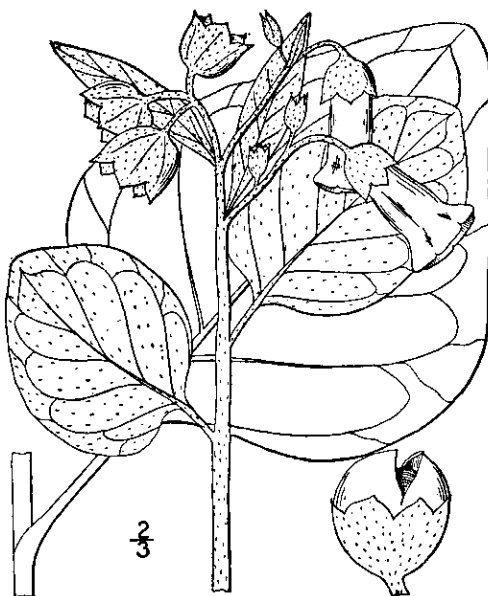
In waste places, New Brunswick and Quebec to South Dakota, Oregon, South Carolina, Kansas and Utah; also in Cuba. Naturalized from Europe. Native also of Asia. July-Nov.

Nicotiana rustica L.
Wild Tobacco.

Nicotiana rustica L. Sp. Pl. 180. 1753.

Annual; stem rather slender, 2°-4° high. Leaves broadly ovate, thin, entire, slender-petioled, 2'-8' long, 1'-6' wide; petioles 1/2'-5/8' long; flowers greenish-yellow, about 1' long, paniced; pedicels 3''-6'' long, rather stout; calyx-lobes broadly triangular, acute, shorter than the tube; corolla-tube cylindrical, somewhat enlarged above, the lobes short, obtuse, slightly spreading; capsule globose, glabrous, about 5'' in diameter, 2-valved, longer than the calyx.

In fields and waste places, escaped from gardens, Ontario to Minnesota, south to southern New York and Florida. Cultivated by the Indians, its origin unknown. Leaves greenish when dry. Indian, Syrian or real-tobacco. June-Sept.



Nicandra physalodes (L.) Gaertn.

Apple-of-Peru.

Atropa physalodes L. Sp. Pl. 181. 1753.
Physalodes peruvianum Kuntze, Rev. Gen. Pl. 452. 1891.

P. physalodes Britton, Mem. Torr. Club 5: 287. 1894.

Stem angled, 2°-5° high. Leaves ovate or oblong, acuminate but blunt-pointed, narrowed at the base, 3'-8' long, 1'-4' wide; petioles longer than the peduncles; flowers 1'-1 1/2' long and broad; corolla-limb almost entire; fruiting calyx 1'-1 1/2' long and thick, its segments acute at the apex, their basal auricles acute or cuspidate; berry about 1/2' in diameter, loosely surrounded by the calyx.

In waste places, escaped from gardens, Nova Scotia to Ontario, Florida, Tennessee and Missouri. Adventive from Peru. Plant with the aspect of a large *Physalis*. Leaves similar to those of *Siranium*. July-Sept.

Onosmodium occidentale Mackenzie.
Western False Gromwell.

O. occidentale Mackenzie, Bull. Torr. Club 32: 502. 1905.

O. occidentale sylvestre Mackenzie, loc. cit. 504. 1905.

Stem 1°-3 1/4° high, branched above or also from the base, strigose or hirsute-pubescent. Leaves lanceolate to ovate-lanceolate, acute, appressed-pubescent on both sides, or the hairs somewhat spreading, 2'-3' long, strongly veined; bracts similar to the leaves but much smaller; calyx-lobes lanceolate, acute to obtuse, 3''-6'' long; corolla 6''-10'' long, canescent all over outside, its lobes 1 1/2''-2'' long, broadly triangular and acute; nutlets ovoid, acutish, about 2'' long, dull, scarcely if at all pitted, not constricted at the base.

On prairies and plains, Illinois to North Dakota, Manitoba, Alberta, Kansas, Texas and New Mexico. Included in *O. molle* Michx., in our first edition, and by previous authors. May-July.

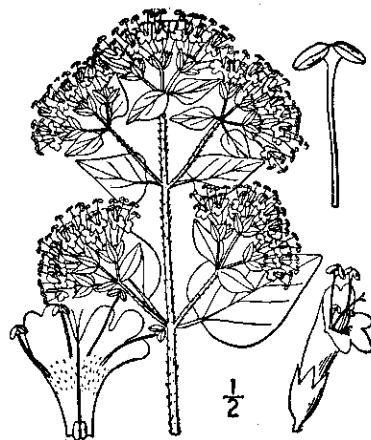


Origanum vulgare L. Wild Marjoram.
Winter Sweet. Organy.

Origanum vulgare L. Sp. Pl. 590. 1753.

Perennial from nearly horizontal rootstocks, villous or hirsute; stem erect, slender, 1°-2½° high. Leaves ovate, petioled, obtuse or subacute at the apex, rounded or subcordate at the base, crenate or entire, 1'-1½' long, often with smaller ones, or short leafy branches, in their axils; flower-clusters often 2' broad; bracts purplish, ovate or oval, about equalling the nearly regularly 5-toothed calyx; corolla pink, purple or nearly white, longer than the calyx, the upper lobe broad; all four stamens, or the two longer, exserted.

In fields and waste places, Ontario to New Jersey and Pennsylvania. Naturalized from Europe. Native also of Asia. Called also organs, pot-marjoram. July-Sept.

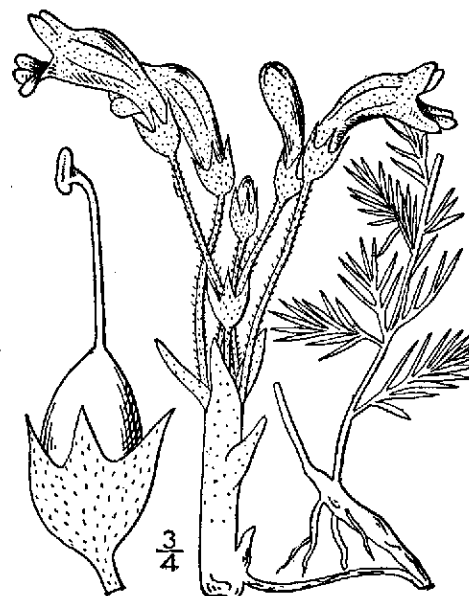


Orobanche fasciculata Nutt.
Clustered or Yellow Cancer-root.

Orobanche fasciculata Nutt. Gen. 2: 59. 1818.
Anoplanthus fasciculatus Walp. Rep. 3: 480. 1844-45.
Aphyllon fasciculatum A. Gray, Syn. Fl. 2: Part 1, 312. 1878.
Thalesia fasciculata Britton, Mem. Torr. Club 5: 298. 1894.

Stem erect, 2'-4' high, densely glandular-pubescent, bearing several scales and 3-15 naked 1-flowered peduncles 1'-4' long. Calyx glandular, broadly campanulate, 3'-5" high, about one-third the length of the corolla, its lobes triangular-lanceolate or triangular-ovate, acute, equalling or shorter than the tube; corolla nearly 1' long, purplish to yellow, puberulent without, the curved tube 3 times as long as the limb, the lobes oblong, obtuse, the limb more manifestly 2-lipped than in the preceding species; capsule ovoid to globose.

In sandy soil, parasitic on the roots of various plants, mostly composites, northern Indiana to Minnesota, Yukon and British Columbia, Nebraska, Arizona and California. April-Aug.



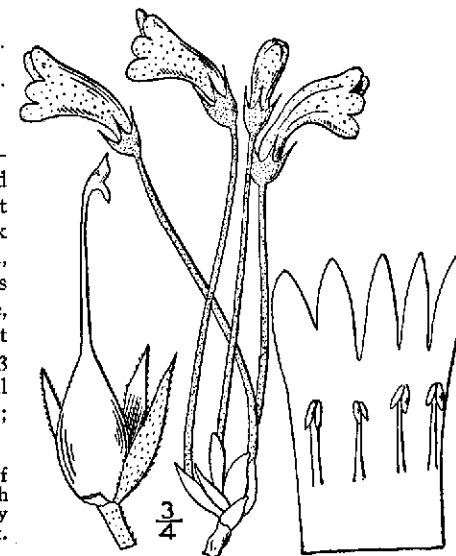
Thalesia lutea (Parry) Rydb. [*Thalesia fasciculata lutea* (Parry) Britton] is a race with light yellow flowers, growing on grasses in western Nebraska and Wyoming.

Orobanche uniflora L. Britton. Pale or Naked Broom-rape. One-flowered Broom-rape. Squaw-drops. Cancer-root.

Orobanche uniflora L. Sp. Pl. 633. 1753.
Anoplanthus uniflorus Endl. Icon. Gen. Pl. 12. pl. 72. 1838.
Aphyllon uniflorum T. & G.; A. Gray, Man. 290. 1848.
T. uniflora Britton, Mem. Torr. Club 5: 298. 1894.

Stem usually less than 1' long, nearly subterranean, bearing several ovate-oblong scales and 1-4 slender erect scape-like glandular-puberulent naked 1-flowered peduncles 3'-8' high. Calyx campanulate, pubescent, glandular, 4'-5" high, less than one-half the length of the corolla, its lobes as long as the tube or longer, lanceolate, acuminate; corolla white or violet, puberulent without, 8'-12" long, the curved tube about 3 times as long as the limb, the short lobes oval or obovate, obtuse; placentae nearly equidistant; capsule ovoid, longer than the calyx.

In woods and thickets, parasitic on the roots of various herbs, Newfoundland to Ontario, South Carolina and Texas. Far western plants, formerly referred to this species, prove to be distinct. Pipes, April-June.



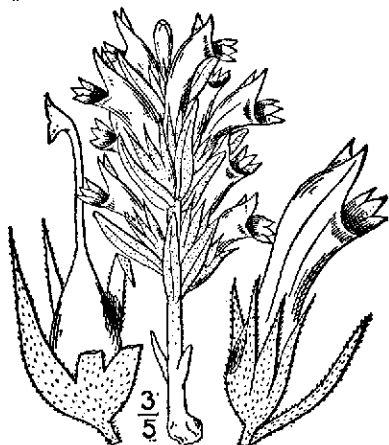
Orobanche ludoviciana Nutt. Louisiana Broom-rape.

Orobanche ludoviciana Nutt. Gen. 2: 58. 1818.
Aphyllon ludovicianum A. Gray, Bot. Cal. 1: 585. 1876.
Mysorrhiza ludoviciana Rydb.; Small, Fl. S.E. U. S. 1093. 1903.

Stems stout, simple, solitary or clustered, viscid-puberulent, 4'-12' high, scaly. Flowers 6"-8" long, very numerous in dense terminal spikes, 1-2-bracteolate under the calyx; calyx 5-cleft, the lobes somewhat unequal, linear-lanceolate, acuminate, longer than the corolla-tube, or shorter; corolla 2-lipped, purplish, its tube narrow, about twice as long as the limb, the teeth of its lips acute; anthers woolly; capsule ovoid-oblong, shorter than the calyx.

In sandy soil, Illinois to South Dakota, Saskatchewan, Nebraska, Texas, Arizona and California.

Strangle tare. June-Aug.





Parthenium integrifolium L. American Fever-few. Prairie Dock.

P. integrifolium L. Sp. Pl. 988. 1753.

Stem stout, striate, finely pubescent with short hairs, or glabrous below, corymbosely branched above, 1°-4° high. Rootstocks tuberous thickened; leaves firm, ovate or ovate-oblong, acute or acuminate, crenate-dentate or somewhat lyrate at the base, hispidulous and roughish on both sides, the lower and basal ones petioled, often 12' long and 5' wide, the upper smaller, sessile; heads numerous in a dense terminal corymb; involucre nearly hemispheric, about 3'' high, its bracts firm, the outer oblong, densely appressed-pubescent, the inner broader, glabrous, or ciliate on the margins; rays white or whitish.

In dry soil, Maryland to Minnesota, south to Georgia, Missouri and Arkansas. Cutting-almond. Wild quinine. May-Sept.

Pectis angustifolia Torr. Lemon-scented Pectis.

Pectis angustifolia Torr. Ann. Lyc. N. Y. 2: 214. 1827.

Annual, much branched, 4'-12' high, the branches diffuse or ascending. Leaves narrowly linear, sessile, obtusish, ½'-2' long, 1'' wide or less, often ciliate with a few bristles near the base; heads several or numerous, short-peduncled, about 3'' broad; involucre short-cylindric or narrowly campanulate, its bracts about 8, linear, acutish, partly enclosing the outer achenes; rays few, 3-toothed, or entire; pappus a crown of 4-6 somewhat united short scales, with or without 2 slender short awns.

In dry soil, Nebraska and Colorado to Mexico and Arizona. Plant with the odor of lemons. May-Oct.

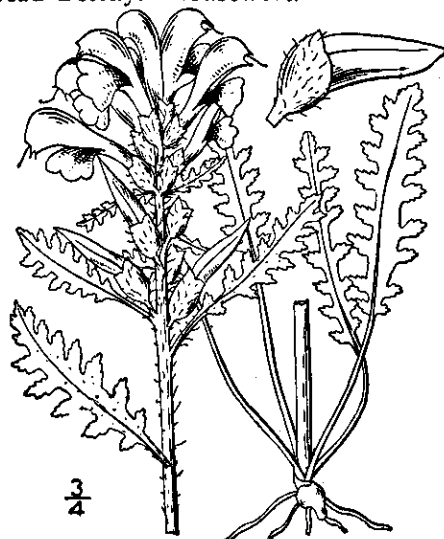


Pedicularis canadensis L. Wood or Head Betony. Lousewort.

Pedicularis canadensis L. Mant. 86. 1767.

Perennial, hirsute, pubescent, or glabrate below; stems commonly tufted, ascending or erect, 6'-18' high, simple. Leaves alternate or some of them opposite, oblong-lanceolate, 3'-5' long, all but the uppermost slender-petioled, pinnately parted into oblong, obtuse, incised or dentate lobes; flowers spicate, the spike short in flower, 5'-8' long in fruit, the lower bracts usually foliaceous, the others small; calyx cleft on the lower side; 2-3-crenate on the upper, oblique; corolla yellow, or reddish (rarely white), 7''-10'' long, the tube much longer than the calyx, the galea arched, incurved, not beaked, minutely 2-toothed below the apex; capsule lanceolate, oblique, 7''-8'' long, 2'' wide, about 3 times as long as the calyx.

In dry woods and thickets, Nova Scotia to Manitoba, Florida, Mississippi, Kansas, Colorado and North Mexico. Ascends to 3000 ft. in Virginia. High heal-all. Beefsteak-plant. Lousewort-foxglove. Snaffles. April-June.



Pedicularis groenlandica Retz. Elephant Head

P. groenlandica Retz. Fl. Scand. Ed. 2, 145. 1795.
Elephantella groenlandica Rydb. Mem. N. Y. Bot. Gard. 1: 363. 1900.

Perennial, glabrous; stem simple, erect, 1°-1½° high. Leaves alternate, lanceolate in outline, acute or acuminate, pinnately parted or the lower pinnately divided into lanceolate, acute, crenulate or incised segments, the upper sessile, the lower slender-petioled, 2'-6' long; spike 1'-6' long, very dense; calyx 5-toothed, nearly as long as the corolla-tube, the teeth short, acutish; corolla red or purple, the galea produced into a filiform beak 6''-8'' long, which is decurved against the lower lip and upwardly recurved beyond it; body of the corolla 2½''-3'' long; capsule obliquely ovate, about 3'' long.

In wet soil, Labrador, Greenland and Hudson Bay to Athabasca, British Columbia, south in the Rocky Mountains to New Mexico, and in the Sierra Nevada to California. Summer.





Pedicularis lanceolata Michx. Swamp Lousewort.

Pedicularis lanceolata Michx. Fl. Bor. Am. 2: 18. 1803.
Pedicularis auriculata J. E. Smith in Rees' Cyclop. 26: No. 4. 1814.

Perennial, glabrous or very nearly so throughout; stem stout, simple, or branched above, 1°-3° high, the branches erect. Leaves alternate and opposite, lanceolate, or linear-lanceolate, 2'-5' long, pinnately lobed, the lower petioled, the upper sessile, the lobes oblong, obtuse, short, crenate-dentate, the margins cartilaginous; spikes short; calyx 2-lobed, the lobes with foliaceous margins; corolla yellow, 8"-10" long, the galea arched, terminated by a very short truncate beak, the lower lip erect-ascending; capsule ovate, little exceeding the calyx, about 5' high.

In swamps, Ontario to Connecticut, North Carolina, Manitoba, Ohio, Michigan, South Dakota and Nebraska. Aug.-Oct.



Pentstemon acuminatus Dougl. Sharp-leaved Beard-tongue.

Pentstemon acuminatus Dougl.; Lindl. Bot. Reg. pl. 1285. 1829.

Glabrous and glaucous; stem rather stout, strict, 6'-2° high, leafy. Leaves firm, entire, the lower and basal ones oblong or spatulate, obtuse or acute, narrowed into petioles, the upper sessile or clasping, lanceolate or ovate-lanceolate, 2'-3' long; thyrsus narrow, sometimes 1-sided, usually leafy-bracted below; pedicels becoming 4"-8" long in fruit; calyx-segments lanceolate, acute, 2'-3" long; corolla blue, 9"-10" long, its tube rather gradually dilated, the limb 2-lipped; sterile filament bearded along the dilated summit; capsule acute, twice as long as the calyx.

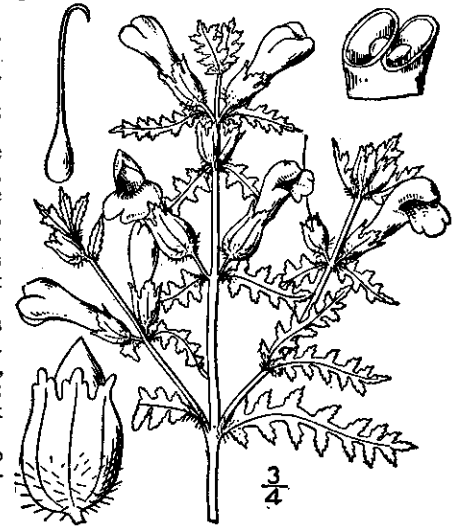
In dry soil, Minnesota to Nebraska, Texas, Manitoba, Alberta, Oregon and New Mexico. St. Joseph's-wand. May-Aug.

Pedicularis parviflora Sm. ex Rees Purple Pedicularis. Marsh Lousewort.

Pedicularis palustris L. 607. 1753.
P. parviflora J. E. Smith in Rees' Cyclop. 26: No. 4. 1814.
Pedicularis Wlassoviana Stev. Mem. Soc. Nat. Mosc. 6: 29. pl. 9, f. 1. 1823.
Pedicularis palustris var. *Wlassoviana* Bunge; Ledeb. Fl. Ross. 3: 283. 1847-49.

Biennial or annual, glabrous throughout, or the petiole-bases ciliate; stem erect, much branched, 1°-2° high. Leaves 1'-2' long, alternate, or some of them opposite, oblong-lanceolate in outline, all pinnatifid into oblong crenate or incised segments; flowers in terminal rather loose spikes and solitary in the upper axils, 7"-9" long; calyx 2-cleft, the lobes with an incised crested border; corolla purple, sometimes white, its tube twice as long as the calyx, the lip much shorter, the galea arched at the top, blunt or apiculate, not beaked, bearing a pair of minute teeth below its summit; capsule obliquely ovate, twice as long as the calyx when mature.

In wet situations, Labrador to Alaska, south to Quebec, the Northwest Territory and Oregon. Europe. Summer. Red rattle, Cow's-wort.

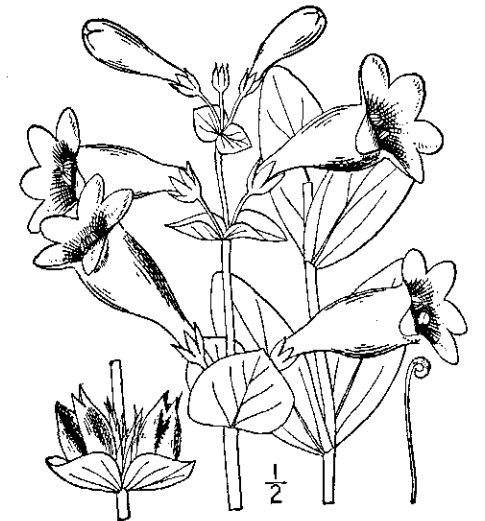


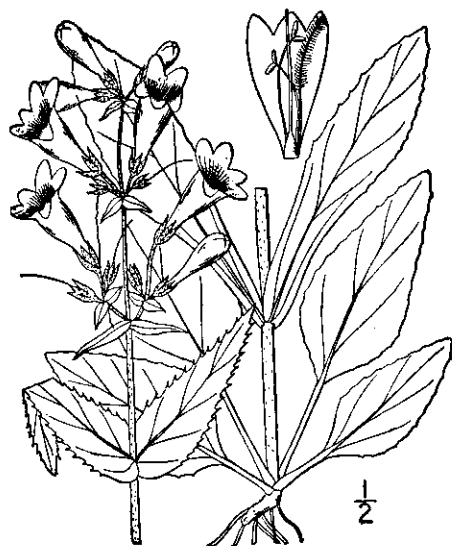
Pentstemon grandiflorus Nutt. Large-flowered Beard-tongue.

P. grandiflorus Nutt. in Fras. Cat. 1813.

Glabrous and somewhat glaucous; stem stout, 2°-4° high. Leaves all entire and obtuse, the basal ones obovate, narrowed into broad petioles, those of the lower part of the stem sessile, oblong or oval, 1'-2 1/2' long, the upper nearly orbicular, cordate-clasping, shorter; thyrsus open, leafy-bracted, the bracts orbicular, cordate; pedicels 2'-6" long; flowers nearly 2' long; calyx-segments lanceolate, acute, 3"-4" long; corolla lavender-blue, the tube rather abruptly dilated above the calyx, the limb somewhat 2-lipped; sterile filament incurved, villous and capitate at the summit; capsule acute, 8"-10" high, three times as long as the calyx.

On prairies, Illinois to Minnesota, North Dakota, Kansas and Colorado. Locally introduced eastward. June-Aug.



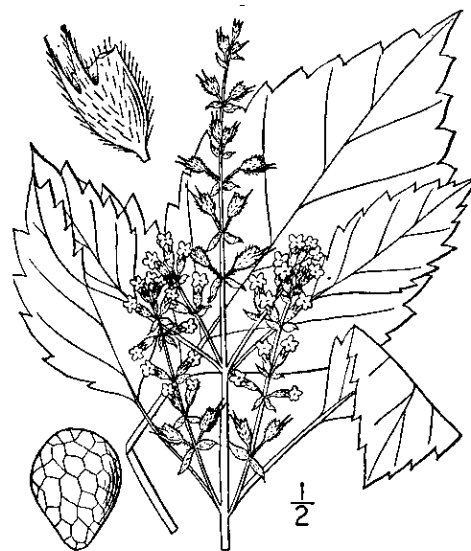


Pentstemon hirsutus (L.) Willd.
Hairy Beard-tongue.

Chelone hirsuta L. Sp. Pl. 611. 1753.
P. pubescens Soland. in Ait. Hort. Kew. 3: 360. 1789.
Pentstemon hirsutus Willd. Sp. Pl. 3: 227. 1801.

Stem slender, erect, downy nearly or quite to the base, 1°-3° high. Leaves puberulent or glabrous, denticulate or the uppermost entire, the basal oblong or ovate, obtusish at the apex, 2'-4½' long, ½'-2' wide, narrowed into petioles, the upper sessile, lanceolate, mostly acuminate, sessile or slightly clasping; inflorescence thyrsoid, rather loose, glandular-pubescent; pedicels mostly short; corolla purplish or violet, the tube gradually dilated above, 2-grooved on the lower side, about 1' long, the throat nearly closed by the villous palate at the base of the lower lip; sterile filament densely bearded for about one-half its length.

In dry woods and thickets, Maine to Ontario, Florida, Minnesota, Alabama and Missouri. Erroneously recorded from Texas. May-July.



Perilla frutescens (L.) Britton.
Perilla. Beef-steak Plant.

Ocimum frutescens L. Sp. Pl. 597. 1753.
Perilla ocimoides L. Gen. Ed. 6, Add. 578. 1764.
P. frutescens Britton, Mem. Torr. Cl. 5: 277. 1894.

Purple or purple-green, sparingly pubescent; stem stout, erect, much branched, 1°-3° high, leafy. Leaves long-petioled, broadly ovate, acuminate at the apex, narrowed at the base, coarsely dentate or incised, 3'-6' long and nearly as wide; racemes terminal and axillary, many-flowered, 3'-6' long; pedicels spreading, 1½'-3" long in fruit; calyx minute in flower, much enlarged, gibbous at the base and densely pilose-pubescent in fruit; corolla purple or white, 1½" long, with a woolly ring within.

In waste places, escaped from gardens, Connecticut to Florida, Illinois, Missouri and Texas. Native of India. July-Oct.



Petasites frigidus var. *palmatus* (Ait.) Cronq.,
Palmate-leaf Sweet Coltsfoot.

Tussilago palmata Ait. Hort. Kew. 2: 188. pl. 2. 1789.
Nardosmia palmata Hook. Fl. Bor. Am. 1: 308. 1833.
P. palmata A. Gray, in Brew. & Wats. Bot. Cal. 1: 407. 1876.

Scape very scaly, stout, 6'-24' high. Leaves nearly orbicular in outline, 3'-12' broad, deeply 7-11-cleft to much beyond the middle, green and glabrous above, densely white-tomentose beneath, at least when young, sometimes becoming glabrate, the lobes oblong or obovate, acute, often somewhat cuneate, sharply dentate or incised; heads mostly dioecious, corymbose or racemose-corymbose, numerous, 4"-6" broad; flowers nearly white, fragrant, the marginal ones of the pistillate heads radiate.

In swamps and along streams, Newfoundland to Massachusetts, New York, Wisconsin, Minnesota and Alberta. Far western plants, formerly included in this species, prove to be distinct. April-June. Butter-bur.

Phacelia Púrshii Buckl. Pursh's Phacelia.



Phacelia Purshii Buckl. Am. Journ. Sci. 45: 171. 1843.

Annual, pubescent; stem erect, usually much branched, 6'-18' high. Lower and basal leaves petioled, 1½'-3' long, pinnately parted or pinnatifid into 9-15 oblong or lanceolate, acute or obtusish, entire or sometimes incised segments; upper leaves sessile, with fewer segments; racemes strongly 1-sided, 10-20-flowered, much elongated in fruit; pedicels 3"-12" long; calyx-segments lanceolate or linear-lanceolate; corolla 5"-6" broad, blue or white, nearly rotate, not appendaged within, its lobes fimbriate; filaments slightly exceeding the corolla; ovules 2 on each placenta; capsule globose-ovoid.

In moist woods or thickets, Pennsylvania to Minnesota, south to North Carolina, Alabama and Missouri. Ascends to 2000 ft. in Virginia. April-June.

Phlox maculata L.

Wild Sweet-William.

Phlox maculata L. Sp. Pl. 152. 1753.
Phlox suaveolens Ait. Hort. Kew. 1: 206. 1789.

Stem slender, erect, simple or branched above, glabrous or puberulent, usually flecked with purple, 1 $\frac{1}{2}$ °-3° high. Leaves lanceolate or the upper ovate-lanceolate, glabrous, rather firm, long-acuminate, sessile, rounded or subcordate at the base, 2'-5' long, widest just above the base, the lowest sometimes linear-lanceolate; flowers short-pedicelled, the compact cymules forming an elongated narrow thyrsoid panicle; calyx-teeth triangular-lanceolate, acute, or acuminate, about one-fourth the length of the tube; corolla pink or purple, rarely white, its lobes rounded, shorter than the tube; capsule similar to that of the two preceding species.

In moist woods and along streams, Connecticut to Florida, Ohio, Minnesota and Mississippi. Occasionally escaped from gardens further north. *P. maculata* var. *candida* Michx. (*P. suaveolens* Ait.) is a race with white flowers and unspotted stem, occurring with the type. June-Aug.



Phlox paniculata L. Garden Phlox.

Phlox paniculata L. Sp. Pl. 151. 1753.

Stem erect, stout or slender, simple or branched above, glabrous or puberulent, 2°-6° high. Leaves thin, sessile or short-petioled, oblong to oblong-lanceolate, acute or acuminate at the apex, narrowed at the base, or the uppermost subcordate, 2'-6' long, $\frac{1}{2}$ '-1 $\frac{1}{2}$ ' wide; flowers short-pedicelled in compact paniculate cymules, the inflorescence often 12' long; calyx-teeth subulate, glabrous, puberulent or glandular, more than one-half as long as the tube; corolla pink, purple or white, its lobes broadly obovate, rounded, entire, shorter than its tube; capsule oval, obtuse, slightly longer than the ruptured calyx-tube.

In woods and thickets, Pennsylvania to Florida, Illinois, Kansas and Louisiana. Freely escaped from gardens in the north and east. Consists of many races, differing in leaf-form, size and color of flowers, and in pubescence. July-Sept.



Phlox pilosa L.

Downy or Prairie Phlox.

Phlox pilosa L. Sp. Pl. 152. 1753.

Soft downy or hairy, often glandular; stem erect or ascending, simple or branched, slender, 1°-2° high. Leaves linear or lanceolate, spreading or divaricate, long-acuminate, 1'-4' long, 1 $\frac{1}{2}$ '-4" wide, sessile, the base narrowed or rounded; cymules corymbed; flowers short-pedicelled; calyx glandular, viscid, its teeth setaceous-subulate, longer than the tube; corolla pink, purple or white, its lobes obovate, entire, the tube usually pubescent; capsule shorter than the calyx.

In dry soil, Ontario to Manitoba, Connecticut, New Jersey, Florida, Arkansas and Texas. Hairy phlox. Sweet-william. April-June.

Phlox argillacea Clute & Ferriss is a recently described relative or race of this species, growing on prairies in Indiana and Illinois.



Phyla nodiflora (L.) Greene

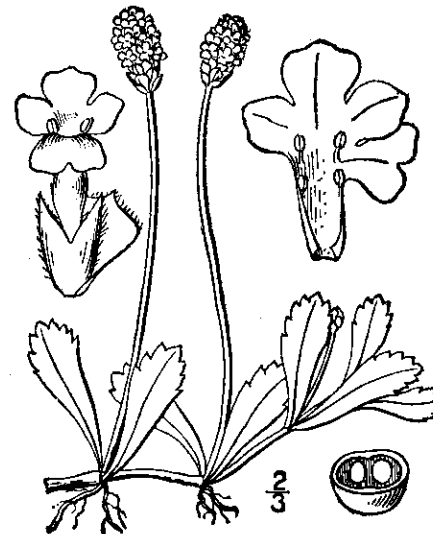
Spatulate-leaved Fog-fruit.

Verbena nodiflora L. Sp. Pl. 20. 1753.

Lippia nodiflora Michx. Fl. Bor. Am. 2: 15. 1803.

Minutely and rather densely puberulent with short appressed hairs, creeping, or some of the branches ascending, 1°-3° long. Leaves thickish, spatulate, oblanceolate, or obovate, 6"-2 $\frac{1}{2}$ ' long, 3'-12" wide, mostly obtuse at the apex, narrowed into a long or short cuneate entire base, sharply serrate above the middle; peduncles slender, 1'-6' long, much longer than the leaves; heads at length cylindrical and 5'-12" long, 3"-4" thick; calyx flattened, 2-cleft; corolla purple to white.

In wet or moist soil, South Carolina to southern Missouri, Florida and Texas. Also in California, Central America, the West Indies, and apparently the same species in the warmer regions of the Old World. May-Sept.



Physalis heterophylla Nees. Clammy Ground-Cherry.

Physalis viscosa Pursh, Fl. Am. Sept. 157. 1814. Not L. 1753.
Physalis heterophylla Nees, Linnaea 6: 463. 1831.
Physalis virginiana A. Gray, Syn. Fl. 2: Part 1, 235. 1878. Not Mill. 1768.

Perennial from a slender creeping rootstock, 1½°-3° tall, at first erect, later generally decumbent and spreading, viscid and glandular, and villous with long spreading jointed flat hairs; leaves large, blade generally over 2' long, usually broadly cordate, often acute and very rarely with an elongated tip, thick, more or less sinuately toothed, or sometimes subentire; calyx long-villous, lobes triangular, generally shorter than the tube; corolla 8"-10" in diameter, greenish yellow with a brownish or purplish center; anthers mostly yellow; berry yellow.

In rich soil, especially where the surface has been disturbed, New Brunswick to Saskatchewan, Florida, Colorado and Texas. The most common of our species, and includes several races.

Physalis peruviana L., a native of South America, is cultivated for its fruit and often escapes. It resembles *P. heterophylla*, but differs in the leaves, which have a long tip, and in the pubescence, which is shorter, denser, and not at all viscid. Cape-gooseberry. Strawberry-tomato. Peruvian ground-cherry. Husk-tomato.



Physalis lanceolata Michx. Prairie Ground-Cherry.

Physalis lanceolata Michx. Fl. Bor. Am. 1: 149. 1803.
Physalis pennsylvanica var. *lanceolata* A. Gray, Man. Ed. 5, 382. 1867.

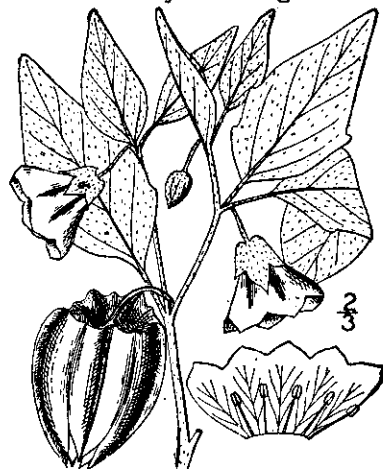
Perennial; rootstock apparently slender and creeping; stem about 1½° high, first erect, later spreading or diffuse, only slightly angled, sparingly hirsute with flat hairs. Leaves lanceolate, oblanceolate or spatulate, tapering into the petiole, acute or obtuse, nearly always entire, rarely wavy, but never sinuately toothed, thickish, sparingly hairy with short hairs; peduncles 5"-10" long, in fruit reflexed; calyx strigose or villous, rarely glabrous, its lobes triangular-lanceolate; corolla dullish yellow with a brownish center, about 8" in diameter; fruiting calyx round-ovoid, not sunken at the base, indistinctly 10-angled; berry yellow or greenish yellow.

On dry prairies, South Carolina to Illinois, South Dakota, Wyoming, Kansas and New Mexico. July-Sept.

Physalis virginiana Mill. Virginia Ground-Cherry.

Physalis virginiana Mill. Gard. Dict. Ed. 8, no. 4. 1768.
Physalis pennsylvanica A. Gray, Man. Ed. 5, 382. 1867. Not L. 1753.
Physalis virginiana intermedia Rydberg, Mem. Torr. Club 4: 345. 1896.

Perennial; rootstock thick and somewhat fleshy; stem 1½°-3° high, erect, dichotomously branched, somewhat angular, more or less strigose-hairy with flat hairs, sometimes a little glandular, or sometimes nearly glabrous. Leaves ovate-lanceolate, tapering to both ends, 1½'-2½' long, generally more or less sinuately dentate, often yellowish green; peduncles 5"-10" long, generally erect, in fruit curved but scarcely reflexed; calyx strigose, hirsute, or at least puberulent, its lobes triangular or broadly lanceolate, nearly equaling the tube; corolla sulphur-yellow with purplish spots, ¾'-1' in diameter; anthers yellow; fruiting calyx pyramidal-ovoid, 5-angled, sunken at the base; berry reddish.



Rich soil, especially in open places, Ontario to Manitoba, Connecticut, Florida, Louisiana and Texas. Consists of numerous races, differing in pubescence. July-Sept. Wild cherry.

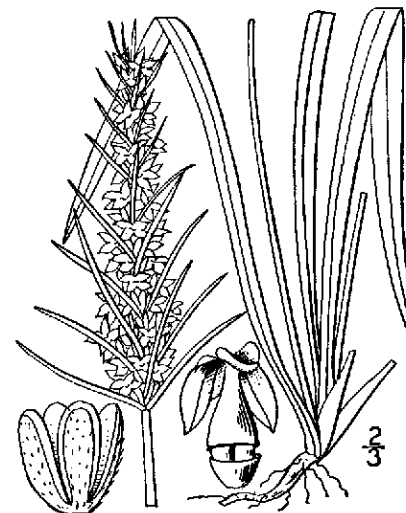
Plantago aristata Michx. Large-bracted Plantain.

Plantago aristata Michx. Fl. Bor. Am. 1: 95. 1803.
Plantago patagonica var. *aristata* A. Gray, Man. Ed. 2, 269. 1856.

Annual, dark green, villous, or glabrate; scapes stout, erect, 6'-18' tall, exceeding the leaves. Leaves linear, acuminate at the apex, entire, narrowed into slender petioles, sometimes prominently 3-ribbed 1½"-4" wide; spikes very dense, cylindric, 1'-6' long, pubescent but not woolly; bracts puberulent, linear, elongated, ascending, the lower often 10 times as long as the flowers; flowers very similar to those of the preceding species; pyxis 2-seeded; the seeds concave on the face.

On dry plains and prairies, Illinois to South Dakota, Louisiana and Texas, west to British Columbia and New Mexico. Also widely adventive as a weed in the Eastern States from Maine to Georgia, its eastern natural limits now difficult to determine. May-Oct.

Plantago spinulosa DCne., differing in its pale green color and mostly shorter involucrel bracts, enters the western part of our area in Nebraska.

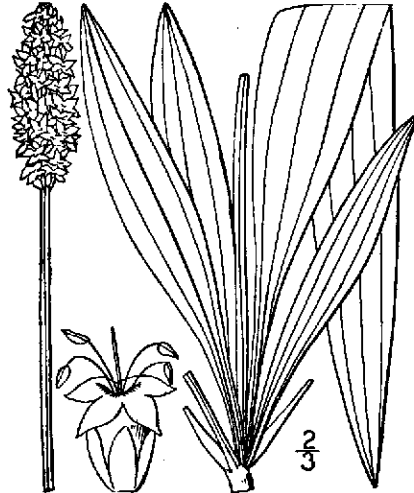


Plantago lanceolata L. Ribwort. Ribgrass. English, Buck, or Buckthorn Plantain. Snake, Lance-leaved, or Ripple Plantain.

Plantago lanceolata L. Sp. Pl. 113. 1753.

Perennial or biennial, more or less pubescent; rootstock mostly short, with tufts of brown hairs at the bases of the leaves. Leaves narrowly oblong-lanceolate, mostly erect, shorter than the scapes, entire, acute or acuminate at the apex, gradually narrowed into petioles, 3-5-ribbed, 2'-12' long, 3"-12" wide; scapes slender, channelled, sometimes 2½° tall; spikes very dense, at first short and ovoid, becoming cylindric, blunt and ¾'-4' long in fruit, 4"-6" thick; flowers perfect, proterogynous; sepals ovate, with a narrow green midrib and broad scarious margins, the two lower ones commonly united; corolla glabrous, its tube very short; filaments white; pyxis oblong, very obtuse, 2-seeded, slightly longer than the calyx; seeds deeply excavated on the face.

In fields and waste places, New Brunswick to the Northwest Territory, British Columbia, Florida and Kansas, Bermuda. Naturalized from Europe; native also of Asia. Sepals rarely metamorphosed into small leaves. April-Nov. Black-jacks. Jack-straws, Dog's-ribs. Cocks. Kemps. Leechwort. Ram's-tongue. Rattail. Windles. Long-plantain. Ripple-grass. Kempseed. Headsman. Hen-plant. Clock. Chimney-sweeps. Cats'-cradles.

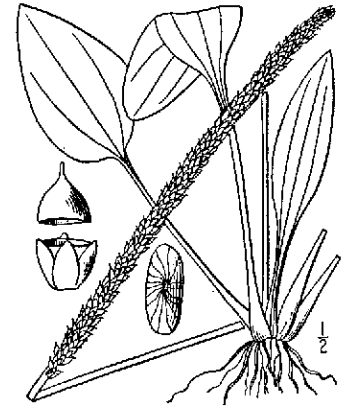


Plantago major L. Common or Greater Plantain. Dooryard Plantain.

Plantago major L. Sp. Pl. 112. 1753.

Perennial, glabrous or somewhat pubescent; rootstock short, thick, erect. Leaves long-petioled, rather firm in texture, mostly ovate, obtuse or acutish, entire, or coarsely dentate, 1'-10' long, 3-11-ribbed; scapes 2'-3° high; spike linear-cylindric, usually very dense, commonly blunt, 2'-10' long, 3"-4" thick; flowers perfect, proterogynous; sepals broadly ovate to obovate, scarious on the margins, one-half to two-thirds as long as the ovoid obtuse or subacute, 5-16-seeded pyxis, which is circumscissile at about the middle; stamens 4.

In waste places, nearly throughout North America. In part naturalized from Europe, but indigenous in the North and on salt meadows. Also in the West Indies. Small leaves are occasionally borne near the bases of the spikes; spikes rarely branched. May-Sept. Way-side or round-leaf plantain. Broad-leaf. Hen-plant. Lamb's-foot. Way-bread. Healing-blade.

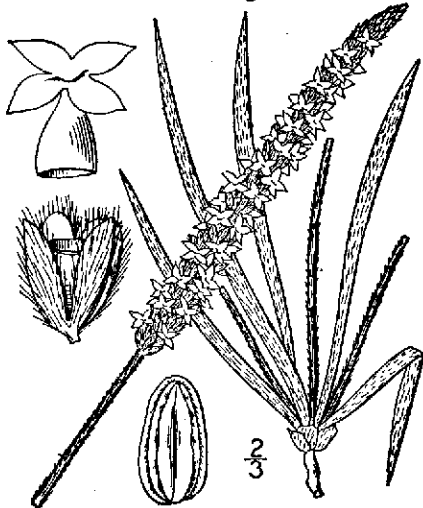


Plantago Purshii R. & S. Pursh's Plantain.

Plantago Purshii R. & S. Syst. 3: 120. 1818.
Plantago gnaphalioides Nutt. Gen. 1: 100. 1818.
Plantago patagonica var. *gnaphalioides* A. Gray, Man. Ed. 2, 269, 1856.

Annual, woolly or silky all over, pale green; scapes slender, 2-15' tall, longer than the leaves. Leaves ascending, linear, acute or acuminate at the apex, narrowed into margined petioles, 1-3-nerved, 1½"-4" wide, entire, or very rarely with a few small teeth; spikes very dense, cylindric, obtuse, 1'-5' long, about 3" in diameter, exceedingly woolly; bracts rigid, equalling or slightly exceeding the flowers; flowers perfect but heterogynous, many of them cleistogamous; sepals oblong, obtuse, scarious-margined; corolla-lobes broadly ovate, spreading; stamens 4; pyxis oblong, obtuse, 1½" long, little exceeding the calyx, 2-seeded, circumscissile at about the middle; seeds convex on the back, deeply concave on the face.

On dry plains and prairies, Indiana to western Ontario, British Columbia, Texas and northern Mexico. Locally adventive eastward. May-Aug. Salt-and-pepper-plant.

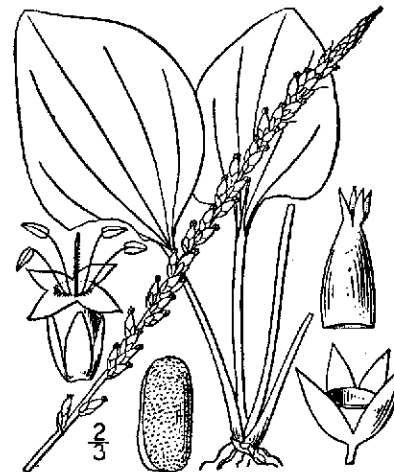


Plantago Rugelii Dcne. Rugel's or Pale Plantain.

Plantago Rugelii in DC. Prodr. 13: Part 1, 700. 1852.

Similar to the preceding species, the spikes less dense, at least toward the base, usually long-attenuate at the summit, sometimes 3" thick. Sepals oblong, prominently keeled on the back, the margins green or scarious; pyxis oblong-cylindric, 2'-3" long, twice as long as the sepals, circumscissile much below the middle and entirely within the calyx, 4-10-seeded; stamens 4.

In fields, woods and waste places, New Brunswick to Ontario, South Dakota, Florida, Kansas and Texas. Petioles commonly purple at the base. Usually brighter green and with thinner leaves than *P. major*. This species, or the preceding one, was known to the Indians as "White-man's-foot." Silk-plant. June-Sept.



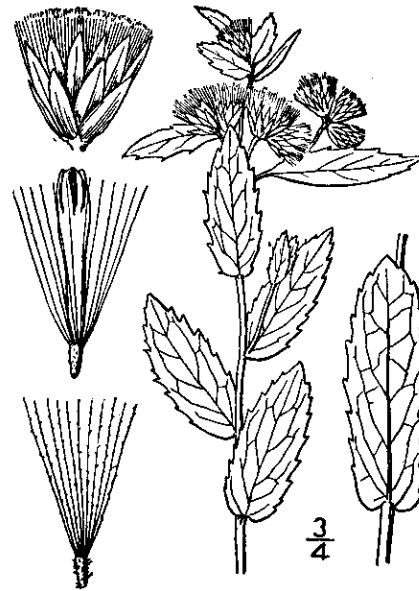


Pluchea camphorata (L.) DC. Spicy or Salt-marsh Fleabane.

Erigeron camphoratum L. Sp. Pl. Ed. 2, 1212. 1763.
Conyza marilandica Michx. Fl. Bor. Am. 2: 126. 1803.
Pluchea camphorata DC. Prodr. 5: 451. 1836.

Root annual; stem usually branched, finely viscid-puberulent, or nearly glabrous, 2°-3° high, somewhat channeled. Leaves ovate, oblong or lanceolate, puberulent or glabrous, acute or acuminate at the apex, narrowed at the base, short-petioled, or the upper sessile but not clasping, 3'-8' long, 1'-3' wide, serrate or denticulate, not conspicuously reticulate-veined; heads about 3" high, rarely leafy-bracted, mostly in naked open corymbiform cymes; bracts of the involucre ovate-lanceolate, or lanceolate, acute, puberulent; flowers purplish; achenes pubescent.

In salt marshes, coast of Massachusetts to Florida, Texas and Mexico. Called also ploughman's-wort. Aug.-Oct.



Pluchea foetida (L.) DC.
 Viscid Marsh Fleabane.

Baccharis foetida L. Sp. Pl. 861. 1753.

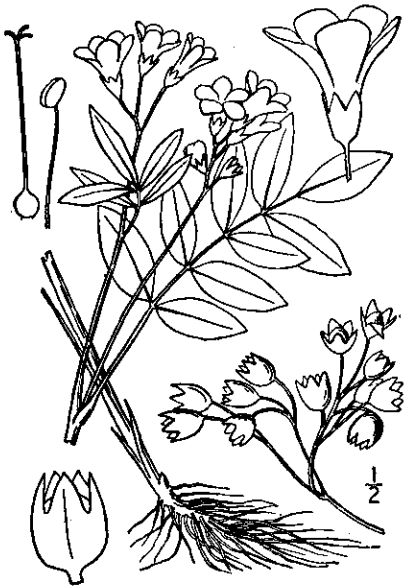
Baccharis viscosa Walt. Fl. Car. 202. 1788.

Pluchea bifrons DC. Prodr. 5: 451. 1836.

Pluchea foetida DC. Prodr. 5: 452. 1836.

Root perennial; stem simple or sparingly branched at the summit, puberulent and slightly viscid, 1½°-3° high. Leaves oblong, ovate or ovate-lanceolate, closely sessile and more or less cordate-clasping at the base, obtuse or acute at the apex, sharply denticulate, pubescent or puberulent, 2'-4' long, ½'-1½' wide, reticulate-veiny; clusters of heads sessile, or stalked, compact, leafy-bracted; involucre 2½"-3" high, its bracts lanceolate, acute, viscid-puberulent.

In swamps, southern New Jersey to Florida and Texas, mainly near the coast. Also in the West Indies. Foetid marsh-fleabane. July-Sept.

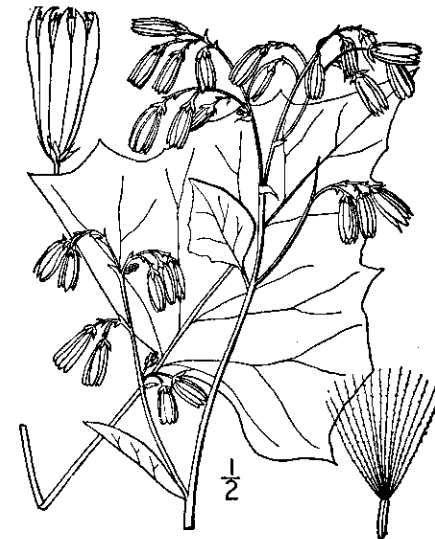


Polemonium reptans L. Greek Valerian.
 Blue-bell.

Polemonium reptans L. Syst. Ed. 10, no. 1. 1759.

Glabrous or very nearly so throughout, usually not more than 1° high; stems weak, slender, at length reclining or diffuse, the rootstock short. Leaflets oblong, ovate-oblong, or lanceolate-oblong, ½'-1½' long, the uppermost leaves 3-5-foliolate or simple; flowers blue, 5"-8" broad; calyx 5-lobed, its lobes obtuse or acute; stamens not exerted; ovules 3 or 4 in each cavity; seeds about 3 in each capsule.

In woods, New York to Minnesota, south to Georgia and Kansas. Ascends to 2200 ft. in Virginia. April-May. American abscess-root. Sweat-root. American or creeping great-valerian.



Prenanthes alba L.

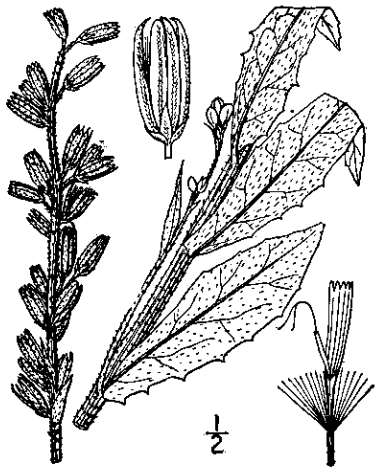
Rattlesnake-root. White Lettuce.

Prenanthes alba L. Sp. Pl. 798. 1753.

Nabalus albus Hook. Fl. Bor. Am. 1: 294. 1833.

Glabrous and glaucous; stem commonly purple, 2°-5° high. Leaves hastate, ovate, cordate, denticulate, dentate, lobed, or palmately divided, of the upper lanceolate, entire, thicker than those of the preceding species, the larger sometimes 8' long; heads numerous, pendulous, 8-15-flowered, about 3" broad, paniculate, or thyrsoid, and often in axillary clusters; involucre glabrous, or with a few scattered hairs, glaucous, 5"-7" high, about 1½" thick, its principal bracts about 8, purplish, with minute outer ones; flowers greenish or yellowish white, fragrant; pappus cinnamon-brown.

In woods, Maine and Ontario to Manitoba, Saskatchewan, Georgia, Kentucky, Wisconsin and North Dakota. Lion's-foot. White cankerweed. Wild lettuce. Milk-weed. Joy-leaf. Cancer-weed. Aug.-Sept.

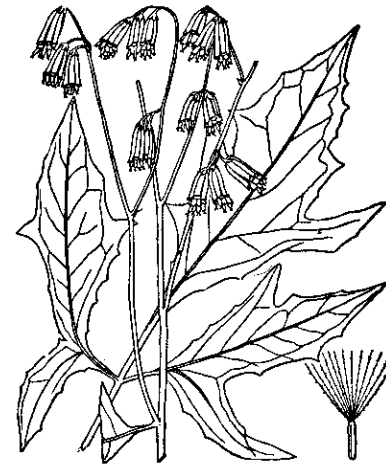


Prenanthes aspera Michx.
Rough White-lettuce.

Prenanthes aspera Michx. Fl. Bor. Am. 2: 83. 1803.
Nabalus asper T. & G. Fl. N. A. 2: 483. 1843.

Scabrous or rough-puberulent; stem virgate, simple, 2°-4° high. Leaves firm, oval, oblong, or oblanceolate, those of the stem all closely sessile, acute or acutish, dentate, denticulate, or the uppermost entire, the lower sometimes clasping, 2'-3' long, ½'-1' wide, the basal tapering into winged petioles, commonly obtuse; heads very numerous, erect, spreading, or slightly drooping, 3"-4" broad, 12-16-flowered, in a long narrow thyrus; involucre oblong, 2"-2½" thick, 5"-7" high, very hirsute, its principal bracts 8-10, with several short outer ones; flowers light yellow; pappus straw-color.

On dry prairies, Ohio to South Dakota, Nebraska, Kentucky, Louisiana and Kansas. Rattlesnake-root. Aug.-Sept.



Prenanthes trifoliolata (Cass.) Fern.

Tall Rattle-snake-root.

Nabalus trifoliolatus Cass. Dict. Sci. Nat. 34: 95. 1825.
Prenanthes trifoliolata Fernald; Brainerd, Jones & Eggleston, Fl. Verm. 89. 1900.

Glabrous throughout; stem usually stout, 3°-9° high. Leaves thinnish, the lower long-petioled, usually 3-divided with the divisions stalked or sessile, the upper short-petioled or sessile, all commonly lobed or dentate, but the upper sometimes lanceolate, acuminate and entire; inflorescence paniculate, the panicle-branches ascending, or nearly erect; heads few in the clusters, drooping, 7-12-flowered; involucre pale green or purplish, glabrous, about 1½" thick and 6" long, its principal bracts 6-8, equalling the pappus, the short outer ones ovate to lanceolate; flowers whitish or pale yellow; achenes 2'-3" long; pappus light brown.

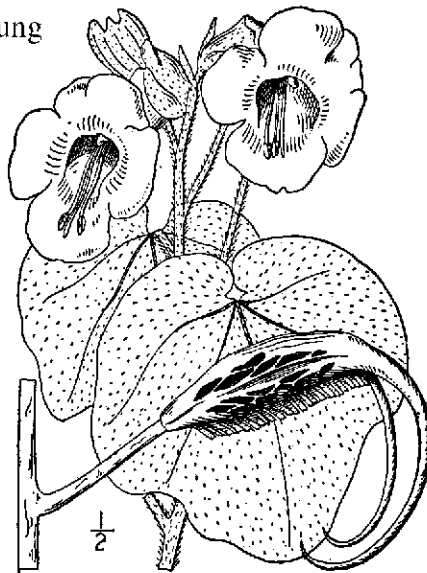
In woods and thickets, Newfoundland to Pennsylvania, Indiana, Delaware and Tennessee. Aug.-Oct.

Proboscidea louisianica (P. Mill.) Thellung
Unicorn-Plant. Elephant's
Trunk. Martineoe. Doubleclaw.

M. louisiana Mill. Gard. Dict. Ed. 8, no. 3. 1768.
Martymia proboscidea Glox. Obs. 14. 1785.

Annual, densely glandular-pubescent all over; stem stout, much branched, the branches prostrate or ascending, 1°-3° long. Leaves broadly ovate to orbicular, rounded at the apex, cordate at the base, repand, undulate or entire, 3'-12' in diameter, the petiole stout, mostly longer than the blade; bractlets at the base of the calyx oblong or linear, deciduous; calyx somewhat cleft on the lower side; racemes several-flowered; pedicels slender; corolla whitish or yellowish, mottled with purple or yellow within, 1½'-2' long, the limb nearly as broad, the lobes obtuse; stamens all anther-bearing; fruit strongly curved, 4'-6' long when mature, the beak longer than the body, splitting into 2 elastically diverging segments, the endocarp crested on the under side only.

In waste places, escaped from gardens, Maine to western New York, New Jersey and Georgia. Native from Indiana to Iowa, Utah, Texas and New Mexico.



Prunella vulgaris L. Self-heal. Heal-all. Dragon-head.

Prunella vulgaris L. Sp. Pl. 600. 1753.

Pubescent or nearly glabrous; stem slender, procumbent or ascending or erect, usually simple, but sometimes considerably branched, 2'-2° high. Leaves ovate, oblong or oblong-lanceolate, obtuse or subacute at the apex, usually narrowed at the base, entire, crenate, dentate, or incised, 1'-4' long, the lowest commonly shorter and sometimes subcordate; spikes terminal, sessile or short-peduncled, very dense, ½'-1' long in flower, becoming 2'-4' long in fruit; bracts broadly ovate-orbicular, cuspidate, more or less ciliate; corolla violet, purple, or sometimes white, 4"-6" long, about twice as long as the purplish or green calyx; calyx-teeth often ciliate.

In fields, woods and waste places throughout nearly the whole of North America. Native and naturalized from Europe. Native also of Asia. Thimble-flower. All-heal. Brown-wort. Carpenter's-herb or -weed. Hook-heal or -weed. Heart-of-the-earth. Sicklewort. Blue-curls. May-Oct.

Prunella laciniata L., differing by pinatifid or deeply incised leaves, found near Washington, D. C., and illustrated in our first edition, is a race of this species.



Pycnanthemum incanum (L.) Michx.

Clinopodium incanum L. Sp. Pl. 588. 1753.
Pycnanthemum incanum Michx. Fl. Bor. Am. 2: 7. 1803.
Koellia incana Kuntze, Rev. Gen. Pl. 520. 1891.

Stem pubescent, or glabrous below, stout, 1½-3° high. Leaves thin, ovate to ovate-lanceolate, petioled, acute at the apex, sharply serrate or serrulate, white-canescens beneath, puberulent or glabrous above, 1½-3' long, ½-1½' wide, or the uppermost smaller and sometimes canescent on both sides; clusters loose, terminal and in the upper axils, 1'-1½' broad, canescent, the flowers sometimes secund on their branches; bracts linear, or the outer broader, canescent or slightly villous, spreading, mostly shorter than the clusters; calyx canescent, slightly 2-lipped, its teeth subulate, somewhat unequal, the longer one-fourth to one-half as long as the tube, rarely villous; corolla-tube equalling or longer than the calyx.

Dry thickets and hillsides, Maine to Ontario, Florida, Alabama and Missouri. Calamint. Wild basil. Aug.-Oct.

Hoary Mountain-Mint.



Pycnanthemum montanum Michx.
 Thin-leaved Mountain-Mint.

Pycnanthemum montanum Michx. Fl. Bor. Am. 2: 8. 1803.
Monardella montana Benth. Lab. Gen. & Sp. 331. 1834.
Koellia montana Kuntze, Rev. Gen. Pl. 520. 1891.

Stem slender, glabrous or nearly so throughout, 2°-3° high. Leaves distinctly petioled, membranous, glabrous, ovate-lanceolate or the upper lanceolate, long-acuminate at the apex, usually narrowed at the base, sharply serrate, 2'-5' long, ½-2' wide, none of them canescent; flower-clusters rather dense, terminal and in the upper axils, ½'-1' broad; bracts appressed, lanceolate or linear-lanceolate, acuminate, not exceeding the fully developed clusters, bearded more or less with long hairs; calyx tubular, glabrous or puberulent, or villous above, its teeth triangular-subulate, equal, one-fifth to one-fourth as long as the tube; corolla-tube longer than the calyx.

In woods, mountains of southern Virginia to Georgia, Tennessee and Alabama. July-Sept.



Pycnanthemum virginianum (L.) T. Dur. & B.D. Jackson ex
 B.L. Robins. & Fern. Virginia Mountain-Mint.

Satureja virginiana L. Sp. Pl. 567. 1753.
P. lanceolatum Fursh, Fl. Am. Sept. 409. 1814.
Koellia virginiana MacM. Met. Minn. 452. 1892.

Stem strict, rather stout, glabrous or pubescent, 1°-3° high. Leaves lanceolate or linear-lanceolate, fragrant, very short-petioled or sessile, firm, entire, acuminate at the apex, glabrous or somewhat puberulent beneath, or the uppermost densely canescent, 1'-2' long, 2''-5'' wide, often with short leafy branches in their axils; glomerules dense, 4''-6'' in diameter, terminal, corymbed, canescent; bracts appressed, rigid, acute, acuminate or subulate-tipped, not exceeding the clusters; calyx cylindraceous, or expanded above, canescent, its teeth triangular-ovate, equal or nearly so, acute, little longer than wide, about one-fourth as long as the tube; corolla pubescent without, purple-spotted, its tube longer than the calyx.

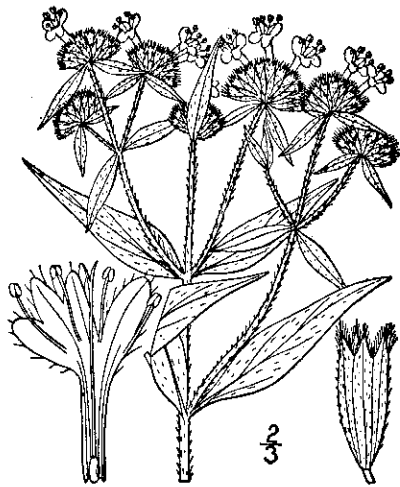
In dry fields and thickets, Quebec and Ontario to Minnesota, south to Georgia, Alabama and Kansas. Virginia or mountain thyme. Prairie-hyssop. Penny-royal. Basil. July-Sept.

Pycnanthemum pilosum Nutt.
 Hairy Mountain-Mint.

Pycnanthemum pilosum Nutt. Gen. 2: 33. 1818.
Pycnanthemum muticum var. *pilosum* A. Gray, Syn. Fl. 2: Part 1, 355. 1878.
Koellia pilosa Britton, Mem. Torr. Club 5: 279. 1894.

Pubescent, at least above, 1°-2½° high. Leaves lanceolate, very short-petioled or sessile, entire or very sparingly denticulate, 1'-2' long, 3''-6'' wide, firm, acuminate at the apex, mostly narrowed at the base, commonly with smaller ones, or short leafy shoots in their axils; glomerules dense, numerous, terminal, villous or hirsute-canescens, about 4'' in diameter; bracts lanceolate, acuminate, equalling or exceeding the clusters; calyx cylindraceous, narrow, canescent, its teeth lanceolate-subulate, equal, often ciliate, about 3 times as long as wide and one-fourth the length of the tube; corolla pubescent, its tube little longer than the calyx; stamens exerted.

On prairies and in dry woods, Ontario to Pennsylvania, Georgia, Iowa, Kansas and Arkansas. July-Sept.





Rudbeckia fulgida var. *speciosa* (Wenderoth) Perdue
Showy Cone-flower.

Rudbeckia aspera Pers. Syn. 2: 477. 1807?
R. speciosa Wendl. Ind. Sem. Hort. Marb. 1828.

Perennial, more or less hirsute or hispid; stem branched above, 1°-4° high. Leaves firm, slender-petioled, 2'-5' long, 1'-2' wide, dentate with low teeth, acute or sometimes acuminate, 3-5-nerved; stem leaves sessile or partly clasping, or narrowed into broad margined petioles, lacinate or serrate, lanceolate to ovate, acuminate, often 6' long, the uppermost smaller and sometimes entire; heads several, 2'-3' broad; bracts of the involucre linear-lanceolate, acute; rays 12-20, 1'-1½' long, bright yellow, usually orange at the base; disk depressed-globose, 5'-8' broad, brown-purple; chaff of the receptacle obtusish or acute, ciliate or naked; pappus a short crown.

In moist soil, New Jersey to Michigan, south to Alabama and Arkansas. Aug.-Oct.

Rudbeckia Sullivantii Boynton & Beadle has been separated from *R. speciosa* on account of its broader leaves, larger disk-flowers and larger achenes.

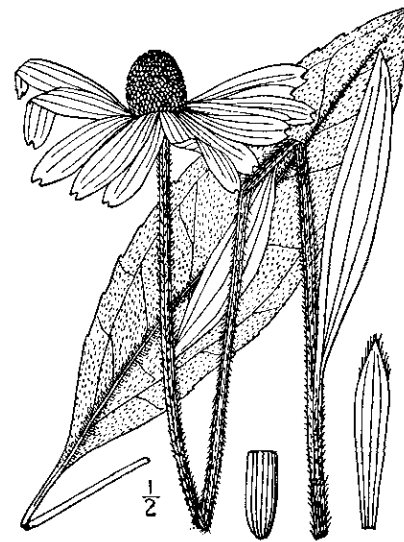
Rudbeckia laciniata L. Tall, or Green-headed Cone-flower.

Rudbeckia laciniata L. Sp. Pl. 906. 1753.

Perennial; stem much branched, glabrous, or nearly so, 3°-12° high. Leaves rather thin, minutely pubescent on the margins and upper surface, broad, the basal and lower ones long-petioled, often 1° wide, pinnately 3-7-divided, the segments variously toothed and lobed; stem leaves shorter-petioled, 3-5-parted or divided, the uppermost much smaller, 3-lobed, dentate or entire; heads several or numerous, 2½'-4' broad; rays 6-10, bright yellow, drooping; bracts of the involucre unequal; chaff of the receptacle truncate and canescent at the apex; disk greenish-yellow, at length oblong and twice as long as thick or longer; pappus a short crown.

In moist thickets, Quebec to Manitoba, Idaho, Colorado, Florida and Arizona. Thimble-weed. A double-flowered form in cultivation is called golden-glow. July-Sept.

A southern mountain race, lower, often only 1° high, with smaller heads, has been described as *Rudbeckia laciniata humilis* A. Gray.



Rudbeckia hirta L. Black Eyed Susan.
Yellow Daisy.

Rudbeckia hirta L. Sp. Pl. 907. 1753.

Hirsute or hispid throughout, biennial or sometimes annual; stems simple or sparingly branched, often tufted, 1°-3° high. Leaves thick, sparingly serrate with low teeth, or entire, lanceolate or oblong, the lower and basal ones petioled, mostly obtuse, 3-5-nerved, 2'-7' long, ½'-2' wide, the upper sessile, narrower, acute or acutish; heads commonly few or solitary, 2'-4' broad; rays 10-20, orange or orange-yellow, rarely darker at the base; bracts of the involucre very hirsute, spreading or reflexed, much shorter than the rays; disk globose-ovoid, purple-brown; chaff of the receptacle linear, acute or acutish, hirsute at the apex; style-tips acute; pappus none.

Prairies and plains, Ontario to Manitoba, Florida, Colorado and Texas. Widely distributed in the east as a weed, north to Quebec. Races differ in pubescence and in length and color of the rays. Nigger- or darkey-head. Nigger- or poor-land daisy. Golden-jerusalem. Yellow ox-eye-daisy. English bull's-eye.

Brown daisy or betty. Brown-eyed susan. May-Sept.

Sabbatia angularis (L.) Pursh. Bitter-bloom. Rose-Pink. Square-stemmed Sabbatia.



Chironia angularis L. Sp. Pl. 190. 1753.

S. angularis Pursh, Fl. Am. Sept. 137. 1814.

Stem usually rather stout and much branched, sharply 4-angled, 2°-3° high, the branches all opposite or the lowest rarely alternate. Leaves ovate, acute at the apex, cordate-clasping at the base, 9"-18" long, or the lower oblong and obtuse, those of the branches smaller; flowers rose-pink, with a central greenish star, occasionally white, 1'-1½' broad, usually solitary at the ends of the branches; calyx-lobes linear, one-half the length of the corolla, or less; corolla-segments obovate; style 2-cleft; capsule oblong, about 3" high.

In rich soil, often in thickets, New York and Pennsylvania to western Ontario, Michigan, Florida, Arkansas, Oklahoma and Louisiana. Bitter clover. Pink-bloom. American centaury. July-Aug. Flowers fragrant.



Sabatia brevifolia Raf.

Elliott's Sabatia.

Swertia difformis L. Sp. Pl. 226. 1753?

Sabatia paniculata Ell. Bot. S. C. & Ga. 1: 282. 1817. Not Pursh, 1814.

S. Elliottii Steud. Nomencl. Ed. 2, 2: 489. 1841.

Stem paniculately branched, terete or slightly ridged, 1°-2° high, the branches alternate. Lower leaves obovate or lanceolate-oblong, obtuse, 6"-9" long, the upper and those of the branches narrowly linear or subulate; flowers very numerous, white, solitary at the ends of the branches and short peduncles, 1' broad or less; calyx not ribbed, its lobes subulate-linear, one-half as long as the spatulate or oblanceolate segments of the corolla, or less; style 2-parted; capsule about 2½" high.

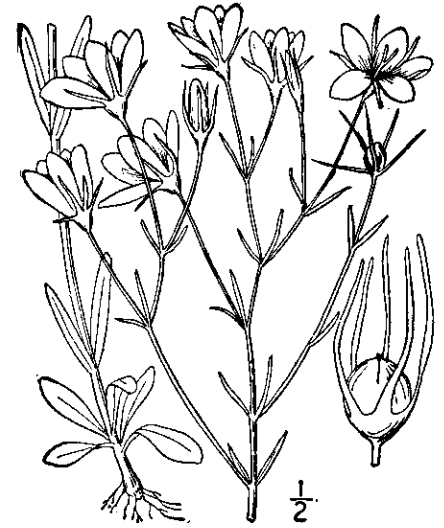
In pine-barrens, Virginia and North Carolina to Florida. Quinine-flower. July-Sept.

Sabatia campanulata (L.) Torr. Slender Marsh Pink.

Chironia campanulata L. Sp. Pl. 190. 1753.
Chironia gracilis Michx. Fl. Bor. Am. 1: 146. 1803.
Sabatia gracilis Salisb. Parad. Lond. pl. 32. 1806.
Sabatia campanulata Torr. Fl. U. S. 1: 217. 1824.

Similar to the preceding species. Stem usually very slender and much branched, 1°-2° high, the branches alternate. Leaves linear, or linear-lanceolate, 1'-1½' long, sessile, acute, or the lowest much shorter, obtuse, oblong or oblanceolate, sometimes narrowed into short petioles, the uppermost almost filiform; flowers pink with a yellow eye, about 1' broad, solitary at the ends of the branches and peduncles, mostly 5-parted; calyx-lobes filiform-linear, equalling the oblong-obovate corolla-segments, or somewhat shorter; style 2-cleft to about the middle; capsule obovoid, about 2½" high.

In salt marshes and along brackish rivers, rarely in fresh-water swamps, Nantucket to Florida and Louisiana. Also on the summits of the southern Alleghanies. Bahamas; Cuba. May-Aug.



Sabatia campestris Nutt. Prairie Sabatia.

Sabatia campestris Nutt. Trans. Amer. Phil. Soc. (II.) 5: 197. 1833-37.

Stem 4-angled, branched, 6'-15' high, the branches alternate or dichotomous, or the lowest opposite. Leaves ovate, oblong or lanceolate, mostly obtuse at the apex, sessile or slightly clasping and subcordate at the base, ½'-1' long; flowers solitary at the ends of the branches and peduncles, 1'-2' broad; peduncles, 1'-2' long; calyx 5-ribbed or almost 5-winged, its lobes lanceolate, acute, 6"-12" long, about as long as the obovate lilac corolla-segments, becoming rather rigid in fruit; style 2-cleft; capsule oblong, 3"-4" high.

On prairies, Missouri and Kansas to Texas.

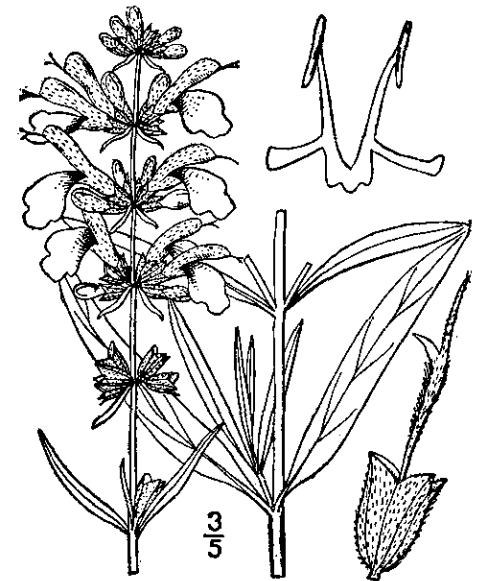
Salvia azurea var. grandiflora Benth.

Pitcher's Sage. Tall Sage.

Salvia Pitcheri Torr.; Benth. Lab. 251. 1833.
Salvia azurea var. *grandiflora* Benth. in DC. Prodr. 12: 302. 1848.

Perennial, downy; stem stout, branched or simple, erect, 2°-5° high; branches nearly erect. Leaves linear or linear-oblong, dentate to entire, sessile, or narrowed at the base into short petioles, firm, 2'-5' long, 2"-8" wide, the uppermost reduced to small bracts; clusters in long dense terminal spikes, or the lower ones distant; calyx oblong-campanulate, densely and finely woolly, about 3" long, its upper lip entire, obtuse, the lower with 2 ovate acute teeth; corolla blue or white, finely pubescent without, 1' long, its lower lip broad, sinuately 3-lobed, longer than the concave upper one; lower ends of the connective dilated, often adherent to each other, destitute of anther-sacs.

On dry plains, Illinois and Minnesota to Missouri, Kansas, Colorado and Texas. July-Sept.



Salvia lyrata L. Lyre-leaved Sage.
Wild Sage. Cancer-weed.

Salvia lyrata L. Sp. Pl. 23. 1753.

Perennial or biennial, hirsute or pubescent; stem slender, simple, or sparingly branched, erect, 1°-3° high, bearing 1 or 2 distant pairs of small leaves (rarely leafless), and several rather distant whorls of large violet flowers. Basal leaves tufted, long-petioled, obovate or broadly oblong, lyrate-pinnatifid or repand-dentate, thin, 3'-8" long; stem-leaves similar, or narrower and entire, sessile, or short-petioled; clusters distant, about 6-flowered; calyx campanulate, the teeth of its upper lip subulate, those of the lower longer, aristulate; corolla about 1' long, the tube very narrow below, the upper lip much smaller than the lower; filaments slender; anther-sacs borne on both the upper and lower ends of the connective, the lower one often smaller.

In dry, mostly sandy woods and thickets, Connecticut to Florida, west to Illinois, Arkansas and Texas. Corolla rarely undeveloped. May-July.



Salvia reflexa Hornem.
Lance-leaved Sage.

S. lanceolata Brouss. App. Elench. Pl. Hort. Monsp. 15. 1805. Not Lam.
?S. reflexa Hornem. Enum. Pl. Hort. Hafn. 34. 1807.
S. lanceifolia Poir. in Lam. Encycl. Suppl. 5: 49. 1817.

Annual, puberulent or glabrous; stem leafy, usually much branched, erect or diffuse, 6'-18' high. Leaves oblong, linear-oblong or oblong-lanceolate, petioled, mostly obtuse at the apex and narrowed at the base, crenulate-dentate or entire, 1'-2' long, 2''-5'' wide, the upper reduced to lanceolate-subulate, rather persistent bracts; flowers mostly opposite, but sometimes 3-4 together in the terminal spike-like racemes; pedicels shorter than the campanulate calyx; calyx 2''-3'' long, its upper lip ovate, entire, the lower 2-cleft, the teeth ovate, mucronate; corolla blue, about 4'' long, its lower lip narrow, twice as long as the upper; lower ends of the connectives dilated; style nearly or quite glabrous.

On plains, Indiana to Nebraska, Montana, Colorado, Texas, Arizona and Mexico. Recorded as introduced in Ohio. May-Sept.

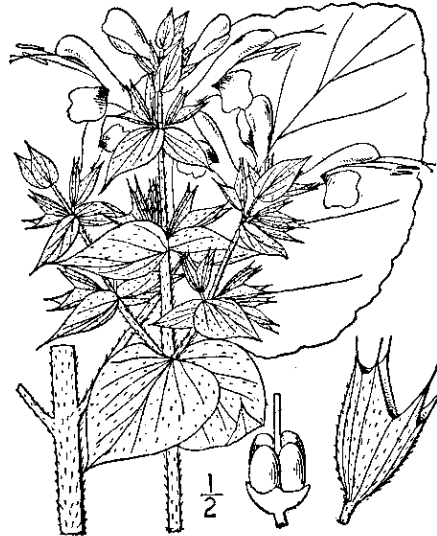


Salvia Sclarea L. Clary. Clear-eye.
See-bright.

Salvia Sclarea L. Sp. Pl. 27. 1753.

Biennial or annual, glandular-pubescent; stem stout, erect, 2°-3½° high. Leaves broadly ovate, rugose, acute or obtuse at the apex, cordate at the base, irregularly denticulate, the lower long-petioled, 6'-8" long, the upper small, short-petioled or sessile; clusters several-flowered, numerous in terminal spikes; bracts broad, ovate, acuminate, commonly longer than the calyx, pink or white; calyx campanulate, deflexed-spreading in fruit, 4''-5'' long, its lips about equal, the teeth all subulate-acicular; corolla blue and white, about 1' long; upper lip arched, laterally compressed, longer than the lower one.

In fields, Pennsylvania to South Carolina, escaped from gardens. Naturalized from Europe. The mucilage of the seeds used to clear specks from the eye. June-Aug.



Sambucus nigra ssp. canadensis (L.) R. Bolli

American Elder.

Sweet or Common Elder.

Sambucus canadensis L. Sp. Pl. 269. 1753.

A shrub, 4°-10° high, glabrous or very nearly so, the stems but little woody, the younger ones with large white pith. Leaflets 5-11, usually 7, ovate or oval, acuminate or acute at the apex, short-stalked, glabrous above, sometimes pubescent beneath, 2'-5' long, sharply serrate, sometimes stipellate; cymes convex, broader than high; flowers white, about 1½'' broad; drupe deep purple or black, nearly 3'' in diameter; nutlets roughened.

In moist soil, Nova Scotia to Florida, west to Manitoba, Kansas and Texas. Also in the West Indies. Ascends to 4000 ft. in North Carolina. Called also elder-blow, elder-berry. The flowers and fruit have strong medicinal properties. Leaves heavy-scented when crushed, those of young shoots often stipulate. June-July.

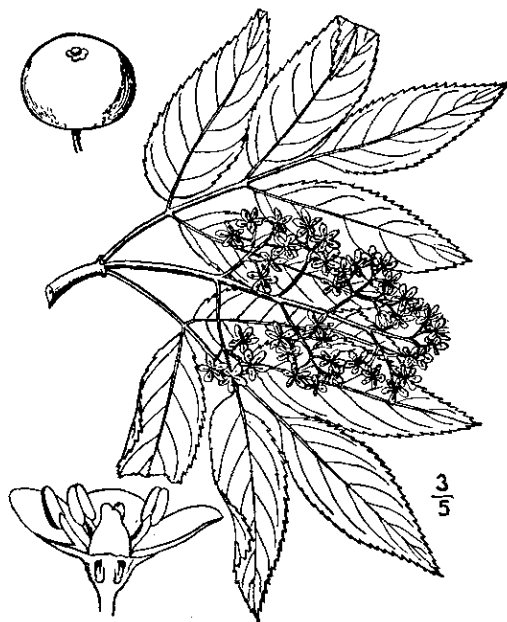


Sambucus racemosa L. Red-berried Elder.

S. racemosa L. Sp. Pl. 270. 1753.
S. pubens Michx. Fl. Bor. Am. 1: 181. 1803.

A shrub, 2°-12° high, the twigs and leaves commonly pubescent; stems woody, the younger with reddish-brown pith. Leaflets 5-7, ovate-lanceolate or oval, acuminate at the apex, often narrowed and usually inequilateral at the base, 2'-5' long, not stipellate, sharply serrate; cymes thyrsoid, longer than broad; flowers whitish, turning brown in drying; drupe scarlet or red, 2'-3" in diameter; nutlets very minutely roughened.

In rocky places, Newfoundland to Alaska, British Columbia, Georgia, Michigan, Colorado and California. Fruit rarely white. April-May. Called also mountain elder. Poison-elder (Me.). Boor- or bore-tree. Boutry. Ascends to 5000 ft. in Virginia. *Sambucus pubens dissecta* Britton, Mem. Torr. Club 5: 304. 1894, is a race with leaflets lacinate. Lake Superior and Pennsylvania.

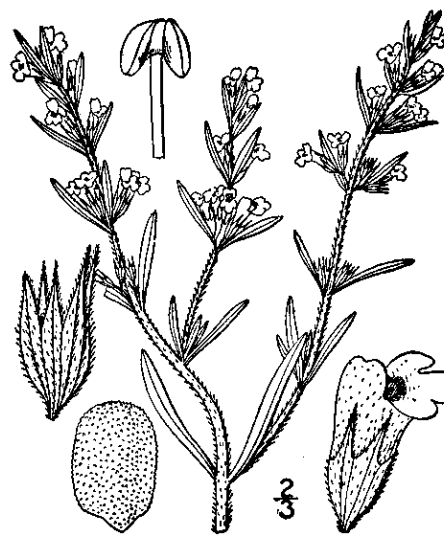


Satureia hortensis L. Savory. Summer Savory.

Satureia hortensis L. Sp. Pl. 568. 1753.

Annual, puberulent; stems erect, slender, much branched, 6'-18' high. Leaves linear or linear-oblong, short-petioled, entire, acute at both ends, 3'-1 1/2' long, 1"-2" wide; clusters 3"-5" in diameter, terminal and in many of the upper axils; bracts linear, small, minute, or wanting; calyx about equalling the corolla-tube, somewhat pubescent, its teeth subulate, about as long as the tube, ciliate; corolla little longer than the calyx; stamens scarcely exserted.

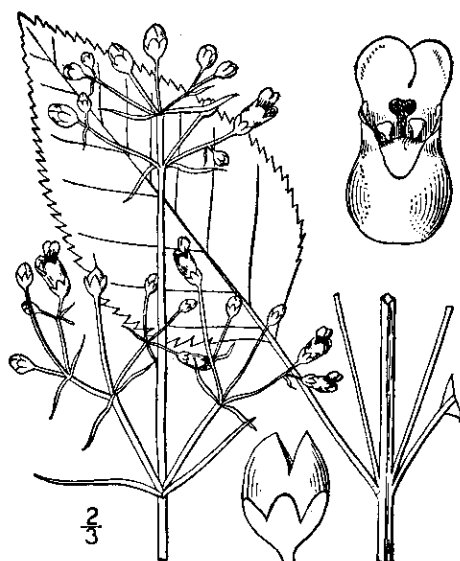
In waste places, New Brunswick and Ontario to Kentucky, west to Nevada. Naturalized or adventive from Europe. July-Sept.



Scrophularia marylandica L. Maryland Figwort, Heal-all or Pilewort.

Scrophularia marylandica L. Sp. Pl. 619. 1753.
Scrophularia nodosa var. *marylandica* A. Gray, Syn. Fl. 2: Part 1, 258. 1878.

Glabrous below, somewhat glandular-pubescent above; stem slender, 4-angled with grooved sides, usually widely branched, erect, 3°-10° high. Leaves membranous, slender-petioled, usually puberulent beneath, ovate or ovate-lanceolate, acuminate at the apex, sharply serrate, narrowed, truncate or subcordate at the base, 3'-12' long; flowers greenish-purple, 3"-4" long, very numerous in the nearly leafless thyrses; bractlets mostly opposite, pedicels slender, ascending, 4"-12" long; calyx-lobes broadly ovate, obtuse, about the length of the tube; corolla green, dull without, brownish purple and shining within, little contracted at the throat, the two lateral lobes slightly spreading, the upper lip erect, its lobes short, rounded; capsule subglobose, with a slender tip; sterile stamen deep purple.



In woods and thickets, Maine to South Dakota, North Carolina, Georgia and Tennessee. Scrofula-plant. Carpenter's-square. Ascends to 4000 ft. in North Carolina. July-Sept.

Scutellaria Brittonii Porter.

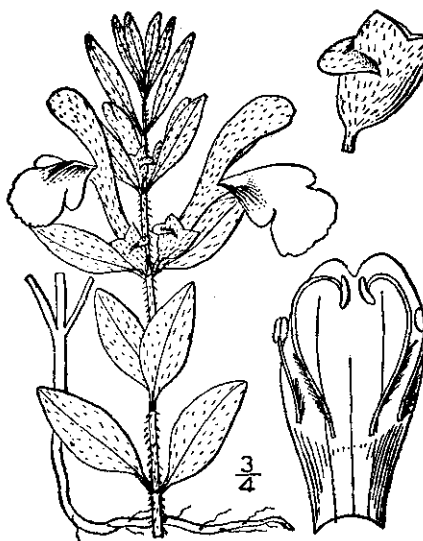
Britton's Skullcap.

Scutellaria resinosa A. Gray, Syn. Fl. 2: Part 1, 381. 1878. Not Torr. 1827.

Scutellaria Brittonii Porter, Bull. Torr. Club 21: 177. 1894.

Perennial by tuberous-thickened rootstocks, viscidly glandular, pubescent or puberulent, branched from the base; stems erect, 4'-8' high, leafy. Leaves oblong or oval, sessile and entire or the lowest short-petioled and slightly crenulate, obtuse at the apex, rather prominently veined on the lower surface, 6"-12" long, the upper scarcely smaller; flowers solitary in the axils; pedicels mostly shorter than the calyx; corolla pubescent, blue, 10"-15" long, the tube narrow below, enlarged above into the throat; gynobase short.

Nebraska (according to Coulter); Colorado and Wyoming. June-July.



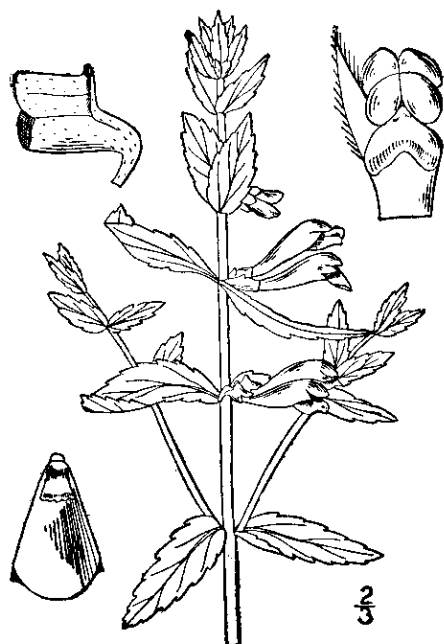
Scutellaria galericulata L.

Hooded Willow-herb. Marsh or European Skullcap.

Scutellaria galericulata L. Sp. Pl. 599. 1753.

Perennial by filiform stolons, not tuber-bearing, puberulent or pubescent; stem erect, usually branched, 1°-3° high. Leaves oblong-lanceolate to ovate-oblong, thin, short-petioled, or the upper sessile, acute at the apex, dentate with low teeth or the upper entire, subcordate or rounded at the base, 1'-2½' long, the uppermost usually much smaller and bract-like; flowers solitary in the axils; peduncles shorter than the calyx; corolla blue, puberulent, nearly or quite 1' long, with a slender tube and slightly enlarged throat; gynobase short.

In swamps and along streams, Newfoundland to Mackenzie, Alaska, New Jersey, the mountains of North Carolina, Ohio, Nebraska, Arizona and Washington. Also in Europe and Asia. June-Sept.



Scutellaria incana Muhl.

Downy Skullcap.

Scutellaria incana Muhl. Cat. 56. 1813.

Scutellaria canescens Nutt. Gen. 2: 38. 1818.

S. serrata Spreng. Syst. 2: 703. 1825. Not Andr. 1809.

Perennial, finely and densely whitish downy, or the upper surfaces of the leaves glabrous; stem rather strict, erect, usually much branched above, 2°-4° high. Leaves ovate, oval, or oblong, rather firm, slender-petioled, acute at the apex, crenate-dentate, narrowed, rounded or the lower subcordate at the base, 3'-4½' long; racemes terminal, usually numerous and paniced, several-many-flowered; fruiting calyx 1½'-2' long; corolla 9"-10" long, canescent; upper lip of the corolla slightly longer than the lower; gynobase very short.

In moist woods and thickets, Ontario to Michigan, Kansas, Georgia, Florida and Alabama. June-Aug.



Scutellaria integrifolia L. Larger or Hyssop Skullcap.

Scutellaria integrifolia L. Sp. Pl. 599. 1753.

Scutellaria hyssopifolia L. Sp. Pl. 599. 1753.

Perennial, hoary with a minute down; stem slender, erect, rather strict, simple or branched, 6'-2½° high. Leaves thin, linear to oblong, petioled, or the upper sessile, obtuse at the apex, entire, 1'-2' long, 2"-6" wide, or the lower ovate, lanceolate or nearly orbicular, obtuse and sometimes subcordate at the base, often crenate-dentate or incised; racemes solitary or several, terminal; bracts linear-oblong, subacute, longer than the pedicels; fruiting calyx 2"-3" long; corolla blue, or whitish underneath, 10"-15" long, its large lips nearly equal; gynobase short.

In fields, woods and thickets, Massachusetts to West Virginia, Tennessee, Arkansas, Florida, Louisiana and Texas. Consists of several races. May-Aug. Large-flowered skullcap.



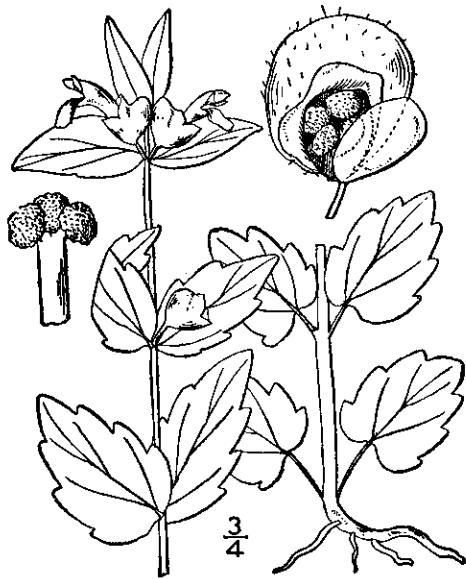
Scutellaria lateriflora L. Mad-dog or Blue Skullcap.

Scutellaria lateriflora L. Sp. Pl. 598. 1753.

Perennial by slender stolons, glabrous throughout or puberulent above; stem slender, leafy, erect or ascending, commonly branched, 4'-2½° high. Leaves ovate, ovate-oblong or ovate-lanceolate, thin, slender-petioled, acute or acuminate at the apex, coarsely dentate-serrate, obtuse, rounded or subcordate at the base, 1'-3' long, the upper gradually smaller, the uppermost sometimes entire; racemes narrow, secund, axillary or often also terminal and leafy-bracted, several-many-flowered; flowers 3'-5" long; calyx short; corolla blue, varying to nearly white, its lips about equal, one-fifth as long as the tube; nutlets borne on a very short gynobase.

In wet places, Newfoundland to Ontario and British Columbia, Florida, Mississippi, New Mexico and Oregon. July-Sept. Blue pimpernel. Side-flowering skullcap. Madweed. Hoodwort.





Scutellaria nervosa Pursh.
Veined Skullcap.

S. nervosa Pursh, Fl. Am. Sept. 412. 1814.
Scutellaria teucrifolia J. E. Smith in Rees' Cycl.
32: no. 15. 1816.

Perennial by filiform stolons; stem glabrous or sparingly pubescent, erect, slender, simple or sometimes branched, 6'-2° high. Leaves thin, glabrous, or sometimes decidedly pubescent, the lower slender-petioled, nearly orbicular, crenate, often subcordate at the base, the middle ones larger, ovate, 1'-2' long, sessile or nearly so, obtuse or acute, coarsely dentate or crenate, the upper lanceolate or ovate-lanceolate, acute, commonly entire; flowers solitary in the axils; fruiting calyx about 2" long; corolla blue, 4'-5" long, puberulent, the lower lip longer than the concave upper one; nutlets membranous-winged, borne on a slender gynobase.

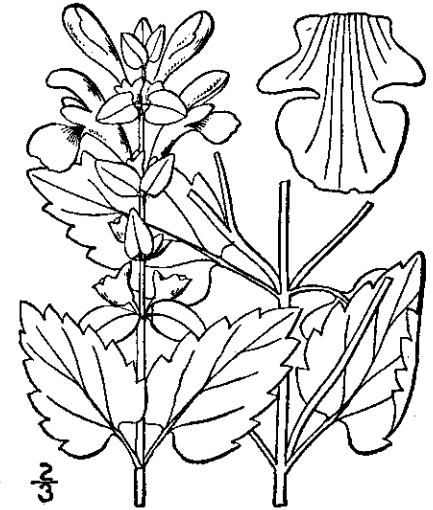
In moist woods and thickets, southern Ontario, New York and New Jersey to Illinois and Missouri, North Carolina and Tennessee. Ascends to 3000 ft. in Virginia. May-Aug.

Scutellaria ovata Hill
Heart-leaved Skullcap.

Scutellaria cordifolia Muhl. Cat. 56. 1813.
Scutellaria versicolor Nutt. Gen. 2: 38. 1818.

Perennial, densely glandular-pubescent; stem erect, usually stout, 1°-3° high, often simple. Leaves prominently veined, slender-petioled, broadly ovate, crenate-dentate all around, 2'-4' long, all but the uppermost cordate at the base; racemes terminal, narrow, solitary or paniced; bracts ovate, mostly entire, commonly longer than the pedicels; fruiting calyx nearly 3" long; corolla puberulent, 10'-12" long, blue with the lower side lighter or white, its tube narrow, its throat moderately dilated, its lateral lobes about as long as the upper lip; gynobase short.

In woods and thickets, especially along streams, Pennsylvania to Florida, west to Minnesota, Kansas, Arkansas and Texas. Includes several races. June-Aug.

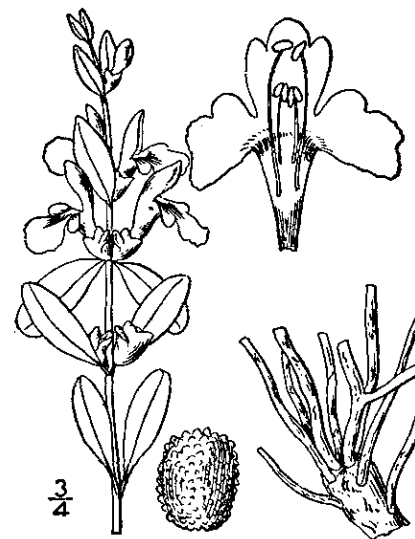


Scutellaria parvula Michx.
Small Skullcap.

S. parvula Michx. Fl. Bor. Am. 2: 11. 1803.
Scutellaria ambigua Nutt. Gen. 2: 37. 1818.
S. parvula var. *mollis* A. Gray, Syn. Fl. 2: 380.
1878.
S. campestris Britton, Mem. Torr. Club 5: 283.
1894.

Glabrous, or quite densely pubescent, sometimes slightly glandular, perennial by slender tuberous-thickened rootstocks; stems erect or ascending, very slender, usually branched, 3'-12' tall. Leaves ovate, oval or lanceolate, or the lower nearly orbicular, entire and sessile, or the lower dentate and petioled, 3"-12" long; flowers solitary in the axils; fruiting calyx about 2" long; corolla 2"-4" long, violet, pubescent; gynobase short.

In sandy soil, Quebec to Ontario, South Dakota, Florida, Nebraska and Texas. Races differ in pubescence and in leaf-form. April-July. Little skullcap.



Scutellaria resinosa Torr.
Resinous Skullcap.

S. resinosa Torr. Ann. Lyc. N. Y. 2: 232. 1827.
S. Wrightii A. Gray, Proc. Am. Acad. 8: 370. 1872.

Perennial from a thick woody root, minutely canescent or puberulent and usually resiniferous; stems rather slender, rigid, tufted, leafy, ascending, 6'-10' high. Leaves ovate, oval, or oblong, sessile, or the lower short-petioled, entire, obtuse at the apex, mostly narrowed at the base, 3"-6" long; flowers solitary in the axils; fruiting calyx nearly 3" long; corolla violet or nearly white, very pubescent, 6"-8" long, its tube narrow and lips nearly equal; gynobase short.

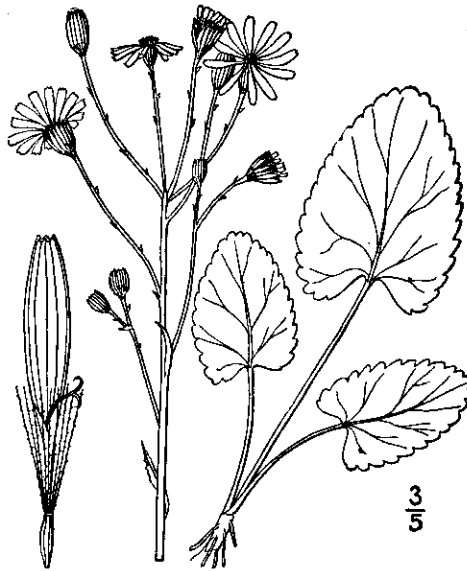
On dry plains, Nebraska and Kansas to Texas and Arizona. May-Aug.

Senecio aureus L. Golden Ragwort.
Life-root. Swamp Squaw-weed.

Senecio aureus L. Sp. Pl. 870. 1753.
Senecio pauciflorus Pursh, Fl. Am. Sept. 529. 1814.
Senecio gracilis Pursh, Fl. Am. Sept. 529. 1814.

Perennial, glabrous or very nearly so throughout; stems rather slender, solitary or tufted, 6'-2½' high. Basal leaves cordate-ovate or cordate-orbicular or reniform, crenate-dentate, very obtuse and rounded, often purplish, 1'-6' long, with long slender petioles; lower stem leaves lanceolate or oblong, usually lacinate, pinnatifid or lyrate, the uppermost small, sessile, somewhat auriculate and clasping; heads usually several, 8"-10" broad, 4"-5" high, slender-peduncled in an open corymb; rays 8-12, golden-yellow; achenes glabrous; pappus white.

In swamps and wet meadows, Newfoundland to Florida, Ontario, Michigan, Missouri and Texas. Grundy-swallow. False-valerian. Root strong-scented. Races differ in size of plant, size of leaves and number of heads. May-July.



Sicyos angulatus L. One-seeded Bur-cucumber. Star Cucumber.

Sicyos angulatus L. Sp. Pl. 1013. 1753.

Stem angled, more or less viscid-pubescent, climbing to a height of 15°-25°, or trailing. Petioles stout, 1'-4' long, pubescent; leaves nearly orbicular, rough on both sides, rather thin, deeply cordate at the base, 5-angled or 5-lobed, the lobes acute or acuminate, the margins denticulate; staminate flowers loosely corymbose or racemose, borne on elongated peduncles; fertile flowers capitate, their peduncles shorter; fruits sessile, 3-10 together, yellowish, about ½' long, pubescent, armed with slender rough spines.

Along river banks and in moist places, Quebec and Ontario to Florida, west to South Dakota, Kansas and Texas. Naturalized in eastern Europe. Called also nimble kate, wild cucumber. Leaves sometimes 10' across. June-Sept.



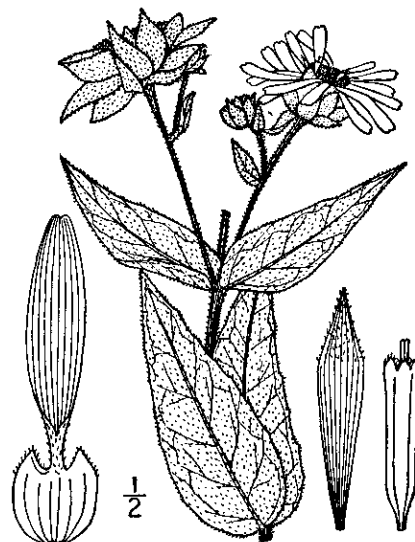
Silphium integrifolium Michx. Entire-leaved Rosin-wood.

S. integrifolium Michx. Fl. Bor. Am. 2: 146. 1803.

S. speciosum Nutt. Trans. Am. Phil. Soc. (II) 7: 341. 1841.

Stem glabrous, rough or sometimes hirsute, corymbosely branched above, 2°-5° high. Leaves ovate to ovate-lanceolate, acute or acuminate, entire, denticulate or remotely dentate, rough above, pubescent or glabrous beneath, those of the stem all closely sessile, often half-clasping but not connate-perfoliate at the rounded base, 3'-5' long, 1'-2' wide; heads usually numerous, 1'-2' broad; involucre nearly hemispheric, its outer bracts ovate or ovate-lanceolate, acute, spreading, ciliolate or pubescent; rays 15-25; achenes oval or obovate, 4'-5" long, deeply emarginate.

On prairies, Ohio to Minnesota, south to Louisiana, Nebraska, Arkansas and Texas. Aug.-Sept.

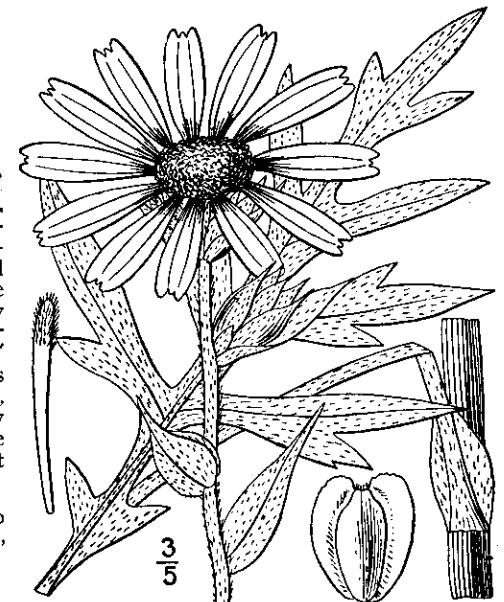


Silphium laciniatum L. Compass-plant. Pilot-weed.

Silphium laciniatum L. Sp. Pl. 919. 1753.

Rough or hispid, very resinous; stem 6°-12° high; basal leaves pinnatifid or bipinnatifid, long-petioled, 1° long or more, the lobes oblong or lanceolate; stem leaves alternate, vertical, their edges tending to point north and south, sessile, or the lower short-petioled, the upper cordate-clasping at the base, gradually smaller and less divided; heads several or numerous, sessile or short-peduncled, 2'-5' broad, the peduncles bracted at the base; rays 20-30, 1'-2' long; involucre nearly hemispheric, its bracts large, rigid, lanceolate or ovate, very squarrose; achenes oval, about 6" long, the wing broader above than below, notched at the apex, awnless.

On prairies, Ohio to South Dakota, south to Alabama, Louisiana and Texas. Turpentine-weed, polar-plant, rosin-weed. July-Sept.





Silphium perfoliatum L. Cup-plant. Indian-cup.

S. perfoliatum L. Sp. Pl. Ed. 2, 1301. 1763.

Stem square, glabrous, or rarely somewhat hispid, branched above, or sometimes simple, 4°-8° high. Leaves ovate or deltoid-ovate, opposite, the upper connate-perfoliate, the lower abruptly contracted into margined petioles, all thin, usually scabrous on both sides, or pubescent beneath, coarsely angulate-dentate, or the upper entire, the larger 6'-12' long, 4'-8' wide; heads commonly numerous, 2'-3' broad; rays 20-30, about 1' long and 2'' wide; involucre depressed-hemispheric, its outer bracts broad, ovate, ciliolate, spreading or erect; achenes obovate, emarginate, sometimes 2-toothed.

In moist soil, southern Ontario to Minnesota, South Dakota, New Jersey, Georgia, Nebraska and Louisiana. Naturalized near New York City, and elsewhere escaped from cultivation. Called also ragged-cup. July-Sept.



Silphium terebinthinaceum Jacq. Prairie Dock. Prairie Burdock.

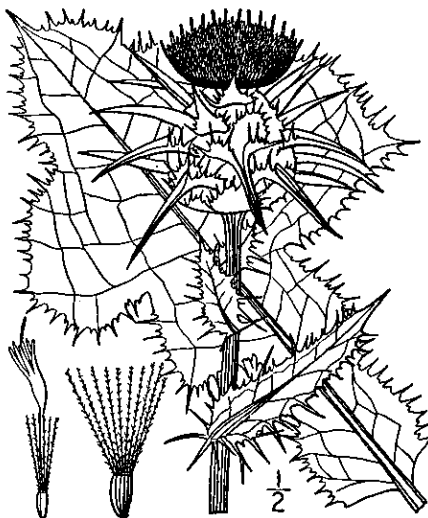
Silphium terebinthinaceum Jacq. Hort. Vind. 1: pl. 43. 1770.

S. pinnatifidum Ell. Bot. S. C. & Ga. 2: 462. 1824.

Silphium terebinthinaceum pinnatifidum A. Gray, Man. 220. 1848.

Stem glabrous or nearly so, branched and scaly above, 4°-10° high. Leaves all basal or nearly so, coriaceous, ovate, mostly long-petioled, acute at the apex, cordate at the base, rough on both sides, often 12' long and 6' wide, sharply dentate, lacinate or pinnatifid; heads numerous, 1½'-3' broad, borne on glabrous peduncles; involucre hemispheric, its bracts ovate-oblong, erect, glabrous or minutely pubescent; rays 12-20; achenes obovate, narrowly winged, slightly 2-toothed and emarginate at the apex.

On prairies and in dry woods, southern Ontario and Ohio to Minnesota, south to Georgia, Iowa and Louisiana. Rosin-plant. July-Sept.



Silybum marianum (L.) Gaertn.,

Milk Thistle.

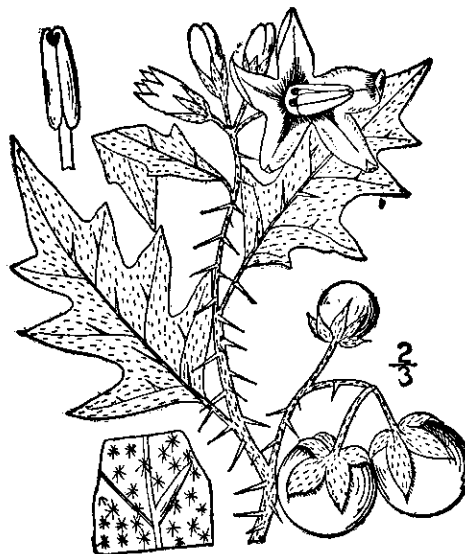
Carduus marianus L. Sp. Pl. 823. 1753.

Mariana mariana Hill, Hort. Kew. 61. 1769.

Silybum marianum Gaertn. Fruct. & Sem. 2: 378. 1802.

Stem striate, glabrous or slightly woolly, little branched, 2°-4° high. Leaves oblong-lanceolate, prickly, strongly clasping, the lower often 12' long and 6' wide, the upper much smaller, scarcely lobed, acute; heads about 2½' broad; spines of the middle involucre bracts often 1½' long; pappus bristles white, barbellate.

Escaped from gardens near Kensington, Ontario (T. Walker, according to Macoun), in ballast and waste grounds about the eastern seaports, south to Alabama, and on the Pacific Coast from British Columbia to southern California, where it is naturalized. Virgin Mary's-thistle, lady's-milk, holy thistle. June-Aug.



Solanum carolinense L.

Horse-Nettle. Sand-Brier.

Solanum carolinense L. Sp. Pl. 184. 1753.

Perennial, green, finely stellate-pubescent with 4-8-rayed hairs; stem erect, branched, 1°-4° high, the branches, petioles, midveins and sometimes the lateral veins of the leaves armed with straight subulate yellow prickles. Leaves oblong or ovate, repand, lobed, or pinnatifid, 2'-6' long, the lobes obtuse or acutish; petioles 3''-10'' long; flowers cymose-racemose, appearing terminal, but really lateral, as is manifest in fruit; pedicels 3''-7'' long, recurved in fruit; calyx-lobes lanceolate, acuminate, about one-half the length of the corolla, persistent at the base of the berry; corolla-lobes ovate-lanceolate, acute; anthers elongated; berries orange-yellow, smooth and glabrous, 8''-10'' in diameter.

In dry fields and in waste places, southern Ontario to Vermont, Massachusetts and Florida, west to Illinois, Nebraska and Texas. Adventive in its northeastern range. Apple-of-sodom. Radical-weed. Bull-nettle. Tread-softly. May-Sept.

Solanum Dulcamàra L. Climbing or Bitter Nightshade. Blue Bindweed.
Fellenwort. Bittersweet. Dogwood.

Solanum Dulcamara L. Sp. Pl. 185. 1753.

Perennial, pubescent with simple hairs or glabrate, stem climbing or straggling, somewhat woody below, branched, 2°-8° long. Leaves petioled, ovate or hastate in outline, 2'-4' long, 1'-2½' wide, acute or acuminate at the apex, usually slightly cordate at the base, some of them entire, some with a lobe on one side near the base, some deeply 3-lobed or 3-divided, with the terminal segment much the largest; cymes compound, lateral; pedicels slender, articulated at the base, spreading or drooping; flowers blue, purple or white, 5"-7" broad; calyx-lobes short, oblong, obtuse, persistent at the base of the berry; corolla deeply 5-cleft, its lobes triangular-lanceolate, acuminate; berry oval or globose, red.

In waste places or in moist thickets, sometimes appearing as if indigenous, Nova Scotia to Minnesota, Washington, New Jersey, Pennsylvania and Kansas. May-Sept. Woody nightshade. Poison-flower. Poison- or snake-berry. Scarlet berry. Naturalized from Europe. Native also of Asia.



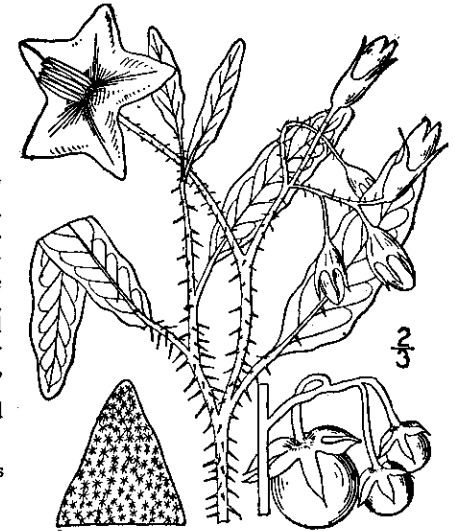
Solanum elaeagnifolium Cav.

Silver-leaved Nightshade.

S. elaeagnifolium Cav. Icon. 3: 22. pl. 243. 1794.

Perennial, densely and finely stellate-pubescent, silvery-canescens all over; stem branched, 1°-3° high, armed with very slender sharp prickles, or these wanting. Leaves lanceolate, oblong, or linear, petioled, 1'-4' long, 3"-12" wide, mostly obtuse at the apex, narrowed or rounded at the base, repand-dentate or entire; flowers cymose, 8"-12" broad, violet or blue; peduncles short and stout, appearing terminal, but soon evidently lateral; calyx-lobes lanceolate or linear-lanceolate, acute; anthers linear; ovary white-tomentose; berries globose, yellow or darker, smooth and glabrous, 4"-6" in diameter.

On dry plains and prairies, Missouri and Kansas to Texas and Arizona. Trompillos. May-Sept.



Solanum nigrum L. Black, Deadly or Garden Nightshade. Morel.

Solanum nigrum L. Sp. Pl. 186. 1753.

Annual, glabrous, or somewhat pubescent with simple hairs, green; stem erect, branched, 1°-2½° high. Leaves ovate, petioled, more or less inequilateral, 1'-3' long, entire, undulate, or dentate, thin, acute, acuminate or acutish at the apex, narrowed or rounded at the base; peduncles lateral, umbellately 3-10-flowered, ½'-1½' long; pedicels 3"-7" long; flowers white, 4"-5" broad; calyx-lobes oblong, obtuse, spreading, much shorter than the corolla, persistent at the base of the berry; filaments somewhat pubescent; anthers obtuse; berries black when ripe, smooth and glabrous, globose, 4"-5" in diameter, on nodding peduncles.

In waste places, commonly in cultivated soil, Nova Scotia to the Northwest Territory, south to Florida and Texas. Widely distributed in nearly all countries as a weed, and includes numerous races, differing principally in leaf-form and pubescence. Petty-morel. Duscle. Hound's-berry. July-Oct.



Solidago altissima L. Tall, High, or Double Golden-rod.

Solidago altissima L. Sp. Pl. 878. 1753.

S. procera Ait. Hort. Kew. 3: 211. 1789.

Solidago canadensis procera T. & G. Fl. N. A. 2: 224. 1841.

Solidago canadensis scabra T. & G. Fl. N. A. 2: 224. 1841.

Stem stout, pubescent, or hirsute nearly throughout, 2°-8° high. Leaves lanceolate, triple-nerved, acute at each end, roughish above and pubescent beneath, the lower ones sharply serrate and petioled, 3'-6' long, 4"-12" wide, the upper smaller, often entire, sessile; heads 1½"-2½" high, usually numerous, secund on the spreading or recurving branches of the usually large panicle; bracts of the involucre linear, obtuse or acutish; rays 9-15; achenes glabrous or somewhat pubescent.

Usually in dry soil, Maine to Ontario, Nebraska, Georgia and Texas. Confused, in our first edition, with *S. canadensis* L. Yellow weed. Aug.-Nov.

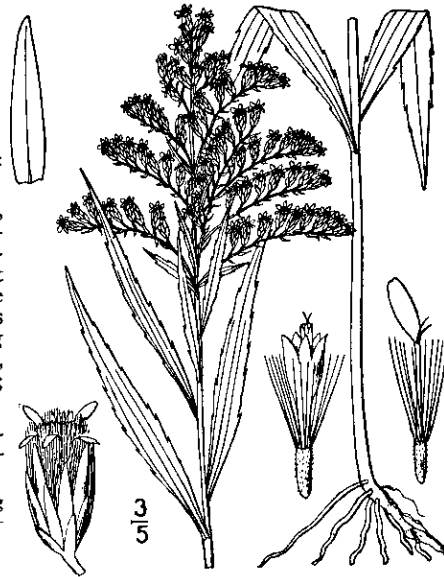
Solidago canadensis L. Canada or Rock Golden-rod.

Solidago canadensis L. Sp. Pl. 878. 1753.
Solidago rupestris Raf. Ann. Nat. 14. 1820.
S. canadensis glabrata Porter, Bull. Torr. Club 21: 310. 1894.

Stem slender, glabrous, or pubescent above, 1°-5° high. Leaves thin, triple-nerved, linear-lanceolate, 2'-5' long, 3"-5" wide, entire, or serrate with somewhat appressed teeth, acuminate at the apex, narrowed at the base, sessile, or the lowest petioled, glabrous, or pubescent; heads small, 1½" high or less, secund on the spreading branches of the often large panicle; rays 4-6, short; bracts of the involucre thin, linear, acutish; achenes small, nearly glabrous.

Hillsides, thickets and banks of streams, Newfoundland to Virginia, Ontario, Saskatchewan, Tennessee and South Dakota. Aug.-Oct.

Solidago gilvocanescens Rydb. differs in being canescent; it ranges from Illinois to Manitoba, Saskatchewan, Nebraska and Utah.

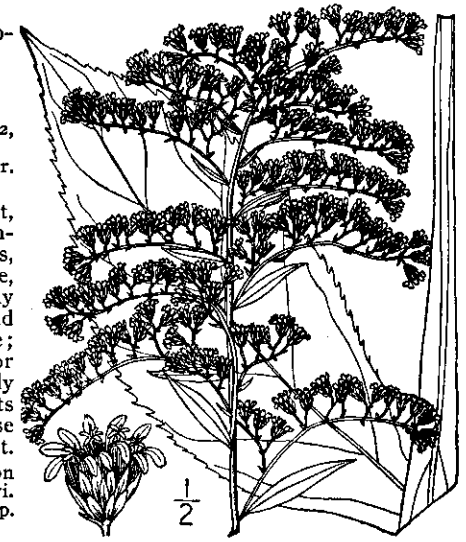


Solidago juncea Ait. Early or Sharp-toothed Golden-rod.

Solidago juncea Ait. Hort. Kew. 3: 213. 1789.
S. arguta scabrella T. & G. Fl. N. A. 2: 214. 1841.
Solidago juncea scabrella A. Gray, Syn. Fl. 2: Part 2, 155. 1884.
Solidago juncea ramosa Porter & Britton, Bull. Torr. Club 18: 368. 1891.

Stem glabrous, or very nearly so throughout, rigid, rather stout, simple, or branched at the inflorescence, 1½°-4° high. Leaves firm, glabrous, sometimes rough, lanceolate or oval-lanceolate, acute or acuminate, serrate, serrulate, or nearly entire, the lower large, sometimes 12' long and 2' wide, long-petioled, the upper smaller, sessile; heads 1½"-2" high, secund on the recurved or sometimes nearly erect branches of the usually ample spreading panicle; rays 7-12, small; bracts of the involucre oblong or ovate-oblong, obtuse or acute; achenes glabrous or sparingly pubescent.

In dry or rocky soil, New Brunswick to Hudson Bay, Saskatchewan, North Carolina and Missouri. One of the earliest flowering species. Yellow top. Plume or pyramid-golden-rod. June-Nov.



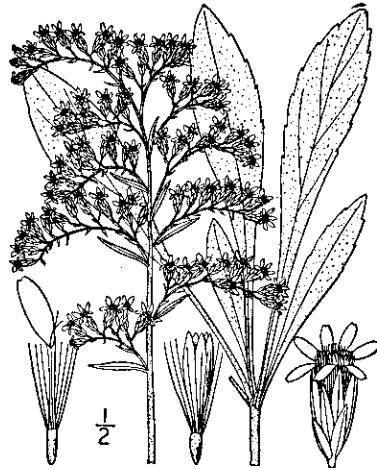
Solidago nemoralis Ait. Gray, Field, or Dwarf Golden-rod. Dyer's Weed.

Solidago nemoralis Ait. Hort. Kew. 3: 213. 1789.
Solidago nemoralis arenicola Burgess; Britton & Brown, Ill. Fl. 3: 344. 1898.

Slender, ashy-gray, 6'-2° high, erect, depressed or sometimes prostrate, finely and densely pubescent. Leaves thick, roughish, the basal and lower ones of the stem oblanceolate or spatulate, petioled, obscurely triple-nerved, obtuse or acutish, crenate-dentate, 3'-6' long, 4'-12" wide; upper leaves gradually smaller, oblanceolate or linear-oblong, acute or acutish, entire; heads 2'-3" high, secund on the spreading or recurving branches of the terminal, usually one-sided panicle; bracts of the involucre linear-oblong; rays 5-9; achenes pubescent.

In dry soil, Nova Scotia and Quebec to Saskatchewan, Florida, Texas and Arizona. July-Nov.

Solidago pulcherrima A. Nelson (*S. longipetiolata* Mack. & Bush), of Central North America, ranging eastward into Wisconsin and Missouri, differs mainly by somewhat larger heads, and is here regarded as one of the many races of *S. nemoralis* Ait.



Solidago odora Ait. Sweet or Anise-scented Golden-rod.

Solidago odora Ait. Hort. Kew. 3: 214. 1789.
Solidago odora inodora A. Gray, Man. Ed. 5, 244. 1867.

Slender; stem simple, glabrous, or minutely pubescent above, 2°-4° high. Leaves usually punctate, anise-scented when bruised, or sometimes inodorous, lanceolate, quite entire, acute or acuminate, 2'-4' long, 3"-8" wide, sessile, or the lowermost petioled; heads 2'-2½" high, secund on the spreading racemes of the terminal, usually ample panicle; rays 3 or 4, 2'-3" long; bracts of the involucre oblong-lanceolate, acute, the inner much longer than the outer.

In dry soil, Nova Scotia (according to Sommers); New Hampshire to Florida, New York, Kentucky, Missouri and Texas. Blue mountain-tea. True golden-rod. July-Sept.

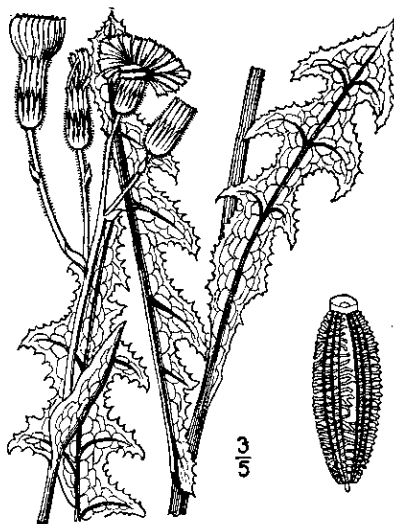


Sonchus arvensis L. Corn Sow-Thistle.
Milk Thistle.

Sonchus arvensis L. Sp. Pl. 793. 1753.

Perennial by deep roots and creeping rootstocks, glabrous; stem leafy below, paniculately branched and nearly naked above, 2°-4° high. Lower and basal leaves runcinate-pinnatifid, often 12' long, spinulose-dentate, narrowed into short petioles, the upper pinnatifid or entire, lanceolate, clasping; heads several or numerous, corymbose-paniculate, 1'-2' broad, bright yellow, very showy; involucre nearly 1' high, its bracts as also the peduncles glandular-bristly; achenes oblong, compressed, with about 10 rugose longitudinal ribs.

In low grounds, fields and waste places, New Jersey to Quebec, Newfoundland, Minnesota, Colorado and British Columbia. Naturalized from Europe. Native also of Asia. July-Oct. Dindle. Gutweed. Swine-thistle. Tree sow-thistle.



Stachys officinalis (L.) Trev.

Betony. Wood Betony. Bishop's-wort.

Betonica officinalis L. Sp. Pl. 573. 1753.
Stachys Betonica Benth. Lab. Gen. & Sp. 532. 1834.

Perennial, pilose or glabrate, deep green; stem slender, erect, usually simple, 1°-3° tall. Leaves oblong or ovate, obtuse at the apex, crenate all around, firm, cordate or truncate at the base, the basal and lower ones very long-petioled, the blades 3'-6' long, the upper distant, short-petioled or nearly sessile; lower petioles 1½-4 times as long as the blades; spike short, dense; bracts ovate, mucronate, about as long as the calyx; calyx-teeth acicular, half as long as the tube or more; corolla-tube exerted.

In a thicket at Newton, Mass. Fugitive from Europe. Herb christopher. Wild hop. July-Sept.

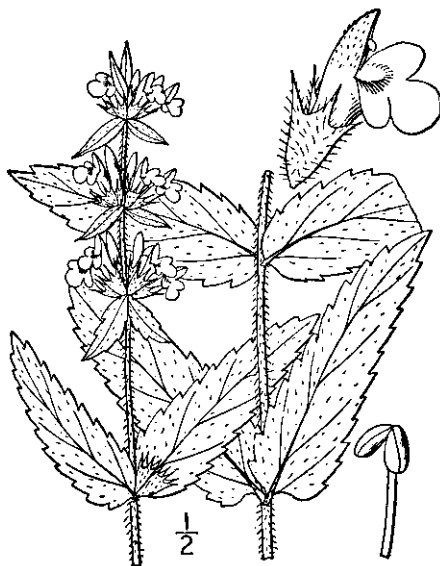


Stachys palustris L. Hedge Nettle.
Marsh or Clown's Woundwort.

Stachys palustris L. Sp. Pl. 580. 1753.

Perennial, hirsute or pubescent all over; stem erect, strict, simple or somewhat branched, commonly slender, and retrorse-hispid on the angles, 1°-4° high. Leaves firm, lanceolate, oblong, or oblong-lanceolate, sessile, or very short-petioled, acuminate or acute at the apex, truncate, cordate or subcordate at the base, 2'-5' long, ½'-1' wide, crenulate or dentate; flower-clusters forming an elongated interrupted spike, sometimes also in the upper axils; flowers 6-10 in a whorl; calyx pubescent, its subulate teeth more than one-half as long as the tube; corolla purplish to pale red, purple spotted, 6''-8'' long, its upper lip pubescent.

In moist soil, Newfoundland to Oregon, south to southern New York, Illinois, Michigan, and in the Rocky Mountains to New Mexico. Also in Europe and Asia. June-Sept. Old names, clown's-heal or all-heal. Cock-head. Dead nettle. Rough weed. June-Sept.



Stachys tenuifolia Willd. Smooth
Hedge Nettle.

Stachys tenuifolia Willd. Sp. Pl. 3: 100. 1801.
S. glabra Ridd. Suppl. Cat. Ohio Pl. 16. 1836.
S. cincinnatensis Kuntze, Rev. Gen. Pl. 531. 1891.

Perennial; stem quite smooth, or slightly scabrous on the angles, slender, erect or ascending, usually branched, 1°-2½° high. Leaves lanceolate, oblong, or ovate-lanceolate, slender-petioled, thin, acuminate at the apex, obtuse or subcordate at the base, sharply dentate or denticulate, dark green, 2'-5' long, ½'-2' wide; clusters several or numerous in terminal spikes, or also in the upper axils; calyx glabrous, or sparingly hirsute, 2'' long, its teeth lanceolate, acute, one-half as long as the tube or more; corolla about 6''-8'' long, pale red and purple.

In moist fields and thickets, New York to Illinois, Kansas, North Carolina and Louisiana. Ascends to 4000 ft. in North Carolina. June-Aug.



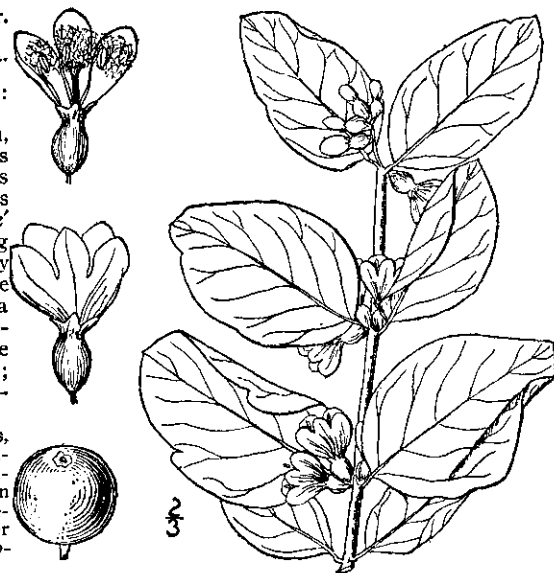
Symphoricarpos albus (L.) Blake

Symphoricarpos racemosus Michx. Fl. Bor. Am. 1: 107. 1803.
S. racemosus var. *pauciflorus* Robbins; A. Gray, Man. Ed. 5, 203. 1867.
S. pauciflorus Britton, Mem. Torr. Club 5: 305. 1894.

An erect or diffuse shrub, 1°-4° high, glabrous, or usually so, the branches slender. Petioles about 2" long; leaves oval, obtuse at each end, sometimes pubescent or whitened beneath, 1½-2" long, entire, undulate, or those of young shoots sometimes dentate; axillary clusters few-flowered, the terminal one mostly interruptedly spicate; corolla campanulate, about 3" long, slightly gibbous at the base, bearded within; style glabrous; stamens and style included; berry snow-white, globose, loosely cellular, 2½"-5" in diameter.

In rocky places and on river shores, Nova Scotia and Quebec to British Columbia, south to Pennsylvania, Kentucky, Minnesota, South Dakota, Montana and in California. Commonly planted and sometimes escaped from cultivation. Races differ in size, habit and pubescence. Snowdrop-berry. Egg-plant. June-Sept.

Snowberry. Wax-berry.

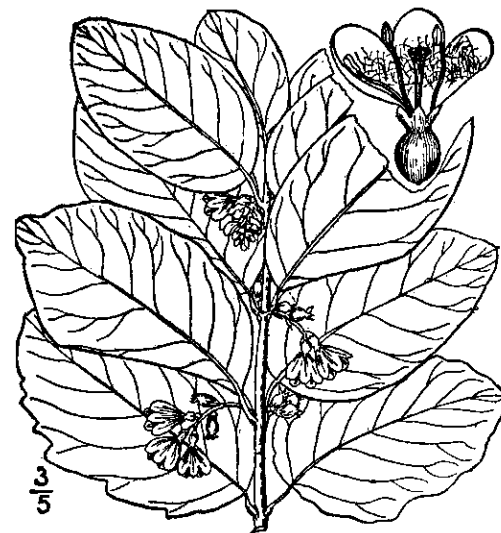


Symphoricarpos occidentalis Hook. Wolfberry.

Symphoricarpos occidentalis Hook. Fl. Bor. Am. 1: 285. 1833.

Similar to *S. racemosus* but stouter, with larger leaves, 1'-3' long, more or less pubescent beneath, entire, or often undulate-crenate; petioles 2"-3" long; axillary clusters spicate, many-flowered, 6"-12" long; corolla funnel-form-campanulate, 3" long, lobed to beyond the middle; stamens and glabrous style somewhat exserted; berry nearly globular, white, 4"-5" in diameter.

Rocky situations, Illinois, Michigan and Minnesota to British Columbia, Kansas and Colorado. Buck-bush. June-July.

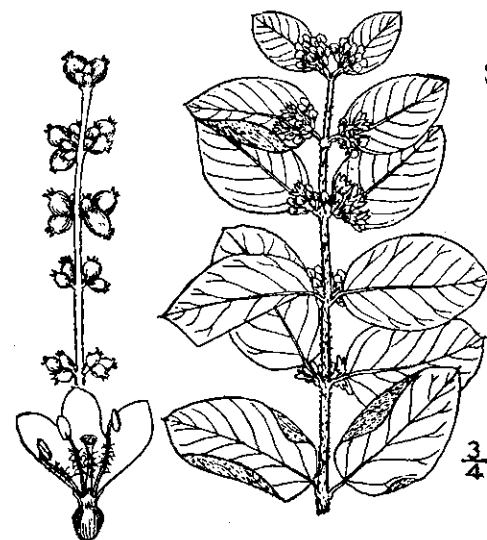


Symphoricarpos orbiculatus Moench

Coral-berry. Indian Currant.

Lonicera *Symphoricarpos* L. Sp. Pl. 175. 1753.
S. orbiculatus Moench, Meth. 503. 1794.
Symphoricarpos vulgaris Michx. Fl. Bor. Am. 1: 106. 1803.
Symphoricarpos *Symphoricarpos* MacM. Bull. Torr. Club 19: 15. 1892.

A shrub, 2°-5° high, the branches erect or ascending, purplish, usually pubescent. Petioles 1"-2" long; leaves oval or ovate, entire or undulate, mostly obtuse at each end, glabrous or nearly so above, usually soft-pubescent beneath, 1'-1½' long; clusters dense, many-flowered, at length spicate, shorter than the 3/4 leaves; corolla campanulate, sparingly pubescent within, pinkish, about 2" long; style bearded; stamens included; berry purplish red, ovoid-globose, 1½"-2" long.



Along rivers and in rocky places, banks of the Delaware in New Jersey and Pennsylvania, west to western New York and South Dakota, south to Georgia, Kansas and Texas. Also sparingly escaped from cultivation farther east. Fruit persistent after the leaves have fallen. Buck-bush. Turkey- or snap-berry. July.

Symphytum asperum Lepechin

Rough Comfrey.

S. asperrimum Donn; Sims, Bot. Mag. 24: pl. 929. 1806.

Similar to *S. officinale*, but the pubescence rougher, the hairs stiff and reflexed. Leaves ovate-lanceolate to oblong-lanceolate, long-acuminate at the apex, narrowed at the base, all but the uppermost petioled, slightly or not at all decurrent, the lower often 8' long; flower-clusters rather loose; calyx about half as long as the corolla-tube, its segments hispid; corolla bluish-purple.

Waste grounds, Massachusetts to Maryland. Adventive or naturalized from Europe. June-Aug.



Symphytum officinale L. Comfrey. Healing-herb.



Symphytum officinale L. Sp. Pl. 136. 1753.

Roots thick, deep; stem erect, branched, 2°-3° high. Leaves lanceolate, ovate-lanceolate, or the lower ovate, pinnately veined, 3'-10' long, acute or acuminate at the apex, narrowed into margined petioles, or the uppermost smaller and sessile, decurrent on the stem; petioles of the basal leaves sometimes 12' long; flowers numerous, in dense racemes or clusters; pedicels 2"-4" long; calyx-segments ovate or ovate-lanceolate, acute or acuminate, much shorter than the corolla; corolla yellowish or purplish, 6"-10" long; nutlets brown, shining, slightly wrinkled, 2" high.

In waste places, Newfoundland to Minnesota, south to Virginia and North Carolina. Naturalized or adventive from Europe. Native also of Asia. June-Aug. Back-or black-wort. Bruisewort. Knit-back. Boneset. Consound. Gum-plant.

Symphytum tuberosum L., with thickened tuberous roots, the nutlets granular-tuberculate, not shining, has been found in sandy meadows in Connecticut.

Tanacetum bipinnatum ssp. *huronense* (Nutt.) Breitung,

Lake Huron Tansy.

Tanacetum huronense Nutt. Gen. 2: 141. 1818.

Villous-pubescent throughout, at least when young, less so when mature, 1°-2° high. Leaves 2-pinnately divided, the lobes dentate or incised, acute, the lower segments commonly smaller than the others; heads 1-8, 6'-8" broad, on very stout pubescent peduncles; involucre depressed-hemispheric; marginal flowers with 3-5-lobed limbs, often expanded into short rays; pappus a short crown.

In moist soil, especially along streams or lakes, New Brunswick to Hudson Bay, Maine, Lake Superior, Alaska and Oregon. July-Sept.



Tanacetum parthenium (L.) Schultz-Bip.

Common Feverfew. Featherfew.

Matricaria Parthenium L. Sp. Pl. 890. 1753.
C. Parthenium Pers. Syn. 2: 462. 1807.

Perennial; stem puberulent or glabrate, much branched, 1°-2½° high. Leaves thin, the lower often 6' long, petioled, or the upper sessile, pinnately parted into ovate or oblong, pinnatifid or incised segments; heads numerous, corymbose, slender-peduncled, 6"-10" broad; bracts of the depressed involucre lanceolate, rather rigid, keeled, pubescent, acute or acutish; rays 10-20, white, oval or obovate, spreading, mostly toothed, long-persistent; pappus a short toothed crown.

In waste places, New Brunswick and Ontario to New Jersey, Ohio, and in California, mostly escaped from gardens. Naturalized or adventive from Europe. Called also pellitory, wild camomile. Rays variable in length. Summer.



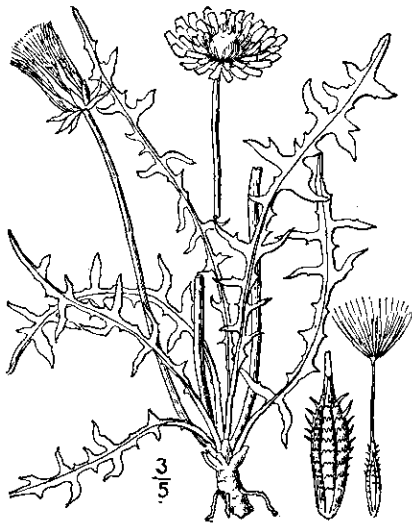
Tanacetum vulgare L. Tansy.

Tanacetum vulgare L. Sp. Pl. 844. 1753.
Tanacetum vulgare crispum DC. Prodr. 6: 128. 1837.

Stem stout, usually simple up to the inflorescence, glabrous, or sparingly pubescent, 1½°-3° high. Leaves pinnately divided into linear-oblong, pinnatifid or incised, often crisped segments, the lobes acute, usually serrate; lower segments of the leaves often smaller than the others; basal leaves often 1° long; heads commonly numerous, 3'-5" broad, rather short-peduncled; involucre depressed-hemispheric, its bracts oblong-lanceolate, obtuse, or the outer acute, slightly pubescent or ciliate; receptacle flat; flowers yellow; marginal corollas with short oblique 3-toothed limbs; pappus a short crown.

Along roadsides, mostly escaped from gardens, Nova Scotia and Ontario to Minnesota, Oregon, Nevada, North Carolina and Missouri. Naturalized or adventive from Europe. Bitter-buttons. Hindheal. Ginger-plant. July-Sept.





Taraxacum laevigatum (Willd.) DC.

Red-seeded Dandelion.

Taraxacum erythrospermum Andr. in Bess. Enum. Pl. Vilh. 75. 1821.

Similar to the two preceding species, the leaves glabrous, very deeply runcinate-pinnatifid or pinnately divided into narrower triangular-lanceolate usually long-pointed segments; scapes glabrous, or pubescent above; heads rarely more than 1' broad, 70-90-flowered; bracts of the involucre glaucous, the outer lanceolate, spreading or ascending, the inner linear, longer, each usually with an appendage just below the tip; flowers sulphur-yellow, the outer rays purplish without; achenes narrower, bright red, or red-brown, spinulose above, the filiform beak not more than twice their length; pappus dirty white.

In fields and woods, Maine and Vermont to New York, Pennsylvania, Ontario, Alberta, Illinois and Wyoming. Naturalized from Europe. April-June.

Taraxacum officinale G.H. Weber ex Wiggers Dandelion.

Leontodon Taraxacum L. Sp. Pl. 798. 1753.
T. officinale Weber, Prim. Pl. Holst. 56. 1780.
T. Dens-leonis Desf. Fl. Atlant. 2: 228. 1800.
T. Taraxacum Karst. Deutsch. Fl. 1138. 1880-83.

Root thick, deep, often 10' long, bitter. Leaves oblong to spatulate in outline, usually pubescent, at least when young, acute or obtuse, pinnatifid, sinuate-dentate or rarely nearly entire, rather succulent, 3'-10' long, 1/2'-2 1/2' wide, narrowed into petioles; scape erect, 2'-18' high; head 1'-2' broad; containing very numerous golden-yellow flowers (150-200), inner bracts of the involucre linear or linear-lanceolate, the outer similar, shorter, not glaucous, reflexed, all acute; achenes greenish-brown, fusiform, spinulose above, narrowed into a filiform beak 2-3 times their length, which support the copious white pappus, the fruiting mass of which becomes globose when ripe.

In fields and waste places, naturalized as a weed from Europe. Also in Asia and distributed as a weed in all civilized parts of the world. Jan-Dec. Called also lion's-tooth, cankerwort, milk-witch- or yellow-gowan, Irish daisy, monk's-head, priest's-crown, puff-ball. Arnica.



Teucrium canadense L. American

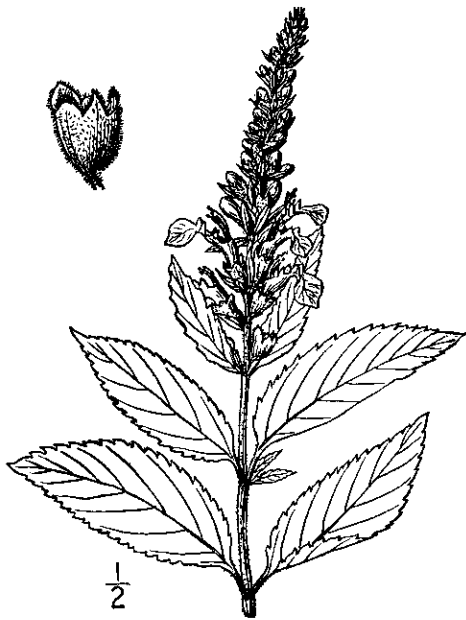
Germander or Wood Sage.

Teucrium canadense L. Sp. Pl. 564. 1753.

Teucrium virginicum L. Sp. Pl. 564. 1753.

Perennial, appressed-pubescent or canescent; stem erect, simple or somewhat branched, rather slender, 1°-2° tall. Leaves lanceolate, oblong-lanceolate or ovate-lanceolate, acuminate at the apex, irregularly dentate, mostly rounded at the base, short-petioled, 1 1/2'-5' long, 1/2'-2' wide, glabrous or sparingly pubescent above, densely canescent beneath; spike usually dense, becoming 6'-12' long in fruit, bracts canescent, the lower sometimes foliaceous, the upper commonly not longer than the canescent calyx; flowers 6"-10" long, very short-pedicelled; calyx about 3" long in fruit, its three upper teeth obtuse or subacute.

In moist thickets or along marshes, New England to Ontario, Minnesota, Florida, Kansas and Texas. Ascends to 2600 ft. in Virginia. Ground-pine. June-Sept.



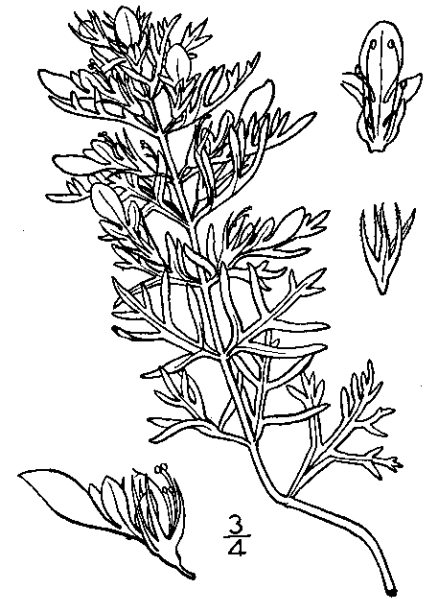
Teucrium laciniatum Torr. Cut-leaved
 Germander.

Teucrium laciniatum Torr. Ann. Lyc. N. Y. 2: 231. 1828.

Melosmon laciniatum Small, Fl. SE. U. S. 1019. 1903.

Diffusely branched from a woody perennial root, 1° high or less, densely leafy, glabrous, or nearly so. Leaves 1 1/2' long or less, pinnately parted into 3-7 stiff, linear, entire, toothed or lobed segments; flowers solitary in the upper axils, as long as the subtending leaves or shorter, short-peduncled; calyx deeply 5-parted, the lobes narrowly lanceolate, nearly equal; corolla pale blue or lilac, about 9" long, its lower lobes much longer than the calyx.

Plains, Kansas and Colorado to Texas and Arizona. May-Aug.



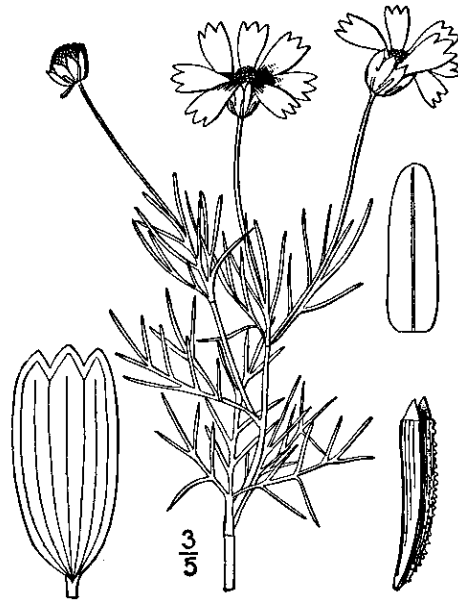
Thelesperma filifolium (Hook.) Gray

Fine-leaved Thelesperma.

Coreopsis trifida Poir. in Lam. Encycl. Suppl. 2: 353. 1811.
Thelesperma filifolium A. Gray, Kew. Journ. Bot. 1: 252. 1849.
Thelesperma trifidum Britton, Trans. N. Y. Acad. Sci. 9: 182. 1890.

Annual or biennial; stem branched, 1°-3° high. Leaves numerous, not rigid, 1½'-2' long, bipinnately divided into filiform or linear-filiform segments; heads several or numerous, 12''-15'' broad; outer bracts of the involucre about 8, subulate-linear, equalling or more than half as long as the inner, which are united not higher than the middle; rays 6-10, somewhat spatulate, 3-lobed; disk purple or brown; achenes linear-oblong, straight, or slightly curved, the outer ones strongly papillose; awns of the pappus not longer than the width of the summit of the achene.

In dry soil, South Dakota, Missouri and Nebraska to Colorado, Texas, New Mexico and northern Mexico. June-Aug.



Thelesperma megapotamicum (Spreng.) Kuntze

Rayless Thelesperma.

Bidens gracilis Torr. Ann. Lyc. N. Y. 2: 215. 1827.
T. gracile A. Gray, Kew. Journ. Bot. 1: 252. 1849.

Perennial from a deep root; stem rigid, branched, 1°-3° high, the branches nearly erect. Leaves rigid, erect or ascending, 2'-3' long, pinnately or bipinnately divided into linear segments, or the upper linear and entire; heads 6''-10'' broad; rays usually none, sometimes present and 2''-3'' long; outer bracts of the involucre 4-6, oblong or ovate, mostly obtuse, very much shorter than the inner ones, which are united to the middle or beyond; disk yellow or brownish; outer achenes slightly papillose; pappus awns longer than the width of the summit of the achene.

On dry plains, Nebraska and Wyoming to Texas, northern Mexico and Arizona. May-Aug.

Thymus Serpyllum L. Wild or Creeping Thyme. Mother of Thyme.

Thymus Serpyllum L. Sp. Pl. 590. 1753.

Stems more or less pubescent in lines, very slender, procumbent, tough, much branched, 4'-12' long, commonly forming dense mats. Leaves oblong or ovate-oblong, petioled, obtuse at the apex, usually narrowed at the base, entire, glabrous, or sometimes ciliate, 2''-5'' long; bracts similar to the leaves, but smaller; flowers numerous in verticillate clusters crowded in dense short terminal spikes, or also in the upper axils; calyx distinctly 2-lipped, the tube usually pubescent and the teeth ciliate; corolla longer than the calyx.

In thickets, woods, and along roadsides, Nova Scotia to southern New York and North Carolina. Naturalized from Europe. Native also of Asia. June-Sept. Old English names, brotherwort, hillwort, penny-mountain, shepherd's-thyme.



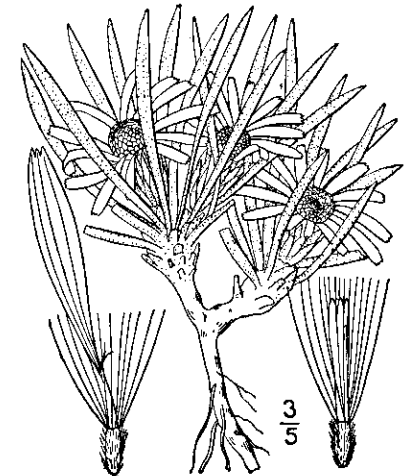
Townsendia exscapa (Richards) Porter. Silky or Low Townsendia.

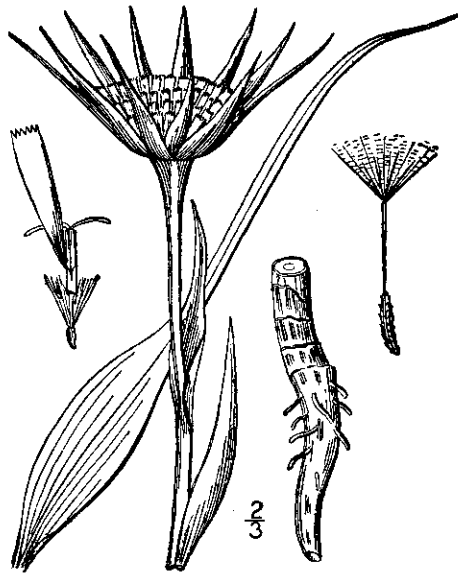
Aster (?) *exscapus* Richards. App. Frank. Journ. 32. 1823.
Townsendia sericea Hook. Fl. Bor. Am. 2: 16. pl. 119. 1834.
Townsendia exscapa Porter, Mem. Torr. Club 5: 321. 1894.

Acaulescent, or nearly so, from a deep woody root, tufted, 1'-3' high. Leaves all clustered at the base, narrowly linear or slightly spatulate, 1'-2' long, 1''-2½'' wide; heads closely sessile, 1'-1½' broad, equalled or surpassed by the leaves; involucre broadly campanulate, its bracts lanceolate, acute, the inner scarious-margined; rays white or purplish; pappus of both ray- and disk-flowers a row of rigid bristles, those of the rays shorter and smaller.

In dry soil, Saskatchewan to Montana, Nebraska, Texas and New Mexico. Often silky-pubescent. April-July.

Townsendia intermedia Rydb., ranging from Nebraska and Colorado to Texas, appears to be a race of this species with leaves wider than in the type.





Tragopogon porrifolius L. Oyster Plant. Salsify. Purple Goat's-beard.

Tragopogon porrifolius L. Sp. Pl. 789. 1753.

Taller, sometimes 4½° high. Peduncles very much thickened and hollow for 1 to 3 inches below the heads; heads 2'-4' broad, very showy; bracts of the involucre linear-lanceolate, acuminate, usually much longer than the purple rays; achenes sometimes 2' long, the outer ones covered with scale-like tubercles, especially on the ribs below.

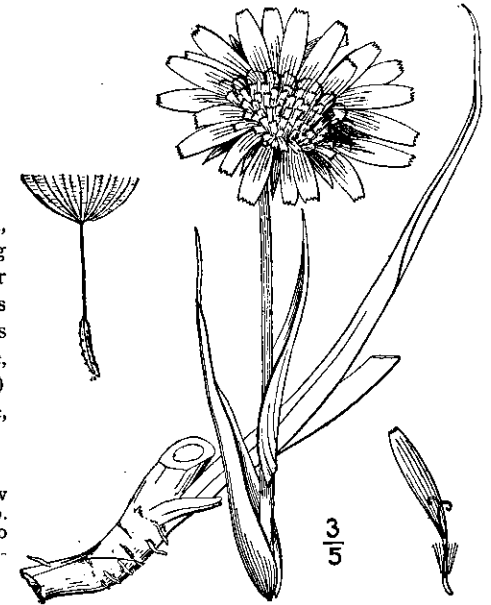
In fields and waste places, Ontario to New Jersey, Virginia, Minnesota, British Columbia, Nebraska and California, mostly escaped from gardens, where it is common. Native of Europe. Called also vegetable oyster, jerusalem-star, nap-at-noon, oyster-root. Naturalized as a weed on the Pacific Coast. The root is the familiar vegetable known as oyster-plant. An apparent hybrid between this and the preceding species has been noticed at New Brunswick, N. J. June-Oct.

Tragopogon pratensis L. Yellow Goat's-beard. Meadow Salsify.

Tragopogon pratensis L. Sp. Pl. 789. 1753.

Stem branched, 1½°-3° high. Leaves keeled, tapering from the broad, more or less clasping base to a very long acuminate tip, the lower sometimes 10' long and 1' wide; peduncles thickened at the top; heads 1'-2½' broad; bracts of the involucre about 8, lanceolate, acuminate, shorter than or equalling (rarely exceeding) the yellow rays; marginal achenes striate, smooth or roughened.

In fields and waste places, Nova Scotia to New Jersey, Ontario, Ohio, Manitoba and Colorado. Naturalized from Europe. June-Oct. Called also buck's-beard, noon-flower, star-of-jerusalem, noon-tide, joseph's flower, go-to-bed-at-noon.

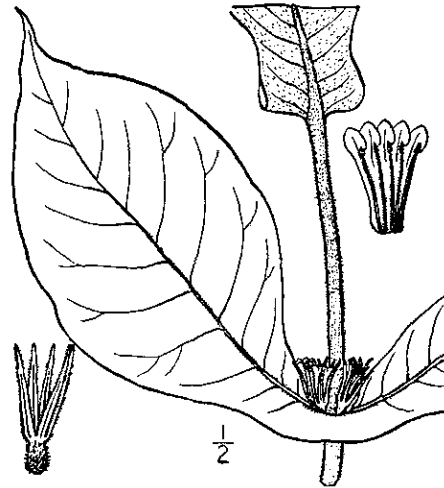


Triosteum perfoliatum L. Feverwort. Horse-Gentian.

Triosteum perfoliatum L. Sp. Pl. 176. 1753.

Stem erect, stout, finely glandular-pubescent, 2°-4° high. Leaves ovate to broadly oval, 4'-9' long, 2'-4' wide, acute or acuminate at the apex, abruptly narrowed at the base, connate-perfoliate, soft-pubescent beneath, somewhat hairy above, the margins entire or sinuate; bracts linear; corolla dull purplish-brown, greenish below, 6''-10'' long, viscid-pubescent, about the length of the calyx-lobes, the limb nearly regular; filaments bearded; drupe 4''-6'' long, obovoid-globose, orange-yellow, densely and finely pubescent; nutlets usually 3.

In rich soil, Massachusetts to Alabama, Kentucky and Kansas. Fever-root. Wild or wood ipecac. Tinker's-weed. Wild coffee. Horse-ginseng. White gentian. Genson (N. C.). Ascends 3000 ft. in Virginia. May-July.

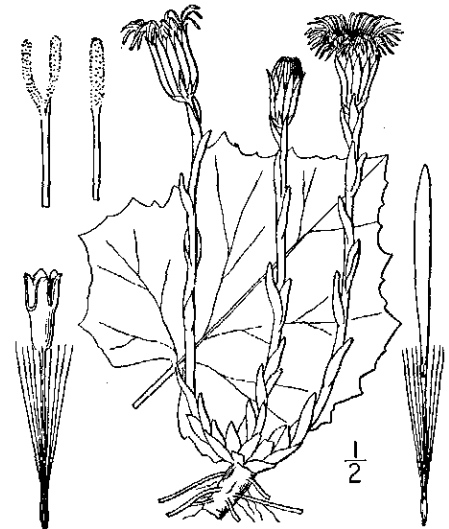


Tussilago Farfara L. Coltsfoot. Coughwort.

Tussilago Farfara L. Sp. Pl. 865. 1753.

Scape slender, 3'-18' high, bearing a solitary large head at the summit. Leaves nearly orbicular, or broadly ovate-reniform, angulately lobed and dentate, 3'-7' broad, green and glabrous above, persistently white-tomentose beneath; head about 1' broad; involucre campanulate; rays bright yellow, numerous, linear.

In moist soil, on banks and roadsides, Nova Scotia and New Brunswick to New Jersey, Pennsylvania and Minnesota. Naturalized from Europe. Horse-foot. Horse-hoof. Dove-dock. Sow-foot. Colt-herb. Hoofs. Cicats. Ass's-foot. Bull's-foot. Foal-foot. Ginger. Clay-weed. Butter-bur. Dummy-weed. April-June.



Valeriana dioica var. *sylvatica* S. Wats.

Northern Valerian.

Valeriana sylvatica Banks; Richards. App. Frank. Journ. Ed. 2, 2. 1823. Not F. W. Schmidt.

Valeriana septentrionalis Rydb. Mem. N. Y. Bot. Gard. 1: 376. 1900.

Erect, 8'-16' high, glabrous, or the inflorescence minutely pubescent. Basal leaves spatulate or oval, 4' long or less, entire; stem leaves usually 3 pairs, the segments 5-7, oval to linear-lanceolate, entire, or undulate-margined; inflorescence cymose-paniculate, dense; flowers white, about 1½" wide; fruit 1½"-2" long, glabrous.

In wet soil, Newfoundland to British Columbia, south in the Rocky Mountains to New Mexico. Summer.

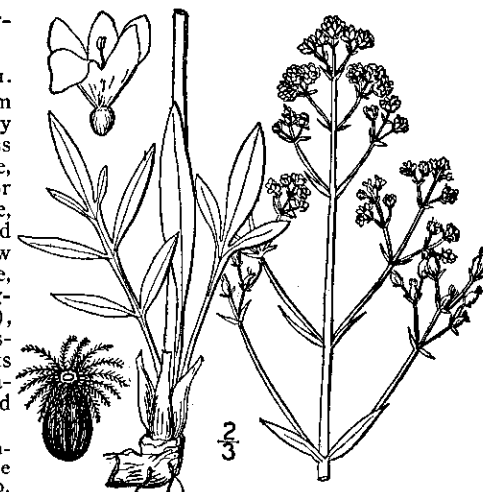


Valeriana edulis Nutt. Edible Valerian. Tobacco-root.

V. edulis Nutt. in T. & G. Fl. N. A. 2: 48. 1841.

Erect, 1°-4° high, from a deep fusiform carrot-shaped root. Stem glabrous, or nearly so, the young leaves commonly more or less pubescent and the older ones finely ciliate, sometimes glabrous; basal leaves spatulate or oblanceolate, thick, 3'-12' long, 2"-10" wide, obtuse at the apex, narrowed into a margined petiole, parallel-veined, entire or with a few obtuse entire lobes; stem leaves few, sessile, pinnately-parted into linear or lanceolate segments; flowers yellowish-white, small (2"), polygamo-dioecious, paniculate, the inflorescence at length widely branching; bracts lanceolate, short; fruit narrowly ovate, glabrous or nearly so, 2" long, at length exceeded by the plumose calyx-teeth.

In wet open places, Ontario to British Columbia, south in Ohio, Iowa, Wisconsin, and in the Rocky Mountains to Arizona and New Mexico. Called also oregon tobacco; the root cooked for food. May-Aug.



Valeriana officinalis L. Common, Garden or Great Wild Valerian. Vandal-root.

Valeriana officinalis L. Sp. Pl. 31. 1753.

Erect, 2°-5° high, more or less pubescent, especially at the nodes. Leaves all pinnately parted into 7-25 thin reticulate-veined lanceolate acute or acuminate segments, sharply dentate, or those of the upper leaves entire, usually with some scattered hairs beneath; flowers pink or nearly white, about 2" long; inflorescence of several rather compact corymbed cymes; bracts linear-lanceolate, rather large; fruit glabrous, ovate, about 1½" long.

Escaped from gardens to roadsides in New York, Ohio and New Jersey. Native of Europe and Asia. Old names, cats'-valerian, setwell, cut-heal, all-heal. Garden-, summer- or hardy-heliotrope. St. George's-herb. June-Aug.



Valeriana uliginosa (T. & G.) Rydb. Marsh or Swamp Valerian.

Valeriana dioica Pursh, Fl. Am. Sept. 727. 1814. Not L. 1753.

V. sylvatica uliginosa T. & G. Fl. N. A. 2: 47. 1841. *V. uliginosa* Rydb.; Britton, Man. 878. 1901.

Erect, glabrous or very nearly so throughout, 8'-2½° high. Rootstocks creeping or ascending; basal leaves thin, petioled, oblong or spatulate, obtuse, entire, or with a few obtuse lobes, reticulate-veined, 2'-10' long, 3'-18' wide; stem leaves 2-4 pairs, petioled, pinnately parted into 3-15 ovate to lanceolate, dentate or entire, acute or obtuse segments; inflorescence cymose-paniculate, at length loosely branched; flowers pink or nearly white, 3"-4" long, about 2" wide; bracts linear-lanceolate; fruit ovate, glabrous, 1½" long.

In wet soil, Quebec to New York, Ontario and Michigan. American wild valerian. Referred, in our first edition, to the following northern and western species. May-Aug.



Verbascum Blattaria L. Moth Mullen.

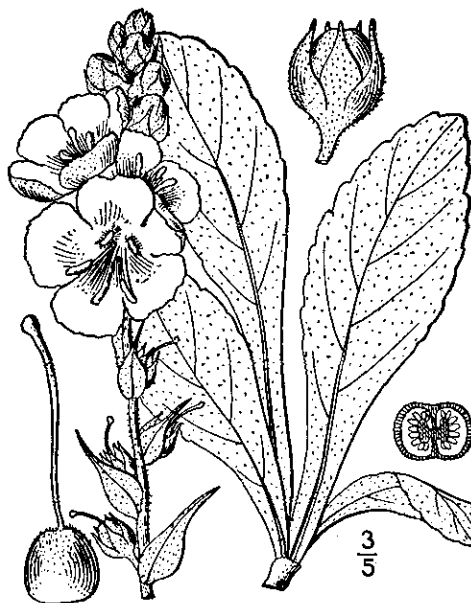


Verbascum Blattaria L. Sp. Pl. 178. 1753.

Stem erect, strict, slender, terete, glabrous or sparingly glandular-pubescent, usually quite simple, 2°-6° high. Leaves oblong, ovate or lanceolate, dentate, lacinate, or pinnatifid, acute or acuminate, the upper 1/2'-2 1/2' long, truncate or cordate-clasping at the base, the lower and basal ones sessile or somewhat petioled, sometimes 1° long, seldom present at flowering time; raceme 1°-2° long, loose; pedicels spreading, 1/2'-1' long, bracted at the base; corolla yellow or white, about 1' broad, with brown marks on the back; filaments all pilose with violet hairs; capsule depressed-globose, 3'' in diameter, longer than the calyx.

In fields and waste places, Quebec to Florida, west to Oregon and California. Naturalized from Europe. Native also of Asia. June-Nov. Said to repel the cockroach (*Blatta*), whence the name *Blattaria*; frequented by moths, hence moth-mullen.

Verbascum virgatum Stokes, a similar Old World species, found on Cape Breton Island and naturalized in the Pacific States, has fruiting pedicels shorter than the capsules.



Verbascum phlomoides L. Claspingleaved Mullen.

Verbascum phlomoides L. Sp. Pl. 1194. 1753.

Stem rather stout, usually simple, 1°-4° high. Leaves oblong to ovate-lanceolate, crenate, crenulate, or entire, woolly-tomentose on both sides, sessile or somewhat clasping, or slightly decurrent on the stem, or the lower often petioled with truncate or subcordate bases; flowers yellow, or cream-color, 1' broad or more, usually in a solitary elongated tomentose spike-like raceme; pedicels clustered, shorter than the calyx; stamens as in *V. Thapsus*; capsule 4'-5'' long, exceeding the tomentose calyx.

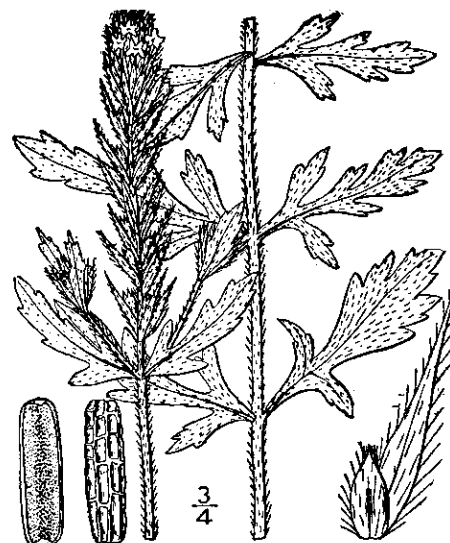
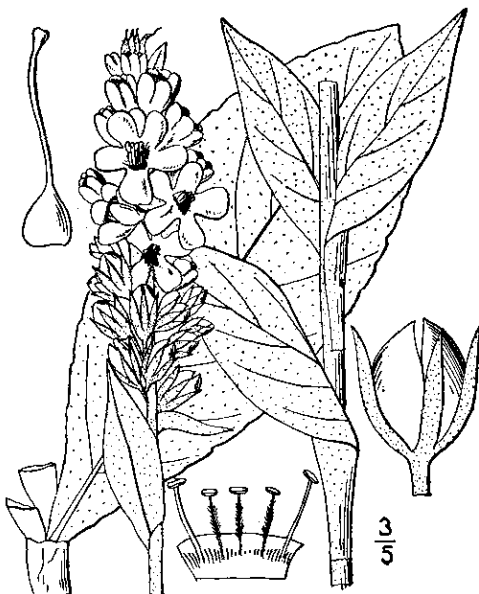
Eastern Massachusetts to Kentucky. Adventive or fugitive from Europe or eastern Asia. June-Aug.

Verbascum Thapsus L. Great Mullen. Velvet or Mullen Dock.

Verbascum Thapsus L. Sp. Pl. 177. 1753.

Erect, stout, simple or with some erect branches, densely woolly all over with branched hairs; stem 2°-7° high, wing-angled by the bases of the decurrent leaves. Leaves oblong, thick, acute, narrowed at the base, dentate or denticulate, 4'-12' long, the basal ones borne on margined petioles; flowers yellow, 8'-12'' broad, sessile, numerous in dense elongated spikes rarely branched above; stamens unequal, the three upper shorter with white hairy filaments and short anthers, the two lower glabrous or nearly so with larger anthers; capsule about 3'' high, slightly longer than the woolly calyx.

In fields and waste places, Nova Scotia to South Dakota, California, Florida and Kansas. Often a troublesome weed. Naturalized from Europe. Native also of Asia. Among some 40 English names are hedge-, hig- or high-taper. Candlewick. Cow's or bullock's-lungwort. Aaron's- or Adam's-rod or -flannel. Feltwort. Hare's-beard. Jacob's-, Jupiter's- or Peter's-staff. Ice-leaf. Torches. Flannel-leaf. Old man's-flannel or blanket-leaf. Woolen, i. e., mullen. Shepherd's-club. Velvet-plant. June-Sept.



Verbena bracteata Lag. & Rodr.

Large-bracted Vervain.

V. bracteosa Michx. Fl. Bor. Am. 2: 13. 1803.

Perennial, hirsute-pubescent; stem 4-sided, much branched from the base, the branches decumbent or ascending, slender, 6'-15' long. Leaves ovate, oval, or obovate in outline, pinnately incised or pinnatifid, 1'-3' long, more or less cuneate at the base and narrowed into short petioles, the lobes mostly dentate; spikes sessile, stout, dense, becoming 4'-6' long in fruit; bracts conspicuous, linear-lanceolate, rather rigid, longer than the flowers and fruits, the lower ones often incised; corolla purplish blue, about 2'' long.

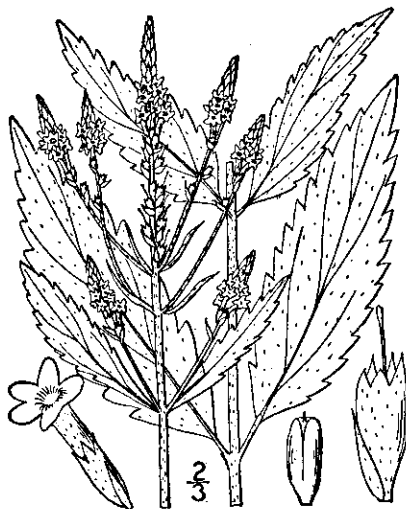
On prairies and in waste places, Minnesota and Illinois to Virginia, Alabama and Florida, west to British Columbia, Arizona and California. In ballast grounds at Atlantic seaports. Hybridizes with *V. canadensis*. Prostrate vervain. May-Aug.

Verbena hastata L. Blue or False Vervain. Wild Hyssop.

Verbena hastata L. Sp. Pl. 20. 1753.
Verbena pinnatifida Lam. Tabl. Encycl. 1: 57. 1791.
Verbena paniculata Lam. Encycl. 8: 548. 1808.
Verbena hastata pinnatifida Britton, Mem. Torr. Club 5: 276. 1894.

Perennial, roughish-puberulent; stem erect, strict, 4-sided, usually branched above, 3'-7' high. Leaves oblong-lanceolate or lanceolate, petioled, acute or acuminate at the apex, narrowed at the base, serrate or incised-dentate with acute teeth, sometimes pinnatifid, 3'-6' long, the lower sometimes hastately 3-lobed at the base; spikes numerous, panicle, slender, usually peduncled, 2'-6' long; fruits densely imbricated on the spikes, 1"-1½" high; bracts ovate, acuminate, shorter than the calyx; corolla blue, white, or sometimes pink, its limb about 1½" broad.

In moist fields, meadows and in waste places, Nova Scotia to British Columbia, Florida, Nebraska and Arizona. Hybridizes with *V. stricta* and *V. bracteosa*. American vervain. Purvain. Iron-weed. June-Sept.

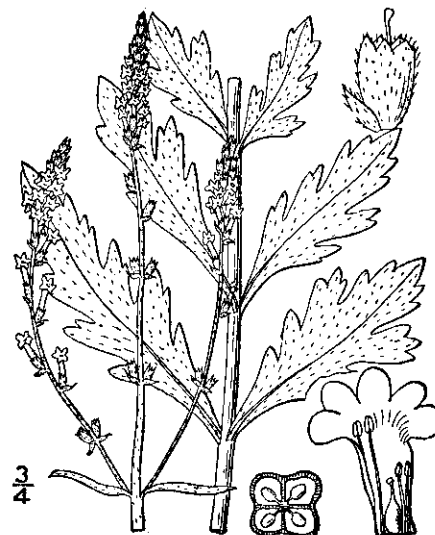


Verbena officinalis L. European Vervain. Herb-of-the-Cross. Berbine.

Verbena officinalis L. Sp. Pl. 20. 1753.

Annual; stem 4-sided, slender, glabrous or nearly so, ascending or spreading, diffusely branched, 1'-3' high. Leaves minutely pubescent, the lower deeply incised or 1-2 pinnatifid, ovate, oblong, or obovate in outline, 1'-3' long, narrowed into margined petioles, the teeth acute; upper leaves linear or lanceolate, acute, entire, sessile; spikes several or numerous, filiform, at length 4'-5' long; fruits less than 1" high, scattered along the spikes, not at all imbricated; bracts ovate, acuminate, shorter than the 5-toothed calyx; corolla purplish or white, the limb 1"-2" broad.

In waste and cultivated ground, Maine to Florida, Tennessee and Texas. Also on the Pacific Coast and in the West Indies. Naturalized from the Old World. Sometimes a troublesome weed. Herb-grace. Holy-herb. Enchanter's-plant. Juno's-tears. Pigeon's-grass. Simpler's-joy. June-Sept.

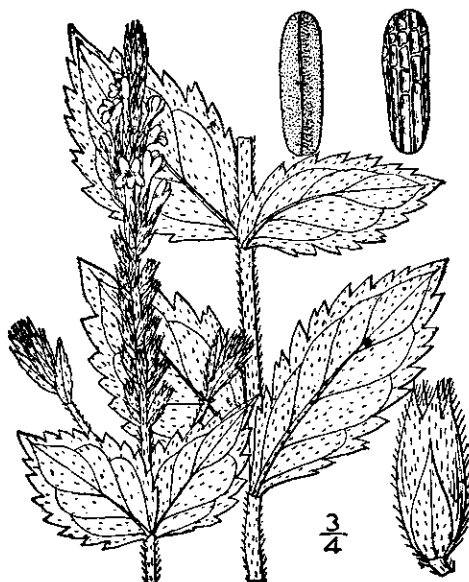


Verbena stricta Vent. Hoary or Mullen-leaved Vervain.

V. stricta Vent. Descr. Pl. Jard. Cels. pl. 53. 1800.
Verbena rigens Michx. Fl. Bor. Am. 2: 14. 1803.

Perennial, densely soft-pubescent all over with whitish hairs; stem stout, obtusely 4-angled, simple, or branched above, strict, very leafy, 1'-2½' high. Leaves ovate, oval, or oblong, very short-petioled, acute or obtuse at the apex, narrowed at the base, prominently veined, incised-serrate or lacinate, 1'-4' long; spikes solitary, or several, mostly sessile, dense, stout, becoming 6'-12' long in fruit; fruits much imbricated, 2'-2½" high; bracts lanceolate-subulate, nearly as long as the calyx; corolla purplish blue, 4'-5" long, its limb nearly as broad.

In dry soil, Ontario and Ohio to Minnesota, South Dakota and Wyoming, south to Tennessee, Texas and New Mexico. Naturalized as a weed further east. Hybridizes with *V. bracteosa*. June-Sept.



Verbena urticifolia L. White or Nettle-leaved Vervain.

Verbena urticifolia L. Sp. Pl. 20. 1753.
V. urticifolia riparia Britton, Mem. Torr. Club 5: 276. 1894.
V. riparia Raf.; Small & Heller, Mem. Torr. Club 3: 12. 1892.

Perennial, usually pubescent; stem slender, strict, erect, 4-sided, paniculately branched above, 3'-5' high, the branches upright. Leaves ovate, oblong, or oblong-lanceolate, all petioled, or the uppermost sessile, serrate-dentate all around, or incised, sometimes 3-cleft near the base, thin, acute or acuminate, mostly rounded at the base, 1½'-5' long; spikes numerous, filiform, erect, or spreading, at length 4'-6' long; fruits oblong, scattered, not at all imbricated, about 1" high; bracts ovate, acuminate, shorter than the calyx; corolla white, blue or pale purple, its limb about 1" broad.

In fields and waste places, New Brunswick to South Dakota, Kansas, Florida and Texas. Hybridizes with *V. bracteosa*, *V. hastata* and *V. stricta*. June-Sept.

Verbena carolinensis (Walt.) Gmel., with sessile, spatulate to oblong leaves and larger bluish flowers, native of the Southeastern States, is recorded as occurring north to Virginia.



Verbesina encelioides (Cav.) Benth. & Hook. f. ex Gray

Golden Crownbeard.

Ximenesia encelioides Cav. Icon. 2: 60. pl. 178. 1793.
Verbesina encelioides A. Gray, Syn. Fl. 1: Part 2, 288. 1884.

Annual; stem densely puberulent, much branched, 1°-2° high. Leaves deltoid-ovate or deltoid-lanceolate, thin, 2'-4' long, acuminate, acute or blunt at the apex, coarsely dentate, or even lacinate, green and minutely pubescent above, pale and densely canescent beneath, all alternate, or the lowest opposite, narrowed at the base into naked or wing-margined petioles, which are often provided with dilated appendages at the base; heads several or numerous, 1'-2' broad; involucre hemispheric, about 1/2' high, its bracts lanceolate, canescent; rays 12-15, bright golden yellow, 3-toothed; achenes of the disk-like flowers obovate, winged, pubescent, their pappus of 2 subulate awns, those of the ray-flowers rugose, thickened, often wingless.

In moist soil, Kansas to Texas, Arizona and Mexico, and occasional in waste grounds farther east. Also in Florida and widely distributed in warm regions as a weed. Summer.



Verbesina virginica L.

Small White or Virginia Crownbeard.

Verbesina virginica L. Sp. Pl. 901. 1753.

Perennial; stem densely puberulent, terete or winged, simple or branched, 3°-6° high. Leaves usually thin, alternate, ovate, roughish above, puberulent, canescent or glabrate beneath, acute or acuminate at the apex, 4'-10' long, 1'-3' wide, contracted at the base into winged petioles, the uppermost sessile, lanceolate, smaller, often entire; heads corymbose-paniculate at the ends of the stem and branches, numerous, 6"-10" broad; involucre oblong-campanulate, 2"-3" broad, its bracts narrowly lanceolate, erect, obtuse, pubescent; rays 3-5, obovate, white, pistillate; achenes minutely pubescent, winged or wingless; pappus of 2 slender awns, or sometimes none.

In dry soil, Pennsylvania to Virginia, Illinois, Missouri, Kansas, Florida and Texas. Aug.-Sept.

Vernonia fasciculata Michx.

Western Iron-weed.

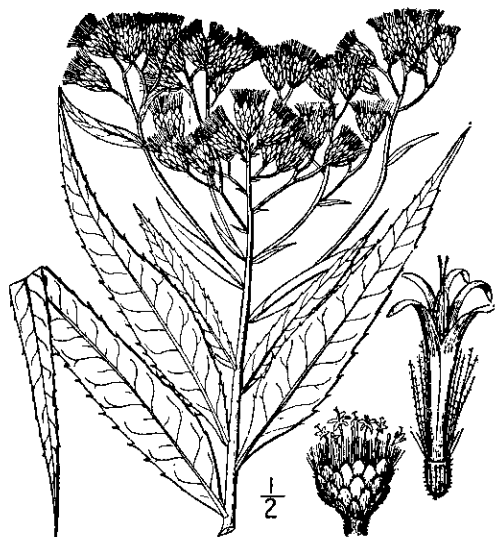
Vernonia fasciculata Michx. Fl. Bor. Am. 2: 94. 1803.

Cacalia fasciculata Kuntze, Rev. Gen. Pl. 970. 1891.

Glabrous, or puberulent above, 2°-6° high. Leaves firm, lanceolate or linear-lanceolate, long-acuminate, 3'-6' long, 2"-4" wide, glabrous or nearly so on both surfaces; inflorescence usually compact; heads short-peduncled, or some of them sessile; involucre campanulate, 2'-3" broad, 20-30-flowered; bracts all appressed, ovate or oval, acute, ciliate, or sometimes pubescent; achenes glabrous, or a little pubescent; pappus purple.

In moist soil or on prairies, Ohio to Minnesota, Nebraska, Kansas and Oklahoma. Southern plants formerly referred to this species prove to be distinct. July-Sept.

Vernonia corymbosa Schwein., ranging from Manitoba to western Nebraska, has broader leaves but is otherwise similar.



Vernonia glauca (L.) Britton. Broad-leaved Iron-weed.

Serratula glauca L. Sp. Pl. 818. 1753.
Vernonia noveboracensis var. *lanifolia* A. Gray, Syn. Fl. 1: Part 2, 89. 1884.
Vernonia glauca Britton, Mem. Torr. Club 5: 311. 1894.

Slender, glabrous or finely puberulent, 2°-5° high. Leaves thin, the lower broadly oval or slightly obovate, sharply serrate, acute or acuminate, 4'-7' long, 1'-2 1/2' wide, the upper narrower and more finely toothed; inflorescence loosely branched; heads slender-peduncled, 10-20-flowered; involucre campanulate, 3'-4" broad; bracts ovate, with filiform tips, appressed; achenes minutely hispidulous; pappus yellowish.

In woods, Pennsylvania and Maryland to Georgia and Alabama. Southern plants previously referred to this species prove to be distinct. Aug.-Sept.



Vernonia noveboracensis (L.) Willd. New York Iron-weed. Flat Top.



Serratula noveboracensis L. Sp. Pl. 818. 1753.
V. noveboracensis Willd. Sp. Pl. 3: 1632. 1804.
C. noveboracensis Kuntze, Rev. Gen. Pl. 323. 1891.
Vernonia noveboracensis tomentosa Britton, Mem. Torr. Club 5: 311. 1894.

Roughish-pubescent or glabrate, 3°-9° high. Leaves lanceolate or narrowly oblong, serrulate, 3'-10' long, 5''-12'' wide, acuminate or acute; heads peduncled; involucre hemispheric, 20-40-flowered, 4''-5'' in diameter; bracts brownish-purple or greenish, ovate or ovate-lanceolate, with subulate spreading tips usually twice or three times their own length, or some of the lower linear-subulate, the upper sometimes merely acute; flowers deep purple, rarely white; achenes hispidulous on the ribs; pappus purple or purplish, rarely green.

In moist soil, Massachusetts to Pennsylvania, North Carolina, West Virginia, Mississippi and Missouri. Erroneously recorded west to Minnesota. July-Sept.

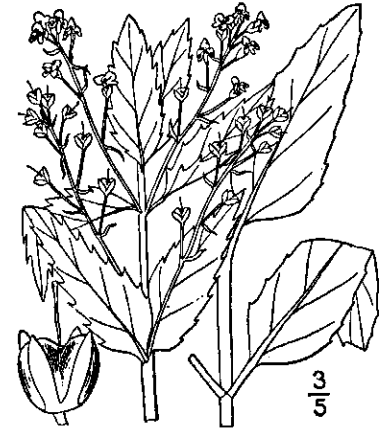
Veronica americana Schwein. American Brooklime.

V. americana Schwein.; Benth. in DC. Prodr. 10: 468. 1846.

Similar to the preceding species, perennial by stolons or leafy shoots, glabrous throughout; stem decumbent, usually branched, rooting at the lower nodes, 6'-3° long. Leaves oblong, ovate or oblong-lanceolate, all distinctly petioled, sharply serrate, truncate, rounded, or subcordate at the base, obtuse or acutish at the apex, 1'-3' long, ½'-1' wide; racemes peduncled, borne in most of the axils, loose, elongated, sometimes 6' long; bractlets shorter than the pedicels; flower blue or nearly white, usually striped with purple, 2'' broad; capsule nearly orbicular, compressed, but not very flat, emarginate, 1½'' high; seeds flat.

In brooks and swamps, Anticosti to Alaska, south to Pennsylvania, Nebraska, New Mexico and California. Ascends to 2600 ft. in the Catskills. Wallink. Blue-bells. April-Sept.

Veronica Beccabunga L., a European brooklime, similar to *V. americana* in habit, but with crenate or low-serrate broad tipped leaves, is naturalized about Quebec and has been found on ballast about seaports in New York and New Jersey.



Veronica Anagallis-aquatica L. Water Speedwell or Pimpernel.

Veronica Anagallis-aquatica L. Sp. Pl. 12. 1753.

Perennial by stolons or leafy shoots developed in autumn; stem rather stout, glabrous, or glandular-puberulent above, erect or decumbent, often rooting at the lower nodes, usually branched, 1°-3° high. Leaves of sterile autumn shoots orbicular to obovate, obtuse, serrulate, narrowed into margined petioles, those of the flowering stems ovate, oblong, or lanceolate, sessile and more or less clasping or the lowest short-petioled, serrulate or entire, 1½'-4' long, ½'-2' wide; racemes peduncled, borne in most of the axils, 2'-5' long; bractlets shorter than or exceeding the pedicels; flowers blue, or purplish striped, 2'' broad; capsule compressed, not very flat, nearly orbicular, 2-lobed, emarginate, 1½'' high; seeds flat.

In brooks and swamps, Nova Scotia to British Columbia, south to North Carolina, Nebraska and New Mexico. Also in Europe and Asia. The plant of the Atlantic Coast appears as if introduced. Ascends to 4000 ft. in Virginia. May-Sept.



Veronicastrum virginicum (L.) Farw.

Bowman's- or Culver's-root.

Veronica virginica L. Sp. Pl. 9. 1753.
Leptandra virginica Nutt. Gen. 1: 7. 1818.

Stem glabrous, or very nearly so, simple, strict, 2°-7° high. Leaves verticillate in 3's-9's or some of the uppermost opposite, lanceolate or oblong-lanceolate, short-petioled, long-acuminate at the apex, sharply serrulate, narrowed at the base, pinnately veined, glabrous both sides, or pubescent beneath, 3'-6' long, ½'-1' wide; spike-like racemes several or rarely solitary, 3'-9' long, very dense, the terminal one first developing; pedicels and bractlets about as long as the calyx; calyx-segments ovate-lanceolate, acute; corolla tubular, white or bluish, 2'' long; capsule ovoid-oblong, 1''-1½'' long, 2-3 times as long as the calyx.

In meadows, moist woods and thickets, Ontario to Manitoba, Massachusetts, Alabama and Texas. Recorded from Nova Scotia. Ascends to 2700 ft. in Virginia. Black-root. Culver's-physic. Brinton's-root. Oxadaddy. Quitch. Tall speedwell. June-Sept.



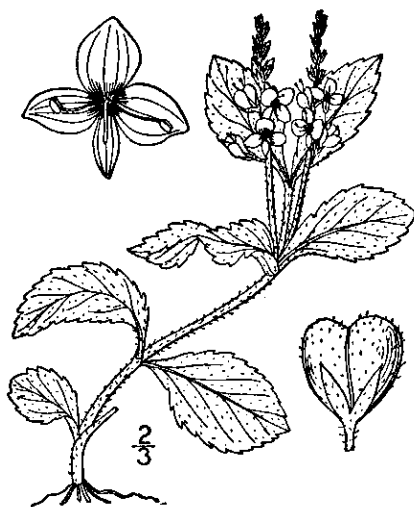
Veronica officinalis L. Common Speedwell. Fluellin. Gipsy-weed.

Veronica officinalis L. Sp. Pl. 11. 1753.

Perennial by stolons, pubescent all over; stem ascending, 3'-10' high. Leaves oblong, oval, or obovate, petioled, 1'-2' long, obtuse at the apex, serrate, narrowed into the petioles; racemes spike-like, narrow, dense, elongated, often borne only in alternate axils, much longer than the leaves; subulate bractlets and the calyx longer than the pedicels; flowers pale blue, 2'-3" broad; capsule obovate-cuneate, compressed, broadly emarginate, 2" high, 1½" broad; seeds numerous, flat.

In dry fields and woods, Nova Scotia to Ontario, South Dakota, North Carolina and Tennessee. Ascends to 5600 ft. in Virginia. Also in Europe and Asia. Appears, in most places, as if introduced. Paul's-betony. Ground-hel. Upland speedwell. May-Aug.

Veronica longifolia L., an erect European species with lanceolate petioled acuminate sharply serrate leaves, has been found in waste grounds and fields from Nova Scotia to New York.

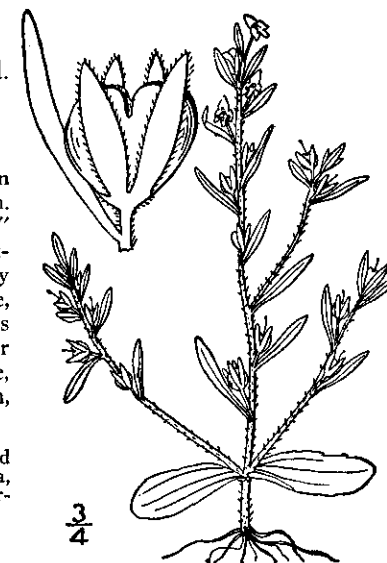


Veronica peregrina L. Purslane Speedwell. Neckweed.

Veronica peregrina L. Sp. Pl. 14. 1753.

Annual, glabrous, or glandular-pubescent; stem erect or ascending, simple or branched, 3'-12' high. Leaves oblong, oval, linear or slightly spatulate, 3'-10" long, obtuse or acutish, the lowest opposite, short-petioled, or sessile, broader than the upper and usually denticulate, the upper alternate, sessile, mostly entire, each with a short-pedicelled flower in its axil; flowers nearly white, about 1" broad; pedicels much shorter than the calyx; capsule nearly orbicular, obcordate, usually a little shorter than the calyx, 1"-1½" high, many-seeded, the seeds flat.

In moist places, and common as a weed in cultivated soil, Nova Scotia to British Columbia, south to Florida, Mexico and California. Also in Central and South America, distributed as a weed in the Old World. May-Oct.



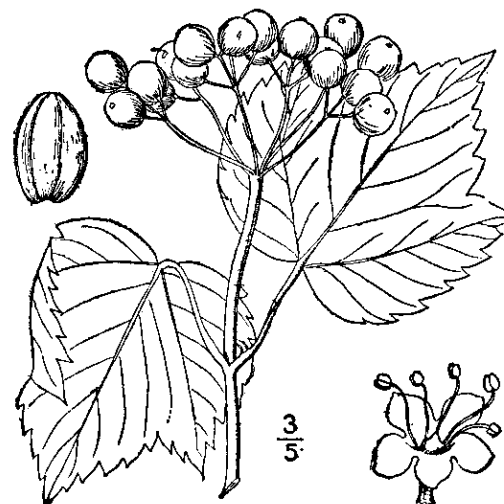
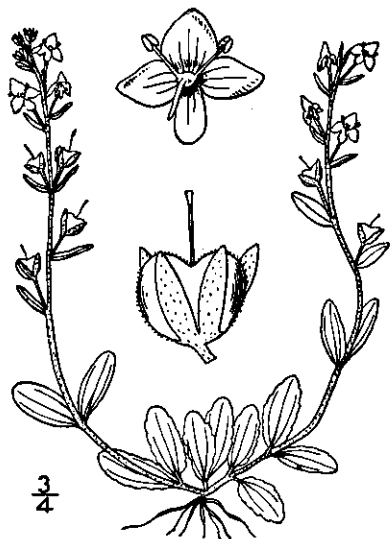
Veronica serpyllifolia L. Thyme-leaved Speedwell.

Veronica serpyllifolia L. Sp. Pl. 12. 1753.

Perennial, puberulent or glabrous; stems slender, decumbent, branched, the branches ascending or erect, 2'-10' high. Leaves all opposite and petioled, or the uppermost sessile, oblong, oval, or ovate, 1'-1½" long, crenulate or entire; flowers in short narrow racemes at the end of the stem and branches; pedicels equalling or longer than the calyx, usually shorter than the bractlets; corolla blue with darker stripes, sometimes white, 2"-4" broad; capsule broader than high, broadly obcordate or emarginate at the summit, about 1" long, about equalling the calyx; seeds flat, numerous.

In fields and thickets, Labrador to Alaska, south to Georgia, New Mexico and California. Also in Europe, Asia and South America. Ascends to 2600 ft. in the Catskills. Paul's-betony. April-Aug.

Veronica humifusa Dickson, differing in larger flowers and more pubescent inflorescence, is apparently a northern race of this species, also occurring in Europe.

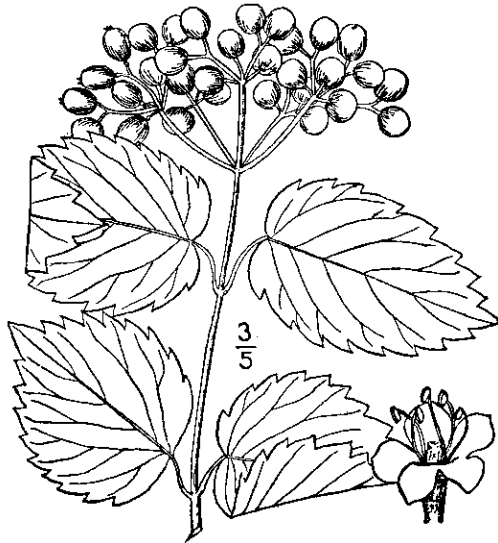


Viburnum acerifolium L. Maple-leaved Arrow-wood.

V. acerifolium L. Sp. Pl. 268. 1753.

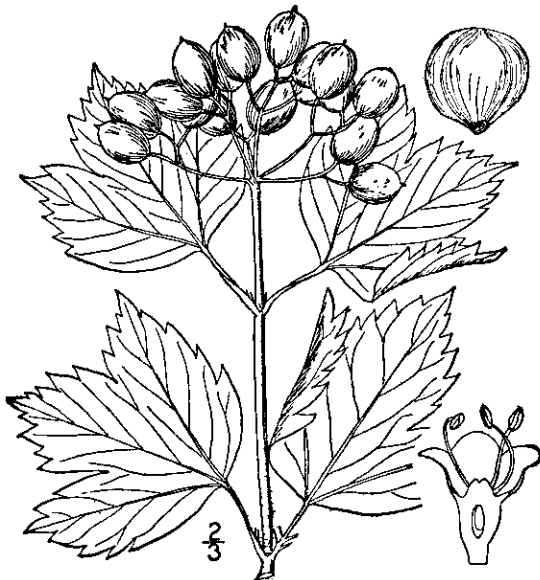
A shrub 3°-6° high, with smooth gray slender branches, and somewhat pubescent twigs and petioles. Leaves ovate, orbicular, or broader than long, cordate or truncate at the base, pubescent on both sides, or becoming glabrate, 2'-5' broad, mostly rather deeply 3-lobed, coarsely dentate, the lobes acute or acuminate; petioles ½'-1' long; cymes long-peduncled, 1½'-3' broad; flowers all perfect, 2"-3" broad; drupe nearly black, 3"-4" long, the stone lenticular, faintly 2-ridged on one side and 2-grooved on the other.

In dry or rocky woods, New Brunswick to Georgia, Alabama, Ontario, Michigan and Minnesota. Upper leaves sometimes merely toothed, not lobed. May-June. Squash-berry. Maple-leaf guelder-rose. Dockmakie.



Viburnum dentatum L. Arrow-wood.

Viburnum dentatum L. Sp. Pl. 268. 1753.
A shrub with slender glabrous gray branches, sometimes reaching a height of 15°. Twigs and petioles glabrous; petioles 3"-12" long; leaves ovate, broadly oval or orbicular, rounded or slightly cordate at the base, acute or short-acuminate at the apex, prominently pinnately veined, coarsely dentate all around, 1½'-3' broad, glabrous on both sides, or sometimes pubescent with simple hairs in the axils of the veins beneath; cymes long-peduncled, 2'-3' broad; flowers all perfect; drupe globose-ovoid, about 3" in diameter, blue, becoming nearly black; stone rather deeply grooved on one side, rounded on the other.
In moist soil, New Brunswick to Ontario, south along the mountains to Georgia and to western New York, Michigan and Minnesota. Called also mealy-tree. Withe-rod or -wood. May-June.



Viburnum Opulus L. Cranberry-tree. Wild Guelder-rose. High Bush-cranberry.

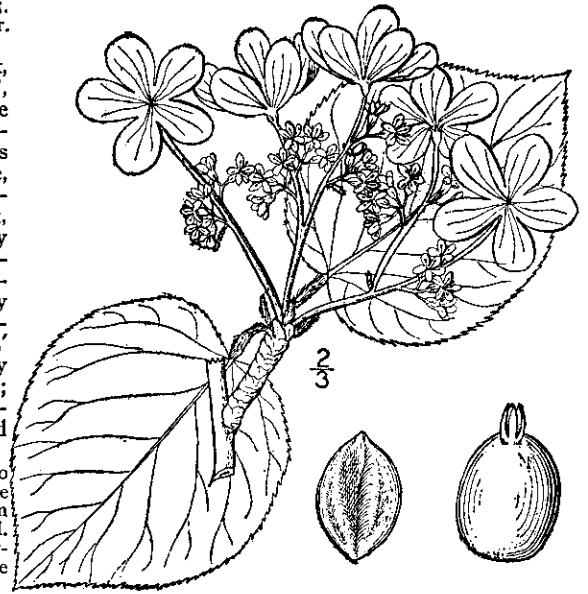
Viburnum Opulus L. Sp. Pl. 268. 1753.
V. trilobum Marsh. Arb. Am. 162. 1785.
V. americanum Mill. Gard. Dict. Ed. 8, no. 8. 1768.
A shrub sometimes 12° high, with nearly erect smooth branches. Leaves broadly ovate, sometimes broader than long, glabrous, or with scattered hairs above, more or less pubescent on the veins beneath, rather deeply 3-lobed, rounded or truncate and 3-ribbed at the base, the lobes divergent, acuminate, coarsely dentate; petioles ½'-1' long, glandular above; cymes peduncled, 3'-4' in diameter, the exterior flowers radiant, neutral, ½'-1' broad; drupes globose, or oval, 4"-5" in diameter, red, very acid, translucent; stone orbicular, flat, not grooved.

In low grounds, Newfoundland to British Columbia, New Jersey, Michigan, Iowa, South Dakota and Oregon. Also in Europe and Asia. Among many English names are marsh-, rose- or water-elder, white dogwood, whitten-tree, dog rowan-tree, gaiter-tree or gatten, cherry-wood, May-rose, squaw-bush, cramp-bark. In cultivation, the snowball, Gadrise. Red elder. Love-roses. Witch-hopple or -hobble. Pincushion-tree. June-July.

Viburnum lantanoides Michx. Hobble-bush. American Wayfaring Tree. Moose-bush or -berry.

V. alnifolium Marsh. Arb. Am. 102. 1785.
Viburnum lantanoides Michx. Fl. Bor. Am. 1: 179. 1803.

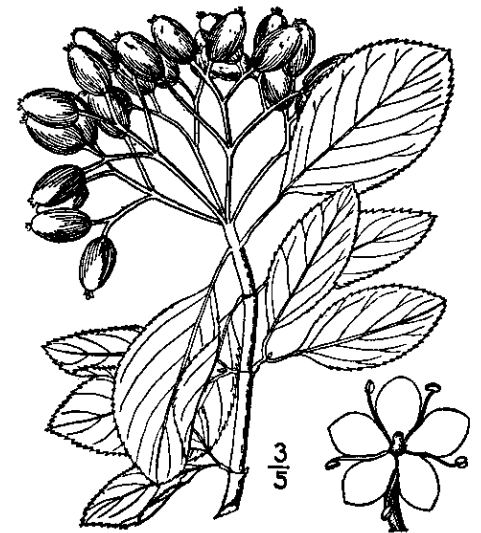
A shrub, with smooth purplish bark, sometimes reaching a height of 10°, widely and irregularly branching, the branches often procumbent and rooting, the youngest twigs scurfy. Leaves orbicular, or very broadly ovate, strongly pinnately veined, short-acuminate or acute at the apex, usually cordate at the base, finely stellate-pubescent, or at length glabrous above, scurfy with stellate pubescence on the veins beneath, finely serrate all around, 3'-8' broad; petioles ½'-1½' long; cymes sessile, 3'-5' broad, the exterior flowers usually radiant and neutral, about 1' broad; drupes red, becoming purple, ovoid-oblong, 5"-6" long; stone 3-grooved on one side, 1-grooved on the other.
In low woods, New Brunswick to North Carolina, Ontario, Tennessee and Michigan. Leaves of shoots from cut stumps thin, ovate, coarsely toothed. May-June. Tangle-legs or -foot. Dogwood. Dogberry. Trip-toe. Witch-hopple or -hobble. Winter-buds naked.

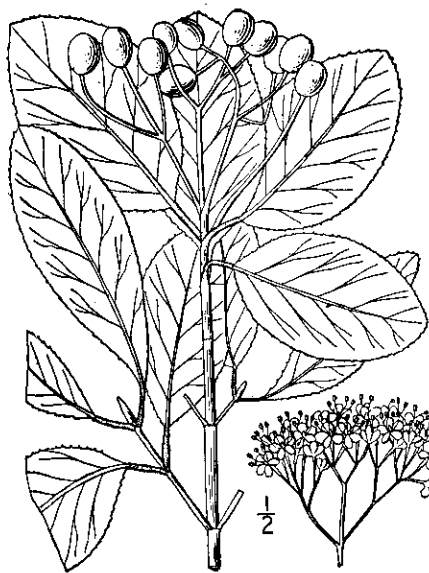


Viburnum prunifolium L. Black Haw. Stag-bush. Sloe.

Viburnum prunifolium L. Sp. Pl. 268. 1753.
A shrub or small tree somewhat similar to the preceding species; but the winter buds smaller, less acute, often reddish-pubescent. Leaves shorter-petioled, ovate or broadly oval, obtuse or acutish but not acuminate at the apex, narrowed or rounded at the base, 1'-3' long, finely serrulate, glabrous or nearly so; petioles rarely margined; cyme sessile, several-rayed, 2'-4' broad; flowers expanding with the leaves or a little before them; drupe oval, bluish-black and glaucous, 4"-5" long; stone very flat on one side, slightly convex on the other, oval.

In dry soil, Connecticut to Georgia, west to Michigan, Kansas and Texas. Wood hard, reddish-brown; weight per cubic foot 52 lbs. April-June. Sheep- or nanny-berry. Fruit ripe in September, sweet and edible. A race, *Viburnum prunifolium globosum* Nash, has the drupe globose, about 3" in diameter, smaller; New Jersey and eastern Pennsylvania.





Viburnum rufidulum Raf. Southern Black Haw.

Viburnum rufidulum Raf. Alsog. Am. 56. 1838.
Viburnum prunifolium var. *ferrugineum* T. & G. Fl. N. A. 2: 15. 1841. Not *V. ferrugineum* Raf. 1838.
Viburnum rufotomentosum Small, Bull. Torr. Club 23: 410. 1896.

A small tree, becoming 20° high. Leaves elliptic to obovate, mostly obtuse at the apex, finely and sharply serrate or serrulate, narrowed or obtuse at the base, the veins brown-tomentose beneath; petioles 3"-8" long, winged, brown-tomentose; cymes large, sessile, or very short-peduncled, the principal rays 3-5, mostly 4; flowers 3"-3½" broad; drupe oval, 5"-7" long, blue with a bloom; seed nearly orbicular.

In woods and thickets, New Jersey to Missouri, Kansas, Florida and Texas. Ascends to 3500 ft. in Virginia. April-May. Fruit ripe Aug.-Sept.

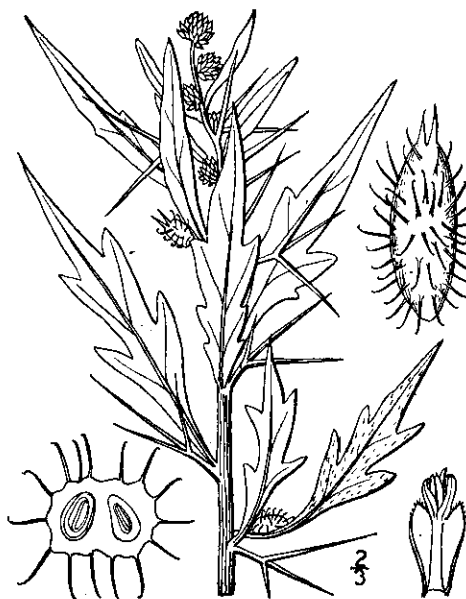
Viburnum obovatum Walt., admitted into our first edition as recorded from Virginia, is not definitely known to range north of South Carolina.

Xanthium spinosum L. Spiny or Thorny Clotbur, Clotweed or Burweed.

Xanthium spinosum L. Sp. Pl. 987. 1753.

Stem pubescent or puberulent, much branched, ascending or erect, 1°-3° high. Leaves lanceolate or ovate-lanceolate, acute or acuminate, lobed, or the upper entire, narrowed at the base, short-petioled, white-canescens beneath and on the whitish veins of the upper surface, 2'-5' long; axils each with a short-stalked 3-pronged yellow spine nearly 1' long; ripe fertile involucre (bur) oblong-cylindric, 4"-6" long, about 2" in diameter, pubescent, armed with short subulate rather inconspicuous beaks, and numerous glabrous spines about 1" long.

In waste grounds, Maine to Ontario, Florida, Illinois, West Virginia, Missouri, Texas, New Mexico and California. Widely distributed as a weed in tropical America. Naturalized from Europe or Asia. Cocklebur. Dagger-cocklebur. Aug.-Nov.

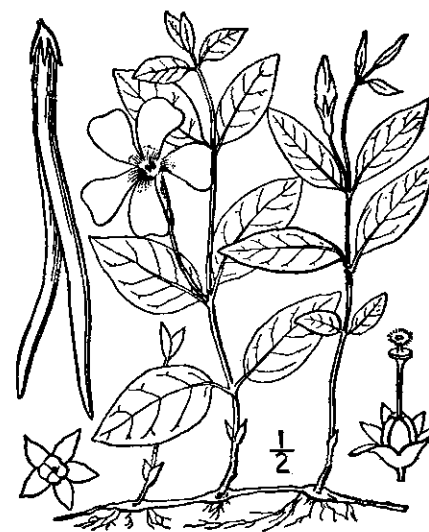


Vinca minor L. Periwinkle. Myrtle.

Vinca minor L. Sp. Pl. 209. 1753.

Perennial, trailing, glabrous; stems 6'-2° long. Leaves oblong to ovate, entire, firm, green both sides, obtuse or acutish at the apex, narrowed at the base, short-petioled, 1'-2½' long, ½'-1' wide; flowers not numerous, solitary in some of the axils, blue, 9"-15" broad; peduncles slender, ½'-1½' long; calyx very deeply parted, the segments subulate-lanceolate, glabrous, about 1½' long; corolla tube expanded above, as long as or slightly longer than the obovate, nearly truncate lobes; anthersacs with a broad connective; follicles few-seeded.

Escaped from gardens to roadsides and woods, Ontario to Connecticut, southern New York and Georgia. Native of Europe. Leaves shining. Also called running myrtle or small periwinkle. Feb.-May.



Xanthium strumarium var. canadense (P. Mill.) Torr. & Gray Great Clotbur.

Xanthium speciosum Kearney, Bull. Torr. Club 24: 574. 1897.

Very stout, 3°-4½° high. Stem sharply angled above; lower petioles 4'-6' long; leaf-blades broadly triangular-ovate, the larger 6'-8' wide, 3-5-lobed, dentate, scabrous on both surfaces; burs commonly clustered, oblong to ovoid-oblong, 1' long or more, the stout beaks 5"-6" long, somewhat incurved, strongly hooked at the apex, equalling or a little longer than the dense subulate uncinatc prickles, which are hispid to above the middle, and 4"-5" long.

Moist and waste grounds, North Dakota to Wisconsin, Tennessee, Montana, Nebraska and Texas, and locally in waste places eastward. Aug.-Sept.

