

OENOTHERA
GAURA
CIRCAEA
CORNUS



REFERENCES: Riddell 1834:117 (dry prairies); Riddell 1835:17 (near Cols., dry prairies); Sullivant 1840:9; Selby & Craig 1890:10.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 28 Jun 1990—Hover Dam Park, open woody area W of Cabbage Rd. & ½ mi. S of Walnut St., Blendon Twp., *Lowden 4424*.

NOTE: Not mapped by Cooperrider 1995:188 (illus. p. 189).

5. *Oenothera perennis* L.

Small Sundrops

Quite similar to *Oenothera fruticosa* but differing in having shorter petals (less than 1 cm long; in this specimen approx. 6 mm long), and inflorescence usually nodding before anthesis.

REFERENCE: Cooperrider 1995:188 (illus. p. 189).

HERBARIUM RECORD: Oct 1896—Cols., *Weiseman*.

4. GAURA L.

Rosette blades oblanceolate; cauline blades lanceolate, tapering at both ends, denticulate; epigynous hypanthium elongate; sepals and petals 4, rarely 3; sepals reflexed; petals narrow, turned to one side of flower, white becoming pink; stamens 8; carpels 4; ovary becoming 1-loculed; fruit fusiform, 4-sided, 1-4-seeded, hard and indehiscent.

1. *Gaura biennis* L.

Gaura

Stems with spreading hairs; petals white to pinkish red, less than 1 cm long; leaf blades lanceolate, tapering at both ends.

REFERENCES: Riddell 1834:117 (*Gaura mollis*, dry prairies); Sullivant 1840:9; Craig 1890:80 (not rare, may be found on the dike N of the island and along the river bank, 8 Aug 1882, 29 Jul 1888); Selby & Craig 1890:10; Cooperrider 1995:191 (illus. p. 189).

HERBARIUM RECORDS: 14 Aug 1839—Duncan's Plains, *J. Paddock Collection* (ILL); 27 Jul 1891—near Cols., *E. V. Wilcox*; 11 Aug 1895—Cols., *W. Kellerman*; 20 Aug 1899—Scioto R., *Selby*; 4 Aug 1974—old field along Olentangy R. near intersection of Rt. 315 & W. North Broadway, *Roberts 4412*; 4 Aug 1982—Blendon Woods, *Owens*; 11 Aug 1989—along Scioto R., *Trabue-Murphy Landing*, just S of Fishinger Rd. bridge, Perry Twp., *Lowden 4283*.

NOTE: Riddell's *Gaura mollis* (= *G. parviflora* Dougl.) was most likely misapplied.

5. CIRCAEA L. Enchanter's-nightshade

Leaves opposite, dentate, ovate or oblong, base rounded, truncate, or subcordate; flowers small, in terminal and lateral racemes, epigynous hypanthium short; sepals 2, reflexed; petals 2, white, notched or 2-lobed; stamens and carpels 2; style elongate; fruit bristly, obovoid, indehiscent.

a Fruit longitudinally-ridged, 2-loculed, 3.5-6 mm wide, incl. hairs; stigma shallowly 2-lobed; rhizome slender.

1. *C. lutetiana*

a' Fruit not ridged, 1-loculed, 1-3 mm thick, incl. hairs, 1-seeded; stigma 2-cleft; rhizome thickened. 2. *C. alpina*

1. *Circaea lutetiana* L. var. *canadensis* L.

Common Enchanter's Night-shade

Herbs, stems erect, firm; sepals, petals & stamens 2; petals white, 2-lobed; floral disc present; fruits with many stout hooked bristles, more than 4.0 mm wide (incl. bristles). Syn.: *C. quadrisulcata* of authors

REFERENCES: Riddell 1834:117 (dense & shady woods); Sullivant 1840:9; Craig 1890:80 (found with *Circaea alpina* but is not so common; it grows in damp places near the river); Selby & Craig 1890:10; Cooperrider 1995:191 (illus. p. 192).

HERBARIUM RECORDS: 27 Jun 1890—Cols., *E. V. Wilcox*; 27 Jun 1890—University woods, Cols., *Oh. Agr. Exp. Station*; 30 Jun 1890—near Cols., *E. Green*; 20 Jul 1890—Glovers Woods, near Scioto R., *Selby*; 20 Jul 1890—Scioto R., *Selby*; 24 Jul 1890—Cols., *Hine*; 4 Jul 1972—Alton-Darby Creek Rd. & Cole Rd., woodlot, *D. Keil 9332*; 5 Jul 1982—Blendon Woods, common along woodland trails, *Owens*; 9 Jul 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), *G. Moore 210*; 29 Jun 1986—Highbanks Metro Park (Delaware Co.), closed forest, Shale Creek Woods, *Witsberger 922* (OWU).

2. *Circaea alpina* L.

Small Enchanter's-nightshade

REFERENCES: Riddell 1834:117 (doubt to correctness in the Natural System; dense & shady woods); Riddell 1835:18 (Worthington, dense & shady woods); Craig 1890:80 (common in the E part of the woods near the fence, 9 Jul 1882); Cooperrider 1995:193 (illus. p. 192).

NOTE: No specimens seen from Franklin Co. Kellerman & Werner 1893:225 considered that Craig's #152 *Circaea alpina* "should be referred to *C. lutetiana* ... as is shown by the herbarium specimens an examination of the plants in the locality named." Boufford (1982) recorded Franklin Co.

CORNACEAE, Dogwood Family (incl. Nyssaceae)

- a Leaves opposite or apparently whorled (alternate in *Cornus alternifolia*); stamens and petals 4; flowers perfect. **1. CORNUS**
- a' Leaves alternate; stamens 5 or more; petals 5, small or none; flowers mostly unisexual. **2. NYSSA**

1. CORNUS L. Dogwood, Cornel

Shrubs, small trees, or herbs; leaves opposite or rarely alternate, simple, entire; flowers epigynous, bisporangiate, small, in compound cymes or in umbelliform or headlike clusters sometimes subtended by an involucre of bracts; corolla regular; sepals and petals 4, separate; epigynous disk present; stamens 4; carpels 2, united; locules 2, 1 ovule in each; style 1; fruit a drupe.

Cultivated ornamentals (OSU Campus Trees & Chadwick Arboretum) include *Cornus mas* L. (Cornelian Cherry), *Cornus kousa* Hance (Kousa or Japanese Dogwood), and *Cornus sanguinea* L. (Bloodtwig Dogwood).

- a Flowers in heads or umbels subtended by bracts; fruit red.
 - b Bracts greenish-yellow, about as long as pedicels of the yellow flowers. *C. mas*
 - b' Bracts white, rarely pink, much exceeding the greenish-yellow flowers.
 - c Flowering stems herbaceous, 3 dm high or less, leaves clustered at summit; flower cluster solitary. **7. *C. canadensis***
 - c' Small trees; flower clusters usually many. **8. *C. florida***
- a' Flowers in compound cymes; petals white; fruit white to blue; shrubs.
 - d Leaves alternate, sometimes appearing almost whorled on flowering stems; fruit blue. **1. *C. alternifolia***
 - d' Leaves opposite.
 - e Leaf-blades glabrous or minutely appressed-pubescent; fruit white or bluish.
 - f Sepals 1-2 mm long; style dilated at tip; pith of 1- or 2-year-old stems brown; blades lanceolate; fruit blue. **2. *C. amomum* var. *schuetzeana***
 - f' Sepals not more than 0.5 mm long.
 - g Branchlets gray or brownish; cymes somewhat racemiform; fruit white; pedicels red; lateral veins 3-4 pairs. **6. *C. racemosa***
 - g' Branchlets red; cymes not racemiform; fruit white or gray-blue; pedicels not red; lateral veins 5-7 pairs. **3. *C. sericea***
 - e' Leaf-blades pubescent beneath with larger hairs, at least some of which are spreading.
 - h Hairs brown, at least on veins; sepals 1-2 mm long; style dilated at tip; fruit white or bluish; pith brown. **2. *C. amomum* var. *amomum***
 - h' Hairs pale; sepals 0.5 mm long.
 - i Blades broadly ovate, abruptly acuminate, lateral veins 7-9 pairs; branches green; fruit blue; pith white. **4. *C. rugosa***
 - i' Blades ovate, scabrous above, lateral veins 3-4 pairs; fruit white; pedicels red; pith brown or white. **5. *C. drummondii***

1. *Cornus alternifolia* L.f.

Alternate-leaf Dogwood, Pagoda Dogwood

Usually a large shrub or small tree; leaves alternate, crowded near tips of branchlets; blades ovate-broadly elliptic, abruptly acuminate at apex, under surface pale; flowers cream-colored, in a wide, somewhat rounded to flat-topped cyme; fruits dark blue.

REFERENCES: Selby & Craig 1890:10; Braun 1961:281 (illus. p. 280); Cooperrider 1995:247 (illus. p. 245).

HERBARIUM RECORDS: 2 Jun 1888—banks of Scioto R., Selby; 1890—Scioto R., Selby (WOOS); 27 May 1893—Cols., W. Kellerman; 11 May 1895—Alum Creek, Osburn; 8 Jun 1901—Big Darby Creek, Mead; 4 Jun 1904—Franklin Co., F. King; 24 May 1979—Indian Run, disturbed woods W of Rt. 745, ¼ mi. N of Rt. 33, Dublin, Washington Twp., NW Cols. Quad., Cusick 19259; 25 Apr 1986—Hayhurst, Worthington, Benkowski 19.

2. *Cornus amomum* Miller

Silky Dogwood

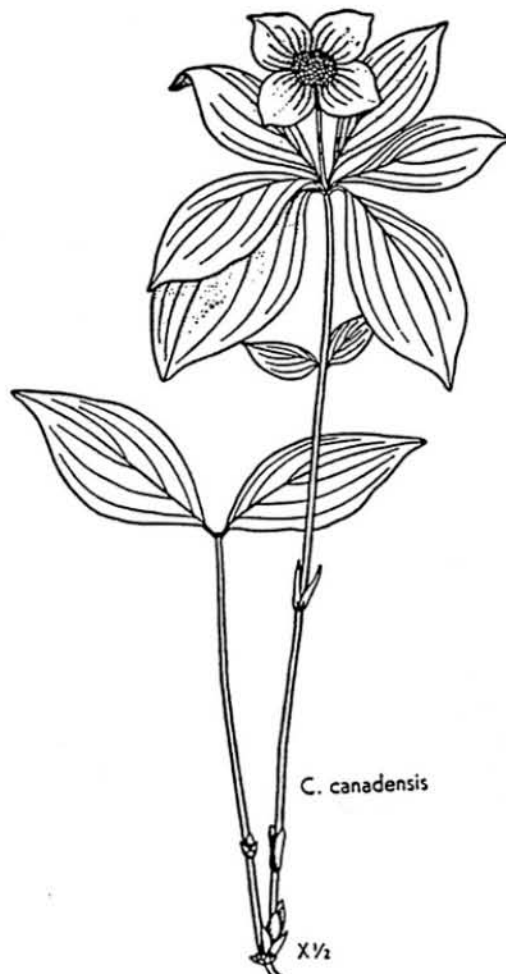
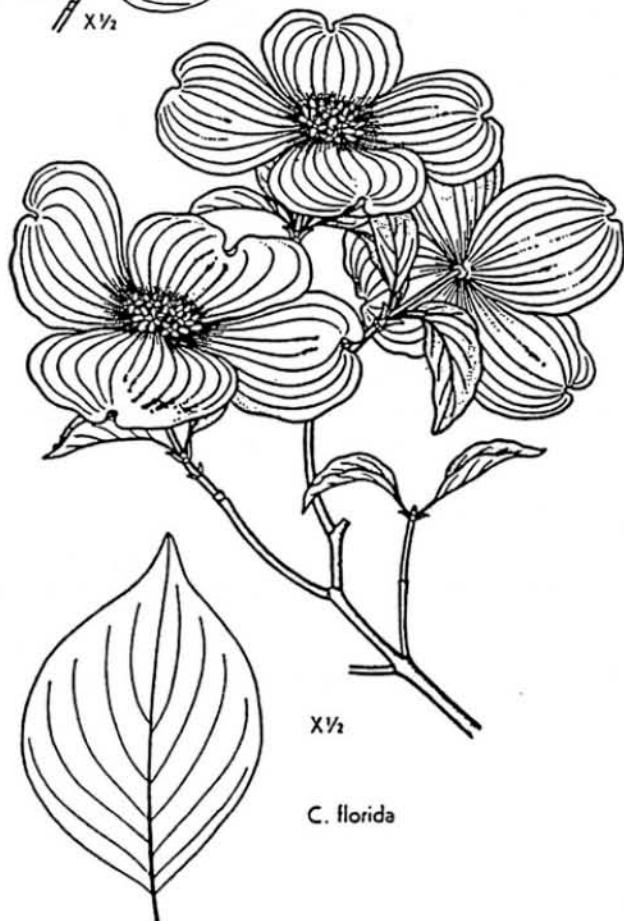
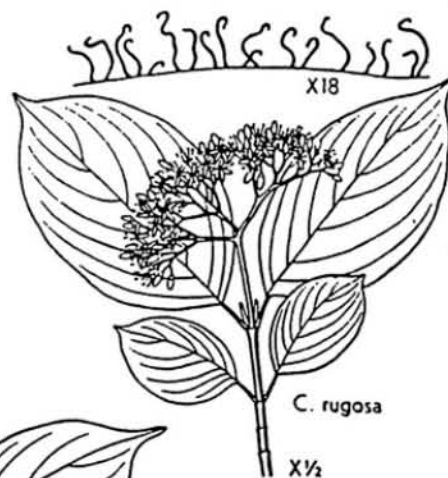
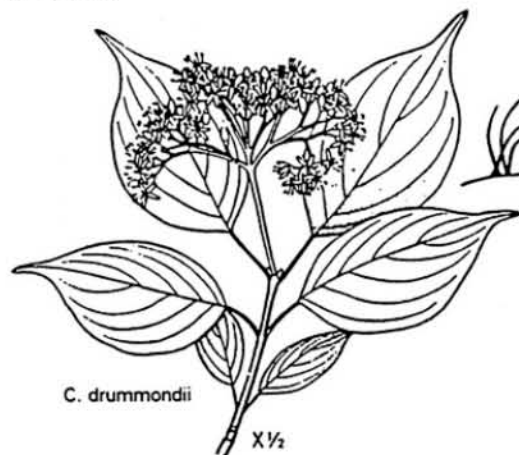
Shrub; leaves opposite, smooth on upper surface; branches dark red to reddish-brown or reddish-purple; fruit blue; pedicels not red; calyx lobes 1-2 mm long; style tip dilated.

REFERENCES: Braun 1961:284 (illus. p. 282); Cooperrider 1995:244 (illus. p. 245).

Two varieties are recognized:

var. *amomum*

CORNUS



Upper surface of leaves with both spreading and appressed brownish or reddish hairs; leaves ovate to broadly elliptic, acute to nearly rounded at base.

HERBARIUM RECORDS: [ca. 1982]—Blendon Woods, *Owens*; 17 Jun 1986—Highbanks Metro Park (Delaware Co.), day camp area, *Kosko*; 5 Aug 1989—Godown Rd. between Commerce Pl. & Le Anne Marie Circle, drainage ditch, Perry Twp., *Lowden 4253*.

var. *schuetzeana* (C.A.Mey.) Rickett

Upper surface of leaves with appressed white or colorless hairs; leaves lanceolate, tapering to an acute base and acuminate apex. Syn.: *C. obliqua* Raf., *C. purpusii* Koehne

HERBARIUM RECORDS: 1 Jul 1891—Georgesville, *Werner* (CLM); 1892—Cols., *Werner*; 1892—Franklin Co., *Bogue*; 24 Aug 1892—Alum Creek Station, *Bogue*; 29 Aug 1892—Cols., *Werner* (CLM); 3 May 1896—Cols., *McCall*; 30 May 1896—Reservoir Park, *M. Wright*; 11 Aug 1989—Scioto R. just S of Fishinger Rd. bridge, Trabue-Murphy Landing, Perry Twp., *Lowden 4275*; 23 Jun 1991—E bank of Scioto R., from Lane Rd. S to Fishinger Rd., Perry Twp., *Lowden 4722 & 4723*.

3. *Cornus sericea* L.

Red-osier Dogwood

Shrub, some lower branches prostrate, upper stems bright red; leaves opposite, ovate to elliptic-ovate, whitish beneath; flowers and fruits white. Syn.: *C. stolonifera* Michx.

REFERENCES: Riddell 1834:156 (slaty ravines; & *Cornus alba*); Sullivant 1840:10 (*Cornus alba* L.); Selby & Craig 1890:10; Cooperrider 1995:243 (illus. p. 243).

HERBARIUM RECORD: 1890—Scioto R., *Selby*.

4. †*Cornus rugosa* Lam.

Round-leaved Dogwood

Shrub; flowers white; leaves broadly ovate to suborbicular, with 6-9 pairs of lateral veins; blades abruptly short acuminate at apex, pale beneath with white pubescence; fruits light blue. Syn.: *C. circinata* L'Hér.

REFERENCES: Riddell 1834:156 (slaty ravines); Riddell 1835:66 (Worthington, banks of streams); Selby & Craig 1890:10; Cooperrider 1995:244 (illus. p. 243).

HERBARIUM RECORD: 14 Jul 1893—Scioto R., Cols., *Selby* (OS, WOOS).

5. *Cornus drummondii* C.A.Mey.

Roughleaf Dogwood

Shrub; leaves opposite, narrowly to broadly ovate, scabrous on upper surface, under surface paler and covered with spreading hairs; blades with 4-5 pairs of lateral veins; flowers white; pedicels becoming dark red; fruits white.

REFERENCES: Selby 1891a:111a (*Cornus asperifolia* Mx.); Braun 1961:283 (illus. p. 282); Cooperrider 1995:244 (illus. p. 245).

HERBARIUM RECORDS: 15 May 1891—Worthington Woods, *Selby*; 1 Jul 1891—Big Darby, *Selby*; Jul 1892—Georgesville, *Werner* (CLM); 15 Jul 1892—Franklin Co., *Bogue*; 19 Jul 1977—W facing bluffs above Big Darby Creek, N of Pickaway Co. line & NW of Orient, Pleasant Twp., *Cusick 17035*.

6. *Cornus racemosa* Lam.

Gray Dogwood, Panicle Dogwood

Shrub, older branches light to medium gray; leaves opposite, lanceolate to elliptic or narrowly ovate, acuminate at apex, acuminate to acute at base, with 3-4 pairs of lateral veins, under surface glaucous; flowers whitish in paniculate cymes; pedicels red; fruits white. Syn.: *C. paniculata* L'Hér.

REFERENCES: Riddell 1834:156 (dry prairies); Selby & Craig 1890:10; Braun 1961:281 (illus. p. 282); Cooperrider 1995:246 (illus. p. 245).

HERBARIUM RECORDS: 17 Oct 1890—Cols., *Selby*; 26 Aug 1958—Maize Rd. ½ mi. S of Morse Rd., *E. Herrick*; 29 May 1991—Hoover Dam Park, N of entrance off Cabbage Rd., open woody area, *Lowden 4644*.

7. †*Cornus canadensis* L.

Bunchberry, Dwarf Cornel

REFERENCE: McCance 1984:A-280.

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Cooperrider 1995:241 (illus. p. 243).

8. *Cornus florida* L.

Flowering Dogwood

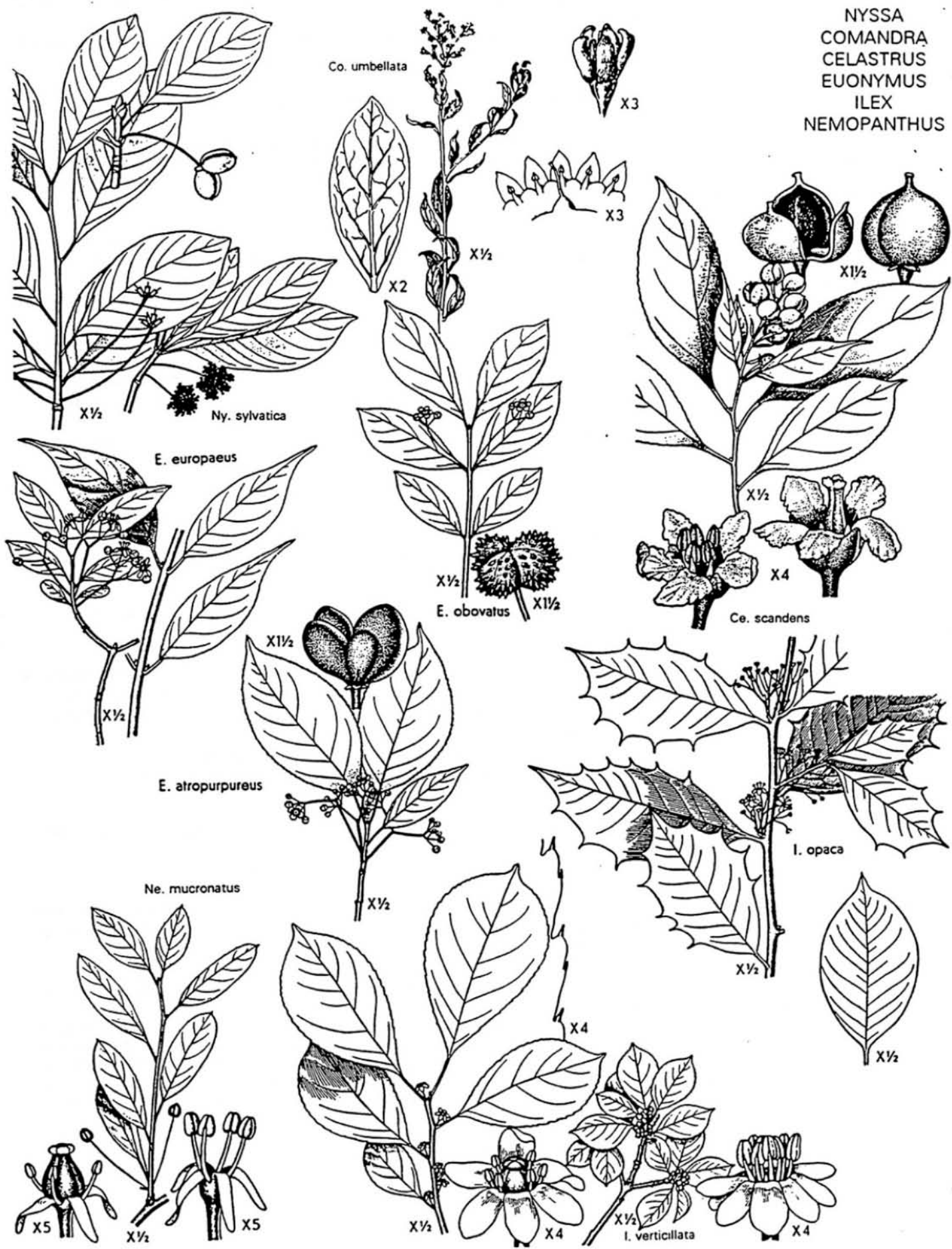
Small tree, sometimes shrubby; flowers yellow in dense clusters subtended by a corolla-like involucre of 4 large notched white (rarely pink) showy bracts; leaves ovate; fruits red.

REFERENCES: Riddell 1834:156 (incl. var. *rosea*); Sullivant 1840:10; Craig 1890:82 (2 or 3 specimens on the campus; one is near the tennis court, and another is W of the college bldg., 5 May 1883, 12 May 1884, 28 May 1885, 3 May 1887, 8 May 1888); Selby & Craig 1890:10; Kellerman & Werner 1893:228; Braun 1961:279 (illus. p. 278); Cooperrider 1995:242 (illus. p. 243).

HERBARIUM RECORDS: Jun 1888—Cols., *Craig*; 14 May 1892—Black Lick, *Werner*; Jun 1892—Cols., *Bayley*; 1897—OSU campus, *Ruppersberg 81*; 1 Jun 1899—Gahana [Gahanna], *Helfrich*; 7 Sep 1899—Worthington, *Selby*; 5 Oct 1901—OSU campus, *Eckman*; 5 May 1983—Blendon Woods, *Owens*; 11 May 1984—beside parking garage on 11th Ave., OSU campus, *Schnipke 29*; 10 Jun 1986—Highbanks Metro Park (Delaware Co.), *Kosko*; 1 Sep 1987—Highbanks Metro Park (Delaware Co.), shale creek woods, *B. Reed*; 9 May 1989—W on Highland Dr. off Olentangy River Rd. just before the RR crossing, Clinton Twp., *Lowden 4046*; 18 Apr 1991—woods W of Cabbage Rd. entrance to Hoover Dam Park, Blendon Twp., *Lowden 4592*.

2. NYSSA L. Sour Gum

NYSSA
COMANDRA
CELASTRUS
EUONYMUS
ILEX
NEMOPANTHUS



Trees; leaves alternate, simple, blades obovate, entire or with a few large teeth; mostly dioecious, but some perfect flowers may be present; flowers small, greenish, the staminate in peduncled umbel-like clusters, the carpellate epigynous, in few-flowered peduncled heads; sepals 5, minute; petals 5, small or none; stamens 5 or more, at edge of disk; ovary 1-loculed; ovule 1; fruit a drupe.

1. *Nyssa sylvatica* Marshall

Sour-gum, Black-gum, Black Tupelo

Tree; leaves alternate, simple, mostly entire, blades obovate; fruit a dark blue drupe. Dry or moist woodlands.

REFERENCES: Riddell 1834:118 (*Nyssa multiflora*); Sullivant 1840:23 (*Nyssa multiflora* Walter); Selby & Craig 1890:10; Braun 1961:275 (illus. p. 278); Cooperrider 1995:173 (illus. p. 172).

HERBARIUM RECORDS: Aug 1890—Headley's woods, Selby; 1897—Neil's Run, Cols., Ruppertsberg 92; 15 Oct 1902—Neil's Run, Cols., Sanders; 1 & 9 Oct 1903—Cols., J. H. Schaffner, [ca. 1982]—Blendon Woods, fairly common, front of nature center, Owens; 10 Jul 1982—OSU campus, cult. between Main Library & University Hall, T. Lammers 4745; 5 Oct 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), blufftop, G. Moore 201.

SANTALACEAE, Sandalwood Family

Perennial herbs; usually partially parasitic on underground parts of other plants; leaves alternate, blades entire; flowers small, white, epigynous with epigynous hypanthium, in small clusters; sepals 5; petals none; stamens 5, at edge of disk; carpels 3-5, united; locule 1; fruit a drupe, 1-seeded, 4-10 mm wide.

1. COMANDRA Nutt.

Flower-cluster terminal, corymbiform; flowers all bisporangiate; fruit dry.

1. *Comandra umbellata* (L.) Nutt.

Bastard Toad-flax

Herb; leaves alternate, blades entire; flowers small, epigynous with an epigynous hypanthium; inflorescence terminal, corymbiform; tepals 5, whitish; stamens 5.

REFERENCES: Riddell 1834:118 (*Thesium umbellatum*; rocky situations); Sullivant 1840:23; Selby & Craig 1890:15.

HERBARIUM RECORDS: 1840—Cols., Sullivant; May 1891—Big Darby Creek, Cols., Selby; 9 May 1891—near Big Darby Creek, Cols., Selby (WOOS); 4 May 1895—Georgesville, Osburn; 1925—Westerville, Big Walnut Creek, dry shale banks, Camp; 2 Jul 1932—Red Hills, Hicks; 11 May 1970—Camp Johnson, 8 mi. N of OSU on N. High, frequent in patches on dry sunny hillsides, Boone 138; 25 May 1982—Highbanks Metro Park (Franklin & Delaware Cos.), blufftop, G. Moore; 24 Jun 1982—Highbanks Metro Park (Franklin & Delaware Cos.), blufftop, G. Moore 297; 17 May 1983—Battelle-Darby, Owens; 10 May 1987—Highbanks Metro Park (Delaware Co.), bluffs, Higgins 15 (OS, OWU); 7 May 1992—Cedar Bluff Overlook, Battelle Darby Creek, Metro Park, Pleasant Twp., Lowden 4931; 14 May 1992—Graessle Rd. Bluff Area, Battelle Darby Creek Metro Park, Pleasant Twp., Lowden 4946; 30 May 1993—Hoover Dam Park, W of Cabbage Rd. & S of Walnut St., Blendon Twp., Lowden 5053.

CELASTRACEAE, Staff-tree Family

Small trees, shrubs, and woody vines; leaves simple; flowers hypogynous, bisporangiate or monosporangiate; hypogynous disc present; perianth regular; sepals, petals, and stamens 4-5; carpels 2-5, united, locules of ovary and lobes of stigma as many; style short or none; fruit a capsule; seeds with arils.

a Leaves alternate; vines. 1. CELASTRUS

a' Leaves opposite; small trees or erect or prostrate shrubs. 2. EUONYMUS

1. CELASTRUS L. Bittersweet

Woody vine; leaves alternate, pinnately veined, serrate; dioecious, each kind of flower with rudiments of the other sporophylls, or some bisporangiate flowers on the same plant as the monosporangiate ones; panicles terminal; petals greenish-white, small; sepals, petals, and stamens 5; carpels 3; fruit orange; seeds 1 or 2 in each locule, arils scarlet.

1. *Celastrus scandens* L.

American Bittersweet, Waxwork, Climbing Staff Tree

Twining woody vine; leaves alternate, oblong-elliptic to ovate; flowers and fruits more than 6 in terminal panicles; capsules dull-orange, arils scarlet.