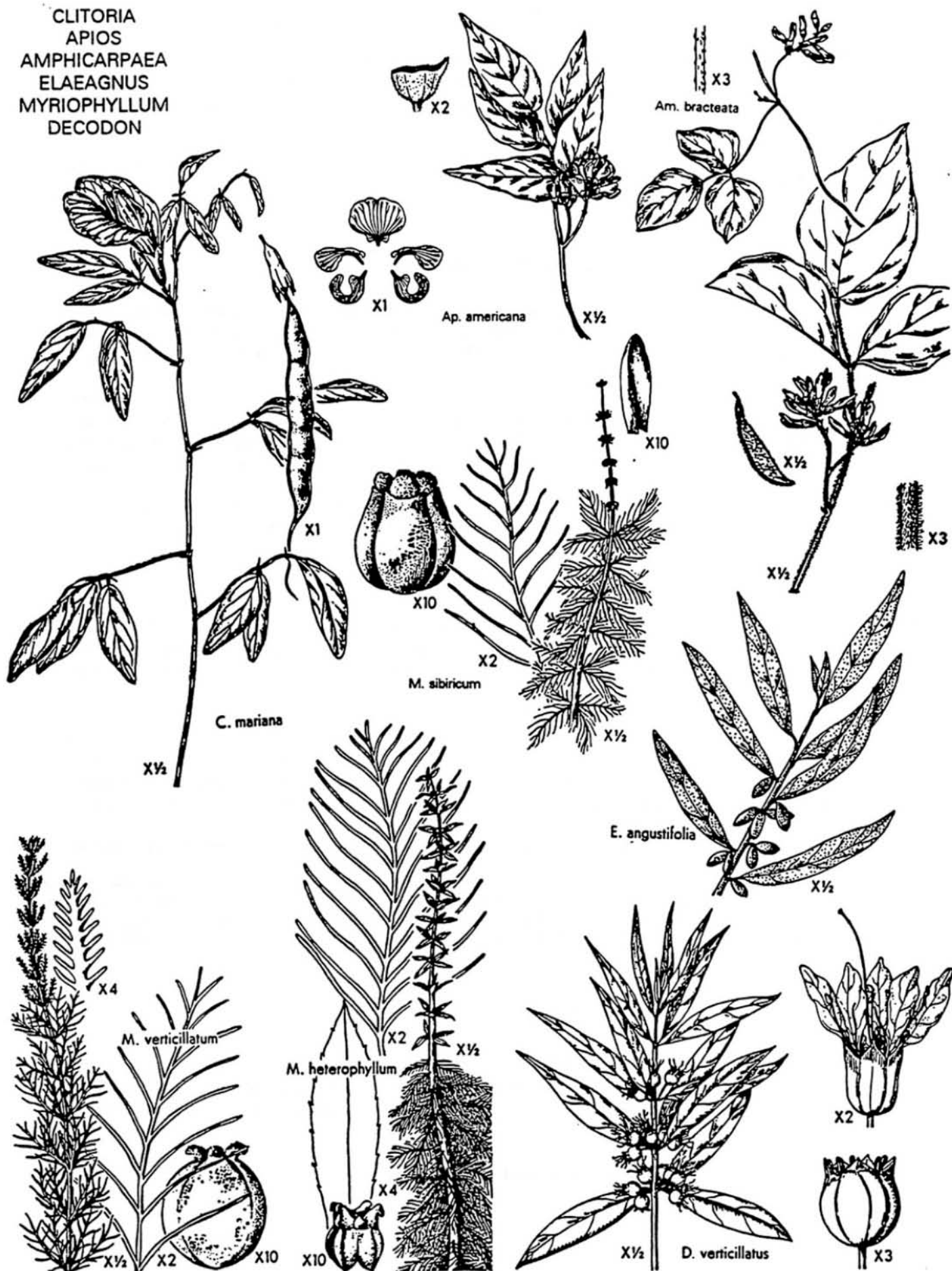


CLITORIA
APIOS
AMPHICARPAEA
ELAEAGNUS
MYRIOPHYLLUM
DECODON



Flowers bisporangiate or some of them monosporangiate, on twigs of current season; hypanthium tubular, constricted above ovary; leaves alternate; stamens 4.

- a Leaves lanceolate, silvery scales on both sides; calyx tube slightly longer than lobes; fruit yellow, stalks 2-4 mm long. **1. *E. angustifolia***
a' Leaves elliptic to ovate or lanceolate, green and somewhat glabrescent above, silvery scales beneath; calyx tube at least 2 times as long as lobes; fruit red, stalks 3-5 mm long. **2. *E. umbellata***

1. **Elaeagnus angustifolia* L.

Russian-olive, Oleaster

Planted Ornamental (native of Eurasia)

Shrub or small tree; leaves alternate, lanceolate or narrowly lanceolate; leaves and young branches covered with silvery scales only; fruit yellow with silvery scales.

HERBARIUM RECORDS: 7 Jun 1967—OSU campus, cult., Cols., *Cooke & Stuckey*; 12 May 1986—OSU, W Campus, Cols., *Blanco*; 18 May 1988—OSU, between Campus Loop Rd. & Howlett Hall parking lot, *Chinery 49*; 22 May 1988—W. Thurber Dr., Cols., *Kelly 27*; 3 Jun 1993—jct. of Bethel Rd. & Olentangy River Rd., Cols., Sharon Twp., *Lowden 5071*; 3 Jun 1993—S on Rt. 315, Lane Ave. exit, Clinton Twp., *Lowden 5072*.

NOTE: Not mapped for Franklin Co. by Cooperrider 1995:166.

2. **Elaeagnus umbellata* Thunb.

Autumn-olive

Planted Ornamental (native of E Asia)

Shrub or small tree; leaves alternate, elliptic to ovate-oblong; leaves and young branches with silvery and brown scales; fruit red.

HERBARIUM RECORDS: 24 Jul 1986—Highbanks Metro Park, scattered, *Kosko*; 25 May 1994—main entrance to Darby Creek Metro Park, 1665 Darby Creek Dr., *Stahl*.

NOTE: Planted in every Metro Park (pers. comm., Jim Stahl). Not mapped for Franklin Co. by Cooperrider 1995:166 (illus. p. 164).

HALORAGACEAE, Water-milfoil Family

Aquatic or marsh herbs; emerged leaves entire, toothed, or pinnatifid, submersed ones pinnatifid with linear or filiform segments; monoecious; flowers epigynous, bisporangiate or monosporangiate, sessile, axillary, solitary or few together; perianth regular; carpels 3-4, united, locules and ovules as many.

1. MYRIOPHYLLUM L. Water-milfoil

Submersed; leaves opposite or whorled; flowers small, 2-bracted, in axils of emerged leaves or bracts, the whole forming spikes, usually the carpellate below, the staminate above, and the bisporangiate in the transition zone; calyx of 4 sepals deeply parted in the staminate, toothed in the carpellate; petals 4 or none; stamens 4 or 8; carpels 4, separating at maturity, each 1-seeded, indehiscent; styles and stigmas separate.

- a Bracts, at least the lower, longer than flowers and fruits.
b Carpels in fruits smooth; stamens 8; bracts pinnatifid. **1. *M. verticillatum* var. *pectinatum***
b' Carpels in fruit rounded or keeled, beaked; stamens 4; bracts serrate to entire; stem stout. **3. *M. heterophyllum***
a' Bracts shorter than flowers and fruits; stamens 8; stems white in drying; carpels in fruit smooth or finely tubercled. **2. *M. sibiricum***

1. †*Myriophyllum verticillatum* L. var. *pectinatum* Wallr.

Whorled Water-milfoil

Aquatic herb; flower on emerged stems; bracts of inflorescence deeply pinnatifid.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Sullivant 1840:10 (*Myriophyllum* species?, sine fl. & fr.). Not mapped for Franklin Co. by Cooperrider 1995:197 (illus. p. 196).

2. †*Myriophyllum sibiricum* Kom.

Common Water-milfoil

Native to Naturalized (European)

Syn.: *M. exalbescens* Fernald, *M. spicatum*

REFERENCE: Craig 1890:79 (common in ponds around the island and in the lake).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Cooperrider 1995:195 (illus. p. 196). Kellerman & Werner 1893:226-227 referred to #143 *Myriophyllum spicatum* on Craig's list as a doubtful identification and indicated "a thorough but unsuccessful search was made ... in the localities named, the same season that the list was published."

3. †*Myriophyllum heterophyllum* Michx.

Broad-leaved Water-milfoil

REFERENCE: Craig 1890:79 (abundant in the lake).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Cooperrider 1995:197 (illus. p. 196). Kellerman & Werner 1893:226-227 referred to #144 *Myriophyllum heterophyllum* on Craig's list as a doubtful identification and indicated "a thorough but unsuccessful search was made ... in the localities named, the same season that the list was published."

LYTHRACEAE, Loosestrife Family

Herbs; leaves opposite, whorled, or alternate, simple, entire; flowers perfect, perigynous, often dimorphic or trimorphic in length of filaments and of style; petals rarely none or sepals and petals 4-7, stamens as many or twice as many; carpels 2-6, united, ovary completely or incompletely 2-6-loculed; placentation axile; style 1; fruit a capsule.

a Corolla not regular; hypanthium spurred or saccate on one side; sepals and petals 6. 5. CUPHEA

a' Corolla regular or absent; hypanthium regular.

b Hypanthium cylindrical, longer than wide; sepals and petals 5-7, stamens as many or twice as many.

4. LYTHRUM

b' Hypanthium as wide as long, globose in fruit; petals 5, 4, or none.

c Tall plants with alternate, whorled, or opposite leaves; petals usually 5, stamens 10, of 2 lengths; flowers trimorphic. 1. DECODON

c' Low plants with opposite leaves; petals 4 or none; stamens equal; flowers of one form.

d Flowers usually solitary in axils; bases of leaves tapering. 2. ROTALA

d' Flowers usually clustered in axils; bases of at least upper leaves auricled. 3. AMMANNIA

1. DECODON J.F.Gmel. Swamp Loosestrife

Herbaceous to slightly shrubby; growing in swamps; stem angled, elongate, usually arching and rooting at nodes; leaves opposite, whorled, or alternate, lanceolate, short-petioled; flowers showy, trimorphic, in nearly sessile clusters in axils of upper leaves; sepals 4-8, alternating with linear appendages; petals 5, purple-pink, 10-15 mm long; stamens 10; capsule 3-5-loculed, dehiscent.

1. *Decodon verticillatus* (L.) Elliott

Swamp Loosestrife

Shrub-like, branches arched; leaves usually opposite or in whorls; blades lanceolate; flowers clustered in axils of upper leaves; petals purple-pink; hypanthium subglobose.

REFERENCES: Sullivant 1840:14; Selby & Craig 1890:10; Cooperrider 1995:170 (illus. p. 169).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 4 Jun 1931—Westerville, *Hicks*.

2. ROTALA L. Tooth-cup

Low herbs of wet soil; stems erect or prostrate; blades opposite, short-petioled, linear-spatulate, 1-3 cm long; bases of leaves tapering; flowers small, solitary and sessile in axils; sepals 4, about as long as alternating appendages; petals 4, minute, white or pink, early deciduous; stamens 4; capsule 4-loculed, dehiscent; hypanthium equaling capsule.

1. *Rotala ramosior* (L.) Koehne

Tooth-cup

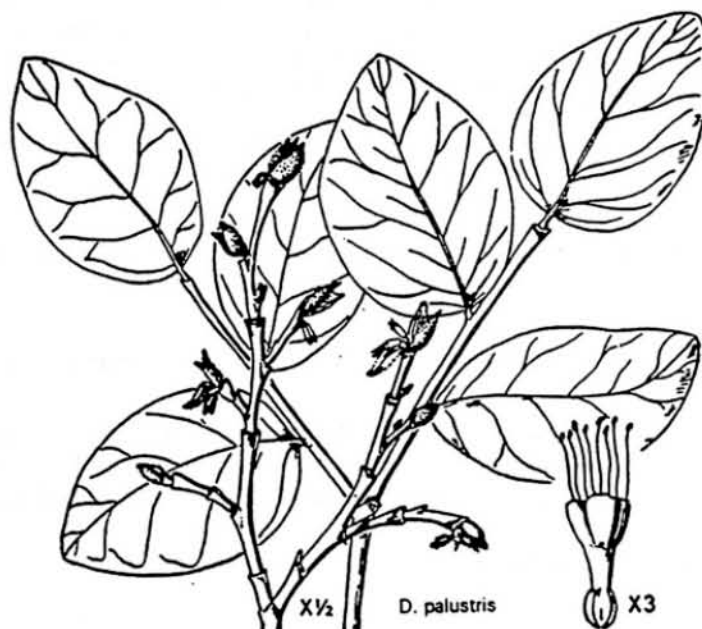
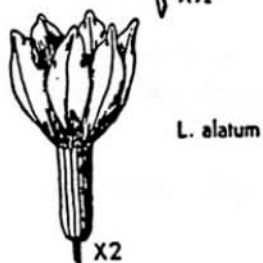
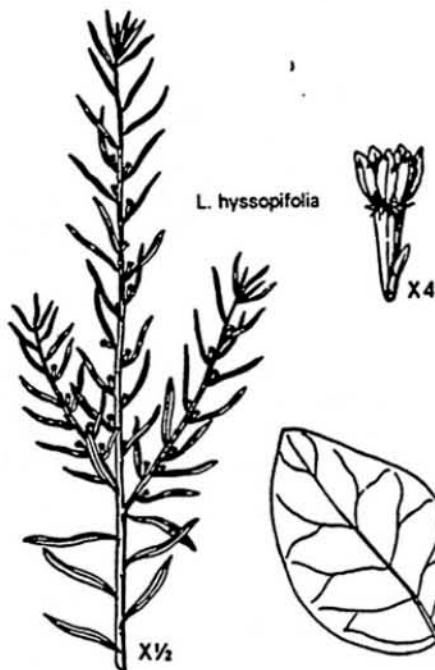
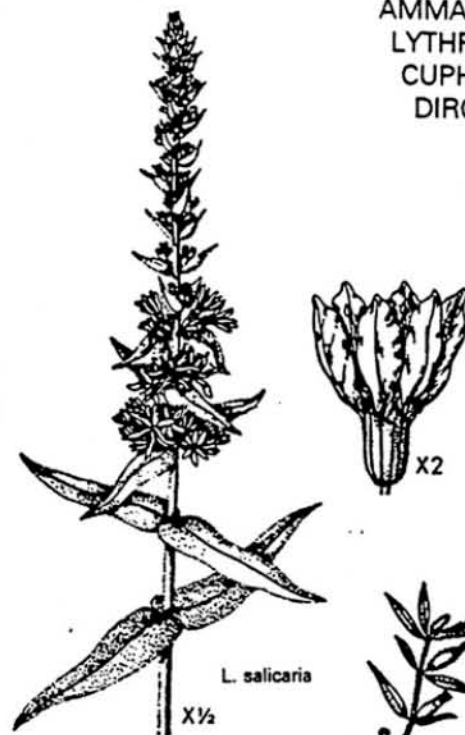
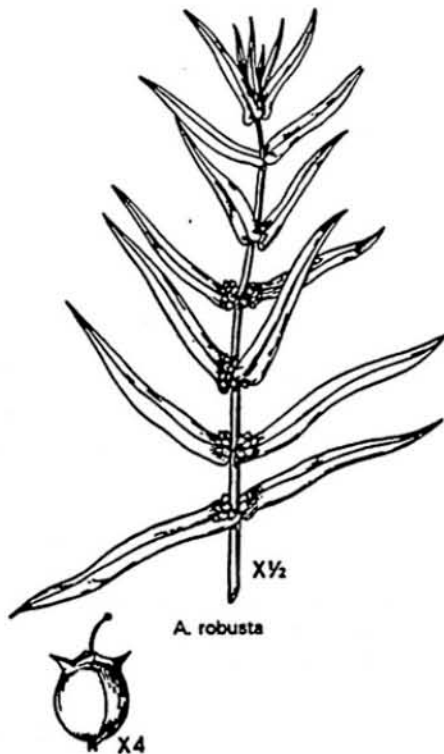
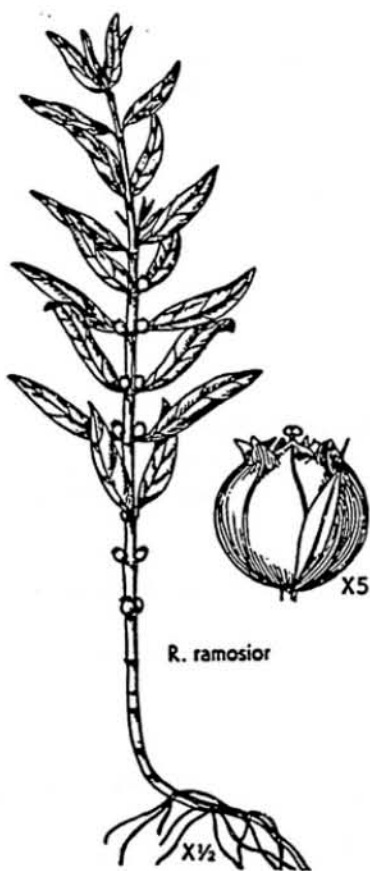
Herbs; leaves opposite, linear-spatulate, narrowed at base to short petiole; flowers and fruits solitary and sessile in leaf axils; hypanthium globose to subglobose; petals white or pink, falling early. Wet places, mudflats.

REFERENCES: Sullivant 1840:13 (*Ammannia humilis* Michx.); Selby & Craig 1890:10; Kellerman & Werner 1893:228 (fields back of North Dormitory, 5 Aug 1890); Cooperrider 1995:168 (illus. p. 169).

HERBARIUM RECORDS: 5 Aug 1890—Cols., *Werner* (CLM, OS); 29 Aug 1933—Baumgardner's Pond, *Chapman*; 2 Oct 1987—W bank of the Olentangy R., just N of Lane Ave. bridge and S. of Fawcett Center for Tomorrow, wet open mudflat, *T. Lammers & Stuckey 6191*; Summer 1988—along the Olentangy R., OSU campus, mudflat near Fawcett Center, *DeLong*; 13 Oct 1991—Olentangy R., mudflat N of Lane Ave. bridge, S of Fawcett Center, Clinton Twp., *Lowden 4879*.

3. AMMANNIA L.

RODALA
AMMANNIA
LYTHRUM
CUPHEA
DIRCA



Low glabrous herbs of wet places; blades opposite, sessile, narrow, auricled at base; flowers small, axillary, usually clustered; hypanthium 4-angled; sepals 4, small, appendages in sinuses; petals 4, small, early deciduous; stamens 4 or 8; capsule bursting irregularly.

1. *Ammannia robusta* Heer & Regel

Sessile Tooth-cup

Petals pale lavender; flowers and fruits nearly sessile, peduncle not more than 1 mm long; fruits more than 3.5 mm wide.

REFERENCE: Cooperrider 1995:170 (illus. p. 169).

NOTE: No specimens seen from Franklin Co.

4. LYTHRUM L. Loosestrife

Stems 4-angled; leaves opposite, alternate, or whorled; flowers often dimorphic or trimorphic, solitary or in axillary clusters, sometimes in spikes; hypanthium cylindrical, striate; sepals 5-7, alternating with appendages; petals 5-7, purple, red-purple, or white; stamens as many or twice as many as petals, inserted lower in hypanthium; style slender; capsule 2-loculed.

a Leaves opposite or whorled; flowers in clusters in upper axils, clusters in spikelike inflorescence; plants more or less downy; stamens twice petals. 1. *L. salicaria*

a' Leaves, at least part of them, alternate; flowers solitary or in 2's in axils; stamens not more numerous than petals.

b Petals 5 mm long; hypanthium narrowly 12-winged. 2. *L. alatum*

b' Petals 2-3 mm long; hypanthium not winged. 3. *L. hyssopifolia*

1. **Lythrum salicaria* L.

Purple Loosestrife, Spiked Loosestrife

Naturalized (native of Eurasia)

Plants pubescent above; leaves opposite, whorled; flowers reddish-purple, several in axils; inflorescence racemose to spike-like.

REFERENCES: Stuckey 1990:4; Cooperrider 1995:171 (illus. p. 172).

HERBARIUM RECORDS: 15 Aug 1972—Scioto R. at Greenlawn Ave. bridge, uncommon on backwater bay mudflats, *Roberts 3037*; 24 Jul 1973—ditch along RR S of Lincoln Ave. and E of Indianola Ave., SE edge of Worthington, *Thorp*; 4 Aug 1974—borrow pit along Olentangy R. near intersection of Rt. 315 & W. North Broadway, *Roberts 4409* (KE, OS); 28 Jul 1979—S end of abandoned limestone quarry, E bank Scioto R., about 1 mi. S of Dublin on Rt. 33, *W. Carr 1755*; 27 Jul 1980—along RR between I-270 & Wilson Rd. at ODOT Garage, Sharon Twp., NW Cols. Quad., *Cusick 20240*; 10 Jul 1982—Pickerington Marsh, *Owens*; Summer 1988—along the Olentangy R., OSU campus, Cols., *DeLong*; 5 Aug 1989—along Godown Rd., wet ditch between Commerce Pl. & Le Anne Marie Circle, Perry Twp., *Lowden 4238*; 23 Jun 1991—E bank of Scioto R., James J. Thomas Park, near Fishinger Rd. Bridge, Perry Twp., *Lowden 4732*; 5 Jul 1991—E bank of Olentangy R., between Lane Ave. and King Ave., OSU campus, Clinton Twp., *Lowden 4761*.

2. *Lythrum alatum* Pursh

Wing-angled Loosestrife

Plants with several branches; stems glabrous; lower leaves opposite, upper alternate, bases rounded; corolla pink-purple; 1-2 flowers in each axil, hypanthium with prominent nerves, stamens or style exerted.

REFERENCES: Craig 1890:79-80 (I found this 31 Jul, growing in marshy ground in the W part of the island near the central lagoon where it occurs sparingly; it is not given in Sullivant's "List of plants growing in the vicinity of Cols.," and there is no record of its having been found in the county); Selby & Craig 1890:10; Cooperrider 1995:171 (illus. p. 169).

HERBARIUM RECORDS: Aug 1889—"Island," OSU Farm, Cols., *Craig*; 1 Jul 1891—towards Georgesville, *Selby*; 9 Aug 1990—S side of Hibbs Rd., swampy area, 1 mi. E of Rt. 104, Jackson Twp., *Lowden 4537*.

3. †*Lythrum hyssopifolia* L.

Grass-Poley, Hyssop-leaved Loosestrife

REFERENCES: Riddell 1834:118 (wet prairies); Sullivant 1840:14; Selby & Craig 1890:10.

NOTE: No specimens have been seen from Franklin Co. Not mentioned for Franklin Co. by Cooperrider 1995:170.

5. CUPHEA P.Browne

Viscid-hairy; stem erect, branching; leaves opposite, ovate-lanceolate, petioled; flowers solitary or in 2's in axils, sessile or short-stalked; hypanthium tubular, oblique, ribbed, spurred on one side; sepals 6, appendages in sinuses; corolla irregular; petals red-purple, about 1 cm long; stamens usually about 11-12.

1. *Cuphea viscosissima* Jacq.

Blue Waxweed, Clammy Cuphea

Plants viscid-hairy; corolla irregular, red-purple; leaves opposite, lanceolate; hypanthium cylindrical. Syn.: *C. petiolata* (L.) Koehne, a preoccupied name
REFERENCES: Riddell 1834:118 (wet prairies); Sullivant 1840:14; Selby & Craig 1890:10; Cooperrider 1995:173 (illus. p. 172).
HERBARIUM RECORDS: 1840—Cols., Sullivant; Oct 1890—Central College, Bogue (CLM, OS).

THYMELAEACEAE, Mezereum Family

Shrubs; leaves alternate; flowers perigynous, bisporangiate; sepals present, sometimes minute; corolla none; stamens 8; carpels united; fruit a drupe.

1. DIRCA L. Leatherwood

Shrub with tough bark and flexible branches; leaves short-petioled, blades obovate, entire; flowers in small axillary clusters, appearing before the leaves; hypanthium tubular-funnelform, yellow, margin (sepals scarcely evident) wavy or shallowly toothed; style and stamens exerted; locule and ovule 1.

1. *Dirca palustris* L.

Leatherwood

Plants woody, tree-like shrub; branches flexible; leaves alternate, obovate, entire; flowers yellow, appearing before the leaves; fruit a greenish to reddish drupe.

REFERENCES: Riddell 1834:118; Selby 1891a:111a; Cooperrider 1995:165 (illus. p. 164).

HERBARIUM RECORD: 9 May 1891—Big Darby, Selby.

NOTE: Sullivant 1840:24 and Selby & Craig 1890:15 reported on plants collected in adjacent counties. See Braun 1961:273.

ONAGRACEAE, Evening-primrose Family

Herbs; leaves alternate or opposite, simple; flowers epigynous, perfect, epigynous hypanthium present or absent; corolla regular or rarely somewhat zygomorphic; sepals and petals usually 4 (2-6); petals separate or rarely none; stamens usually 8 (2-8); carpels usually 4 (2-6), united, locules as many or rarely 1; style 1, sometimes short; stigma 1 or with lobes as many as carpels; fruit a capsule or nutlike.

Clarkia pulchella Pursh (Farewell-to-spring) was reported by Selby 1891a:111a (found at Sellsville), Selby 1891b:75 (circus grounds), and Cooperrider 1995:175. This adventive herb has pink-lavender 3-lobed petals (6 Jul 1891—Sellsville, Selby).

a Sepals, petals, and stamens 2. **5. CIRCAEA**

a' Sepals and petals 4 to 6 or rarely none.

b Epigynous hypanthium very short or absent.

c Petals purple, red-purple, pink, or white; calyx and short hypanthium, when present, deciduous; seeds with tufts of hairs. **2. EPILOBIUM**

c' Petals yellow or greenish or none; calyx persistent in fruit; seeds without tufts of hairs. **1. LUDWIGIA**

b' Epigynous hypanthium elongate, slender.

d Petals usually yellow, if pink or white then 2-4 cm long; fruit prismatic, cylindrical, or clavate; flower regular. **3. OENOTHERA**

d' Petals white or pink, slender, less than 1 cm long; fruit fusiform, indehiscent; flower somewhat irregular. **4. GAURA**

1. LUDWIGIA L. False Loosestrife

Of wet soil or water; stems erect or prostrate; flowers solitary, sessile or short-stalked, in upper axils; perianth regular; sepals, petals, and stamens 4, or petals none, sepals persistent in fruit; carpels 4; ovary often square in cross section; bractlets usually present on ovary or below; length of capsule less than twice width.

a Leaves alternate; flowers stalked or sessile. **1. L. alternifolia**