

EUPHORBIA
CEANOTHUS
RHAMNUS



10 Oct 1902—Cols., *Sanders*; 2 Aug 1932—Red Hills, *Chapman*; 19 Jul 1977—W-facing bluffs above Big Darby Creek, N of Pickaway Co. line, NW of Orient, Pleasant Twp., *Cusick 17034* (KE); 1 Aug 1990—Hoover Dam Park, W of Cabbage Rd. & S of Walnut St., Blendon Twp., *Lowden 4486*; 3 Sep 1992—W side of Cabbage Rd., fairly common in dry openings in brushy field, ½ mi. S of Walnut St., Blendon Twp., New Albany Quad., *McCormac 4893*.

7. **Euphorbia marginata* Pursh

Snow-on-the-mountain

Naturalized (native of C U.S.)

Plants erect; upper leaves subtending inflorescence conspicuously white-margined; stems pubescent.

REFERENCES: Selby & Craig 1890:15 (introduced); Cooperrider 1995:50 (illus. p. 49).

HERBARIUM RECORDS: Aug 6—Galloway, *W. & Mrs. Kellerman*; Aug 1898—Cols., *Detmers*; 22 Oct 1929—Cols., *J. H. Schaffner*; 28 Jul 1979—soil heaps at bottom of limestone quarry, E bank of Scioto R. about 1 mi. S of Dublin on Rt. 33, *W. Carr 1756*; 24 Sep 1992—deadend of W. Moler Ave., weedy bank above RR, SE Cols. Quad., *Cusick 30601*.

8. *Euphorbia nutans* Lag.

Spurge, Eyebane

Stems erect or ascending; leaves opposite, serrulate, usually red spotted, inequilateral at base; stems glabrous or sparsely pubescent in lines above; capsules glabrous; seeds obtusely angled. Syn.: *E. hypericifolia* L., *E. maculata* L., misapplied, *E. preslii* Guss.

REFERENCES: Riddell 1834:119; Sullivant 1840:14; Craig 1890:54, 99 (#353, this and [*Euphorbia maculata*] are abundant on the campus; they are quite variable; 27 Jul 1882, 1 Jul 1887; University Farm Sep & Oct 1887, 3 Aug 1888); Selby & Craig 1890:15; Cooperrider 1995:54 (illus. p. 53).

HERBARIUM RECORDS: 11 Jul 1892—Cols., *Bogue*; 13 Sep 1895—Cols., *Osburn*; 26 Sep 1936—waste places, Cols., *J. H. Schaffner*; 16 Oct 1936—Cols., *J. H. Schaffner*; 17 Aug 1979—in cinders in railyard S of E 1st Ave., between N 4th St. and Leonard Ave., NW ¼ SE Cols. Quad., *W. Carr 2034*; 17 Aug 1986—Highbanks Metro Park (Delaware Co.), Big Meadows Area, *Morawetz 28* (OS, OWU).

9. *Euphorbia maculata* L.

Prostrate Spurge, Spotted Spurge

Prostrate-ascending much branched pubescent herbs; leaves opposite; blades minutely serrulate to subentire, length more than twice width, typically with a red blotch on upper surface; capsules with appressed hairs; seed-faces with 3-4 cross ridges; seeds quadrangular; cyathium split a short distance on 1 side. Syn.: *E. supina* Raf.

REFERENCES: Riddell 1834:119 (roadsides); Sullivant 1840:14; Craig 1890:54, 99 (#352, University Farm Sep 1887; it is most abundant near the new chemical laboratory, 3 Jul 1887); Selby & Craig 1890:15; Cooperrider 1995:50 (illus. p. 51).

HERBARIUM RECORDS: 24 Aug 1839—Worthington, *J. Paddock Collection* (ILL); Aug 1890—Cols., near RR yards, *E. V. Wilcox*; Jul 1892—Alum Creek Station, *Bogue*; 18 Jul 1898—Hayden's Falls, *W. Kellerman*; 15 May 1986—Oval at OSU campus, Cols., *Blanco*; 29 Sep 1991—Scioto Blvd., just N of Greenlawn Ave. Bridge, W bank of Scioto R., Franklin Twp., *Lowden 4864*.

RHAMNACEAE, Buckthorn Family

Shrubs and small trees; leaves simple, alternate or rarely opposite, with stipules; monoecious or sometimes dioecious; flowers bisporangiate or monosporangiate, perigynous or slightly epigynous; stamens and petals attached to disk lining floral cup; sepals and stamens 5 or 4; petals 5 or 4 or none; carpels usually 3 or 4, united, locules as many; ovules 1 in each carpel.

a Leaves with 3 strong veins from top of petiole; flowers in terminal or axillary corymbs of clustered umbels.

1. CEANOTHUS

a' Leaves pinnately-veined; flowers solitary or in few-flowered sessile or short-peduncled clusters in or above axils.

2. RHAMNUS

1. CEANOTHUS L. Redroot

Shrubs with alternate leaves; flowers bisporangiate, in corymbs of clustered umbels; sepals and stamens 5; petals 5, white; hypanthium adnate to base of ovary; carpels 3, sunken in disk; fruit 3-lobed, carpels separating when ripe.

1. *Ceanothus americanus* L. var. *americanus*

New Jersey Tea

Shrub; leaves alternate, 3 main veins from apex of petiole; blades ovate, apex acuminate; peduncles axillary; flowers in corymbs of clustered umbels; petals white.

REFERENCES: Riddell 1834:119 (dry prairies); Sullivant 1840:14; Selby & Craig 1890:8; Braun 1961:258 (illus. p. 256); Cooperrider 1995:90 (illus. p. 88).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 1 Jul 1891—Georgesville, *Werner* (CLM, OS); 1 Jul 1891—Big Darby, Cols., *Selby* (OS, WOOS); 15 Jul 1892—Georgesville, *Bogue*; Sep 1931—Red Hills, *Chapman*.

2. RHAMNUS L. Buckthorn

Shrubs or small trees; leaves alternate or rarely opposite; flowers small, greenish, perigynous, solitary or in small axillary clusters, bisporangiate or monosporangiate, then each kind often with vestiges of the other type of sporophyll; sepals and stamens 4 or 5; petals 4 or 5 or none; carpels and locules 2-4; fruit a drupe with 2-4 stones.

- a Leaves alternate, with more than 3 pairs of lateral veins; winter twigs not ending in thorns; flowers monosporangiate or some of them bisporangiate, appearing with the leaves; petals 4 or none; winter buds with scales.
- b Leaf-blades crenate-serrate, obovate-elliptic; petals none; sepals and stamens 5. 1. *R. alnifolia*
- b' Leaf-blades finely serrulate, lanceolate-elliptic; sepals, stamens, and petals 4. 2. *R. lanceolata*
- a' Leaves often opposite or nearly so, with usually 3 pairs of lateral veins; winter twigs usually ending in thorns; flowers monosporangiate, appearing with the leaves; petals and sepals 4. 3. *R. cathartica*

1. †*Rhamnus alnifolia* L'Hér. Alder-leaved Buckthorn

Leaf blades crenate-serrate, with mostly 5 prominent veins on either side of midrib.

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

NOTE: *Sullivant* 1840:14 and *Selby & Craig* 1890:8 reported on plants collected in adjacent counties. Not mapped for Franklin Co. by *Cooperrider* 1995:87 (illus. p. 85).

2. †*Rhamnus lanceolata* Pursh Lance-leaved Buckthorn

Shrub; leaves alternate, margins finely serrulate; blades with mostly 7 prominent lateral veins on either side of midrib; drupes with 2 pits.

REFERENCES: *Sullivant* 1840:14; *Selby & Craig* 1890:8; *Braun* 1961:258 (illus. p. 256); *Cooperrider* 1995:87 (illus. p. 88).

HERBARIUM RECORDS: 1833—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., *Sullivant*; 14 Jul 1893—Scioto R., *Selby*; 11 Aug 1895—Cols., *W. Kellerman*; 19 Oct 1901—Scioto R., limestone banks, *J. H. Schaffner*; 30 Jun 1906—Big Darby, *W. Kellerman*; 15 Jul 1933—Scioto R. above Dublin, *Hicks*.

3. **Rhamnus cathartica* L. European Buckthorn

Naturalized (native of Eurasia)

Shrub or small tree; leaves opposite or nearly so; blades with usually 3 pairs of lateral veins; winter twigs usually ending in thorns; flowers monosporangiate, petals and sepals 4; drupes with usually 4 pits.

REFERENCE: *Cooperrider* 1995:87 (illus. p. 85).

HERBARIUM RECORDS: 19 May 1980—ditch between two RR rights-of-way 4 blks. E of N. 4th St. just S of E. 11th Ave., NW ¼ SE Cols. Quad., *W. Carr* 2771 & 2772 (KE, OS); 10 May 1986—OSU campus, W of Pomerine Hall, Neil Ave., Cols., *Di Sabato-Aust* 36; 23 Jun 1991—E bank of Scioto R., James J. Thomas Park N of Fishinger Rd., Upper Arlington, Perry Twp., *Lowden* 4715.

VITACEAE, Grape Family

Climbing or trailing woody vines; leaves alternate, simple or compound, with or without stipules; flowers small, hypogynous, bisporangiate or monosporangiate; clusters usually opposite leaves; perianth regular; sepals, petals, and stamens 5 or sometimes 4; calyx minute; petals separate but sometimes connate at tip, greenish; stamens opposite petals; carpels usually 2, rarely more, united, locules as many; style short or absent; placentation central; ovules 1-2 per carpel; fruit a berry.

- a Hypogynous disk not evident; leaves, or some of them, palmately compound, leaflets 3-7, if 3, then tendrils ending in adhesive disks. 2. **PARTHENOCISSUS**
- a' Ovary surrounded by hypogynous disk; leaves simple or twice compound.
- b Petals not expanding, falling with tips united as a cap; glands of hypogynous disk alternate with stamens. 3. **VITIS**
- b' Petals expanding, not united; hypogynous disk cup-shaped. 1. **AMPELOPSIS**

1. AMPELOPSIS Michx.