

HERBARIUM RECORDS: 17 Sep 1892—Cols., *Werner* (CLM, OS); Jun 1893—near Cols., *E. M. Wilcox*; Oct 1897—Cols., *Riddle*; Fall 1903—Cols., *J. H. Schaffner*; 18 May 1986—Cols. Alley between 12th & 13th Ave., near Summit St., *Hollander 039*; 15 Jul 1988—Highbanks Metro Park (Delaware Co.), sandbars along Olentangy R., *Watts 444* (OS, OWU); 22 Sep 1991—end of Oxford St., S of 11th Ave., Clinton Twp., *Lowden 4856*.

RUTACEAE, Rue Family

Shrubs and small trees with alternate gland-dotted leaves; flowers hypogynous, bisporangiate or monosporangiate; perianth regular; petals separate.

Phellodendron amurense Rupr. (Corktree, native of E Asia), with wide-spreading branches and fissured corky bark, is a specimen tree on the OSU Campus (#30, A Walking Tour).

- a Leaves pinnately compound; carpels separate; fruit an aggregate of follicles. 1. ZANTHOXYLUM
a' Leaves 3-foliolate; carpels united; fruit a samara. 2. PTELEA

1. ZANTHOXYLUM L. Prickly-ash

Shrub; leaves pinnately compound; stems and sometimes petioles prickly; dioecious; flowers small, in axillary clusters, appearing before the leaves; calyx none; petals 4-5; stamens 4-5 in staminate flowers, on hypogynous disk; carpels 3-5, separate, becoming 1-2-seeded follicles.

1. *Zanthoxylum americanum* Mill.

Prickly-ash

Shrub; stems prickly; leaves pinnately compound, gland-dotted, tips of leaflets notched; flowers small, in axillary clusters appearing before the leaves. Thickets. Syn.: *Xanthoxylum americanum* Mill., *X. fraxineum* Willd.

REFERENCES: Riddell 1834:119; Sullivant 1840:16; Craig 1890:72 (quite rare, and only a few specimens have been found within our limits; five small shrubs along the river bank W of the seed barn; last summer the only one in the woods was cut down, but it may start up again; 26 Apr 1882, 8 May 1884, 10 May 1885, 24 Apr 1889); Selby & Craig 1890:8; Braun 1961:230 (illus. p. 228); Cooperrider 1995:23 (illus. p. 24).

HERBARIUM RECORDS: 26 Aug 1890—Cols., *Werner* (CLM); 21 May 1892—Franklin Co., *Werner*; 7 Sep 1899—Worthington, *Selby*; 1 Sep 1911—3/4 mi. NE of Westerville, woods, *Hanawalt*; [ca. 1982]—Blendon Woods, *Owens*.

2. PTELEA L. Hop-tree

Shrub or small tree; leaves 3-foliolate, petioled; flowers bisporangiate or monosporangiate, in dense terminal compound cymes; carpellate flowers sometimes with rudimentary stamens; sepals 3-5; petals 3-5, small, greenish-white, stamens as many; ovary 2-loculed; fruit a flat 2-seeded samara.

1. *Ptelea trifoliata* L.

Hop-tree, Wafer-ash, Shrub Trefoil, Shrubby Trefoil

Shrub or small tree; leaves 3-foliolate, glossy, dotted below; petals small, greenish-white; fruits flat, roundish samara. Woody thickets.

REFERENCES: Riddell 1834:119; Sullivant 1840:16; Craig 1890:72 (a single tree 10 or 12 feet high is growing along the river bank W of the seed barn, 12 Jun 1887; a very rare plant about Cols.; one specimen grows 2 mi. N of the city near the river, and there is one growing in Goodale Park; these are the only ones I know of in the county); Selby & Craig 1890:8; Braun 1961:231 (illus. p. 228); Cooperrider 1995:23 (illus. p. 24).

HERBARIUM RECORDS: [date?]-N of Cols., *Craig*; 6 Jun 1891—near Harrisburg, *Selby*; 6 Jul 1891—near Morgan Station, *Selby*; Jun 1893—Cols., *Werner* (CLM); 5 Jun 1895—Cols., *W. Kellerman*; 20 Jun 1901—Marble Cliff, *Mead*; 22 Jul 1982—Scenic Nature Preserve, Highbanks Metro Park, floodplain, *Brauning 288*; 30 Jun 1991—E bank of Scioto R., 1/2 mi. N of Fishinger Rd. Bridge, Upper Arlington, Perry Twp., *Lowden 4749*; 31 May 1993—W bank of Scioto R., Lou Berliner Park, Scioto Blvd., just N of Greenlawn Ave. bridge, Franklin Twp., *Lowden 5063*.

ZYGOPHYLLACEAE, Creosote-bush Family

1. TRIBULUS L. Caltrop

Stems prostrate, leaves even-pinnate, opposite, stipuled, one at each node larger; flowers about 1 cm wide, hypogynous, bisporangiate, solitary in axils; perianth regular; sepals and petals 5, stamens 10, petals yellow; carpels 5, united; style 1; ovary 5-loculed; fruit splitting into 5 segments, each with 2 spines and a band of tubercles.

PTELEA
TRIBULUS
OXALIS



1. **Tribulus terrestris* L.

Caltrop, Puncture-weed

Naturalized (native of the Mediterranean region)

Prostrate; leaves pinnately compound, unequal at each node; petals 5, yellow; fruits splitting into 5 segments, each with 2 spines and a ridge of spiny tubercles.

REFERENCE: Cooperrider 1995:22 (illus. p. 21).

HERBARIUM RECORDS: 17 Sep 1956—OSU campus near Plumb Hall, *Kauffman*; 4 Jun 1960—OSU campus on dike paralleling Olentangy R. near Woodruff Ave. bridge, *Cusick*.

OXALIDACEAE, Wood Sorrel Family

1. OXALIS L. Wood-sorrel

Low herbs; leaves palmately compound, 3-foliolate, leaflets obcordate, entire; flowers hypogynous, bisporangiate, in cymes or umbels; sometimes cleistogamous flowers developing; perianth regular; sepals 5, separate; petals 5, separate or united at base; stamens 10, alternate ones shorter, usually united at base; carpels 5, united; styles, stigmas, and locules 5; fruit a somewhat elongate capsule.

a Without aerial leafy stems; leaves all basal; petals usually violet. 5. *O. violacea*

a' With aerial leafy stem; petals yellow.

b Petals more than 1 cm long; leaflets 2-5 cm wide, margins usually purple-brown; flowers in cymes; pedicels not deflexed. 4. *O. grandis*

b' Petals usually less than 1 cm long; leaflets 2 cm wide or less, margins not purple-brown.

c Stem prostrate, rooting, flowers in simple umbels; fruiting pedicels deflexed. 3. *O. corniculata*

c' Stem erect.

d Flowers in umbels; fruiting pedicels deflexed; hairs of fruit appressed. 2. *O. dillenii*

d' Flowers in cymes or branched umbels; fruiting pedicels not deflexed; hairs of fruit spreading.

1. *O. stricta*

1. *Oxalis stricta* L.

Yellow Wood-sorrel, Wood-sorrel, Common Yellow Wood-sorrel

Petals yellow, less than 1 cm long; stems erect, not rooting at nodes; leaflets usually less than 2 cm wide, margins not purple-brown; hairs on stems and petioles spreading with brown septae or constrictions; fruiting pedicels erect or ascending. Syn.: *O. corniculata* L. var. *stricta* Sav., *O. europaea* Jord.

REFERENCES: Riddell 1834:119; Sullivant 1840:16; Craig 1890:53, 72 (#80; common in the woods and in various places on the University farm; in dry soils it grows only a few inches high, but in rich moist soils along the river it attains a height of eight or nine inches, the flowers become larger and have a pink center; 14 May 1882, 26 Apr 1884, 26 May 1885, 25 May; University Farm Sep and Oct 1887, 5 Jun 1888; Selby & Craig 1890:8; Cooperrider 1995:13 (illus. p. 12).

HERBARIUM RECORDS: 27 Jun 1890—O. Ag. Ex. Station field, Cols.; 9 Jul 1890—Cols., *Hine*; 14 Jul 1892—Cols., *Bogue*; 3 Aug 1897—Cols., *W. Kellerman*; 2 Jul 1900—Georgesville, *Coberly*; 28 Aug 1909—Cols., *J. H. Schaffner*; 29 May 1922—Westerville, *Horlacher*; 24 Jun & 18 Sep 1982—scenic nature preserve, Highbanks Metro Park, floodplain, *G. Moore 215 & 216*; 16 Aug 1987—Highbanks Metro Park (Delaware Co.), open field, *Witsberger 958*; 10 Oct 1987—Highbanks Metro Park (Delaware Co.), floodplain, *Morawetz* (OS, OWU); 12 Sep 1991—Hoover Dam, W of Cabbage Rd., cemetery lot along Walnut St., Blendon Twp., *Lowden 4843*.

2. *Oxalis dillenii* Jacq.

Southern Yellow Wood-sorrel

Petals yellow, stem erect, not rooting at nodes; leaf base with stipules narrow at apex and wider at base; hairs on stems, petioles and fruits appressed, not septate; pedicels usually deflexed. Syn.: *O. stricta* L., misapplied

REFERENCE: Cooperrider 1995:13 (illus. p. 12).

HERBARIUM RECORDS: 21 May 1923—Westerville, *Lyon*; 19 May 1974—OSU Botany Garden, Cols., *D. Johnson*; 2 May 1977—along N wall of McPherson Laboratory, OSU Campus, *Watson 17*; 18 May 1986—Pearl Alley, between 12th & 13th Ave., Cols., *Hollander 040*; 21 May 1986—Park of Roses, Cols., *Blanco*; 26 May 1986—Riverview Park Dr., E of Rustic Bridge, *R. Burnes 45*; 1 Jun 1986—yard at 6887 Hayhurst, Worthington, *Benkowski 71*; 15 May 1988—corner of Indianola Ave. & E. Patterson Ave., Cols., *Kelly 13*; 18 May 1988—OSU, Howlett Hall, W side of greenhouse headhouse, *Chinery 47*; 26 May 1988—OSU campus, S of Howlett Hall, *Gerberick 45*; 17 May 1989—E side of Waldeck Ave., N of Woodruff, sidewalk, *C. Warren 89*; 23 May 1989—Overbrook Drive Ravine, E of N. High St., Clinton Twp., *Lowden 4078*; 14 Jun 1989—OSU campus behind B&Z Bldg., *Lowden 4171*.

3. **Oxalis corniculata* L.

Creeping Yellow Wood-sorrel

Naturalized (tropics & S U.S.)

Petals yellow; stems aerial, leafy and prostrate; fruiting pedicels deflexed. Syn.: *O. repens* Thunb.