

PLANTAGO
SYRINGA
LIGUSTRUM



Rd., Clinton Twp., Cols., *Lowden 4050*; 4 Jun 1989—between Olentangy River Rd., & Rt. 315, S of Henderson Rd., Clinton Twp., Cols., *Lowden 4093*.

6. *Plantago virginica* L.

Dwarf Plantain, Hoary Plantain

Leaves in basal rosettes, pubescent; blades elliptic to oblanceolate; peduncles with soft spreading hairs; corolla lobes erect above fruits.

REFERENCE: Cooperrider 1995:514 (illus. p. 513).

HERBARIUM RECORD: 7 Jun 1980—common on weedy slope on N side of Swan Ave. exit, just E of N. 4th St. bridge over railyard at N edge of downtown Cols., NW ¼ SE Cols. Quad., *W. Carr 2895* (KE, OS).

7. **Plantago aristata* Michx.

Bracted Plantain, Bearded Plantain

Naturalized (native of W U.S.)

Leaves in basal rosettes, alternate; blades linear; peduncles with appressed and spreading hairs; flowers in a dense spike, with bracts much longer than the flowers.

REFERENCES: Craig 1890:97 (*Plantago patagonica* Jacq. var. *aristata* A.Gray, rare, there is quite a patch NW of the college near the seed barn; it was recently introduced from the W in impure grass seed and is now spreading rapidly; two years ago there was another patch E of the walk from the college to the spring, but this was dug up on account of its aggressive habits, 9 Jul 1882, 5 Jul 1887); Selby & Craig 1890:14 (*Plantago patagonica* Jacq. var. *aristata* A.Gray, introduced); Selby 1891b:75; Cooperrider 1995:514 (illus. p. 513).

HERBARIUM RECORDS: [date?]-Cols., coll.?; 11 Jul 1882—University campus, Cols., coll.?; 188—Cols., *Craig*; 1888—Cols., *Craig*; Jul 1891—Cols., *Werner* (CLM); 6 Jul 1891—Sellsville, near Cols., *Selby* (OS, WOOS); 26 Aug 1891—Sellsville, Cols., *Selby*; 14 Jul 1892—Cols., *Bogue*.

OLEACEAE, Olive Family

Trees and shrubs; leaves opposite; flowers hypogynous, bisporangiate or monosporangiate; calyx small or none; corolla regular, when present; petals 4, more or less united, or none; stamens 2; carpels 2, united; locules 2; style 1; fruit a drupe, capsule, or samara.

a Trees; petals none; calyx minute or absent; leaves compound. **5. FRAXINUS**

a' Shrubs and small trees; petals 4.

b Corolla yellow, lobes longer than tube; flowers in small lateral clusters, appearing before leaves.

3. FORSYTHIA

b' Corolla not yellow; flowers in panicles.

c Petals nearly separate, narrowly linear, white. **4. CHIONANTHUS**

c' Corolla tube about as long as lobes or longer.

d Corolla lilac or white; anthers included in corolla-tube. **1. SYRINGA**

d' Corolla white; anthers not included in corolla-tube. **2. LIGUSTRUM**

1. SYRINGA L. Lilac

Shrub; blades ovate, base truncate to cordate; flowers lilac or white, about 1 cm wide, fragrant, in panicles; fruit a capsule.

1. **Syringa vulgaris* L.

Lilac

Planted & persisting from Cultivation (native of SE Europe)

Shrub; leaves simple, ovate, subcordate to subtruncate at base, apex acute to acuminate, margins entire; flowers white, lilac or purple (blue or pink), fragrant; fruit a capsule.

HERBARIUM RECORDS: May 1888—OSU grounds, Cols., *Craig*; 20 May 1911—Westerville, *Hanawalt*; 19 May 1974—OSU Botany Garden, Cols., *D. Johnson*; 5 May 1984—OSU campus, Oxley Hall, Cols., *Valdebenito* 2; 22 Apr 1986—OSU campus, S of Horticulture Greenhouses, Howlett Hall, Fyffe Ct., Cols., *Di Sabato-Aust* 26; 10 May 1986—6887 Hayhurst, Worthington, *Benkowski* 18; 14 May 1989—Pegg Ave. of Highland Dr., W of Olentangy River Rd., Clinton Twp., *Lowden 4047*.

NOTE: Not mapped for Franklin Co. by Braun 1961:312 or Cooperrider 1995:290 (illus. p. 291). Among the cultivated species on the OSU campus is *Syringa reticulata* (Blume) Hara (*Syringa amurensis* Rupr. var. *japonica* (Maxim.) Franch. & Sav.), Japanese Tree-lilac.

2. LIGUSTRUM L. Privet

FORSYTHIA
CHIONANTHUS
FRAXINUS



Shrub; blades 3-6 cm long, ovate-lanceolate; flowers small, in terminal panicles, appearing after leaves; petals white; berry black.

1. **Ligustrum vulgare* L.

Common Privet

Naturalized (native of Europe)

Shrub, branchlets pubescent; leaves elliptic to oblong, glabrous on under surface with hairs scattered along midrib; fruit a dark blue-black drupe. Open woods & thickets.

REFERENCES: Riddell 1834:156 (naturalized); Cooperrider 1995:293 (illus. p. 291).

HERBARIUM RECORDS: 23 Apr 1901—Cols., *W. Kellerman*; [ca. 1982]—Blendon Woods, *Owens*; 20 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), *G. Moore* 209; 23 May 1986—Park of Roses, Cols., *Blanco*; 1 Jun 1986—5 blks. E of Worthington High School Environmental Bldg. off Rt. 161, *Benkowski* 48; 10 Jun 1986—Highbanks Metro Park (Delaware Co.), *Kosko*; 6 Jun 1989—Turkey Run, between Olentangy River Rd. & Pegg Ave., just S of Highland Dr., Clinton Twp., *Lowden* 4117; 14 Jun 1989—OSU campus, behind B&Z & Campbell Hall, *Lowden* 4194; 23 Jun 1991—E bank of Scioto R., from Lane Rd. S to Fishinger bridge, Perry Twp., *Lowden* 4724.

NOTE: See Braun 1961:313 and Cooperrider 1995:

3. *FORSYTHIA* Vahl Goldenbells

Shrubs, branched; leaves simple, toothed or entire; flowers perfect; calyx and corolla deeply 4-parted; stamens 2, short, attached to short corolla tube; capsule many-seeded, bilocular.

1. **Forsythia suspensa* (Thunb.) Vahl

Forsythia, Goldenbells

Cultivated Ornamental (introduced from Asia)

Shrub, showy; flowers golden yellow, in small lateral clusters, appearing before the leaves; calyx lobes as long as corolla-tube.

HERBARIUM RECORDS: 6 Apr 1986—OSU campus behind University Hosp. parking garage, corner of Upham & Clinic Drs., *Taylor-Lehman* 4; 22 Apr 1986—OSU campus, Neil Ave. between B&Z Bldg. & Campbell Hall, *Yang* 135; 20 Apr 1988—OSU campus, walkway SE of Drake Union, cult., *M. Hoffman* 27.

NOTE: Not mapped by Braun 1961:306 or Cooperrider 1995:284.

The following hybrid is recognized:

**Forsythia* × *intermedia* Zabel (*F. suspensa* (Thunb.) Vahl × *F. viridissima* Lindl.)

Cultivated Ornamental (Asian)

Shrub, showy; flowers yellow; calyx shorter than corolla-tube.

HERBARIUM RECORDS: 1 Aug 1967—OSU, Cols., *Cooke*; 5 Apr 1986—W. Hudson St. at entrance to Tuttle Park, Cols., *Cooperband* 12.

NOTE: See Cooperrider 1995:284.

4. *CHIONANTHUS* L. Fringe-tree

Low tree or shrub; blades entire, about 1 dm long; panicles drooping, from buds on last year's stem-segments, appearing with the leaves; calyx minute; petals white, linear, 1.5-3 cm long; drupes dark blue.

1. **†Chionanthus virginicus* L.

Fringe-tree

Cultivated (native of Ohio)

Shrub or small tree; leaves about 1 dm long, entire, elliptic-oblong; flowers numerous in axillary panicles; petals 4, nearly separate, white, narrowly linear; fruit a drupe, dark blue.

HERBARIUM RECORDS: 26 May 1934—OSU campus, *Weishaup*; 10 May 1967—OSU, behind Orton Hall, Cols., *Cooke & Stuckey*.

NOTE: Not mapped for Franklin Co. by Braun 1961:312 (illus. p. 310) or Cooperrider 1995:292 (illus. p. 291).

5. *FRAXINUS* L. Ash

Trees; leaves pinnately compound; flowers monosporangiate or bisporangiate, in crowded or open panicles or racemes, appearing before or with the leaves; calyx absent or small; petals none; fruit a samara with 1, or rarely 2-3, seeds.

a Calyx evident in fruit; dioecious or imperfectly so; body of fruit terete or nearly so, thicker than wing; twigs not 4-sided; leaflets stalked.

- b Wing little decurrent on the ellipsoid or short cylindric body of fruit; blades whitened beneath; stalk of lateral leaflets not winged to base. 1. *F. americana*,
 - c Branchlets, petioles, and leaf-rachises glabrous; leaflets glabrous or sparsely pubescent beneath, var. *americana*
 - c' Branchlets, petioles, leaf rachises, and lower surface of leaflets pubescent, var. *biltmoreana*
- b' Wing decurrent on narrowly cylindric body of fruit; stalks of lateral leaflets winged to base or nearly so; leaf-rachis and petiole grooved on upper side. 2. *F. pennsylvanica*,
 - d Branchlets pubescent; petioles, rachises, and lower surface of leaflets tawny-pubescent, var. *pennsylvanica*
 - d' Branchlets, petioles, and rachises glabrous; lower surface of leaflets glabrous or nearly so, var. *subintegerrima*
- a' Calyx only a ring, or deciduous in fruit, or absent; fruit oblong, flat, body scarcely thicker than wing; lateral leaflets sessile or twigs 4-sided.
 - e Dioecious or imperfectly so; calyx minute or none; twigs terete; lateral leaflets sessile. 3. *F. nigra*
 - e' Flowers bisporangiate; calyx deciduous; twigs 4-sided; leaflets stalked. 4. *F. quadrangulata*

1. *Fraxinus americana* L.

White Ash

Forest tree; leaves pinnately compound; leaflets 5-9, stalks 3-15 mm long; blades of leaflets ovate to lanceolate, under surface pale green to whitish; samara linear, sometimes slightly notched at apex, wing almost decurrent to slightly below middle of fruit; calyx present.

Two varieties are recognized:

var. *americana*

Typical var. with young branches, petioles, leaf rachises and under surface of leaflets glabrous or nearly so.

REFERENCES: Riddell 1834:156 (*Fraxinus acuminata* and *F. juglandifolia*); Sullivant 1840:40 (*Fraxinus acuminata* L.); Craig 1890:89 (on the campus in the woods, 15 May 1883, 5 May 1884, 23 Apr 1885, 17 Apr 1887, 16 Apr 1889); Selby & Craig 1890:12; Braun 1961:309 (illus. p. 308); Cooperrider 1995:286 (illus. p. 287).

HERBARIUM RECORDS: 27 May 1893—Cols., W. Kellerman; 14 Jul 1893—Scioto R., Cols., Selby (OS, WOOS); 19 May 1896—W Cols., M. Wright; 1897—S of Marble Cliff, Ruppertsberg; 15 Jun 1905—Cols., J. H. Schaffner; Fall 1907—OSU campus, McCray; 28 Aug 1911—Westerville, college campus, Hanawalt; 1 Oct 1912—Cols., J. H. Schaffner; 14 May 1933—OSU, Hicks; Autumn 1935—OSU campus, cult., J. H. Schaffner; 19 May 1974—OSU Botany Garden, Cols., D. Johnson; [ca. 1982]—[Blendon Woods], Owens; 30 Aug 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), floodplain, Brauning 202; 1 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), Brauning 204; 10 Jun 1986—Highbanks Metro Park (Delaware Co.), Kosko.

var. *biltmoreana* (Beadle) Wright

Biltmore Ash

Similar to the typical var., except young branches, petioles, leaf rachises, and under surface of leaflets pubescent.

Syn.: *F. biltmoreana* Beadle

REFERENCES: Braun 1961:309 (illus. p. 308); Cooperrider 1995:286.

HERBARIUM RECORDS: 11 May 1895—Alum Creek near Cols., W. Kellerman; 1897—S of Marble Cliff, Ruppertsberg 57; 22 Aug 1899—Franklin Co., Selby; 1 Oct 1904—Flint, W. Kellerman; 1 Oct 1912—Cols., J. H. Schaffner; 6 Oct 1934—Fishingers, Gordon; 1 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), bluff face, Brauning 203.

2. *Fraxinus pennsylvanica* Marshall

Red Ash

Tree; leaves pinnately compound; leaflets 5-9, elliptic-lanceolate, under surface green, lateral leaflets with short stalks, 1-5 mm long; samara winged from apex to ½ its length, apex usually not notched; calyx present.

Two varieties are recognized:

var. *pennsylvanica*

This var. with young branches, petioles, leaf rachises, and usually under surface of leaflets pubescent. Syn.:

F. pubescens Lam.

REFERENCES: Riddell 1834:156; Selby 1892a:110 (Scioto R., W. Kellerman); Braun 1961:311 (illus. p. 308); Cooperrider 1995:288 (illus. p. 289).

HERBARIUM RECORDS: 5 Sep 1892—Scioto R., W. Kellerman; Jun 1893—Cols., Werner (CLM); 1908—OSU campus, McCray; 20 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), floodplain, G. Moore 206; 17 Jun 1986—Highbanks Metro Park (Delaware Co.), streambanks, Kosko 11; 6 Jun 1989—Pegg Ave. off Highland Dr., W of Olentangy River Rd., Clinton Twp., Lowden 4129.

var. *subintegerrima* (Vahl) Fernald

Green Ash

Similar to the typical var. except young branches, petioles, leaf rachises, and under surface of leaflets glabrous.

Syn.: *F. lanceolata* Borkh.

REFERENCES: Braun 1961:311 (illus. p. 308); Cooperrider 1995:288.

HERBARIUM RECORDS: Aug 1893—Cols., Werner (CLM); 1897—OSU campus, Ruppertsberg 64; 6 Aug 1897—Hamilton Twp., W. Kellerman; 22 Aug 1899—Big Darby, Selby; 7 Oct 1901—OSU Camp, Cols., Hartford; 1 Oct 1912—Cols., J. H. Schaffner; 17 Jul 1971—W of Olentangy River Rd., approx. ½ mi. N of Henderson Rd., Roberts 1348; 2 Aug 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), floodplain, G. Moore 205; 11 Jun 1987—E bank of Olentangy R., between Lane Ave. & Dodridge St. bridges, mesic woods on floodplain, Tuttle

FRAXINUS
GRATIOLA
LEUCOSPORA
MIMULUS
MAZUS



Park, Cols., *T. Lammers* 6123; 22 Jul 1987—Highbanks Metro Park (Delaware Co.), *B. Reed*; 23 Jun 1991—E bank of Scioto R., Lane Rd. S to Fishinger Rd. bridge, Perry Twp., *Lowden* 4719 & 4727.

3. *Fraxinus nigra* Marshall

Black Ash, Water Ash

Tree; leaves pinnately compound; leaflets 7-11, the sessile bases with a tuft of hairs extending onto the rachis; samaras oblong, wing decurrent to base of fruit; calyx none.

REFERENCES: Riddell 1834:156 (*Fraxinus sambucifolia*); Sullivant 1840:40 (*Fraxinus sambucifolia* Willd.); Craig 1890:89 (*Fraxinus sambucifolia* Lam., common in the woods and along the river, 15 Apr 1882, 23 Apr 1884, 16 May 1885); Selby & Craig 1890:12 (*Fraxinus sambucifolia* Lam.); Cooperrider 1995:290 (illus. p. 289).

HERBARIUM RECORDS: 1835—Cols., *J. Paddock Collection*, Lapham (ILL); 1897—OSU campus, *Ruppersberg*; 20 Aug 1899—Scioto R., *Selby*; Fall 1907—OSU campus, *McCray*.

4. *Fraxinus quadrangulata* Michx.

Blue Ash

Tree; branches 4-angled or 4-winged; samara wing decurrent almost to base of fruit, apex of samaras usually notched.

REFERENCES: Sullivant 1840:40; Craig 1890:89 (2 or 3 specimens on the campus, 17 Apr 1887); Selby & Craig 1890:12; Braun 1961:312 (illus. p. 310); Cooperrider 1995:290 (illus. p. 289).

HERBARIUM RECORDS: Sep 1840—banks of Olentangy, *J. Paddock Collection* (ILL); 22 Aug 1890—Scioto R., *Selby*; 30 May 1895—N Cols., *Osburn*; 5 Jun 1895—Cols., *W. Kellerman*; 19 May 1896—W Cols., *M. Wright*; 31 May 1896—Cols., *E. M. Wilcox*; 20 & 22 Aug 1899—Scioto R., *Selby* (OS, WOOS); Sep 1901—Cols., *J. H. Schaffner*; 6 Oct 1902—Cols., *Sanders*; Fall 1907—OSU campus, *McCray*; 23 Sep 1935—Indian Springs ravine, Cols., *J. H. Schaffner*; 1 Apr 1967—E bank of Scioto R., abandoned quarry, approx. 1 mi. S of Dublin, Perry Twp., *Stuckey* 3352; 9 Apr 1967—S bank of Darby Creek, approx. ½ mi. SW of Darbydale, Pleasant Twp., *Stuckey* 3409; 9 Apr 1967—N of cemetery, approx. ¾ mi. W of Darbydale, Pleasant Twp., *Stuckey* 3416; 30 Aug 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), *Brauning* 207; 18 Sep 1982—Scenic Nature Preserve, Highbanks Metro Park (Franklin & Delaware Cos.), blufftop, *G. Moore* 208; 8 Aug 1987—Highbanks Metro Park (Delaware Co.), *Kosko* 58; 23 Jun 1991—E bank of Scioto R., from Lane Rd. S to Fishinger Rd. bridge, *Lowden* 4733 & 4734.

SCROPHULARIACEAE, Figwort Family

Mostly herbs; leaves alternate or opposite, rarely whorled, without stipules; flowers hypogynous, perfect; calyx with 5, or rarely 4, lobes or divisions; corolla zygomorphic or rarely nearly regular, often 2-lipped, sometimes spurred or gibbous, lobes 5 or 4; stamens on corolla-tube, rarely 5, usually 4 or 2; when 4, a fifth sometimes present without an anther or as a vestige; when 2, 1-3 vestiges sometimes present; hypogynous disk usually present; carpels 2, united; ovary 2-loculed, placentation axile; ovules many, rarely few; style 1; stigma 1 or 2-lobed; fruit a capsule, usually ovoid.

a Anther-bearing stamens 5; corolla rotate, almost regular. 6. VERBASCUM

a' Anther-bearing stamens 4; fifth stamen absent, vestigial, or only a filament. (See a").

b Corolla with slender spur on lower side.

c Flowers in terminal racemes; leaves entire, linear to lanceolate. 11. LINARIA

c' Flowers axillary, solitary or rarely in small clusters.

d Blades linear to spatulate; plants low, upright, much branched; corolla-throat with palate, but open; capsule asymmetric. 14. CHAENORRHINUM

d' Blades nearly circular, shallowly lobed or coarsely toothed, palmately veined; slender glabrous vine; corolla-throat closed by palate; capsule symmetric. 12. CYMBALARIA

b' Corolla without a spur, but sometimes gibbous or saccate.

e Corolla nearly regular, scarcely 2-lipped, lobes flat or nearly so, only slightly unequal; vestigial stamen minute or absent.

f Leaves alternate; flowers in one-sided raceme; corolla-lobes much shorter than tube. 15. DIGITALIS

f' At least the lower leaves opposite; flowers not in one-sided racemes; corolla-lobes about equaling tube or shorter.

g Corolla purple, pink-purple, or rarely white. 18. AGALINIS

g' Corolla yellow.

h Anthers glabrous, not awned at base. 16. DASISTOMA

h' Anthers pubescent, awned at base. 17. AUREOLARIA

e' Corolla evidently 2-lipped.

i Upper lip narrow or folded lengthwise or galeate, enclosing the stamens, which ascend under it and are not or little exerted beyond it.