

11. DIANTHUS L. Pink

Flowers solitary or clustered; calyx cylindric, 5-toothed, with many fine nerves, subtended by bracts; petals long-clawed, dentate or crenate, not appendaged; stamens 10; styles 2; capsule 1-loculed, dehiscent by 4-5 teeth.

- a Leaves lanceolate to ovate-lanceolate; flowers in dense terminal clusters; bracts long-pointed, about equaling calyx. **2. *D. barbatus***
- a' Cauline leaves linear to linear-lanceolate.
 - b Flowers about 1 cm wide, in small dense clusters; bracts narrow, pubescent, about equaling calyx; petals rose-color, narrow. **3. *D. armeria***
 - b' Flowers 1.5-2 cm wide, solitary or few; bracts broad, slender-pointed, scarcely pubescent, shorter than calyx; petals deep rose-color with darker area at base. **1. *D. deltoides***

1. **Dianthus deltoides* L. Maiden Pink
Adventive (native of Europe)

Leaves linear to linear-lanceolate; flowers 1.5 or more cm wide, solitary or few; bracts broad, pointed, hardly pubescent, shorter than calyx; petals deep rose-color with darker area at base.
HERBARIUM RECORD: 2 Jun 1986—corner of Eighth and Highland, infrequent, *Benkowski 76*.

2. **Dianthus barbatus* L. Sweet William
Adventive (native of Eurasia)

Plants stout; leaves lanceolate to ovate-lanceolate; flowers in dense terminal clusters; bracts long-pointed, about equaling calyx.
HERBARIUM RECORD: 5 Jun 1922—in waste pasture land N of Cols., *J. H. Schaffner*.

3. **Dianthus armeria* L. Deptford Pink
Naturalized (native of Europe)

Cauline leaves linear to lanceolate; flowers about 1 cm wide, subtended by narrow, pubescent bracts, about equaling calyx; sepals united forming cylindric tube, with many fine nerves; petals rose-color, narrow; styles 2.
HERBARIUM RECORDS: 2 Aug 1963—edge of parking lot on W. 11th near Neil Ave., Cols., *Cusick*; 19 Jun 1973—quarry 1 mi. S of Dublin, E side of Scioto R. along Rt. 33, common, *Cahall & Roberts 3598*; 29 May 1982—Blendon Woods, Big Meadows, common, *Owens*; 31 May 1986—Highbanks Metro Park (Delaware Co.), field, Big Meadow Hill, *Morawetz 11* (OS, OWU); 13 Jun 1990—Gahanna Woods Park, just W of Taylor Station Rd., prairie area, Jefferson Twp., *Lowden 4401*; 28 Jun 1990—Hoover Dam Park, just below the dam on the E side, N of Central College Rd., Blendon Twp., *Lowden 4429*.

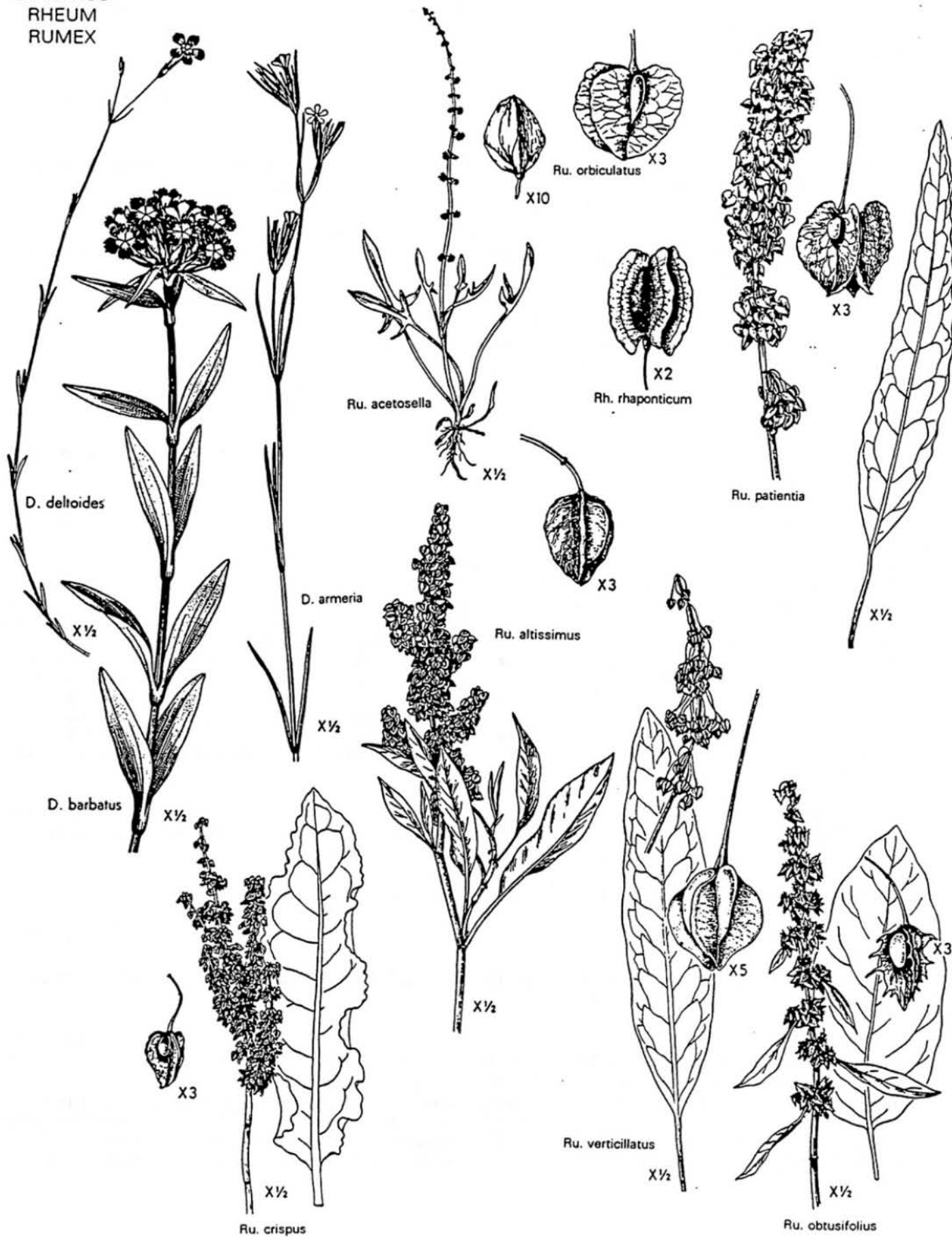
POLYGONACEAE, Smartweed Family

Herbaceous, sometimes vines, or rarely shrublike; leaves alternate, simple; stipules sheathing the stem (ocreae), these sometimes obsolete; flowers hypogynous, usually bisporangiate, solitary, in clusters of a few, or in spikes, racemes, heads, or panicles; perianth regular or nearly so, deeply cleft into 3-6 parts (here called sepals) in 2 series; stamens 3-9; carpels 2-4, united; ovary 1-loculed, ovule 1; styles 2-3, wholly or partially united, or absent; stigmas capitate or a tuft of branches; fruit an achene, 3-angled or lenticular.

Rhubarb (*Rheum rhaponticum* L.) has been cultivated frequently in home gardens. Its basal leaves are very large, petioles thick and fleshy, blades ovate-cordate; stem-leaves smaller; flowers in large terminal panicle; sepals 6, white on pink; stamens 9 or fewer; achene 3-winged.

- a Sepals 6; stigmas 3, brushlike; stamens 6-9.
 - b Achene 3-winged, not enclosed in fruit by sepals; calyx petaloid. **RHEUM**
 - b' Achene 3-angled, enclosed in fruit by inner enlarged sepals; sepals usually greenish. **1. RUMEX**
- a' Sepals usually 4-5; stigmas 2-3, usually minute or capitate; stamens 3-9.
 - c Perianth white; achene exerted from calyx; blades triangular-hastate or ovate and cordate. **3. FAGOPYRUM**
 - c' Perianth white, green, rose, pink, or red; achene not exerted from calyx or, if so, then blades narrow; sometimes vines. **2. POLYGONUM**

DIANTHUS
RHEUM
RUMEX



1. RUMEX L. Dock, Sorrel

Stems grooved; ocreae brittle; flowers sometimes monosporangiate, small, green, whorled, in racemes or panicles; the 3 inner sepals enlarged and closely covering fruit (these called valves), one or more of the 3 usually bearing a tubercle; stamens 6, styles 3; stigma tufted.

a At least some of the leaves usually hastately lobed; dioecious; sour to taste; plants usually less than 5 dm high.

1. *R. acetosella*

a' Leaves not lobed; flowers usually bisporangiate.

b Valves of fruiting calyx toothed, teeth of valves no longer than width of undivided portion; basal blades ovate to broadly oblong, usually red-veined; tubercle usually 1, ovoid. 7. *R. obtusifolius*

b' Valves of fruiting calyx entire or nearly so.

c Blades usually pale-green, flat, entire, somewhat fleshy, narrowed to base.

d Pedicels strongly clavate, jointed at base, 2-5 times as long as fruiting calyx; tubercles 3, lance-ovoid. 4. *R. verticillatus*

d' Pedicels not strongly clavate, approximately equaling fruiting calyx; tubercles usually 1 or, if more, then often unequal; inflorescence not leafy. 6. *R. altissimus*

c' Blades dark-green, margin ruffled or crenulate or both.

e Tubercles 1 or none. 3. *R. patientia*

e' Tubercles 3; valves about as long as wide, much wider than achenes and tubercles at maturity.

f Blades ruffled at edge; tubercle ellipsoid to subglobose, its base not above base of valve. 5. *R. crispus*

f' Blades not ruffled at edge; tubercle narrow, pointed at tip, its base above base of valve. 2. *R. orbiculatus*

1. **Rumex acetosella* L.

Red Sorrel, Sheep-sorrel

Naturalized (native of Eurasia)

Leaves hastately lobed, variable; inner sepals about equal and closely investing the achene.

REFERENCES: Riddell 1834:120 (*Rumex acetosella*); Sullivan 1840:25; Craig 1890:98 (very abundant everywhere in fields and pastures, 15 May 1882, 14 May 1883, 7 Jun 1884, 7 May 1887, 24 Apr 1889); Selby & Craig 1890:14 (introduced).

HERBARIUM RECORDS: 11 Jun 1882—OSU Campus, Cols., *Devol*; Aug 1888—Cols., *Craig*; 1890—OSU grounds, Cols., *Selby*; 21 May 1892—near Cols., *E. M. Wilcox*; 1 Jul 1911—Westerville, old meadows & pastures, *Hanawalt*; Jun 1921—Westerville, *Brewbaker*; 3 Jul 1925—Worthington, *R. Crane* (OWU); Summer 1938—OSU Botanical Garden, *C. Jones*; 7 May 1970—Groveport, Main Rd. & Mohr Rd., dry cinder roadbed of abandoned RR, *Boone 119*; 18 May 1980—OSU Campus, Neil Ave., Cols., *H. Liu 2226*; 26 May 1982—Blendon Woods, *Owens*; 12 May 1986—Highbanks Metro Park (Delaware Co.), field S of Oak Coves Picnic Area, W of overlook trail, *Watts 296* (OS, OWU); 29 May 1988—Highbanks Metro Park (Delaware Co.), old field, *Morawetz 72* (OS, OWU); 19 May 1990—E of New Albany, 1 mi. S of Rt. 161 along W roadside of Kitzmiller Rd., Plain Twp., *Lowden 4313*; 13 Jun 1990—field along W side of Waggoner Rd., 1 mi. S of the Conrail and B&O RR tracks, Jefferson Twp., *Lowden 4409*; 16 May 1992—Georgesville, along RR track just E of Big Darby Creek, Battelle Darby Creek Metro Park, Pleasant Twp., *Lowden 4960*.

2. *Rumex orbiculatus* A.Gray

Great Water Dock

Plants stout; leaves mostly flat, lanceolate; calyx valves basally broadly truncate; tubercle narrow, pointed, its base above the base of the valve. Syn.: *R. britannica*, misapplied

REFERENCES: Selby & Craig 1890:14; Selby 1891a:111a (#701 Re-collected).

HERBARIUM RECORDS: 24 Aug 1892—Cols., *Bogue*; 29 Oct 1892—Alum Creek Station, Cols., *Selby*.

3. **Rumex patientia* L.

Patience-dock

Adventive (native of Europe)

Leaves pale green, somewhat ruffled; calyx valves broadly rounded, blunt, deeply cordate; tubercle 1 or none.

HERBARIUM RECORD: 1 Jun 1931—Hamilton Twp., *Bartley*.

4. *Rumex verticillatus* L.

Swamp Dock

Leaves pale-green, flat, lanceolate or lance-linear, narrowed to the base; pedicels clavate, 2-5 times as long as fruiting calyx, deflexed; valves of fruiting calyx entire; tubercles 3, lance-ovoid.

REFERENCES: Sullivan 1840:25; Craig 1890:98 (common in moist places near the river, 30 Mar 1887, 9 Jun 1888); Selby & Craig 1890:14.

HERBARIUM RECORDS: 1833—Worthington, *J. Paddock Collection* (ILL); 21 May 1892—near Cols., *E. M. Wilcox*; 6 Jun 1960—OSU Campus, along Olentangy R., W of Cyclotron Lab., *Cusick*; 11 Sep 1971—OSU Campus, along Olentangy R. near Tower Dorms, *Roberts 2049*; 22 May 1977—just N of Lane Ave. bridge, edge of Olentangy R., Cols., *W. Carr 234* OS); Summer 1988—along Big Darby Creek between I-70 & Little

Darby Creek, Galloway Quad., *Delong*; 7 Jun 1991—Boyer Park at end of Park St., E of Rt. 3, Westerville, Blendon Twp., *Lowden 4670*; 5 Jul 1991—OSU Campus, E bank of the Olentangy R., between Lane Ave. & King Ave., Cols., Clinton Twp., *Lowden 4758*.

5. **Rumex crispus* L.

Curly Dock, Sour-dock, Yellow Dock

Naturalized (native of Europe)

Leaf blades ruffled along edge, dark-green; valves of fruiting calyx entire; tubercles 3, bases not above base of valves.

REFERENCES: Riddell 1834:120; Sullivant 1840:25 (naturalized); Craig 1890:98 (common in fields and pastures, 7 Jun 1884, 25 May 1887); Selby & Craig 1890:14 (introduced).

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL); 189—Franklin Co., *Trelease*; 20 Jul 1911—Franklin Co., *Hanawalt*; 19 May 1974—OSU Botany Garden, Cols., *D. Johnson*; 3 Jul 1982—Blendon Woods, *Owens*; 13 May 1986—OSU Campus, parking lot S of 12th Ave. intersection with Cannon Rd., *Taylor-Lehman 48*; 18 May 1986—Antrim Park, N side of lake, Cols., *R. Burnes 29*; 1 Jun 1986—N of St. Michael's Church, corner of Selby & High St., *Benkowski 70*; 11 Jun 1987—along E bank of Olentangy R., between Lane Ave. & Dodrige St. bridges, Tuttle Park, Cols., *T. Lammers 6122*; 6 Jun 1989—Turkey Run, just S of Highland Dr., between Olentangy River Rd. & Pegg Ave., Clinton Twp., *Lowden 4124*.

6. *Rumex altissimus* A.W. Wood

Tall Dock

Leaf blades entire, flat, pale-green, narrowed to base; pedicels nearly equaling fruiting calyx; margins of fruiting calyx nearly entire; tubercles usually 1; inflorescence not leafy.

REFERENCE: Selby 1891a:111a.

HERBARIUM RECORDS: 1891—Big Darby, Cols., *Selby*; 1892—Cols., *Bogue*; 13 Sep 1895—So. Cols., *Osburn*; 22 May 1899—Big Darby, *Selby*; 4 Jun 1960—dike along Olentangy R. across from OSU Stadium, *Cusick*; 15 May 1986—Pearl Alley, 30 m N of E. 12th Ave., Cols., *Hollander 032*.

7. **Rumex obtusifolius* L.

Broad-leaf Dock, Bitter Dock

Naturalized (native of Europe)

Plants stout; leaves ovate to broadly oblong, lower blades sometimes cordate at base; valves of fruiting calyx toothed, teeth not as long on the undivided upper portion of calyx valve; tubercle usually 1, well developed, ovoid.

REFERENCES: Riddell 1834:120 (*Rumex sanguineus*); Sullivant 1840:25 (naturalized); Craig 1890:54, 98 (not common; near the river and along the brook, occasionally along roadsides, some specimens have red-veined radical leaves, 30 May 1887, 3 Jun 1888, University Farm Sep & Oct 1887); Selby & Craig 1890:14 (introduced).

HERBARIUM RECORDS: 1891—Hadley's Woods, Cols., *Selby*; 2 Jul 1892—Cols., *Bogue*; 27 Sep 1894—Cols., *W. Kellerman*; 8 Jun 1986—Highbanks Metro Park (Delaware Co.), shale creek woods, *Witsberger 913* (OWU); 16 Jul 1990—Overbrook Drive Ravine, off of N. High St. & S of E. Cooke Rd., Clinton Twp., *Lowden 4441*; 5 Jul 1991—OSU Campus, E bank of Olentangy R., just S of Lane Ave. bridge, Cols., Clinton Twp., *Lowden 4762*; 30 Jun 1992—Camp Mary Orton, along entrance road, W of Rt. 23, N of Worthington, Sharon Twp., *Lowden 4972*.

NOTE: Based on an immature specimen of *J. R. Paddock Collection* (ILL) maybe *Rumex sanguineus* of Riddell belongs here.

2. POLYGONUM L.

Usually herbs, some twining; calyx 4-6-parted, the divisions often petaloid; stamens 3-9; carpels 2-3; styles 2-3, sometimes very short or absent, sometimes wholly or partially united; stigmas usually capitate. (incl. *Tovara* Adans.)

- a Flowers axillary, solitary or in small clusters; ocreae hyaline, 2-lobed, becoming lacerate; petioles jointed; inner filaments wide. Knotweeds
 - b Leaf-blades with 2 lengthwise folds, linear, subulate-tipped; flowers 1 or 2 in axils of much reduced leaves forming spikelike inflorescence. 1. *P. tenue*
 - b' Leaf-blades without lengthwise folds, not subulate-tipped; floral bracts little reduced, much exceeding flowers.
 - c Plants erect; sepals with yellow or green margins, outer ones longer than inner; pedicels usually longer than sheaths subtending them.
 - d Blades obovate or oblanceolate, about 2 times as long as wide. 2. *P. erectum*
 - d' Blades narrow, about 4 times as long as wide. 4. *P. ramosissimum*
 - c' Plants diffusely branched, prostrate to erect; sepals usually with pink or white margins; blades linear to oval; pedicels usually shorter than subtending sheaths. 3. *P. aviculare*
- a' Flowers in terminal or axillary spikelike heads or racemes, or in panicles.
 - e Stems weak, reclining, 4-angled, with recurved prickles.
 - f Blades sagittate; achenes usually 3-angled. 14. *P. sagittatum*
 - f' Blades halberd-shaped; achenes lenticular. 15. *P. arifolium*
 - e' Stems erect or twining, without prickles.

- g Styles 2, 2 mm long in flower, becoming longer in fruit, deflexed, hooked at tip, persistent; flowers remote, in long slender terminal racemes. 16. *P. virginianum*
- g' Styles shorter, not deflexed, not elongate in fruit.
- h Outer sepals not keeled or winged; erect herbs. Smartweeds
 - i Borders of ocreae spreading and flangelike.
 - j Tall erect annual; roots fibrous; spikes arching and drooping; blades ovate or oblong, long-petioled. 13. *P. orientale*
 - j' Perennial with long rhizomes; aquatic or terrestrial; spikes erect; blades lanceolate, short-petioled. 5. *P. amphibium*
 - i' Borders of ocreae not spreading and flangelike.
 - k Borders of ocreae not ciliate.
 - l Racemes many, terminal and lateral; perianth rose-color, pink, or white; annual, without extensive rhizomes.
 - m Racemes drooping; peduncles with sessile glands or glabrous; veins of outer sepals forked at apex, branches recurved. 7. *P. lapathifolium*
 - m' Racemes erect; peduncles with stalked glands or strigose or rarely glabrous; veins of outer sepals not as above. 8. *P. pensylvanicum*
 - l' Racemes terminal, rarely more than 1 or 2; perianth scarlet to pink; perennial with extensive rhizomes; aquatic or mud plants or of drier places; flowers dimorphic in relative length of styles and filaments. 5. *P. amphibium*
 - k' Borders of ocreae ciliate.
 - n Calyx not gland-dotted (except sometimes on the upper half in *P. hydropiperoides*).
 - o Cilia of ocreae 5-10 mm long; cilia of ocreolae about as long as sheath; achene 3-angled; perianth rose-purple. 11. *P. caespitosum*
 - o' Cilia of ocreae 4 mm long or less; cilia of ocreolae shorter than sheath.
 - p Racemes usually 2-4 cm long, compact; achene lenticular or 3-angled; leaves often with reddish spot; perianth rose-purple. 12. *P. persicaria*
 - p' Racemes elongate, slender, lax, often interrupted; achene 3-angled; perianth usually pink. 6. *P. hydropiperoides*
 - n' Calyx gland-dotted throughout.
 - q Racemes usually continuous; achene dull; usually some flowers in axil below topmost leaf; border of calyx red or green; stems often reddish. 9. *P. hydropiper*
 - q' Racemes often interrupted; achene shining; no flowers in axil below topmost leaf; border of calyx usually white; stems usually not reddish. 10. *P. punctatum*
 - h' Outer sepals keeled or winged.
 - r Twining vines; style short or none.
 - s Outer sepals more or less keeled, not winged, in fruit. 17. *P. convolvulus*
 - s' Outer sepals winged in fruit; wings of sepals 1-3 mm wide at top, ruffled; achene 3.5 mm long or more. 18. *P. scandens*
 - r' Not vines; erect branched perennials, sometimes shrublike; styles divaricate. 19. *P. cuspidatum*

1. *Polygonum tenue* Michx.

Knotweed

Plants slender, branches erect; leaves linear, subulate-tipped, blades with 2 longitudinal folds, margins minutely spinulose-serrulate; flowers axillary.

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

NOTE: *Sullivant* 1840:25 and *Selby & Craig* 1890:14 reported on plants collected in adjacent counties.

2. *Polygonum erectum* L.

Plants erect; leaves obovate or oblanceolate; pedicels usually longer than the subtending sheaths; perianth bottle-shaped, constricted above, divided approx. 3/4 its length.

REFERENCES: *Riddell* 1834:120 (roadsides); *Sullivant* 1840:25; *Craig* 1890:98 (rather common along roadsides and in waste places); *Selby & Craig* 1890:14.

HERBARIUM RECORDS: 1836—*Worthington, J. Paddock Collection* (ILL); 1890—Cols., *Selby*; 1890—OSU grounds, near Cols., *Selby*; 30 Jun 1890—Cols., coll.?.; Aug 1890—near Cols., *E. M. Wilcox*; 22 Sep 1892—Cols., *Werner*; 28 Sep 1911—Westerville, about houses, *Hanawalt*.

3. **Polygonum aviculare* L.

Knot-grass, Bird's Knot Grass

Naturalized (European)

Plants prostrate to erect, branched; leaves lanceolate to lance-ovate; perianth with pink or white margins; pedicels shorter than subtending sheaths.

REFERENCES: Riddell 1834:120 (roadsides); Sullivant 1840:25 (naturalized plants); Craig 1890:54, 56, 98 (common on the campus and along roads; University Farm Sep & Oct 1887, 4 Nov 1888); Selby & Craig 1890:14.

HERBARIUM RECORDS: 30 Aug 1890—Cols., Selby; 2 Nov 1911—Westerville, barn lots & lawns, Hanawalt; 18 Sep 1982—Highbanks Metro Park (Franklin & Delaware Cos.), locally common, floodplain, G. Moore 235; 2 Jun 1985—OSU campus, near B&Z Bldg., Cols., Cho 43; 14 Jun 1989—OSU Campus, parking lot between the B&Z and Biological Sciences Bldg., Clinton Twp., Lowden 4165; 31 Jul 1990—Northmoor Park along stone wall of the Olentangy R., Clinton Twp., Lowden 4466.

4. †*Polygonum ramosissimum* Michx.

Bushy Knotweed

Plants erect, freely branched; leaves narrowly lance-elliptic, acute; flowers on pedicels longer than the calyx.

REFERENCES: Jones 1943:101; McCance 1984:A-177.

HERBARIUM RECORD: 7 Oct 1905—Cols., Stowe.

5. *Polygonum amphibium* L. var. *emersum* Muhl.

Water Smartweed

Rhizomatous erect herb, amphibious to terrestrial; leaves lance-acuminate, hairy; racemes stout, more than 4 cm long, pink to reddish, borne singly or in pairs at ends of terminal branches; peduncles glandular-hairy. Syn.: *P. coccineum* Muhl. ex Willd., *P. muhlenbergii* (Meisn.) S. Watson

REFERENCES: Riddell 1834:120 (standing pools); Sullivant 1840:25; Selby & Craig 1890:14; Kellerman & Werner 1893:229 (only a few were found in the low ground near the W boundary, Aug 1890).

HERBARIUM RECORDS: 6 Aug 1897—Hamilton Twp., W. Kellerman; 13 Sep 1968—Whittier St., overlooking the Scioto R., in clumps, Stuessy 1423; 1 Aug 1985—Fountain Square, S of Morse Rd., weedy field, NE Cols. Quad., Cusick 24589 (KE); 8 Aug 1990—Elliot Rd., 0.5 mi. NW of Scioto-Darby Creek Rd., swampy area, Brown Twp., Lowden 4515; 6 Jul & 10 Aug 1992—Pickerington Ponds, wetland wildlife area, just S of Wright Rd. & E of Bowen Rd., Madison Twp., Lowden 4980 & 5023.

NOTE: Leaves are glabrous on Lowden collections 4515, 4980 & 5023.

6. *Polygonum hydropiperoides* Michx.

Mild Water Pepper, False Water-pepper

Plants erect; leaves lanceolate to linear; ocreae strigose and ciliate fringed; racemes slender, elongate, interrupted; perianth white or pink, not gland-dotted.

REFERENCES: Riddell 1834:120 (*Polygonum mite*, wet prairies); Sullivant 1840:25 (*Polygonum mite* Pers.); Craig 1890:54, 56, 98 (common S of the road leading to the island and in damp places, 15 Jul 1882; University Farm Sep & Oct 1887, 4 Nov 1888); Selby & Craig 1890:14.

HERBARIUM RECORDS: Aug 1890—Westerville, E. V. Wilcox; 9 Sep 1890—Lake Park, Selby; 9 Sep 1890—So. Cols., Selby; 4 Jul 1891—Worthington, Selby; 7 Sep 1899—Worthington, Selby; 5 Aug 1977—bottom of Hayden Run ravine, where Hayden Run empties into the Scioto R., W. Carr 626; 6 Nov 1984—Gahanna Woods State Nature Preserve, buttonbush swamp in SW corner of the Preserve, in standing water, Tyrrell; 23 Sep 1991—Scioto R., common on gravel bars & banks, just N of I-270, Hamilton Twp., SW Cols. Quad., McCormac 4364.

7. *Polygonum lapathifolium* L.

Dock-leaved Smartweed

Plants erect; leaves lanceolate and acuminate; ocreae entire, not ciliate fringed; racemes many, drooping; perianth white, green or pink, veins of outer lobes ending in an anchor-shaped fork; peduncles with sessile glands or glabrous.

REFERENCES: Riddell 1834:120 (dense and shady wood); Selby & Craig 1890:14 (#691 & 692).

HERBARIUM RECORDS: 9 Sep 1890—Lake Park, Selby; 31 Jul 1891—OSU Campus, near Cols., Hine; 5 Sep 1891—Cols., Werner (CLM); 6 Aug 1897—Hamilton Twp., W. Kellerman; 22 Aug 1899—S Cols., Selby; 3 Nov 1984—Gahanna Woods State Nature Preserve, swampy area along Woodland Pond Trail (II), Tyrrell; Summer 1988—OSU Campus, along the Olentangy R., Cols., Delong; Summer 1988—along Big Darby Creek, between I-70 & Little Darby Creek, Galloway Quad., Delong; 31 Jul 1990—Northmoor Park, E bank of the Olentangy R., Clinton Twp., Cols., Lowden 4467; 23 Sep 1991—Scioto R., common on gravel bars & banks, just N of I-270, Hamilton Twp., SW Cols. Quad., McCormac 4360; 10 Aug 1992—Pickerington Ponds, Wetland Wildlife Area, just S of Wright Rd. & E of Bowen Rd., Madison Twp., Lowden 5024.

8. *Polygonum pensylvanicum* L.

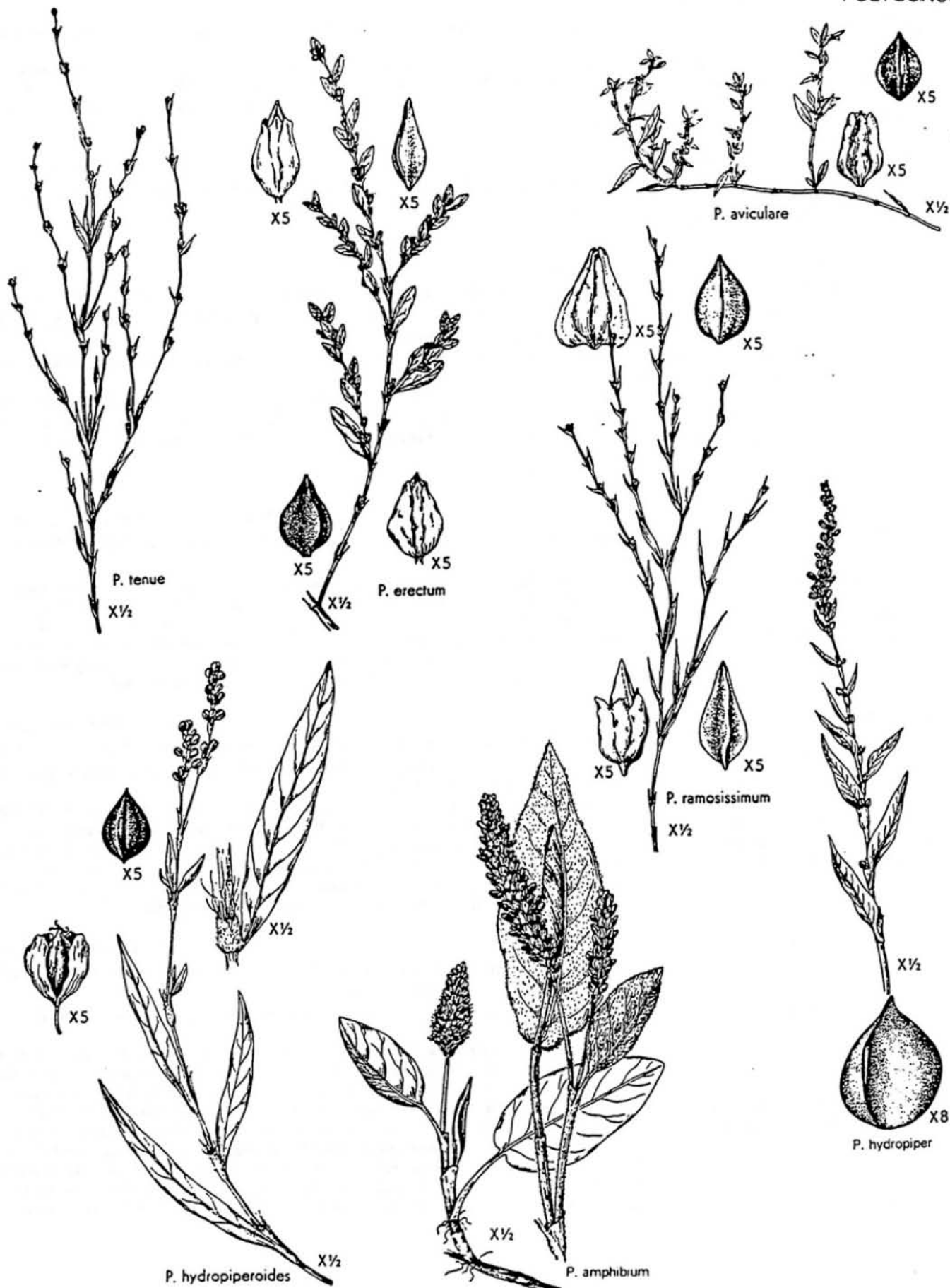
Pennsylvania Smartweed

Plants erect, branched; leaves lanceolate, acuminate, ocreae not ciliate fringed; racemes erect, many, cylindrical, blunt; peduncles with stalked glands, often strigose; perianth rose or white.

REFERENCES: Riddell 1834:120; Sullivant 1840:25; Selby & Craig 1890:14; Kellerman & Werner 1893:229 (very common in cultivated ground, Aug 1890).

HERBARIUM RECORDS: 1890—Sellsville, Cols., Selby; Aug 1890—near Cols., E. V. Wilcox; Aug 1890—near Cols., Selby; 5 Aug 1890—Olentangy R., Cols., Hine; 30 Aug 1890—OSU Farm, Cols., Selby; 7 Sep 1890—Lake Park, near Cols., Selby; 22 Sep 1892—Cols., Werner; 5 Oct 1901—OSU Farm, Eckman; 18 Oct 1906—OSU Farm, Mickiui [?]; 13 Sep 1968—W. Whittier St., overlooking Scioto R., Stuessy 1424; 31 Oct 1976—Scioto R. bank directly behind Frank Rd. sewage plant, Kubetin; 11 Jul 1982—Blendon Woods, Owens; 3 Nov 1984—Gahanna Woods State Nature Preserve, in swampy area along woodland pond trail (II), Tyrrell; 6 Nov 1984—Gahanna Woods State Nature Preserve, buttonbush swamp in SW corner of preserve (V), Tyrrell; 27 Jun 1986—along shore of Alum Creek near the intersection of Agler Rd. & Sunbury Rd., Taylor-Lehman 901; 11 Jul 1986—along E shore of the Olentangy R., S of OSU Campus near Battelle Institute, Taylor-Lehman 1015; 20 Sep 1987—Highbanks Metro Park (Delaware Co.), riverbank, Morawetz; Summer 1988—along Big Darby Creek between I-70 & Little Darby Creek, Galloway Quad., Delong; 11 Aug 1989—Trabue-Murphy Landing just S of Fishinger Rd. bridge along E bank of Scioto R., Perry Twp., Lowden 4282; 13 Jul 1990—Northmoor Park,

POLYGONUM



E bank of the Olentangy R., Clinton Twp., Cols., *Lowden 4465*; 9 Aug 1990—S side of Berger Rd., 1 mi. E of Richardson Rd., Madison Twp., *Lowden 4552*; 16 Sep 1990—Highbanks Metro Park (Delaware Co.), S end of River Trail in Big Meadows Picnic Area, 3/4 mi. N of Powell Rd., *Watts 529* (OS, OWU); 23 Sep 1991—Scioto R., common on gravel bars and banks, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac 4361*; 10 Aug 1992—Pickerington Ponds, Wetland Wildlife Area, just S of Wright Rd., & E of Bowen Rd., Madison Twp., *Lowden 5021*.

9. *Polygonum hydropiper* L.

Smartweed, Water-pepper

Stems erect, reddish; leaves lanceolate; ocreae bristly fringed; racemes continuous; perianth glandular-punctate throughout, border red or green.

REFERENCES: Craig 1890:98 (common along the river); Selby & Craig 1890:14.

HERBARIUM RECORDS: 10 Sep 1901—Cols., *Tyler & Jennings*; 20 Oct 1911—Westerville, low barn lots, *Hanawalt*; 9 Aug 1990—S side of Berger Rd., 1 mi. E of Richardson Rd., Madison Twp., *Lowden 4551*; 10 Aug 1992—Pickerington Ponds, Wetland Wildlife Area, just S of Wright Rd. & E of Bowen Rd., Madison Twp., *Lowden 5022*.

10. *Polygonum punctatum* Elliott

Dotted Smartweed

Plants erect, slender; leaves narrowly lanceolate or elliptic; ocreae ciliate fringed; racemes much interrupted; perianth gland-dotted throughout, border white or greenish. Syn.: *P. acre* Humb., Bonpl. & Kunth

REFERENCES: Riddell 1834:120 (dense and shady woods); Sullivant 1840:25 (Biting Knotweed); Craig 1890:98 (grows in waste places near the river); Selby & Craig 1890:14.

HERBARIUM RECORDS: Aug 1890—Cols., *Werner* (CLM); 7 Aug 1890—Rocky Fork, near Cols., *Selby*; 7 Sep 1890—Cols., *Selby*; 1892—Cols., *Bogue*; 18 Aug 1892—Cols., *Bogue*; 22 Aug 1899—S Cols., *Selby*; 7 Sep 1899—Worthington, *Selby*; 22 Jul 1982—Highbanks Metro Park (Franklin & Delaware Cos.), riverbank, *G. Moore 238*; 16 Aug 1982—Blendon Woods, *Owens*; 3 Nov 1984—Gahanna Woods State Nature Preserve, in buttonbush swamp in SW corner of preserve (V) and swampy area along woodland pond trail (I), *Tyrrell*; 6 Nov 1984—Gahanna Woods State Nature Preserve, swampy area near boardwalk bridge (IV), *Tyrrell*; 15 Sep 1985—Highbanks Metro Park (Delaware Co.), common along Olentangy R., *Witsberger 854* (OWU); 20 Sep 1987—Highbanks Metro Park (Delaware Co.), riverbank, *Morawetz* (OS, OWU); Summer 1988—OSU Campus, along Olentangy R., *Delong*; Summer 1988—along Big Darby Creek between I-70 & Little Darby Creek, Galloway Quad., *Delong*; 14 Jun 1989—OSU Campus, around B&Z bldg., 1735 Neil Ave., Cols., *Lowden 4248*; 9 Aug 1990—S side of Berger Rd., 1 mi. E of Richardson Rd., Madison Twp., *Lowden 4548*; 10 Sep 1991—E bank of Big Darby Creek just off Rt. 40, Prairie Twp., *Lowden 4821*; 23 Sep 1991—Scioto R., common on gravel bars & banks, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac 4365*; 14 Sep 1992—Pickerington Ponds, just S of Wright Rd., Madison Twp., *Lowden 5038*.

11. **Polygonum cespitosum* Blume var. *longisetum* (Bruijn) Stewart

Smartweed

Naturalized (native of E Asia)

Stems branched, somewhat decumbent; leaves lanceolate to elliptic; ocreae ciliate, cilia more than 5 mm long; perianth rose-purple, not gland-dotted; achenes 3-angled, black, shiny.

HERBARIUM RECORDS: 15 Sep 1985—Highbanks Metro Park (Delaware Co.), common along Olentangy R., *Witsberger 855* (OWU); 10 Jul 1986—OSU Campus, banks of Olentangy R., *E. King 1*; 5 Oct 1986—Highbanks Metro Park (Delaware Co.), open woods, *Higgins*; 20 Sep 1987—Highbanks Metro Park (Delaware Co.), riverbank, *Morawetz*; 2 Oct 1987—just N of the Lane Ave. bridge & S of the Fawcett Center for Tomorrow, W bank of the Olentangy R., wet open mudflat, Cols., *T. Lammers & Stuckey 6192*; Summer 1988—OSU Campus, along the Olentangy R., Cols., *Delong*; 16 Jul 1990—Whetstone Park, along path behind the Blenheim Rd. turn around, Clinton Twp., *Lowden 4450*; 31 Jul 1990—Northmoor Park, wall along the E bank of the Olentangy R., Clinton Twp., *Lowden 4464*; 5 Jul 1991—OSU Campus, between Lane Ave. and King Ave. bridges, E bank of the Olentangy R., Cols., Clinton Twp., *Lowden 4759*.

12. **Polygonum persicaria* L.

Lady's Thumb

Naturalized (native of Europe)

Plants erect, branched; leaves narrowly lanceolate, often with a dark blotch; ocreae ciliate fringed, cilia less than 5 mm long; racemes dense, cylindrical; perianth pink or rose; perianth not evidently glandular-punctate; peduncles smooth.

REFERENCES: Riddell 1834:120; Sullivant 1840:25; Selby & Craig 1890:14 (introduced); Kellerman & Werner 1893:230 (abundant in cultivated ground, Aug 1890).

HERBARIUM RECORDS: 30 Aug 1890—Cols., *Selby*; 18 Aug 1892—Cols., *Bogue*; 22 Sep 1892—Cols., *Werner*; 13 Sep 1968—W. Whittier St. overlooking Scioto R., *Stuessy 1425*; 24 Jun 1970—Clintonville, corner of Piedmont & Dunedin Rd., along walks and flower garden, *W. Owen 198*; Jul 1971—SW side of I-270 just S of Sunbury Rd. underpass of I-270, *Mayhew*; 3 & 6 Nov 1984—Gahanna Woods State Nature Preserve, swamp area off woodland pond trail (II & III), *Tyrrell*; Summer 1988—along Big Darby Creek between I-70 and Little Darby Creek, *Delong*; Summer 1988—along the Olentangy R., OSU Campus, *Delong*; 15 Jul 1988—Highbanks Metro Park (Delaware Co.), sandbars along Olentangy R., *Watts 449* (OS, OWU); 5 Aug 1989—along Godown Rd., wet drainage ditch between Commerce Pl. & LeAnne Marie Circle, Perry Twp., *Lowden 4235*; 11 Aug 1989—Trabue-Murphy Landing, just S of Fishinger Rd. bridge, E bank of Scioto R., Perry Twp., *Lowden 4269*; 23 Sep 1991—Scioto R., common on gravel bars & banks, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac 4362*.

13. **Polygonum orientale* L.

Prince's-feather

Adventive (native of India)

Plants erect, branched, pubescent; leaves ovate, broadly rounded at base, long petioled; ocreae ciliate, border spreading; racemes large, drooping, dense; peduncles densely hairy; perianth rose-crimson.

POLYGONUM



REFERENCES: Riddell 1834:120 (naturalized); Sullivant 1840:25 (naturalized plants); Selby & Craig 1890:14 (introduced).

HERBARIUM RECORDS: 14 Oct 1899—Cols., *J. H. Schaffner*; 28 Jul 1902—Cols., *W. Kellerman*; 11 Sep 1937—N. Cols., *J. H. Schaffner*; 16 Aug 1973—Indianola Ave., between E. 12th & Chittendon Ave., Cols., growing out of a hedge by a telephone pole in an alley, seed source seems to be a short way up the alley in an overgrown backyard, *Gyllenhaal*.

14. *Polygonum sagittatum* L.

Tear-thumb, Arrow-leaved Tear-thumb

Stems reclining, 4-angled, with recurved prickles; leaves sagittate at base, midrib with reflexed prickles, inflorescence short, head-like, long peduncled.

REFERENCES: Riddell 1834:120 (marshes); Sullivant 1840:25; Selby & Craig 1890:14; Kellerman & Werner 1893:230 (margin of brook opposite Prof. Knight's house, 22 Aug [1890]).

HERBARIUM RECORDS: 7 Sep 1882—Cols., *W. Green*; [ca. 1890]—W of Big Walnut, near Cols., *Selby*; 1890—Big Walnut, Cols., *Selby*; 8 Aug 1890—Taylor's Wood, near Cols., *Selby*; 7 Sep 1982—Blendon Woods, *Owens*.

15. *Polygonum arifolium* L.

Halberd-leaved Tearthumb

Stems reclining, 4-angled with recurved prickles; blades hastate, basal lobes triangular, divergent; perianth pink; achenes lenticular.

REFERENCES: Riddell 1834:120 (marshes); Sullivant 1840:25; Selby & Craig 1890:14.

HERBARIUM RECORDS: 1833—Worthington, *J. Paddock Collection* (ILL); 2 Sep 1890—Cols., *Werner* (CLM).

16. *Polygonum virginianum* L.

Jumpseed

Plants erect; leaves lanceolate to ovate, broad; flowers remote in long slender racemes; perianth greenish-white; styles 2, deflexed, hooked at tip, persistent in fruit. Syn.: *Tovara virginiana* (L.) Raf.

REFERENCES: Riddell 1834:120 (*Polygonum virginicum*, dense and shady woods); Sullivant 1840:25; Craig 1890:99 (common in moist shady places along the river, 8 Aug 1882); Selby & Craig 1890:14.

HERBARIUM RECORDS: [ca. 1834]—Cols., *Lapham* (CINC); 31 Jul 1890—Olentangy R., Cols., *Hine*; 8 Aug 1890—Taylor's woods, near Cols., *Selby*; 30 Aug 1890—Cols., *Selby*; 1 Aug 1892—near Cols., *E. M. Wilcox*; 3 Oct 1906—Cols., *Detmers*; 20 Sep 1911—Westerville, low woods, *Hanawalt*; 2 Aug 1982—Highbanks Metro Park (Franklin & Delaware Cos.), *W. Reed 240*; 2 Aug 1982—Highbanks Metro Park (Franklin & Delaware Cos.), floodplain, *G. Moore 241*; 20 Aug 1988—Highbanks Metro Park (Delaware Co.), river floodplain, *Higgins 29* (OS, OWU); 31 Jul 1990—Whetstone Park to Northmoor Park, along E bank of Olentangy R., Cols., Clinton Twp., *Lowden 4458*.

17. **Polygonum convolvulus* L.

Black Bindweed, Knot Bindweed

Naturalized (native of Europe)

Vines, twining, leaves sagittate; ocreae smooth, not reflexed bristly at base; outer perianth lobes keeled, barely winged.

REFERENCES: Sullivant 1840:25; Craig 1890:54, 99 (common in fields, 15 Jul 1882; University Farms Sep & Oct 1887); Selby & Craig 1890:14 (introduced).

HERBARIUM RECORDS: 8 Jul 1892—Cols., *Bogue*; 22 Jul 1992—Davis Historical cemetery, E side of Rt. 33, in front of The Quarry, just S of Riverside Green entrance, approx. 2 mi. S of Rt. 161, Perry Twp., *Lowden 5000*.

18. *Polygonum scandens* L.

Climbing False Buckwheat

Vines, stems twining; leaves oblong to broadly cordate, acuminate, deeply cordate at base; perianth white; outer sepals broadly winged, 1-3 mm wide, ruffled.

REFERENCES: Riddell 1834:120; Sullivant 1840:25; Craig 1890:54, 99 (*Polygonum dumetorum* L. var. *scandens* A.Gray; abundant near the river in cultivated ground, 17 Aug 1882, University Farm Sep 1887); Selby & Craig 1890:14 (*Polygonum dumetorum* L. var. *scandens* A.Gray).

HERBARIUM RECORDS: [ca. 1830s]—Worthington, *J. Paddock Collection* (ILL); 18 Aug 1882—OSU farm, *W. Green*; 1890—near Cols., *Selby*; 30 Aug 1890—Cols., *Selby*; 10 Sep 1901—Cols., *Tyler & Jennings*; 10 Oct 1901—Neils Run, *Eckman*; 2 Aug 1982—Highbanks Metro Park (Franklin & Delaware Cos.), riverbank, *G. Moore 239*; 12 Aug 1982—Blendon Woods, Day Camp Area, *Owens*; 6 Sep 1986—Highbanks Metro Park (Delaware Co.), floodplain, *Witsberger 928* (OS, OWU); Aug 1987—Highbanks Metro Park (Delaware Co.), moist woods & thickets, *Kosko 51* (OS, OWU); Summer 1988—OSU Campus, along the Olentangy R., *Delong*; 18 Sep 1989—Highbanks Metro Park (Delaware Co.), base of shale bluffs at Franklin/Delaware Co. line, *Watts 497* (OS, OWU); 14 Sep 1991—Rt. 315 going S off Henderson Rd. exit onto Olentangy River Rd., Cols., Clinton Twp., *Lowden 4844*; 25 Sep 1991—W side of the Scioto R. off Dublin Rd., 1 mi. N of Tuttle Rd., between bridge & deep ravine gorge leading to the river, Washington Twp., *Lowden 4863*.

19. **Polygonum cuspidatum* Siebold & Zucc.

Japanese Knotwood, Mexican Bamboo

Escape from cultivation (native of Japan)

Shrub-like; stems stout, striate; leaves broadly ovate, cuspidate, truncate at base; racemes numerous in upper axils; perianth greenish-white, outer lobes winged.

HERBARIUM RECORD: 9 Aug 1990—Rt. 665 at old Concord Cemetery, jct. of Hoover Rd. & Rt. 665, Jackson Twp., *Lowden 4534*.

3. FAGOPYRUM Mill. Buckwheat

POLYGONUM



P. persicaria

X $\frac{1}{2}$



P. orientale

X $\frac{1}{2}$



X5



P. arifolium

X $\frac{1}{2}$

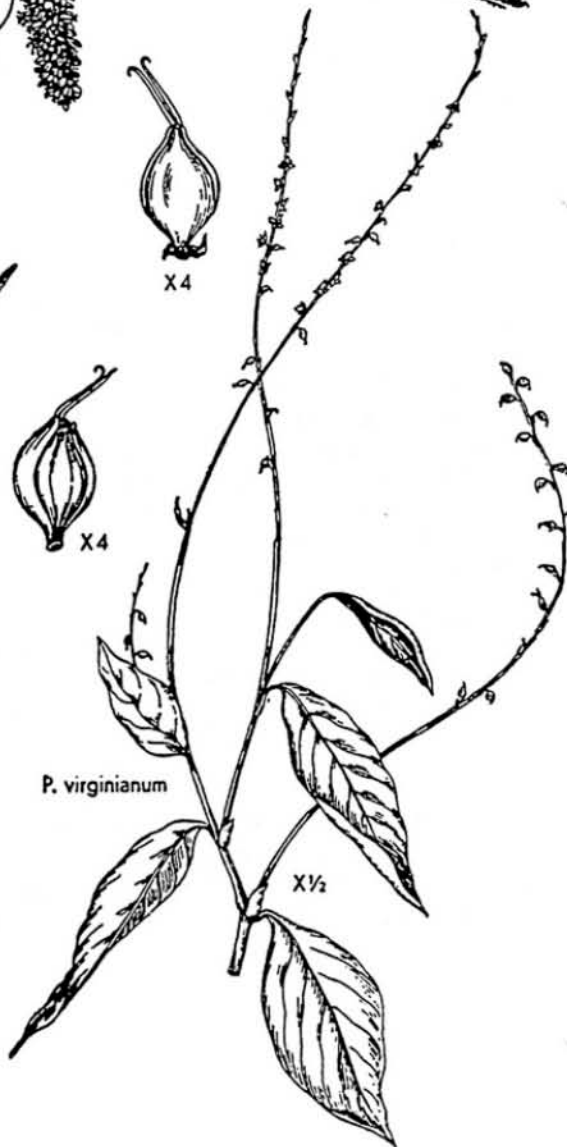


X4



P. sagittatum

X $\frac{1}{2}$



P. virginianum

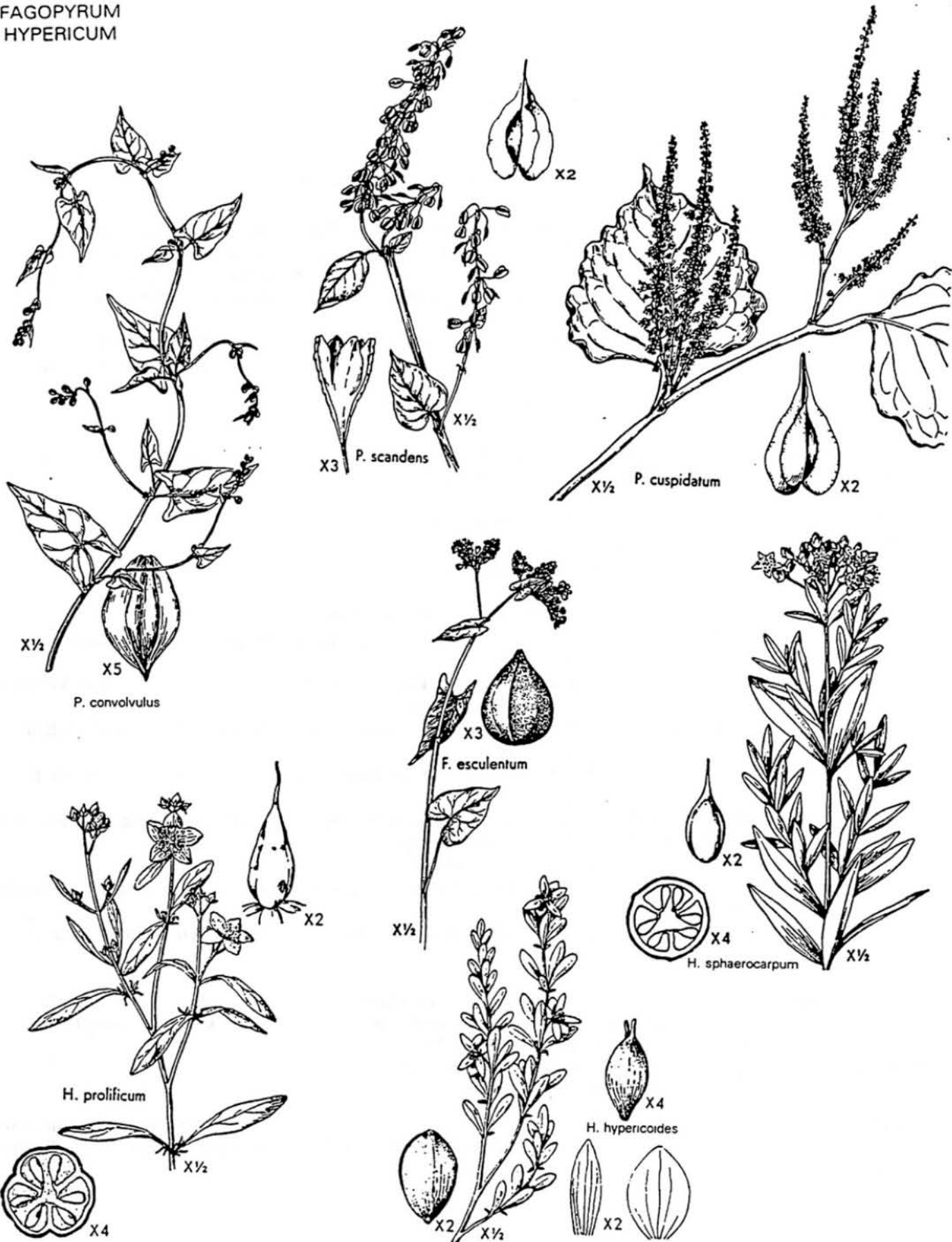
X $\frac{1}{2}$



X10

P. dubium

POLYGONUM
FAGOPYRUM
HYPERICUM



Rather fleshy; stem striate; blades petioled; ocreae oblique; calyx 5-parted, petaloid; stamens 8; styles 3; stigmas capitate; achene acute, smooth and shining, exerted beyond calyx.

1. **Fagopyrum esculentum* Moench

Buckwheat

Escape from cultivation (Asian)

Syn.: *Fagopyrum sagittatum* Gilib.

REFERENCE: Riddell 1834:120 (*Polygonum fagopyrum*, naturalized).

NOTE: No specimens seen from Franklin Co.

CLUSIACEAE, Mangosteen Family

Shrubs and herbs; leaves opposite, entire, dotted; flowers hypogynous, bisporangiate, in cymose clusters or solitary; sepals 4-5; corolla regular, petals separate, 4-5; stamens few to many, separate or basally united in 3 or more groups; carpels 2-5, united, styles as many, separate or united at base; locules of ovary as many as carpels or locule 1, the placentae then parietal and as many as carpels; fruit a many-seeded capsule. (Hypericaceae, Guttiferae)

a Petals yellow; stamens many to few, sometimes united at base in 3 or 5 clusters. 1. **HYPERICUM**

a' Petals pink; stamens usually 9, united in 3 groups, a large gland between each 2 groups. 2. **TRIADENUM**

1. **HYPERICUM** L. St. John's-wort

Herbs and shrubs; flowers usually in cymose clusters; carpels 3 or 5 (rarely 4 or 6); ovary 1-loculed with parietal placentae, or 3-5-loculed with axile placentae. (*Ascyrum* L.)

a Sepals and petals 4, outer pair of sepals larger; styles 2. 1. *H. hypericoides*

a' Sepals and petals 5, styles and stigmas 3-5.

b Styles, carpels, and locules 5. 4. *H. pyramidatum*

b' Styles and carpels 3; locules 3 or 1.

c Stamens 15-40 or more; flowers usually more than 7 mm wide.

d Shrub; stamens separate; blades linear to narrowly elliptic; twigs 2-edged. 2. *H. prolificum*

d' Herbs, sometimes slightly woody at base.

e Petals and sometimes other flower-parts black-dotted or -lined; ovary and capsule 3-loculed, surface marked with oil-vesicles; stamens in 3-5 groups.

f Stem much branched; petals black-dotted near margin; sepals little or not black-dotted; blades 2-4 cm long. 5. *H. perforatum*

f' Stem little branched below inflorescence; petals and sepals lined and dotted with black; blades 4-6 cm long. 6. *H. punctatum*

e' Petals mostly without black dots and lines; ovary and capsule 1-loculed or incompletely 3-loculed, mostly without oil-vesicles. 3. *H. sphaerocarpum*

c' Stamens 5-12 (rarely -20); flowers 7 mm wide or less.

g Blades minute, scalelike, 1-3 mm long; flowers nearly sessile; capsule much longer than sepals. 8. *H. gentianoides*

g' Blades more than 3 mm long, linear to ovate, more than 3-nerved; bracts of ultimate branches of inflorescence subulate. 7. *H. mutilum*

1. †*Hypericum hypericoides* (L.) Crantz var. *multicaule* (Michx.) Fosberg

St. Andrew's Cross

Low lying, somewhat woody shrub; corolla yellow; sepals and petals 4; leaves on both sides with many translucent dots. Syn.: *Ascyrum hypericoides* L. var. *multicaule* (Michx.) Fernald

REFERENCES: Braun 1961:270 (illus. p. 272); Cooperrider 1995:120 (illus. p. 116).

HERBARIUM RECORD: 14 Aug 1932—Red Hills, Chapman.

2. *Hypericum prolificum* L.

Shrubby St. John's-wort

Shrub; principal leaves 3-8 cm long; upper branches winged with 2-4 angles; flowers yellow. Syn.: *H. spathulatum* (Spach) Steud.