

Stems creeping, mat-forming, lower part commonly clothed with persistent dead leaves; leaves terete, crowded, alternate, closely imbricated; petals yellow.

HERBARIUM RECORDS: Sep 1901—Franklin Co., *J. H. Schaffner*, 11 Jun 1987—along Olentangy River Rd. just N of Dodridge St., at SW corner of Union Cemetery (S unit), scattered on barren salty roadside berm, only 1 small patch, Cols., *T. Lammers 6117*.

SAXIFRAGACEAE, Saxifrage Family

Herbs; leaves alternate or opposite; flowers usually bisporangiate, ranging from scarcely perigynous through perigynous or partially epigynous; perianth regular or slightly zygomorphic; sepals and petals 4-5 or petals none; stamens as many as petals, twice as many, or more; carpels 2-4, united to top of styles, or only the styles separate, or only bases of carpels united, then stigmas, styles, and upper part of ovaries separate; locules as many as carpels or locule 1 with parietal placentae as many as carpels; fruit a capsule or of separate follicles. (incl. *Penthorum* L.)

a Carpels 5 (-7); stamens 10. **1. PENTHORUM**

a' Carpels 2-4; stamens 4-10.

b Petals none; small decumbent plants of wet soil, the small leaves partly opposite; flowers nearly sessile, small; sepals greenish; anthers yellow to red. **7. CHRYSOSPLENIUM**

b' Petals present; stems not decumbent.

c Flowers solitary, peduncle bearing 1 leaf; leaves entire. **6. PARNASSIA**

c' Flowers in clusters; leaves not entire.

d Stamens and petals 5. **5. HEUCHERA**

d' Stamens 10 or twice as many as the petals.

e Inflorescence a panicle; basal leaf-blades ovate or oblong, tapering to base, pinnately veined.

2. SAXIFRAGA

e' Inflorescence a raceme; basal leaf-blades ovate or circular, cordate at base, palmately veined.

f Petals entire; carpels unequal. **3. TIARELLA**

f' Petals pinnatifid; carpels equal. **4. MITELLA**

1. PENTHORUM L. Ditch Stonecrop

Erect; leaves alternate, sessile, lanceolate, serrate; flowers greenish, short-pedicel, in forked 1-sided cymes; sepals 5; petals usually none; stamens 10; carpels 5, united below; capsule opening by the circumscissile dehiscence of the 5 beaks which are the separate upper portions of the carpels.

1. *Penthorum sedoides* L.

Ditch-stonecrop

Erect, glabrous below, stipitate-glandular in the inflorescence; leaves alternate, lanceolate to narrowly elliptic, sessile, acuminate at both ends; sepals 5; petals usually none; carpels 5, united nearly to the middle, forming an angular capsule with horned lobes at maturity; stamens 10. Marshes and muddy soil.

REFERENCES: Riddell 1834:120; Sullivant 1840:20 (Virginian Orpine); Craig 1890:79 (sparingly along the lagoons about the island, 2 Aug 1882, 31 Jul 1889); Selby & Craig 1890:10.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 5 Aug 1890—W. J. Green's, Franklin Co., *Selby*; 7 Aug 1890—Alum Creek, Cols., *Selby* (OS, WOOS); 9 Aug 1890—Cols., *Hine*; 29 Aug 1933—Baumgardner's Pond, *Chapman*; 11 Sep 1971—W of OSU Campus along Olentangy R. near Tower Dorms & Battelle, uncommon on clay banks, Cols., *Roberts 2045*; 22 Aug 1982—Blendon Woods, dry streambed in Day Camp area, *Owens*; Summer 1988—along Big Darby Creek between I-70 & Little Darby Creek, Galloway Quad., *Delong*; 9 Aug 1990—S side of Berger Rd., 1 mi., E of Richardson Rd., Madison Twp., *Lowden 4546*; 17 Oct 1991—Hoover Dam Park, W edge of reservoir, just NW of entrance off Cabbage Rd., Blendon Twp., *Lowden 4885*; 10 Aug 1992—Pickerington Ponds, wetland wildlife area, just S of Wright Rd. & E of Bowen Rd., Madison Twp., *Lowden 5020*.

2. SAXIFRAGA L. Saxifrage

Leaves in basal rosettes; flowers on leafless scapes; perianth regular or almost regular; sepals 5; petals 5; stamens 10; hypanthium adnate to bases of carpels; carpels 2, somewhat united at base, summits divergent and tapering; capsule 2-loculed at base, each carpel dehiscent as a follicle; ovules many, on axile placentae.

PENTHORUM
SAXIFRAGA
TIARELLA
MITELLA



- a Basal leaves crenate or dentate, the larger not more than 5 cm long; sepals about as long as hypanthium, spreading or ascending; petals white, 4-6 mm long. 1. *S. virginiensis*
a' Basal leaves denticulate or repand, the larger 10-20 cm long; sepals somewhat longer than hypanthium, reflexed; petals yellow, green, or purple, 2-3 mm long. 2. *S. pensylvanica*

1. *Saxifraga virginensis* Michx.

Early Saxifrage

Basal leaves crenate or dentate, reaching 5-6 cm long; sepals about as long as hypanthium, spreading or ascending; petals white, approx. 4-5 mm long.

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

NOTE: *Sullivant* 1840:20 and *Selby & Craig* 1890:10 reported on plants collected in adjacent counties.

2. *Saxifraga pensylvanica* L.

Swamp-saxifrage, Large-saxifrage, Water-saxifrage

Leaves in basal rosettes, 10-25 cm long; blades with wavy margins; sepals 5, reflexed, longer than hypanthium; petals 5, white, 2-3 mm long; stamens 10.

REFERENCES: *Riddell* 1834:117 (marshes); *Riddell* 1835:16 (Worthington, meadows & marshes); *Sullivant* 1840:20; *Selby & Craig* 1890:10; *Selby* 1891a:111a (#252 Re-collected).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 15 May 1891—Worthington, *Selby* (WOOS); 15 May 1891—Big Wood, Worthington, *Selby*; 17 May 1891—Worthington Woods, N of Cols., *Werner*.

3. TIARELLA L. False Mitrewort, Foamflower

Slender herb; leaves basal, long-petioled, blades round-ovate, shallowly lobed, cordate at base, palmately veined; flowers slightly perigynous, raceme usually scapose; hypanthium short; sepals 5; corolla regular, of 5 white petals 3-5 mm long; stamens 10; carpels 2, united below, unequal; capsule 1-loculed; placentae parietal.

1. *Tiarella cordifolia* L.

Foam-flower

Slender herb; leaves basal, long-petioled; blades round-ovate, denticulate, shallowly lobed, cordate at base, palmately veined; flowers in a raceme; sepals 5; petals 5, white; stamens 10; carpels 2, united below, unequal.

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

4. MITELLA L. Mitrewort, Bishop's-cap

Low herbs; leaves mostly basal, blades round-ovate to reniform, lobed or crenate, cordate at base; flowers in racemes, sometimes spikelike; hypanthium adnate to base of carpels; sepals 5; petals 5, white, pinnatifid, small; stamens 10; carpels 2, united; ovary 1-loculed; placentae parietal, 2.

1. *Mitella diphylla* L.

Bishop's cap, Two-leaved Mitrewort

Low herbs; leaves mostly basal, round-ovate to reniform; blades cordate at base, terminal lobe longest; peduncle bearing 2 opposite leaves; sepals 5; petals white, pinnatifid; stamens 10.

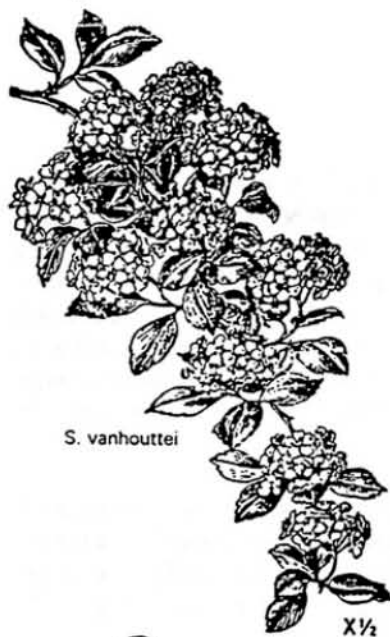
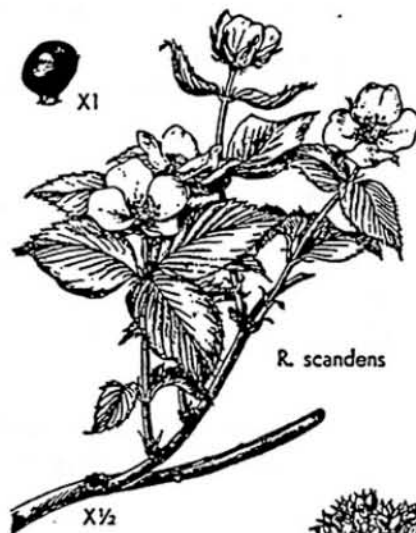
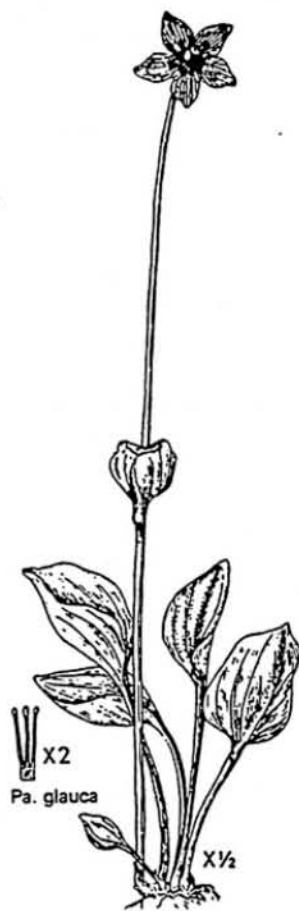
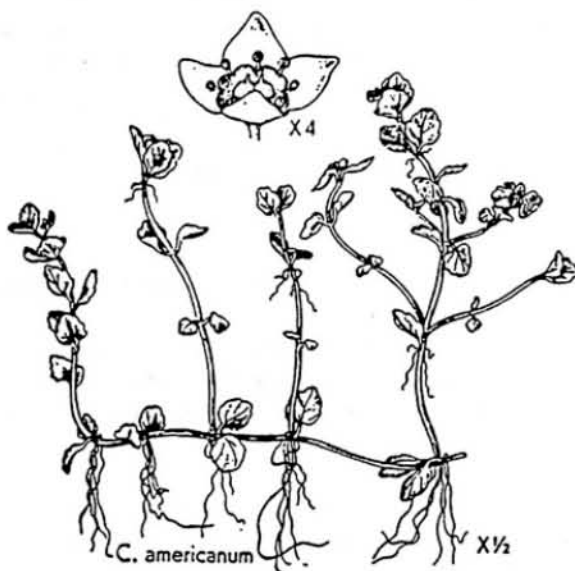
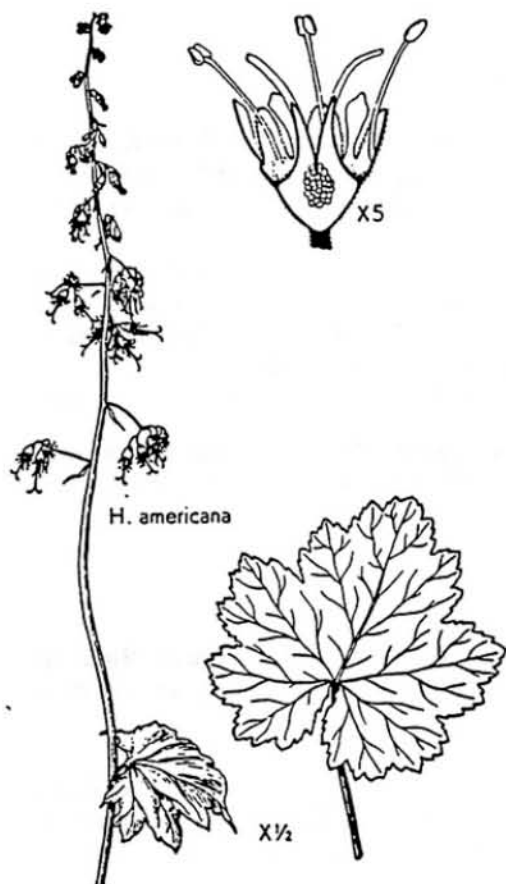
REFERENCES: *Riddell* 1834:117 (dense and shady woods); *Sullivant* 1840:20; *Selby & Craig* 1890:10.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 19 Jul 1882—Hayden's Falls, *Devol*; Spring 1889—Cols., *Craig*; 1890—Wyandotte Grove, Cols., *Selby*; 1890—Scioto R., Cols., *Selby* (OS, WOOS); 13 May 1893—Cols., *Werner* (CLM); 27 May 1893—Georgesville, *E. M. Wilcox*; 4 May 1895—Georgesville, *Osburn*; 21 Apr 1919—Haden's [Hayden's] Fall, Scioto R., *E. & S. Raymond*; 5 Jun 1923—N of Westerville, woods, *Keck*; 20 May 1924—Westerville, woods, *Whetstone*; 23 Apr 1925—Westerville, damp slopes, *Camp*; 10 May 1970—Camp Johnson, 8 mi. N of OSU on N. High, rare in damp areas beside stream, *Boone* 135; 13 May 1989—steep wooded slope on W side of Big Darby Creek, ¼ mi. S of Rt. 665, occasional, Pleasant Twp., Harrisburg Quad., *McCormac* 560.

5. HEUCHERA L. Alum-root

Erect or ascending; leaves mostly basal, long-petioled, blades round-ovate, toothed or lobed, palmately veined, bases cordate; flowers small, sometimes irregular, white, green, or purple, in panicles; peduncle naked or with a few alternate leaves; sepals, petals, and stamens 5; petals often green or purple; stamens often as long as or longer than sepals; hypanthium adnate to bases of carpels; carpels 2, united below, free upper portions forming 2 beaks on capsule; ovary 1-loculed below; placentae 2, parietal.

HEUCHERA
PARNASSIA
CHRYSOSPLENIUM
RHODOTYPOS
PHYSOCARPUS
SPIRAEA



1. *Heuchera americana* L.

Common Alum-root, Blunt Lobed Liver-leaf

Erect, tall; leaves mostly basal, long-petioled, glandular-puberulent; blades round-ovate, toothed or lobed, palmately veined, bases cordate; flowers in panicles; hypanthium minutely glandular-pubescent on outer surface; petals as long or longer than sepals; carpels 2, united below, free upper portions forming 2 beaks on capsule.

REFERENCES: Riddell 1834:117 (slaty ravines); Riddell 1835:9 (Worthington, dense & shady woods); Sullivant 1840:20; Selby & Craig 1890:9. HERBARIUM RECORDS: 1840—Cols., Sullivant; Jun 1891—Cols., Werner (CLM); 27 May 1896—Clintonville, M. Wright; 24 May 1899—Scioto R., Fullmer; 28 May 1900—OSU Botanic Garden, Lamb; 18 May 1982—Highbanks Metro Park (Franklin & Delaware Cos.), blufftop, uncommon, G. Moore 298; 22 Jul 1992—the Quarry, off Rt. 33, E side of Scioto R., approx. ½ mi. S of Rt. 161, W of entrance to Riverside Green, on limestone rocks, Perry Twp., Lowden 4994.

6. PARNASSIA L. Grass-of-Parnassus

Glabrous herb; cauline leaf 1, sessile, basal leaves long-petioled; blades entire, coriaceous, round-ovate; flowers solitary; perianth regular, strongly veined; sepals 5; petals 5, white; staminodes 5, opposite petals, each apparently 3 sterile stamens united at base; stamens 5; carpels united, ovary superior, 1-loculed; placentae 4, parietal; stigmas 4.

1. †*Parnassia glauca* Raf.

American Grass-of-Parnassus

Herb, glabrous; basal leaves long-petioled, peduncle bearing 1 leaf, sessile; blades entire, coriaceous, round-ovate; flowers solitary; perianth regular, strongly veined; sepals 5, petals 5, white; stamens 5; staminodes approx. 15, bases united in groups of apparently 3 each; carpels united; stigmas 4. Syn.: *P. caroliniana*, misapplied

REFERENCES: Riddell 1834:117 (*Parnassia americana*, wet prairies); Sullivant 1840:20; Selby & Craig 1890:10; Selby 1892a:111 (#249 Re-collections, by canal, S of city, Wilcox).

HERBARIUM RECORDS: 1834—Cols., J. Paddock Collection (ILL); 1840—Cols., Sullivant; 17 Sep 1892—Cols., on the canal S of city, E. M. Wilcox; 17 Sep 1892—Cols., Bogue; 4 Oct 1892—Cols., Bogue; 12 Sep 1985—N facing slope S side Big Darby Creek, calcareous wet seep, 0.4 mi. downstream of Rt. 665, Pleasant Twp., Knoop (KE).

7. CHRYSOSPLENIUM L. Golden Saxifrage

Decumbent herb; leaves small, short-petioled, upper alternate, lower opposite, round-ovate, entire or obscurely toothed; flowers small, solitary, nearly sessile, green, yellow, or red; sepals 4-5; petals none; stamens usually 8, in notches of disk; styles 2; ovary flat, 1-loculed; placentae 2, parietal.

1. *Chrysosplenium americanum* Schwein.

Golden Saxifrage

Decumbent plants of wet soil, small; leaves opposite below, upper alternate, short-petioled; blades round-ovate, entire or obscurely toothed; flowers small, solitary, nearly sessile, green; sepals 4-5; petals none; stamens 8, in notches of disk; styles 2.

HERBARIUM RECORD: 14 Jul 1893—Scioto R., Selby.

ROSACEAE, Rose Family

Trees, shrubs, and herbs, sometimes climbing; leaves alternate (rarely opposite), simple or compound, stipules or stipule-scars usually present; rarely dioecious; flowers perigynous or epigynous (rarely merely hypogynous), bisporangiate or rarely monosporangiate; perianth usually regular; sepals usually 5 (3-8), sometimes subtended by a circle of bracts; petals usually 5, separate, rarely none; stamens 5-many, separate; carpels 1 or few to many, separate or united; when solitary, the carpel is free from the hypogynous hypanthium and fruit is a drupe or rarely an achene; when 2 to many, separate, carpels are free from the hypogynous hypanthium and fruit is an aggregate of achenes, follicles, or drupelets; when 2-5 carpels are united, the flower is epigynous (hypanthium is adnate to the ovary), styles or style-branches, stigmas, and locules are as many as carpels (except when, rarely, locules become twice as many by growth of a false septum in each carpel), placentae are axile, and fruit is a pome.

Cotoneaster Medik., *Kerria* DC. and *Rhodotypos* Siebold & Zucc. are genera of ornamental shrubs that occasionally escape from cultivation. Fire-thorn, *Cotoneaster pyracantha* (L.) Spach (Syn.: *Pyracantha coccinea* Roem.), is a thorny evergreen, with blades oblanceolate, crenate-serrate, flowers small in dense corymbs, petals white and pome bright red or orange (27 Aug 1897—near Hilliard, W. Kellerman; 14 Jun 1989—OSU Campus, N side of B&Z bldg., 1735