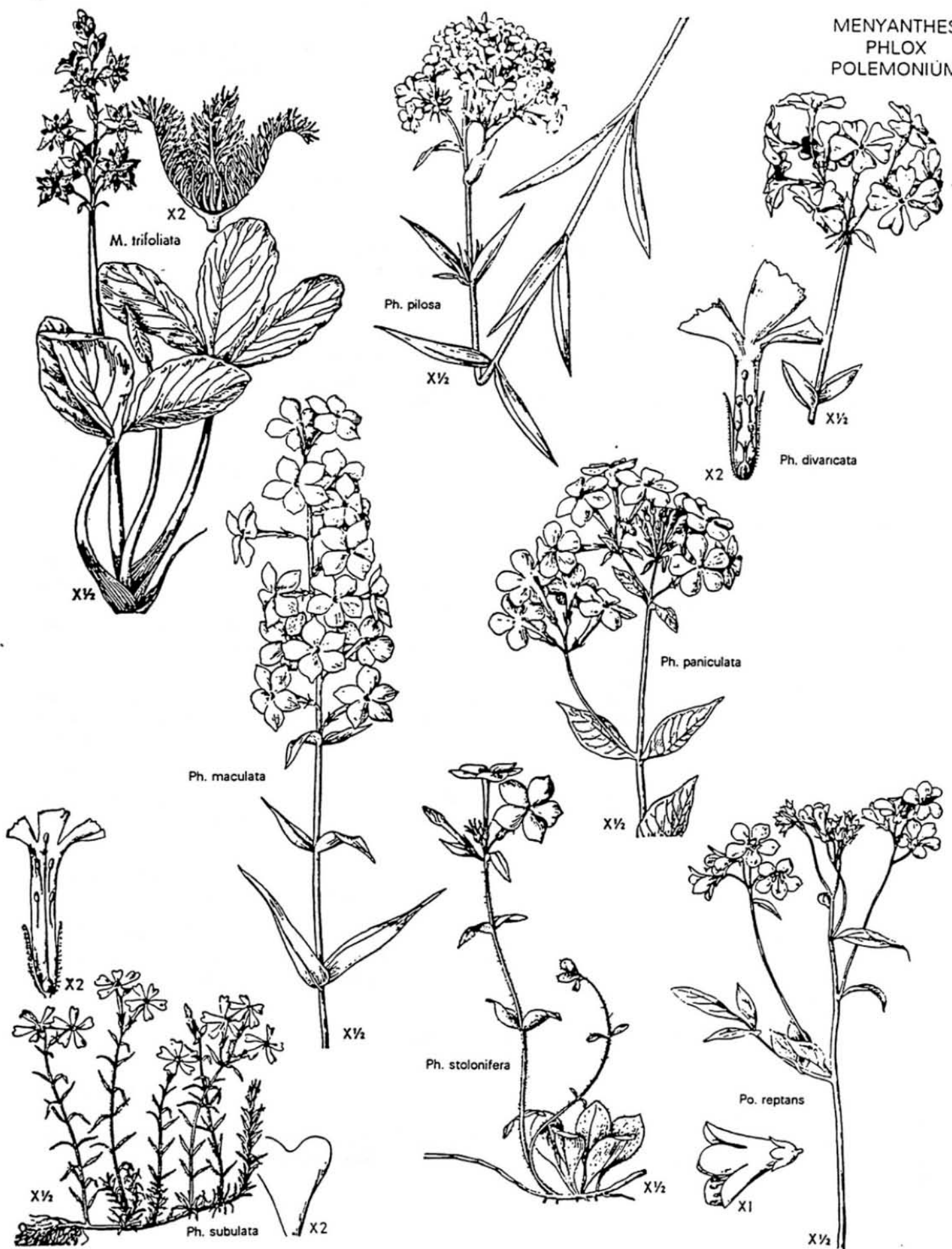


MENYANTHES
PHLOX
POLEMONIUM



HERBARIUM RECORD: 20 Jun 1897—Scioto Valley, *W. Johnson*.

MENYANTHACEAE, Buckbean Family

1. MENYANTHES L. Buckbean

Bog and marsh herb; leaves crowded near base of stem, 3-foliolate; raceme scapose; flowers dimorphic as to relative length of style and stamens, the parts in 5's; corolla 1-1.5 cm long, white or pink, lobes fringed on inner surface.

1. †*Menyanthes trifoliata* L.

Buckbean, Bogbean

Bog or marsh herb; leaves 3-foliolate, alternate, bases sheathed; perianth parts in 5's; corolla white or pink, lobes fringed on inner surface; raceme scapose.

REFERENCES: Sullivant 1840:40; Selby & Craig 1890:13; Stuckey & Roberts 1977:36; Roberts & Cooperrider 1982:63; McCance 1984:A-297; Cooperrider 1995:305 (illus. p. 307).

HERBARIUM RECORDS: 14 Sep 1930—small bog at Baumgardner's Pond, Jackson Twp., *Chapman & Gordon*; 17 May 1931—bog at Baumgardner's Pond, Jackson Twp., *Gordon & E. Thomas*.

POLEMONIACEAE, Phlox Family

Herbs; leaves alternate or opposite, simple or compound; flowers hypogynous, perfect, often in cymes; calyx 5-lobed; corolla regular, 5-lobed, salverform or campanulate; stamens 5, on corolla-tube; disk present; carpels 3, united; ovary 3-loculed; placentation axile; style 1; stigmas 3; fruit a capsule enclosed by the persistent, sometimes accrescent, calyx.

a Cauline leaves opposite, simple, entire; corolla salverform. **1. PHLOX**

a' Cauline leaves alternate, pinnately compound; corolla campanulate. **2. POLEMONIUM**

1. PHLOX L. Phlox

Leaves entire, mostly opposite, bracts sometimes alternate; calyx tubular, 5-ribbed, often scarious between ribs; corolla salverform, tube long and slender, the 5 lobes often emarginate; stamens inserted in corolla tube at different levels, wholly included or slightly exserted; style short or elongate; ovules 1-4 in each locule.

a Stems prostrate and matted; leaves rigid, linear to subulate, crowded, ½ to 2 cm long, often with fascicles of leaves in axils; cymes few-flowered; corolla rose-purple or pink, 1-2 cm wide, lobes deeply notched. **3. *P. subulata***

a' Stems erect or ascending; leaves flat, not rigid and subulate, sometimes linear, longer than 2 cm.

b Style not reaching beyond middle of corolla-tube, shorter than fruiting calyx.

c Without prostrate basal shoots; corolla usually red-purple, lobes not emarginate, tube usually hairy; leaf-blades sharp-pointed. **1. *P. pilosa***

c' Prostrate basal shoots present; corolla usually blue or blue-purple, the lobes usually emarginate; leaf-blades acute or obtuse. **2. *P. divaricata***

b' Style reaching beyond middle of corolla-tube and exceeding fruiting calyx.

d Lateral veins of leaf-blades anastomosing near the ciliate margin; pedicels short; inflorescence pyramidal; anthers cream-color. **4. *P. paniculata***

d' Lateral veins of leaf-blades not anastomosing, margins not ciliate.

e Rosette leaves evergreen; basal stolons present at anthesis, blades spatulate and petioled; flowering stems villous above, nodes few and distant; flowers few, in a single cyme; calyx glandular-pubescent. **5. *P. stolonifera***

e' Rosette leaves often not evergreen; basal flowerless shoots present or absent, leaves not spatulate; inflorescence usually of several cymes, cylindrical, much longer than wide; stem dotted with red or purple. **6. *P. maculata***

1. *Phlox pilosa* L.

Downy Phlox

Plants ascending; leaves simple, opposite, linear to lanceolate; corolla pinkish-violet or white, tube usually pilose; anthers at most reach 2/3 the length of corolla tube.

REFERENCES: Sullivant 1840:28 (*Phlox aristata* Michx.?). Selby & Craig 1890:13; Cooperrider 1995:343 (illus. p. 342).

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., Sullivant; 9 May 1891—Big Darby, Selby (WOOS); 6 May 1892—Georgesville, Werner (CLM).

2. *Phlox divaricata* L.

Common Blue Phlox, Wild Sweet William

Stems erect or ascending from a basal shoot; leaves simple, opposite; leaf-blades linear to ovate; corolla blue, blue-purple or white, lobes often shallowly notched; style and stamens short, at most not reaching the midpoint of the corolla tube; calyx and pedicels with glandular pubescence.

REFERENCES: Riddell 1834:156 (open woods); Sullivant 1840:28; Craig 1890:90 (common in woods, but rarely found elsewhere; some have pure white flowers and the color seems to be constant from year to year; at least we find white ones in the same place each season; 27 Apr 1883, 30 Apr 1884, 10 May 1885, 19 Apr 1886, 14 Apr 1887, 21 Apr 1888, 9 Apr 1889); Selby & Craig 1890:13; Cooperrider 1995:341 (illus. p. 342).

HERBARIUM RECORDS: 1833—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., Sullivant; 2 May 1882—Cols., W. Green; May 1888—Cols., Craig; May 1889—OSU woods, Cols., Craig; May 1890—Cols., Selby; 19 May 1891—Big Darby, Selby (OS, WOOS); 3 May 1899—Benden [Blendon], Helfrich; 7 May 1901—Cols., Mead; 9 May 1911—1 mi. NE of Westerville, Hanawalt; 27 May 1923—Westerville, Lyon; 10 May 1924—Westerville, Hummell; 24 Feb 1948—woods near Morse Rd. & Indianola Ave., Beatley; 26 Apr 1970—Clintonville, stream in Whetstone Park, W. Owen 101; 28 Apr 1970—Darby Creek, S of Darby Creek Park, wooded damp hillsides, Boone 87; 5 Apr 1977—Worthington, Colonial Hill Elementary School, outdoor laboratory, Ficek 2; 24 Apr 1982—Cols., E bank of Olentangy R., between Broadway & Henderson Rd., D. Taylor 9; 6 May 1982—Highbanks Metro Park (Franklin & Delaware Cos.), ravine slope, W. Reed 229; 6 May 1982—Highbanks Metro Park (Franklin & Delaware Cos.), G. Moore 230; 10 May 1982—Blendon Woods, Owens; 28 Apr 1985—along Big Darby Creek, N of Darbydale off Rt. 665, Chansa-Ngawej 2; 17 Apr 1986—Highbanks Metro Park (Delaware Co.), woods, Watts 275 (OS, OWU); 19 Apr 1986—1.5 mi. W of jct. of Rt. 33 and Glick Rd., 0.2 mi. N of Glick Rd., Yang 103; 27 Apr 1986—Highbanks Metro Park (Delaware Co.), open woods, Witsberger 889 (OS, OWU); 13 May 1989—W side of Big Darby Creek S of Rt. 665, Pleasant Twp., Harrisburg Quad., McCormac 550; 8 May 1989—Overbrook Drive Ravine, between N. High St. & Cooke Rd., Clinton Twp., Lowden 4025; 19 May 1990—just S of Plain/Jefferson Twp. Line & intersection of Blacklick Creek & Morse Rd., Jefferson Twp., Lowden 4321; 26 Apr 1991—Whetstone Park of Roses, wooded trail along creek, S of rose garden, Cols., Gara 27; 25 Apr 1992—Highbanks Metro Park (Franklin Co.), Sharon Twp., Lowden 4926.

3. †*Phlox subulata* L.

Moss Pink, Mountain Pink, Ground Phlox

Stems prostrate to ascending; leaves subulate to linear; corolla pink, purple or white, lobes notched.

REFERENCES: Riddell 1834:156 (*Phlox setacea*); Cooperrider 1995:341 (illus. p. 342).

HERBARIUM RECORDS: May 1890—Central College, Selby (WOOS); 3 May 1911—2½ mi. E of Westerville, Hanawalt; 25 Apr 1925—Big Walnut Creek, Westerville, Camp; 5 May 1925—Big Walnut Bluffs, dry rocky soil, Westerville, Camp; 21 May 1986—Park of Roses, Cols. [probably escaped from cultivation], Blanco; 1 Aug 1990—Hoover Dam Park, woods N of entrance off Cabbage Rd., S of Walnut St., Blendon Twp., Lowden 4493; 18 Apr 1991—Hoover Dam Park, N of entrance off Cabbage Rd., woody area S of Walnut St., Blendon Twp., Lowden 4587.

NOTE: Sullivant 1840:28 & Selby & Craig 1890:13 reported on plants collected in adjacent counties.

4. *Phlox paniculata* L.

Garden Phlox, Perennial Phlox, Sweet William

Plants ascending; leaves simple, opposite; leaf-blades with lateral veins conspicuous, margins bearing numerous minute rigid antrorse cilia; tips of anthers and stigmas visible at top of corolla tip; corolla purple to white, lobes appeared unnotched.

REFERENCES: Riddell 1834:156 (bottomland); Sullivant 1840:28; Craig 1890:90 (along the river S of the brook, and on the island); Selby & Craig 1890:13; Cooperrider 1995:344 (illus. p. 345).

HERBARIUM RECORDS: [ca. 1830s]—Worthington, *J. Paddock* (URB); 1834—Worthington, *J. Paddock Collection* (ILL); Jul 1888—Cols., Craig; 14 Jul 1888—Olentangy banks, Cols., Selby; 1889—OSU island, Cols., Craig; 26 Aug 1890—Cols., Werner (CLM); 20 Aug 1892—Cols., Bogue; 27 Jul 1982—Highbanks Metro Park (Franklin & Delaware Cos.), floodplain, G. Moore 231 & 232; 31 Jul 1990—along E bank of Olentangy R., walk path, between Whetstone & Northmoor Parks, Clinton Twp., Lowden 4461; 11 Oct 1991—Delawanda Park, woody area along E bank of Olentangy R., Sharon Twp., Lowden 4874.

NOTE: Perhaps also *Phlox nitida* reported by Riddell 1834:156 belongs here.

5. †*Phlox stolonifera* Sims

Creeping Phlox

REFERENCE: Riddell 1834:156 (slaty ravines).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Cooperrider 1995:343 (illus. p. 345).

6. *Phlox maculata* L.

Spotted Phlox, Wild Sweet William

Plants ascending, stems usually blotched with purple; leaves opposite, simple, long-acuminate at apex; leaf-margins mostly without cilia; inflorescence longer than wide; tips of stamens visible at top of corolla tube; corolla purple, lobes unnotched.

REFERENCES: Riddell 1834:156 (marshes); Sullivant 1840:28; Craig 1890:54, 90 (#258, same situation as *Phlox paniculata*, not abundant, 11 Jul 1882, 24 Jul 1887, University Farm Sep 1887, 29 Jul 1888; #258a *Phlox maculata* L. var. *candida* Michx., is a white var., occasionally met with on

the island, it differs from the type in having no spots); Selby & Craig 1890:13 (#534 & 535 *Phlox maculata* L. var. *candida* Michx.); Cooperrider 1995:344 (illus. p. 345).

HERBARIUM RECORDS: 1833—Worthington, *J. Paddock Collection* (ILL); 1837—Cols., *J. Paddock Collection*, *I. G. Jones* (ILL); 8 Aug 1890—Taylor's Woods, Cols., *Selby* (OS, WOOS); 7 Jul 1892—Worthington, *Bogue*; 1 Aug 1892—Alum Creek Station, near Cols., *E. M. Wilcox*; 14 Aug 1892—near Cols., *E. M. Wilcox*.

2. POLEMONIUM L. Greek Valerian, Jacob's Ladder

Tufted, erect or diffuse, glabrous or pubescent; leaves pinnately compound, basal long-petioled, leaflets entire, lanceolate or oblong; flowers pediceled; corolla blue, 10-15 mm long, about twice as long as calyx, 5-lobed; stamens inserted on corolla tube; capsule ovoid.

1. *Polemonium reptans* L.

Jacob's-ladder, Greek Valerian

Two varieties are recognized:

var. *reptans*

Leaves pinnately compound, 7-17 broad leaflets; inflorescence short spiculate-pubescent; stems mostly glabrous; corolla blue-purple.

REFERENCES: Riddell 1834:156 (dense and shady woods); Sullivant 1840:28; Craig 1890:90 (sparingly along the fence from the seed barn to the river, 18 Apr 1882, 5 May 1883, 5 May 1884, 12 May 1885, 23 Apr 1887, 20 Apr 1889); Selby & Craig 1890:13; Cooperrider 1995:338 (illus. p. 342).

HERBARIUM RECORDS: 12 Apr 1882—Olentangy R., *W. Green*; Spring 1889—Cols., *Craig*; 20 May 1892—near Cols., *E. M. Wilcox*; Jun 1892—Cols., *Addison* [maybe "Addisas"]; May 1895—Georgesville, *Osburn*; 5 May 1896—Worthington, *M. Wright*; 30 Apr 1899—Blendon, *Helfrich*; 7 May 1901—N Cols., *Mead*; 2 May 1911—Westerville, moist woods, *Hanawalt*; 22 May 1923—Big Walnut, rocky hillsides, *Betts*; 10 May 1924—Westerville, creek bottom, *Lehman*; 21 May 1924—Minerva Park, *Boyer*; 23 May 1924—Big Walnut, Westerville, woodland, *Bauer*; 14 Apr 1938—Cols., *S. Humphrey*; 25 Apr 1970—corner of Scioto River Rd. & Leeds, damp wooded hillside, *Boone 30*; 5 May 1977—Ohio School for the Deaf, land lab off Morse Rd., upland rich shady woods, *Tyrrell 55*; 29 Apr 1982—Highbanks Metro Park (Franklin & Delaware Cos.), *G. Moore 233*; 10 May 1982—Blendon Woods, *Owens*; 5 May 1985—Sawmill Rd., 1 mi. S of Rt. 161, swampy woods, *Rutter 158*; 12 May 1986—Highbanks Metro Park (Delaware Co.), woods, *Watts 299*; 13 May 1989—W side of Big Darby Creek, ¼ mi. S of Rt. 665, mesic wooded slope, Pleasant Twp., Harrisburg Quad., *McCormac 563*.

†var. *villosum* E.L. Braun

Braun's Jacob's-ladder

Similar to typical *Polemonium reptans* except inflorescence and stems villous pubescent.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; [date?—Cols., OSU, *Craig*; Spring 1889—Cols., *Craig*; May 1889—Franklin Co., *Selby*; 20 May 1892—near Cols., *E. M. Wilcox*; 21 Apr 1927—near Alum Creek, *S. Miller*; 10 Jun 1990—McOwen Rd., woody swamp area, just W of jct. with Dixon Rd., Jefferson Twp., *Lowden 4379*.

NOTE: Not mentioned for Franklin Co. by Cooperrider 1995:339.

HYDROPHYLLACEAE, Waterleaf Family

Herbs, usually pubescent; leaves entire, lobed, or compound, alternate; flowers hypogynous, bisporangiate, solitary or in cymes; sepals 5, united at base or separate; corolla regular, of 5 petals united to middle or a little above, usually appendaged in the tube; stamens 5, inserted on corolla-tube; carpels 2, united; styles 2 or partly united; ovary 1-loculed; placentae 2, large, sometimes nearly meeting, ovary then appearing 2-loculed; fruit a capsule.

a Style bifid to about middle or below; leaves pinnately lobed; corolla campanulate to rotate; flowers in helicoid cymes which become elongate and straight, racemelike. 1. PHACELIA

a' Style bifid only at tip; leaves pinnately or palmately lobed; corolla tubular to campanulate; flower clusters several times forked, often compact, not elongate. 2. HYDROPHYLLUM

1. PHACELIA Juss. Phacelia

Leaves pinnately lobed to pinnately compound; helicoid cymes lengthening and straightening after anthesis; corolla broadly campanulate, blue or white, 0.5 to somewhat more than 1 cm long, lobes sometimes fringed; stamens more or less exsert.

a Corolla-lobes fringed; filaments villous, about as long as corolla. 1. *P. purshii*

a' Corolla-lobes not fringed, sometimes minutely toothed, tube with conspicuous scales; filaments villous, long exsert; plants stipitate-glandular. 2. *P. bipinnatifida*