PAPAVERACEAE 77

Treatment revised to align with phylogenetic and other studies that place our native Papaver species (P. pygmaeum and P. radicatum/P. coloradense) into new genus Oreomecon, place P. argemone in genus Roemeria, and place *Meconopsis cambrica* in genus *Papaver*.

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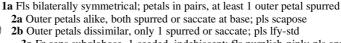
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PAPAVERACEAE Poppy Family

Fls solitary to several, \mathcal{G} , gen hypog but sometimes perig, mostly showy, white, yellow, orange, red, pink, or bluish; sepals 2–3, quickly shed as the fl opens; petals 4(6–12); stamens few (3) to ∞; pistil 2–several-carpellary, ovary 1-celled; fr caps, elongate to obovoid to globose, dehiscent by valves or subterminal pores, occ indehiscent; ann to per herbs (ours) to small trees, often with colored or milky sap, lvs basal and/or cauline, simple, entire to palmately or pinnately divided. (Fumariaceae).

Adlumia fungosa (Aiton) Greene ex Britton, Sterns & Poggenb., e N Am intro with twining sts and bilaterally symmetric fls with petals fused most of their length, is a very uncommon garden escape near Vancouver, BC. Argemone munita Durand & Hilg. subsp. rotundata (Rydb.) G.B. Ownbey apps our area in Malheur Co, OR; Eurasian intro Glaucium flavum Crantz is a historic (1914) waif from near Portland, OR; Eurasian intro G. corniculatum (L.) Rudolph apps our area in c MT.



3a Fr caps subglobose, 1-seeded, indehiscent; fls purplish-pink; pls ann **Fumaria 3b** Fr caps obovoid to linear, several-seeded, dehiscent; fls yellow or white to pinkish; pls per, bien, or (rarely) ann Corydalis

1b Fls radially symmetrical; petals neither paired nor spurred

4a Sepals fused into a conical caps, shed as a unit; sap watery; recep dilated in fr, forming a disk above base of the ovary; stigma lobes 4–8, linear

4b Sepals distinct, shed individually as flopens; recep not dilated in fr; stigma various; sap milky, white to orange (watery in *Canbya*)

5a Petals usually 4, mostly ≥ 1 cm; sepals 2; stamens $12-\infty$; style absent or present; lvs lobed to pinnatifid

6a Style absent, stigma disk-like; fl color various; caps falsely several-celled, dehiscent by subterminal pores

7a Caps glab; petals not yellow; intro spp.

Papaver

Dicentra

7b Caps strigose; petal color various

8a Petals yellow; native spp. of alp habitats

Oreomecon

8b Petals red; intro sp. of disturbed habitats

Roemeria

6b Style present, stigma lobes 2-6; fls yellow

9a Stigma lobes 4–6; caps ovoid, $< 6 \times$ as long as wide; infl not umbellate;

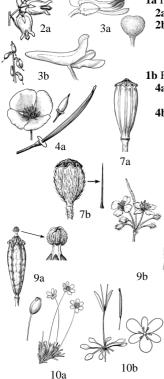
petals 2–4 cm **Papaver 9b** Stigma lobes 2; caps \pm linear, $> 10 \times$ as long as wide; infl gen umbellate;

petals ca 1 cm Chelidonium **5b** Petals usually 6, 2.5–5 mm; sepals 3; stamens 3–15; style absent; lvs mostly

10a Lvs linear, all basal and tufted; petals yellow; caps ovoid, 2.5–3 mm

Canbya

10b Lvs wider, not tufted, some cauline and opp; petals white; caps linear, 10–18 Meconella



Canbya Parry Canbya

Sepals 3, distinct; petals 5–7; stamens 6–15; pistil 3(4)-carpellary, style absent, stigmas 3–4, radiate; caps 1-celled; ± acaulescent ann with watery sap and tufted lvs. (For William W. Canby, 1831–1904, Am botanist).



C. aurea S. Watson. Golden c. Minute, glab ann with ∞ short brs and fleshy, glaucous, linear lvs < 1 cm × scarcely 0.5 mm, forming tiny cushions 0.5–2 × 0.5–4 cm; peduncles several, subfiliform, 1–6 cm; sepals 3, shed separately, ca 2 mm; petals 6, yellow, 3–5 mm; stamens 6–15; caps ovoid, 2.5–3 mm; dry sandy areas in sagebr des; Deschutes and Crook cos, OR, s to nw NV.

Chelidonium L. Greater Celandine

Sepals 2, distinct; petals 4; stamens ∞ ; pistil 2-carpellary, style \pm distinct, stigma 2-lobed; caps 1-celled; lfy-std, bien or per herbs with yellow to orange sap. (Gr *chellidon*, swallow [bird], in reference to lore that mother swallows wash eyes of young with sap).



C. majus L. Celandine. Pls to 10 dm, erect and br, immature sts often pubescent; basal lvs rosulate, often withering by anthesis, cauline lvs alt, $1-2 \times \text{pinnately lobed}$, bls to 20 cm; infl umbel or occ fls solitary; sepals 2, 5–8 mm; petals 4, yellow, to 1 cm; caps linear to narrowly oblong, 2–5 cm; wastelots, roadsides, and disturbed for edges, lowl; Eurasian intro; occ weed; sw BC to near Portland, OR, e sporadically to c BC and w MT; e N Am.

Corydalis Medic. Corydalis

Sepals 2, distinct; petals 4 in pairs, outer pair gen \pm hooded above, but only 1 spurred at base; stamens 6; style present, stigmas 4–8-lobed; caps 2-celled, linear to ovoid or obovoid, dehiscent (often explosively); ann to per herbs with watery sap, fleshy roots or rhizomes and large, decompound lvs. (Gr name for the crested lark, which was possibly suggested by the crested hood or by the spur of the upper petal). (*Capnoides*).



2a Fls pinkish, yellow-tipped; caps (25–)30–45 mm; pls ann or bien, erect, 2–8 dm; lf bl 3–5 × pinnate; mostly in dry, open to shaded, often disturbed soil; AK to s BC, including VI, and nw MT (GNP), e to Newf and GA; pink c., evergreen c.

1 C. sempervirens (L.) Pers.

2b Fls yellow; caps 8–25 mm

3a Pls ann or bien, taprooted; lvs bi- to quadripinnate, ultimate segms ± linear; spur (2–)3–7 mm; caps 20–25 mm; moist to dry soil; widespread e Cas in our area but also very occ w Cas and OM, common in much of N Am; golden c., scrambled eggs; ours subsp. aurea

2 C. aurea Willd.

3b Pls per with large fleshy root; lvs triternate, ultimate segms ± elliptic-obovate; spur of corolla ca 2–3 mm, caps 8–11 mm; European intro, often cult and rarely escaped; PT and Multnomah Co, OR; yellow c. 3 **C. lutea** (L.) DC.

1b Caps ± obovoid, explosively dehiscent; fls never yellow; pls strong per

4a Lower st lvs 4–6 × pinnate, ultimate segms 5–15 × 2–5(–6) mm; clawed petal erosecrested; corolla 10–20 mm, pale to deep pinkish or rose-lavender; wet places; in Cas, Skamania Co, WA, to Lane Co, OR; Clackamas c. (*C. caseana* subsp. *a.*); perhaps better considered a subsp. of no 5; further study needed

4 C. aquae-gelidae M. Peck & W.C. Wilson

4b Lower st lvs 2–4 × pinnate, segms mostly > 15 × 5 mm; clawed petal often not erose-crested

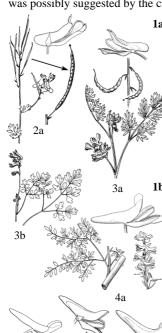
5a Main racemes mostly with > 50 fls; corolla white to pink, tip deep pinkish or purple, 17–25 mm; spurred petal not strongly crested but with free margins; st lvs 3–6; wet places, mostly along streams; rare, ne OR and ne CA, e to ID, UT, CO, and NM; Case's c.; 2 subspp. in our area
 5 C. caseana A. Gray

a1 Racemes simple or few-br, compact; spurred petal gen with margin reflexed > 1.5 mm; ne OR e to Valley, Boise, Elmore, and Camas cos, ID

subsp. cusickii (S. Watson) G.B. Ownbey

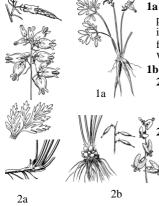
a2 Racemes openly br, loose; spurred petal with margin reflexed much < 1.5 mm; nc ID subsp. hastata (Rydb.) G.B. Ownbey

5b Main racemes 15–35-fld; corolla pink, not much more deeply tinged at tip; spurred petal crested but without free margins; st lvs mostly 2–3; moist, shaded soil; s VI, BC, to Douglas Co, OR, from w slope Cas to coast, and in CRG; Scouler's c. (C. allenii, C. macrophylla)
6 C. scouleri Hook.\



Dicentra Bernh. Bleedingheart

Sepals 2, distinct; petals 4, in pairs, outer pair both spurred to saccate at base, white to purplish (yellow); stamens 6; style distinct, stigma 2-lobed; caps 2-celled, \pm elongate; scapose per with watery sap, fleshy, fascicled roots or rhizomes and \pm ternately decompound lvs. (Gr *dis*, twice, and *kentron*, spur, in reference to the spur of outer petals).



1a Fls solitary, terminal; scape 4–8(–10) cm; roots fusiform, fascicled; corolla white to pinkish, cordate-saccate at base, outer petals widely spreading and slightly recurved; inner petals gen purplish-tipped, 12–15 mm; well-drained, often seasonally moist soil, foothills to subalp slopes; se BC, s in Cas of WA and OR to CA and NV, e to MT, WY, and UT; steer's head

1b Fls several; scape gen > 10 cm; roots not fusiform

2a Fls pan, mostly deep pink; outer petals cordate-saccate at base, sac 2–4 mm deep; inner petals 10–15 mm; pls rhizomatous, not tuber-bearing; moist woodl, lowl to lower mts; s BC to CA, Cas to coast, disjunct in se WA, ne OR, and adj ID; Pac b.; ours subsp. formosa 2 D. formosa (Andrews) Walp.

2b Fls racemose, white or pale pink; outer petals spurred-saccate, sac 7–11 mm; inner petals ca 10 mm; pls with erect rootstocks covered with small, ± globose tubers; moist woodl to gravelly banks; Saddle Mt, OR, e through CRG to se and ne WA, ne OR, and w ID, also in c and e N Am; Dutchman's breeches (*D. occidentalis*)3 D. cucullaria (L.) Bernh.

Eschscholzia Cham. Poppy

Recep dilated beneath sepals, forming a disk; sepals 2, fused, shed as a unit; petals gen 4; stamens 12–∞; style absent, stigmas 4–8-lobed; caps 1-celled, with 2 parietal placentae; per, ± scapose herbs (ours) with watery or orange sap and ternately decompound lvs. (For Johann Friedrich Eschscholtz, 1793–1831, Estonian scientist who traveled with Capt. Kotzebue; he visited CA in 1816).



E. californica Cham. CA p. Glab and glaucous per, in our area often blossoming as an ann and not surviving winter, 1–several-std, 1–5 dm; peduncles 6–20 cm; sepals connate into a conical (dunce-cap-like) unit, shed as the fl opens; petals 8–40 mm, pale yellow to orange (occ white); caps linear, base covered by prolonged, hollow recep with 1–2 mm wide rim; w N Am intro, aggressive weed; VI and s BC to s OR, native CA and n Mex, e to TX; ours subsp. **californica** (*E. columbiana*, *E. douglasii*).

Fumaria L. Fumitory; Ramping-fumitory

Sepals 2, distinct, ovate, with peltate attachment, margins entire to lacerate; petals 4, in pairs, only the upper petal spurred-saccate at base; stamens 6; style distinct, stigma inconspicuous; fr subglobose to obcordate, 1-seeded, nutlike, indehiscent, tiny; caulescent anns with watery sap, erect to sprawling sts, and decompound lvs. (L fumus, smoke, prob in reference to the smell or to the pale color of the fls).

Measurements are for fresh sepals and fls, which shrink upon drying; measure fls from base of spur to tips of petals. Fl colors given below exclude the gen dark reddish-purple petal tips.



1a Fls 5–8(–9) mm; sepals 0.5– 3.5×0.25 –1.5 mm; frs rugose when dry; lf lobes mostly 0.5–1.5(–3) mm wide

2a Fls (6–)7–8(–9) mm, pale pink to purplish-pink; sepals 1.5–3.5 × 1–1.5 mm; frs truncate to retuse, slightly wider than long; occ weed in disturbed areas; European intro; scattered on both sides Cas in our area; common f. 1 F. officinalis L.

2b Fls 5–6 mm, light pink; sepals 0.5–1(–1.5) × 0.25–0.5 mm; frs rounded to truncate or slightly emarginate, ca as wide as long; uncommon weed of dry ground and roadsides; European intro; ne OR, and bordering our area in c MT; few-fl f. (*F. parviflora* misapplied) 2 F. vaillantii Loisel.

1b Fls (8–)9–13 mm; sepals (2.7–)3–5 \times 1.5–3 mm; frs \pm smooth when dry; If lobes mostly (1–)1.5–5 mm wide

3a Racemes ca = peduncle; fls (8–)9–11(–12) mm, pink to very pale pink; sepals dentate in ca lower half; occ weed, waste ground and landscaping; European intro; sw BC to PT and sw WA; common r. 3 **F. muralis** Sond. ex W.D.J. Koch

3b Racemes much > peduncle; fls (10–)11–13 mm, pink; sepals ± entire; occ weed of urban wastelots; European intro; sw BC and King Co, WA; Martin's r.

4 F. reuteri Boiss.

Meconella Nutt. Meconella

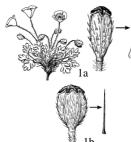
Sepals 3, distinct; petals (4–5)6; stamens 3–6(12); pistil 3-carpellary, style absent, stigma 3-lobed; caps 1-celled; small, opp-lvd ann with watery sap and tiny, white to yellow fls, 1–few on slender peduncles that are \pm lfy at the base. (Diminutive of Gr *mekon*, poppy). (*Platystigma*).



M. oregana Nutt. White m. Glab and glaucous ann; st simple to \pm br, 2–10 cm; lvs entire, the basal spatulate-obovate, 6–18 mm, the cauline opp, sessile; fls solitary on axillary and terminal peduncles 2–4 cm; sepals ca 1.5 mm; petals 6, white, 2.5–4 mm; stamens (3)6, anthers oval, much < filaments; caps linear, 10–18 mm; open ground, gen where wet in the spring; scattered, VI, PT, CRG, s Wi Va, sw OR, and CA. (*Platystemon o.*).

Oreomecon Banfi, Bartolucci, J.-M.Tison & Galasso. Alpine poppy

Fls solitary, pedunculate; sepals 2, distinct; petals 4(6), showy, white, yellow, or red to violet; stamens ∞ ; pistil 3–18(–22)-carpellary, style absent, stigma sessile, 3–18(–22)-lobed, forming a disk; caps 1-celled, globose to obovoid, pubescent; scapose to caulescent ann or per herbs with colored or milky sap, lvs basal, lobed to pinnately dissected. (Gr oreo, mountain, and mekon, Gr name for the poppy). (*Papaver* in part)



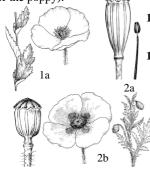
1a Caps obovoid to obconic, trichomes white to ivory-colored; peduncles sparsely hispid, hairs pale throughout; petals mostly orange with yellow base, or orangepink, occ yellow; pls to 12 cm; talus and ridges; endemic to RM of nw MT, se BC and sw Alta; alp p. (*P. p.*) 1 **O. pygmaeum** (Rydb.) Krivenko

1b Caps ellipsoid to oblong-obconic, trichomes light to dark brown; peduncles often densely hispid, hairs pale below, gen brown above; petals yellow, occ pinkish to red; pls to 17 cm; talus and ridgelines; circumboreal, s in RM to se BC, sw Alta, and in SRM to NM, in our area in Lemhi Co, ID, and app in Carbon Co, MT; CO alp p. (*P. c.*; *P. kluanense* and *P. radicatum* subsp. *k.* misapplied)

2 O. coloradensis (Fedde) Krivenko

Papaver L. Poppy

Infl cymiform, fls solitary or in 2s or 3s, on long scapes or peduncles, fls bracteate, nodding in bud; sepals 2, distinct; petals 4(6), showy, white, yellow, or red to violet; stamens ∞ ; pistil 3–18(–22)-carpellary, style absent, stigma sessile, 3–18(–22)-lobed, forming a disk; caps 1-celled, globose to obovoid, glab; taprooted ann, bien, or per herbs with colored or milky sap, lvs basal and cauline, alt, simple, 1–3× pinnately lobed or parted. (L name for the poppy).



- 1a Lvs undivided, st lvs cordate-clasping, mostly glab; petals white to purple, occ black at base; caps glab, subglobose, 2.5–5 cm, not ribbed; chiefly lowl w Cas in our area; opium p.

 1 P. somniferum L.
- **1b** Lvs pinnately divided, st lvs not cordate-clasping, often hairy; petals scarlet to orange (occ white), gen black at base; caps ribbed (obscurely so in *P. rhoeas*); scattered throughout our area
 - 2a Peduncles distally appressed-hispid; petals 2.5–4 cm; caps > 2 × as long as wide; pls to 7 dm; occ in waste places; long-headed p.

 2 P. dubium L.

 2b Peduncles distally spreading hispid; petals 4–7 cm; caps < 2 × as long as wide;
 - **2b** Peduncles distally spreading-hispid; petals 4–7 cm; caps < 2 × as long as wide, occ in waste places; corn p., field p. 3 **P. rhoeas** L.

Roemeria Medik. Prickly-headed Poppy

Fls \mathcal{C} , solitary, axillary or terminal, bracteate, peduncle straight or recurved; sepals 2, pubescent, quickly shed as the fl opens; petals 4, showy, purple, mauve, or red; stamens ∞ ; pistil 2–4(–6)-carpellate; ovary 1-locular, style absent or obscure, stigmas 2–4(–6), radiate; caps slenderly cylindric or terete, 2–4(–6)-valved, dehiscing from apex almost to base, pubescent; peduncle straight or recurved; ann herbs with basal and cauline, alt, simple, 2–3× pinnately lobed lvs. (For Johann Jakob Roemer, 1763-1819, Swiss physician and naturalist). (*Papaver* in part).



R. argemone (L.) C. Morales, R. Mend. & Romero García. Long p. Sts erect, to 5 dm, hispid; lvs to 12(–20) cm; peduncles distally appressed-hispid; petals dark red, sometimes with a dark basal spot, to 25 mm; anthers pale blue, filaments strongly dilated near tip; stigmas 4–6, disc convex, radial; caps slenderly oblong-obovoid, hispid; occ in waste places; s BC s, both sides Cas, to nc OR, also in ID, UT and PA. (*P. a.*)