

Treatment revised to include *R. basalticus*, a new species endemic to WA published in 2024.

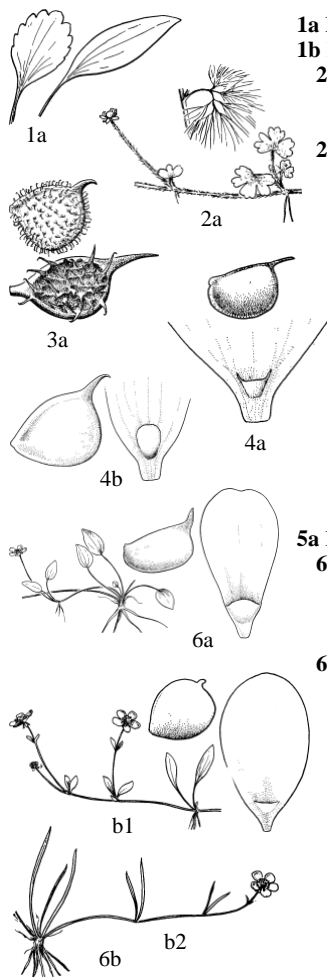
References: Giblin, D.E., C. A. Wright, P. Slichter, and J.A. Arnett. 2023. *Ranunculus basalticus*: a new *Ranunculus* species from south-central Washington. *Madrono* 70(4): 242–247

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Ranunculus L. Buttercup; Crowfoot; Water-buttercup

Fls ♀, radially symmetrical, often showy; sepals 5, spreading to reflexed, often soon deciduous; petals gen 5 (occ 6–18 or ∞), rarely lacking, yellow or white, occ red-tinged, with small, gen scale-covered gland on upper side near base; stamens (5)10–∞; pistils 5–∞; achenes in a globose to ovoid or cylindric, headlike cluster, each compressed to terete, surfaces smooth or occ cross-corrugated, warty, or spiny, not longitudinally veined, glab to hairy, with a short to prominent, straight to hooked, gen persistent styler beak; aquatic to terrestrial, ann or per herbs with erect, creeping, or floating sts and alt, simple to compound or dissected lvs. (L name, used by Pliny, from *rana*, frog, in reference to the aquatic habitat). (*Batrachium*, *Flammula*, *Hecatonica*).

Molecular and morphological evidence support separation of *Arcteranthis*, *Beckwithia*, *Ceratocephala*, *Ficaria*, and *Halerpestes* from *Ranunculus*, and inclusion of *Batrachium* within *Ranunculus* (Hörandl et al. 2005; Emadzade et al. 2010). *Ranunculus recurvatus* Poir., included in the 1st ed., does not occur in our area.



- 1a** Lvs all entire or toothed, none lobed, dissected, or compound **Group 1**, lead 5a
- 1b** Lvs at least in part lobed (> 1/4 way to midvein), dissected, or compound
- 2a** Pls stoloniferous, the sts either rooting at nodes or floating in water; lvs simple and lobed, or compound, or dissected into filiform segms; petals yellow, white, or white with yellow base **Group 2**, lead 10a
- 2b** Pls not stoloniferous, the sts gen erect or decumbent but not rooting at nodes, never floating in water; lvs simple and lobed, or compound, not dissected into filiform segms; petals yellow (occ drying white)
- 3a** Mature achenes spiny or bristly on faces, the bristles sometimes slender and hair-like but then with hooked tips and pustulate bases **Group 3**, lead 16a
- 3b** Mature achenes neither bristly nor spiny, although sometimes cross-corrugated, or with low warts, or finely hairy (hairs not hooked, not pustulate-based)
- 4a** Achenes only moderately compressed (thickness at least 1/3 the dorsiventral width); margins of nectary scale adnate to petal almost their full length, forming a pocketflets **Group 4**, lead 20a
- 4b** Achenes strongly compressed, often discoid (thickness < 1/3 the dorsiventral width); margins of nectary scale free from petal for at least 1/2–2/3 of their length, forming a flapflets **Group 5**, lead 33a

Group 1

- 5a** Pls stoloniferous, the sts rooting at the nodes, gen decumbent or prostrate
- 6a** Basal lvs ovate to cordate, mostly < twice as long as wide; roots rather strongly fusiform-thickened toward base, whitish and carrot-shaped; mudflats and stream banks to subalp meadows; Cas from Deschutes and Lane cos, OR, to CA; Gorman’s b. (*R. reptans* var. *g.*, *R. terrestris*) **1 R. gormanii** Greene
- 6b** Basal lvs linear to lanceolate or oblanceolate, much > twice as long as wide; roots scarcely fusiform-thickened, not whitened; mudflats mostly, lowl to mt valleys; widespread in N Am; Eurasia; creeping b., lesser spearwort; 3 intergrading vars., in need of further study **2 R. flammula** L.
- a1** Sepals 3–4 mm; petals 5–7 × 3–4 mm; sts prostrate or occ ± erect; lf bls lanceolate to oblanceolate, 3–10 mm wide; coastal BC s to nw CA, inl to n ID, e Can; Eurasia var. **flammula**
- a2** Sepals 1–3 mm; petals 3–5 × 1–3 mm; sts gen prostrate; lf bls various
- b1** Lf bls linear-lanceolate to elliptic, 2–8 mm wide; sepals 2–3 mm; petals 3–5 × 2–3 mm; s AK s to CA and NM, e across s Can and n US to Atl var. **ovalis** (J.M. Bigelow) L.D. Benson
- b2** Lf bls linear, up to 1 mm wide; sepals 1–2 mm; petals 3–5 × 1–2.5 mm; widespread in boreal N Am, s to WA, ID, and WY, e to Atl; Eurasia var. **reptans** (L.) E. Mey.
- 5b** Pls not stoloniferous, the sts never rooting at the nodes, erect or occ decumbent



7a Basal lf bls cordate to ± truncate at base, mostly ± crenate-serrulate; roots rather strongly fusiform-thickened toward base, whitish and carrot-shaped; petals 4–9 mm; pls glab; wet mont areas; Cas from Pierce Co, WA to CA, also se WA and ne OR (Blue and Wallowa mts), and through c ID to w MT; mt b. (*R. cusickii*, *R. alismifolius* var. *p.*); some pls are difficult to distinguish from *R. alismifolius*

3 R. populago Greene

7b Basal lf bls acute to obtuse at base, entire (serrulate in *R. alismifolius* var. *alismifolius*); roots fusiform-thickened or not

8a Cluster of mature achenes 6–12(–20) mm wide; mature achenes gen finely puberulent; sepals 5–8 mm; petals 8–13 mm; basal lf bls elliptic to oblanceolate; pls mostly of moist swales, sagebr slopes, dry conif for, or occ subalp slopes (see lead 21a)

16 R. glaberrimus Hook.

8b Cluster of mature achenes 2–8 mm wide; mature achenes gen glab; sepals 3–5(–6) mm; petals < 8 mm (to 11 mm in *R. alismifolius* var. *alismifolius*); basal lf bls variable, often ovate or narrowly lanceolate; pls of meadows or wet areas

9a Roots finely tomentose, not fusiform-thickened; lf bls 0.2–1 cm wide, gradually narrowed to an indistinct petiole; petals gen 4–6 × 1–2 mm; stamens ca 15; wet places in foothills and lower mt meadows; ne OR and adj w ID; Blue Mt b.

4 R. oresterus L.D. Benson

9b Roots glab, fusiform-thickened or not; lf bls often > 1 cm wide, or quickly tapered to a slender petiole; petals 5–11 × 2–8 mm; stamens 20–90; moist to wet, open areas, lowl to alp; in most of w US and sw Can; plantainlvd b.; 5 vars. in our area

5 R. alismifolius Geyer ex Benth.

a1 Petals 7–12 on most fls, narrow, mostly 1.5–3 mm wide; mt meadows; app our area in se ID, to nw NV, UT, WY, and CO

var. **montanus** S. Watson

a2 Petals gen 5–6(–8), 2–8 mm wide

b1 Sts 3.5–8 mm diam; basal lf bls gen ± serrulate, 6–14 cm, petioles 2–6 mm wide; petals (7–)8–11 mm; pls (2–)3–6 dm, glab; wet meadows and shallow water, lowl to mont; occ from sw BC s in w WA to CRG, Wi Va, and ne CA, e to ID and w MT

var. **alismifolius**

b2 Sts 1–3 mm diam; basal lvs entire, 2–9 cm, gen slender-petiolate; petals 5–8 mm; pls mostly < 3(–4) dm, glab or pilose; the following 3 vars. intergrade in our area

c1 Most lf bls elliptic or ovate, 1.5–3(–5) cm, ± thin, bases rounded to broadly acute; pls glab; moist mt meadows and stream banks; uncommon, Kittitas Co, WA, s in Cas to CA, e to ID and sw MT; dwarf plainainlf b.

var. **alismellus** A. Gray

c2 Most lf bls broadly to narrowly lanceolate, mostly 3.5–9 cm, ± thickened, bases broadly acute to acuminate (often a few basal lvs ovate to elliptic and < 3.5 cm)

d1 Roots ± fusiform-thickened toward base; sts and petioles glab or strigose; basal and lower st lvs broadly to narrowly lanceolate, bases gen broadly acute; wet mt meadows and bogs; ne OR to sw MT, s to n NV, nw WY; Davis' b.

var. **davisii** L.D. Benson

d2 Roots not or scarcely fusiform-thickened; sts and petioles glab (strigose); basal and lower st lf bls mostly narrowly lanceolate, bases acute to acuminate; mt meadows; e side Cas, WA to CA, e in OR to c and s ID, w WY, and NV

var. **hartwegii** (Greene) Jeps.

Group 2

10a Lvs ternate with distinct, petiolulate lflets; pls of dry, moist or wet areas

11a Petals 4–6 × 3.5–5 mm, ca = sepals; achene beak straight or nearly so (see lead 35b)

30 R. macounii Britt.

11b Petals 6–18 × 5–12 mm, clearly > sepals; achene beak curved (see lead 40a)

34 R. repens L.

10b Lvs dissected into filiform segms, or simple and lobed; pls gen aquatic or semi-aquatic on receding shorelines

12a Mature achenes prominently cross-corrugated; petals white or with white bl and yellowish claw; nectary scale small to almost obsolete, wider than long, forming a pocket or a mere thickening

13a Fl recep glab; style 1–1.5 mm, slender and deciduous, the mature achenes not beaked; achenes 2–7 per head, 2–2.4 mm, glab; floating lvs deeply 3-lobed, the lobes elliptic-ovate, entire or with 1–2 clefts; submersed lvs gen 2–3 × dissected;

petals 4–6 × 2–5 mm; occ in lowl vernal pools and ponds; sw BC, Wasco Co, OR, and Wi Va s to c CA; Lobb's w-b. (*R. aquatilis* var. *l.*)

6 **R. lobbii** (Hiern) A. Gray

13b Fl recep hispid (glab); style 0.1–0.8 mm, deciduous or forming a persistent styler beak 0.1–1.2 mm; achenes 15 or more per head, body 1–2 mm, glab or hispid; lvs all finely dissected or the floating lvs 3-lobed with lobes obovate to fan-shaped with 2–5 clefts; submersed lvs gen 3–6 × dissected; petals 4–7 × 1–5 mm; ponds, lakes, and sluggish streams; widespread throughout most of N Am; S Am, Eurasia, Australia; white w-b., water c.; 2 vars.

7 **R. aquatilis** L.

a1 Floating lvs simple and lobed, with wide lamina; submersed lvs filiform-dissected (deep water pls occ lack floating lvs and are indistinguishable from var. *diffusus*); AK s to CA, mostly in and w of Cas, occ e to w MT, nw WY, and UT; S Am, Europe (*R. a.* var. *hispidulus*)

var. **aquatilis**

a2 Lvs all filiform-dissected; widespread, throughout our area and most of N Am; Eurasia, Australia (*R. a.* vars. *capillaceus* and *porteri*, *R. longirostris*, *R. subrigidus*)

var. **diffusus** With.

12b Mature achenes not prominently cross-corrugated; petals gen yellow; nectary scale often rather prominent, occ with free margins

14a Mature achene body 1.8–2.5 mm, beak 1–2 mm, body puffy-margined for ca 3/4 of the circumference and strongly keeled on distal dorsal margin; styles 0.8–1.2 mm in fl; petals 7–12 mm; lf bls 2–8 cm, mostly 3–5 × ternately dissected into segms scarcely 2 mm wide (occ the upper with fewer, wider segms); ponds and mudflats at lower elev; mostly e Cas, s BC to n CA, e to Alta, ID, WY, n NV, UT, and c US e to Atl; yellow w-b. (*R. fluviatilis*)

8 **R. flabellaris** Raf.

14b Mature achene body 1–1.6 mm, beak 0.1–0.8 mm, body smooth or slightly puffed for 1/3–2/3 of the circumference, slightly or not at all keeled; styles 0.1–0.4 mm in fl; petals 2–7 mm; lf bls 1–3(–6) cm, mostly with 3–5 main divisions, segms gen > 2 mm wide (occ some submersed lvs filiform)

15a Lf bls 0.3–1.2 cm, the 3(5) lobes entire or only shallowly notched; petals 2–4 mm, nectary scale adnate to petal on sides as well as at base, forming a low crescent; style 0.1–0.2 mm in fl, forming a beak 0.1–0.4 mm in fr; mudflats and shallow ponds; circumpolar, s in RM to c ID, w MT, WY, NV, UT, CO; far-n b., arctic b., floating w-b. (*R. natans* var. *intertextus*)

9 **R. hyperboreus** Rottb.

15b Lf bls 1–3(–6) cm, the 3–5 lobes again 1–3-lobed or dissected; petals 3–7 mm, nectary scale adnate to petal only at base, upper margin and sides free and flap-like; style 0.2–0.4 mm in fl, forming a beak 0.4–0.8 mm in fr; shallow ponds to mudflats; circumboreal, s to OR, UT, and NM; Gmelin's b., small yellow w-b. (*R. g.* vars. *hookeri*, *limosus*)

10 **R. gmelinii** DC.

Group 3

16a Mature achene body 2–3 mm, beak 0.4–0.7 mm; surfaces with low tubercles or short, straight spines; stamens 25–50; petals 7–10 mm; basal and lower st lvs trifoliolate, lflets distinct; pls per; European intro; sporadic w Cas, sw BC to CA; more common in e US; hairy b.

11 **R. sardous** Crantz

16b Mature achene body 4–6.5 mm or beak 1.5–3.5 mm, or achene surfaces with ∞ slender, hooked bristles; stamens 6–15; petals 1–10 mm; basal and lower st lvs gen simple, shallowly to deeply lobed; pls ann (rarely per?)

17a Mature achenes with slender, hooked, hair-like bristles thickened only at base, achene body 1.5–3 mm, beak 0.4–0.7 mm; petals 1–2 mm

18a Achenes bristly on surfaces and margins, beak lanceolate; petals spatulate, with nectary at midpoint, claw ca = bl; sepals spreading; moist to dryish hills and woodl; Whitman Co, WA, and adj wc ID, e end CRG, WA and OR, s to Baja Cal; downy b.

12 **R. hebecarpus** Hook. & Arn.

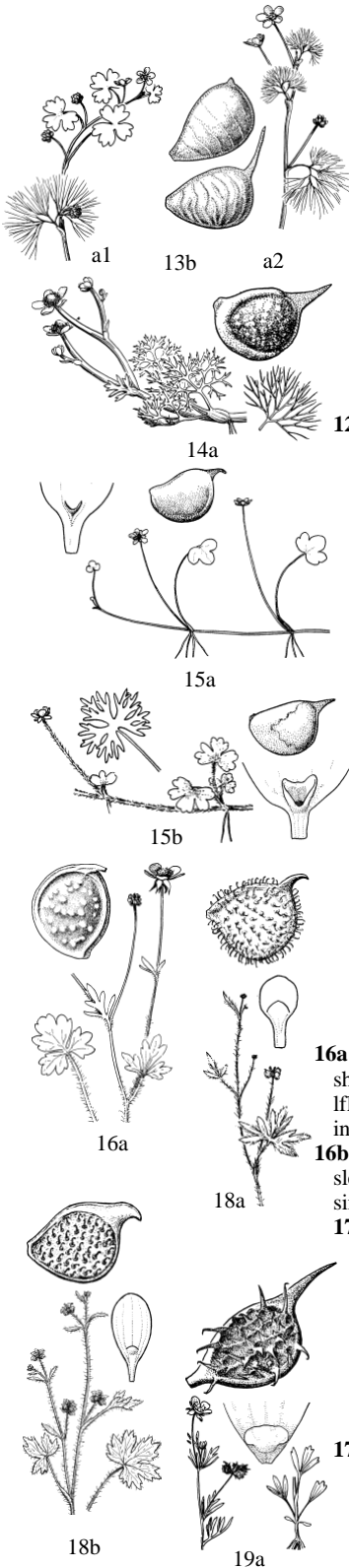
18b Achenes bristly on surfaces, not on margins, beak deltate; petals elliptic, with nectary below midpoint, claw < bl; sepals gen reflexed; European intro; occ w Cas, VI s to CA, e N Am; smallfl b.

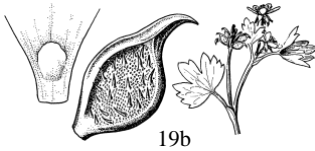
13 **R. parviflorus** L.

17b Mature achenes with stout, thickened spines, achene body 4–6.5 mm, beak 1.5–3.5 mm; petals 4–10 mm

19a Achenes spiny on surfaces and margins, 5–8 per head; sepals spreading; nectary scale nearly as wide as adj petal base; lvs oblanceolate to obovate, gen divided into linear to oblanceolate or obovate segms; mostly on waste ground or in dry areas in the lowl; sporadic European intro; sw BC, e WA and adj ID, and Wi Va to CA, also e N Am; field b., corn c., hungerweed

14 **R. arvensis** L.





19b Achenes spiny on surfaces, not on margins, 10–20 per head; sepals reflexed; nectary scale ca half as wide as adj petal base; lvs cordate to reniform, shallowly 3-lobed, segms wide, deeply crenate to lobate; disturbed areas; European intro; occ w Cas and in CRG, WA to CA; se N Am; spiny-fr b. 15 *R. muricatus* L.

Group 4

20a Some or all basal lf bls unlobed or lobed < halfway to base

21a Basal lf bls entire or with 3(5) shallow, rounded lobes; achenes in a semi-globose cluster; nectary scale (1–)1.5–3 mm; pls long-hirsute on basal-most lf stips and gen ± tomentose on the roots; sts rarely > 15 cm, ascending to ± decumbent; sagebr or grassl to conif woodl, lowl to subalp; widespread e Cas, c BC s to nw CA, e to Sask, Daks, NE, and NM, disjunct in ne OM; sagebr b.; 2 vars.

16 *R. glaberrimus* Hook.

a1 Basal lf bls elliptic to oblanceolate, mostly entire; st lvs entire to 3-lobed, middle lobe much the largest; mostly mont to subalp, in juniper or ponderosa pine woodl, sagebr slopes, or subalp meadows; range of sp. including OM (*R. e.*)

var. *ellipticus* (Greene) Greene

a2 Basal lf bls mostly ovate to obovate, occ wider than long, more often shallowly lobed than entire; st lvs entire or 3-lobed, lobes ± equal in size; mainly lowl sagebr and grassl; s BC to nw CA, e to MT, WY, and SD var. *glaberrimus*

21b Basal lf bls crenate to shallowly lobate along much of margin, the teeth or lobes gen > 5; achenes in an ovoid or cylindric cluster; nectary scale 0.3–1 mm; basal stips glab or with marginal cilia only; roots never tomentose; sts gen erect

22a Petals 1–3.5 mm; sepals 2.5–4 mm; anthers 0.4–0.7 mm; achenes 20–40(–50) per head, glab, beak 0.1–0.2 mm; basal lf bls cordate to truncate; moist woodl to meadows, lowl to subalp; AK s to ne WA, ID, MT, and NM, e to much of e N Am; smallfld b., kidney-lvd b. 17 *R. abortivus* L.

22b Petals 4–13(–16) mm; sepals 4–8 mm; anthers 0.5–2.2 mm; achenes 20–100 or more per head, canescent or glab, beak 0.3–1.8 mm; basal lf bls various

23a Sts 1–2 mm diam, solid, often ± decumbent, with 1–3(4) fls, glab to occ sparsely pubescent; basal lf margins shallowly 5–9-lobed, the lobes gen acute (see lead 32b, var. *eximius*) 28 *R. eschscholtzi* Schldtl.

23b Sts 1.5–4 mm diam, hollow, gen erect, with (1–)3–8 fls, glab to densely pilose; basal lf margins mostly rounded-crenate; pls of RM

24a Basal lf bls cordate, as long as or longer than wide; petals 6–13 mm, nectary scale ciliate on upper margin; achenes canescent, beak 0.6–1.2 mm; mt meadows; e BC to Alta and Sask, sporadically s along e base RM in MT, to Daks, WY, CO, UT, NM, and AZ, reported from ne WA but no specimens seen; heartlvd b. 18 *R. cardiophyllus* Hook.

24b Basal lf bls cuneate to broadly obtuse (rarely cordate), ± as long as wide; petals 4–9 mm, nectary scale not ciliate; achenes canescent or glab, beak 0.4–0.9 mm; mt meadows and moist slopes; RM from n BC to NM, w to ne WA, much of ID, NV, and AZ; unlovely b. (*R. alpeophilus*); ours var. *inamoenus* 19 *R. inamoenus* Greene

20b Basal lvs all lobed at least halfway to base, or compound

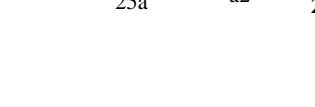
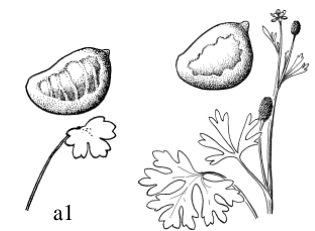
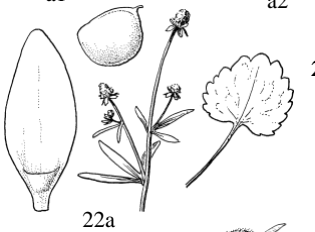
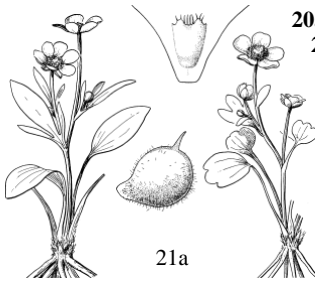
25a Achene beak absent or to 0.15 mm; achene body with margins and base corky-thickened; petals 2–5 mm; pls ann, gen glab, gen erect, 1.5–5 dm; fr heads ellipsoid to shortly cylindric; achenes 1–1.2 × 0.8–1 mm; shallow water to wet meadows; widespread throughout most of N Am n of Mex; Eurasia; celerylvd c. or b., blister b.; 2 vars. 20 *R. scleratus* L.

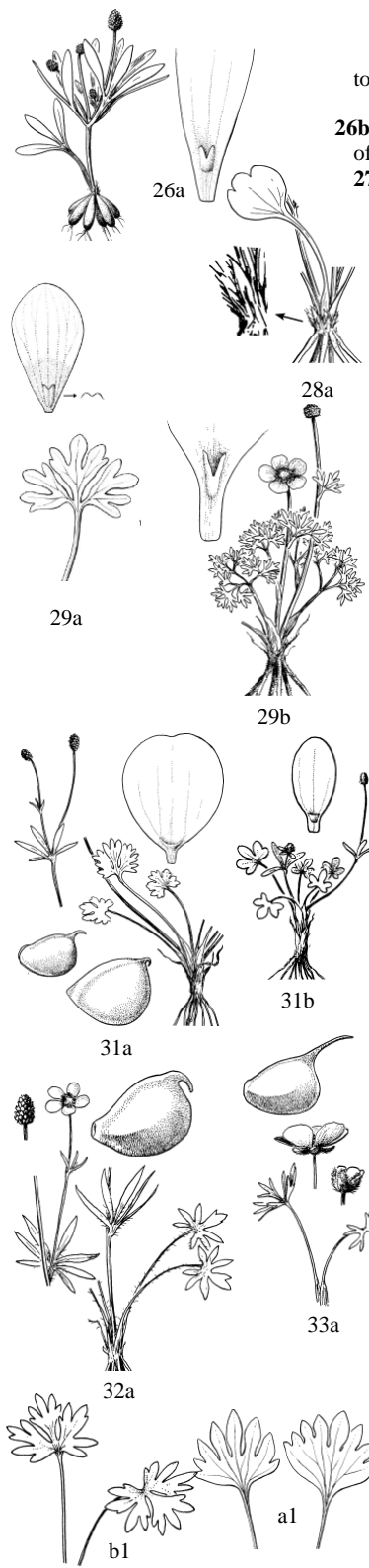
a1 Achenes cross-corrugate or -reticulate on central area of faces; basal lvs deeply divided into 3 main divisions, sinuses between segms narrow, 2ndary lobing shallow; European intro; occ w Cas from sw BC to CA, widely distributed in e N Am (*R. eremogenes*) var. *scleratus*

a2 Achenes smooth in central area of faces; basal lvs with wider sinuses and primary segms often rather deeply lobed; AK s to n CA, on both sides Cas, e to Que, MN, IA, and NM var. *multifidus* Nutt.

25b Achene beak 0.2–1.8 mm; achene body with margins and base not corky-thickened; petals 3–16 mm; pls per, of moist to dry areas

26a Roots ± clavate, tuberlike, abruptly rounded at tip, 1–2.5(–5) cm, 2–5 mm diam; lvs deeply divided into (2)3(–5) narrowly oblanceolate, entire lobes, the st lvs often opp or whorled; achenes 1.1–1.4 × 0.8–1.1 mm; nectary scale ca 0.7 mm, narrowly fan-shaped, lateral margins adnate full length and forming pocket; sts mostly < 10 cm; pls fl soon after appearance from under snow; sagebr slopes





to lower for; sw MT and se ID to NV, UT, WY, and CO; Jove's b. (*R. digitatus*)

21 **R. jovis** A. Nelson

26b Roots tapered gradually to tip, not tuberlike; basal lvs with the primary lobes often again divided or toothed; achenes 1–2.4 × 0.8–2 mm

27a Basal-most lf stip long hirsute; larger roots thickened, 1.5–3 mm wide, usually finely tomentose; nectary scale (1–)1.5–3 mm; achenes in a semi-globose cluster; sagebr or grassl to ponderosa pine for, lowl to upper mont

28a Lvs simple throughout, shallowly 3(5)-lobed at tip, the lobes gen entire; nectary scale gen ciliate on upper margin; widespread e Cas (see lead 21a)

16 **R. glaberrimus** Hook.

28b Lvs compound, ternate to triternate

29a Lvs ternate, lfsts shallowly to deeply lobed, segms broadly oblanceolate to ovate or obovate; nectary scale eciliate, entire to erose on upper margin; talus slopes in sagebr, rocky grassl, and oak woodl; narrow endemic from Kittitas to Klickitat cos, WA; basalt b.

22 **R. basalticus** Giblin

29b Lvs 3–4 × triternately dissected into linear segms; nectary scale rarely ciliate on upper margin; sagebr slopes, oak woodl, and open ponderosa pine for; endemic to e end CRG, Klickitat Co, WA, and Wasco and Hood R cos, OR; obscure b. (*R. reconditus*)

23 **R. triternatus** A. Gray

27b Basal-most lf stip glab or only ciliate on margins (occ hirsute in no 22); larger roots slender, 0.3–1.5 mm wide, glab; nectary scale 0.1–0.7(–1.5) mm; achenes often in an elongate cluster; subalp and alp meadows and slopes

30a Petals 1–5(–6) mm; sepals 2–5 mm; achene beak 0.3–0.8 mm; lobes of basal lvs with rounded to obtuse tips

31a Petals 3–5(–6) mm; stamens ca 50; achene body 1.2–2.4 mm, beak curved; fl sts (3–)7–20 cm; basal lf bls mostly 0.8–2 cm; alp meadows, rock ledges, and talus slopes; AK s, in w Can, to OM and Cas, WA, ne OR, ID, MT, ne UT, and n CO; Siberia; arctic b. (*R. gelidus* misapplied, *R. verecundus*)

24 **R. grayi** Britt.

31b Petals 1–3.5 mm; stamens 10–20; achene body 1–1.2 mm, beak straight or curved; fl sts 1–3(–6) cm; basal lf bls ca 0.5–1 cm; alp meadows and rock crevices, gen near snowbanks; AK to Greenl, s to Okanogan Co, WA, c ID, w MT, WY, ne UT, and CO; Europe; dwarf b.

25 **R. pygmaeus** Wahlenb.

30b Petals (6–)7–16 mm; sepals 4–8 mm; achene beak 0.5–1.8 mm; lobes of basal lvs with rounded to acute tips

32a Pls ± pilose throughout and esp on the peds; achene beak 0.5–1 mm, strongly curved; basal lf bls pedately parted into (5)7(9) acute lobes, these simple or divided; petals 7–10 mm (occ absent); circumpolar, s sporadically in RM through MT to NM and AZ; birdfoot b., n b.; ours var. **affinis** (R. Br.) L.D. Benson

26 **R. pedatifidus** Sm.

32b Pls glab, or rarely sparsely pubescent on the peds and upper lvs; achene beak 0.6–1.8 mm, straight to slightly curved; basal lvs variously lobed, the lobes rounded or acute; petals (6–)7–16 mm

33a Basal lvs 2–3 × finely dissected into linear segms 0.5–1.5(–2) mm wide; stamens 100–125; achene body 1.8–2.4 mm; subalp and alp meadows, often near melting snowbanks; c ID and sw MT to WY, NV, UT, and CO (*R. eschscholtzii* var. *alpinus*)

27 **R. adoneus** A. Gray

33b Basal lvs 1–2 × divided into segms mostly > 2 mm wide; stamens 20–40; achene body 1.4–2 mm; mont to alp meadows and talus slopes; widespread, AK to CA, in both OM and Cas, e to Alta, RMS, and AZ; subalp b.; 4 vars. in our area

28 **R. eschscholtzii** Schtdl.

a1 Basal lf bls obovate to broadly oblong, with cuneate to rounded bases, 5–9-lobed or occ the middle lobe again divided, lobe tips and sinuses gen acute to acuminate; petals 9–16 mm; RM, from se BC and sw Alta to w MT, e ID, and nw WY, disjunct in se UT, n AZ

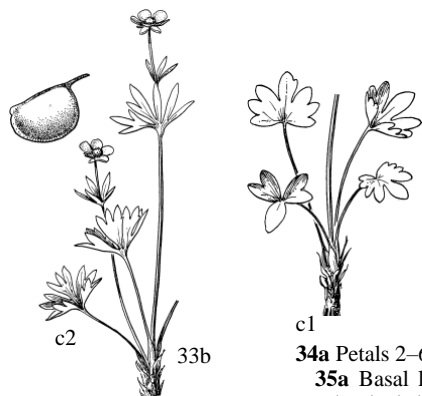
var. **eximius** (Greene) L.D. Benson

a2 Basal lf bls broadly obovate to reniform, with cordate to truncate bases, variously lobed; petals (6–)7–12 mm

b1 Middle segm of many basal lvs deeply lobed, the lobes and teeth gen > 3, oblanceolate to obovate, tips obtuse or rounded; e OR through c ID to nw WY

var. **trisectus** (B.L. Rob.) L.D. Benson

b2 Middle segm of basal lvs unlobed or at most with 3 lobes or teeth (occ > 3 in var. *suksdorfii*, with lanceolate, acute lobes)



c1 Basal lf segms and sinuses mostly rounded to obtuse, middle segm of basal lvs entire to shallowly 3-lobed; range of sp.

var. **eschschoitzii**

c2 Basal lf segms and sinuses mostly acute, middle segm of basal lvs gen lobed; OM and Cas, WA, nw CA, and RM from se BC and sw Alta to ID and nw WY, apparently absent from OR

var. **suksdorfii** (A. Gray) L.D. Benson

Group 5

34a Petals 2–6 mm, < to only slightly > sepals

35a Basal lf bls deeply lobed but simple; recep glab; achene beak 1–2(–2.5) mm, hooked, body glab or sparsely hispid; petals 2–4(–5) mm; moist areas, often in shade, widespread from lowl to subalp; AK to CA, e to RMS; little b. (*R. u. var. parviflorus*)

29 **R. uncinatus** D. Don

35b Basal lf bls in part compound, lflets gen stalked; recep hirsute; achene beak straight or nearly so, body glab

36a Petals 2–4 × 1.5–2.5 mm, < the sharply reflexed sepals; achenes in an ovoid-cylindric cluster, the head 5–7 mm wide with fr recep up to 12 mm; achene beak 0.5–0.9 mm; st lvs 3–8, ave > 4; sts erect, never nodally rooting; wet ground, esp along streams; AK to w and n WA, e to ID, MT, and e N Am, s occ to AZ and NM; PA b., bristly b.

30 **R. pensylvanicus** L. f.

36b Petals 4–6 × 3.5–5 mm, ca = the spreading to reflexed sepals; achenes in a globose to ovoid cluster, the head 7–10 mm wide with fr recep up to 5 mm; achene beak 1–1.5 mm; st lvs gen < 4; sts often ± decumbent, occ rooting at nodes; moist to wet places, lowl to mont; AK s, on both sides Cas, to ne CA, AZ, and NM, e to NE, MN, and e Can; Macoun's b. (*R. m. var. oreganus*)

31 **R. macounii** Britt.

34b Petals 5–18 mm (ave > 7 mm), much > sepals

37a Petals 8–16 in most fls, oblong, ca 2.5–3 × as long as wide; beak of achene stout, 0.2–0.8 mm, recurved; basal lvs simple or compound; grassy coastal bluffs; disjunct in Gulf Is of sw BC and San Juan Is of nw WA, otherwise coastal OR s to Baja Cal; many pls from sw BC and nw WA combine characters of the 2 vars., or have wider petals or achene beaks 1–1.8 mm suggesting hybridization with no 37, further study needed; CA b.; 2 vars.

32 **R. californicus** Benth.

a1 Sts hirsute (hairs spreading) or glab, erect to decumbent; basal lvs with ultimate segms mostly acute to obtuse at tip; sw OR s to Baja Cal, possibly also in sw BC and nw WA

var. **californicus**

a2 Sts strigose (hairs ± appressed), gen prostrate to decumbent; basal lvs with ultimate segms mostly rounded to obtuse at tip; sw BC and nw WA (where uncommon), and coastal OR to coastal CA

var. **cuneatus** Greene

37b Petals 5–6 in most fls, when (as occ) 8 or more then scarcely twice as long as wide, or achene beak often > 1 mm

38a Sts conspicuously thickened and cormose at base; basal lf bls deeply lobed to more often ± pinnately compound; recep hispid; petals 9–13 mm and ca as wide; achene beak 0.2–0.8 mm; uncommon European intro; sw BC to nw CA, w Cas and in CRG, e N Am; bulbous b.

33 **R. bulbosus** L.

38b Sts not enlarged and cormose at base

39a Achenes with straight beak 2–4 mm; basal lf bls pinnately 5–7-lobed or compound; petals 8–18 mm; nectary scale 0.5–1 mm; recep hispid; moist fields to mont meadows; se AK to CA, e to w MT, w WY, UT, and NV; straightbeak b.; 2 vars. in our area

34 **R. orthorhynchus** Hook.

a1 Petals yellow but gen reddish-tinged on back, mostly > 2 × as long as wide; heads of achenes hemispheric to occ globose, 5–7 mm wide; achene beak 3–4 mm; se AK and BC s, mostly in and w Cas, to CA

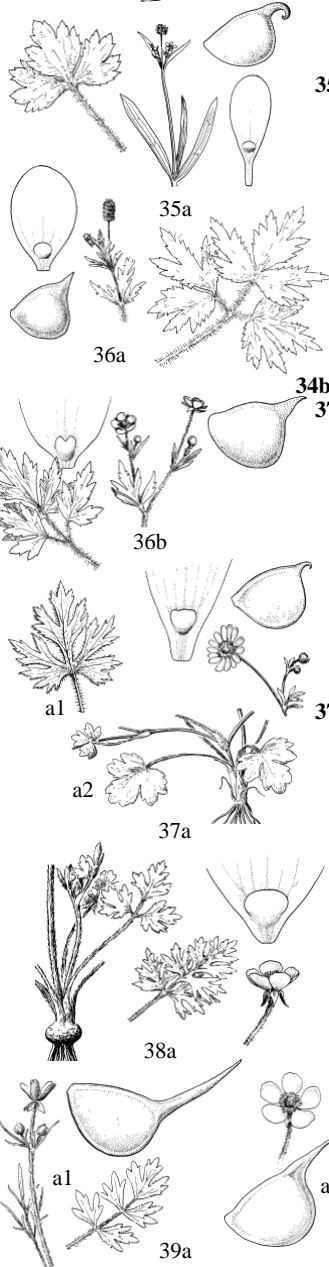
var. **orthorhynchus**

a2 Petals yellow, mostly < 2 × as long as wide; heads of achenes globose to ovoid, 8–13 mm wide; achene beak gen 2–3 mm; BC s, on both sides Cas, to CA, e to ID, w MT, w WY, UT, and NV

var. **platyphyllus** A. Gray

39b Achenes with beak 0.2–2(–2.5) mm, curved or straight (if rarely > 2 mm then basal lf bls merely deeply lobed); basal lvs simple or compound

40a Recep hispid or pilose (rarely glab in *R. repens*); basal lf bls compound, lflets gen stalked

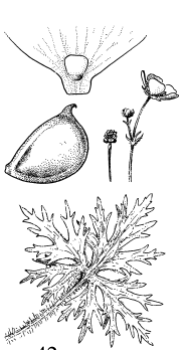




41a



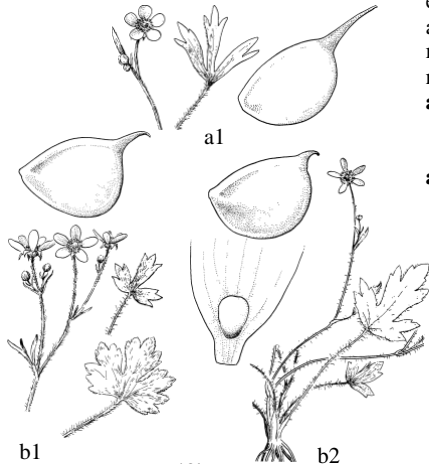
41b



42a



43a



b1

43b

41a Achene beak 0.8–1.2 mm, lanceolate to lanceolate-filiform, recurved, achene body smooth; sepals spreading or slightly reflexed from base; sts gen prostrate or decumbent, tending to root at lower nodes; roadsides, lawns, moist areas; European intro; AK s to CA and UT, and in e N Am, in our area esp common lowl w Cas, occ e to MT; creeping b. (*R. repens* var. *pleniflorus*, a cult form with double fls) **35 R. repens** L.

41b Achene beak 0.3–0.7 mm; stout, deltoid, achene body smooth or with low tubercles; sepals strongly reflexed along a well-defined transverse fold 1–3 mm above base; sts \pm erect, never rooting at lower nodes; occ intro w Cas (see lead 16a) **11 R. sardous** Crantz

40b Recept glab; basal lf bls simple though often deeply lobed to divided (rarely compound with stalked lflets)

42a Basal lf bls pentagonal, deeply (3–)5 \times parted into narrow segms with short acute teeth or lobes; achene beak 0.3–0.6(–1) mm, deltate, curved or occ straight; sepals spreading; sts gen erect, 3–10 dm; widely estab on moist to well-drained soil; European intro; both sides Cas, AK to n CA and AZ, e to ID, MT, UT, WY, and e N Am; meadow b., tall b. **36 R. acris** L.

42b Basal lf bls not conspicuously pentagonal, gen 3-lobed with the segms blunt to acute, entire or with few lobes or teeth; achene beak 0.4–2.2 mm, lanceolate to lanceolate-subulate, curved or straight

43a Sepals spreading or slightly reflexed from base; bls of basal lvs gen dissected into linear or narrowly lanceolate segms or teeth; beak of achene considerably flattened, gen > 0.5 mm wide at base, < 1 (–1.5) mm, strongly recurved; moist banks and meadowl; c ID to w MT, s to UT, WY, and CO; sharp b.; ours var. **montanensis** (Rydb.) L.D. Benson **37 R. acriformis** A. Gray

43b Sepals strongly reflexed along a well-defined transverse fold 1–3 mm above base; bls of basal lvs parted into 3 primary segms, these oblong, elliptic, lanceolate, or oblanceolate, shallowly toothed or lobed; beak of achene not greatly flattened, (0.4–)1–2.2 mm, straight or curved; meadows and open woods; mostly w Cas, AK to CA, e occ to Alta and ne OR; w b.; 3 vars. in our area **38 R. occidentalis** Nutt.

a1 Achene beak 1.2–2.2 mm, nearly straight (except for the slightly curled tip); petals mostly $< 2 \times$ as long as wide; Blue Mts to Deschutes Co, OR, s to n CA var. **dissectus** L.F. Hend.

a2 Achene beak 0.4–1.8 mm, curved through much of length; petals $<$ or $>$ twice as long as wide; mostly w Cas, and e in CRG

b1 Petals 3–6 mm wide, mostly ca $2 \times$ as long as wide; achene beak 0.6–1.8 mm; sts erect to decumbent; basal lvs fairly thick, often < 2 cm; sw BC s, w Cas and in CRG, to CA (*R. o.* var. *rattanii*)

var. **occidentalis**

b2 Petals 1.5–2.5 mm wide, mostly $> 2 \times$ as long as wide; achene beak 0.4–1.2 mm; sts \pm decumbent; basal lvs delicate, 2–5 cm; app our area in s OR, s to CA var. **ultramontanus** Greene