

**Comments:** Key revised to include *S. altissima* var. *altissima*, which has been collected in scattered locations in central Washington, and likely is more widespread in our area. The range of *S. spathulata* has been expanded further north to southwestern Washington based on examination of past and recent (2023) collections.

**Solidago** L. Goldenrod

Heads radiate (ours) or occ discoid, few–∞, gen small, camp to subcylindric, in racemiform to paniculiform arrays; ray fls 2–15(–24), ♀ and fertile, yellow, small, seldom > 5 mm; invol small, in ours 2–8 mm, phyllaries ± imbricate in 3–5 series or rarely subequal, ± chartaceous at base, gen with ± herbaceous green tip; recep small, slightly convex, naked; disk fls ♀ and fertile, yellow; anthers entire or nearly so at base; style brs flattened, with introrsely marginal stigmatic lines and an externally minutely hairy, gen lanceolate appendage; achenes cylindric to obconic, subterete or angled, 8–10-nerved; pappus of ∞ capillary bristles, gen white; fibrous-rooted per herbs from a rhizome or caudex, with simple, alt, entire or toothed lvs. (*L. solidus*, whole, and *ago*, resembling or becoming, referring to reputed healing properties). (*Oligoneuron*). See also *Euthamia*.



**1a** Sts densely and finely canescent throughout; lvs finely canescent to scab across both surfaces

**2a** Pls with elongate, creeping rhizomes; sts equably lfy, without well-developed basal lvs; lvs gen strongly 3-veined from near base; invol 2–6 mm; rays 0.7–2 mm

**3a** Invol 2–4 mm (ours), phyllaries lanceolate to linear-lanceolate; middle cauline lvs 7–15 cm, gen 5–10 × as long as wide; pls 5–9(–20) dm; infl paniculiform with recurved-secund brs; rays (5–)8–13(–17); prairies, shorelines, roadsides; intro in c BC to CA; widespread and native in e US and Gr Pl, w to c MT; Gr Pl g. (*S. canadensis* var. g.); **1 *S. altissima* L.**

**a1** Involucres usually 2–3 mm; in our area BC s, mostly e Cas, to OR

subsp. ***gilvocanescens*** (Rydb.) Semple

**a2** Involucres usually 3–4 mm; in our area sc BC to c WA subsp. ***altissima***

**3b** Invol 3–6 mm, phyllaries lanceolate to oblong; middle cauline lvs 4–8 cm, gen 2.5–4 × as long as wide; pls 1–6 dm; infl compact and club-shaped to paniculiform with recurved-secund brs; rays 6–10; prairies; apparently intro to sc BC; Gr Pl sp., w occ to w MT; velvety g. **2 *S. mollis* Bartlett**

**2b** Pls from a short-br caudex or occ short and stout rhizomes; basal and lower cauline lvs well developed, tending to be persistent, the cauline lvs conspicuously reduced upwards; lvs ± pinnately veined; invol 4–8 mm; rays 1.5–5.5 mm

**4a** Phyllaries longitudinally striate with 3–5 nerves; achenes glab except gen for a few short loose hairs near the tip; basal lvs gen 2–5 cm wide, ovate to rhombic; disk fls 15–35; infl corymbiform; pls 4–7(–9) dm; prairies and grassy areas; widespread in c US and sc Can, bordering our area along e base RM in MT; stiff g., hard-lvd g. (*S. r.* var. *h.*); ours subsp. ***humilis*** (Porter) S.B. Heard & Semple

**3 *S. rigida* L.**

**4b** Phyllaries not striate, only the midnerve visible; achenes short-hairy throughout; basal lvs gen 0.5–2 cm wide, oblanceolate; disk fls gen 5–16

**5a** Disk fls gen 5–9, ca = or more often fewer than the rays; infl either with ± secund brs, or elongate and nodding at the tip; pls 2–10 dm; prairies, grassl, and open areas; widespread in e N Am, w to se BC and sw MT; gray g., field g. (*S. n.* var. *longipetiolata*); ours subsp. ***decemflora*** (DC.) Brammall ex Sempl.

**4 *S. nemoralis* Aiton**

**5b** Disk fls gen 8–16, gen more ∞ than the rays; infl corymbiform and gen relatively broad, neither nodding nor with evidently secund brs; pls 1–5 dm; foothills, valleys, and plains; sw MT to c ID, s to NV, AZ, and NM; low g.

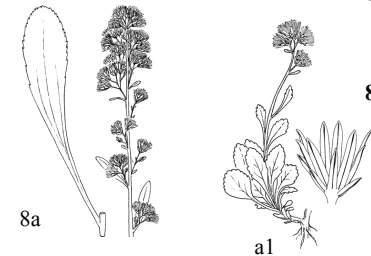
**5 *S. nana* Nutt.**

**1b** Sts glab to sparsely puberulent below the infl, glab or glabrate near base; lvs glab except along margins and on main veins, or sparsely puberulent on lower surface

**6a** Pls caespitose from a br caudex; basal and lower cauline lvs well developed and largest, tending to be persistent, the cauline lvs conspicuously reduced upwards and not very ∞; pls 0.5–5(–8) dm; invol gen 4–6 mm; ray fls 2–5 mm; infl corymbiform to spiciform-thyrsoid or subracemiform

**7a** Lowermost lvs with ciliate-margined petiole; rays gen ca 13 (occ more); infl ± corymbiform; phyllaries not much imbricate; pls 0.5–3(–5) dm; subalp to alp slopes and meadows; boreal N Am, s through OM and Cas to CA, and in RM to AZ and NM; n g. (*S. m.* var. *scopulorum*) **6 *S. multiradiata* Aiton**

**7b** None of the lvs with ciliate-margined petiole; infl paniculiform to thyrsoform or racemiform; rays gen ca 8; phyllaries evidently imbricate; pls lowl to alp



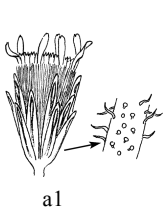
8a

a1



10a

8b a2



a1



10b



a2

12a



12b

**8a** Involcs and herbage strongly shiny-resinous and aromatic; basal lvs broadly spatulate or obovate, 1–3 cm wide, with (8–)12–24 teeth per side; infl spiciform-thyrsoïd, gen dense; pls 1–4(–5) dm; coastal sand dunes and headlands; sw WA to CA; coast or dune g. (*S. s.* var. *s.*) **7 *S. spathulata* DC.**

**8b** Involcs and herbage less strongly resinous and aromatic, basal lvs narrowly spatulate to nearly orbiculate, 0.5–1.5(–2) cm wide, with 4–11(–15) teeth per side; infl short and compact to spiciform-thyrsoïd or subracemiform; grassl, prairies, meadows, open for, shorelines, lowl to alp but rarely coastal; widespread; sticky g.; 2 vars. in our area **8 *S. simplex* Kunth**

**a1** Pls 0.5–1.5 dm; basal lvs broadly elliptic to orbiculate, abruptly tapered to petiole, margins distinctly crenate; infl short, compact; subalp to alp; scattered, VI and Cas from n WA to c OR; dwarf g. (*S. bellidifolia*, *S. spathulata* var. *n.*) **var. *nana* (A. Gray) G.S. Ringius**

**a2** Pls (0.5–)1.5–5(–8) dm; basal lvs spatulate to narrowly (occ broadly) elliptic, gradually tapered to petiole, margins gen weakly crenate-serrate; infl spiciform-thyrsoïd to subracemiform; valley to mont, rarely alp in our area; AK and Can s to PT of WA, in RM to AZ and NM, and GL; mt g. (*S. glutinosa*, *S. spathulata* var. *neomexicana*) **var. *simplex***

**6b** Pls with well developed, creeping rhizomes; sts rather equably lfy, without well-developed basal lvs; pls (1–)3–20 dm; invol 2.5–5 mm; ray fls 0.5–3 mm; infl broadly to narrowly paniculiform, often with recurved-second brs

**9a** St glab below the infl

**10a** Sts puberulent in the infl, gen glaucous; pls 5–20 dm; lvs ∞ and equably distributed, largest near mid-st; rays gen ca 13 (10–17); pappus 2–2.5 mm; moist, gen open places in the valleys and plains; widespread in e N Am, w to w MT; smooth g., late g. (*S. g.* var. *serotina*) **9 *S. gigantea* Aiton**

**10b** Sts glab or very nearly so throughout, not glaucous; pls (1–)3–8 dm; lvs gen largest on lower st, reduced upwards; rays gen ca 8, rarely 13; pappus 2.5–3 mm; rather dry, open places from the valleys and plains to fairly high elev in mts; e Cas (and rarely on prairies w Cas), c BC to OR, e to RM, Gr Pl, and Midwest; MO g. (*Solidago m.* vars. *extraria*, *fasciculata*, *m.*, *tolmieana*); pls w Cas occ have hairy sts **10 *S. missouriensis* Nutt.**

**9b** St puberulent, at least above the middle

**11a** Phyllaries ovate-lanceolate, 0.6–1 mm wide; cauline lvs relatively few and well-spaced, linear-oblancoate, 3–10 mm wide, strongly ascending; lowl prairies w Cas (see lead 10b) **10 *S. missouriensis* Nutt.**

**11b** Phyllaries lanceolate to linear-lanceolate or occ ovate-lanceolate, 0.3–0.7(–0.9) mm wide; cauline lvs ∞ and strongly overlapping, elliptic-lanceolate to occ linear-lanceolate, often > 1 cm wide, spreading to ascending

**12a** Phyllaries, peduncles, and infl lvs minutely and often obscurely stipitate-glandular as well as eglandular-puberulent; infl broadly to narrowly thyrsoïd or pyramidal-paniculiform, often lfy near base, the brs ascending to recurved; upper st lvs often > 1 cm wide, coarsely serrate; fields, meadows, thickets, and shorelines; lowl to mont; widespread on both sides Cas, AK to CA, e to RMS and e Can; w Can g. (*S. canadensis* misapplied); 2 weak vars. in our area **11 *S. lepida* DC.**

**a1** Infl thyrsoïd, the lower brs ascending, occ on both sides Cas (*S. canadensis* var. *subserata*) **var. *lepida***

**a2** Infl pyramidal-paniculiform, the lower brs arching to recurved; widespread (*S. canadensis* var. *s.*) **var. *salebrosa* (Piper) Semple**

**12b** Phyllaries, peduncles and infl lvs not stipitate-glandular, merely eglandular-puberulent; infl thyrsoïd or narrowly pyramidal-paniculiform, scarcely lfy, often congested, the brs gen strongly ascending; upper st lvs gen < 1 cm wide, finely serrate; sandy or gravelly, open areas or thickets; from coast to Cas, sw BC to CA; w coast g. (*S. canadensis* var. *e.*, *S. lepida* var. *e.*); reports f from e Cas likely referable to no 11 **12 *S. elongata* Nutt.**

**Treatment Metadata:**

**Family:** Asteraceae

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**Comments:** *S. altissima* subsp. *altissima* added to the key based on recent collections in c WA; range for *S. spathulata* expanded to sw WA based on historic and recent collections.

**Illustrations:** None.

**References:**