Identification key to *Allium* species in North America

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1. Leaf blade flat, channeled, or ± terete, never more than 30 mm wide, (never petiolate).
   2. Flowering pedicels mostly or completely replaced by bulbils.
      3. Outer bulb coats persisting as fibrous reticulum; leaf sheaths not extending more than 1/4 scape; spathe bract beakless or beak much shorter than base.
         4. Ovary, when present, crestless; spathe bracts 3–7-veined; east of 103rd meridian ..... ***A. canadense***
         4. Ovary, when present, obscurely crested with 6, low, central processes; spathe bracts 1-veined; west of 105th meridian ..... ***A. geyeri***
      3. Outer bulb coats membranous, if with fibers these not forming reticulum; leaf sheaths extending to midscape or above; spathe bract with beak equaling or longer than base.
         5. Spathe bract 1, caducous.
            6. Bulbs 1–2 cm diam.; leaf blade 2–4 mm diam., cylindric or filiform, not carinate, hollow below middle ..... ***A. vineale***
            6. Bulbs (1.5–)3–8 cm diam.; leaf blade 5–20 mm wide, flat, carinate, solid ..... ***A. sativum* var. *sativum***
         5. Spathe bracts 2–5, persistent.
            7. Spathe bracts 2–5, 4–9-veined, beak to 20 cm ..... ***A. oleraceum***
            7. Spathe bracts 3–5, 2–3-veined, beak to 10 cm ..... ***A. ampeloprasum***
   2. Flowering pedicels floriferous, bulbils almost unknown.
      8. Outer bulb coats persisting as fibrous reticulum.
         9. Ovary usually crestless; if obscurely crested, with 3 or 6 processes; east of 103rd meridian.
            10. Spathe bracts usually 1-veined.
               11. Spaces between bulb coat fibers filled in proximal 1/2 bulb; tepals white, pink, or red, rarely greenish yellow; central plains from N Mexico to Nebraska ..... ***A. drummondii***
               11. Spaces between bulb coat fibers open; tepals yellow; W Texas ..... ***A. coryi***
            10. Spathe bracts 3–7-veined.
               12. Umbel compact; pedicels much shorter than flowers ..... ***A. schoenoprasum***
               12. Umbel loose; pedicels longer than flowers.
                  13. Flowers substellate to urceolate-campanulate, ultimately withering somewhat and exposing capsule; reticula of bulbs finely or only moderately coarsely meshed.
                     14. Bulbs 1–3, narrowly cylindric, attached to ± horizontal primary rhizome, often missing or not visible on herbarium specimens; leaf blade carinate; cells of seed coat smooth, shiny; occasional introduction ..... ***A. tuberosum***
                     14. Bulbs 1–4+, ovoid, not attached to rhizome; leaf blades not carinate, channeled; cells of seed coat each with minute, central papilla; native east of 103rd meridian ..... ***A. canadense***
                  13. Flowers urceolate, permanently investing capsule; reticula of bulbs usually very coarsely meshed.
                     15. Flowering bulbs with cluster of stalked, basal bulbels; cells of innermost bulb coats contorted, with sinuous walls; extreme S Texas ..... ***A. runyonii***
                     15. Flowering bulbs without basal bulbels; cells of innermost bulb coats vertically elongate, without sinuous walls; W Texas and E New Mexico to C South Dakota ..... ***A. perdulce***
         9. Ovary usually crested with 3 or 6 processes; if crestless, from west of 105th meridian.
            16. Ovary and capsule conspicuously crested with 6 contorted or horizontally spreading, ± lateral processes; tepals widely spreading to reflexed, SE United States.

17. Spathe bracts usually 5–7-veined; ovary crests conspicuously contorted; tepals spreading to reflexed ..... ***A. cuthbertii***
17. Spathe bracts 1-veined; ovary crests flattened, horizontally spreading, not contorted; tepals widely spreading ..... ***A. speculae***

16. Ovary crested with 6 ± erect, often obscure central processes; tepals erect to widely spreading; W North America.
18. Leaves 3+ per scape; cells of seed coat each with minute, central papilla.
19. Bulbs often short-rhizomatous basally; spathe bracts 3–5-veined; ovary conspicuously crested with 6 flattened, lacerate central processes; tepals spreading or reflexed, withering in fruit, not investing capsule ..... ***A. plummerae***
19. Bulbs not short-rhizomatous; spathe bracts usually 1-veined; ovary obscurely crested with 6 rounded central processes; tepals erect, not withering in fruit, permanently investing capsule.
20. Leaf blade flat, ± falcate, usually 3–6 mm wide; Box Elder County, Utah ..... ***A. passeyi***
20. Leaf blade channeled, ± straight, usually less than 5 mm wide; widespread, N Great Plains and W North America ..... ***A. geyeri***

18. Leaves usually 2 per scape; cells of seed coat ± smooth, with or without central papillae.
21. Spathe bracts 3–5-veined; tepals becoming papery in fruit, midrib scarcely thickened, not investing capsule; ovary usually conspicuously crested with 6 flattened central processes, often to 2 mm ..... ***A. macropetalum***
21. Spathe bracts 1-veined; tepals becoming callous-keeled, permanently investing capsule; ovary inconspicuously crested with 6 rounded central processes, to 1 mm.
22. Leaf blade flat, ± falcate, usually 3–6 mm wide; cells of seed coat with minute central papilla; Box Elder County, Utah ..... ***A. passeyi***
22. Leaf blade semiterete, channeled, ± straight, usually 1–3(–5) mm wide; cells of seed coat smooth; N Great Plains and W North America ..... ***A. textile***

8. Outer bulb coats membranous to chartaceous, with or without distinct cellular markings (reticulation); without fibers or with some parallel fibers.
23. Scape fistulose, 3–25 mm diam., not flattened and winged; leaves 2–10, blade flat and solid, or fistulose.
24. Leaf blade flat, solid.
25. Leaves not or scarcely sheathing base of scape ..... ***A. nigrum***
25. Leaves sheathing 1/3–1/2 scape ..... ***A. ampeloprasum***

24. Leaf blade fistulose.
26. Bulbs 1–3, to 10 cm diam., ± globose, not rhizomatous; leaf blade semicircular in cross section; occasional escape from cultivation ..... ***A. cepa***
26. Bulbs 1–2, 5 cm diam., cylindric, clustered on short rhizome (this often missing or not visible on herbarium specimens); leaf blade circular in cross section; native or introduced.
27. Flowers 8–18 mm; tepals lilac to pale purple; native or introduced ..... ***A. schoenoprasum***
27. Flowers 6–9 mm; tepals pale yellowish white; introduced ..... ***A. fistulosum***

23. Scape solid, exceeding 5 mm wide only if flattened and winged; leaves 1–several, leaf blade solid.
28. Leaves (3–)5–40 mm wide, basal sheaths extending 1/3–1/2 scape.
29. Filaments unappendaged; leaf blade terete to semiterete; bulbels, if present, light brown ..... ***A. paniculatum***
29. Inner filaments appendaged with prominent tooth on each side of anther; leaf blade flat, channeled; bulbels very dark purple ..... ***A. rotundum***

28. Leaves 1–25 mm wide, basal sheaths never extending much above soil level.
30. Bulbs oblong, elongate, or ovoid, clustered on stout, primary rhizome, or short-rhizomatous; bulb coats membranous or chartaceous, finely striate with narrow, vertically elongate cells.
31. Bulbs on stout, iris-like rhizome; ovary crestless.

32. Tepals elliptic, apex obtuse; stamens ± equaling tepals; EC Arizona and adjacent New Mexico, and Santa Catalina Mountains, S Arizona ... ***A. gooddingii***
32. Tepals narrowly lanceolate to lanceolate, apex acuminate; stamens much shorter than tepals or definitely exserted; widespread in W North America, not occurring in Arizona.
33. Stamens and style exserted; stigma capitate; Cascades and Sierras E to NE Nevada, E Oregon, W Idaho ... ***A. validum***
33. Stamens and style ca. 1/2 tepals; stigma 3-lobed; Rocky Mountains from C Montana and NE Idaho to Wyoming, NE Utah, Colorado, and New Mexico ... ***A. brevistylum***

31. Bulbs short-rhizomatous at base, rhizome not stout and iris-like; ovary strongly crested with 6 processes.
34. Stamens and styles included; outer bulb coats ± reddish brown, inner coats deep red to white; ovary crested with 6 short, rounded, densely papillose processes ... ***A. haematochiton***
34. Stamens and styles exserted; outer bulb coats gray or brown, inner coats white to pink or reddish; ovary crested with 6 flattened, ± triangular processes, margins entire or toothed.
35. Flowers campanulate; tepals ± erect; scape nodding ... ***A. cernuum***
35. Flowers stellate; tepals spreading; scape erect, or, if nodding at anthesis, becoming erect ... ***A. stellatum***

30. Bulbs ovoid to subglobose, not clustered on stout, primary rhizome; rhizomes, if present, secondary, arising from bulbs, ± slender, terminated by new bulbs; bulb coats without reticulation or with ± isodiametric or transversely elongate cells that are sometimes intricately contorted.
36. Leaf 1 per scape; leaf blade terete; ovary prominently crested with 6 ± triangular processes.
37. Stigma unlobed or minutely 3-lobed, lobes ± stout, erect or spreading.
38. Scape 18–60 cm; flowers 5–9 mm; tepals unequal, inner whorl 1/4–1/3 longer than outer, margins entire or irregular to erose; stamens exserted ... ***A. sanbornii***
38. Scape less than 25 cm; flowers 7–20 mm; tepals ± equal, margins entire; stamens included.
39. Outer bulb coat reticulate with ± elongate, contorted meshes ... ***A. nevadense***
39. Outer bulb coat lacking reticulation, or meshes very indistinct, square or polygonal.
40. Pedicels slender, longer than flowers; flowers 8–12 mm ... ***A. atrorubens***
40. Pedicels stout, generally shorter than flowers; flowers 12–20 mm.
41. Tepals lanceolate to lance-linear, apex acute; lacking stalked, basal increase bulbs; rocky, sandy desert slopes, S California to W Arizona ... ***A. parishii***
41. Tepals lance-linear to lanceolate, apex long-acuminate; with 1–2 stalked basal increase bulbs; alpine ridges and talus, S California mountains ... ***A. monticola***

37. Stigma distinctly 3-lobed, lobes often slender and recurved.
42. Stamens equaling tepals or exserted.
43. Tepals unequal, inner 1/3–1/2 longer than outer ... ***A. sanbornii***
43. Tepals ± equal ... ***A. howellii***
42. Stamens included.
44. Tepal (at least inner whorl) margins denticulate to erose.
45. Scape 25–40 cm ... ***A. jepsonii***
45. Scape 5–20 cm.
46. Outer bulb coats reddish brown; tepals erect, ± straight at tip; inner whorl margins denticulate ... ***A. denticulatum***
46. Outer bulb coats brown to gray; tepals erect, ± spreading-reflexed at tip; inner whorl margins denticulate to erose ... ***A. abramsii***
44. Tepal margins all ± entire.

47. Margins of ovarian crest processes entire or notched at tip, outer margins sometimes irregular but never dentate or laciniate.
48. Flowers 10–18 mm; tepals maroon or deep reddish purple.
49. Tepals deep reddish purple, all reflexed at tip; Mount Hamilton Range, C California ..... ***A. sharsmithiae***
49. Tepals maroon, outer curled back at tip, inner reflexed; Spanish Needle Peak, S Sierra Nevada, and Horse Canyon, Tehachapi Mountains, California ..... ***A. shevockii***
48. Flowers 6–9 mm; tepals white to pink, darkening in age.
50. Inflorescence loose; pedicels flexuous in fruit; tepals lanceolate to lance-ovate, apex acuminate ..... ***A. parryi***
50. Inflorescence compact; pedicels straight; tepals ovate to nearly round, apex obtuse (rarely acute) to shallowly emarginate ... . ***A. munzii***
47. Margins of ovarian crest processes dentate to laciniate.
51. Tepals deep reddish purple, erect, usually conspicuously recurved at tip ..... ***A. fimbriatum***
51. Tepals white or flushed to pale lavender with darker midveins, spreading or erect, not conspicuously recurved at tip.
52. Flowers usually 6–12 mm ..... ***A. fimbriatum***
52. Flowers usually 6–8(–10) mm.
53. Scape 25–50 cm; tepals spreading from base; serpentine soil, Rawhide Hill and Red Hills, foothills of Sierra Nevada, C California..... ***A. tuolumnense***
53. Scape 7–20(–30) cm; tepals erect; serpentine clay soils, S Coast Ranges and W Transverse Ranges, California .... ***A. diabolense***

36. Leaves usually 2 or more, if 1, blade flattened or broadly channeled; ovary crestless or variously crested.
54. Bulbs generally with numerous increase bulbs, these much smaller than parent bulb, enclosed by bulb coats, in basal cluster or on threadlike rhizomes to 10 cm.
55. Ovary crestless or obscurely crested with 3 low central processes.
56. Larger bulbs each with cluster of bulbels surrounding roots; S Texas ..... ***A. elmendorfii***
56. Larger bulbs each with cluster of small, basal bulbels on one side; NE Oregon and WC Idaho..... ***A. madidum***
55. Ovary prominently crested with 6 triangular central processes, margins finely papillose or denticulate.
57. Leaves usually beginning to wither from tip by anthesis; tepals rigid (not papery), ± shiny in fruit, strongly involute at tip, carinate .... ***A. campanulatum***
57. Leaves usually green at anthesis; tepals papery (not rigid and shiny) in fruit, not strongly involute, not carinate.
58. Tepals ovate to elliptic, apex acute to acuminate; foothills of Sierra Nevada, N, C California..... ***A. membranaceum***
58. Tepals lanceolate, apex acuminate; Sierra Nevada, California, and intermountain region N to Oregon, Idaho..... ***A. bisceptrum***
54. Increase bulbs absent or 1–4, ± equaling parent bulbs, enclosed by parental bulb coats, never appearing as basal cluster, not rhizomatous or rhizomes 2+ mm thick (not threadlike).
59. Leaf blade channeled to subterete, if flat, not falcate.
60. Bulb coats lacking reticulation or reticulum delicate, very obscure under hand lens.
61. Bulbs ovoid to subglobose; rhizomes absent, renewal bulbs formed within coats of parent bulb; native or introduced.
62. Scape terete throughout, 1–3 mm diam.; leaf blade 1–3 mm wide; native to W Texas to SE Arizona..... ***A. kunthii***

62. Scape triquetrous, 2-edged or slightly winged proximally, if terete only proximally so, 1–10 mm wide; introduced in California and Oregon near the Pacific coast.
63. Umbel erect, ± hemispheric; flowers ± erect; tepals broadly elliptic, apex obtuse ..... ***A. neapolitanum***
63. Umbel lax, ± 1-sided; flowers pendent; tepals lanceolate, apex acute ..... ***A. triquetrum***
61. Bulbs oblique or oblique-ovoid, renewal bulbs borne terminally on rhizomes outside coats of parent bulbs; native.
64. Rhizomes conspicuous, 2 cm or more, including renewal bulbs.
65. Rhizomes smooth, parent bulb disappearing by anthesis except for still-functional roots and bulb coat; leaf blade broadly concave-convex or ± flattened, carinate; tepals obovate to ovate, apex acute to obtuse or emarginate; Coast Ranges, California, Oregon ..... ***A. unifolium***
65. Rhizomes scaly, sometimes absent, often missing in herbarium specimens, parent bulb persisting after anthesis; leaf blade flat, not carinate; tepals lanceolate to oblong, apex acute to acuminate; trans- Pecos Texas to SE Arizona ..... ***A. rhizomatum***
64. Rhizomes inconspicuous, 2 cm or less, including renewal bulb.
66. Tepals erect, red-purple, rarely pure white, at least inner tepal margins serrulate; NW California, SW Oregon ..... ***A. bolanderi***
66. Tepals ± spreading, white to pale pink, margins entire; W Texas to SE Arizona ..... ***A. kunthii***
60. Bulb coats obviously reticulate with prominent meshes under hand lens.
67. Cells of outer bulb coat square or polygonal.
68. Ovary with 6 prominent, flat, ± triangular crest processes .... ***A. bigelovii***
68. Ovary with 3 or 6 minute, rounded crest processes, or crest obscure.
69. Flowers 4–9 mm; tepals erect or spreading from base, margins entire ..... ***A. lacunosum***
69. Flowers 8–16 mm; tepals spreading at tip, inner tepal margins denticulate.
70. Bulb forming 1–3 renewal bulbs borne terminally on rhizomes outside coats of parent bulb; parent bulb disappearing by anthesis except for still-functional roots and shriveled bulb coats; near Weller Butte, Blue Mountains, SE Washington ..... ***A. dictuon***
70. Bulbs not forming rhizomes, renewal bulbs formed within coats of parent bulb; widespread W of Rocky Mountains .. .. ***A. acuminatum***
67. Cells of bulb coat transversely elongate, V-shaped, arranged in ± vertical rows, forming herringbone pattern, or ± contorted.
71. Cells of bulb coat in wavy, transverse rows, forming indistinct herringbone pattern or ± contorted; tepals spreading, ± equal.
72. Scape (3–)5–15(–17) cm; umbel persistent; tepals erect, not connivent over capsule in fruit ..... ***A. hickmanii***
72. Scape 15–60 cm; umbel shattering, each flower with its pedicel falling as unit; tepals connivent over capsule in fruit.
73. Ovary crested with 6 ± rectangular lateral processes; umbel compact; pedicel 0.7–2 times perianth ..... ***A. amplectens***
73. Ovary crestless or crested with 3 minute, 2-lobed central processes; umbel loose; pedicel 1.5–4 times perianth.
74. Leaf blade to 10 mm wide, channeled or flattened, carinate; inner bulb coats white; tepals becoming papery (not hyaline) after anthesis ..... ***A. praecox***

74. Leaf blade 1–3 mm wide, channeled or subterete, not carinate; inner bulb coats light yellow or white; tepals becoming hyaline (not papery) after anthesis ..... ***A. hyalinum***

71. Cells of bulb coat in sharply serrate, transverse rows, forming distinct herringbone pattern; tepals erect, inner shorter, narrower.

75. Tepals connivent over capsule in fruit, not rigid; umbel shattering in fruit, each flower with its pedicel falling as a unit . ***A. serra***

75. Tepals not connivent over capsule, rigid in fruit; umbel persistent.

76. Leaves 3–6, blade arcuate to tortuous; umbel compact; pedicels 5–20 mm; sea cliffs, N, C California ..... ***A. dichlamydeum***

76. Leaves 2–3, blade straight to arcuate; umbel loose; pedicels 10–40 mm; not on sea cliffs, California Floristic Province, extending south in coastal ranges.

77. Inner tepal margins denticulate, crisped ..... ***A. crispum***

77. Inner tepal margins entire to denticulate, never crisped ..... ***A. peninsulare***

59. Leaf blade flat or broadly channeled, if flat, ± falcate.

78. Scape and leaves persisting after seeds mature or on pressing, or only tardily deciduous.

79. Stamens much shorter than tepals.

80. Bulb coat cellular-reticulate with elongate, ± obscure, intricately contorted cells (resembling *Allium madidum*, but never with cluster of basal bulbels) ..... ***A. fibrillum***

80. Bulb coat cellular-reticulate with ± narrowly hexagonal, transversely elongate cells ..... ***A. brandegeei***

79. Stamens equaling tepals or exserted.

81. Scape expanded proximal to inflorescence; leaf blade (2–)5–8 mm wide ..... ***A. columbianum***

81. Scape thickest immediately proximal to inflorescence; leaf blade 1–5(–15) mm wide.

82. Scape constricted just proximal to inflorescence, then expanded; leaf blade 1–3(–5) mm wide..... ***A. constrictum***

82. Scape not expanded proximal to inflorescence; leaf blade 2–5(–15) mm wide.

83. Leaf blade usually more than 5 mm wide, flat; umbel 25–50-flowered; spathe bracts 3..... ***A. douglasii***

83. Leaf blade 2–3 mm wide, flat to channeled; umbel 10–30-flowered; spathe bracts 2.

84. Bulb coat with quadrate to polygonal reticulations; leaf blade ± equaling scape..... ***A. nevii***

84. Bulb coat without reticulations or with 2–3 rows of ± quadrate cells just distal to roots; leaf blade exceeding scape ..... ***A. macrum***

78. Scape and leaves forming abcission layer at soil surface and deciduous when seeds mature, also frequently breaking at soil surface after pressing.

85. Outer bulb coats cellular-reticulate throughout (often obscurely so in *A. aaseae* and *A. simillimum*).

86. Bulb coats obscurely cellular-reticulate with ± contorted cells; tepal margins denticulate to erose.

87. Tepals white with greenish or reddish veins, sometimes flushed pink; anthers purple or mottled purple and white; pollen white or gray ..... ***A. simillimum***

87. Tepals bright pink, rarely white; anthers yellow; pollen yellow ..... ***A. aaseae***

86. Bulb coats ± prominently cellular-reticulate; tepal margins entire.

88. Bulb coats reticulate, cells irregularly arranged, ± polygonal, rectangular, or transversely elongate, ± curved.
89. Cells of bulb coat irregularly arranged, ± transversely elongate, curved; Tuolumne County, C California ..... ***A. tribracteatum***
89. Cells of bulb coat irregularly arranged or in ± regular vertical rows, polygonal or ± rectangular; Sierra Nevada, California, and Nevada ..... ***A. obtusum***
88. Bulb coats reticulate, cells arranged in ± regular vertical rows, narrowly hexagonal to rectangular, transversely elongate.
90. Tepals linear-lanceolate ..... ***A. anceps***
90. Tepals oblanceolate to ovate.
91. Scape 3–10 cm; pedicel ± equaling perianth ... ***A. punctum***
91. Scape 15–20 cm; pedicel 2–3 times perianth ... ***A. lemmonii***

85. Outer bulb coats not cellular-reticulate or with 2–3 rows of cells just distal to roots.
92. Scape terete or ± compressed, not winged.
93. Stamens well included.
94. Stamens ± equaling tepals or exserted.
95. Leaf blade strongly falcate; umbel mostly 5–10-flowered ..... ***A. parvum***
95. Leaf blade linear or weakly falcate; umbel 20–30-flowered ..... ***A. cratericola***
94. Leaves 2 per scape.
96. Leaf 1 per scape.
97. Leaf blade ± equaling to 2 times scape; WC Idaho .. .. ***A. tolmiei***
97. Leaf blade much longer than scape; C Sierra Nevada, California ..... ***A. yosemitense***
96. Filaments papillose proximally ..... ***A. hoffmanii***
93. Filaments smooth proximally ..... ***A. burlewii***
92. Scape flattened, 2-edged or usually winged distally.
98. Bulbs oblique or oblique-ovoid, renewal bulbs borne terminally on rhizomes outside coats of parent bulb; parent bulb disappearing by anthesis except for still-functional roots and shriveled bulb coat.
99. Pedicel ± equaling perianth; ovary obscurely 3-crested; barren, bald summits W of Cascade Mountains from Vancouver Island to SW Oregon, also at Jefferson Park, Oregon, and in Wenatchee Mountains, C Washington ..... ***A. crenulatum***
99. Pedicel 2–3 times perianth; ovary prominently 6-crested; mountains and scablands E of Cascade Mountains, Oregon ..... ***A. tolmiei***
98. Bulbs ovoid to subglobose, rhizomes absent, renewal bulbs formed within coats of parent bulb; parent bulbs persistent.
100. Tepals narrowly lanceolate, apex long-acuminate; stamens exserted ..... ***A. platycaule***
100. Tepals lanceolate to ovate or elliptic, apex obtuse to acuminate; stamens included.
101. Flowers 9–15 mm; tepal apex long-acuminate, inner margins usually denticulate ..... ***A. falcifolium***
101. Flowers 6–10(–12) mm; tepal apex obtuse to acute, or ± involute in age and appearing acuminate, inner margins denticulate or not.
102. Inner bulb coats usually pink or red; inner tepal margins sometimes ± denticulate; Siskiyou Mountains of NW California and SW Oregon ..... ***A. siskiyouense***

102. Inner bulb coats white; inner tepal margins entire; W United States, E of Sierra–Cascade axis.
103. Tepals becoming rigid (not papery), carinate in fruit.
104. Tepals lanceolate, apex acute to acuminate, ± erect in fruit, involute at tip; ovary obscurely to prominently crested with 3 or 6 processes ..... ***A. tolmiei***
104. Tepals elliptic-oblong, apex obtuse, not involute at tip, connivent over ovary in fruit; ovary crestless or obscurely crested ..... ***A. scilloides***
103. Tepals becoming papery (not rigid), not carinate in fruit.
105. Ovary distinctly crested with 3 or 6 low processes; sand and gravel deposits, along Columbia River from Ferry County, NE Washington, to mouth of John Day River, NC Oregon ..... ***A. robinsonii***
105. Ovary obscurely crested with 3 low, rounded processes; rocky, clay slopes and talus, E Oregon, Idaho, to C California, N Nevada, NW Utah .. ***A. parvum***

1. Leaf blade flat, 15–90 mm wide, (tapering to base or distinctly petiolate).
106. Leaves ephemeral, usually absent at anthesis; E North America ..... ***A. tricoccum***
106. Leaves present at anthesis; Attu and Unalaska islands, Alaska ..... ***A. victorialis***