

Alliums of Garner Valley

key element species key characteristics

lvs 1 per stem, cylindric

9 *monticola* fl 12-20 mm, pink to rose-purple near tip, often white basally
20' *parryi* fl 6-9 mm, white to pink
21 *fimbriatum*^2 fl (6)8-12 mm, dark red-purple

lvs 2 per stem, if 1, flat or widely channeled

Bulbs oblong or oblong-ovoid, clustered on stout rhizome

28 *A. haematochiton* lvs 2 per stem, flat; ovary crests inconspicuous
28' *A. marvinii* lvs 2 per stem, flat; ovary crests 6, obvious

Bulbs ovoid to ± spheric, not clustered on short rhizome

Ovary crests 6, obvious, triangular

30 *A. campanulatum* lvs 2 per stem, widely channeled

Ovary crests 0 or obscure, not triangular

plant in fruit dry, breaking at ground

41 *cratericola* lvs 2 per stem, ± flat to widely channeled, fl 7-14 mm, +- pink, Stamens well incl
43 *burlewii* lvs 1 per stem, flat or channeled, fl 7-10 mm, white or tinged pink basally; Stamens
exserted or ± at same level as perianth

plant in fruit not breaking at ground

55' *lacunosum* lvs 2 per stem, ± cylindric or flat, fl 4-9 mm, white or pale pink

JM2 key

- 3. Lvs 1 per stem, cylindric; ovary crests 6, obvious, $\pm$ triangular
 - 4. Stigma lobes $\pm$ 0
 - 5' Stamens included; perianth parts 8–20 mm, $\pm$ equal, entire; stem generally < 20 cm
 - 6' Plants not of DMtns or flowers not white
 - 7' Perianth parts 12–20 mm; pedicels stout, generally $<$ flowers
 - 9. Perianth parts lance-linear, long-tapered; bulblets 1–2, stalked, at bulb base; TR, w PR *A. monticola*
 - 4' Stigma lobes 3, often slender, recurved
 - 10' Stamens including
 - 14' Perianth parts $\pm$ entire
 - 17. Ovary crests entire, notched, or jagged, not dentate to deeply cut
 - 18' Perianth 6–9 mm, white to pink, in age $\pm$ red
 - 20' Infl open, pedicels curved in fruit; perianth parts lanceolate, acuminate *A. parryi*
 - 17' Ovary crests dentate to deeply cut
 - 21. Perianth dark red-purple, tips generally recurved to spreading *A. fimbriatum*
- var. *fimbriatum*
- 3' Lvs ≥ 2 per stem (if 1, leaf flat or channeled); ovary crests 6, obvious, $\pm$ triangular, or $\pm$ 0
 - 25' St < 3 mm diam unless flattened and/or winged, solid or hollow, not inflated below middle; bulb < 3 cm diam; flowers 5–150
 - 26. Bulbs oblong or oblong-ovoid, clustered on stout rhizome
 - 27' St 10–40 cm; perianth parts narrowly ovate, acute; stamens incl
 - 28. Ovary topped with a low, papillate cap covering lobes *A. haematochiton*
 - 28' Ovary crests 6, obvious, triangular, margins papillate or not *A. marvinii*
 - 26' Bulbs ovoid to $\pm$ spheric, not clustered on short rhizome
 - 29. Ovary crests 6, obvious, triangular; bulblets > 3 , generally $<<$ bulb, generally clustered at bulb base or on rhizome
 - 30 Lvs generally withered in flower; perianth red-purple, rigid-keeled, $\pm$ shiny in fruit, tip margins inrolled, parts with a purple crescent adaxially just above base ... *A. campanulatum*
 - 29' Ovary crests 0 or obscure, not triangular; bulblets 1–3, $\pm$ = bulb, within bulb coats or on rhizome

A. monticola Davidson

Bulb 10–22 mm, ovoid, bulblets 1–2, large, stalked, at base; outer coat sculpture 0 or cells $\pm$ square, in 2–3 rows basally; inner coats white or pink.

Stem: 6–25 cm, glaucous.

Leaf: 1, $< 2 \times$ stem, cylindric, glaucous.

Inflorescence: flowers 8–25; pedicels 5–12 mm.

Flower: 12–19 mm; perianth parts erect, lance-linear, long-tapered, entire, pink to rose-purple near tip, often white basally; ovary crests

6, obvious, $\pm$ linear to narrowly triangular, entire.

n=7. Uncommon. Rocky ridges, talus slopes; 1400–3200 m. Transverse Ranges, nw Peninsular Ranges (Orange Co.). May–Jul

A. parryi S. Watson

Bulb 8–14 mm, ovoid to $\pm$ spheric; outer coat $\pm$ red-brown, sculpture 0 or cells $\pm$ square, in 2–3 rows basally; inner coats lighter.

Stem: 5–20 cm.

Leaf: 1, $< 1.5 \times$ stem, cylindric.

Inflorescence: flowers 8–50; pedicels 6–20 mm, curved in fruit.

Flower: 6–9 mm; perianth parts lanceolate, acuminate, entire, white, $\pm$ red in fruit; ovary crests 6, obvious, entire or finely, irregularly dentate.

A. lacunosum S. Watson

Bulb 1–2 cm, ovoid; outer coat often many, thickly surrounding bulb, cells $\pm$ square, polygonal, or transversely rectangular, but not forming a herringbone pattern, walls thick, wavy.

Stem: 10–35 cm.

Leaf: 2, 0.7–2 $\times$ stem, $\pm$ cylindric or flat.

Inflorescence: flowers 5–45; pedicels 5–25 mm.

Flower: 4–9 mm; perianth parts erect or spreading, oblanceolate to narrowly ovate, entire, white or pale pink; ovary crests 3, minute, 2-lobed, central, crests and upper ovary densely papillate.

A. lacunosum var. *davisiae* (M.E. Jones) McNeal & Ownbey

Inflorescence: open; bracts 2; flowers 10–35; pedicels 10–25 mm.

Flower: 6–8 mm.

n=7. Uncommon. Open, sandy slopes, ridges; 600–2100 m. Western Transverse Ranges, San Bernardino Mountains, East of Sierra Nevada, Mojave Desert. Apr–May [Online

A. lacunosum var. *lacunosum*

Inflorescence: dense; bracts 2; flowers 5–25; pedicels 5–12 mm.

Flower: 6–9 mm.

n=7. Serpentine outcrops, clay; 50–1000 m. n Central Coast, s San Joaquin Valley, South Coast Ranges, South Coast, n Channel Islands.
Ap

A. lacunosum var. *micranthum* Eastw.

Inflorescence: open; bracts 3; flowers generally 10–30; pedicels 6–13 mm.

Flower: 4–6 mm.

n=7. Uncommon. Dry rocky hillsides, including serpentine; 300–600 m. South Coast Ranges, San Bernardino Mountains, Peninsular Ranges.

A. marvinii Davidson YUCAIPA ONION

Bulbs clustered, 2–3 cm, oblong, on short rhizome; outer coat $\pm$ red-brown, sculpture finely striate, cells vertically elongate in narrow rows; inner coats white, pink, or deep red.

Stem: 10–40 cm.

Leaf: 4–6, < stem, flat.

Inflorescence: flowers 10–30; pedicels 7–15 mm.

Flower: 6–8 mm; perianth parts > stamens, narrowly ovate, entire, white, midveins rose; ovary crests 6, obvious, triangular, margins papillate or not.

Dry slopes, ridges; 300–1250 m. South Coast, San Bernardino Mountains, Peninsular Ranges.

32. Lvs flat or widely channeled, $\pm$ sickle-shaped; plant in fruit dry, breaking at ground

33' Outer bulb coat sculpture 0 or cells $\pm$ square, in 2–3 rows basally

39. St cylindric or $\pm$ flat, not winged

40. Stamens well incl

41. Lvs straight or $\pm$ sickle-shaped; flowers 20–30; KR, NCoR, n&c SNF, s SNH, Teh, SCoRI, WTR, SnJt *A. cratericola*

40' Stamens exerted or $\pm$ at same level as perianth

42' Lvs 1 per stem

43. Filaments smooth *A. burlewii*

32' Lvs narrowly channeled to $\pm$ cylindric, if flat or widely channeled, not sickle-shaped; plant in fruit dry or not, not breaking at ground

48' Outer bulb coat sculpture obvious, $\pm$ net-like

54. Outer bulb coat cells square, polygonal, in regular rows, not in $\pm$ herringbone pattern, not $\pm$ contorted

55' Perianth parts 4–9 mm, erect or spreading, entire *A. lacunosum*

A. lacunosum varieties:

56. St 10–25 cm; inflorescence dense, pedicel 0.7–1.5 $\times$ flower

57. Lvs generally < stem; stem 15–25 cm; flowers 5–7 mm; s SNF, Teh, w DMoj var. *kernense*

57' Lvs > stem; stem 10–20 cm; flowers 6–9 mm; n CCo, s SnJV, SCoR, SCo, n ChI var. *lacunosum*

56' St 15–35 cm; inflorescence open, pedicel 1.5–3.5 $\times$ flower

58. Bracts 2; flower 6–8 mm; WTR, SnBr, SNE, DMoj var. *davisiae*

58' Bracts 3; flower 4–6 mm; SCoR, SnBr, PR var. *micranthum*

JM2 Descriptions

A. burlewii Davidson

Bulb 15–25 mm, ovoid; outer coat sculpture 0 or cells $\pm$ square, in 2–3 rows basally.

Stem: 2–8 cm.

Leaf: 1, 1–2 $\times$ stem, widely channeled.

Inflorescence: flowers 8–20; pedicels 6–10 mm.

Flower: 7–10 mm; perianth parts ovate, erect, entire, white or tinged pink basally, in age dull purple; filaments smooth; ovary crests 0 or 6, minute, central.

n=7. Granitic sands on dry slopes, ridges; 1800–2800 m. s High Sierra Nevada, Tehachapi Mountain Area, South Coast Ranges, Southwestern California. Apr–Jul

A. campanulatum S. Watson

Bulb 1–2 cm, ovoid, bulblets generally clustered at base or on slender rhizomes; outer coat cells $\pm$ square, walls wavy; inner pink to white.

Stem: 10–30 cm.

Leaf: 2, $\pm$ = stem, widely channeled, generally withered in flower.

Inflorescence: flowers 10–50; pedicels 1–2 cm.

Flower: 5–8 mm; perianth parts $\pm$ spreading, lanceolate to ovate, rigid-keeled in fruit, acuminate, entire, rose to purple (white), with a purple crescent adaxially just above base; ovary crests 6, low, triangular, dentate.

n=7,14. Dry mtn slopes; 600–2600 m. Klamath Ranges, Outer North Coast Ranges, Cascade Range, High Sierra Nevada, Outer South Coast Ranges, Southwestern California, Modoc Plateau; Oregon, Nevada. May–Aug

A. cratericola Eastw.

Bulb 15–25 mm, ovoid; outer coat sculpture 0 or cells $\pm$ square, in 2–3 rows basally.

Stem: 3–10 cm.

Leaf: 1–2, 1.5–4 $\times$ stem, $\pm$ flat to widely channeled.

Inflorescence: flowers 20–30; pedicels 5–18 mm.

Flower: 7–14 mm; perianth parts $\pm$ oblong to elliptic, entire, $\pm$ pink; ovary crests 3, minute, central.

n=7,14. Open, serpentine, volcanic, or granitic places; 300–1800 m. Klamath Ranges, North Coast Ranges, n&c Sierra Nevada Foothills, s High Sierra Nevada, Tehachapi Mountain Area, se San Francisco Bay Area, Inner South Coast Ranges, Western Transverse Ranges, San Jacinto Mountains. Most n CA plants have 1 leaf; s CA plants and 2 populations in Mariposa Co. have 2 leaves; some NCoR populations mixed. Mar–Jun

A. fimbriatum S. Watson

Bulb 10–17 mm, ovoid to $\pm$ spheric; outer coat red-brown, sculpture 0 or cells $\pm$ square, in 2–3 rows basally; inner coats pale brown to white.

Stem: 10–37 cm.

Leaf: 1, 1.5–2 $\times$ stem, cylindric.

Inflorescence: flowers 6–75; pedicels 6–20 mm.

Flower: (6)8–12 mm; perianth parts lanceolate to ovate, entire, dark red-purple to white; ovary crests 6, obvious, dentate to deeply cut.

A. fimbriatum var. *fimbriatum*

Stem: 10–20 cm.

Inflorescence: flowers 6–35.

Flower: perianth dark red-purple; ovary crests finely dentate to deeply cut.

n=7. Common. Dry slopes, flats; 300–2700 m. s North Coast Ranges, s Sierra Nevada Foothills, Tehachapi Mountain Area, Central Western California, Southwestern California, Desert; n Baja California. Apr–Jun

A. haematochiton S. Watson

Bulbs clustered on stout rhizome, 2–3 cm, oblong; outer coat $\pm$ red-brown, sculpture finely striate, cells vertically elongate in narrow rows; inner coats deep red to white.

Stem: 10–40 cm.

Leaf: 4–6, < or $\pm$ = stem, flat.

Inflorescence: flowers 10–30; pedicels 7–15 mm.

Flower: 6–8 mm; perianth parts narrowly ovate, entire, white to rose; ovary topped with a low, papillate cap covering lobes.

n=7. Common. Dry slopes, ridges; < 800 m. Outer South Coast Ranges, South Coast, Western Transverse Ranges, Peninsular Ranges; n Baja California. Mar–May