

**NOMENCLATURAL SUMMARY AND SYNOPTIC ARRANGEMENT  
OF *PYRROCOMA* (ASTERACEAE: ASTEREAE)**

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**ABSTRACT**

*Pyrrocoma* is one of the largest genera in the tribe Astereae, with 90 species, all within the western USA and southwestern Canada. In 2024–2025, many species have been added and many previously published names have been revived. Each species with formal typology is listed here alphabetically and the species are arranged into informal groups based on morphology and geography. Pertinent taxonomic publications from 2024 and 2025 are listed.

*Pyrrocoma* in the present accounting includes 90 species, all endemic to the western USA and adjacent Canada. Among genera of Astereae worldwide, only *Baccharis*, *Erigeron*, and *Solidago* are unequivocally larger. *Brachyscome*, *Felicia*, *Pteronia*, *Shawia*, and *Symphotrichum* are about the same size.

*Pyrrocoma* has recently been interpreted to comprise 14 species (Bogler 2006, mostly following Mayes 1976 and Hall 1928). The remarkable increase in number reflects differences in taxonomic philosophy (outlined in Nesom 2025a) but more significantly an increase in the number of collections and an attempt by the present author to make consistent identifications, aligning morphology and geography. Taxonomic interpretations in *Pyrrocoma* are not of a different nature nor more difficult than in some other genera.

The occurrence of numerous endemics of narrow distribution has resulted in large part from a preference for saline habitats (ultramafic in some), which usually are scattered and discontinuous. Intraspecific variability (particularly in inflorescence structure) and overlapping morphology from convergence and parallelism, as well as a Ph.D. study (Mayes 1976) that differed little from an earlier assessment (Hall 1928), probably have diverted critical study.

The set of recent *Pyrrocoma* publications listed here can be taken as a broad attempt to find morpho-geographic patterns and clarify application of names — remaining taxonomic problems are pointed out, and molecular-phylogenetic analyses will be critical in interpretations.

**LITERATURE CITED**

- Bogler, D.J. 2006. *Pyrrocoma*. Pp. 413–424, in *Flora of North America North of Mexico*, Vol. 20. Oxford Univ. Press, New York.
- Hall, H.M. 1928. The Genus *Haplopappus*. A Phylogenetic Study in the Compositae. Publ. Carnegie Inst. Washington 389: 1–391.
- Mayes, R.A. 1976. A cytotaxonomic and chemosystematic study of the genus *Pyrrocoma* (Asteraceae: Astereae). Ph.D. dissertation, Univ. of Texas, Austin.
- Nesom, G.L. 2025. Taxonomy of the *Pyrrocoma hirta* group (Asteraceae: Astereae). *Phytoneuron* 2025-07: 1–34.

## APPENDIX 1. *Pyrrocomma* publications, 2024 and 2025

- Ertter, B. 2025. Two new Idaho *Pyrrocomma* previously included in *P. carthamoides* (Asteraceae: Astereae). *Phytoneuron* 2025-61: 1-12.
- Goodrich, S. 2024. *Pyrrocomma wyethiana* (Asteraceae): A new species from Strawberry Valley, Utah. *Western N. Amer. Naturalist* 84: 411–418.
- Nesom, G.L. 2025a. Taxonomy of the *Pyrrocomma hirta* group (Asteraceae: Astereae). *Phytoneuron* 2024-07: 1–34.
- Nesom, G.L. 2025b. Taxonomy of the *Pyrrocomma racemosa* group (Asteraceae: Astereae). *Phytoneuron* 2025-08: 1–64.
- Nesom, G.L. 2025c. *Pyrrocomma* (Asteraceae: Astereae) from Oregon collected by Nuttall in 1834. *Phytoneuron* 2025-09: 1–24.
- Nesom, G.L. 2025d. *Pyrrocomma payettensis* (Asteraceae: Astereae), a new species from western Idaho. *Phytoneuron* 2025-10: 1–4.
- Nesom, G.L. 2025e. *Pyrrocomma* (Asteraceae: Astereae) in Colorado and New Mexico. *Phytoneuron* 2024-11: 1–59.
- Nesom, G.L. 2025f. New species of *Pyrrocomma* (Asteraceae: Astereae) from southwestern Utah. *Phytoneuron* 2025-12: 1–19.
- Nesom, G.L. 2025g. Distinction of *Pyrrocomma acuminata* (Asteraceae: Astereae), from southwestern Wyoming. *Phytoneuron* 2025-13: 1–9.
- Nesom, G.L. 2025h. *Pyrrocomma plantaginea* Greene (Asteraceae: Astereae), from Yellowstone National Park. *Phytoneuron* 2025-14: 1–15.
- Nesom, G.L. 2025i. Glandular species of *Pyrrocomma* (Asteraceae: Astereae) from Nevada, California, and Oregon. *Phytoneuron* 2025-15: 1–49.
- Nesom, G.L. 2025j. Definition of *Pyrrocomma subviscosa* (Asteraceae: Astereae). *Phytoneuron* 2025-16: 1–22.
- Nesom, G.L. 2025k. Three species of *Pyrrocomma* (Asteraceae: Astereae) from east-central California and adjacent Nevada. *Phytoneuron* 2025-17: 1–35.
- Nesom, G.L. 2025l. *Pyrrocomma pyramidis* (Asteraceae: Astereae), a new species from Nevada. *Phytoneuron* 2025-18: 1–6.
- Nesom, G.L. 2025m. Three new species of *Pyrrocomma* (Asteraceae: Astereae) from Idaho. *Phytoneuron* 2025-19: 1–47.
- Nesom, G.L. 2025n. *Pyrrocomma stenocephala* (Asteraceae: Astereae) from California. *Phytoneuron* 2025-20: 1–11.
- Nesom, G.L. 2025o. *Pyrrocomma* (Asteraceae: Astereae) from Siskiyou Co., California. *Phytoneuron* 2025-24: 1–29.
- Nesom, G.L. 2025p. *Pyrrocomma lanceolata* (Asteraceae: Astereae) in Utah. *Phytoneuron* 2025-26: 1–57.
- Nesom, G.L. 2025q. *Pyrrocomma eremica* (Asteraceae: Astereae), a new species from Churchill Co., Nevada. *Phytoneuron* 2025-28: 1–6.
- Nesom, G.L. 2025r. *Pyrrocomma gossypina* (Asteraceae: Astereae), San Bernardino Mountains endemic. *Phytoneuron* 2025-30: 1–10.
- Nesom, G.L. 2025s. Taxonomy of *Pyrrocomma lanceolata* (Asteraceae: Astereae). *Phytoneuron* 2025-31: 1–32.
- Nesom, G.L. 2025t. *Pyrrocomma halophila* (Asteraceae: Astereae), from Lake County, Oregon. *Phytoneuron* 2025-32: 1–20.
- Nesom, G.L. 2025u. *Pyrrocomma solidaginea* and *Pyrrocomma kennedyi* (Asteraceae: Astereae), variants of *P. lanceolata*. *Phytoneuron* 2025-33: 1–24.
- Nesom, G.L. 2025v. *Pyrrocomma tenuicaulis* (Asteraceae: Astereae) from Nevada and *Pyrrocomma eureka*, sp. nov. *Phytoneuron* 2025-34: 1–32.

- Nesom, G.L. 2025w. *Pyrocoma landerantha*, sp. nov. (Asteraceae: Astereae), a monocephalous relative of *P. lanceolata*. *Phytoneuron* 2025-35: 1–14.
- Nesom, G.L.. 2025x. The identity of *Pyrocoma cuspidata* (Asteraceae: Astereae). *Phytoneuron* 2025-36: 1–16.
- Nesom, G.L. 2025y. *Pyrocoma peregrina* (Asteraceae: Astereae), a new species from Mono and Inyo cos., California. *Phytoneuron* 2025-39: 1–15.
- Nesom, G.L. 2025z. *Pyrocoma ahartii* (Asteraceae: Astereae), a new species from northeastern California. *Phytoneuron* 2025-40: 1–6.
- Nesom, G.L. 2025aa. *Pyrocoma apargioides* (Asteraceae: Astereae) and similar species. *Phytoneuron* 2024-44: 1–55.
- Nesom, G.L. 2025bb. *Pyrocoma villosa* (Asteraceae: Astereae), Big Horn Mountains endemic. *Phytoneuron* 2024-45: 1–11.
- Nesom, G.L. 2025cc. Taxonomy of the *Pyrocoma sessiliflora* group (Asteraceae: Astereae). *Phytoneuron* 2025-46: 1–47.
- Nesom, G.L. 2025dd. Var. *virgata* in *Pyrocoma* (Asteraceae: Astereae): What it is. *Phytoneuron* 2025-47: 1–15.
- Nesom, G.L. 2025ee. Taxonomy of *Pyrocoma uniflora* (Asteraceae: Astereae) and similar species. *Phytoneuron* 2025-51: 1–63.
- Nesom, G.L. 2025ff. Taxonomy of the *Pyrocoma carthamoides* complex (Asteraceae: Astereae). *Phytoneuron* 2025-60: 1–48.
- Nesom, G.L. 2025gg. Parapatric species, *Pyrocoma insecticruris* and *P. bennettensis* (Asteraceae: Astereae). *Phytoneuron* 2025-62: 1–25.
- Nesom, G.L. 2025hh. Nomenclatural summary and synoptic arrangement of *Pyrocoma* (Asteraceae: Astereae). *Phytoneuron* 2025-63: 1–17.
- Tiehm, A. and G.L. Nesom. 2025. *Pyrocoma anemophila* (Asteraceae: Astereae), a new species from northeastern California. *Phytoneuron* 2025-25: 1–15.

## APPENDIX 2. *Pyrocoma* taxa

**PYRROCOMA** Hook., Fl. Bor. Amer. 1(6): 306. 1833. *Haplopappus* sect. *Pyrocoma* (Hook.) Hall, Publ. Carnegie Inst. Wash. 389: 34. 1928. **TYPE:** *Pyrocoma carthamoides* Hook.

*Homopappus* Nutt., Trans. Amer. Philos. Soc. 2, 7: 330. 1841. **LECTOTYPE** (designated here): *Homopappus paniculatus* Nutt. = *Pyrocoma paniculata* (Nutt.) Torr. & Gray = *Pyrocoma glomerata* (Nutt.) Torr. & Gray

1. **PYRROCOMA ACROPHILA** Nesom, *Phytoneuron* 2025-60: 17. 2025. **TYPE: Oregon.** Jackson Co.: Dry sunny summit of Siskiyou, above the Inns, Oregon-California line, 11 Jul 1930, L.F. Henderson 12681 (holotype: OSC).
2. **PYRROCOMA AHARTII** Nesom, *Phytoneuron* 2025-40: 1. 2025. **TYPE: California.** Plumas Co.: 4.9 air mi SW of Quincy, 1.2 air mi NNW of Deanes Valley Campground, 3.2 air mi SE of Spanish Ranch, just E of USFS Rd 24N29, ca. 915 ft W of Rock Creek, 39° 54' 21.9" N, 121° 01' 49.1" W, dry rocky serpentine soil, open forest/outcrops, yellow pine forest, nearly level, low ridge, 4200 ft, normal size plant, uncommon, scattered, 14 Sep 2018, Ahart 21,896 (holotype: CHSC).
3. **PYRROCOMA ANEMOPHILA** Tiehm & Nesom, *Phytoneuron* 2025-25: 1. 2025. **TYPE: California.** Lassen Co.: Cascade Range, Windy Hollow, 18.0 road mi N of Hwy 36 to Susanville on Hwy 44 to Lassen, 0.3 air mi WSW of the hwy, 40.5468° N, 121.06448° W, NAD83, 1217 m (5617 ft), 15 Aug 2024, A. Tiehm 20,008 with Mike Hagebusch (holotype: RENO; isotypes: to be distributed).

4. **PYRROCOMA ANGUINEA** Nesom, *Phytoneuron* 2025-12: 3. 2025. **TYPE: Utah.** Millard Co.: Snake Valley, E of Gandy, ca. 2.5 mi E of Gandy Road [S end of Salt Marsh Lake], 39.4467 N, 113.9318 W, in channel on *Juncus*, *Carex*, *Potentilla*, *Muhlenbergia* hummocks, 4830 ft, 4 Oct 1985, *B. Franklin 2636* (holotype: BRY; isotype: NY).
5. **PYRROCOMA APARGIOIDES** (A. Gray) Greene, *Erythea* 2: 70. 1894. *Haplopappus apargioides* A. Gray, *Proc. Amer. Acad. Arts* 7: 354. 1868. *Aster apargioides* (A. Gray) Kuntze, *Rev. Gen.* 1: 317. 1891. **TYPE: California.** Tuolumne Co.: Soda Springs, on the Tuolumne River, 9700 ft, 1866, *H.N. Bolander 5050* (holotype: GH; isotypes: BRU, MO, NDG, NY-3 sheets, US).  
*Pyrocoma demissa* Greene, *Leafl. Bot. Observ. Crit.* 2: 10. 1909. **TYPE: California.** Nevada Co.: Mt. Stanford, 8800 ft, 5 Aug 1888, *C.F. Sonne 139* (holotype: US; isotypes: F, JEPS, MO, PH, UC).
6. **PYRROCOMA ARGUTA** (Nutt.) Torr. & Gray, *Fl. N. Amer.* 2: 244. 1842. *Homopappus argutus* Nutt., *Trans. Amer. Philos. Soc. ser. 2, 7*: 331. 1840. **LECTOTYPE** (Nesom 2025c): **Oregon.** "Plains of the Columbia" [BM label], 1834, *T. Nuttall s.n.* (BM 102340; probable isolectotype: NY "Ex Herbario Musei Britannici").  
*Pyrocoma duriuscula* Greene, *Leafl. Bot. Observ. Crit.* 2: 16. 1909. *Haplopappus racemosus* subsp. *duriusculus* (Greene) Hall, *Publ. Carnegie Inst. Wash.* 389: 129. 1928. **TYPE: Oregon.** [Union Co.]: "Eastern Oregon," stony ground, 3500 ft, Aug 1897, *W.C. Cusick 1755* (holotype: US; isotypes: BRU, E, MO, NDG).
7. **PYRROCOMA BENITOANA** Nesom, *Phytoneuron* 2025-08: 14. 2025. **TYPE: California.** San Benito Co.: Clear Creek, wet highly serpentized soil, chaparral, 3000 ft, common, much browsed by deer, 4 Oct 1966, *Twisselmann 12855* (holotype: CAS 362351; isotypes: CAS, JEPS).
8. **PYRROCOMA BENNETTENSIS** Nesom, *Phytoneuron* 2025-62: 4. 2025. **TYPE: Idaho.** Gooding Co.: Mount Bennett Hills, ca. 16 air km NE of King Hill, E of road and stock pond to Indian Writing Waterhole, S of Dempsey Meadows Rd, 43.148° N, 115.038° W, ephemerally wet rock drainage, mostly in cracks of rocks, 5395 ft, 17 Jul 1998, *S. Popovich & C. Blackburn 6217* (holotype: SRP 33412; isotypes: CIC-SHO, IDS, SRP-33410).
9. **PYRROCOMA BITNERI** Nesom, *Phytoneuron* 2025-15: 2. 2025. **TYPE: Nevada.** Washoe Co.: Along Badger Creek near Bitner Ranch, T44N, R22E, Sec 14, meadows, 5700 ft, 22 Jul 1998, *G. Schoolcraft 2777* (holotype: RENO).
10. **PYRROCOMA BOISEANA** Ertter, *Phytoneuron* 2025-61: 2. 2025. **TYPE: Idaho.** Ada Co.: Boise foothills ca. 3.5 air mi NE of downtown Boise, SE end of Corrals Trail, crest of N-facing ridge above trail, relatively good quality shrub-steppe with intact cryptogamic crust, mixed bunchgrasses (native and non-native), scattered bitterbrush and mountain big sagebrush, miscellaneous forbs (e.g., *Crepis*, *Lupinus*, *Achillea*), 43.656° N, 116.150° W, ca. 1120 m elev, 4 Aug 2024, *B. Ertter 25588* (holotype: UC; isotypes: ID, IDS, K, NY, MO, OSC, RM, SRP, TEX, US, UTC, WTU).
11. **PYRROCOMA BRACHYCEPHALA** A.Nels., *Bot. Gaz.* 37: 265. 1904. *Haplopappus lanceolatus* var. *brachycephalus* (A. Nels.) Piper, *Bot. Gaz.* 37: 265. 1904. *Haplopappus racemosus* subsp. *brachycephalus* (A. Nels.) Hall, *Publ. Carnegie Inst. Wash.* 389: 134. 1928. *Haplopappus racemosus* var. *brachycephalus* (A. Nels.) Peck, *Man. Pl. Oregon*, 713. 1941. **TYPE: Oregon.** Lake Co.: Abert Valley, dry alkaline soil, 24 Aug 1901, *W.C. Cusick 2778* (holotype: RM; isotypes: E, F, MO, OSC, POM, UC, US, WSC).

- 12. PYRROCOMA CARTHAMOIDES** Hooker, Fl. Bor.-Amer. 1(6): 307, plate 107. 1833. *Haplopappus carthamoides* (Hook.) A. Gray, Proc. Acad. Nat. Sci. Philadelphia 15(3): 65. 1863 [1864]. *Aster carthamoides* (Hook.) Kuntze, Rev. Gen. 1: 317. 1891. **TYPE:** [Protologue]: "North-West coast of America," *D. Douglas s.n.* (holotype: K; isotypes: BM, G-DC, NY).
- Pyrrocomma rigida* Rydb., Bull. Torrey Bot. Club 27: 624. 1900 [not *Pyrrocomma rigida* Phil., 1858]. *Haplopappus rigidus* (Rydb.) Blank., Sci. Stud. Montana Coll. Agric., Bot. 1: 100. 1905. *Haplopappus carthamoides* subsp. *rigidus* (Rydb.) Hall, Publ. Carnegie Inst. Wash. 389: 103. 1928. *Haplopappus carthamoides* var. *rigidus* (Rydb.) Peck, Man. Pl. Oregon, 712. 1941. **TYPE: Idaho.** Kootenai Co.: Granite Station, sandy places, 29 Jul 1892, *J.H. Sandberg 785* (holotype: NY 232746; isotypes: BM-2, CAS, F-2, GH, K, PH, RSA).
- Pyrrocomma erythropappus* Rydb., Bull. Torrey Bot. Club 27: 624. 1900. *Haplopappus carthamoides* subsp. *erythropappus* (Rydb.) Hall, Publ. Carnegie Inst. Wash. 389: 105. 1928. *Haplopappus carthamoides* var. *erythropappus* (Rydb.) H. St. John, Fl. S.-E. Washington, 455. 1937. **TYPE: Idaho.** Nez Perce Co.: Clear Water, no other collection data, *H.H. Spalding s.n.* (holotype: NY; isotype: GH).
- The printed label says "Oregon" but Rev. H.H. Spalding's mission was in Idaho, on the Clearwater River at the mouth of Lapwai Creek in Nez Perce County.
- 13. PYRROCOMA CASCADIA** Nesom, Phytoneuron 2025-60: 15. 2025. **TYPE: California.** Siskiyou Co.: Sterling Mtn, Soda Creek, 41.966° N, 122.796° W, open rocky E ridge, 3500 ft, 29 Jun 1934, *L.C. Wheeler 2830* (holotype: CAS; isotypes: DS, LL).
- 14. PYRROCOMA CATENARIA** Nesom, Phytoneuron 2025-51: 15. 2025. **TYPE: Wyoming.** Sweetwater Co.: [Chain Lakes Wildlife Habitat Management Area], S shore of Hansen Lake, 41.9658° N, 107.9241° W, mesic alkaline meadow, 6500 ft, 25 Jun 1978, *W.H. Romme 78-7* (holotype: RM).
- 15. PYRROCOMA CEBOLLANA** Nesom, Phytoneuron 2025-11: 16. 2025. **TYPE: Colorado.** Gunnison Co.: Powderhorn, saline soil near mineral spa, 29 July 1964, *W.A. Weber 12157* (holotype: COLO).
- 16. PYRROCOMA CHEIRANTHIFOLIA** Greene, Leafl. Bot. Observ. Crit. 2: 47. 1910. **TYPE: Utah.** San Pete Co.: Wasatch Mountains, W of Ephraim, along the San Pete River, 1500 m, common in fields, 7 Sep 1907, *I. Tidestrom 534* (holotype: US; isotype: UC).
- 17. PYRROCOMA CILIOLATA** Greene, Pittonia 3: 184. 1898. **TYPE: California.** Kern Co.: Bakersfield, along Tejon Road, dry plains, 4 Oct 1894, *A. Eastwood s.n.* (holotype: CAS; isotype: GH).
- 18. PYRROCOMA CLEMENTIS** Rydb., Bull. Torrey Bot. Club 27: 625. 1900. *Haplopappus clementis* (Rydb.) Blake, Contr. U.S. Natl. Herb. 25: 543. 1925. **TYPE: Colorado.** Chaffee Co.: Mt. Harvard, 1896, *F. Clements 44* (holotype: NY; isotypes: NEB, NY).
- Pyrrocomma calendulacea* Greene, Leafl. Bot. Observ. Crit. 2: 9. 1909. **TYPE: Colorado.** Jackson Co.: Union Creek Pass, Jul 1873, *J. Wolf 579* (holotype: US, isotype: GH). The holotype label has "579, 472" as collection number — the protologue did not specify a collection number. The GH label has Wolf & Rothrock as collectors, with the number as "472, 579."
- Pyrrocomma subcaesia* Greene Leafl. Bot. Observ. Crit. 2: 12. 1909. **TYPE: Utah.** Garfield Co.: Panguitch Lake, 8400 ft, 7 Sep 1894, *M.E. Jones 6005* (holotype: US; isotypes: BRY, NY, RSA, RM, UC, US).

- 19. PYRROCOMA COLOSSUS** Nesom, *Phytoneuron* 2025-24: 3. 2025. **TYPE: California.** Siskiyou Co.: Scott Valley, 5 mi S of Ft. Jones, roadside, 13 Aug 1958, *T.C. Fuller s.n.* (holotype: CAS).
- 20. PYRROCOMA CONGESTA** Greene, *Pittonia* 3: 23. 1896. *Haplopappus racemosus* subsp. *congestus* (Greene) Hall, *Publ. Carnegie Inst. Wash.* 389: 128. 1928. *Pyrrocomma racemosa* var. *congesta* (Greene) Mayes ex Brown & Keil, *Phytologia*. 73: 58. 1992. **LECTOTYPE** (Nesom 2025b): **Oregon.** [Josephine Co. ]: Near Waldo, western base of Coast Mountains, Sep 1892, *T. Howell 1438* (NDG 00517; isolectotypes: NDG 00518, NDG 00519, NY, P-2 sheets).  
*Pyrrocomma balsamitae* Greene, *Leafl. Bot. Observ. Crit.* 2: 15. 1909. **TYPE: Oregon.** Jackson Co.: Dead Indian Valley, summit of the Cascade Mts, wet meadows, 12 Aug 1902, *W.C. Cusick 2947* (holotype: US; isotypes: BRU, CAS, DH, E, F, GH-2 sheets, MO, NY, OSC-3 sheets, P, POM, UC, US, UTC, WSC).
- 21. PYRROCOMA CROCEA** (A. Gray) Greene, *Erythea* 2: 69. 1894. *Haplopappus croceus* A. Gray, *Proc. Amer. Acad. Nat. Sci. Philadelphia* 1863: 65. 1864. *Aster croceus* (A. Gray) Kuntze, *Rev. Gen.* 1: 317. 1891. **TYPE: Colorado.** "Colorado Territory, lat. 39°-41°, alpine and subalpine," 1862, *C.C. Parry 257* (holotype: GH; isotypes: MO, US).  
The protologue: "A. (PYRROCOMA) CROCEUS, n. sp.\* Subalpine, in the Middle Park, &c., west of the Rocky Mountains range" — perhaps an amalgum from the labels of two collections mounted on the same GH sheet. Left: Rocky Mountain Flora, 1862, *E. Hall & J.P. Harbour 257*. Right: Colorado Territory, lat. 39°-41°, alpine and subalpine, 1862, *C.C. Parry* No. "=", annotated by Gray as "Aplopappus (*Pyrrocomma croceus*, n. sp." — the "=" sign apparently referring to the "257" on the Hall & Harbour label. The Colorado collections were made conjointly by Parry with Hall and Harbour, as explained by Gray (1863). The right-side collection with the Parry label might justifiably be regarded as the lectotype but Gray's annotation implies that it was the one that had his eye, and in the Synoptical Flora (2[1]: 128. 1884, as *Aplopappus*) he noted that the species was "first coll. by Parry." Many of Parry's collections with numbers near 257 were made in Middle Park, Teller County.  
*Pyrrocomma amplexens* Greene *Leafl. Bot. Observ. Crit.* 2: 10. 1909. **TYPE: New Mexico.** Socorro Co.: Mogollon Mountains, Middle Fork Gila River, ca. 9000 ft, 17 Aug 1903, *O.B. Metcalfe 540* (holotype: US; isotypes: ARIZ, GH, MIN, MO, NDG, NY, RM).
- 22. PYRROCOMA CUSICKII** (A. Gray), Greene, *Erythea* 2: 59. 1894. *Haplopappus carthamoides* var. *cusickii* A. Gray, *Synopt. Fl. N. Amer.* 1(2): 126. 1884. *Haplopappus carthamoides* subsp. *cusickii* (A. Gray) Hall, *Publ. Carnegie Inst. Wash.* 389: 104. 1928. *Pyrrocomma carthamoides* var. *cusickii* (A. Gray) Kartesz & Gandhi, *Phytologia*. 71: 60. 1991. **TYPE: Oregon.** "Union Co. Eastern Oregon, 1877" [GH labels], no other collection data; [other labels]: Sterile, heavy soil, 3-4000 ft, or 3-5000 ft, May and/or June, [1877-1880], *W.C. Cusick 445* (holotype: GH-8654; isotypes: F, GH-8655, NY, US, YU-2).
- 23. PYRROCOMA CUSPIDATA** Greene, *Leafl. Bot. Observ. Crit.* 2: 17. 1909. **TYPE: Oregon.** [Lake Co.]: Cycan [Syca] Marsh, marsh margin, 10 Aug 1901, *W.C. Cusick 2741* (holotype: US; isotypes: GH, MO, NDG, NY, OSC, RM, WS).
- 24. PYRROCOMA DUCHESNIA** Nesom, *Phytoneuron* 2025-26: 10. 2025. **TYPE: Utah.** Duchesne Co.: 3 mi SE (136°) of Tabonia, jct of Hwy 208 and Duchesne River, 40.3229° N, 110.6805° W, riparian community with willows, grasses, sedges, 6400 ft, 20 Jul 1981 *S. Goodrich 15877* (holotype: NY; isotype: SSLP).

25. **PYRROCOMA EBULLIENS** Nesom, Phytoneuron 2025-08: 11. 2025. **TYPE: California.** Napa Co.: Soda Spring, E of Soda Valley, T8N, R4W, Sec. p25, W1/2 or NW 1/4, [38.51517 N, 122.25405 W], chaparral community on serpentine rock, rock apron washed by carbonate spring, 1150 ft, beginning to flower, 13 Jul 1996, *J. Ruygt 3767b* (holotype: DAV).
26. **PYRROCOMA EDAPHILA** Nesom, Phytoneuron 2025-15: 11. 2025. **TYPE: California.** Plumas Co.: Diamond Mountains, Snow Lake (ca. 2 air mi E of Frenchman Lake), edge of Forest Rd 24N44 just SE of the lake, 39.87051° N, 120.11964° W, *Juncus balticus*-dominated meadow bordered by *Pinus jeffreyi*-*Artemisia tridentata*-*Purshia tridentata* community, sandy soil derived from granitics, 6100 ft, 20 Jul 2001, *D. W. Taylor 17845* (holotype: JEPS; isotype: MO).
27. **PYRROCOMA ELATA** Greene, Man. Bot. Bay Region, 173. 1894. **TYPE: California.** Napa Co.: Calistoga, Oct 1881, *C.C. Parry s.n.* (holotype: GH, isotypes: NY, UC).
28. **PYRROCOMA ELLIPTICA** Nesom, Phytoneuron 2025-19: 8. 2025. **TYPE: Idaho.** Caribou Co.: Hooper Springs, 2.5 mi NW of Soda Springs, alkaline meadow, sagebrush grass zone, 20 Jul 1952, *W.H. Baker 9417* (holotype: WTU; isotypes: ID, NY-2 sheets).
29. **PYRROCOMA ERIPODA** Greene, Proc. Acad. Nat. Sci. Philadelphia 47[1895]: 549. 1896. *Haplopappus eriopodus* (Greene) Blake, Contr. US Natl. Herb. 25: 544. 1925. **TYPE: Nevada.** Esmeralda Co.: Soda Springs, Jul 1888, *W.H. Shockley 541* (holotype: US 00127806; isotypes: GH, NDG, US).
30. **PYRROCOMA EREMICA** Nesom, Phytoneuron 2025-28: 2. 2025. **TYPE: Nevada.** Churchill Co.: 35 mi W of Austin [on Hwy 50], alkali flat, 17 Aug 1938, *C.L. Hitchcock 4640* (holotype: WTU; isotype: WS). Figures 1-3.
31. **PYRROCOMA ERTTERAE** Nesom, Phytoneuron 2025-19: 1. 2025. **TYPE: Idaho.** Valley Co.: Ca 23 air mi N of Lowman, Boise Natl Forest Rd 563 (Bearskin Creek Rd) 0.3 mi S of Rd 579, T12N R8E Sec 3 NW, ca 6400 ft, dry open lodgepole pine flat, fine dry friable granitic soil, 18 Jul 1991, *B. Ertter 10552* (holotype: TEX; isotypes: 4 dups to be distributed).
32. **PYRROCOMA ESKIA** Nesom, Phytoneuron 2025-12: 4. 2025. **TYPE: Utah.** Millard Co.: Snake Valley, ca 4 mi W of Eskdale, 39.10555 N, 114.02861 W, valley bottom, moist playa, gravelly silt, 5034 ft, with *Juncus*, sand dropseed, 29 Jun 2004, *S.L. Welsh 28905* (holotype: KHD).
33. **PYRROCOMA EUREKA** Nesom, Phytoneuron 2025-34: 5. 2025. **TYPE: Nevada.** Eureka Co.: W of Eureka, SW of Lone Mountain, 2 air mi N of Hwy 50, SW side of Hot Springs Hill, T19N R50E, Sec 5 [39.5493° N, 116.3641° W], light-colored clay below springs, alkaline with *Triglochin* and grasses, 6500 ft, occasional, 5 Aug 1983, *B. Ertter 5039* (holotype: NY; isotype: TEX).
34. **PYRROCOMA FIMBRIATA** Nesom, Phytoneuron 2025-24: 4. 2025. **TYPE: California.** Siskiyou Co.: E of McCloud along Hwy 89, 7.7 mi W of Shasta County line, 41.25119° N, 121.8204° W [at or near Bartle], lodgepole pine forest, [ca. 4150 ft], local on roadside, 24 Jul 1992, *Keil 23572* (holotype: OBI 163870; isotype: OBI 163872).
35. **PYRROCOMA FRESNOA** Nesom, Phytoneuron 2025-44: 4. 2025. **TYPE: California.** Fresno Co.: Jackass Meadows, granitic sand at meadow-granitic slope border, 7300 ft, common, 12 Jul 1954, *A.R. Kruckeberg 3451* (holotype: CAS; isotypes: DS, RSA, UT, WS, WTU).

- 36. PYRROCOMA GENUFLEXA** Greene, Pittonia 3: 348. 1898. *Haplopappus croceus* subsp. *genuflexus* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 99. 1928. *Haplopappus croceus* var. *genuflexus* (Greene) Blake, J. Wash. Acad. Sci. 30: 467. 1940. *Pyrocoma crocea* var. *genuflexa* (Greene) Mayes ex Brown & Keil, Phytologia 73: 58. 1992. **TYPE: Arizona.** Coconino Co.: Near Flagstaff, 5 Sep 1894, *J.W.Toumey 25* (holotype: NDG; isotype: UC).  
*Pyrocoma adsurgens* Greene, Leafl. Bot. Observ. Crit. 2: 22. 1909. **TYPE: Arizona.** Coconino Co.: Flagstaff, Aug 1883, *H.H. Rusby 645* (holotype: US; isotypes: F, NY-2 sheets, PH, RSA, TEX).
- 37. PYRROCOMA GLOMERATA** (Nutt.) Torr. & Gray, Fl. N. Amer. 2: 244. 1842. *Homopappus glomeratus* Nutt., Trans. Amer. Philos. Soc. ser. 2, 7: 331. 1840. *Haplopappus racemosus* var. *glomerellus* A. Gray, Syn. Fl. N. Amer. 1, pt. 2: 127. 1884. *Haplopappus racemosus* subsp. *glomeratus* (Nutt.) Hall, Publ. Carnegie Inst. Wash. 389: 132. 1928. *Haplopappus racemosus* var. *glomeratus* (Nutt.) Peck, Man. Pl. Oregon 712. 1941. **LECTOTYPE** (Nesom 2025c): **Oregon:** "Plains of the Columbia" [BM and GH labels], late July-early September 1834, *T. Nuttall s.n.* (BM 1025339; isolectotypes: GH 9248, GH 9251, NY 178916, PH).  
*Pyrocoma paniculata* (Nutt.) Torr. & Gray, Fl. N. Amer. 2: 244. 1842. *Homopappus paniculatus* Nutt., Trans. Amer. Philos. Soc., ser. 2, 7: 331. 1840. *Pyrocoma racemosa* var. *paniculata* (Nutt.) Kartesz & Gandhi, Phytologia. 71: 610. 1991. *Haplopappus racemosus* var. *paniculatus* (Nutt.) Cronq., Intermount. Fl. 5: 210. 1994. **TYPE: Oregon. Protologue:** "Plains of the Oregon [Columbia R.], not far from Walla-Walla, particularly the prairie called the Grand Ronde. About a foot high, growing in considerable quantities in wet places;" BM 1025337 label: "Grand Ronde prairie," 1836, *T. Nuttall s.n.* (holotype: BM; isotype: GH). Nuttall evidently had at least two collections in mind, as the Grand Ronde prairie (Polk/Yamhill cos., Oregon) and Walla Walla (Walla Walla Co., Washington) are about 300 miles separate. GH (fragment) 9252 label: "Plains Columbia above Lower Falls"
- 38. PYRROCOMA GOSSYPINA** Greene, Pittonia 3: 23. 1898. *Haplopappus gossypinus* (Greene) Hall, Univ. Calif. Publ. Bot. 3: 49. 1907. *Haplopappus uniflorus* subsp. *gossypinus* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 150. 1928. *Pyrocoma uniflora* var. *gossypina* (Greene) Kartesz & Gandhi, Phytologia 71: 61. 1991. **TYPE: California.** San Bernardino Co.: San Bernardino Mts, Bear Valley, Aug 1882, *S.B. and W.F. Parish 1558* (holotype: US; isotypes: GH, UC).
- 39. PYRROCOMA HALOPHILA** Greene, Leafl. Bot. Observ. Crit. 2: 16. 1909. *Haplopappus racemosus* subsp. *halophilus* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 136. 1928. *Haplopappus racemosus* var. *halophilus* (Greene) Peck, Man. Pl. Oregon, 712. 1941. **TYPE: Oregon.** Lake Co.: Goose Lake Valley, alkaline meadow, 19 Aug 1901, *W.C. Cusick 2769* (holotype: US; isotypes: F, GH, MO, NDG, NY, OSC, RM, RSA, UC, WS).
- 40. PYRROCOMA HIRTA** (A. Gray) Greene, Erythea 2: 69. 1894. *Haplopappus hirtus* A. Gray, Synopt. Fl. N. Amer. 1(2): 127. 1884. *Aster grayanus* Kuntze [nom. nov., not *Aster hirtus* Scop 1771], Rev. Gen. 1: 316. 1891. *Hoorebekia hirta* (A. Gray) Piper, Contr. U.S. Natl. Herb. 11: 560. 1906. **LECTOTYPE** (Nesom 2025a): **Oregon.** Baker Co.: Blue Mts, Upper Burnt River, Jul 1881, *W.C. Cusick 951* (GH; isolectotypes: F, NY, OSC, UC, US).
- 41. PYRROCOMA HOWELLII** (A. Gray) Greene, Erythea 2: 70. 1894. *Haplopappus howellii* A. Gray, Synopt. Fl. N. Amer. ed. 2, 1(2): 446. 1886. *Haplopappus uniflorus* subsp. *howellii* (A. Gray) Hall, Publ. Carnegie Inst. Wash. 389: 150. 1928. *Haplopappus uniflorus* var. *howellii* (A. Gray) Peck, Man. Higher Pl. Oregon, 713. 1941. *Haplopappus inuloides* var. *howellii* (A.

- Gray) Boivin, *Phytologia* 23: 23. 1972. **LECTOTYPE** (Hall 1928): **Oregon**. Harney Co.: Stein's [Steens] Mountain, dry ridges, 6 Jun 1885, *T.J. Howell s.n.* (GH; isoelectotypes: NY-3 sheets, OSC, PH-2 sheets).
- Haplopappus uniflorus* subsp. *linearis* Keck, *Aliso* 4: 103. 1958. *Haplopappus inuloides* var. *linearis* (Keck) Boivin, *Phytologia* 23: 23. 1972. *Pyrrocoma linearis* (Keck) Kartesz & Gandhi, *Phytologia*. 71: 60. 1991 [nom. illegit.]. **TYPE: Idaho**. Owyhee Co.: Mud Flats, 44 mi SW of Grandview, mountain meadows, 17 Jun 1943, *J.H. Christ 14081* (holotype: NY).
- 42. PYRROCOMA INSECTICRURIS** (L.F. Henderson) A. Heller, *Muhlenbergia* 1: 7. 1900. *Aplopappus insecticruris* L.F. Henderson, *Bull. Torrey Bot. Club* 27: 346. 1900. *Haplopappus integrifolius* subsp. *insecticruris* (L.F. Henderson) Hall, *Publ. Carnegie Inst. Wash.* 389: 111. 1928. **TYPE: Idaho**. Blaine Co.: Southwest corner of Big Camas Prairie, dry field, 5000 ft, 14 Jul 1895, *L.F. Henderson 3013* (holotype: US; isotypes: GH, ID, NY, UC).
- Pyrrocoma pratensis* Greene, *Leafl. Bot. Observ. Crit.* 2: 19. 1909. **TYPE: Idaho**. Blaine Co.: Southwest corner of Big Camas Prairie, dry field, 5000 ft, 14 Jul 1895, *L.F. Henderson 3013* (holotype: US; isotypes: GH, ID, NY, UC). Homotypic with *P. insecticruris*.
- 43. PYRROCOMA INTEGRIFOLIA** (Porter ex A. Gray) Greene, *Erythea* 2: 69. 1894. *Haplopappus integrifolius* Porter ex A. Gray, *Synopt. Fl. N. Amer.* 1(2): 128. 1884. *Aster canybi* Kuntze, *Rev. Gen.* 1: 315. 1891 [nom. nov., not *Aster integrifolius* Nutt. 1840]. **LECTOTYPE** (Nesom 2025m): **Idaho**. Fremont Co.: Henry's Fork of the Snake River, 1872, *T. Coulter s.n.* (GH).
- Pyrrocoma integrifolia* var. *pumila* Rydb., *Bull. Torrey Bot. Club* 27: 626. 1900. **TYPE: Montana**. Silver Bow Co.: Butte, 31 Jul 1895, *P.A. Rydberg 2808* (holotype: NY; isotype: NY).
- 44. PYRROCOMA ISABELLAE** Nesom, *Phytoneuron* 2025-15: 7. 2025. **TYPE: California**. Kern Co.: Scovern Hot Springs (Isabella alkali flats), broad valley in oak woodland-digger pine association, moist subalkaline soil, 2500 ft, common, 16 Sep 1964, *E. Twisselmann 10169* (holotype: CAS-362314; isotypes: CAS-362313, JEPS, RSA).
- 45. PYRROCOMA LANCEOLATA** (Hook.) Greene, *Erythea* 2: 69. 1894 (not Howell 1900). *Donia lanceolata* Hook., *Fl. Bor. Amer.* 2: 25. 1834. *Haplopappus lanceolatus* (Hook.) Torr. & Gray, *Fl. N. Amer.* 2: 241. 1842. *Hoorebekia lanceolata* (Hook.) M.E. Jones, *Bull. Univ. Mont. Biol.* 15: 49. 1910. **TYPE: CANADA. Saskatchewan**. Between Carleton House and Edmonton House, [1825], *T. Drummond s.n.* (holotype: K?; probable isotypes: GH, NY).
- Homopappus multiflorus* Nutt., *Trans. Amer. Philos. Soc.* 2, 7: 333. 1840. **TYPE: Protologue**: "Prairies on the east and west side of the Rocky Mountains," [probably southwestern Wyoming, 1834], *T. Nuttall s.n.* (probable holotype: PH; isotype: GH).
- Pyrrocoma kennedyi* A. Nels., *Bot. Gazette* 37: 265. 1904. **Type: Nevada**. [Elko Co.]: Maggie Creek, 13 Aug 1902, *P.B. Kennedy 630* (holotype: RM; isotypes: RENO, UC-fragment).
- Pyrrocoma lagopus* Rydb., *Bull. Torrey Bot. Club* 32: 130. 1905. **TYPE: Wyoming**. Lincoln Co.: Ham's Fork and La Barge, 7000 ft, 13-21 Jul 1900, *C.C. Curtis s.n.* (holotype: NY).
- Pyrrocoma curvata* (Piper) Nesom, **comb. nov.** *Hoorebekia curvata* Piper, *Proc. Biol. Soc. Washington* 31: 77. 1918. **TYPE: Oregon**. [Klamath Co.]: Klamath Falls, 29 Aug 1916, *M.E. Peck 7492* (holotype: not located, US-photo and fragment; isotype: WS).
- 46. PYRROCOMA LANDERANTHA** Nesom, *Phytoneuron* 2025-35: 1. 2025. **TYPE: Nevada**. Lander Co.: Grass Valley, unnamed hot springs on the NW side of the valley, 8 air mi NW of the Walti Ranch, T24N, R47E, sec 15 [ca. 39.96, -116.63], along the saline seepages from the springs, 5660 ft, 26 May 1986, *A. Tiehm 10494* (BRY, COLO, IDS, NSMC, NY, WTS).

- 47. PYRROCOMA LANULOSA** Greene, Leafl. Bot. Observ. Crit. 2: 16. 1909. *Haplopappus hirtus* subsp. *lanulosus* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 125. 1928. *Haplopappus hirtus* var. *lanulosus* (Greene) Peck, Man. Pl. Oregon, 713. 1941. *Pyrrcoma hirta* var. *lanulosa* (Greene) Mayes ex Brown & Keil, Phytologia 73: 58. 1992. **TYPE: Oregon.** Lake Co.: Bear Flat, 1650 m, 18 Aug 1894, *J.B. Leiberg 748* (holotype: US-127836; isotypes: F, GH, MO, NY, OSC, US).
- Pyrrcoma turbinella* Greene, Leafl. Bot. Observ. Crit. 2: 17. 1909. **TYPE: Oregon.** Lake Co.: Cyscan Valley, dry soil, 5500 ft, 10 Aug 1901, *W.C. Cusick 2744* (holotype: US; isotypes: E, F, GH, MO, NY, RM, WS).
- 48. PYRROCOMA LAPATHIFOLIA** Greene, Leafl. Bot. Observ. Crit. 2: 13. 1909. **TYPE: Utah.** [Wayne Co.]: Rabbit Valley, 6700 ft, 18 Aug 1875, *L.F. Ward 596* (holotype: US; isotypes: MO, PH, UC, US).
- 49. PYRROCOMA LIATRIFORMIS** Greene, Leafl. Bot. Observ. Crit. 2: 17. 1909. *Haplopappus integrifolius* subsp. *liatiriformis* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 111. 1928. *Haplopappus liatiriformis* (Greene) H. St. John, Fl. Southeast. Washington, 455. 1937. *Haplopappus racemosus* subsp. *liatiriformis* (Greene) Keck, Aliso 4: 103. 1958. **TYPE: Washington.** Whitman Co.: Pullman, 29 Aug 1903, *C.V. Piper s.n.* (holotype: US; isotypes: GH-2 sheets, MICH, MO, RM, UC, WS).
- Pyrrcoma suksdorfii* Greene, Leafl. Bot. Observ. Crit. 2: 18. 1909. **TYPE: Washington.** Spokane Co.: On prairies, 18 Jul 1889, *W.N. Suksdorf 923* (holotype: US; isotypes: CAS, F, MO, PH, UC, WTU).
- 50. PYRROCOMA LONGIFOLIA** Greene, Pittonia 3: 183. 1898. *Haplopappus longifolius* (Greene) Jeps., Man. Flowering Pl. California, 1027. 1925. *Haplopappus racemosus* subsp. *longifolius* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 130. 1928. **TYPE: California.** Alameda Co.: Mount Eden, May 1891, *T.S. Brandegee s.n.* (holotype: CAS; isotype: UC).
- 51. PYRROCOMA LUCIDA** (Keck) Kartesz & Gandhi, Phytologia. 71: 60. 1991. *Haplopappus racemosus* subsp. *lucidus* Keck, Madrono 5: 167. 1940. *Haplopappus lucidus* (Keck) Keck, Aliso 4: 105. 1958. **TYPE: California.** Plumas Co.: 1 mi W of Portola, alkaline grassy flat, 1480 m, 9 Aug 1938, *D.D. Keck 4897* (holotype: CAS; isotype: CAS).
- 52. PYRROCOMA MICRODONTA** Greene, Leafl. Bot. Observ. Crit. 2: 11. 1909. **TYPE: California.** Inyo Co.: Resting Springs Valley, 525 m, 6 Feb 1891, *F.V. Coville & F. Funston 269* (holotype: US).
- 53. PYRROCOMA MINERALIS** Nesom, Phytoneuron 17: 33. 2025. **TYPE: Nevada.** Mineral Co.: Huntoon Mts, SW end of Truman Meadows, 37° 57' 09.9" N, 118° 26' 41.4" W, with *Chrysothamnus nauseosus* at edge of meadows, 7200 ft, 11 Sep 2006, *A. Tiehm 15354* (holotype: RENO; isotypes: ASC, BRY, COLO, KANU, NY, UTC).
- 54. PYRROCOMA NIVIS** Nesom, Phytoneuron 2025-08: 7. 2025. **TYPE: California.** Lake Co.: Snow Mountain, 25 Aug 1892, *K. Brandegee* (holotype: UC).
- 55. PYRROCOMA PARVA** Nesom, Phytoneuron 2025-12: 4. 2025. **TYPE: Utah.** Millard Co.: Snake Valley, 6.5 mi E of Gandy, S of Salt Marsh Lake, 39.44841 N, 113.9165 W, saline clay fines, 4788 ft, *Distichlis-Allenrolfea-Sporobolus* community, 5 Sep 1976, *S.L. Welsh et al. 14514* (holotype: BRY).

- 56. PYRROCOMA PAYETTENSIS** Nesom, *Phytoneuron* 2025-10: 1. 2025. **TYPE: Idaho.** Gem Co.: 12 mi W of Emmett, with *Sarcobatus* in alkali flats, [floodplain of Payette River, ca. 2250 ft], 7 Aug 1937, *J.H. Christ 8547* (holotype: NY)
- 57. PYRROCOMA PEREGRINA** Nesom, *Phytoneuron* 2025-39: 2. 2025. **TYPE: California. Mono Co.:** Basin NE of and below Mammoth Rock, draining eastward, 37.618556° N, 118.981667° W, dry meadow in slightly undulating terrain, soil light gray, silty, likely derived from old hot springs, 7999 ft, with *Iris missouriensis*, *Symphyotrichum spathulatum*, *Symphyotrichum campestre*, *Elymus*, *Salix* spp., abundant, achene silky, 27 Jul 2021, *A. Howald 5310* (holotype: CAS; isotypes: DAV, RENO).
- 58. PYRROCOMA PINETORUM** (Keck) Nesom, *Phytoneuron* 2025-08: 5. 2025. *Haplopappus racemosus* subsp. *pinetorum* Keck, *Madrono* 5: 166. 1940. *Pyrrocoma racemosa* var. *pinetorum* (Keck) Kartesz & Gandhi, *Phytologia* 71: 61. 1991. **TYPE: California.** Siskyou Co., 8 Aug 1938, *D.D. Keck 4862* (holotype: CAS).  
*Haplopappus racemosus* (Nutt.) Torr. var. *praticola* J.T. Howell, *Leafl. W. Bot.* 6: 86. 1950. **TYPE: California.** Trinity Co.: Summit of Scott Mts N of Carrville, 24 Aug 1936, *J.T. Howell 12752* (holotype: CAS)
- 59. PYRROCOMA PLANTAGINEA** Greene, *Leafl. Bot. Observ. Crit.* 2: 13. 1909. **TYPE: Wyoming.** Yellow-stone National Park, Lone Star Geyser Basin, 7000 ft, 7 Aug 1897, *P.A. Rydberg* and *E.A. Bessey 5051* (holotype: US, fragment-UC; isotypes: F, NY).  
*Pyrrocoma hololeuca* Greene *Leafl. Bot. Observ. Crit.* 2: 10. 1909. **TYPE: Wyoming.** [Teton Co.:] Yellowstone National Park, 10 Aug 1902, *E.A. Mearns 3188* (holotype: US; isotype: UC).  
*Pyrrocoma crepidinea* Greene *Leafl. Bot. Observ. Crit.* 2: 12. 1909. **TYPE: Wyoming.** Teton Co.: Buffalo River, near an alkali spring, 5 Aug 1901, *E.D. Merrill* and *E.N. Wilcox 1137* (holotype: US, fragment-UC; isotypes: NY, RM).
- 60. PYRROCOMA PONDEROSANA** Ertter, *Phytoneuron* 2025-61: 7. 2025. **TYPE: Idaho.** Valley Co.: Osprey Overlook at N end of peninsula in Payette Lake, Ponderosa State Park ca 4 airmi N of downtown McCall, open conifer forest on isolated summit of fused basalt, scattered subpopulations on various aspects and habitats, all on shallow soil with limited competition or shade, 44.962°N 116.081°W, ca 1600 m, 26 Jul 2025, *Ertter & Grant 25586* (holotype: UC; isotypes: ID, NY, OSC, RM, SRP, TEX, WTU).
- 61. PYRROCOMA PRIONOPHYLLA** Greene, *Leafl. Bot. Observ. Crit.* 2: 12. 1909. *Haplopappus racemosus* subsp. *prionophyllus* (Greene) Hall, *Publ. Carnegie Inst. Wash.* 389: 131. 1928. *Haplopappus racemosus* var. *prionophyllus* (Greene) S.L. Welsh, *Great Basin Nat.* 43: 294. 1983. **TYPE: Nevada.** Ormsby Co.: Eagle Valley, 1446 m, 11 Aug 1902, *C.F. Baker 1450* (holotype: US; isotypes: CAS, GH, NY, POM, RM-2 sheets, RSA, TEX, UC, WS).
- 62. PYRROCOMA PTILOTA** Nesom, *Phytoneuron* 2025-60: 13. 2025. **TYPE: California.** Plumas Co.: E side of Forest Road 27N54, ca. 5.5 mi (air) NW of the Boulder Creek Work Center at Antelope Lake, along a poor logging road NE of a small branch of Lights Creek, 40° 12' 31.0" N, 120° 42' 43.7" W, yellow pine forest, dry, bare, gravelly clay soil, 5976 ft, common, normal size plants, 10 Aug 2005, *L. Ahart 12306* (holotype: JEPS; isotypes: CHSC, RSA).
- 63. PYRROCOMA PYRAMIDIS** Nesom, *Phytoneuron* 2025-18: 1. 2025. **TYPE: Nevada.** Washoe Co.: Warm Springs Valley, 5.2 road mi NW of Hwy 445 to Pyramid Lake on the Milk Ranch road

to Winnemucca Valley, T23N, R20E, Sec 27 [39.83180 N, 119.72471 E], in and about saline seepage areas, with *Sarcobatus*, 4500 ft, 25 Jun 1986, A. Tiehm 10653 (holotype: NY; isotypes: COLO, ID, IDS, NCSC, OSC).

**64. PYRROCOMA RACEMOSA** (Nutt.) Torrey & Gray, Fl. N. Amer. 2(2): 244. 1842. *Homopappus racemosus* Nutt., Trans. Amer. Philos. Soc. ser. 2, 7: 332. 1840. *Haplopappus racemosus* (Nutt.) Torrey in Sitgreaves, Rep. Exped. Zuni & Colorado Rivers 162. 1853. *Aster pyrrocoma* Kuntze, Revis. Gen Pl. 1: 317. 1891 (not *Aster racemosus* Elliott 1823). *Hoorebekia racemosa* (Nutt.) Piper, Contr. U.S. Natl. Herb. 11: 560. 1906. **TYPE: Oregon.** [Clackamas Co.]: Protologue: "Plains of the Wahlamet," 30 Sep 1834, T. Nuttall s.n. (holotype: BM 1025338; isotypes: GH 00008678-with Nuttall's annotation, GH 00009253-with original label by Nuttall). The BM sheet has a full specimen with Nuttall's original label and annotation, including the asterisk denoting a new species. The label of GH 8678 says "Wahlamet" in Nuttall's hand.

*Haplopappus lanceolatus* var. *strictus* A. Gray, Proc. Amer. Acad. Arts 8: 389. 1872. **TYPE: Oregon** Without locality [see below], Aug 1871, E. Hall 256 (holotype: GH; isotypes: BRU, F, MO, NY, PH, RSA, UC).

The protologue is in an article by Asa Gray entitled "Determination of a collection of plants made in Oregon by Elihu Hall during the summer of 1871 ... " (Amer. Acad. Arts 8: 372–412. 1872.). In a letter to Asa Gray (3 Sep 1871, from Salem, Oregon), Hall wrote this: "I have confined my operations so far to the Willamette & Columbia rivers & the Cascade Mountains — including Mount Hood. I have now about 600 species, the exact number not known." Gray's protologue: "Resembles *Pyrrocoma racemosa* and *paniculata*, Torr. & Gray; but achenia densely silky-canescens and shorter. Stems slender, strict, leafy, bearing 3 to 10 rather distinct spicate heads."

**65. PYRROCOMA RADIATA** Nutt., Trans. Amer. Philos. Soc. ser. 2, 7: 333. 1840. *Haplopappus carthamoides* var. *maximus* A. Gray [nom. et stat. nov.], Syn. Fl. N. Amer. 1, pt. 2: 126. 1884. *Haplopappus carthamoides* subsp. *maximus* (A. Gray) Hall, Publ. Carnegie Inst. Wash. 389: 102. 1928. *Haplopappus radiatus* (Nutt.) Cronq., Vasc. Pl. Pacif. N.W. 5: 223. 1955. **TYPE: Oregon.** [Protologue: "Plains of Oregon, near Walla-Walla"]; label: "Wahlamet plains," no date [late Aug 1834; Cronquist 1994 noted that the locality is probably near Huntingdon in Baker County], T. Nuttall s.n. (holotype: BM; isotypes: GH, K).

**66. PYRROCOMA ROBERTJOHNSONII** Nesom, Phytoneuron 2025-26: 2. 2025. **TYPE: Utah.** Utah Co.: 0.5 mi W of town of Fairfield at Big Spring, 40.26525 N, 112.09651 W, dry site in *Sarcobatus vermiculatus*-*Distichlis spicata* association, 4900 ft, 18 Aug 1988, L. Arnow 6539 (holotype: BRY; isotypes: COLO, NY, UT).

**67. PYRROCOMA SALSA** Nesom, Phytoneuron 2025-19: 7. 2025. **TYPE: Idaho.** Caribou Co.: Along Stump Creek which flows into Salt River near Afton, Wyoming, T7S R46E S21 [42.79904° N, 111.08421° W], upper *Artemisa* grassland zone, alkali flat, heavy salt crystals on the soil surface; 6158 ft, 20 Aug 1985, R. Rosentreter 3704 (holotype: CIC; isotypes: BBLM, NY).

**68. PYRROCOMA SANLUSIA** Nesom, Phytoneuron 2025-11: 4. 2025. **TYPE: Colorado.** Saguache Co.: San Luis Valley, Baca National Wildlife Refuge, ca. 0.5 mi due E of Great Sand Dunes National Park & Preserve, 37.75853 N, 105.7343 W, stock tank supplied by flowing artesian well in *Chrysothamnus-Sarcobatus* shrubland, with *Chrysothamnus nauseosus* subsp. *consimilis*, *Sarcobatus vermiculatus*, *Eleocharis* sp., *Juncus arcticus*, 7575 ft, 21 Aug 2012, P. Regensberg 941 (holotype: KHD).

69. **PYRROCOMA SCABERULA** Greene, Leafl. Bot. Observ. 2: 19. 1909. *Haplopappus integrifolius* subsp. *scaberula* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 111. 1928. **TYPE: Idaho.** Nez Perce Co.: About Forest, 3500 ft, 29 Jul 1896, A.A. Heller 3469 (holotype: US; isotypes: NY, UC).
70. **PYRROCOMA SERICEA** Greene, Leafl. Bot. Observ. Crit. 2: 19. 1909. **TYPE: Idaho.** Butte Co.: Arco, Snake River Plains, 18 Jun 1893, E. Palmer 197 (holotype: US). [= **mancusoi** ]
71. **PYRROCOMA SESSILIFLORA** Greene, Leafl. Bot. Observ. Crit. 2: 11. 1909. *Haplopappus racemosus* subsp. *sessiliflorus* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 136. 1928. *Haplopappus racemosus* var. *sessiliflorus* (Greene) S.L. Welsh, Great Basin Naturalist 43: 294. 1983. *Pyrrocoma racemosa* var. *sessiliflora* (Greene) Mayes ex Brown & Keil, Phytologia 73: 58. 1992. **TYPE: Nevada.** Nye Co.: [Probably along the Amargosa River near Beatty], May 1898, C.A. Purpus 6340 (holotype: US).
72. **PYRROCOMA SHASTENSIS** Nesom, Phytoneuron 2025-24: 1. 2025. **TYPE: California.** Siskiyou Co.: Shasta Big Springs Ranch, 3.9 air mi SE of Grenada, 6.3 air mi NW of Dwinell Dam, 2.6 air mi NW of Big Springs Lake, 41° 36' 32" N, 122° 27' 29" W, riparian corridor surrounded by juniper woodland, moist soil of riparian terraces near spring, 2555 ft, common, 30 Jul 2010, L. Ahart 16969 (holotype: CHSC; isotypes: HSC, JEPS, RSA, SBBG, US).
73. **PYRROCOMA SICULA** Nesom, Phytoneuron 2025-15: 4. 2025. **TYPE: Nevada.** Pershing Co.: Grass Valley, Leach Hot Springs, 40.6044° N, 117.6514° W, along the seepage from the hot springs, 4660 ft, with *Distichlis*, 4 Sep 1979, A. Tiehm 5490 (holotype: NY; isotype: RENO)
74. **PYRROCOMA SIERRAVALLIS** Nesom, Phytoneuron 2025-44: 13. 2025. **TYPE: California.** Plumas Co.: Sierra Valley, 0.75 mi E of A-23 on Marble Lane at the hot wells, 39.758247 N, 120.358355 W, edge of meadow, 4890 ft, scattered. 2 Aug 2000, W. Harnach 974 (CAS, JEPS, RSA-2 sheets, RENO).
75. **PYRROCOMA SOLIDAGINEA** Greene, Proc. Acad. Nat. Sci. Philadelphia 1895: 549. 1896. *Haplopappus lanceolatus* subsp. *solidagineus* Hall, Publ. Carnegie Inst. Wash. 389: 118. 1928. **TYPE: Nevada.** Eureka Co.: Palisade, along the Humboldt River, 24 Jul 1893, E.L. Greene s.n. (holotype: NDG; isotypes: GH, UC).
76. **PYRROCOMA SONCHIFOLIA** Greene, Leafl. Bot. Observ. Crit. 2: 18. 1909. *Haplopappus hirtus* subsp. *sonchifolius* (Greene) Hall, Publ. Carnegie Inst. Wash. 389: 125. 1928. *Haplopappus hirtus* var. *sonchifolius* (Greene) Peck, Man. Higher Pl. Oregon, 713. 1941. *Pyrrocoma hirta* var. *sonchifolia* (Greene) Kartesz & Gandhi, Phytologia 71: 60. 1991. **TYPE: Washington.** [Yakima Co.]: Washington Territory, Yakima region, 1882, T.S. Brandegee "111 and 140" [on the single US label] (holotype: US 127879; isotype: UC-as cited by Mayes 1976).  
*Pyrrocoma foliosa* Greene, Leafl. Bot. Observ. Crit. 2: 18. 1909 [not *Pyrrocoma foliosa* Torr. & Gray 1845 = *Oonopsis fremontii*; not *Pyrrocoma foliosa* Phil. 1858 = *Haplopappus multifolius*]. **LECTOTYPE** (Hall 1928): **Washington.** [Kittitas Co., headwaters of the Naches River]: label no locality data except "Washington," 1889, G.R. Vasey 505 (US).
77. **PYRROCOMA SPIRALIS** Nesom, Phytoneuron 2025-11: 14. 2025. **TYPE: Colorado.** Ouray Co.: Corkscrew Gulch Road, at pass between Red Mountain No. 1 and No. 2 [Corkscrew Pass, ca. 12,150 at the Ouray/San Juan County border], alpine tundra with *Geum rossii*, 30 Jul 1998, M.J. Lyon 8925 (holotype: FLD)

78. **PYRROCOMA STELLARIS** Nesom, *Phytoneuron* 2025-26: 4. 2025. **TYPE: Utah.** Tooele Co.: Great Salt Lake Desert, ca. 15 air mi N of Wendover, Halls Meadow, spring bordering playa on E side of Pilot Range, 40.95336° N, 114.01412° W, saline meadow community with *Distichlis*, *Ericameria alba*, 4265 ft, 17 Aug 2018, *R.L. Johnson 5911* (holotype: BRY).
79. **PYRROCOMA STENOCEPHALA** (A. Gray) Nesom, *Phytoneuron* 2025-20: 1. 2025. *Haplopappus paniculatus* var. *stenocephalus* A. Gray, *Bot. Calif.* 1: 312. 1876. *Haplopappus racemosus* var. *stenocephalus* (A. Gray) A. Gray, *Synopt. Fl. N. Amer.* 12: 127. 1884. **TYPE: California.** Sierra Co.: Without specific locality data, 1874, *J.G. Lemmon 98* (holotype: GH; isotypes: K, MO, NY-2 sheets, PH).
80. **PYRROCOMA SUBSQUARROSA** Greene, *Erythea* 3: 22. 1895. *Haplopappus carthamoides* subsp. *subsquarrosus* (Greene) Hall, *Publ. Carnegie Inst. Wash.* 389: 104. 1928. *Pyrrocomma carthamoides* var. *subsquarrosa* (Greene) Brown & Keil, *Phytologia*. 73: 57. 1992. **TYPE: Wyoming.** Park Co.: Sunlight Basin, 5 Sep 1893, *J.N. Rose 334* (holotype: US; isotype: UC)
81. **PYRROCOMA SUBVISCOSA** Greene, *Proc. Acad. Nat. Sci. Philadelphia* 1895: 549. 1896. *Haplopappus subviscosus* (Greene) Blake, *Contr. U.S. Natl. Herb.* 25: 543. 1925. *Haplopappus lanceolatus* subsp. *subviscosus* (Greene) Hall, *Publ. Carnegie Inst. Wash.* 389: 117. 1928. *Pyrrocomma lanceolata* var. *subviscosa* (Greene) Mayes ex Brown & Keil, *Phytologia* 73: 58. 1992. **TYPE: Nevada.** Elko Co.: Near the Humboldt Wells, 25 Jul 1893, *E.L. Greene s.n.* (holotype: NDG, fragment-UC).
82. **PYRROCOMA TENUICAULIS** (D.C. Eat.) Greene, *Erythea* 2: 69. 1894 (not Howell 1900). *Haplopappus tenuicaulis* D.C. Eat. in *S. Wats., Botany [Fortieth Parallel]* 160. 1871. *Haplopappus lanceolatus* var. *tenuicaulis* (D.C. Eat.) A. Gray, *Syn. Fl. N. Amer.* 1, pt. 2: 129. 1884. *Haplopappus lanceolatus* subsp. *tenuicaulis* (D.C. Eat.) Hall, *Publ. Carnegie Inst. Wash.* 389: 118. 1928. **TYPE: Nevada.** Elko Co.: Ruby Valley, alkaline meadow, 6000 ft, Aug 1868, *S. Watson 576* (holotype: GH; isotypes: NY, US, YU).
83. **PYRROCOMA THERMOLIBES** Nesom, *Phytoneuron* 2025-17: 6. 2025. **TYPE: California.** Mono Co.: Long Valley, Hot Creek, moist alkali soil, grass meadow, aspen belt, 6700 ft, 23 May 1937, *P. Train s.n.* (holotype: NY; isotypes: CAS, DS, MO, NEB, RSA).
84. **PYRROCOMA TIEHMII** Nesom, *Phytoneuron* 2025-15: 5. 2025. **TYPE Nevada.** Eureka Co.: Crescent Valley, 5.1 road mi SSW of RR crossing in Beowawe on Hwy 306, then 1.0 road mi S on dirt road, T31N R48E S36, at the edge of saline seepage areas, 4730 ft, 20 Aug 2003, *A. Tiehm 14347* (holotype: RENO; isotypes: BRY, COLO, NY, TEX, UT).
85. **PYRROCOMA TULARIA** Nesom, *Phytoneuron* 2025-44: 7. 2025. **TYPE: California.** Tulare Co.: South Fork Kern River, Bakeoven Meadows, 8100 ft, 14 Jul 1950, *Howell 26876* (holotype: US; isotype: CAS).
86. **PYRROCOMA UNIFLORA** (Hook.) Greene, *Erythea* 2: 60. 1894. *Donia uniflora* Hook., *Fl. Bor. Amer.* 2: 25. 1834. *Homopappus uniflorus* (Hook.) Nutt., *Trans. Amer. Philos. Soc.* 2, 7: 332. 1840. *Haplopappus uniflorus* (Hook.) Torr. & Gray, *Fl. N. Amer.* 2: 241. 1842. *Aster uniflorus* (Hook.) Kuntze, *Rev. Gen.* 1: 318. 1891. *Hoorebekia uniflora* (Hook.) M.E. Jones, *Bull. Montana State Univ., Biol. Ser.* ser. 15: 49. 1910. **TYPE: CANADA. Saskatchewan.** Plains of Saskatchewan and prairies of the Rocky Mountains, [1825], *T. Drummond s.n.* (holotype: K, fragment-NDG).

- Pyrrocoma inuloides* (Nutt.) Greene, Erythea 2: 60. 1894. *Homopappus inuloides* Nutt., Trans. Amer. Philos. Soc. 2, 7: 333. 1840. *Haplopappus inuloides* (Nutt.) Torr. & Gray, Fl. N. Amer. 2(2): 241. 1842. **TYPE: Wyoming.** [Fremont Co.?]: Protologue: "Plains of the Rocky Mountains towards the source of the Platte," 1834, *T. Nuttall s.n.* (probable holotype: PH; isotypes: GH, K, UC-fide Mayes 1976). The PH label, handwritten by Nuttall, has his asterisk with the name "Actinaphoria inuloides" — the other labels also are handwritten by him but use the name "Homopappus inuloides."
- Haplopappus lanceolatus* var. *sublanatus* Cody, Canad. Field-Naturalist 70: 126. 1956. **TYPE: CANADA. Northwest Territories,** Mackenzie District: Salt Plain W of Ft. Smith, 60° 03' N, 112° 25' W, rare in sod, 20 Jul 1950, *J. Cody & C.C. Loan 4576* (ALTA-VP; isotypes: CAS, NY, US).
- 87. PYRROCOMA VASEYI** (Parry) Rydb., Bull. Torrey Bot. Club 27: 626. 1900. *Haplopappus lanceolatus* var. *vaseyi* Parry in D.C. Eat., Botany [40th Parallel], 160. 1871. *Haplopappus lanceolatus* subsp. *vaseyi* (Parry) Hall, Publ. Carnegie Inst. Wash. 389: 117. 1928. **TYPE: Colorado.** Grand Co.: Rocky Mountains, Middle Park, 1868, *G.R. Vasey 273* (holotype: GH; isotypes: KANU, NY).
- 88. PYRROCOMA VILLOSA** Rydb., Bull. Torrey Bot. Club 27: 625. 1900. *Pyrrocoma clementis* var. *villosa* (Rydb.) Mayes ex Brown & Keil, Phytologia 73: 57. 1992. **TYPE: Wyoming.** Sheridan Co.: Big Horn Mountains, Willow Creek, meadows, 9200 ft, Aug 1899, *F. Tweedy 2063* (holotype: NY).
- 89. PYRROCOMA VIRGATA** (A. Gray) Nesom, Phytoneuron 2025-46: 1–47. 2025. *Haplopappus paniculatus* var. *virgatus* A. Gray, Proc. Amer. Acad. Arts 7: 354. 1868. *Haplopappus racemosus* var. *virgatus* (A. Gray) A. Gray, Synopt. Fl. 127. 1884. *Pyrrocoma paniculata* var. *virgata* (Gray) Davidson & Moxley, Fl. S. Calif. 377. 1923. **TYPE: California.** Mono Co.: Bridgeport, east side of the sierra, alkaline soil, [1866], *H.N. Bolander 6168* (holotype: GH; isotypes: K, US, YU).
- 90. PYRROCOMA WYETHIANA** Goodrich, Western N. Amer. Nat. 84: 412. 2024. **TYPE: Utah.** Wasatch Co.: 35.4 km from (SE of) Heber City, Strawberry Valley [N and W of Strawberry Reservoir], in a *Wyethia amplexicaulis* community, 2359 m, 3 Aug 2023, *S. Goodrich 30041* (holotype: BRY; isotypes: CS, GH, ID, MO, NY, POM, RM, SUU, UC, US, USUUB, UT, UTC, UTW, WS — duplicates as cited in the protologue).

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#### DIFFERENT GENUS

- PYRROCOMA ACUMINATA** Rydb., Bull. Torrey Bot. Club 27: 626. 1900. *Haplopappus contractus* Hall, Publ. Carnegie Inst. Wash. 389: 155. 1928 (nom. nov., not *Haplopappus acuminatus* DC., 1836). **TYPE: Wyoming.** Uinta Co.: Fort Bridger, 1873, *J. Van A. Carter s.n.* (holotype: NY).  
= *Xylorhiza venusta* (M.E. Jones) Heller
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### APPENDIX 3. Synoptic arrangement of *Pyrrocoma* species

#### A. SPECIES WITHOUT PERSISTENT FIBROUS PETIOLE REMNANTS

##### B. Glandular (stipitate glands)

- § **HIRTA GROUP** (rays fertile, Pacific NW)  
- hirta, lanulosa, sonchifolia

##### B. Glandular (imbedded or sessile glands, at least phyllaries)

- § **ARGUTA GROUP** (rays sterile, Pacific NW)  
- arguta, glomerata (achenes 2.5-3 mm long, glabrous)  
- liatrifomis, scaberula (achenes 3.5-4.5 mm long, hairy)

- § **AHARTII GROUP** (sessile glands)  
- ahartii

##### B. Eglandular

- § **ANEMOPHILA GROUP**  
- anemophila, fimbriata

- § **STENOCEPHALA GROUP**  
- stenocephala

- § **CARTHAMOIDES GROUP** (eglandular, achenes 6-11 mm long, glabrous, rays sterile or absent)  
- acrophila, bennettensis, boiseana, carthamoides, cascadia, cusickii, ponderosa, ptilota, radiata, subsquarrosa  
- insecticuriis (achenes 4-6 mm long, hairy)

- § **INTEGRIFOLIA GROUP** (achenes shorter, hairy)  
- erterrae, integrifolia, villosa

#### A. SPECIES WITH PERSISTENT FIBROUS PETIOLE REMNANTS

##### B. Glandular

- § **SUBVISCOSA GROUP** (stipitate glands)  
- bitneri, subviscosa

- § **ERIOPODA GROUP** (imbedded glands)  
- eremica, eriopoda, isabellae, robertjohnsonii, sicula, tiehmii  
- ciliolata, microdonta, sessiliflora  
- benitoana  
- lucida  
- brachycephala, edaphila

- § **SPIRALIS GROUP** (stipitate-glandular, alpine)  
- spiralis - placement uncertain [perhaps related to *P. crocea*]

##### B. Eglandular

- § **CROCEA GROUP** (involucres 18-34 mm wide, achenes glabrous, 5.5-9 mm long)  
- crocea (24-34 mm wide), genuflexa (22-30 mm wide), wyethiana (18-22 mm wide)  
- clementis (involucres 15-20 / 20-34 mm wide, achenes sparsely hairy)

§ **RACEMOSA GROUP** (racemes, rays sterile)

- congesta, ebuliens, gossypina, longifolia, nivis, pinetorum, racemosa
- colossus, shastensis

§ **LANCEOLATA-INULOIDES GROUP**

- northern states
  - payettensis - placement uncertain
  - elliptica, lanceolata, plantaginea, salsa
  - catenaria, howellii, sericea, uniflora
- Nevada & California
  - landerantha, solidaginea, tenuicaulis, eureka, halophila, pyramidis, peregrina
- Colorado
  - cebollana, sanluisia, vaseyi
- Utah
  - stellaris - placement uncertain
  - cheiranthifolia, duchesnia, lapathifolia,

§ **ANGUINEA GROUP** (small heads, few flowers, southwestern Utah)

- anguinea, eskia, parva

§ **APARGIOIDES GROUP** (achenes glabrous to glabrate; California-western Nevada)

- apargioides, fresnoa, mineralis, prionophylla, sierravallis, tularia
- thermolibes, virgata