

NEW COMBINATIONS FOR THE FLORA OF NEVADA, U.S.A.

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ABSTRACT

Presented here are new combinations made in advance of publication of an *Annotated Checklist for the Flora of Nevada*. New combinations of *Aliciella latifolia* var. *imperialis*, *Androsace elongata* var. *acuta*, *Arceuthobium abietinum* var. *grandae*, *Arceuthobium abietinum* var. *magnifica*, *Arceuthobium abietinum* var. *mathiasenii*, *Arceuthobium abietinum* var. *wiensii*, *Artemisia cana* var. *bolanderi*, *Askellia pygmaea* var. *ramosa*, *Boechera fernaldiana* var. *vivariensis*, *Calystegia sepium* var. *limnophila*, *Camissoniopsis pallida* var. *hallii*, *Cassiope mertensiana* var. *californica*, *Centaurea stoebe* var. *micranthos*, *Chloropyron maritimum* var. *canescens*, *Chloropyron maritimum* var. *palustre*, *Chloropyron maritimum* var. *parryi*, *Chylismia brevipes* var. *pallidula*, *Chylismia cardiophylla* var. *cedrosensis*, *Chylismia cardiophylla* var. *robusta*, *Chylismia claviformis* var. *aurantiaca*, *Chylismia claviformis* var. *cruciformis*, *Chylismia claviformis* var. *funerea*, *Chylismia claviformis* var. *lancifolia*, *Chylismia claviformis* var. *peeblessii*, *Chylismia claviformis* var. *peirsonii*, *Chylismia claviformis* var. *purpurascens*, *Chylismia claviformis* var. *rubescens*, *Chylismia claviformis* var. *wigginsii*, *Chylismia claviformis* var. *yumae*, *Chylismia scapoidea* var. *brachycarpa*, *Chylismia scapoidea* var. *macrocarpa*, *Chylismia scapoidea* var. *utahensis*, *Chylismia walkeri* var. *tortilis*, *Crepis runcinata* var. *hallii*, *Dianthus armeria* var. *armeriastrum*, *Eremothera boothii* var. *alyssoides*, *Eremothera boothii* var. *condensata*, *Eremothera boothii* var. *decorcicans*, *Eremothera boothii* var. *desertorum*, *Eremothera boothii* var. *villosa*, *Eriastrum diffusum* var. *coachellae*, *Eriastrum diffusum* var. *utahense*, *Eriastrum eremicum* var. *markianum*, *Eriastrum eremicum* var. *yageri*, *Eriastrum eremicum* var. *zionis*, *Festuca brachyphylla* var. *breviculmis*, *Gilia aliquanta* var. *breviloba*, *Gilia brecciarum* var. *jacens*, *Gilia brecciarum* var. *neglecta*, *Gilia cana* var. *bernardina*, *Gilia cana* var. *speciformis*, *Gilia cana* var. *speciosa*, *Gilia cana* var. *triceps*, *Gilia ochroleuca* var. *bizonata*, *Gilia ochroleuca* var. *exilis*, *Gilia ochroleuca* var. *vividia*, *Hedeoma nana* var. *californica*, *Hulsea vestita* var. *inyoensis*, *Ipomopsis tenuituba* var. *latiloba*, *Langloisia setosissima* var. *punctata*, *Leontodon saxatilis* var. *longirostris*, *Leptosiphon chrysanthus* var. *decorus*, *Leptosiphon nuttallii* var. *howellii*, *Leptosiphon nuttallii* var. *pubescens*, *Linanthus bigelovii* var. *johnsonii*, *Linanthus pungens* var. *pulchriflorus*, *Linanthus watsonii* var. *dolomiticus*, *Monardella breweri* var. *lanceolata*, *Monardella linoides* var. *sierrae*, *Navarretia leptalea* var. *bicolor*, *Navarretia leucocephala* var. *bakeri*, *Navarretia leucocephala* var. *minima*, *Navarretia leucocephala* var. *pauciflora*, *Navarretia leucocephala* var. *plieantha*, *Navarretia linearifolia* var. *pinnatisecta*, *Nothaea fendleri* var. *glauca*, *Orthocarpus cuspidatus* var. *copelandii*, *Pedicularis attollens* var. *protogyna*, *Penstemon thompsoniae* var. *jaegeri*, *Pentagramma triangularis* var. *maxonii*, *Pentagramma triangularis* var. *rebmanii*, *Pentagramma triangularis* var. *semipallida*, *Pentagramma triangularis* var. *viscosa*, *Perideridia parishii* var. *latifolia*, *Phragmites australis* var. *americanus*, *Poa abbreviata* var. *marshii*, *Poa abbreviata* var. *pattersonii*, *Polygonum aviculare* var. *buxiforme*, *Proboscidea louisiana* var. *fragrans*, *Rhodiola integrifolia* var. *leedyi*, *Rhodiola integrifolia* var. *neomexicana*, *Rosa woodsii* var. *puberulenta*, *Sagina decumbens* var. *occidentalis*, and *Veronica wormskjoldii* var. *nutans*, are made.

KEY WORDS: Nevada flora, varieties, combinations

RESUMEN

Aquí se presentan nuevas combinaciones hechas previamente a la publicación de una Lista de Verificación Anotada para la Flora de Nevada. Se realizan nuevas combinaciones de *Aliciella latifolia* var. *imperialis*, *Androsace elongata* var. *acuta*, *Arceuthobium abietinum* var. *grandae*, *Arceuthobium abietinum* var. *magnifica*, *Arceuthobium abietinum* var. *mathiasenii*, *Arceuthobium abietinum* var. *wiensii*, *Artemisia cana* var. *bolanderi*, *Askellia pygmaea* var. *ramosa*, *Boechera fernaldiana* var. *vivariensis*, *Calystegia sepium* var. *limnophila*, *Camissoniopsis pallida* var. *hallii*, *Cassiope mertensiana* var. *californica*, *Centaurea stoebe* var. *micranthos*, *Chloropyron maritimum* var. *canescens*, *Chloropyron maritimum* var. *palustre*, *Chloropyron maritimum* var. *parryi*, *Chylismia brevipes* var. *pallidula*, *Chylismia cardiophylla* var. *cedrosensis*, *Chylismia cardiophylla* var. *robusta*, *Chylismia claviformis* var. *aurantiaca*, *Chylismia claviformis* var. *cruciformis*, *Chylismia claviformis* var. *funerea*, *Chylismia claviformis* var. *lancifolia*, *Chylismia claviformis* var. *peeblessii*, *Chylismia claviformis* var. *peirsonii*, *Chylismia claviformis* var. *purpurascens*, *Chylismia claviformis* var. *rubescens*, *Chylismia claviformis* var. *wigginsii*, *Chylismia claviformis* var. *yumae*, *Chylismia scapoidea* var. *brachycarpa*, *Chylismia scapoidea* var. *macrocarpa*, *Chylismia scapoidea* var. *utahensis*, *Chylismia walkeri* var. *tortilis*, *Crepis runcinata* var. *hallii*, *Dianthus armeria* var. *armeriastrum*, *Eremothera boothii* var. *alyssoides*, *Eremothera boothii* var. *condensata*,

Eremothera boothii var. *decorticans*, *Eremothera boothii* var. *desertorum*, *Eremothera boothii* var. *villosa*, *Eriastrum diffusum* var. *coachellae*, *Eriastrum diffusum* var. *utahense*, *Eriastrum eremicum* var. *markianum*, *Eriastrum eremicum* var. *yageri*, *Eriastrum eremicum* var. *zionis*, *Festuca brachyphylla* var. *breviculmis*, *Gilia aliquanta* var. *breviloba*, *Gilia brecciarum* var. *jacens*, *Gilia brecciarum* var. *neglecta*, *Gilia cana* var. *bernardina*, *Gilia cana* var. *speciformis*, *Gilia cana* var. *speciosa*, *Gilia cana* var. *triceps*, *Gilia ochroleuca* var. *bizonata*, *Gilia ochroleuca* var. *exilis*, *Gilia ochroleuca* var. *vivida*, *Hedeoma nana* var. *californica*, *Hulsea vestita* var. *inyoensis*, *Ipomopsis tenuituba* var. *latiloba*, *Langloisia setosissima* var. *punctata*, *Leontodon saxatilis* var. *longirostris*, *Leptosiphon chrysanthus* var. *decorus*, *Leptosiphon nuttallii* var. *howellii*, *Leptosiphon nuttallii* var. *pubescens*, *Linanthus bigelovii* var. *johnsonii*, *Linanthus pungens* var. *pulchriflorus*, *Linanthus watsonii* var. *dolomiticus*, *Monardella breweri* var. *lanceolata*, *Monardella linoides* var. *sierrae*, *Navarretia leptalea* var. *bicolor*, *Navarretia leucocephala* var. *bakeri*, *Navarretia leucocephala* var. *minima*, *Navarretia leucocephala* var. *pauciflora*, *Navarretia leucocephala* var. *plieantha*, *Navarretia linearifolia* var. *pinnatisecta*, *Noccaea fendleri* var. *glaуca*, *Orthocarpus cuspidatus* var. *copelandii*, *Pedicularis attollens* var. *protogyna*, *Penstemon thompsoniae* var. *jaegeri*, *Pentagramma triangularis* var. *maxonii*, *Pentagramma triangularis* var. *rebmanii*, *Pentagramma triangularis* var. *semipallida*, *Pentagramma triangularis* var. *viscosa*, *Perideridia parishii* var. *latifolia*, *Phragmites australis* var. *americanus*, *Poa abbreviata* var. *marshii*, *Poa abbreviata* var. *pattersonii*, *Polygonum aviculare* var. *buxiforme*, *Proboscidea louisiana* var. *fragrans*, *Rhodiola integrifolia* var. *leedyi*, *Rhodiola integrifolia* var. *neomexicana*, *Rosa woodsii* var. *puberulenta*, *Sagina decumbens* var. *occidentalis*, y *Veronica wormskjoldii* var. *nutans* se fabrican.

INTRODUCTION

The following is a list of new combinations made in advance of publication of an *Annotated Checklist for the Flora of Nevada*. The purpose is to consistently allow the use of variety instead of subspecies for infraspecific taxa. The use of varieties or subspecies in recognizing infraspecific taxa is a subjective individual choice. Preferences usually start with the early influencers in ones botanical education. In my case that would be John Thomas Howell, and later, the botanists at The New York Botanical Garden. As such, I prefer the use of variety. I like the idea that varieties can be grouped into subspecies if a two-tiered infraspecific classification is warranted. Discussions, opinions, and assessments on this subject, among others, can be found in Cronquist 1955; Hamilton & Reichard 1992; Holmgren 1994; Stuessy 1990; and Yatskievych & Moran 1989. Probably the best advice of this choice I ever heard was from Lincoln Constance. He told me that he told his students to use whichever category they preferred but to be consistent in its use.

Not all of the following combinations affect Nevada plants. When a species had varieties that occur in Nevada and some that did not occur in Nevada I felt it would be consistent to make all of the necessary combinations for that species.

APIACEAE

Perideridia parishii var. **latifolia** (A. Gray) Tiehm, **comb. nov.** *Carum gairdneri* var. *latifolium* A. Gray, Proc. Amer. Acad. Arts 7(2):344. 1868; *Perideridia parishii* subsp. *latifolia* (A. Gray) T.I. Chuang & Constance, Univ. Calif. Publ. Bot. 55:67. 1969.

ASTERACEAE

Artemisia cana var. **bolanderi** (A. Gray) Tiehm, **comb. nov.** *Artemisia bolanderi* A. Gray, Proc. Amer. Acad. Arts 19:50. 1883[1884]; *Artemisia tridentata* subsp. *bolanderi* (A. Gray) H.M. Hall & Clem., Publ. Carnegie Inst. Wash. 32:6:139. 1923; *Artemisia tridentata* var. *bolanderi* (A. Gray) McMinn, Man. Calif. Shrubs 609. 1939; *Artemisia cana* subsp. *bolanderi* (A. Gray) G.H. Ward, Contr. Dudley Herb. 4(6):192. 1953; *Seriphidium canum* subsp. *bolanderi* (A. Gray) W.A. Weber, Phytologia 55(1):7. 1984; *Seriphidium bolanderi* (A. Gray) Y.R. Ling, Advances Compos. Syst. 287. 1995.

Askellia pygmaea var. **ramosa** (Babc.) Tiehm, **comb. nov.** *Crepis nana* subsp. *ramosa* Babc., Univ. Calif. Publ. Bot. 22:542. 1947; *Askellia nana* subsp. *ramosa* (Babc.) W.A. Weber, Phytologia 55(1):7. 1984; *Crepis nana* var. *ramosa* (Babc.) Cronquist, Intermount. Fl. 5:460. 1994; *Askellia pygmaea* subsp. *ramosa* (Babc.) K.L. Chambers & S.C. Meyers, J. Bot. Res. Inst. Texas 5(2):619. 2011.

Centaurea stoebe var. **micranthos** (S.G. Gmel. ex Gugler) Tiehm, **comb. nov.** *Centaurea maculosa* subsp. *micranthos* S.G. Gmel. ex Gugler, Ann. Hist.-Nat. Mus. Natl. Hung. 6(1):167. 1908; *Centaurea stoebe* subsp. *micranthos* (S.G. Gmel. ex Gugler) Hayek, Repert. Spec. Nov. Regni Veg. Beih. 30(2[5]):766. 1931.

Crepis runcinata var. **hallii** (Babc. & Stebbins) Tiehm, **comb. nov.** *Crepis runcinata* subsp. *hallii* Babc. & Stebbins, Publ. Carnegie Inst. Wash. 504:104, 107. 1938; *Psilocheinia runcinata* subsp. *hallii* (Babc. & Stebbins) W.A. Weber, Phytologia 53(3):189. 1983.

Hulsea vestita var. **inyoensis** (D.D. Keck) Tiehm, **comb. nov.** *Hulsea californica* subsp. *inyoensis* D.D. Keck, Aliso 4(1):101. 1958; *Hulsea vestita* subsp. *inyoensis* (D.D. Keck) Wilken, Aliso 7(4):413. 1972.

Leontodon saxatilis var. **longirostris** (Finch & P.D. Sell) Tiehm, **comb. nov.** *Leontodon taraxacoides* subsp. *longirostris* Finch & P.D. Sell, Bot. J. Linn. Soc. 71(4):247. 1975 [1976]; *Leontodon saxatilis* subsp. *longirostris* (Finch & P.D. Sell) P. Silva, Bol. Soc. Brot., ser. 2, 60. 155. 1987; *Leontodon longirostris* (Finch & P.D. Sell) Talavera, Herb. Univ. Hispal. Fl. Select. 1:37. 1982.

BRASSICACEAE

Boechera fernaldiana var. **vivariensis** (S.L. Welsh) Tiehm, **comb. nov.** *Arabis vivariensis* S.L. Welsh, Great Basin Naturalist 46(2):263. 1986; *Boechera vivariensis* (S.L. Welsh) W.A. Weber, Phytologia 67(6):425. 1989; *Boechera fernaldiana* subsp. *vivariensis* (S.L. Welsh) Windham & Al-Shehbaz, Harvard Pap. Bot. 11(1):67. 2006.

Noccaea fendleri var. **glauca** (A. Nelson) Tiehm, **comb. nov.** *Thlaspi alpestre* var. *glaucum* A. Nelson, Wyoming Agric. Exp. Sta. Bull. 28:84. 1896; *Thlaspi glaucum* (A. Nelson) A. Nelson, Bull. Torrey Bot. Club 25(5):275. 1898; *Thlaspi fendleri* var. *glaucum* (A. Nelson) C.L. Hitchc., Univ. Wash. Publ. Biol. 17(2):554. 1964; *Noccaea glauca* (A. Nelson) Holub, Preslia 70(2):108. 1998; *Noccaea fendleri* subsp. *glauca* (A. Nelson) Al-Shehbaz & M. Koch, Syst. Bot. 29(2):382–383. 2004.

CARYOPHYLLACEAE

Dianthus armeria var. **armeriastrum** (Wolfn.) Tiehm, **comb. nov.** *Dianthus armeriastrum* Wolfn., Oesterr. Bot. Z. 8:318 (1858); *Dianthus armeria* subsp. *armeriastrum* (Wolfn.) Velen., Fl. Bulg. Suppl. 42. 1898.

Sagina decumbens var. **occidentalis** (S. Watson) Tiehm, **comb. nov.** *Sagina occidentalis* S. Watson, Proc. Amer. Acad. Arts 10:344. 1875; *Alsinella occidentalis* (S. Watson) Greene, Flora Franciscana 1:125. 1891; *Sagina decumbens* subsp. *occidentalis* (S. Watson) G.E. Crow, Rhodora 80(821):68. 1978.

CONVOLVULACEAE

Calystegia sepium var. **limnophila** (Greene) Tiehm, **comb. nov.** *Convolvulus limnophilus* Greene, Pittonia 3:329. 1898; *Calystegia sepium* subsp. *limnophila* (Greene) Brummitt, Ann. Missouri Bot. Gard. 52(2):216. 1965.

CRASSULACEAE

Rhodiola integrifolia var. **leedyi** (Rosend. & J.W. Moore) Tiehm, **comb. nov.** *Sedum rosea* var. *leedyi* Rosend. & J.W. Moore, Rhodora 49(584):198. 1947; *Rhodiola integrifolia* subsp. *leedyi* (Rosend. & J.W. Moore) H. Ohba, J. Jap. Bot. 74(1):61. 1999; *Tolmachevia integrifolia* subsp. *leedyi* (Rosend. & J.W. Moore) Å. Löve & D. Löve, Taxon 34(1):163. 1985.

Rhodiola integrifolia var. **neomexicana** (Britton) Tiehm, **comb. nov.** *Rhodiola neomexicana* Britton, New N. Amer. Crassul. 38. 1903; *Sedum integrifolium* subsp. *neomexicanum* (Britton) R.T. Clausen, Sedum N. Amer. 509. 1975; *Sedum rosea* var. *neomexicanum* (Britton) A. Berger, Nat. Pflanzenfam. (ed. 2) 18a:440. 1930; *Tolmachevia integrifolia* subsp. *neomexicana* (Britton) Å. Löve & D. Löve, Taxon 34(1):163–164. 1985; *Rhodiola integrifolia* subsp. *neomexicana* (Britton) H. Ohba, J. Jap. Bot. 74(1):61. 1999.

ERICACEAE

Cassiope mertensiana var. **californica** (Piper) Tiehm, **comb. nov.** *Cassiope mertensiana* subsp. *californica* Piper, Smithsonian Misc. Collect. 50(2):196. 1907.

LAMIACEAE

Hedeoma nana var. **californica** (W.S. Stewart) Tiehm, **comb. nov.** *Hedeoma nana* subsp. *californica* W.S. Stewart, Repert. Spec. Nov. Regni Veg. Beih. 115:29. 1939.

Monardella breweri var. **lanceolata** (A. Gray) Tiehm, **comb. nov.** *Monardella lanceolata* A. Gray, Proc. Amer. Acad. Arts 11:102. 1876; *Madronella lanceolata* (A. Gray) Greene, Leafl. Bot. Observ. Crit. 1(12):169. 1906; *Monardella breweri* subsp. *lanceolata* (A. Gray) A.C. Sanders & Elvin, Novon 19(3):337. 2009.

Monardella linoides var. **sierrae** (Elvin & A.C. Sanders) Tiehm, **comb. nov.** *Monardella linoides* subsp. *sierrae* Elvin & A.C. Sanders, Novon 19(3):331. 2009.

MARTYNIACEAE

Proboscidea louisiana var. **fragrans** (Lindl.) Tiehm, **comb. nov.** *Martynia fragrans* Lindl., Bot. Reg. 26:85. 1840; *Proboscidea louisiana* subsp. *fragrans* (Lindl.) Bretting, S. W. Naturalist 28(4):448. 1983.

ONAGRACEAE

Camissoniopsis pallida var. **hallii** (Davidson) Tiehm, **comb. nov.** *Sphaerostigma hallii* Davidson, Muhlenbergia 3(7):107. 1907; *Oenothera distorta* var. *hallii* (Davidson) Jeps., Man. Fl. Pl. Calif. 685. 1925; *Camissonia pallida* subsp. *hallii* (Davidson) P.H. Raven, Brittonia 16(3):284. 1964; *Oenothera hallii* (Davidson) Munz, N. Amer. Fl. ser. 2, 5:160. 1965; *Camissoniopsis pallida* subsp. *hallii* (Davidson) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:205. 2007.

Chylismia brevipes var. **pallidula** (Munz) Tiehm, **comb. nov.** *Oenothera brevipes* var. *pallidula* Munz, Amer. J. Bot. 15(4):229. 1928; *Oenothera pallidula* (Munz) Munz, Leafl. W. Bot. 2(6):88. 1938; *Oenothera brevipes* subsp. *pallidula* (Munz) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):83. 1962; *Camissonia brevipes* subsp. *pallidula* (Munz) P.H. Raven, Brittonia 16(3):281. 1964; *Chylismia brevipes* subsp. *pallidula* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia cardiophylla var. **cedrosensis** (Greene) Tiehm, **comb. nov.** *Oenothera cedrosensis* Greene, Bull. Calif. Acad. Sci. 1(4):187–188. 1885; *Oenothera cardiophylla* subsp. *cedrosensis* (Greene) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):79. 1962; *Camissonia cardiophylla* subsp. *cedrosensis* (Greene) P.H. Raven, Brittonia 16(3):281. 1964; *Chylismia cardiophylla* subsp. *cedrosensis* (Greene) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia cardiophylla var. **robusta** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera cardiophylla* subsp. *robusta* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):79. 1962; *Camissonia cardiophylla* subsp. *robusta* (P.H. Raven) P.H. Raven, Brittonia 16(3):281. 1964; *Chylismia cardiophylla* subsp. *robusta* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **aurantiaca** (Munz) Tiehm, **comb. nov.** *Oenothera claviformis* var. *aurantiaca* Munz, Amer. J. Bot. 15(4):237–238. 1928; *Chylismia aurantiaca* (Munz) D.A. Johans., Desert 3(7):78. 1931; *Oenothera claviformis* subsp. *aurantiaca* (Munz) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):100. 1962; *Camissonia claviformis* subsp. *aurantiaca* (Munz) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia claviformis* subsp. *aurantiaca* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **cruciformis** (Kellogg) Tiehm, **comb. nov.** *Oenothera cruciformis* Kellogg, Proc. Calif. Acad. Sci. 2:227. 1863; *Chylismia scapoidea* var. *cruciformis* (Kellogg) Small, Bull. Torrey Bot. Club 23(5):193. 1896; *Chylismia cruciformis* (Kellogg) Howell, Fl. N.W. Amer. 2:233. 1898; *Oenothera claviformis* var. *cruciformis* (Kellogg) Munz, Amer. J. Bot. 15(4):235. 1928; *Oenothera claviformis* subsp. *cruciformis* (Kellogg) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):108. 1962; *Camissonia claviformis* subsp. *cruciformis* (Kellogg) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia claviformis* var. *cruciformis* (Kellogg) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Chylismia claviformis* subsp. *cruciformis* (Kellogg) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **funerea** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera claviformis* subsp. *funerea* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):106. 1962; *Camissonia claviformis* subsp. *funerea* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia claviformis* var. *funerea* (P.H. Raven) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Chylismia claviformis* subsp. *funerea* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **lancifolia** (A. Heller) Tiehm, **comb. nov.** *Chylismia lancifolia* A. Heller, Muhlenbergia 2:226. 1906; *Oenothera claviformis* subsp. *lancifolia* (A. Heller) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):109. 1962; *Camissonia claviformis* subsp. *lancifolia* (A. Heller) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia claviformis* var. *lancifolia* (A. Heller) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Chylismia claviformis* subsp. *lancifolia* (A. Heller) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **peeblesii** (Munz) Tiehm, **comb. nov.** *Oenothera claviformis* var. *peeblesii* Munz, Leafl. W. Bot. 2(9):158. 1939; *Oenothera claviformis* subsp. *peeblesii* (Munz) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):101. 1962; *Camissonia claviformis* subsp. *peeblesii* (Munz) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia claviformis* subsp. *peeblesii* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:206. 2007.

Chylismia claviformis var. **peirsonii** (Munz) Tiehm, **comb. nov.** *Oenothera claviformis* var. *peirsonii* Munz, Amer. J. Bot. 15(4):238. 1928; *Chylismia peirsonii* (Munz) D.A. Johans., Desert 3(7):78. 1931; *Oenothera claviformis* subsp. *peirsonii* (Munz) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):105. 1962; *Camissonia claviformis* subsp. *peirsonii* (Munz) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia claviformis* subsp. *peirsonii* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:207. 2007.

Chylismia claviformis var. **purpurascens** (S. Watson) Tiehm, **comb. nov.** *Oenothera scapoidea* var. *purpurascens* S. Watson, Proc. Amer. Acad. Arts 8:295. 1870; *Oenothera claviformis* var. *purpurascens* (S. Watson) Munz, Leafl. W. Bot. 3(3):53. 1941; *Camissonia claviformis* var. *purpurascens* (S. Watson) Cronquist, Great Basin Naturalist 46(2):258. 1986. At the subspecific level the correct name of this taxon is *Chylismia claviformis* subsp. *integrifolia* (P.H. Raven) W.L. Wagner & Hoch.

Chylismia claviformis var. **rubescens** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera claviformis* subsp. *rubescens* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):103. 1962; *Camissonia claviformis* subsp. *rubescens* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia claviformis* subsp. *rubescens* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:207. 2007.

Chylismia claviformis var. **wigginsii** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera claviformis* subsp. *wigginsii* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):103. 1962; *Camissonia claviformis* subsp. *wigginsii* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia wigginsii* (P.H. Raven) P.H. Raven, Ann. Missouri Bot. Gard. 63:384. 1976[1977]; *Chylismia claviformis* subsp. *wigginsii* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:207. 2007.

Chylismia claviformis var. **yumae** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera claviformis* subsp. *yumae* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):104. 1962; *Camissonia claviformis* subsp. *yumae* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia claviformis* subsp. *yumae* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:207. 2007.

Chylismia scapoidea var. **brachycarpa** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera scapoidea* subsp. *brachycarpa* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):95. 1962; *Camissonia scapoidea* subsp. *brachycarpa* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Chylismia scapoidea* subsp. *brachycarpa* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:208. 2007.

Chylismia scapoidea var. **macrocarpa** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera scapoidea* subsp. *macrocarpa* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):95. 1962; *Camissonia scapoidea* subsp. *macrocarpa* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia scapoidea* var. *macrocarpa* (P.H. Raven) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Chylismia scapoidea* subsp. *macrocarpa* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:208. 2007.

Chylismia scapoidea var. **utahensis** (P.H. Raven) Tiehm, **comb. nov.** *Oenothera scapoidea* subsp. *utahensis* P.H. Raven, Univ. Calif. Publ. Bot. 34(1):96. 1962; *Camissonia scapoidea* subsp. *utahensis* (P.H. Raven) P.H. Raven, Brittonia 16(3):282. 1964; *Camissonia scapoidea* var. *utahensis* (P.H. Raven) S.L. Welsh, Great Basin Naturalist 46(2):258. 1986; *Chylismia scapoidea* subsp. *utahensis* (P.H. Raven) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:208. 2007.

Chylismia walkeri var. **tortilis** (Jeps.) Tiehm, **comb. nov.** *Oenothera scapoidea* var. *tortilis* Jeps., Man. Fl. Pl. Calif. 687. 1925; *Oenothera walkeri* subsp. *tortilis* (Jeps.) P.H. Raven, Univ. Calif. Publ. Bot. 34(1):90. 1962; *Camissonia walkeri* subsp. *tortilis* (Jeps.) P.H. Raven, Brittonia 16(3):281. 1964; *Chylismia walkeri* subsp. *tortilis* (Jeps.) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:208. 2007; *Camissonia walkeri* var. *TORTILIS* (Jeps.) S.L. Welsh, Utah Fl. (ed. 4) 531. 2008.

Eremothera boothii var. **alyssoides** (Hook. & Arn.) Tiehm, **comb. nov.** *Oenothera alyssoides* Hook. & Arn., Bot. Beechey Voy. 340. 1839; *Holostigma alyssoides* (Hook. & Arn.) Hook., Hooker's Icon. Pl. 339. 1841; *Sphaerostigma alyssoides* (Hook. & Arn.) Walp., Repert. Bot. Syst. 2(1):78. 1843; *Camissonia boothii* subsp. *alyssoides* (Hook. & Arn.) P.H. Raven, Brittonia 16(3):285. 1964; *Oenothera boothii* subsp. *alyssoides* (Hook. & Arn.) Munz, N. Amer. Fl., ser. 2, 5:154. 1965; *Camissonia boothii* var. *alyssoides* (Hook. & Arn.) N.H. Holmgren & P.K. Holmgren, Intermount. Fl. 3(A):187. 1997; *Eremothera boothii* subsp. *alyssoides* (Hook. & Arn.) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:209. 2007.

Eremothera boothii var. **condensata** (Munz) Tiehm, **comb. nov.** *Oenothera decorticans* var. *condensata* Munz, Bot. Gaz. 85(3):247. 1928; *Camissonia boothii* subsp. *condensata* (Munz) P.H. Raven, Brittonia 16(3):285. 1964; *Oenothera boothii* subsp. *condensata* (Munz) Munz, N. Amer. Fl., ser. 2, 5:154. 1965; *Camissonia boothii* var. *condensata* (Munz) Cronquist, Great Basin Naturalist 46(2):258. 1986; *Eremothera boothii* subsp. *condensata* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:209. 2007.

Eremothera boothii var. **decorticans** (Hook. & Arn.) Tiehm, **comb. nov.** *Gaura decorticans* Hook. & Arn., Bot. Beechey Voy. 343. 1839; *Oenothera decorticans* (Hook. & Arn.) Greene, Fl. Francisc. 2:217. 1891; *Sphaerostigma decorticans* (Hook. & Arn.) Small, Bull. Torrey Bot. Club 23(5):191. 1896; *Oenothera alyssoides* var. *decorticans* (Hook. & Arn.) Jeps., Man. Fl. Pl. Calif. 686. 1925; *Camissonia boothii* subsp. *decorticans* (Hook. & Arn.) P.H. Raven, Brittonia 16(3):285. 1964; *Oenothera boothii* subsp. *decorticans* (Hook. & Arn.) Munz, N. Amer. Fl., ser. 2, 5:152. 1965; *Camissonia boothii* var. *decorticans* (Hook. & Arn.) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Eremothera boothii* subsp. *decorticans* (Hook. & Arn.) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:209. 2007.

Eremothera boothii var. **desertorum** (Munz) Tiehm, **comb. nov.** *Oenothera decorticans* var. *desertorum* Munz, Bot. Gaz. 85(3):246. 1928; *Camissonia boothii* subsp. *desertorum* (Munz) P.H. Raven, Brittonia 16(3):285. 1964; *Oenothera boothii* subsp. *desertorum* (Munz) Munz, N. Amer. Fl., ser. 2, 5:153. 1965; *Camissonia boothii* var. *desertorum* (Munz) Cronquist, Great Basin Naturalist 52(1):76. 1992; *Eremothera boothii* subsp. *desertorum* (Munz) W.L. Wagner & Hoch, Syst. Bot. Monogr. 83:209. 2007.

Eremothera boothii var. **villosa** (S. Watson) Tiehm, **comb. nov.** *Oenothera alyssoides* var. *villosa* S. Watson, Proc. Amer. Acad. Arts 8:591, 602. 1873; *Camissonia boothii* var. *villosa* (S. Watson) Cronquist, Great Basin Naturalist 46(2):258. 1986. At the subspecific level the correct name of this taxon is *Eremothera boothii* subsp. *intermedia* (Munz) W.L. Wagner & Hoch.

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Chloropyron maritimum var. **parryi** (S. Watson) Tiehm, **comb. nov.** *Cordylanthus parryi* S. Watson, Amer. Naturalist 9:346. 1875; *Cordylanthus canescens* var. *parryi* (S. Watson) A. Gray, Syn. Fl. N. Amer. 2(1):304. 1878; *Adenostegia parryi* (S. Watson) Greene, Pittonia 2(10B):181. 1891; *Chloropyron parryi* (S. Watson) A. Heller, Muhlenbergia 3(8):134. 1907; *Cordylanthus maritimus* var. *parryi* (S. Watson) Jeps., Man. Fl. Pl. Calif. 947. 1925; *Chloropyron maritimum* subsp. *parryi* (S. Watson) J.M. Egger in J.M. Egger & Zharkikh, Phytoneuron 2022-2-3. 2022.

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Phragmites australis var. **americanus** (Saltonstall, P.M. Peterson, & Soreng) Tiehm, **comb. nov.** *Phragmites australis* subsp. *americanus* Saltonstall, P.M. Peterson, & Soreng, Sida 21(2):690. 2004.

Poa abbreviata var. **marshii** (Soreng) Tiehm, **comb. nov.** *Poa abbreviata* subsp. *marshii* Soreng, Phytologia 71(5):390. 1991[1992].

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POLEMONIACEAE

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Eriastrum diffusum var. **coachellae** (S.J. De Groot) Tiehm, **comb. nov.** *Eriastrum diffusum* subsp. *coachellae* S.J. De Groot, Aliso 34(2):82. 2016.

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Gilia brecciarum var. **jacens** (A.D. Grant & V.E. Grant) Tiehm, **comb. nov.** *Gilia jacens* A.D. Grant & V.E. Grant, Aliso 4(3):437. 1960; *Gilia brecciarum* subsp. *jacens* (A.D. Grant & V.E. Grant) A.G. Day, Novon 3(4):332. 1993.

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- Gilia cana** var. **speciformis** (A.D. Grant & V.E. Grant) Tiehm, **comb. nov.** *Gilia cana* subsp. *speciformis* A.D. Grant & V.E. Grant, Aliso 3(3):230. 1956.
- Gilia cana** var. **speciosa** (Jeps.) Tiehm, **comb. nov.** *Gilia tenuiflora* var. *speciosa* Jeps., Fl. Calif. 3(2):181. 1943; *Gilia latiflora* subsp. *speciosa* (Jeps.) H. Mason & A.D. Grant, Madroño 9(7):218. 1948; *Gilia cana* subsp. *speciosa* (Jeps.) A.D. Grant & V.E. Grant, Aliso 3(3):229. 1956.
- Gilia cana** var. **triceps** (Brand) Tiehm, **comb. nov.** *Gilia tenuiflora* var. *triceps* Brand, Pflanzenr. 27[IV,250]:102. 1907; *Gilia cana* subsp. *triceps* (Brand) A.D. Grant & V.E. Grant, Aliso 3(3):231. 1956; *Gilia latiflora* var. *triceps* (Brand) Cronquist, Intermount. Fl. 4:116. 1984.
- Gilia ochroleuca** var. **bizonata** (A.D. Grant & V.E. Grant) Tiehm, **comb. nov.** *Gilia ochroleuca* subsp. *bizonata* A.D. Grant & V.E. Grant, Aliso 3(3):223. 1956.
- Gilia ochroleuca** var. **exilis** (A. Gray) Tiehm, **comb. nov.** *Gilia latiflora* var. *exilis* A. Gray, Syn. Fl. N. Amer. (ed. 2) 2(1):411–412. 1886; *Gilia arenaria* subsp. *exilis* (A. Gray) Brand, Pflanzenr. 27[IV,250]:104. 1907; *Gilia exilis* (A. Gray) Abrams, Fl. Los Angeles ed. 3:289–290. 1917; *Gilia tenuiflora* var. *exilis* (A. Gray) Jeps., Fl. Calif. 3(2):178, 181. 1943; *Gilia latiflora* subsp. *exilis* (A. Gray) H. Mason & A.D. Grant, Madroño 9(7):219. 1948; *Gilia ochroleuca* subsp. *exilis* (A. Gray) A.D. Grant & V.E. Grant, Aliso 3(3):222. 1956.
- Gilia ochroleuca** var. **vivida** (A.D. Grant & V.E. Grant) Tiehm, **comb. nov.** *Gilia leptantha* subsp. *vivida* A.D. Grant & V.E. Grant, Aliso 3(3):238. 1956; *Gilia ochroleuca* subsp. *vivida* (A.D. Grant & V.E. Grant) A.D. Grant & V.E. Grant, Aliso 4(3):438. 1960.
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- Langloisia setosissima** var. **punctata** (Coville) Tiehm, **comb. nov.** *Gilia setosissima* var. *punctata* Coville, Proc. Biol. Soc. Washington 7(2):72. 1892; *Navarretia setosissima* var. *punctata* (Coville) Coville, Contr. U.S. Natl. Herb. 4:154. 1893; *Langloisia punctata* (Coville) Goodl., Bot. Gaz. 37(1):58. 1904; *Gilia punctata* (Coville) Munz, Man. S. Calif. Bot. 599. 1935; *Langloisia setosissima* subsp. *punctata* (Coville) Timbrook, Madroño 33(3):169. 1986.
- Leptosiphon chrysanthus** var. **decorus** (A. Gray) Tiehm, **comb. nov.** *Gilia aurea* var. *decora* A. Gray, Proc. Amer. Acad. Arts 8:264. 1870; *Gilia aurea* fo. *decora* (A. Gray) Brand, Pflanzenr. 27[IV,250]:131. 1907; *Linanthus aureus* var. *decorus* (A. Gray) Jeps., Man. Fl. Pl. Calif. 803. 1925; *Linanthus aureus* subsp. *decorus* (A. Gray) H. Mason, Ill. Fl. Pacific States 3:419. 1951; *Leptosiphon aureus* subsp. *decorus* (A. Gray) J.M. Porter & L.A. Johnson, Aliso 19(1):80. 2000; *Leptosiphon chrysanthus* subsp. *decorus* (A. Gray) J.M. Porter & R. Patt., Aliso 32(2):59–60. 2015.
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- Linanthus pungens** var. **pulchriflorus** (Brand) Tiehm, **comb. nov.** *Gilia pungens* subsp. *pulchriflora* Brand, Annaire Conserv. Jard. Genève 15-16:333. 1913; *Leptodactylon pungens* subsp. *pulchriflorum* (Brand) H. Mason, Ill. Fl. Pacific States 3:455. 1951; *Linanthus pungens* subsp. *pulchriflorus* (Brand) J.M. Porter & R. Patt., Aliso 32(2):77. 2015.
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- Navarretia leucocephala** var. **bakeri** (H. Mason) Tiehm, **comb. nov.** *Navarretia bakeri* H. Mason, Madroño 8(6):198. 1946; *Navarretia leucocephala* subsp. *bakeri* (H. Mason) A.G. Day, Novon 3(4):337. 1993.
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Navarretia leucocephala var. **pauciflora** (H. Mason) Tiehm, **comb. nov.** *Navarretia pauciflora* H. Mason, Madroño 8(6):200. 1946; *Navarretia leucocephala* subsp. *pauciflora* (H. Mason) A.G. Day, Novon 3(4):337. 1993.

Navarretia leucocephala var. **plieantha** (H. Mason) Tiehm, **comb. nov.** *Navarretia plieantha* H. Mason, Madroño 8(6):199–200. 1946; *Navarretia leucocephala* subsp. *plieantha* (H. Mason) A.G. Day, Novon 3(4):337. 1993.

Navarretia linearifolia var. **pinnatisecta** (H. Mason & A.D. Grant) Tiehm, **comb. nov.** *Gilia leptalea* subsp. *pinnatisecta* H. Mason & A.D. Grant, Madroño 9(7):220. 1948; *Gilia sinistra* subsp. *pinnatisecta* (H. Mason & A.D. Grant) A.G. Day, Novon 3(4):332. 1993; *Allophylum sinistrum* subsp. *pinnatisectum* (H. Mason & A.D. Grant) A.G. Day & V.E. Grant, Phytologia 84:376. 1998[1999]; *Navarretia sinistra* subsp. *pinnatisecta* (H. Mason & A.D. Grant) L.A. Johnson, Aliso 19(1):68. 2000; *Navarretia linearifolia* subsp. *pinnatisecta* (H. Mason & A.D. Grant) L.A. Johnson, Syst. Bot. 35(3):626. 2010.

POLYGONACEAE

Polygonum aviculare var. **buxiforme** (Small) Tiehm, **comb. nov.** *Polygonum buxiforme* Small, Bull. Torrey Bot. Club 33(1):56. 1906; *Polygonum aviculare* subsp. *buxiforme* (Small) Costea & Tardif, Sida 20(3):988. 2003.

PRIMULACEAE

Androsace elongata var. **acuta** (Greene) Tiehm, **comb. nov.** *Androsace acuta* Greene, Man. Bot. San Francisco Bay 238. 1894; *Androsace occidentalis* var. *acuta* (Greene) Jeps., Man. Fl. Pl. Calif. 755. 1925; *Androsace elongata* subsp. *acuta* (Greene) G.T. Robbins, Amer. Midl. Naturalist 32(1):154. 1944; *Androsace occidentalis* subsp. *acuta* (Greene) A.E. Murray, Kalmia 12:18. 1982.

PTERIDACEAE

Pentagramma triangularis var. **maxonii** (Weath.) Tiehm, **comb. nov.** *Pityrogramma triangularis* var. *maxonii* Weath., Rhodora 22(259):119; *Pentagramma triangularis* subsp. *maxonii* (Weath.) Yatsk., Windham & E. Wollenw., Amer. Fern J. 80(1):16. 1990; *Pentagramma maxonii* (Weath.) Schuettp. & Windham, Syst. Bot. 40(3):640. 2015.

Pentagramma triangularis var. **rebmanii** (Winner & M.G. Simpson) Tiehm, **comb. nov.** *Pentagramma triangularis* subsp. *rebmanii* Winner & M.G. Simpson, Madroño 54(4):345. 2007[2008]; *Pentagramma rebmanii* (Winner & M.G. Simpson) Schuettp. & Windham, Syst. Bot. 40(3):641. 2015.

Pentagramma triangularis var. **semipallida** (J.T. Howell) Tiehm, **comb. nov.** *Pityrogramma triangularis* var. *semipallida* J.T. Howell, Leafl. W. Bot. 9:223. 1962; *Pentagramma triangularis* subsp. *semipallida* (J.T. Howell) Yatsk., Windham & E. Wollenw., Amer. Fern J. 80(1):16. 1990.

Pentagramma triangularis var. **viscosa** (Nutt. ex D.C. Eaton) Tiehm, **comb. nov.** *Gymnogramma viscosa* Nutt. ex D.C. Eaton, Ferns N. Amer. 2:16. 1879; *Pityrogramma viscosa* (Nutt. ex D.C. Eaton) Maxon, Contr. U.S. Natl. Herb. 17(2):173. 1913; *Pityrogramma triangularis* var. *viscosa* (Nutt. ex D.C. Eaton) Weath., Rhodora 22(259):117. 1920; *Pentagramma triangularis* subsp. *viscosa* (Nutt. ex D.C. Eaton) Yatsk., Windham & E. Wollenw., Amer. Fern J. 80(1):15. 1990; *Pentagramma viscosa* (Nutt. ex D.C. Eaton) Schuettp. & Windham, Syst. Bot. 40(3):642. 2015.

ROSACEAE

Rosa woodsii var. **puberulenta** (Rydb.) Tiehm, **comb. nov.** *Rosa puberulenta* Rydb., Fl. Rocky Mts. 443, 1062. 1917 [1918]; *Rosa woodsii* subsp. *puberulenta* (Rydb.) W.H. Lewis & Erter, Novon 20(1):48. 2010.

SANTALACEAE

Arceuthobium abietinum var. **grandae** (Kenaley) Tiehm, **comb. nov.** *Arceuthobium abietinum* subsp. *grandae* Kenaley, J. Bot. Res. Inst. Texas 14(1):33. 2020.

Arceuthobium abietinum var. **magnifica** (Mathiasen & Kenaley) Tiehm, **comb. nov.** *Arceuthobium abietinum* subsp. *magnifica* Mathiasen & Kenaley, J. Bot. Res. Inst. Texas 13(1):98. 2019.

Arceuthobium abietinum var. **mathiasenii** (Kenaley) Tiehm, **comb. nov.** *Arceuthobium abietinum* subsp. *mathiasenii* Kenaley, J. Bot. Res. Inst. Texas 14(1):32. 2020.

Arceuthobium abietinum var. **wiensii** (Mathiasen & C.M. Daugherty) Tiehm, **comb. nov.** *Arceuthobium abietinum* subsp. *wiensii* Mathiasen & C.M. Daugherty, Madroño 56(2):119. 2009.

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