

NOMENCLATURAL CHANGES IN PORTULACACEAE

Mark A. HersHKovitz

Botany Department, University of California, Davis, California 95616 U.S.A.

ABSTRACT

Species of *Calyptridium*, *Calandrinia*, *Claytonia*, *Lewisia* and *Talinum* are recombined under *Cistanthe*. The nomenclatural changes reflect new morphological and cladistic data on Portulacaceae.

KEY WORDS: *Cistanthe*, *Calyptridium*, *Spraguea*, *Calandrinia*, *Lewisia*, *Claytonia*, *Talinum*, Portulacaceae, taxonomy.

Critical re-examination of Carolin's (1987) cladistic analysis of Portulacaceae and corroboration with leaf morphological data (HersHKovitz 1990), support the segregation of *Cistanthe* Spach from *Calandrinia* H.B.K. The latter study also indicates that *Calyptridium* Nuttall (including *Spraguea* Torrey), cannot be excluded from *Cistanthe* on phylogenetic, and perhaps even phenetic, criteria. Therefore, these segregate taxa are here regarded as comprising a distinct section within *Cistanthe*, and the species recognized by Hinton (1975) are recombined as follows:

Cistanthe Spach sect. **Calyptridium** (Nuttall in Torrey & A. Gray) HersHKovitz, *stat. nov.* BASIONYM: *Calyptridium* Nuttall in Torrey & A. Gray, *Fl. N. Amer.* 1(2):198. 1838. TYPE: *Calyptridium monandrum* Nuttall in Torrey & A. Gray, *Fl. N. Amer.* 1(2):198. 1838.

Spraguea Torrey, *Pl. Frémont.* (Smithsonian Contr. Knowl. 6[2] [err., 5(1)]:4. 1853. TYPE: *Spraguea umbellata* Torrey, *Pl. Frémont.* (Smithsonian Contr. Knowl. 6[2] [err., 5(1)]:4. 1853.

Included species:

Cistanthe monandra (Nuttall in Torrey & A. Gray) HersHKovitz, *comb. nov.* BASIONYM: *Calyptridium monandrum* Nuttall in Torrey & A. Gray, *Fl. N. Amer.* 1(2):198. 1838.

Cistanthe monosperma (E. Greene) HersHKovitz, *comb. nov.* BASIONYM: *Calyptridium monospermum* E. Greene, *Erythea* 3:63. 1895.

- Cistanthe parryi** (A. Gray) Hershkovitz, *comb. nov.* BASIONYM: *Calyptridium parryi* A. Gray, Proc. Amer. Acad. Arts 22:285. 1887.
- Cistanthe pulchella** (Eastwood) Hershkovitz, *comb. nov.* BASIONYM: *Spraguea pulchella* Eastwood, Bull. Torrey Bot. Club 29:79. 1902.
- Cistanthe pygmaea** (Parish ex Rydberg) Hershkovitz, *comb. nov.* BASIONYM: *Calyptridium pygmaeum* Parish ex Rydberg, N. Amer. Fl. 21:320. 1932.
- Cistanthe quadripetala** (S. Watson) Hershkovitz, *comb. nov.* BASIONYM: *Calyptridium quadripetalum* S. Watson, Proc. Amer. Acad. Arts 20:356. 1885.
- Cistanthe rosea** (S. Watson) Hershkovitz, *comb. nov.* BASIONYM: *Calyptridium roseum* S. Watson, Botany (fortieth parallel) 44. 1871.
- Cistanthe umbellata** (Torrey) Hershkovitz, *comb. nov.* BASIONYM: *Spraguea umbellata* Torrey, Pl. Frémont. (Smithsonian Contr. Knowl. 6[2] [err., 5(1)]):4. 1853.

Followup on Hohn's (1975) studies of *Lewisia* and corroboration with leaf data (Hershkovitz 1990), indicate that plants referred to "*Lewisia tweedyi*," also belong to a separate section of *Cistanthe*. This species had been assigned to the monotypic *Lewisia* subg. *Strophium*. The name *Strophium* is retained as the sectional name in *Cistanthe*, although it is misleading, because other members of *Cistanthe* are strophiolate.

- Cistanthe Spach sect. Strophium** (B. Mathew) Hershkovitz, *comb. nov.* BASIONYM: *Lewisia* subg. *Strophium* B. Mathew, The Genus *Lewisia* 139. 1989. LECTOTYPE (here designated): *Calandrinia tweedyi* A. Gray, Proc. Amer. Acad. Arts 22:277. 1887.

Included species:

- Cistanthe tweedyi** (A. Gray) Hershkovitz, *comb. nov.* BASIONYM: *Calandrinia tweedyi* A. Gray, Proc. Amer. Acad. Arts 22:277. 1887.
≡ *Lewisia tweedyi* (A. Gray) B.L. Robinson in A. Gray, Syn. Fl. N. Amer. 1(1):268. 1897.

The remaining sections of *Cistanthe* are established herein, following the circumscriptions proposed by Carolin, later modified by Hershkovitz (1990 and in prep.). New combinations for the type species are provided as necessary. The taxonomy of most South American species of *Cistanthe* remains chaotic (Hershkovitz 1990), hence their transfer from *Calandrinia* is delayed (Hershkovitz in prep.). The remaining North American species, however, are sufficiently distinct to be recombined under their assigned sections below:

Cistanthe Spach sect. **Amarantoideae** (Reiche) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Calandrinia* sect. *Amarantoideae* Reiche, Ber. Deutsch Bot. Ges. 15:501. 1897. LECTOTYPE (here designated): *Calandrinia salsoloides* Barnéoud in Gay, *Fl. Chil. (Hist. Fisica y Politica de Chile, Botanica)* 2:502. 1847.

Included species:

Cistanthe salsoloides (Barnéoud in Gay) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Calandrinia salsoloides* Barnéoud in Gay, *Fl. Chil. (Hist. Fisica y Politica de Chile, Botanica)* 2:502. 1847.

Cistanthe ambigua (S. Watson) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Claytonia ambigua* S. Watson, Proc. Amer. Acad. Arts 17:365. 1882.

Cistanthe Spach sect. *Cistanthe* BASIONYM: *Cistanthe* Spach, *Hist. Nat. Veg. Phan.* 5:229. 1836. LECTOTYPE (here designated): *Calandrinia grandiflora* Lindley, Bot. Reg. t. 1194. 1828.

Calandrinia sect. *Cistanthe* (Spach) Reiche, Ber. Deutsch Bot. Ges. 15:501. 1897.

Included species:

Cistanthe grandiflora (Lindley) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Calandrinia grandiflora* Lindley, Bot. Reg. t. 1194. 1828. $\equiv$ *Cistanthe anceps* Spach *nom. illeg.*

Cistanthe guadalupensis (Dudley) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Talinum guadalupense* Dudley in D. Jordan, *The Fur Seals and Fur-Seal Islands of the Northern Pacific Ocean* 3:282. 1899.

Cistanthe maritima (Nuttall in Torrey & A. Gray) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Calandrinia maritima* Nuttall in Torrey & A. Gray, *Fl. N. Amer.* 1(2):197. 1838.

Cistanthe Spach sect. **Philippiamra** (Kuntze) HersHKovitz, *comb. nov.* BASIONYM: *Philippiamra* Kuntze, *Rev. Gen. Pl.* 1:58. 1891. LECTOTYPE (here designated): *Silvaea celosioides* Philippi, *Fl. Atacam.* 22. 1860.

Cistanthe celosioides (Philippi) Carolin ex HersHKovitz, *comb. nov.* BASIONYM: *Silvaea celosioides* Philippi, *Fl. Atacam.* 22. 1860.

The recognition of *Cistanthe guadalupense* represents a formal correction of the misplacement of this species by Dudley (1899), whose erroneous assignment of the species to *Talinum* has persisted for many decades.

ACKNOWLEDGMENTS

I gratefully acknowledge an anonymous reviewer for comments on an earlier version of this manuscript.

LITERATURE CITED

- Carolin, R.C. 1987. A review of the family Portulacaceae. *Austral. J. Bot.* 35:383-412.
- Dudley, W.R. 1899. Report of the plants of Guadalupe Island, pp. 280-283, in Jordan, D.S., *The Fur Seals and Fur-Seal Islands of the Northern Pacific Ocean*, Part 3. U.S. Government Printing Office, Washington, D.C.
- Hershkovitz, M.A. 1990. Phylogenetic and morphological studies in Portulacaceae. Ph.D. dissertation, University of California, Davis.
- Hinton, W.F. 1975. Systematics of the *Calyptridium umbellatum* complex (Portulacaceae). *Brittonia* 27:197-208.
- Hohn, J.E. 1975. Biosystematics of the genus *Lewisia*, section *Cotyledon* (Portulacaceae). Ph.D. dissertation, University of Washington, Seattle.



Hershkovitz, M A. 1990. "Nomenclatural changes in Portulacaceae." *Phytologia* 68, 267–270. <https://doi.org/10.5962/bhl.part.5799>.

View This Item Online: <https://www.biodiversitylibrary.org/item/47092>

DOI: <https://doi.org/10.5962/bhl.part.5799>

Permalink: <https://www.biodiversitylibrary.org/partpdf/5799>

Holding Institution

New York Botanical Garden, LuEsther T. Mertz Library

Sponsored by

The LuEsther T Mertz Library, the New York Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Phytologia

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.