

A CORRECTED NAME IN NORTH AMERICAN *EPILOBIUM* (ONAGRACEAE)

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Abstract. *Epilobium ravenii* Hoch & Gandhi is proposed here as the new name for the species previously known as *E. foliosum* (Nutt. ex Torr. & A. Gray) Suksd., non *E. foliosum* Heynh.

Keywords: Onagraceae, Nomenclature, *Epilobium foliosum*, *E. ravenii*

Epilobium L., the largest genus in the family Onagraceae, is widely distributed in cool or cold regions of the world with a center of phylogenetic diversity in western North America (Wagner et al., 2007; Hoch, 2021). Most of the estimated 165 species recognized worldwide are perennial; only nine are annual species, and eight of those are endemic/native in western North America. Two of these annuals—*Epilobium foliosum* (Nutt. ex Torr. & A. Gray) Suksdorf and *E. minutum* Lindl.—comprise the well supported monophyletic section *Crossostigma* (Spach) P. H. Raven (Raven, 1976; Baum et al., 1994).

Although *Epilobium foliosum* and *E. minutum* are similar morphologically and occupy overlapping dry, often disturbed habitats from British Columbia and Montana to California and Arizona, rarely to northwestern Mexico (*E. foliosum*), they have different chromosome numbers, $n = 16$ in *E. foliosum* and $n = 13$ in *E. minutum*, both unique in the genus (Seavey et al., 1977), and several consistent morphological differences. Efforts to cross them experimentally fail routinely, and no known natural hybrids have been detected.

Epilobium minutum has been recognized consistently by that name at the specific level for well over a century, whereas *E. foliosum* was originally proposed as a variety of *E. minutum*. Although *E. foliosum* Heynh. (1842), predates the name *E. foliosum* (Nutt. ex Torr. & A. Gray) Suksd. (1900), the earlier name *E. foliosum* Heynh. has heretofore been interpreted as a provisional name and invalid, and therefore, the later Suksdorf name has been in use. However, a careful analysis by Gandhi, with corroboration by W. Greuter, now indicates that *E. foliosum* Heynh. is a valid name and that *E. foliosum* (Nutt. ex Torr. & A. Gray) Suksd. is a later homonym and needs to be replaced with a new name.

According to the analysis by Gandhi and Greuter, within the protologue of *Epilobium foliosum* Heynh., which describes a plant with affinities to *E. tetragonum* L. and/or *E. montanum* L., two species common in Europe, Heynhold expressed some uncertainty (“Ob eigne Art oder nicht, davon habe ich mich nicht genau überzeugen können, da ich die Pflanze am angegebenen Standorte später vergebens suchte”); translation: “I could not fully convince myself

whether it is a species of its own or not, because later I could not find the plant again at the locality specified”) and preceded his new species with a dagger mark (“†”), explained in the preface to the book as follows: “the plants ... marked with a dagger sign are to be regarded as either hybrids or uncertain species”. Hoch (2021) and others interpreted this to indicate that the name was provisional, but the last sentence in ICN Article 36.1 (Turland et al., 2018) states that “these provisions do not apply to names published with a question mark or other indication of taxonomic doubt yet accepted by their author.” So, the validly published *E. foliosum* Heynhold renders illegitimacy to Suksdorf’s later new combination. Since no other epithet has been used at the specific level for the North American plants in question, we provide the following new name.

***Epilobium ravenii* Hoch & Gandhi, nom. nov.**

Replaced synonym: *Epilobium minutum* var. *foliosum* Torr. & A. Gray, Fl. N. Amer. (Torr. & A. Gray) 1: 490. 1840.

TYPE: Dry rocks, “Oregon and the Rocky Mountains of California,” 1834-1835, *T. Nuttall s.n.*

Homotypic synonym: *Epilobium foliosum* (Nutt. ex Torr. & A. Gray) Suksdorf, Deutsche Bot. Monatsschr. 18: 87. 1900 [non *E. foliosum* Heynh. in Holl & Heynhold, Fl. Sachsen 297-298. 1842]

Eponymy: *Epilobium ravenii* is named in honor of Peter H. Raven, President Emeritus of the Missouri Botanical Garden, for his enormous contributions to our understanding of the plant family Onagraceae, and specifically of *Epilobium*, where among many other contributions he provided the first chromosome count for *E. ravenii*. His work on the family commenced when as a teenager he collected at the Presidio in San Francisco what proved to be the rare and endangered species *Clarkia franciscana* Lewis & P. H. Raven, which in turn led to his dissertation research with Harlan Lewis (1919–2008) at UCLA. Research by Raven and his many students, first at Stanford University and later at Washington University/Missouri Botanical Garden (including the senior author), transformed the classification of Onagraceae and made the family an outstanding model system for the study of plant evolution.

We thank W. Greuter (B) for his advice on interpretation of the International Code of Nomenclature, and P. H. Raven (MO) and W. L. Wagner (US) for comments on and assistance with the text.

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