

RESURRECTION OF *SIDERANTHUS* (ASTERACEAE: ASTEREAE)
VS. *XANTHISMA*

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ABSTRACT

An earlier valid publication necessitates the use of *Sideranthus* Bosc in the place of *Xanthisma* DC. sensu lato. The following new combinations are made: ***Sideranthus arenarius*** (Benth.) Morgan & Hartm. ex Paz, ***Sideranthus blephariphyllus*** (A. Gray) Morgan & Hartm. ex Paz, ***Sideranthus coloradoensis*** (A. Gray) Morgan & Hartm. ex Paz, ***Sideranthus crutchfieldii*** (B.L. Turner) Morgan & Hartm. ex Paz, ***Sideranthus grindelioides*** var. ***depressus*** (Maguire) Morgan & Hartm. ex Paz, ***Sideranthus gymnocephalus*** (DC.) Morgan & Hartm. ex Paz, ***Sideranthus gypsophilus*** (B.L. Turner) Morgan & Hartm. ex Paz, ***Sideranthus incisifolius*** (I.M. Johnst.) Nesom ex Paz, ***Sideranthus johnstonii*** (Blake) Paz, ***Sideranthus paradoxus*** (Turner & Hartm.) Nesom & Turner ex Paz, ***Sideranthus pseudorestiformis*** (B.L. Turner) Paz, ***Sideranthus restiformis*** (B.L. Turner) Paz, ***Sideranthus rhizomatus*** (M.C. Johnst.) Morgan & Hartm. ex Paz, ***Sideranthus scabrellus*** (Greene) Nesom & Turner ex Paz, ***Sideranthus spinulosus*** var. ***austrotexanus*** (B.L. Turner) Paz, ***Sideranthus spinulosus*** var. ***chihuahuanus*** (Turner & Hartm.) Morgan & Hartm. ex Paz, ***Sideranthus spinulosus*** var. ***gooddingii*** (A. Nels.) Morgan & Hartm. ex Paz, ***Sideranthus spinulosus*** var. ***hartmanii*** (Turner & Nesom) Paz, ***Sideranthus tenuilobus*** (A. Gray) Morgan & Zandoni ex Paz, ***Sideranthus texanus*** (DC.) Paz, ***Sideranthus texanus*** var. ***drummondii*** (Torr. & Gray) Semple ex Paz, ***Sideranthus texanus*** var. ***occidentalis*** (Semple) Paz, ***Sideranthus wigginsii*** (Blake) Morgan & Hartm. ex Paz. Four sections are recognized, three with new combinations: ***Sideranthus*** sect. ***Blepharodon*** (DC.) Paz, ***Sideranthus*** sect. ***Havardia*** (R.C. Jacks.) Paz, and ***Sideranthus*** sect. ***Xanthisma*** (DC.) Paz. The genus includes 22 species.

Morgan and Hartman (2003) split *Machaeranthera* Nees into a number of new, monophyletic genera on the basis of molecular and other data. Among these was *Xanthisma* DC., a genus that previously contained only the popular ornamental *Xanthisma texanum* DC. (e.g., Semple 1974). As the oldest known generic-level name (dating to 1836) for the clade containing *X. texanum*, *Xanthisma* was adopted in an expanded sense and has since been maintained as such.

Included in the generic-level synonymy of *Xanthisma* sensu Morgan and Hartman (2003) is the name *Sideranthus* “Nutt. ex Nees.” *Sideranthus* was originally published as a nomen nudum by Nuttall in the obscure publication commonly referred to as “Fraser’s Catalogue” (1813, reprinted in Greene 1890 with commentary). This fact was eventually realized and the name discarded. A much earlier validation for the name *Sideranthus*, however, has been overlooked:

Nouveau Dictionnaire d’Histoire Naturelle, ed. 2, 31: 151. 1819.

SIDÉRANTHE, *Sideranthus*. Genre établi par Forster, pour placer les AMELLES VELUE et PINNATIFIDE de Pursh, dont les réceptacles sont garnis de soies et non de paillettes.
Ces deux plantes croissent sur les bords du Missouri.
(B.)

The entry references a “Forster” as the author, but this is more likely in error and intended to read “Fraser,” probably the junior John Fraser (1780-1852) of Fraser’s Catalogue (Anon. 1836). The parenthetical “B.” stands for Louis Augustin Guillaume Bosc (1759-1828), who must be considered the sole author of the name under Article 46.4. “Amelles velue et pinnatifide de Pursh” is doubtless a reference to “*Sideranthus integrifolius* Nutt.” (= *Amellus villosus* Pursh) and “*S. pinnatifidus* Nutt.” (= *Amellus spinulosus* Pursh), making either a candidate for type. Typification with *Amellus spinulosus* was finally validated, albeit unintentionally (as he believed the name already typified), by Rydberg (1900).

Sideranthus Bosc (1819) predates *Xanthisma* DC. (1836), necessitating the adoption of the former name for the genus as recognized by Morgan and Hartman (2003). One might suggest conservation of *Xanthisma* over *Sideranthus* to maintain the current nomenclature, but the case would be weak. *Xanthisma* has been used in the expanded sense for only about two decades, while *Sideranthus* has more or less continuously remained in use at various ranks since 1813 (see below synonymy for a timeline). Also, several species of *Xanthisma* sensu lato already have combinations in *Sideranthus*. The only species that has widely and consistently been treated under the name *Xanthisma* is *X. texanum*, but that alone is insufficient to justify conservation. *Sideranthus* is here resurrected.

A brief nomenclatural synopsis of the resurrected genus is provided below, divided by sections and ordered mirroring Morgan and Hartman (2003) for ease of comparison. Under the provisions of Article 46.10, the “ex” notation is employed to give credit to the authors of combinations in *Xanthisma* where the taxon concept has here essentially been transferred without modification.

SIDERANTHUS Bosc, *Nouv. Dict. Hist. Nat.*, ed. 2. 31: 151. 1819. *Dieteria* [unranked] *Sideranthus* (Bosc) Nutt., *Trans. Amer. Philos. Soc. ser. 2*, 7: 301. 1840. *Dieteria* sect. *Sideranthus* (Bosc) Nutt. ex Walp., *Repert. Bot. Syst.* 2: 587. 1843. *Dieteria* subg. *Sideranthus* (Bosc) Nutt., *J. Acad. Nat. Sci. Philadelphia* 1(2): 177. 1848. *Machaeranthera* subg. *Sideranthus* (Bosc) R.L. Hartm., *Phytologia* 68(6): 456. 1990. *Machaeranthera* sect. *Sideranthus* (Bosc) R.L. Hartm., *Phytologia* 68(6): 456. 1990. *Xanthisma* sect. *Sideranthus* (Bosc) Morgan & Hartm., *Sida* 20(4): 1405. 2003. **LECTOTYPE** (Rydberg 1900): *Amellus spinulosus* Pursh = *Sideranthus spinulosus* (Pursh) Sweet

Of interest above is the inclusion of *Sideranthus* as an infrageneric category in Nuttall’s original circumscription of *Dieteria*. Intuitively, this would make *Dieteria* nomenclaturally superfluous and illegitimate. However, since in 1840 *Sideranthus* was still untypified and Nuttall included only one of two potential type elements, Article 52.2 Note 1 seems to apply and preserves the legitimacy of *Dieteria* (J. Wiersema, pers. comm.).

SIDERANTHUS sect. **XANTHISMA** (DC.) Paz, **comb. nov.** Basionym: *Xanthisma* DC., *Prodr.* 5: 94. 1836.

Sideranthus texanus (DC.) Paz, **comb. nov.** Basionym: *Xanthisma texanum* DC., *Prodr.* 5: 95. 1836.

Sideranthus texanus var. **orientalis** (Semple) Paz, **comb. nov.** Basionym: *Xanthisma texanum* var. *orientale* Semple, *Rhodora* 76(805): 14. 1974.

Sideranthus texanus var. **drummondii** (Torr. & Gray) Semple ex Paz, **comb. nov.** Basionym: *Centauridium drummondii* Torr. & Gray, *Fl. N. Amer.* 2(2): 246. 1842.

SIDERANTHUS sect. **BLEPHARODON** (DC.) Paz, **comb. nov.** Basionym: *Haplopappus* sect. *Blepharodon* DC., *Prodr.* 5: 346. 1836.

Sideranthus blephariphyllus (A. Gray) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus blephariphyllus* A. Gray, *Smithsonian Contr. Knowl.* 3(art. 5): 97. 1852.

- Sideranthus coloradoensis** (A. Gray) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Aster coloradoensis* A. Gray, Proc. Amer. Acad. Arts 11: 76. 1876.
- Sideranthus crutchfieldii** (B.L. Turner) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Machaeranthera crutchfieldii* B.L. Turner, Phytologia 26(2): 116. 1973.
- Sideranthus grindelioides** (Nutt.) Britton ex Rydb., Bull. Torrey Bot. Club 27(12): 621. 1900.
- Sideranthus grindelioides** var. **depressus** (Maguire) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus nuttallii* var. *depressus* Maguire, Amer. Midl. Naturalist 37(1): 144. 1947.
- Sideranthus gymnocephalus** (DC.) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus gymnocephalus* DC., Prodr. 5: 346. 1836.
- Sideranthus gypsophilus** (B.L. Turner) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Machaeranthera gypsophila* B.L. Turner, Phytologia 26(2): 117. 1973.
- Sideranthus johnstonii** (Blake) Paz, **comb. nov.** Basionym: *Haplopappus johnstonii* S.F. Blake, Proc. Biol. Soc. Washington 54: 18. 1941.
- Sideranthus restiformis** (B.L. Turner) Paz, **comb. nov.** Basionym: *Machaeranthera restiformis* B.L. Turner, Amer. J. Bot. 60(8): 836. 1973.
- Sideranthus pseudorestiformis** (B.L. Turner) Paz, **comb. nov.** Basionym: *Xanthisma pseudorestiforme* B.L. Turner, Phytoneuron 2010-40: 1. 2010.
- Sideranthus rhizomatus** (M.C. Johnst.) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus rhizomatus* M.C. Johnst., Rhodora 63(750): 177. 1961.

SIDERANTHUS sect. SIDERANTHUS

- Sideranthus arenarius** (Benth.) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus arenarius* Benth., Bot. Voy. Sulphur 24. 1844.
- Sideranthus gracilis** (Nutt.) A. Nels., Bot. Gaz. 37: 266. 1904.
- Sideranthus junceus** (Greene) Davidson & Moxley, Fl. S. Calif. 377. 1923.
- Sideranthus spinulosus** (Pursh) Sweet, Hort. Brit. 227. 1826.
- Sideranthus spinulosus** var. **austrotexanus** (B.L. Turner) Paz, **comb. nov.** Basionym: *Xanthisma spinulosum* var. *austrotexanum* B.L. Turner, Phytologia 89(3): 350. 2007.
- Sideranthus spinulosus** var. **hartmanii** (Turner & Nesom) Paz, **comb. nov.** Basionym: *Xanthisma spinulosum* var. *hartmanii* Turner & Nesom, Phytologia 89(3): 380. 2007.
- Sideranthus spinulosus** var. **chihuahuanus** (Turner & Hartm.) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Machaeranthera pinnatifida* var. *chihuahuana* Turner & Hartm., Wrightia 5(8): 311. 1976.
- Sideranthus spinulosus** var. **gooddingii** (A. Nels.) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Sideranthus gooddingii* A. Nels., Bot. Gaz. 37: 266. 1904.
- Sideranthus glaberrimus** Rydb. in Britton, Man. Fl. N. States, 933. 1901.
- Sideranthus incisifolius** (I.M. Johnst.) Nesom ex Paz, **comb. nov.** Basionym: *Haplopappus arenarius* var. *incisifolius* I.M. Johnst., Proc. Calif. Acad. Sci. ser. 4, 12(30): 1190. 1924.
- Sideranthus paradoxus** (Turner & Hartm.) Nesom & Turner ex Paz, **comb. nov.** Basionym: *Machaeranthera pinnatifida* var. *paradoxa* Turner & Hartm., Wrightia 5(8): 314. 1976.
- Sideranthus scabrellus** (Greene) Nesom & Turner ex Paz, **comb. nov.** Basionym: *Eriocarpum scabrellum* Greene, Erythea 2(7): 108. 1894.
- Sideranthus tenuilobus** (A. Gray) Morgan & Zanoni ex Paz, **comb. nov.** Basionym: *Haplopappus tenuilobus* A. Gray, Proc. Amer. Acad. Arts 21: 385. 1886.
- Sideranthus wigginsii** (Blake) Morgan & Hartm. ex Paz, **comb. nov.** Basionym: *Haplopappus wigginsii* Blake, Proc. Biol. Soc. Washington 48: 169. 1935.

SIDERANTHUS sect. **HAVARDIA** (R.C. Jacks.) Paz, **comb. nov.** Basionym: *Haplopappus* sect. *Havardia* R.C. Jacks., Univ. Kansas Sci. Bull. 46: 479. 1966.

This section was originally published as “Havardii,” but that epithet is in the genitive singular contrary to recommendation of Article 21.2. It is here amended to *Havardia* (Art. 32.2), with a minimal change in spelling.

Sideranthus viscidus Woot. & Standl., Contr. U.S. Natl. Herb. 16(4): 180. 1913.

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