

# New Combinations in North American Alismatidae

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**ABSTRACT.** Subspecies is the only infraspecific rank included in the Alismatidae in the *Flora of North America*. All new combinations for taxa in North America are proposed herein for use in this Flora: *Potamogeton pusillus* subsp. *tenuissimus*, *P. pusillus* subsp. *gemmiparus*, *P. foliosus* subsp. *fibrillosus*, *Sagittaria graminea* subsp. *chapmanii*, *S. graminea* subsp. *weatherbiana*, *Najas guadalupensis* subsp. *olivacea*, *N. guadalupensis* subsp. *floridana*, and *N. guadalupensis* subsp. *muenscheri*.

The family treatments for the Alismatidae in the *Flora of North America* include only one infraspecific category, that being subspecies. We have long recognized only one infraspecific category. In previous publications, however, Haynes (1974, 1979) considered this infraspecific category to be at the rank of variety. "Variety" was chosen mostly because the botanist with whom he was associated used that rank more often than that of subspecies. Haynes indicated in both publications cited above that he considered varieties (or infraspecific categories) to be morphogeographic subdivisions of a species. That concept has not changed, only the rank at which the taxa are accepted. It is our opinion that more and more systematists accept only one infraspecific rank (although the *Botanical Code* allows for more), and that rank is becoming more often subspecies. We now, therefore, use subspecies exclusively.

Infraspecific taxa in the Alismatidae have previously been recognized at the varietal and subspecific levels. Utilizing one infraspecific category necessitates a new combination for any taxon that has previously been recognized at the varietal level and for which no subspecific name is available. Such taxa are being accepted in *Potamogeton* (Potamogetonaceae), *Sagittaria* (Alismataceae), and *Najas* (Najadaceae). All necessary combinations are proposed below for use in the *Flora of North America*.

**Potamogeton pusillus** L. subsp. **tenuissimus** (F. K. Mertens & W. D. J. Koch) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Potamogeton pusillus* L. var. *tenuissimus* F. K. Mertens & W. D. J. Koch, in Röhling's, *Deutschl. Fl.* 1: 857. 1823. TYPE: not located.

**Potamogeton pusillus** L. subsp. **gemmiparus** (Robbins) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Potamogeton pusillus* L. var. *gemmiparus* Robbins, in A. Gray, *Manual*, 5th ed. 489. 1867. *Potamogeton gemmiparus* (Robbins) Morong, *Bot. Gaz.* (Crawfordsville) 5: 51. 1880. TYPE: U.S.A. Massachusetts: valley of the Blackstone, Robbins *s.n.* (lectotype, selected by Haynes (1974), NY; isoelectotypes, GH, NY, PH, US).

**Potamogeton foliosus** Rafinesque subsp. **fibrillosus** (Fernald) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Potamogeton fibrillosus* Fernald, *Mem. Amer. Acad. Arts* 17: 51. 1932. *Potamogeton foliosus* Rafinesque var. *fibrillosus* (Fernald) R. R. Haynes & J. L. Reveal, *Rhodora* 75: 76. 1973. TYPE: U.S.A. Oregon: margin of Harney Valley, "P" Ranch, 22 June 1901, W. C. Cusick 2598 (holotype, GH; isotypes, F, K, MO, NY, UC, US).

**Sagittaria graminea** A. Michaux subsp. **chapmanii** (J. G. Smith) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Sagittaria graminea* L. var. *chapmanii* J. G. Smith, *Annual Rep. Missouri Bot. Gard.* 6: 52. 1895. *Sagittaria chapmanii* (J. G. Smith) Mohr, *Bull. Torrey Club* 24: 20. 1897. TYPE: U.S.A. Florida: in a creek on road to Marianna, 3 or 4 mi. from Ochesee, 1862, Chapman *s.n.* (lectotype, selected here, NY).

Bogin (1955), in his revision of *Sagittaria*, cited Chapman *s.n.*, 1862, as the holotype. That specimen cannot be the holotype since collections made by Mohr in 1880 and 1884 "in the vicinity of Mo-

bile, Alabama" are also included in the protologue. We believe that since the variety was named to commemorate Chapman, one of his collections should be chosen as the lectotype if it was cited in the protologue and maintains current usage. *Chapman s.n.*, 1862, at NY satisfies both criteria.

**Sagittaria graminea** A. Michaux subsp. **weatherbiana** (Fernald) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Sagittaria weatherbiana* Fernald, *Rhodora* 37: 387. 1935. *Sagittaria graminea* A. Michaux var. *weatherbiana* (Fernald) C. Bogin, *Mem. New York Bot. Gard.* 9: 209. 1955. TYPE: U.S.A. Virginia: Norfolk Co., gum swamp N of Land of Promise, 7 May 1935, *Fernald & Griscom* 4297 (holotype, GH).

**Najas guadalupensis** (Sprengel) Magnus subsp. **olivacea** (Rosendahl & Butters) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Najas olivacea* Rosendahl & Butters, *Rhodora* 37: 347. 1935. *Najas guadalupensis* (Sprengel) Magnus var. *olivacea* (Rosendahl & Butters) R. R. Haynes, *Sida* 8: 43. 1979. TYPE: U.S.A. Minnesota: Kandiyohi Co.: NE bay of Norway Lake, 6 Sep. 1933, *C. O. Rosendahl & F. K. Butters* 6446 (lectotype, selected by Haynes (1979), MIN).

**Najas guadalupensis** (Sprengel) Magnus subsp. **floridana** (R. R. Haynes & W. A. Wentz) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Najas guadalupensis* (Sprengel) Magnus var. *floridana* R. R. Haynes & W. A. Wentz, *Sida* 5: 262. 1974. TYPE: U.S.A. Florida: Dade Co., St. Rt. 94 off U.S. 41 at edge of Everglades National Park, ca. 40 mi. W of Miami, 5 Apr. 1972, *W. A. Wentz* 670 (holotype, US; isotypes, GH, MICH, OS).

**Najas guadalupensis** (Sprengel) Magnus subsp. **muenschleri** (Clausen) R. R. Haynes & C. B. Hellquist, comb. et stat. nov. Basionym: *Najas muenschleri* Clausen, *Rhodora* 39: 59. 1937. *Najas guadalupensis* (Sprengel) Magnus var. *muenschleri* (Clausen) R. R. Haynes, *Sida* 8: 45. 1979. TYPE: U.S.A. New York: Greene Co., tidal mudflats of Hudson River, Imbocht Bay, 3 Sep. 1936, *W. C. Muenschler & O. F. Curtis, Jr.* 5495 (holotype, BH, isotype, GH).

#### Literature Cited

- Bogin, C. 1955. Revision of the genus *Sagittaria*. *Mem. New York Bot. Gard.* 9: 179-233.  
Haynes, R. R. 1974. A revision of North American *Potamogeton* subsection *Pusilli* (Potamogetonaceae). *Rhodora* 76: 564-649.  
Haynes, R. R. 1979. Revision of North and Central American *Najas* (Najadaceae). *Sida* 8: 34-56.