

**A NEW VARIETY OF *ABRONIA MELLIFERA* (NYCTAGINACEAE)
OF CONSERVATION CONCERN IN SOUTHWESTERN IDAHO**

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ABSTRACT

Abronia mellifera* var. *pahoveorum Ertter & Nosratinia, **var. nov.**, is described from hills on the north side of the Snake River Plains in southwestern Idaho. Because of the immediate need for conservation attention, this variety is published in advance of a more detailed revision of the *A. mellifera* clade. It differs from other members of the clade in the larger inflorescence bracts that are often broadly ovate or even orbicular, and in the combination of lack of rhizomes, relatively narrow, green, flexible leaves, glandular-septate trichomes in the inflorescence, and moderately hairy fruit with relatively large wings.

A combined morphological, ecogeographical, and molecular analysis of *Abronia mellifera* Douglas ex Hook. supports the recognition of several new taxa within this clade. Although the full analysis and revision is still in preparation, one variety is sufficiently vulnerable to merit expedited publication so that conservation efforts can proceed unimpeded. Varietal rank is selected because of transitional populations in the western part of the range. The new variety includes plants previously identified as *A. fragrans* Nutt. ex Hook. using Hitchcock and Cronquist (1973), which as currently circumscribed does not exist in the Pacific Northwest (Galloway 2003). Further details will be provided in the aforementioned revision. Only characters diagnostic within the clade are provided in the varietal description; other characters are as given for *A. mellifera* sensu lato in recent floristic treatments (Galloway 2003; Spellenberg 2012).

***Abronia mellifera* Douglas ex Hook. var. *pahoveorum* Ertter & Nosratinia, var. nov. TYPE: USA. Idaho.** Ada Co.: Above Stack Rock Drive in foothills NE of Shadow Valley Golf Course NW of Boise, old road cut on S-facing slope with dark sand and layers of basalt, 43.7483° N 116.28145° W, 914 m, 19 May 2015, *B. Ertter 22323* with P. Shaffer (holotype: UC; isotypes: ID, MO, NY, OSC, RM, SRP, WTU).

Differs from other elements of the *Abronia mellifera* clade in the larger inflorescence bracts that are most often broadly ovate or even orbicular (Fig. 1), and in the combination of lack of rhizomes, relatively narrow, green, flexible leaves (Fig. 2), glandular-septate trichomes in the inflorescence, and moderately hairy fruit with the top margin of the largest wing 3–5 mm.



Figure 1. Comparison of extreme form of involucral bracts of *Abronia mellifera* var. *pahoveorum* (left) to bracts otherwise characteristic of the species (right; representative of populations in Owyhee County, Idaho). All photos by first author.



Figure 2. Comparison of proximal leaf shape and color of *Abronia mellifera* var. *pahoveorum* (top) to leaf from an as yet unnamed variety in Owyhee County, Idaho (bottom; similar to typical variety).

Well-developed plants forming mounds to 10+ dm diam. (Fig. 3); slender rhizomes absent. **Stems** decumbent to more often ascending, (5–)14–55 cm. **Leaves:** petiole (1–)1.5–5 cm, distal ones shorter than leaf blade; leaf blade usually green, flexible, proximal ones (1–)2–6(–8.5) cm long, (0.5–)0.8–2(–2.5) cm wide, narrowly to broadly elliptic-lanceolate, the base cuneate to obtuse. **Inflorescences:** peduncle (6–)10–28 cm, usually ascending in fruit, rarely perpendicular to stem, vestiture of abundant to dense stipitate and septate glands (sometimes sparser and shorter or even subglabrous in west part of range); heads 5–7 cm diam.; bracts 10–15(–20) mm long, (4–)8–12(–17) mm wide, usually broadly ovate to nearly orbicular, sometimes narrowly ovate in older plants, usually strongly overlapping; flowers 26–34 per inflorescence, mildly fragrant; tube 15–22 mm long, green to pinkish; throat 1.5–3 mm diam.; limb 10–15 mm diam.; style situated well below anthers. **Fruits:** outermost wingless or with irregular rudimentary wings, others with well-developed wings; vestiture of winged fruit ± glandular-pubescent, not restricted to fruit apex and upper wing margins; lateral margin of largest wings (5–)7–10(–12) mm, top margin of largest wings 3–5 mm, wing angle (as per Spellenberg 2012) 105–150°; fruit beak 1–3 mm; achene 3.5–4 mm. **Flowering** April to September. **Elevation** 730–1100 m.



Figure 3. Well-developed plant of *Abronia mellifera* var. *pahoveorum* at type locality, in full bloom on overcast morning.

The new variety is named to honor all the dedicated members of the Pahove Chapter of the Idaho Native Plant Society, many of whom have contributed directly to past and current understanding of this new variety, and whose collective efforts will be instrumental in ensuring the continued existence of this beautiful plant. “Pahove sand-verbena” and “Boise sand-verbena” are both appropriate vernacular names.

Variety *pahoveorum* is restricted to a relatively narrow band of sand hills and lake bed sediments below 1100 meters on the north side of the western Snake River Plains in southwestern Idaho. The easternmost historical location is near Lucky Peak Dam east of Boise; sporadic populations occur (or occurred) northwest from here along the Boise Front to Horseshoe Bend, and west in the sandy ridge separating the Boise and Payette rivers.

It is not often that a new plant is described within walking distance of an author's house, especially when that house is in one of the original neighborhoods of a capitol city in the USA. The unfortunate consequence is that var. *pahoveorum* is by far the component of the *Abronia mellifera* clade most urgently in need of conservation attention. Its range overlaps prime real estate for housing development, and what hasn't been developed is subject to severe habitat alteration by *Bromus tectorum*, *Secale cereale*, and other invasive non-native species. Less than 100 plants were located in 2015, with one of the larger populations (used for the type) on a site subsequently purchased with plans for development. No plants could be found at three historical localities, and only ten plants total were found at three other locations. Several hundred fruit were collected from the site scheduled for development; these have been shared with the Idaho Botanical Garden and other propagators.

Additional representative specimens. **Idaho. Ada Co.:** Lucky Peak, T2N R3E S12, 13 Jun 1983, *Steele 1512* (BOIS); Bogus Basin Road ca 5.5 mi from Hill Rd., 31 May 2009, *Ertter & Hosford 19409* (to be distributed to CIC, NY, UC, WTU); Spring Valley Ranch, 18 May 1949, *Lingenfelter 664* (SRP). **Boise Co.:** ca 3 mi SW of Horseshoe Bend, 20 Jul 1939, *Beard 11878* (ID, NY). **Canyon Co.:** Caldwell, May 1902, *Marlatt s.n.* (CIC). **Gem Co.:** Emmett, 9 Jun 1911, *Macbride 882* (NY, WS); along Payette River E of Montour Bridge, May 1980, *Manwaring s.n.* (IDS). **Payette Co.:** Big Willow ["Canyon Co."], 1 Jun 1910, *Macbride 175* (NY, UC, WTU); ½ mi S of Langley Gulch Power Plant, 6 Aug 2015, *Ertter et al. 22430* (to be distributed to CIC, UC, WTU). Specimens from near Vale in Malheur Co., Oregon, are intermediate between var. *pahoveorum* and an as yet unnamed variety in Owyhee Co., Idaho; their optimum placement has not yet been decided.

ACKNOWLEDGEMENTS

Among the individuals who helped improve our understanding of this new variety are Holly Beck, Beth Corbin, Ann DeBolt, Alexa DiNicola, Dale Donahue, Susan Fritts, Anne Halford, Lynn Kinter, Mike Mancuso, Don Mansfield, Patricia L. Packard, Roger Rosentreter, Lynda Smithman, and Amy Stillman. Richard Spellenberg and John McNeill generously shared their expertise on Nyctaginaceae and nomenclatural matters respectively. The curators of CIC, IDS, NY, OSC, UC, and WTU provided loans to SRP for the first author's use; all are gratefully acknowledged. The Consortium of Pacific Northwest Herbaria and Intermountain Region Herbarium Network were invaluable sources of locality data. Molecular screening by the second author was carried out in the lab of Brent Mishler at the University of California, Berkeley, with financial support provided by the Lawrence R. Heckard Endowment Fund of the Jepson Herbarium.

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