

VALIDATION OF SERIES NAMES IN *VERBENA* (VERBENACEAE)

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ABSTRACT

Ser. *Pacifica* Nesom and ser. *Austrobrasilienses* Nesom of *Verbena* sect. *Amphepiros* Nesom, a primarily South American group, are validated by including morphological components in the Latin diagnoses. *Verbena* sect. *Verbena* ser. *Haleanae* is validated as the name of the series including *V. halei*.

In an infrageneric classification of *Verbena* (Nesom 2010), two names at the rank of series were published with Latin diagnoses including only a geographic component. As pointed out to me by Katherine Challis (IPNI Editor, Kew), these names were invalidly published since the International Code of Botanical Nomenclature (McNeil et al. 2006; Article 32.3) notes that requirements for the diagnosis or description of a protologue are not met by statements describing properties of geographic origin. The names are properly validated here.

Verbena series *Pacifica* Nesom, ser. nov. TYPE: *Verbena glabrata* Kunth

Distributione geographica plerumque secus Oceanum Pacificum distinctus. A ser. *Austrobrasilienses* characteribus variabilis caulium foliorum, inflorescentiae, florum, ac fructuum differt; proprietatibus nondum studens differe praedicans.

Verbena series *Austrobrasilienses* Nesom, ser. nov. TYPE: *Verbena hirta* Sprengel

Distributione geographica plerumque in Brasilia australi distinctus. A ser. *Pacifica* characteribus variabilis caulium foliorum inflorescentiae florum ac fructuum differt; proprietatibus nondum studens differe praedicantibus.

The two diagnoses in the earlier paper were based on geography because of a wide and prominent disjunction between the two species groups — ser. *Pacifica* from Pacific Ocean regions of South America to Mexico and ser. *Austrobrasilienses* from a center in the southernmost states of Brazil. As observed in the original publication (Nesom 2010, p. 11), “The separation of ser. *Austrobrasilienses* and ser. *Pacifica*, based on geography, hypothesizes that other distinctions remain to be discovered; a clear morphological difference is not apparent, but the geographically-based names provide reference to the groups. It also is acknowledged that the separation may be arbitrary.”

The *Verbena* classification, like any other, is a hypothesis that involves elements of description and predictivity. Geography is perhaps the strongest predictor in systematics and, in this case, suggests that further study may bring to light morphological or molecular differences correlated with the geographical separation. Exclusion of geographical difference as a valid basis for formal recognition of taxa above species rank may have moved the ICBN further than justified into subjectivities of biological and evolutionary theory.

Dr. Challis also has noted that publication of *Verbena* ser. *Haleae* Nesom (Nesom 2010, p. 8) was invalid, “because the epithet appears to be a feminine noun in the genitive singular which is not allowed under [ICBN] Art. 21.2. I assume this was an attempt to form a plural adjective from the

epithet of the type species, but that (halei) is a masculine genitive noun which would become haleorum in the plural. The feminine adjectival form of the epithet would be haleana (pl. haleanae).” The correction is made here.

Verbena series **Haleanae Nesom, ser. nov.** TYPE: *Verbena halei* Small

Foliis crassibus venis adaxialiter impressis marginibus revolutis caulium lobatis et spicis numerosibus fructibus late remotis ad maturitatem distinctus.

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LITERATURE CITED

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