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Author(s): Jorge S. Marroquín and Joseph E. Laferrière

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TRANSFER OF SPECIFIC AND INFRASPECIFIC TAXA FROM
MAHONIA TO BERBERIS

Jorge S. Marroquín

Universidad Autónoma de Nuevo León

Facultad de Ciencias Forestales

67700 Linares, Nuevo León, México

and

Joseph E. Laferrière

Herbario, CEAMISH

Universidad Autónoma del Estado de Morelos

62210 Cuernavaca, Morelos, México

ABSTRACT

Seventeen specific and infraspecific names are formally transferred from *Mahonia* to *Berberis*. New combinations include: *Berberis aquifolium* var. *lyallii*, *B. aquifolium* var. *nutkana*, *B. x convoluta*, *B. x herveyi*, *B. longipes*, *B. x moseri*, *B. paxii*, *B. pinnata* var. *hortensis*, *B. quinquefolia*, *B. racemosa*, *B. repens* var. *macrocarpa*, *B. repens* var. *rotundifolia*, *B. russellii*, *B. undulata*, *B. volcania*, and *B. zimapaná*. *Berberis standleyi* is a new name replacing *Mahonia glauca*.

For many years, authors have disagreed on whether to treat *Mahonia* and *Berberis* as one genus or two. An increasing amount of evidence indicates that *Mahonia* is probably paraphyletic, while *Berberis* sensu stricto is quite possibly polyphyletic. The only character consistently separating the two groups is that *Mahonia* has compound leaves, while *Berberis* sensu stricto has simple ones. Compound leaves are ancestral in the family (Loconte and Estes 1989). Differences in venation in various simple-leaved species suggest that they may be more closely related to certain compound-leaved taxa than they are to each other (Moran 1982). Hence, reduction in leaflet number may have occurred more than once, making *Berberis* sensu stricto an artificial group.

Some of the approximately one hundred species of *Mahonia* have been formally placed in *Berberis* by one author or another, while others have not. Those of us who prefer combining the two genera frequently have to make passing reference to species for which no formal recombination statement has been published. It then becomes necessary either to use a *nomen nudum* or insert a recombination statement in an unlikely place, e.g., *Berberis siamensis* (Takeda) Laferr., published in a footnote to an ethnobotanical paper (Laferrière et al. 1991). It seems preferable to list all the necessary recombinations in the same publication. Ideally, this should be done in a full-fledged monograph, but such a work treating all 600 species of the cosmopolitan group is unlikely in the near future.

Formal recombination statements are given below for the remaining New World members of *Mahonia*. For one of the taxa below, a new name is proposed to avoid creation of an illegitimate homonym. Mexican species were discussed under the name *Berberis* in an unpublished Ph. D. dissertation (Marroquín 1972a; see also Marroquín, 1972b, 1993).

Berberis aquifolium var. *lyallii* (Ahrendt) Marr. & Laferr., comb. nov. --- *Mahonia aquifolium* var. *lyallii* Ahrendt, J. Linn. Soc. Lond. 57: 336. 1961.

Berberis aquifolium var. *nutkana* (DC.) Marr. & Laferr., comb. nov. --- *Mahonia aquifolium* var. *nutkana* DC., Syst. Nat. 2: 20. 1821. Synonym: *Odostemon nutkanus* (DC.) Rydb., Bull. Torrey Bot. Club 33:141. 1906.

Berberis x convoluta (Ahrendt) Marr. & Laferr., comb. nov. --- *Mahonia x convoluta* Ahrendt, J. Linn. Soc. Lond. 57: 338. 1961.

- Berberis x herveyi* (Ahrendt) Marr. & Laferr., comb. nov. — *Mahonia x herveyi* Ahrendt, J. Linn. Soc. Lond. 57: 337. 1961.
- Berberis longipes* (Standl.) Marr. & Laferr., comb. nov. — *Odostemon longipes* Standl., Proc. Biol. Soc. Wash. 31: 133. 1918. Synonym: *Mahonia longipes* (Standl.) Standl., Publ. Field Mus. Nat. Hist., Bot. Ser. 4: 205. 1929, non *B. hookeri* subsp. *longipes* Chamberlain & Hu, 1985, nec *B. atrocarpa* var. *longipes* Ahrendt, 1961.
- Berberis x moseri* (Ahrendt) Marr. & Laferr., comb. nov. — *Mahonia x moseri* Ahrendt, J. Linn. Soc. Lond. 57: 337. 1961.
- Berberis paxii* (Fedde) Marr. & Laferr., comb. nov. — *Mahonia paxii* Fedde, Bot. Jahrb. 31: 113. 1901. Synonym: *Odostemon paxii* (Fedde) Standl., Contr. U. S. Nat. Herb. 23: 271. 1922.
- Berberis pinnata* var. *hortensis* (Fedde) Marr. & Laferr., comb. nov. — *Mahonia pinnata* var. *hortensis* Fedde, Bot. Jahrb. 31: 88. 1901.
- Berberis quinquefolia* (Standl.) Marr. & Laferr., comb. nov. — *Odostemon quinquefolius* Standl., Proc. Biol. Soc. Wash. 31: 133. 1918. Synonym: *Mahonia quinquefolia* (Standl.) Standl., Publ. Field Mus. Nat. Hist., Bot. Ser. 4: 205. 1929.
- Berberis racemosa* (A. Molina) Marr. & Laferr., comb. nov. — *Mahonia racemosa* Standl. & L. O. Williams ex A. Molina, Ceiba 14: 4. 1968.
- Berberis repens* var. *macrocarpa* (Jouin) Marr. & Laferr., comb. nov. — *Mahonia repens* var. *macrocarpa* Jouin, Mitt. Deutsch. Dendrol. Ges. 1910: 87. 1910.
- Berberis repens* var. *rotundifolia* (Fedde) Marr. & Laferr., comb. nov. — *Mahonia repens* var. *rotundifolia* Fedde, Bot. Jahrb. 31: 82. 1901.
- Berberis russellii* (N. P. Taylor) Marr. & Laferr., comb. nov. — *Mahonia russellii* N. P. Taylor, Kew Mag. 6: 58. 1989.
- Berberis standleyi* Marr. & Laferr., nom. nov. — *Mahonia glauca* Standl. & L. O. Williams, Ceiba 3: 44. 1952, non *Berberis glauca* Knuth, 1821, nec *B. glauca* Benth., 1843.
- Berberis undulata* (Ahrendt) Marr. & Laferr., comb. nov. — *Mahonia undulata* Ahrendt, J. Linn. Soc. Lond. 57: 338. 1961.
- Berberis volcania* (Standl. & Steyerm.) Marr. & Laferr., comb. nov. — *Mahonia volcania* Standl. & Steyerm., Publ. Field Mus. Nat. Hist., Bot. Ser. 23: 6. 1943.
- Berberis zimapana* (Fedde) Marr. & Laferr., comb. nov. — *Mahonia zimapana* Fedde, Bot. Jahrb. 31: 111. 1901. Synonym: *Odostemon zimapanus* (Fedde) Standl., Contr. U. S. Nat. Herb. 23: 271. 1922.

LITERATURE CITED

- AHRENDT, L. W. A. 1961. *Berberis* and *Mahonia*: a taxonomic revision. *Journal of the Linnaean Society of Botany* 57: 1-410.
- LAFERRIERE, J. E., C. W. WEBER and E. A. KOHLHEPP. 1991. Use and nutritional composition of some traditional Mountain Pima plant foods. *Journal of Ethnobiology* 11: 93-114.
- LOCONTE, H. and J. R. ESTES. 1989. Phylogenetic systematics of Berberidaceae and Ranunculales (Magnoliidae). *Systematic Botany* 14: 565-579.
- MARROQUIN, J. S. 1972a. A monographic study of the genus *Berberis* in Mexico. Ph. D. dissertation. Northeastern University, Boston.
- MARROQUIN, J. S. 1972b. Berberidáceas de México I. Cuaderno del Instituto de Investigaciones Científicas de la Universidad de Nuevo León 15: 1-21.
- MARROQUIN, J. S. 1993. Berberidaceae. Pp. 1-16. In: V. Sousa (ed.), *Flora of Veracruz* 75. Instituto de Ecología, Xalapa, Veracruz, México.
- MORAN, R. 1982. *Berberis claireae*, a new species from Baja California; and why not *Mahonia*? *Phytologia* 52: 221-226.