

# New Combinations and a New Species in *Morella* (Myricaceae)

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**ABSTRACT.** The molecular support for current generic concepts in Myricaceae has made it necessary to make new combinations in *Morella*. *Morella* comprises approximately 47 species found in the Old and New World tropics. Three new combinations are made here: *Morella adenophora*, *M. nana*, and *M. punctata*. *Morella nana* is lectotypified, and a new species, *M. rivas-martinezii*, is described.

**Key words:** Canary Islands, China, Cuba, *Morella*, *Myrica*, Myricaceae, Taiwan.

With the exception of the monotypic genera *Comptonia* L'Héritier ex Aiton (northeastern U.S.A.) and *Canacomyrica* Guillaumin (New Caledonia), the species of Myricaceae have traditionally been referred to the Linnaean genus *Myrica* (Cronquist, 1981; Kubitzki, 1993; Zomlefer, 1994; Takhtajan, 1997). There are, however, significant differences between the two deciduous species with dry fruits of the temperate Northern Hemisphere (*Myrica gale* L. and *M. hartwegii* S. Watson) and the remaining ca. 47 evergreen species with papillose, fleshy fruits that are disjunctly distributed in the Old and New World tropics. Some authors have recognized these two groups at the subgeneric level (Engler, 1888; Melchior, 1964; Elias, 1971), while others have given them generic status (Spach, 1841; Chevalier, 1901; Baird, 1969, unpublished thesis, University of North Carolina, Chapel Hill; Wilbur, 1994; Judd et al., 1999; Polhill & Verdcourt, 2000). Previous authors have used both *Myrica* L. and *Morella* Loureiro to refer to the evergreen species, and a long history of nomenclatural difficulties is associated with the typification of these two genera.

In the only monograph of the family, Chevalier (1901) placed the dry-fruited species in the genus *Gale* Duhamel. It can be assumed that he considered one of the fleshy-fruited species to typify the genus *Myrica*, in which he placed the majority of species. However, he did not cite types for these genera. Subsequent authors (e.g., Baird, 1969, unpublished; Wilbur, 1994) have retained *Myrica* for the dry-fruited species, adopting *Morella* for the remaining taxa.

Recently, Verdcourt and Polhill (1997) made a

proposal to conserve the name *Myrica* with the conserved type of *M. cerifera* L. (one of the fleshy-fruited species) in an attempt to minimize the number of necessary name changes. However, the Committee for Spermatophyta (Brummitt, 1999) rejected the proposal. Thus *Myrica gale* is the lectotype of *Myrica* (Herb. Linn. No. 373 [Inst. France]; lectotype designated by Jonsell & Jarvis (in Jarvis et al., 1993)), and the majority of species previously known as *Myrica* must be transferred to *Morella*. The following key separates the two genera:

## KEY TO DIFFERENTIATE *MYRICA* AND *MORELLA*

- 1a. Shrubs deciduous; leaves with sunken stomata; inflorescences borne on the previous year's growth; fruits dry with adherent spongy bracteoles, water-dispersed . . . . . *Myrica*
- 1b. Shrubs or trees evergreen; leaves with stomata not sunken; inflorescences borne on the present year's growth; fruits papillose, fleshy, sometimes with a waxy covering, bird-dispersed . . . . *Morella*

New combinations in *Morella* have been made for species in North America (Wilbur, 1994), Africa (Killick et al., 1999), Malesia (Turner, 2001), South America (Parra-O., 2002), and some in Central America and the Caribbean (Wilbur, 2001; Knapp, 2002). In the course of the preparation of a Ph.D. thesis on Myricaceae, in which new molecular data support the recognition of *Morella* (Herbert, 2005), it became apparent that some new combinations in *Morella* were necessary. A new species is described and three new combinations are made here to provide valid names for species recognized in a forthcoming molecular phylogenetic paper.

***Morella adenophora*** (Hance) J. Herbert, comb. nov. Basionym: *Myrica adenophora* Hance, J. Bot. 21: 357. 1883. TYPE: [China.] "In dicione Ting-on ins. Hai-nan, m. Nov. 1882," *B. C. Henry 22159* (holotype, BM).

This species occurs in Hainan, Guangdong, and Guangxi in China (Lu & Bornstein, 1999); variety *kusanoi* Hayata is recognized in the *Flora of Taiwan* (Yang & Lu, 1996). *Morella adenophora* is a shrub (up to 3 m in height) and is closely related



to *Morella nana*, which occurs in the neighboring provinces of Yunnan and Guizhou (see below). *Morella adenophora* is also closely related to *Morella rubra* Loureiro, which is widely cultivated in China and also occurs in Japan. The fruits of *M. rubra* (up to 3 cm diam.) are significantly larger than those of *M. adenophora* (up to 1 cm diam.). All three species share the character of a single fruit developing at the apex of the infructescence, thus differing from the other Asian species, such as *M. javanica* (Blume) I. M. Turner, in which more than one fruit per infructescence develops.

***Morella nana*** (A. Chevalier) J. Herbert, comb. nov. Basionym: *Myrica nana* A. Chevalier, Mém. Soc. Sci. Nat. Cherbourg 32: 202. 1901. TYPE: China. Yunnan Province: Bois de Mao-Kou-Tchang, au dessus du Tapintz, *P. J. M. Delavay 148* (lectotype, designated here, P).

This species is found in central and northern Yunnan and western Guizhou in China. At up to 3 m in height, it is much smaller than the more widespread *M. rubra* (up to 15 m). When Chevalier (1901) described this species he had not seen specimens of *M. adenophora*; the ranges of the two species are contiguous, but detailed population-level studies of morphology and/or genetics would be required to confirm their status. *Morella nana* is recognized in the *Flora of China* (Lu & Bornstein, 1999).

***Morella punctata*** (Grisebach) J. Herbert, comb. nov. Basionym: *Myrica punctata* Grisebach, Mem. Acad. Amer. Sci. Art N. S. 8 [Plantae Wrightianae, pt. I]: 177. 1860. TYPE: [Cuba.] "In saxosis prope Monte Verde, Feb." *C. Wright 1460* (holotype, GH).

This species is endemic to Cuba. It has entire oblong-oblongate leaves (3–5 cm long) and ovoid fruits (Leon & Alain, 1951), distinguishing it from the widespread *Morella cerifera* (L.) Small, which is found throughout the Caribbean (also in the United States and Central America) and which has longer leaves (to 8 cm) and globose fruits.

***Morella rivas-martinezii*** A. Santos & J. Herbert, sp. nov. TYPE: Spain. Canary Islands: Isla de Hierro, La Dehesa, 22 Feb. 1976, *A. Santos 24699* (holotype, ORT).

A. Santos (1980) intended to publish "*Myrica rivas-martinezii*" as a new species. Because different gatherings were cited as "Holotypi atque isotypi" (holotypes and isotypes), the name was not validly

published (Greuter et al., 2000: Art. 37.1 & 37.2, with Art. 8.1 & 8.2). Dr. Santos has accepted my invitation to publish the taxon here as a new species of *Morella* (on the basis of his 1980 description), and this we do above.

This species is sympatric with *Morella faya* (Aiton) Wilbur in the laurel forests of La Gomera, El Hierro, and La Palma in the Canary Islands. The mature leaves, which are small (up to 20 mm) and spatulate, are distinct from the much larger and oblanceolate leaves of *M. faya*.

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