



## Taxonomic application of the name *Callicarpa boninensis* Hayata (Lamiaceae) based on type material

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*Callicarpa* Linnaeus (1753: 111) comprises approximately 140 species of shrubs and trees, distributed mainly in tropical and subtropical Asia, with about 20 taxa recorded from Japan (Yonekura 2017). In the Ogasawara Islands, a remote oceanic archipelago of Japan, *Callicarpa* exhibits a clear pattern of adaptive radiation (Ono 1991). Traditionally, three species have been recognized from the islands: *C. subpubescens* Hooker & Arnott (1838: 305), *C. glabra* Koidzumi (1918: 56), and *C. parvifolia* Hooker & Arnott (1838: 305). Within the Hahajima Islands of the Ogasawara Islands, *Callicarpa* was long considered to be represented solely by *C. subpubescens*; however, pronounced morphological variation within its populations has been reported (Kawakubo 1986). Recent genetic analyses, ecological surveys, and morphological measurements have demonstrated that the four morphological and ecological groups occurring in the Hahajima Islands comprise *C. subpubescens* sensu stricto and three additional taxa: two distinct species, *C. hahajimensis* Sugai & Setsuko in Sugai *et al.* (2025: 5) and *C. ogasawarensis* Singh (2026: 83), and one natural hybrid, *C. ×chibusensis* Sugai & Setsuko in Sugai *et al.* (2025: 7) (Sugai *et al.* 2019, 2025, Setsuko *et al.* 2024a, b).

In the course of this revisionary work, the taxonomic application of the earlier name *C. boninensis* Hayata (1911: 218) required re-examination. This name was described based on a specimen collected by Okada from Chichijima Island of the Ogasawara Islands (TI00044084) and has long been treated as a synonym of *C. subpubescens* (Tuyama 1940). Although *C. boninensis* Hayata has been cited in recent nomenclatural literature (Singh 2026), its taxonomic identity has not been explicitly evaluated through examination of the type material. Here, we reassess the type of *C. boninensis* Hayata to clarify its correct application.

The type specimen of *C. boninensis* Hayata (TI00044084) shows morphological characters typical of *C. subpubescens* s. str. The leaves are ovate to elliptic; on the upper surface, pubescence is concentrated along the veins, with the interveinal lamina being very sparsely pubescent, whereas on the lower surface, stellate hairs occur along the midrib and lateral veins, extending onto the lamina. This pattern of foliar indumentum closely matches the diagnostic features of *C. subpubescens* s. str.

By contrast, the type specimen of *C. boninensis* Hayata clearly differs from those of the other two *Callicarpa* species occurring in the Chichijima Islands: *C. glabra* (TI00044082) has leaves glabrous on both surfaces, whereas *C. parvifolia* (K000674717) is characterized by nearly orbicular leaves with the lower surface densely stellate-tomentose. The type specimen of *C. boninensis* Hayata does not agree with either *C. hahajimensis* (MAK472471-1/2) or *C. ogasawarensis* (MAK472470-1/2), two of the three taxa recently recognized from the Hahajima Islands, both of which exhibit distinct foliar indumentum patterns on both leaf surfaces. The foliar indumentum of the natural hybrid, *C. ×chibusensis* (MAK472472-1/3), resembles that of the type specimen of *C. boninensis* Hayata, a similarity readily explained by the involvement of *C. subpubescens* as one of the parental species. However, *C. ×chibusensis* is known only from a restricted area of Hahajima Island, whereas the type specimen of *C. boninensis* Hayata was collected on Chichijima Island. Therefore, despite the morphological similarity, application of Hayata's name to this hybrid is unlikely.

Although *C. subpubescens* was originally described without explicit type designation, a specimen at Kew (K000674714) cited by Tuyama (1940) has effectively been treated as the type, despite the absence of precise island of origin within the Bonin Islands (Ogasawara Islands) on the label. This ambiguity does not affect the present assessment. Comparison based on diagnostic morphological characters clearly demonstrates that *C. boninensis* Hayata is taxonomically applicable to *C.*

*subpubescens* s. str. and does not correspond to any of the other endemic *Callicarpa* taxa of the Ogasawara Islands. Based on examination of the type material, *C. boninensis* Hayata is best treated as a synonym of *C. subpubescens* s. str. under the revised circumscription of the species complex.

The present paper has implications not only from a nomenclatural perspective, but also for the correct identification of plant taxa within *Callicarpa* and for the implementation of appropriate strategies for biodiversity conservation (Wagensommer 2023, Ben Mahmoud *et al.* 2024).

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