



***Balanophora coralliformis* (Balanophoraceae), a new species from Mt. Mingan, Luzon, Philippines**

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Abstract

Balanophora coralliformis Barcelona, Tandang & Pelsler is described as a new species of Balanophoraceae. It is unique in its coral-like appearance due to the repeated branching of elongated, above-ground tubers and their coarse texture. It most closely resembles *B. papuana* in details of the staminate inflorescence and is sympatric with this species at its only known site in the montane forest of Mt. Mingan, bordering Aurora and Nueva Ecija provinces, Luzon, Philippines.

Introduction

Balanophora J.R. Forster & G. Forster (1775: 99) is a genus of root parasites in temperate and tropical Asia, the Pacific, tropical Australia, the Comores, Madagascar, and tropical Africa (Hansen 1972, 1976). On the basis of morphological differences, Hansen (1999) recognized 15 species of *Balanophora*, but a molecular phylogenetic study of *B. japonica* Makino (1902: 212) and *B. yakushimensis* Hatusima & Masamune (Hatusima 1971: 61) suggests that a more narrow species delimitation might need to be adopted in this genus (Su *et al.* 2012). In the Philippines, thus far three species have been reported: *B. abbreviata* Blume (1827: 87), *B. fungosa* J.R. Forster & G. Forster (1775: 100), and *B. papuana* Schlechter (1913: 68) (Hansen 1976, Pelsler *et al.* 2011 onwards).

During fieldwork on Mt. Mingan within the provinces of Aurora and Nueva Ecija in 2006, Nestor Bartolome and the late Leonardo L. Co photographed a remarkable *Balanophora* plant that differs from all other described species in the genus in the presence of elongated and repeatedly branched above-ground tubers (Nickrent 2006 onwards, DOL28559–62). This is quite a unique feature, because the tubers of other *Balanophora* species are mainly subterranean. The branching pattern and the coarse texture of the segments of the above-ground tubers give this new species a coral-like appearance (Figs. 1 & 2). In February 2014, we visited Mt. Mingan and collected specimens of this taxon. Assuming that the distinct morphological differences between this species and other *Balanophora* are an indication of reproductive isolation, we name and describe it here as a new species under a biological species concept (Mayr 2000).

Taxonomy

Balanophora coralliformis Barcelona, Tandang & Pelsler, *sp. nov.* (Figs. 1 & 2)

Type:—PHILIPPINES. Luzon: Aurora Province, San Luis Municipality, Mt. Mingan, beside trail en route to summit, 15°27'48.8" N, 121°23'43.3" E, c. 1725 m, 23 February 2014, *Barcelona 3895 with Pelsler & Tandang* (staminate plant; holotype: PNH, isotypes: CHR, K, PUH, US).

Balanophora coralliformis differs from all other described *Balanophora* species in the coral-like growth of repeatedly branched above-ground tubers.

Also the poorly known *B. fungosa* J.R. Forster & G. Forster (1775: 99) ssp. *indica* (Arnott 1838: 37) Hansen (1972: 100) var. *minor* (Eichler in De Candolle 1873: 145) Hansen (1972: 106) from south India, Sri Lanka, and Thailand (Hansen 1972, Nickrent 1997 onwards, Su *et al.* 2012) is described as having elongated, cylindrical tuber segments (Hansen 1972, Su *et al.* 2012), but photos on the Parasitic Plant Connection website (Nickrent 1997 onwards) suggest that these are subterranean. Furthermore, amongst others, the leaves of this variety are more numerous (15–35 vs. 4 or 5) and spirally arranged (vs. opposite), and the staminate flowers are actinomorphic (vs. bisymmetric).

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