



A new species of *Discospermum* (Coffeae, Rubiaceae) from Luzon, Philippines including its conservation status[#]

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Abstract

Discospermum philippinensis, a new endemic species from the Philippines, is here described and illustrated. The species is similar to *D. whitfordii* because of a persistent calyx and a prominent disk below the fruit apex, from which it can be distinguished by leaf blades 5.5–15.5 × 3.5–6.5 cm, acute to attenuate leaf apex (vs. 4.5–10.0 × 2.0–4.5, caudate in *D. whitfordii*), fruits faintly ribbed, smaller with thin mesocarp (vs. non-ribbed, with a thick mesocarp), and 4–6 seeds per locule (vs. 5–12).

Key words: critically endangered, *Discospermum*, Malesia, Philippine endemic

Introduction

Discospermum Dalzell (1850: 257), a strictly Asian genus of the tribe Coffeae is represented by seven species (Govaerts, 2011) and is characterized by a combination of the following characters: small to almost inconspicuous bracteoles, 4-merous corolla with pubescent to bearded throat, sclerified mesocarp, conspicuous and massive placental outgrowth that completely embeds the seed, lenticular seeds, radial exotestal cells and an embryo radicle pointed away from the septum (Hooker 1880, Ali & Robbrecht 1991, Tosh *et al.* 2009). Based on the morphological study of Ali and Robbrecht (1991), *Discospermum* is closely allied with the Asian *Diplospora* A.P. de Candolle (1830: 477). However, recent molecular work of Davis *et al.* (2007) and Tosh *et al.* (2009) revealed that the former is closely allied to *Xantonnea* Pierre ex Pitard (1923: 270), while the latter is sister taxon of the African *Empogona* J.D. Hooker (1871: 1091). As part of the ongoing phylogenetic work on the Asian Coffeae as well as the continuing taxonomic revision of Philippine Coffeae, several botanical explorations were carried out to recollect the endemic species of the group. An interesting representative of the tribe was collected in the forested regions of Luzon, Philippines, with several morphological features indicating that it belongs to the genus *Discospermum*. In addition, multiple sequence data (*petD*, *trnL-F*, *accD-psaI* and *rpl16*) also support the placement of our material in the *Discospermum* clade (Arriola *et al.*, unpublished). Careful comparison of these specimens with herbarium sheets and protologues showed that they represent a new species, which is here described and illustrated.

Materials and Methodology

The study was based on field observations and examinations of herbarium specimens from Mount Banahaw, Luzon Island, Philippines. Herbarium specimens were deposited at PNH. Reproductive parts were preserved in 70% ethanol. All vegetative structures were measured using a vernier caliper (Disston) and reproductive parts were examined using the LW Scientific dissecting microscope. Conservation status was assessed applying the 2001 IUCN Red list Categories and Criteria version 3.1.