

***PLAGIOSTACHYS STROBILIFERA* VAR. *CONICA* (ZINGIBERACEAE), A NEW VARIETY FROM SARAWAK, BORNEO**

Received, May 20, 2020; accepted, November 26, 2020

SALASIAH MOHAMAD

Faculty of Resource Science and Technology, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia.

Department of Technology and Heritage, Faculty of Applied Science and Technology, Universiti Tun Hussein Onn Malaysia (Pagoh Campus), Pagoh Education Hub KM 1, Jalan Panchor, 84500 Pagoh, Johor, Malaysia.

E-mail: salasiah.mohamad@gmail.com

MEEKIONG KALU

Department of Plant Science and Environmental Ecology, Faculty of Resource Science and Technology, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia. E-mail: aqmuzzammil@unimas.my

ABSTRACT

SALASIAH, M. & MEEKIONG, K. 2020. *Plagiostachys strobilifera* var. *conica*, a new variety from Sarawak, Borneo. *Reinwardtia* 19(2): 109–116. — The new taxon varies from *Plagiostachys strobilifera* var. *strobilifera* in the broader lanceolate leaves, the bilobed ligule, the longer calyx, the rounded anther crests, the oblong lateral staminodes, and the non-free apical bracteole with conical apex (which gives the taxon its epithet). A key to species of Bornean *Plagiostachys* is also provided, along with a conservation assessment.

Key words: Alpinieae, Alpinioideae, diversity, ginger, Borneo, Malesia, taxonomy, Zingiberales

ABSTRAK

SALASIAH, M. & MEEKIONG, K. 2020. *Plagiostachys strobilifera* var. *conica*, varietas baru dari Sarawak, Borneo. *Reinwardtia* 19(2): 109–116. — Varietas baru ini menampilkan beberapa variasi dari *Plagiostachys strobilifera* var. *strobilifera* yaitu daunnya yang melanset dan lebih lebar, lidah-lidah bercuping rangkap, kelopak yang lebih panjang, kepala sari membundar seperti jengger, staminodium lateral melonjong, mempunyai daun gantilan rembang yang tidak bebas dan mengerucut di bagian ujung (yang menjadi penunjuk takson ini). Kunci untuk jenis *Plagiostachys* Borneo disediakan berikut penilaian konservasinya.

Kata kunci: Alpinieae, Alpinioideae, Borneo, jahe-jahean, keanekaragaman, Malesia, taksonomi, Zingiberales.

INTRODUCTION

The ginger family, Zingiberaceae occurs in the tropics and subtropics, with approximately 1,500 species in at least 53 genera (Lamb *et al.*, 2013) and the number is growing with more botanical exploration in various localities. *Plagiostachys* is a genus in the tribe Alpinieae distributed from southern Thailand and Peninsular Malaysia to Indonesia (Sumatra, Kalimantan, Sulawesi) and the Philippines, with its highest diversity in Borneo. Of the thirty-two of so far-known species, seventeen species occur in Borneo, while nine species are distributed in the Philippines, three in Peninsular Malaysia, two in Indonesia, and one species each in India, Thailand and China (Newman *et al.*, 2004; Sabu *et al.*, 2008; Lamb *et al.*, 2013; Acma *et al.*, 2019; POWO, 2020).

The genus is recognised morphologically by its terminal inflorescence which breaks through the leaf sheaths laterally, either in the middle of the leafy shoot, at one-third of the way up or just above the ground (Smith, 1985). The small flowers are arranged in densely-congested inflorescences bearing up to nine branches, each subtending

rudimentary bract or none, as well as generally tubular bracteoles (Julius *et al.*, 2007; Lamb *et al.*, 2013). Primary forest to disturbed forest are the principal habitats of *Plagiostachys*.

In the past, the species in *Plagiostachys* were divided into two informal groups, one bearing mucilaginous inflorescences and the other non-mucilaginous inflorescences (Smith, 1985). The types of bracteole, calyx, and capsule, the colouration of labellum, as well as the style adnation to the corolla tube wall were the other main characters considered in the natural groupings. However, the groupings were shown to be unsatisfactory by the description of two non-mucilaginous species (*P. breviramosa* and *P. parva*) by Cowley (1999) which revealed that the style adnation character was not compliant with group II.

Based on several new species discoveries, Julius *et al.* (2007) pointed out that the presence of an anther crest, the colouration and surface of the capsule, and the occurrence of style adnation to the corolla wall were significant parameters in defining interspecific variation. More recently, *Plagiostachys* is classified into three subclades