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Gastrochilus kadooriei (Orchidaceae), a new species from Hong Kong, with notes on allied taxa in section Microphyllae found in the region.

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Abstract

A new species, *Gastrochilus kadooriei*, is described from Hong Kong. Notes are presented on its distribution, ecology and conservation status, and its distinguishing features are compared with those of allied taxa. *Gastrochilus jeitouensis* is reduced to the synonymy of *G. distichus*, and a lectotype is assigned for *G. pseudodistichus*. *Gastrochilus fuscopunctatus* is reinstated as an accepted species. Dichotomous keys to this taxonomically difficult group of morphologically similar species are presented.

Introduction

The monopodial orchid genus *Gastrochilus* Don (1825: 32) (Epidendroideae; Vandeae; Aeridinae) is identified by the lip, which is typically biparted with a saccate hypochile and broad epichile that connects the lip to the column, two porate, globose pollinia borne on slender stipe and a bilobed viscidium, and a short axillary inflorescence. It is represented by 53 species distributed from India to Japan (Govaerts *et al.* 2013). Twenty-nine species have been reported from China, of which 17 are believed to be endemic (Chen *et al.* 2009: 491).

Hong Kong is endowed with a wide diversity of orchid taxa representing all five subfamilies (Barretto *et al.* 2011), and new records continue to be added (e.g. Gale *et al.* 2013). During a recent routine survey of upland forest in the central New Territories, an unusual lithophytic orchid was discovered. It was tentatively identified as a species of *Gastrochilus* section *Microphyllae* Bentham & Hooker (1883: 579), which is characterised by plants with numerous distantly spaced leaves compared to plants in the other section, *Gastrochilus*, which have clustered leaves. After undertaking a comprehensive literature and herbarium review, as well as consulting experts from the region, the authors realised that the taxon had previously been collected on several occasions from different localities outside Hong Kong (*i.e.* southern China and Vietnam), but it had remained confused with morphologically similar taxa and therefore not properly identified. Further examination of this species alliance revealed several unresolved taxonomic issues regarding the identity and circumscription of its constituent taxa, and eventually this allowed us to determine that the plants discovered in Hong Kong actually belong to a species new to science. We therefore performed a comprehensive morphological and taxonomic review of six allied species from the region, namely, *Gastrochilus corymbosus* Das & Chanda (1989: 401), *G. distichus* (Lindley 1858: 36) Kuntze (1891: 661), *G. formosanus* (Hayata 1911: 336) Hayata (1915: Additions and Corrections), *G. fuscopunctatus* (Hayata 1912: 143) Hayata (1917: 78), *G. jeitouensis* Ormerod (2013: 24) and *G. pseudodistichus* (King & Pantling

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