A review of *Scaphochlamys* (Zingiberaceae) from Borneo, with description of eleven new species

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Abstract

In the present paper, the genus *Scaphochlamys* from Borneo is revised. Twenty-four species are recognised, of which 11 are new species: *S. durga*, *S. graveolens*, *S. hasta*, *S. lanjakensis*, *S. lucens*, *S. nigra*, *S. multifolia*, *S. penyamar*, *S. pseudoreticosa*, *S. scintillans*, and *S. uniflora*. *Scaphochlamys depressa* is treated as a synonym to *S. argentea*. The Bornean species are arranged into six informal groups based on morphological characteristics: *Anomala* Group, *Calcicola* Group, *Graveolens* Group, *Limiana* Group, *Petiolata* Group, and *Polyphylla* Group. The paper includes an overview of morphological characteristics, identification keys to groups and species, and species descriptions. A discussion of the recently recognized generic segregate, *Borneocola* is included.

Keywords: Bracts, cincinni, endemic, Peninsular Malaysia, Sarawak

Introduction

*Scaphochlamys* Baker (1892: 252) is a genus of 44 species in the *Kaempferia* Clade (Kress et al. 2002) occurring from southern Thailand through Peninsular Malaysia and Sumatera, to northern Borneo (Kress et al. 2002, Leong-Škorničková 2011). *Scaphochlamys* forms a clade with *Distichochlamys* Newman (1995: 65) and *Myxochlamys* Takano & Nagamasu (2007: 21) based on phylogenetic analyses (Takano & Nagamasu 2007). These genera are each defined by sets of morphological characters in combination rather than any single key characteristic. Each character trait on its own may share by more than one genus, so the presence or absence of characters together must be considered before attempting to allocate a species to a genus (Searle 2010). *Scaphochlamys* is distinguished from closely related genera by the following combination of characters: petiole base pulvinate (Borneo only), spiral floral bract arrangement, flowering acroscopic, first bracteole 2-keeled and arising opposite to bract; bracteole split to base, and anthers with free basal spurs (Searle 2010).