Phylogenetic study of the *Schismatoglottis* Nervosa Complex (Araceae: Schismatoglottideae)

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ABSTRACT. The *Schismatoglottis* Nervosa Complex (Araceae: Schismatoglottideae) currently comprises 10 species: *Schismatoglottis adoceta* S.Y.Wong, *S. elegans* A.Hay, *S. liniae* S.Y.Wong, *S. tessellata* S.Y.Wong, *S. ulusarikeiensis* S.Y.Wong, *S. matangensis* S.Y.Wong, *S. simonii* S.Y.Wong, *S. turbata* S.Y.Wong, and *S. nervosa* Ridl., occurring in Borneo, with each endemic to a specific locality and most to a particular geology; and one species (*S. brevicuspis* Hook.f.) widespread in Peninsular Malaysia and Sumatera, where it is restricted to granites. Based on analysis of the *mat*K region, a preliminary biogeographical hypothesis for the origins and subsequent taxagenesis of the Nervosa Complex is presented. This study also provides insight into possible evolution of localised mesophytic endemics in everwet, humid, and perhumid megathermal Sundaic forests. Two clades are resolved: one north of, and another south of, the Lupar Divide.

Keywords. Araceae, biogeography, Borneo, *mat*K, *Schismatoglottis* Nervosa Complex, vicariance

Introduction

Geology and tectonics of Borneo

Borneo is the third largest island in the world and the second largest tropical island after New Guinea. Borneo is situated in a tectonically intricate region between three marginal basins: the South China, Sulu and Celebes Seas (Hall et al. 2008), the latter two on the eastern edge of the Sunda Shelf. Borneo has a complex geological history having been formed by Mesozoic accretion of oceanic crustal material (ophiolite), island arcs and microcontinental fragments accreted to the Palaeozoic continental core of the now Schwaner Mountains (Hutchison 1989; Moss & Wilson 1998; Hall et al. 2008). Despite this rather active formation, Borneo is now a stable area with little or no seismic activity, and has no active volcanoes (Hall 2002; Hall et al. 2008).

Plant endemism in Borneo

Borneo is frequently cited—rightly although nowadays somewhat repetitively—as one of the world's areas of 'mega'-biodiversity. With a flora comprising at least 3000