

Studies on Schismatoglottideae (Araceae) of Borneo XXII: The enigmatic *Aridarum montanum* refound

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ABSTRACT. *Aridarum montanum* Ridl., a species known from a single herbarium specimen allegedly collected on Gunung (Mt) Santubong, Sarawak, Malaysian Borneo in 1909, has been refound on exposed shales in Sri Aman Division, and Sarikei Division, Sarawak, and subsequently flowered in cultivation. Morphological differences of the new collection compared with the original description and figure are catalogued and commented upon. An amended and expanded species description is provided, and the plant is illustrated in habitat, and from flowering cultivated material. Speculations on the probable location origin of Brooks' type material are proffered.

Keywords. Aroid, Mount Santubong, rare species, Sarawak, shales

Introduction

Aridarum montanum Ridl., the type species of the genus, has not been recollected since Cecil Joslin Brooks gathered a single specimen, purportedly on Gunung (Mt) Santubong, and now deposited in the Natural History Museum, London (BM). Boyce & Wong (2011) outlined the few facts known pertaining to *A. montanum*, emphasizing that numerous surveys of the supposed type locality, a large sandstone mountain situated on a peninsula jutting into the South China Sea approximately 35 km north of Kuching, the state capital of Sarawak, had failed to locate the plant, although another quite different *Aridarum* (*A. nicolsonii* Bogner) is abundant there. Recollection of *A. montanum* from a two quite separate very wet shale-dominated sites, one in Sri Aman Division and the other in Sarikei Division, coupled with the persistent failure to locate plants of this species at the supposed type locality on much drier sandstone ecology, raises the probability that Brooks' label data are in error.

Brooks was in Sarawak during 1900–1910, employed as a metallurgical chemist by the gold-exploitation arm of the Borneo Co. Ltd. During this period he collected a wide range of wildlife, including plants, although mainly ferns. Data for Brooks' fieldwork are often incomplete, and there are doubts over the numbering of at least part

of his collections. Brooks' Borneo fieldwork was concentrated almost exclusively in west Sarawak. He made collections on Gunung (G.) Santubong (c. 1° 44' N 110°20'E), G. Pueh (c. 1°48'N 109°41'E), G. Kapor (c. 1°23'N 110°7'E), G. Singai (c. 1°30'18.28"N 110°10'21.36"E), the Banjaran Bungo (c. 1°16'N 110°9'E), Bau (c. 1°25'N 110°9'E), Bidi (c. 1°23'N 110°8'E), and Tringgus (c. 1°14'N 110°5'E). With the exception of Banjaran Bungo, none of the above areas has exposed shales. Gunung Santubong, G. Singai, and Tringgus are predominantly sandstone; G. Kapor and Bidi are forested karst limestone, while G. Pueh is granite. Our new collections coupled with high levels of "geological endemism" present among aroids strongly favours *A. montanum* being a shale-obligate.

Brooks' only documented excursion away from this general area was in 1908 when he ventured to the source of the true right tributary of the Sungai Sarawak, afterwards continuing to the headwaters of the Sungai Sambas where it rises in the Bengkayang (Bengkayang) Mountains (G. Niyut and G. Bentuang) NE of Pontianak, in modern Kalimantan Barat, Indonesian Borneo. Brooks returned to Sarawak from this expedition by way of Siluas and G. Penrissen (Brooks 1911). These areas do have exposed shales, and furthermore there are floristic links with Banjaran Bungo and via the Klingkang range to the border areas of Lubok Antu, close to one of the new collections of *A. montanum*. The Sarawak Banjaran Bungo is botanically reasonably well sampled and to date *A. montanum* has never been located there. On balance it seems most likely that Brooks' collection was made during the trip to the headwaters of the Sungai Sambas.

Aridarum montanum Ridl., J. Bot. 51: 201(–202), pl. 527 (1913); Bogner & Hay, Telopea 9(1): 186 (2000); Boyce & Wong, Malayan Nat. J. 63(4): 613–618, Figs. 2 & 3 (2011). TYPE: *C.J. Brooks* 1035, Malaysian Borneo, Sarawak, Kuching Division, Santubong (but see above), Oct 1909 (holo BM!). (Fig. 1)

Trailing-pendent or tufted obligate rheophyte to c. 25 cm. **Stem** initially condensed, later elongating and often branching from the base, trailing portions to c. 35 cm (or more?), very slender, 3–4 mm diam., all except the oldest portions clothed with tightly fitting red-brown netted fibres derived from the prophylls and cataphylls, and slender adhering sinuous green roots. **Leaves** numerous, carried in dense tufts at the tips of the stems, often two or three leaf tufts basal to these stems; **petiole** 0.2–3 cm long, c. 1 mm diam., sheathing at the very base, the wings extended into a narrowly triangular ligular portion 2.5–3 cm long, drying red-brown; **blade** linear-lanceolate, stiffly coriaceous, deep green, 2–10 cm long × 3.5–4.5 mm wide, base very narrowly cuneate, apex very narrowly acute and apiculate for 0.5–1 mm; midrib abaxially very prominent, adaxially more or less flush with the lamina; primary lateral veins not differentiated; secondary venation more or less obscure, running into a relatively thick marginal vein; tertiary venation very obscure. **Inflorescence** solitary; peduncle much exceeding the petioles, 9–10 cm long, c. 0.8 mm diam, green. **Spathe** narrowly ovate, apically acute, unconstricted, 1.5–2 cm long, initially green, late in development (1–2 days prior to opening) turning entirely white; spathe limb gaping at pistillate anthesis, the