

The Sarawak Museum Journal

Vol. LXVII No. 88

December 2010



ISSN: 0375-3050

E-ISSN: 3036-0188

Citation: Peter C. Boyce and Wong Sin Yeng. (2010). Studies on Monstereae (Araceae) of Borneo I: Two Novel *Anadendrum* from Sarawak. The Sarawak Museum Journal, LXVII (88): 285-294

## STUDIES ON MONSTEREAE (ARACEAE) OF BORNEO I: TWO NOVEL *ANADENDRUM* FROM SARAWAK

Peter C. Boyce and Wong Sin Yeng

### ABSTRACT

Two new *Anadendrum* from Sarawak, *A. calcicola* and *A. muluensis*, are described and illustrated. By the leaf lamina abaxially glaucous they are most similar to *A. affine* (Sumatera). *Anadendrum calcicola* differs from *A. affine* in the bimodal gorgonoid synflorescence, and the stamen filaments not extending at male anthesis. *Anadendrum muluensis* also shares the character of the anthers not exerted at male anthesis, but differs from both *A. affine* and *A. calcicola* by flowering on the tips of elongated shoots, and by the consistently cordate lamina bases.

Keywords: Araceae, *Anadendrum*

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*Keywords:* Araceae, *Anadendrum*

**A***nadendrum* is a small genus of hemiepiphytes restricted to the Sunda Shelf, the Philippines, Thailand, and Indochina as far north as southwestern China (Yunnan). Currently there are 14 published names at all ranks, but there exists considerable difficulty in regard the application of these names to plants in the field. The problems are compounded by the inadequate nature, and condition, of most historical types, the fact that many names are based upon mixed-taxon syntypes, a long tradition of misapplication of names in literature, and in herbaria, and not least, based on fieldwork in Peninsular Malaysia, Thailand and Sarawak, upon the fact that the majority of plants encountered in the field appear to be undescribed. While a start has been made to understand Thai species (Boyce, in press), much remains to be done in Sunda and elsewhere.

While undertaking fieldwork in Sarawak as part of the Araceae of Sarawak subprogramme of CATE (see Haigh *et al.*, 2008) two distinctive *Anadendrum* with leaf laminae conspicuously abaxially



glaucous, adaxially matte olive green (in striking contrast to all other Sarawak species in which leaf laminae are adaxially glossy medium to dark green, while abaxially paler and slightly shiny), and with the petiolar sheath extending to the base of the apical pulvinus, were encountered, both usually, but not exclusively, in association with limestone.

**Anadendrum** Schott, *Bonplandia* 5: 45 (1857); Mayo, Bogner & Boyce, *Genera of Araceae* 113, Map. 11, Pl. 11 (1997).

*Small climbing hemiepiphytes.* Leaves opposite on climbing shoots, usually congested-distichous on flowering shoots; *petiole* pulvinate apically and basally, sheathed to the apical pulvinus in most species, sheath persistent or marcescent; *lamina* obliquely ovato-oblong, entire; primary lateral veins pinnate, running into marginal vein, higher order venation reticulate. *Inflorescences* 1 – 7 in each floral sympodium; *peduncle* relatively long. Spathe oblongo-ovate, boat-shaped, inflating-gaping at female anthesis, thence opening and remaining erect or reflexing during male anthesis, greenish white to yellowish, rarely internally purple-stained, or bright green, rostrate apically and much overtopping the spadix, caducous after anthesis, rarely marcescent. *Spadix* stipitate, cylindric. *Flowers* bisexual, perigoniate; *perigone* membranaceous, cup-like, tepals truncate, equalling or shorter than gynoecium; *stamens* 4, free, filaments relatively short, broad, spatulate, sometimes extending during male anthesis to raise the anthers above the gynoecium; connective slender, thecae linear-elliptic, dehiscing by longitudinal slit. *Pollen* inaperturate, subspheroidal, small (mean 22  $\mu\text{m}$ .), exine psilate or subretipilate, pilae spinulose tipped and solitary, or united into groups of 2 – 4 or more. *Gynoecium* with ovary obconic or obpyramidal, subquadrangular, 1-locular, ovule 1, anatropous, funicle short, placenta basal, stylar region as broad as ovary, stigma transversely oblong. *Fruits* a berry, distinctly truncate apically, subglobose, ripening from green through medium yellow to scarlet or orange red. *Seed* rounded, subglobose, testa smooth, glossy, embryo large, endosperm absent.

***Anadendrum calcicola*** Boyce & Wong, *sp. nov.* Ab alli