

A review of *Alocasia* (Araceae: Colocasieae) for Thailand including a novel species and new species records from South-West Thailand

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ABSTRACT. A review of *Alocasia* in Thailand is presented. One new species (*A. hypoleuca*) and three new records (*A. acuminata*, *A. hypnosa* & *A. perakensis*) are reported. A key to *Alocasia* in Thailand is presented and the new species is illustrated.

INTRODUCTION

Alocasia is a genus of in excess of 100 species of herbaceous, laticiferous, diminutive to gigantic, usually robust herbs. The genus has recently been revised for New Guinea (Hay, 1990), Australasia (Hay & Wise, 1991), West Malesia and Sulawesi (Hay, 1998), the Philippines (Hay, 1999) while post main-treatment novelties have been described for New Guinea (Hay, 1994) Borneo (Hay, Boyce & Wong, 1997; Hay, 2000; Boyce, 2007) & Sulawesi (Yuzammi & Hay, 1998). Currently the genus is least well understood in the trans-Himalaya (NE India to SW China) including the northern parts of Burma, Thailand, Lao PDR and Vietnam with only the flora of Bhutan (Noltie, 1994) partly covering this range. In the absence of extensive fieldwork the account presented here for Thailand can at best be regarded as provisional.

STRUCTURE & TERMINOLOGY

Alocasia plants are often complex in vegetative and floral structure and some notes on their morphology (based here substantially on Hay, 1998) are useful to aid identification.

The stem of *Alocasia*, typically of most Araceae, is a physiognomically unbranched sympodium. The number of foliage leaves per module is variable between and within species and individuals, but during flowering episodes in some species it may be reduced to one. In some species, e.g. *A. peltata* M.Hotta (Borneo), foliage leaves alternate with cataphylls within a module. In such instances the cataphyll performs the role of protecting the subsequent emerging leaf. That role in other species is performed by the sheath of the previous foliage leaf. Those species with regularly interspersed cataphylls typically have very short leaf sheaths, while those without interspersed cataphylls have longer sheaths. A prophyll and usually at least one cataphyll is always associated with the initiation of a new vegetative module.

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The petiole divides, as it runs into the lamina, into three principal veins - the anterior costa (midrib) and two posterior costae which support the anterior and posterior lobes of the blade respectively. The shape of the posterior lobes of the leaf is sometimes of diagnostic importance. Terms used here to describe them are for the most part self-explanatory, such as 'acute', 'obtuse', etc. The posterior lobes are asymmetric, the outer sides being united with the anterior lobe, while the inner sides (i.e., those that face each other across the sinus) are free (unless the leaf is peltate). In some instances, such as the *Scabriuscula* Group, the shape of the piece of lamina on the inside of each posterior lobe may need to be used for identification purposes. For these parts I have used terms such as 'lanceolate', 'ovate', etc. even though the posterior lobe is not symmetrical about the posterior costa. Thus, 'inner side of posterior lobe lanceolate' means that the inside piece of lamina is shaped like a longitudinally bisected lanceolate leaf.

Primary veins run pinnately off both sides of the anterior costa and pedately off the outer (anterior) side of each posterior costa. Glands, of unknown function but perhaps involved with 'lubrication' of the new leaf as it emerges through the often very constraining petiolar sheath, are found in the axils of the primary veins on the abaxial side of the leaf, and may also occur scattered over the surface of the petiole. Secondary venation arises direct from the costae and from the primary veins and is typically colocasoid: secondary veins arising from the primary veins typically run initially at a wide angle from the primary venation and are then deflected towards the margin of the blade. In some species the secondary veins unite between the primary veins into more or less sinuous interprimary collective veins. These may be very well developed and distinct, and while they are a useful feature for distinguishing some species, the state intergrades with a complete absence of interprimary veins and some species evince a variety of intermediate states. In some species some secondary veins are intermediate in thickness between the normal secondary venation and the primary veins, and they may even bear glands in their axils like the primary venation. These are termed subsidiary veins. The primary and secondary veins run into a marginal vein, or in some species a distinct intramarginal vein.

In most, if not all species the rhizome produces at or below soil level a number of short to rarely greatly elongated, slender, branched or unbranched stolons terminating in more or less globose tuberules.

Except in the smallest species the vegetative module is terminated by a synflorescence composed of pairs of inflorescences. Each pair consists of a cataphyll subtending a terminating inflorescence (i.e., peduncle with spathe and spadix) and a second inflorescence arising in the axil of the cataphyll and itself subtended by a bicarinate prophyll. A relay axis develops from the axil of the leaf immediately below the first cataphyll of the bimodular subunit. The relay axis bears first a bicarinate prophyll and then, depending on whether or not the relay module is initially vegetative, a foliage leaf (which may or may not be preceded by one or more vegetative cataphylls) or another synflorescence. If a foliage leaf has been produced, the module may continue to produce foliage leaves and the flowering episode has consisted simply of two inflorescences. Alternatively, the foliage leaf may be followed immediately by another pair of inflorescences and another relay axis with a single foliage leaf and so on, so that the flowering episode consists of a compressed sympodium of flowering units displaced into lateral positions and interspersed with foliage leaves, as in *A. macrorrhizos*. If, however, the first relay axis is not initially vegetative, a second pair