

## A New Species of *Alocasia* (Araceae-Colocasieae) From Cambodia

V. D. NGUYEN<sup>1</sup>, J. C. REGALADO, JR.<sup>2</sup> AND VU TIEN CHINH<sup>1</sup>

<sup>1</sup> Institute of Ecology & Biological Resources, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Hanoi, Vietnam  
Email: nguyenvandu@fpt.vn

<sup>2</sup> Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, USA

### Abstract

*Alocasia jiewhoei* V.D.Nguyen, a new species from Cambodia, is described and illustrated.

### Introduction

The genus *Alocasia* (Araceae-Colocasieae) includes about 75 species distributed mainly in tropical Asia, Malesia, Australia and Melanesia (Govaerts and Frodin, 2002). In Indo-China, eleven species have been recorded in the *Flore Général de l'Indo-Chine* by Gagnepain (1942). In 2007, during fieldwork in Cambodia, V.D. Nguyen's group found a new species of *Alocasia* growing on dry leaf litter in forest in Kulen National Park of Siem Riep Province. The plant does not match any known species in the genus (Boyce, 2007, 2008; Hay, 1998, 1999; Hay and Wise, 1991; Medecilo *et al.*, 2007; Wang *et al.*, 2005).

A comparison of morphological characters with other species in the genus showed the species resemble *A. odora* (Lindl.) K.Koch and *A. navicularis* (K.Koch & C.D.Bouché) K.Koch & C.D.Bouché, in having peltate, cordate-ovate leaf blades, 5-10 pairs of lateral veins, the greenish spathe and conical appendices. However, it is distinguished from *A. odora* and *A. navicularis* by its smaller size, slender petioles, stolons with bulbils at the apex, conspicuous styles and prominently lobed stigmas (Table 1). It closely resembles *A. navicularis* in having erect, cymbiform spathes.

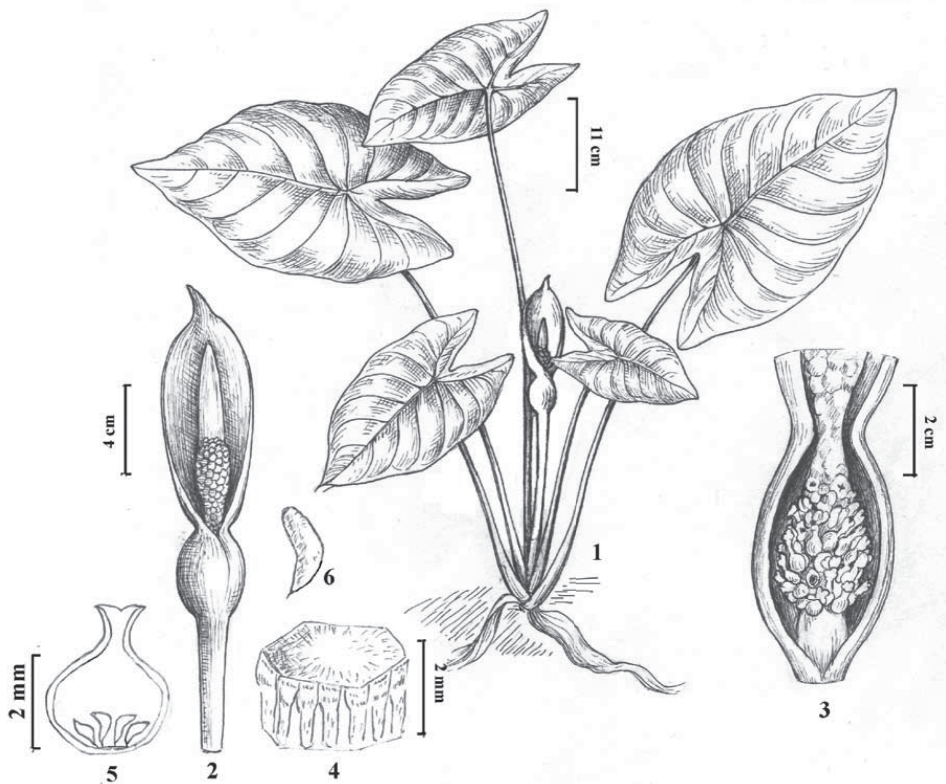
*Alocasia jiewhoei* V.D. Nguyen, *sp. nov.*

*Alocasiae odora* similis in folii lamina peltata et spathae lamina dilute viridi, sed spathae lamina cymbiformi, stylis longis, stigmatibus longe lobatis differt. –**Typus:** Cambodia, Siem Riep Province, Phrom Ku Len National Park, 13°36'58.1" N 104°02'20.4" E, 150 m alt., V.D. Nguyen & Rattana CB-VN 212 (holotype, HN; isotypes, K, P, MO). **Fig. 1 & Plate 1.**

**Table 1.** A comparison of *Alocasia jiewhoei* and closely related species.

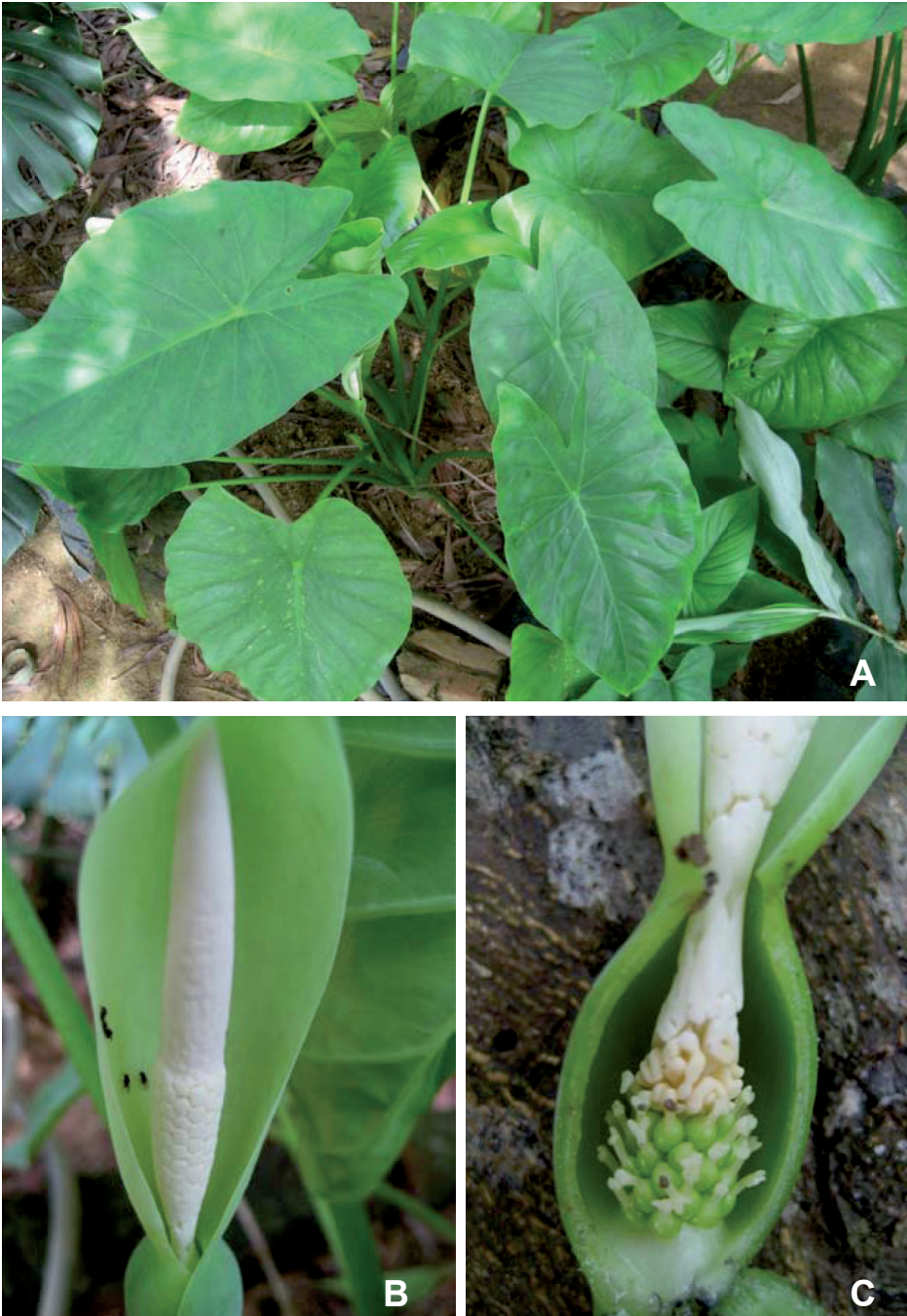
<b>Characters</b>	<i>A. odora</i>	<i>A. navicularis</i>	<i>A. jiewhoei</i>
Plant height	40 to >250 cm	50 to 150 cm	30 to 70 cm
Rhizome internal colour	Light green and white	Light green and white	Light yellow
Petiole	Stout	Stout	Slender
Bulbils on the stolons	None	None	At the apex
Style	Very short or inconspicuous	Very short or inconspicuous	Conspicuous, 1-1.5 mm long
Spathe limb - shape - colour	Hooked cymbiform Green to dull green	Erect cymbiform Dull yellow	Erect cymbiform Medium green
Stigma	Shallowly lobed	Shallowly lobed	Prominently lobed
Habitat	Wet, evergreen forest	Wet, evergreen forest	Dry, deciduous forest

**Rhizomatous** plants, *ca* 70 cm tall. **Rhizomes** decumbent, slender to stout, aerial parts 10-15 cm long, 1-4 cm in diameter, internodes 1.5-3 mm long, grey to dark brown externally, light yellow internally, covered by traces of decayed cataphylls. **Roots** stout, 10-15 cm long, not branched. **Stolons** several, subterranean, apex aerial, bearing bulbils at the apex; bulbils obovate, winged, six-angular in cross section, 1.5 cm long, *ca* 1 cm in diameter, oblong at base, abruptly acuminate, covered by several brown, small triangular scales. **Leaves** peltate, 4-7 together; petioles slender, 40-70 cm long, sheathed up to >1/3 of the length, green with dull dark green veins sunk below the surface; leaf blades ovate, 22-50 cm long, 17-30 cm at widest point, basal lobes broadly triangular, 7-16 cm long, 6-13 cm wide at base, apices obtuse, connection between 2 lobes 5-8 cm wide from petiole apex, dark green



**Figure 1.** *Alocasia jiewhoei* V.D. Nguyen. 1. Habit; 2. Inflorescence; 3. Detail of female flower zone; 4. Male flower; 5. Ovary in longitudinal section; 6. Ovule.

and glossy above, dull green beneath; lateral veins 7-8 pairs in anterior lobes, 2-3 veins in posterior lobes, pronounced above, prominent beneath, secondary veins originating from lateral veins and midrib, run parallel and ascend towards leaf margins, connected by reticular veins. **Inflorescences** one per axil, several per plant; peduncles slender, 25-30(-45) cm long, 7-10 mm in diameter, expanded at top, green, covered by a thin white chalky layer; **spathes** 11-12 cm long, constricted about 1/5 of the way from the base; lower part ellipsoid or subglobose, green; limb 8.3-10 cm long, ca 4 cm wide, cymbiform, green when young, medium green at anthesis; **spadices** 8.5-10 cm long; female zones cylindrical, 0.8-1 cm long, **female flowers** congested, light yellow; ovaries subglobose in general, shallowly concaved into three lobes, 2 mm in diameter, green; styles 1 mm long, white; stigmas three lobed, 1-1.2 mm wide, white; ovules ca 10, placentation basal; sterile interstice conical at lower part, constricted near apex then slightly expanded at apex, 1.8-2.3 cm long, 9 mm in diameter at base, 3-4 mm at the constriction and 4-5 mm at apex, bearing 2 whorls of white, acute-ovate, flattened sterile flowers in



**Plate 1.** *Alocasia jiewhoei* V.D.Nguyen. A. Plant habit; B. Appendix and male portion; C. Stamines and female portion in detail. (Photos: V.D. Nguyen).

upper part; base covered by 2 rows of sterile flowers, columnar or ring-like; male zones cylindrical, 1.8-2.3 cm long, 8-10 mm in diameter, oblong to base, white; appendices conical, 3.5-4.8 cm long, smaller in diameter than male zone, acute at apex, very shallowly concaved on surface, without veins, dull white; **male flowers** sub-rectangular, 3 mm long, *ca* 2 mm wide, bearing 4-6 stamens. **Berries** subglobose, 3-4 mm in diameter; **seeds** 2-3.

*Ecology*: Dry seasonal forest, altitude 0-500 m.

*Distribution*: Endemic in Cambodia.

*Vernacular name*: None recorded.

*Uses*: None recorded. However the new species has potential as an ornamental plant.

*Etymology*: The plant is named in honour of Tan Jiew Hoe of Singapore.

*Conservation status*: The plant is found in the Phrom Ku Len National Park of Siem Riep Province where the forest is protected. Although the new species is rare, there is little data to show if it is threatened.

### Acknowledgements

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