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NOTE

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**A NEW RECORD OF THE MALAY CARDAMOM
AMOMUM ACULEATUM ROXB. (ZINGIBERACEAE)
FOR MAINLAND INDIA**

Sameer Patil¹  & P. Lakshminarasimhan² 

^{1,2} Botanical Survey of India, Western Regional Centre,

7 Koregaon Road, Pune, Maharashtra 411001, India

¹ sameerpatil.c@gmail.com (corresponding author),

² lakshminarasimhan@yahoo.co.in

Zingiberaceae, with 53 genera and 1,377 species (Kong et al. 2010) is widely distributed in tropical areas. *Amomum* Roxb., the second largest genus of the family with ca. 150 species has its distribution along tropical Asia to Australia (Mabberley 2008). In India, the members of the genus are mainly restricted to northeastern India, peninsular India, and the Andaman & Nicobar Islands (Thomas & Sabu 2012). Hooker (1894) listed 48 species in the Flora of British India. Thomas et al. (2010) reported ca. 22 species from India. Sabu (2006) reported six species for southern India. Recent exploration by V.P. Thomas (2009–2018), M. Sabu (1990–2018) and V.S. Hareesh VS (2013–2018) has added 11 species and one variety to Indian flora, which takes the total count to 33 species and one variety of *Amomum* in India.

During a recent floristic exploration along the Western Ghats of Karnataka, the first author collected specimens belonging to the genus *Amomum* Roxb. After critical study and scrutiny of literature and herbarium materials, the collected specimen was identified as *Amomum aculeatum*. The species was first described by Roxburgh in 1810 from the Malay Archipelago. Later, Kurz collected the species in 1866 from the South Andaman Islands during his voyages to Southeast Asia. In recent times N.G. Nair recollected the species in 1976 from the South Andaman Islands and N. Bhargava from the Little Andaman Islands (Balakrishnan & Nair 1979; Pandey & Diwakar 2008). Hence, the present collection of the species from Pushpagiri Wildlife Sanctuary,

Kodagu, Karnataka (12.633°N & 75.654°E); stands as a new record of this species in the wild for mainland India (southern Western Ghats) (Fig. 1). A brief description and photographs along with distribution are provided here.

Amomum aculeatum

(Image 1)

Roxb. in Asiat. Res. 11: 344, t.6.1810 & Fl. Ind., Carey & Wall. Ed. 1: 40. 1820; Baker in Hook. f., Fl. Brit. India 6: 243. 1892; Holtt. in Gard. Bull. Sing. 13: 212. 1950; Baker & Bakh. f., Fl. Java 3: 54. 1968; N.P. Balakr. & N.G. Nair in J. Bombay Nat. Hist. Soc. 76: 196. 1979; Vasudeva Rao in J. Econ. Taxon Bot. 8: 151. 1986; Karthik. & al. Fl. Ind. Enum. Monocot. 290. 1989. *A. aculeatum* var. *gymnocarpum* Valetton in Nova Guinea 8: 926. 1913. *A. aculeatum* var. *macrocarpum* Valetton in Nova Guinea 8: 927. 1913. *A. aurantiacum* Ridl. in J. Fed. Malay States Mus. 10: 153. 1920. *A. ciliatum* Blume in Enum. Pl. Javae 49. 1827. *A. flavum* Ridl. in J. Straits Branch Roy. Asiat. Soc. 32: 133. 1899.

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Herbs, 2.5-3.5 m high; rhizome branched, yellowish-brown within; pseudo-stems 2.5–3.5 cm thick, reddish at base. Leaves distichous, 40–60 x 7–12 cm, elliptic or lanceolate, cuneate at base, acuminate at apex, glabrous; petioles short; ligules ca. 1cm long, bifid. Inflorescence many; peduncles 12–22 cm long; sterile bracts 4–5 x 2.5–3.5 cm, spirally arranged, ovate, cuspidate, red; spikes 7.5 x 4–7 cm, oblong; floral bracts 4.5–5.5 x 2–2.5 cm, ovate, slightly notched at apex, reddish-purple; bracteolate 1.2–1.4 cm long, tubular, pinkish-purple; pedicels 2–3 x 4–5 mm. Calyx 2.5–3 cm long, tabular, 3-keeled, puberulous on keels towards apex, red; limb bilobed, ca. 5mm long, ovate. Corolla 4.1–4.6 cm long, trilobed, white; lateral lobes 2.5–2.8 x 1–1.2 cm, elliptic-oblong, obtuse to subacute; median lobe 2.5–3 x 2.5–3 cm, obovate, obtuse, boat shaped. Labellum 3.5–4 x 3.8–4.2 cm, wedge-shaped, undulate-crispate at margin, white with thick yellow red-striated median band, trilobed at apex; lateral

lobes ca. 1.5 x 2 cm, rounded, hyaline; median lobe 6–8 x 8–10 mm, triangular, obtuse, subacute, sometimes bilobed, hyaline, white with two thick yellow spots at middle. Staminodes 2, 4–5 mm long, linear-subulate, attached at the base of lip. Anthers 1–1.3 x 0.5–0.6 cm, puberulous; crest 0.5–0.6 x 1.5–1.7 cm, trilobed, white; lateral lobes orbicular; median lobe truncate, rounded or irregularly crenate at apex; filament 1.2–1.4 x 0.3–0.4 cm, linear, flat, glabrous. Ovary 0.4–0.5 x 0.3–0.4 cm, puberulous, pink; ovules numerous; style 4.2–4.5 cm long, puberulous; stigma 0.1 x 0.2 cm, cup-shaped, dorso-ventrally compressed, puberulous. Stylodes 2–3 mm long, fleshy, cream colored, many lobed.

Flowering & Fruiting: April–June.

Habitat: Primary forests at an elevation up to 800m.

Distribution: India [Andaman Is. (Kurz, Nair, Bhargava) and Karnataka (present study)], Myanmar, Thailand, Vietnam, Malaysia, Indonesia and, New Guinea.

Specimens examined: (K, CAL), s.n., 23.ix.1867, India,

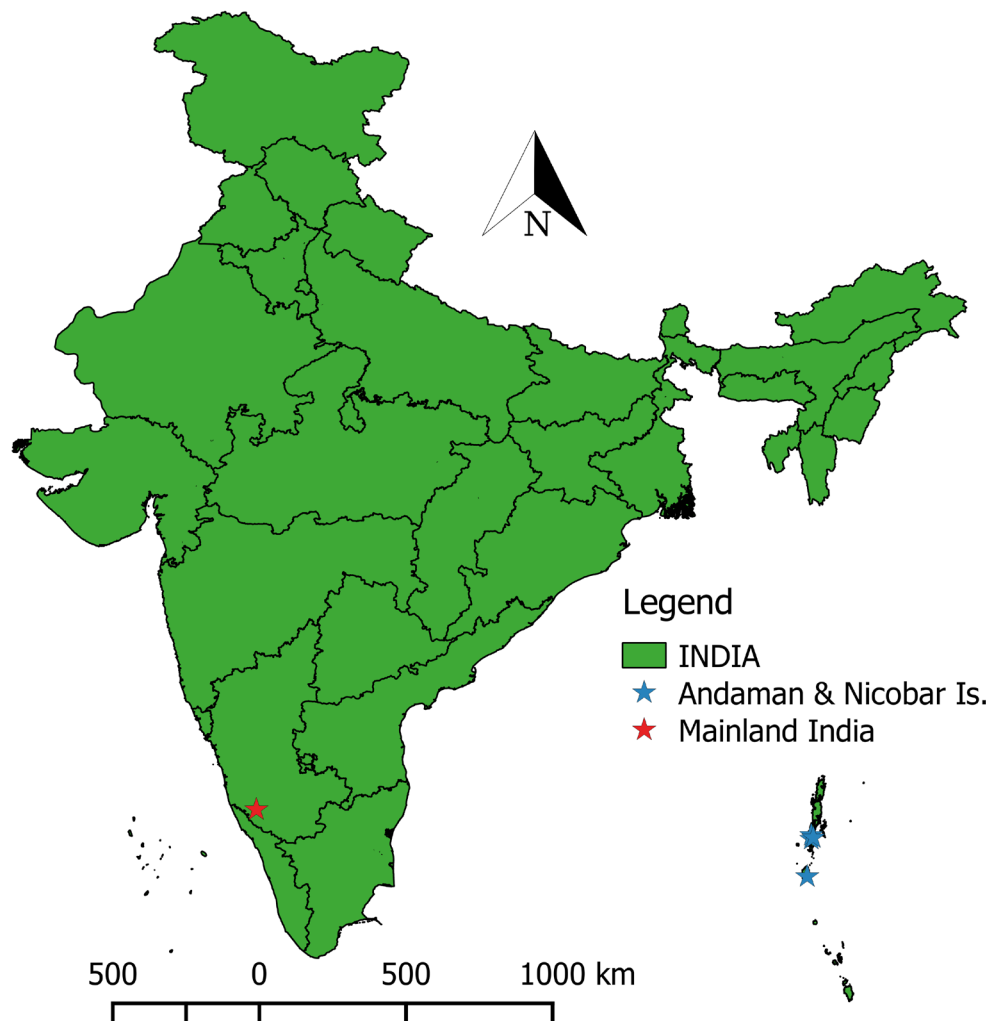
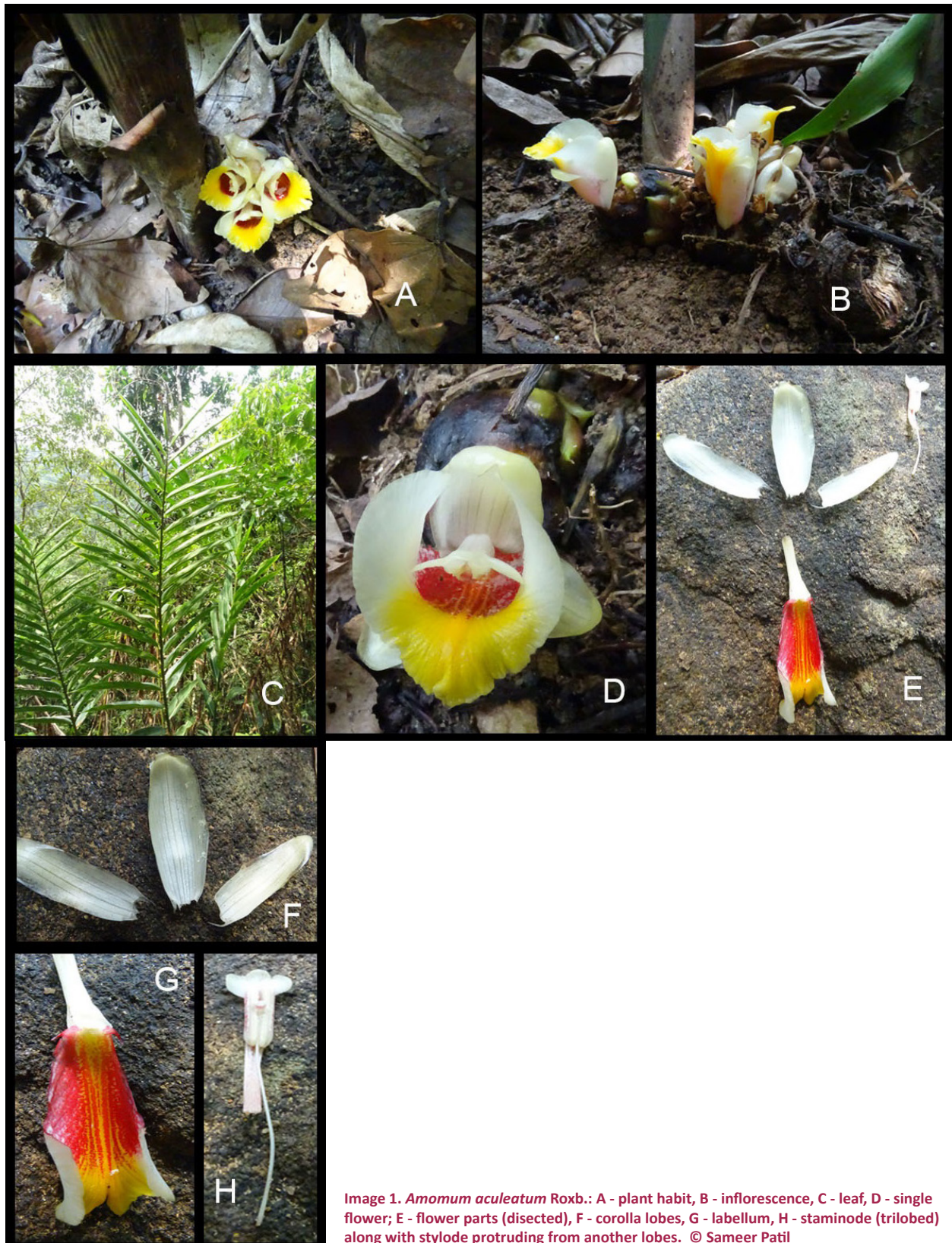


Image 1. *Amomum aculeatum* Roxb.: distribution map (georeferenced)



Andaman & Nicobar Islands, South Andaman Island, coll. S. Kurz; 119, 06.iii.1903, Andamans, C.G. Rogers (CAL); 3751, 15.v.1976, Ferrargunj, N.G. Nair (CAL) & 3752, 15.v.1976, Ferrargunj, N.G. Nair (CAL, PBL); 4133, 14.viii.1976, way to forest nursery, Little Andaman, N. Bhargava (PBL); 206709, 04.iv.2017, towards waterhole Marigundi, Pushpagiri Wildlife Sanctuary, Kodagu, Karnataka, 12.633°N & 75.654°E, c. 270m, coll. Sameer Patil (BSI - Botanical Survey of India, Western Regional Centre, Pune).

Notes: The Andaman aborigines use plants of *A. aculeatum* for tranquilizing the giant rock bees *Apis dorsata* and harvest honey from their hives without protective apparels, while the bees remain docile.

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