



***Amomum sabuanum* (Zingiberaceae): A new species from Sikkim, India**

V.P. THOMAS¹, V.A. MUHAMMED NISSAR² & U. GUPTA³

¹Department of Botany, St. Thomas College, Thrissur, Kerala- 680 001, India. E-mail: amomum@gmail.com

²Spices Board, Santhanpara, Idukki, Kerala-685 619, India.

³Indian Cardamom Research Institute, Gangtok, Sikkim-737 102, India.

Abstract

A new species *Amomum sabuanum* (Zingiberaceae) from Sikkim is described and illustrated.

Introduction

The ginger family, Zingiberaceae, is the largest family in Zingiberales with 53 genera and over 1377 species (Kong *et al.* 2010). With about 150–180 species *Amomum* Roxb. is the second largest genus after *Alpinia* Roxb. It is widely distributed in tropical Asia (Xia *et al.* 2004). In India, the members of the genus are mainly restricted to Northeast India, Southern Peninsular India and Andaman and Nicobar Islands (Thomas & Sabu 2012) and about 22 species are known from the country (Thomas *et al.* 2010). Recent explorations throughout India for a revision of Indian *Amomum* have highlighted some additions to the Indian flora (Thomas *et al.* 2009a; Thomas *et al.* 2009b; Thomas *et al.* 2010; Thomas *et al.* 2012a; Thomas *et al.* 2012b; Thomas & Sabu 2012; Thomas *et al.*; 2013a; Thomas *et al.* 2013b). During recent field studies in Sikkim we encountered an unknown species at Pangthang, ICAR field station and this matched a historical collection by Prain in CAL, labelled “Rungbu, Sikkim Himalaya, May 1903” which had already been flagged up as something special. There are no previous reports regarding the occurrence of similar taxa in the works of Kumar (2001), Smith (1994), Press *et al.* (2000) and Delin & Larsen (2000) from Sikkim Himalaya, Bhutan, Nepal and China respectively. On critical examination we believe it to be a new species and it is hereby described and illustrated.

***Amomum sabuanum* V.P.Thomas, Nissar & U.Gupta, sp.nov. (Fig. 1 & 2)**

Similar to *Amomum kingii* but differs in having cuneate lamina bases, white pink-tinged flowers, 3–4 flowers per bract, short peduncles (0–1 cm long), 3-horned calices, smooth walled capsules with concave apices.

Type:—INDIA. Sikkim: East Sikkim District, Pangthang, ICRI field station, 7 May 2007, V.P. Thomas & V.A. Muhammed Nissar 95506 (holotype CAL!, isotype CALI!).

Rhizome non-stoloniferous, stout, robust, 4–5 cm thick, length/breadth ratio ca. 3, creamy white inside. *Leafy shoots* 120–200 cm, robust; clump forming; sheath 3–4 cm wide at base, dark pink to maroon towards base and green tinged with pink towards apex, lined with prominent parallel veins, margin ciliate, pubescent externally, glabrous internally. *Leaves* 5–7 per shoot; lamina oblanceolate, 40–73 × 9.5–18.5 cm, dark green above, glaucous beneath, base cuneate, margin ciliate, slightly wavy, apex acuminate to 1.5 cm long, glabrous except towards the margins on both surfaces, a line of hairs near margin; midrib pinkish, glabrous; veins appressed above; petiole 3–6 cm long, pink tinged with green, densely pubescent internally, glabrous externally. *Ligule* entire, apex rounded, 0.4–0.9 cm long, coriaceous, maroon, margin ciliate, pubescent externally, glabrous within. *Inflorescence* 6.5–10.5 cm long, many flowered, arises from the rhizome just below the aerial shoot; peduncle short up to 1 cm long. *Outer bract* broadly ovate, 2.0–3.5 × 2–3 cm, sterile, 10–12 per inflorescence, chartaceous, brown, prominently veined,

References

- Delin, W. & Larsen, K. (2000) Zingiberaceae. In: Wu, Z.-Y. & Raven, P.H. (eds.). *Flora of China*. Science Press & Missouri Botanical Garden Press, St. Louis, pp. 347–356.
- Kong, J.J., Xia, Y.M. & Li, Q.J. (2010) Inflorescence and flower development in Hedychieae (Zingiberaceae): *Hedychium coccineum* Smith. *Protoplasma* 247: 83–90.
<http://dx.doi.org/10.1007/s00709-010-0145-5>
- Kumar, S. (2001) *Zingiberaceae of Sikkim*. Deep Publications, New Delhi.
- Kumar, S. & Raju, D.C.S. (1989) Large cardamom and its wild relatives in Sikkim Himalayas. *Journal of Hill Research* 2: 102–107.
- Press, J.R., Shrestha, K.K. & Suttan, D.M. (2000) *Annotated checklist of flowering plants of Nepal*. The Natural History Museum, London & Central Department of Botany, Tribhuvan University, Kathmandu, pp. 328–331.
- Smith, R.M. (1994) Zingiberaceae. In: Noltie, H.J. (ed.) *Flora of Bhutan*, Vol. 3, Part 1. Royal Botanic Gardens Edinburgh, Edinburgh, pp. 182–209.
- Thomas, V.P., Dan, M., Sabu, M. & Jabbar, M.A. (2010) *Amomum andamanicum* (Zingiberaceae): a new species from the Andaman Islands, India. *Blumea* 55: 295–299.
<http://dx.doi.org/10.3767/000651910x550954>
- Thomas, V.P. & Sabu, M. (2012) Two new species of *Amomum* (Zingiberaceae) from Western Ghats, India. *Edinburgh Journal of Botany* 69: 313–321.
<http://dx.doi.org/10.1017/s0960428612000133>
- Thomas, V.P., Sabu, M. & Chathurvedi, S.K. (2012) *Amomum carnosum* (Zingiberaceae): a new species from Nagaland, Northeast India. *Kew Bulletin* 67: 549–553.
<http://dx.doi.org/10.1007/s12225-012-9391-3>
- Thomas, V.P., Sabu, M. & Gupta, U. (2009b) Taxonomic studies on cultivars of *Amomum subulatum* Roxb. (Zingiberaceae). *Rheedia* 19: 25–36.
- Thomas, V.P., Sabu, M. & Prabhu Kumar, K.M. (2012) *Amomum nilgiricum* (Zingiberaceae) a new species from Western Ghats, India. *PhytoKeys* 8: 99–104.
<http://dx.doi.org/10.3897/phytokeys.8.2152>
- Thomas, V.P., Sabu, M. & Prabhu Kumar, K.M. (2013a) *Amomum sahyadricum* (Zingiberaceae) a New Species from Western Ghats, India. *Novon* 22: 321–324.
- Thomas V.P., Sabu, M. & Lalramnghinglova, H. (2013b) *Amomum dampuiianum* and *Amomum mizoramense* spp. Nov. (Zingiberaeae) from Mizoram, northeast India. *Nordic Journal of Botany* 31: 561–568.
- Thomas, V.P., Sanoj, E., Sabu, M. & Prasanth, A.V. (2009a) On the identity and occurrence of *Amomum fulviceps* Thwaites (Zingiberaceae) in India. *Rheedia* 19: 13–17.
- Xia, Y.M., Kress, W.J. & Prince, L.M. (2004) Phylogenetic Analysis of *Amomum* (Alpinioideae: Zingiberaceae) Using ITS and Mat K DNA sequence Data. *Systematic Botany* 29: 334–344.
<http://dx.doi.org/10.1600/036364404774195520>