A New species of *Amomum* Roxb. (Zingiberaceae) from Nagaland, India

Valukattil Ponnachan THOMAS1,∗, Mamiyil SABU2, Vettathukattil Abdul Gafoor Muhammed NISSAR3

1. Department of Botany, Catholicate College, Pathanamthitta, Kerala- 689 645, India.  
2. Department of Botany, University of Calicut, Kerala- 673 635, India.  
3. Indian Institute of Spices Research, Calicut, Kerala-673 012; India.  
∗Corresponding author’s email: amomum@gmail.com; Tel: +91 9496362917

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ABSTRACT: A new species of *Amomum* from Nagaland is described and illustrated. The photographs and illustrations are provided. The species shows similarity with *A. maximum* in having bi-lobed ligule and white flowers and non-stoloniferous rhizome, but differs in slender habit, glabrous lamina, ligule with rounded apex, non-perishable, smaller bracteole, obtuse dorsal corolla lobe, pubescent anther lobe and ridged fruits.

KEY WORDS: *Amomum*; India; Nagaland; New species; Zingiberaceae.

INTRODUCTION

*Amomum* s.l. is the second largest genus after *Alpinia* Roxb. in the ginger family with about 150–180 species, widely distributed in Southeast Asia (Xia et al., 2004). In India, the members of the genus are mainly distributed to North-East India, Peninsular India and Andaman-Nicobar Islands (Thomas and Sabu, 2012) and *Amomum* s.s is represented by 8 species (De Boer et al., 2018). Recent studies on Zingiberaceae of Northeast India and Sikkim had led to the discovery of several new species of *Amomum* and allied taxa (Thomas et al., 2009; 2012; 2013; 2014; 2016; Hareesh and Sabu, 2018; Sabu et al., 2018). During the field studies in North-East India, we encountered an interesting species from Kohima of Nagaland, which are distinct from so far described species. On critical examination it turned out to be a new species and here described and illustrated.

TAXONOMIC TREATAMENT

*Amomum nagamiense* V.P. Thomas & M. Sabu, sp. nov.  
Figs. 1 & 2  
Type: INDIA, Nagaland, Kohima Dist.: Kohima, forest behind Zoo, 25 May 2007, V.P. Thomas & V.A. Muhammed Nissar 95440 (holotype CALI!, isotype CATH!).

Similar to *A. maximum* in having bilobed ligule, white flowers, and non-stoloniferous rhizome, but differs in slender habit, glabrous lamina, ligule with rounded apex, non-perishable, smaller bracteole, obtuse dorsal corolla lobe, pubescent anther lobe and ridged fruits.

Rhizome non-stoloniferous, slender, 0.5–0.7 cm thick, length/breadth ratio c. 4, covered with chartaceous, glabrous scales, apex slightly emarginate. Leafy shoots 50–70 cm tall, slender, clump forming; sheath 0.6–1.2 cm wide at base, green, margin membranous and glabrous, puberulous externally. Leaves 3–6 per shoot; lamina elliptic or ob lanceolate, 17–26 × 2.5–5.2 cm, dark green above, pale beneath, base cuneate, margin cili ate towards apex, apex acuminate, glabrous on both surfaces; midrib glabrous; veins raised above; petiole 1.2–4 cm long, pale green, glabrous; veins prominent above. Ligule bilobed, 0.6–1.5 cm long, membranous, apex rounded, drying, deciduous, pubescent externally. Inflorescence c. 6.5 cm long, c. 6 flowered, arising from the rhizome just below the aerial stem; peduncle c. 2 cm long. Outer bract broadly lanceolate, c. 2.8 × 1.8 cm, maroon, membranous, margin glabrous, pubescent externally, glabrous internally; inner bract, lanceolate, 4–4.1 × 0.6–0.9 cm, membranous, not perishable during anthesis, white, margin ciliate, apex curved, pubescent externally, glabrous within, not perishable during anthesis. Bracteole non-tubular, highly reduced, represented by small oblong structure, apical beak absent, 0.4–0.6 × 0.1 cm, white, margin glabrous, puberulous externally, glabrous internally. Flower 7–7.5 cm long, white, borne singly from each bract. Calyx 3-lobed without any subulate horns, 3.4–3.5 × c. 0.8 cm, membranous, white tinged with pink, unilaterally split, cleft c. 1 cm deep, pubescent externally, glabrous within. Corolla tube 2.6–3.2 cm long, c. 0.5 cm wide at mouth, white tinged with pink, pubescent externally, glabrous within except near mouth; dorsal corolla lobe oblong, 3–3.4 × 1.3–1.5 cm, white, margin ciliate, hooded at apex, obtuse, glabrous; lateral corolla lobes lanceolate, 2.9–3.4 × 1–1.4 cm, margin ciliate, apex rounded, glabrous. Labellum obovate, entire, 3.3–4 × 2–2.2 cm, white, yellow patch and pink streaks form design at centre, margin crenulate and unlobed, pubescent towards base internally. Lateral staminodes usually reduced to 0.2 cm long, or absent, base of staminode hairy. Stam en 2.2–2.4 cm long; filament 0.5–0.6 × 0.3–0.35 cm, white, pubescent within; connective puberulous; crest obscurely trilobed, 0.3–0.5 × 1–1.1 cm, white, glabrous; anther thecae oblong, 1.4–1.5 cm long, creamy-white,
Table 1. Comparison between *A. nagamiense*, *A. glabrum*, *A. maximum* and *A. menglaense*.

<table>
<thead>
<tr>
<th>Attributes</th>
<th><em>A. nagamiense</em></th>
<th><em>A. glabrum</em></th>
<th><em>A. maximum</em></th>
<th><em>A. menglaense</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Habit</td>
<td>50–70 cm tall, slender</td>
<td>80–150 cm tall, slender</td>
<td>100–450 cm tall, robust</td>
<td>100–150 cm tall, slender</td>
</tr>
<tr>
<td>Lamina</td>
<td>17–26 × 2.5–5.2 cm, elliptic or oblong-lanceolate, glabrous</td>
<td>25–55 × 4–5 cm, elliptic-lanceolate, glabrous beneath</td>
<td>25–114 × 7–16 cm, oblong to oblong-lanceolate, tomentose beneath</td>
<td>35–40 × 7.5–9.5 cm, elliptic or oblong-lanceolate, glabrous beneath</td>
</tr>
<tr>
<td>Ligule</td>
<td>0.6–1.5 cm long, bilobed</td>
<td>0.3–0.4 cm long, bilobed</td>
<td>2–5.5 cm long, 2-cleft</td>
<td>0.5 cm long, emarginate</td>
</tr>
<tr>
<td>Bract</td>
<td>Not perishable during anthesis</td>
<td>Not perishable during anthesis</td>
<td>Perishable during anthesis</td>
<td>Not perishable during anthesis</td>
</tr>
<tr>
<td>Bracteole corolla lobe</td>
<td>Highly reduced</td>
<td>Tubular, 3 cm long</td>
<td>Absent</td>
<td>Tubular, 3.5 cm long</td>
</tr>
<tr>
<td>Labellum</td>
<td>Yellow patch and pink streaks at centre</td>
<td>Yellow and red patches at centre</td>
<td>Yellow patch and red streaks at centre</td>
<td>Red at center with radiate lines and yellow apex</td>
</tr>
<tr>
<td>Anther</td>
<td>Pubescent at apex and base</td>
<td>Glabrous</td>
<td>Glabrous</td>
<td>Glabrous</td>
</tr>
<tr>
<td>Capsule</td>
<td>Slightly ridged</td>
<td>Crispid winged</td>
<td>Winged</td>
<td>Smooth</td>
</tr>
</tbody>
</table>

base acute, apex nearly rounded, bending outside, pubescent at apex and base; dehiscing throughout their length. *Epigynous glands* 2, 0.8–1 cm long, creamy-white, apex acuminate, glabrous. *Ovary* globose, 0.3–0.4 × 0.2–0.3 cm, pubescent externally, 3-locular; ovules many on axile placenta; style c. 4.8 cm long, glabrous; stigma cup-shaped, c. 0.1 cm across, pale yellow with red spots, mouth ciliate, opening terminal. *Infructescence* c. 3.5 cm long, 4–5 capsules per spike, calyx persistent; peduncle 2–3 cm long. *Capsule* ovate, slightly ridged, c. 1.5 × 1.6 cm, dark maroon, pubescent externally. *Seeds* many, angular, c. 0.3 × 0.3 cm, arillate; aril white.

**Flowering & Fruiting:** May–June.

**Distribution:** India (Nagaland).

**Ecology:** Found growing as undergrowth in the semi-evergreen forest at an altitude of 1000 m asl in NE India.

**Etymology:** Named for the Indian State Nagaland.

**Affinities:** The species shows similarity with *A. maximum* in having bi-lobed ligule, white flowers, and non-stoloniferous rhizome, but differs in many attributes. A comparison with two other related species *Amomum glabrum* S. Q. Tong and *A. menglaense* S. Q. Tong are also presented (Table 1).

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**LITERATURE CITED**


