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RESEARCH ARTICLE

RHYNCHOGLOSSUM BLUME (GESNERIACEAE): A NEW GENERIC RECORD FOR FLORA OF ANDAMAN AND NICOBAR ISLANDS, INDIA

Apurba Kumar Das and C. Sivaperuman

Zoological Survey of India, Andaman and Nicobar Regional Centre, Port Blair - 744 102, Andaman and Nicobar Islands, India.

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Abstract

The Andaman and Nicobar Islands is rich in floral diversity and high rate of endemism due to the isolations of these islands group and several floral species have yet to be reported. In this paper, we report *Rhynchoglossum obliquum* Blume, which is a small flowering plant (Angiosperm) belongs to family Gesneriaceae, this genus till now unknown from these islands. We recently collected this specimen from the Limestone Cave area in Nayadera Village, Baratang Island, marking the first recorded instance of this genus in the Andaman and Nicobar Islands. The study includes a concise taxonomic description, photographs, a distribution map, conservation status and details on its ethnomedicinal uses.

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Introduction:-

The genus *Rhynchoglossum* Blume belongs to the family Gesneriaceae and is native to tropical and subtropical regions of Asia (POWO, 2024). *Rhynchoglossum* is a relatively small genus, consisting of approximately 14 species globally (POWO, 2024). In India, the genus *Rhynchoglossum* is currently represented by four species: *R. ampliatus* (C.B. Clarke) B.L. Burtt, *R. lazulinum* A.S. Rao & J. Joseph, *R. notonianum* (Wall.) B.L. Burtt, and *R. obliquum* Blume (Pattharahirantricin, 2014; Sinha and Datta, 2016; Moller et al., 2017; Pattharahirantricin and Poopath, 2021; Taram et al., 2023). During a recent floristic survey near Limestone Cave in Nayadera Village, Baratang Island, the authors collected a specimen in its flowering and fruiting stages (Fig. 1). Upon detailed examination, it was identified as *Rhynchoglossum obliquum* Blume, commonly referred to as small-flowered tongue-lip. A review of existing literature indicates that this genus has not been documented in the Andaman and Nicobar Islands (ANI) to date (Lakshminarasimhan and Rao, 1996; Hajra et al., 1999; Sinha, 1999; Pandey and Diwakar, 2008; Diwakar et al., 2008; Prasad et al., 2009; Sinha and Datta, 2016; Das and Sivaperuman, 2023). Therefore, this study marks the first recorded instance of the genus in ANI. To aid in its identification, a detailed taxonomic description, phenology, distribution, conservation status and color photographs are provided. Voucher specimens have been deposited in Port Blair for future reference.

Taxonomic Treatment

Rhynchoglossum obliquum Blume, Bijdr. Fl. Ned. Ind.: 741. 1826, *Antonia obliqua* (Wall.) R.Br. in N.Wallich, Pl. Asiat. Rar. 3: 65. 1832, *Loxotis intermedia* Benth. in Scroph. Ind.: 57. 1835, *Loxotis obliqua* (Wall.) R.Br. in J.J.Bennett, Pl. Jav. Rar.: 102. 1838, *Rhynchoglossum blumei* A.DC. in A.P.de Candolle, Prodr. 9: 274. 1845, nom. superfl. *Rhynchoglossum hologlossum* Hayata in Icon. Pl. Formosan. 5: 131. 1915, *Rhynchoglossum obliquum* (Wall.) A.DC. in A.P.de Candolle, Prodr. 9: 275. 1845, nom. illeg. *Rhynchoglossum obliquum* var. *hologlossum*

Corresponding Author:- Apurba Kumar Das

Address:- Zoological Survey of India, Andaman and Nicobar Regional Centre,
Port Blair - 744 102, Andaman and Nicobar Islands, India.

(Hayata) W.T. Wang in Bull. Bot. Res., Harbin 4(1): 31. 1984, *Rhynchoglossum obliquum* var. *intermedium* (Benth.) A.DC. in A.P.de Candolle, Prodr. 9: 275. 1845, *Rhynchoglossum obliquum* var. *parviflorum* C.B. Clarke in A.L.P.P.de Candolle & A.C.P.de Candolle, Monogr. Phan. 5: 162. 1883, *Rhynchoglossum papuae* Schltr. in Bot. Jahrb. Syst. 58: 299. 1923, *Rhynchoglossum rheedei* A.DC. in A.P.de Candolle, Prodr. 9: 274. 1845, *Rhynchoglossum zeylanicum* Hook. in Bot. Mag. 71: t. 4198. 1845, *Paederota obliqua* A.Dietr. in Sp. Pl., ed. 6. 1: 563. 1831, *Wulfenia intermedia* Wall. in Numer. List: n.º 408. 1829, not validly publ., *Wulfenia obliqua* Wall. in Tent. Fl. Napal. 2: 45, t. 35. 1826 (POWO, 2024).

The taxonomic description was prepared using freshly collected specimens from the field, supplemented by references to descriptions provided by Kartonegoro (2013) and Pattharahirantricin (2014).

Plants annual herb, not rhizomatous, 30–90 cm high. Stem glabrous to sparsely puberulent, young stem pubescent. Leaves ovate to elliptic, 3–14 × 1–6 cm, margin entire to undulate, base unequal, one side rounded to cordate, other side attenuate to cuneate, apex acuminate, glabrous to hairy on both surfaces, secondary veins 10–12 pairs, petioles 1–5 cm long, terete, sparsely puberulous to glabrescent. Inflorescence terminal, up to 20–24 cm long, with 5–20 flowers, peduncles 2–5 cm long, pedicel glabrous or pubescent, 2–5 mm long, bracteoles linear, 1–2 mm long. Calyx campanulate, pale green, often tinged blue, tube 3–8 mm long, lobes triangular, 1–3 mm long, glabrous or pubescent. Corolla personates, 10–15 mm long, tube glabrous, 3–8 mm long, pale blue to dark purple or whitish blue, upper lip 2-lobed, 5–10 mm long, lower lip 3-lobed, 10–15 mm long, with a white to bright yellow pubescent dot at throat. Stamens 2, anthers 0.5–1 mm diameter, thecae nearly parallel, filaments glabrous, 1–5 mm long, staminodes 2. Disc flat, ca. 1 mm. Ovary ovoid to oblong, glabrous, ca 1.5–3 mm long, style glabrous 5–10 mm long, stigma minute, capitate. Capsule ovoid, glabrous, 3–5 mm long, enclosed by calyx, style persistent, 5–8 mm long. Seeds minute, 0.5 mm long, ellipsoid, dark brown, surface tessellate with granules (Fig. 2).

Flowering & Fruiting:

August–December.

Habitat:

This annual herb was observed growing in scrub forests near Limestone Cave areas, as well as on rock walls and along rocky stairways.

Distribution:

Bangladesh, Bismarck Archipelago, Borneo, Cambodia, China South-Central, China Southeast, East Himalaya, Hainan, India (Andhra Pradesh, Karnataka, Kerala, Maharashtra, Odisha, Sikkim, Arunachal Pradesh, Meghalaya, Assam, Nagaland, Uttar Pradesh, Mizoram, Manipur, Tripura) and now from Andaman Island, Jawa, Laos, Lesser Sunda Island, Malaya, Maluku, Myanmar, Nepal, New Guinea, Philippines, Sulawesi, Sumatera, Taiwan, Thailand, Tibet and Vietnam (POWO, 2024; Sankara Rao and Deepak Kumar, 2024).

Specimens examined:

India: Andaman and Nicobar Islands, Limestone Cave path, Nayadera Village, Baratang Island, 13th November 2024, Apurba Kumar Das 005598 (PBL).

Location:

Latitude: 12°05'36.04"N, Longitude: 92°44'38.04"E, Altitude: 30 m MSL.

Conservation Status:

During our field visit at Limestone Cave in Nayadera Village, Baratang Island, we observed ca. 72 individual in a single place, the population are fragmented on Limestone. *R. obliquum* may be under threat due to human disturbance, tourism and habitat destruction as this area is not under protected areas. Hence, we propose the IUCN conservation status of *R. obliquum* as Data Deficient for ANI.

Ethnomedicinal uses:

The plant is used traditionally as antifungal against fungi disease (Manuel et al., 2023).

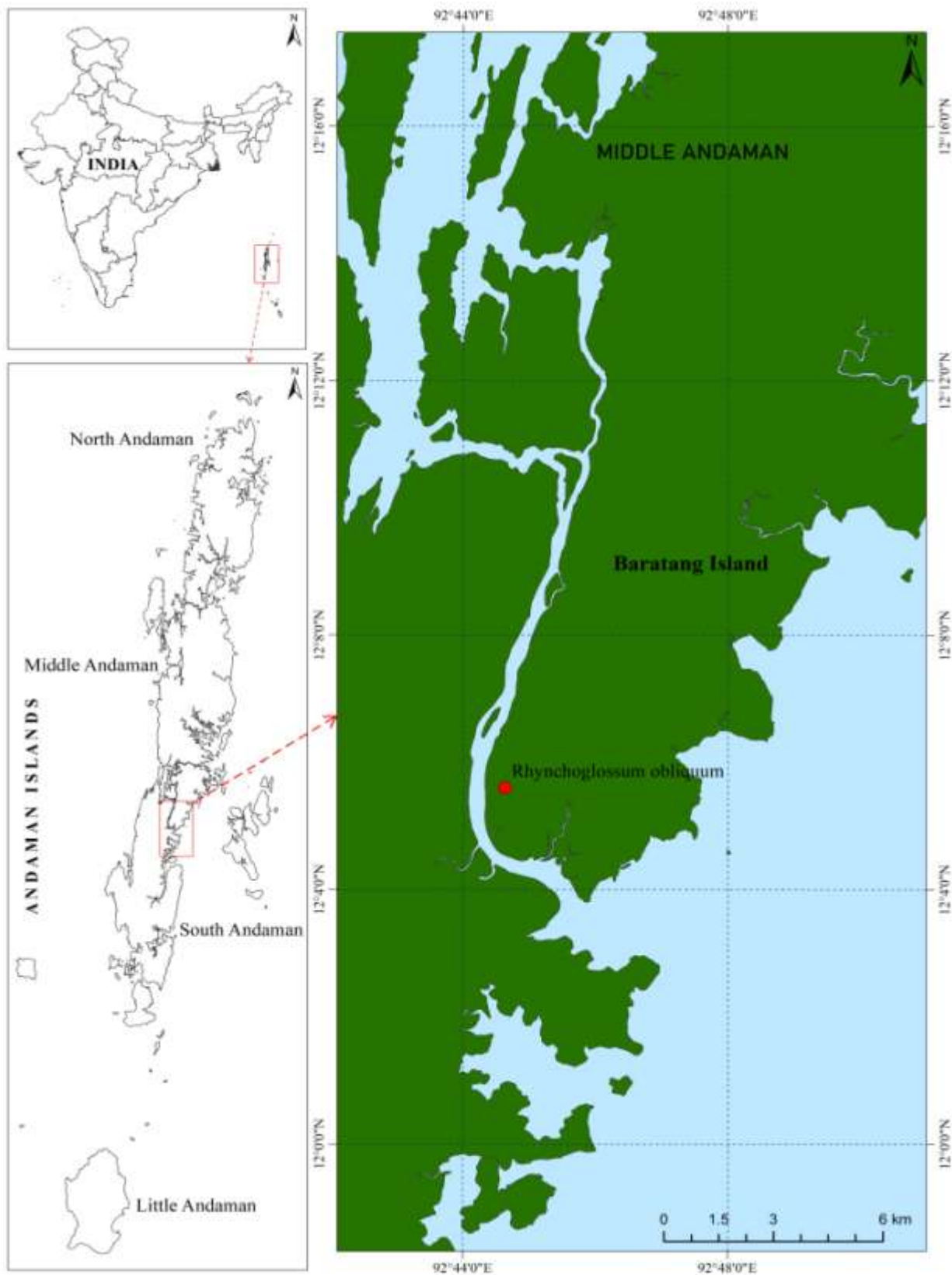


Fig. 1:- Distribution map of *Rhynchosglossum obliquum* Blume, in Nayadera Village, Baratang Island.



Fig. 2:- *Rhynchoglossum obliquum* Blume (Gesneriaceae): A- Habit; B- Ventral leaf blades; C- Dorsal leaf blade; D, Pubescent stem; E- Flower buds; F- Flowers; G- Close-up view of the flower; H-Capsule. Photographs by A.K. Das (A-H).

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