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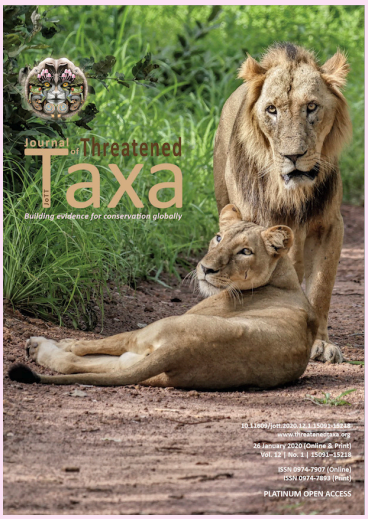

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NOTE

Rhynchotechum parviflorum Blume (Gesneriaceae): a new record to mainland India

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The genus *Rhynchotechum* Blume is a group of understory shrubs distributed in southeastern and eastern Asia, from India to Japan (Odyuo & Roy 2017). It is characterised by having opposite to alternate leaves, pink flowers arranged in cymose inflorescences and white indehiscent berries. It has recently been revised by Anderson & Middleton (2013) who recognized a total of 16 species, of which nine are distributed in India namely (*R. alternifolium* C.B.Clarke, *R. calycinum* C.B.Clarke, *R. ellipticum* (Wall. ex D.Dietr.) A.DC., *R. gracile* B.M. Anderson, *R. hookeri* (C.B.Clarke) B.M.Anderson, *R. obovatum* (Griff.) B.L.Burtt, *R. parviflorum* Blume, *R. permolle* (Nees) B.L.Burtt, and *R. vestitum* (Griff.) Wall. ex C.B.Clarke) from which seven (with the exception of *R. parviflorum* and *R. permolle*) are from northeastern India.

Arunachal Pradesh, the largest state in northeastern India covering an area of 83,743km^2, has the second largest forest cover (67,248km^2) in the country (Gurung et al. 2003). The state falls under the continuous belt of Himalaya extending from the plains of Assam to the steppe rugged alpine mountainous belts neighbouring Tibet and Bhutan. Recent studies on the family Gesneriaceae of the state have led to the publication of several new species such as *Boeica clarkei* Hareesh et al. (2018), *Didymocarpus moellerii* A. Joe et al. (2016: 57), *Lysionotus bijantiae* D. Borah & A. Joe (2018: 232), and *L. gamosepalus* W.T. Wang (1983) var. *biflorus* A. Joe et al. (2017: 337). *Rhynchotechum* is known in the state by all the five species present in northeastern India except for *R. hookeri* (distributed in Assam, in almost opposite boundary neighbouring West Bengal and Bangladesh) and *R. gracile* (known from previous Assam, which consisted most of the northeastern states also Arunachal Pradesh, the locality of the type collection is unknown, and hence its distribution in Arunachal Pradesh is doubtful) (Anderson & Middleton 2013). Even a new species of *Rhynchotechum* (under press) is also found from the state. The genus has very little economic importance owing to its congeners in the family, though plants under this genus are known to have some ethnobotanical uses (Kayang 2007). Considering the richness in diversity, the state has high potential for discovery of both new species and records for the region.

On recent studies conducted on the ethnobotany of

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Image 1. ***Rhynchotechum parviflorum*** **Blume: A—habit | B—inflorescence | C—inflorescence branch | D—part of calyx.**

Adi-Komkar tribe in Upper Siang District of Arunachal Pradesh, an interesting specimen of *Rhynchotechum* was collected. After study of different literature (Clarke 1874, 1884; Wang et al. 1998; Anderson & Middleton 2013; Sinha & Datta 2016; Odyuo & Roy 2017; Roy et al. 2019), and consultation of herbarium specimen housed at different herbaria (CAL, ARUN, ASSAM, K, E, PE), it was identified as *R. parviflorum*, the type species of the genus known previously from Myanmar, Thailand, Vietnam, China, Sumatra, Kalimantan, Sulawesi, Indonesian New Guinea, Papua New Guinea, Philippines, and Nicobar Islands of India. The presence of this species in the state is not unexpected, considering its distribution in the neighbouring countries. As there is no record of this species from mainland India, the authors hereby report the newly collected specimen as the first authentic distribution record of *R. parviflorum* in mainland India.

***Rhynchotechum parviflorum* Blume,**

Bijdr. Fl. Ned. Ind. 775 (1826); C.B.Clarke in Hook.f., Fl. Brit. India 4: 373 (1884); Vietnam 3(1): 25 (1993); B.L.Burtt, Thai Forest Bull., Bot. 29: 107 (2001) (Image 1 & 2).

Subshrubs, branched or unbranched; stems 30–150 cm tall, 0.5–1.2 cm diameter. Leaves opposite, to sub-opposite; petiole 1.9–5 cm long, glabrous, green; blade broadly elliptic to obovate, 16–27 cm × 8–13 cm, apex acute, base narrowly cuneate to cuneate, margin crenate, adaxially dark green glabrescent, abaxially pale yellow, rusty woolly at young stage, glabrescent when mature, brown pubescent on veins; mid vein channelled, impressed above, raised below, lateral veins opposite to sub-opposite, 12–24 pairs. Inflorescence green to rusty brown, 1.5–3 cm long, 1–2 branched, rusty villous; bracts widely subulate, pinkish, slightly membranous, rusty pubescent to glabrous; pedicel 4–7 mm, villous; calyx greenish to pinkish-brown, lobes triangular with apices rounded 6–8 mm × 1–1.5 mm, villous; corolla glabrous, pink, zygomorphic with a dark purple spot in the base, tube short upper lobes 1–1.2 × 0.8–1 mm, oblong, apex rounded, lower lobes 1–1.5 × 1–1.2 mm, stamens inserted at the base of the tube, filaments 0.5–1 mm, anthers 1 mm across, ovary 1 × 1 mm, shortly puberulent; style white, 3–5 mm long, stigma white, truncate. Berries not seen.

Phenology: Flowering May–June

Note: *Rhynchotechum parviflorum* is nearly similar to *R. calycinum* and *R. hookeri* in having oblanceolate to elliptic ovate leaves, short fascicled inflorescence and sericeous pedicel whereas differs in having villous calyx lobes (vs. glabrous in *R. calycinum*), puberulent and shorter style (vs. glabrous to pubescent and longer style in *R. hookeri*).

Image 2. *Rhynchotechum parviflorum* Blume: A—habitat | B—showing the reduced inflorescence with green calyx parts.

Ethnobotany: Tender shoots are eaten raw; Jongkot (Adi-Komkar)

Ecology and distribution: It usually prefers cliffs near perennial streams in primary forests as well as in secondary forests and damp groves near roadsides. It grows in association with *Diplazium esculentum, Lysionotus bijantiae, Henckelia pumila, Boeica clarkei, Rhynchotechum vestitum, Pilea insolens, Pilea umbrosa, Mycetia mukerjiana, Cyclosorus parasiticus, Strobilanthes hamiltoniana, Justicia* sp. etc.

Conservation status: Least Concern.

Specimen examined: 5068 (HAU), 18.vi.2018, Sikem, Upper Siang District, Arunachal Pradesh, India, 28°21'39"N, 95°4'17"E, 300m, coll. M. Taram and O. Taku (Image 3).

Type: Java, Seribu mountains, Blume s.n. [barcode: 0834014]

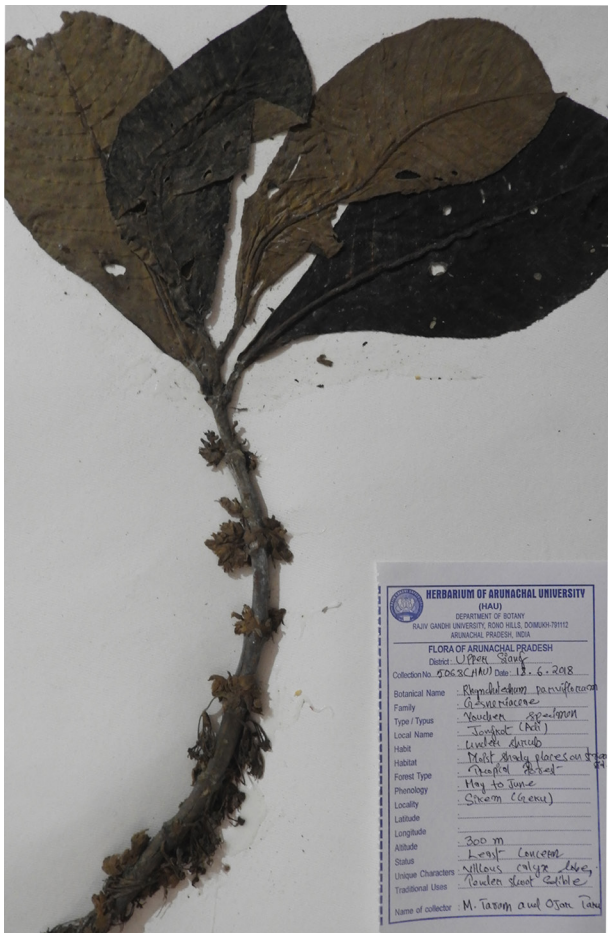

Image 3. Herbarium sheet of *Rhynchotechum parviflorum* Blume (5068 (HAU)).

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