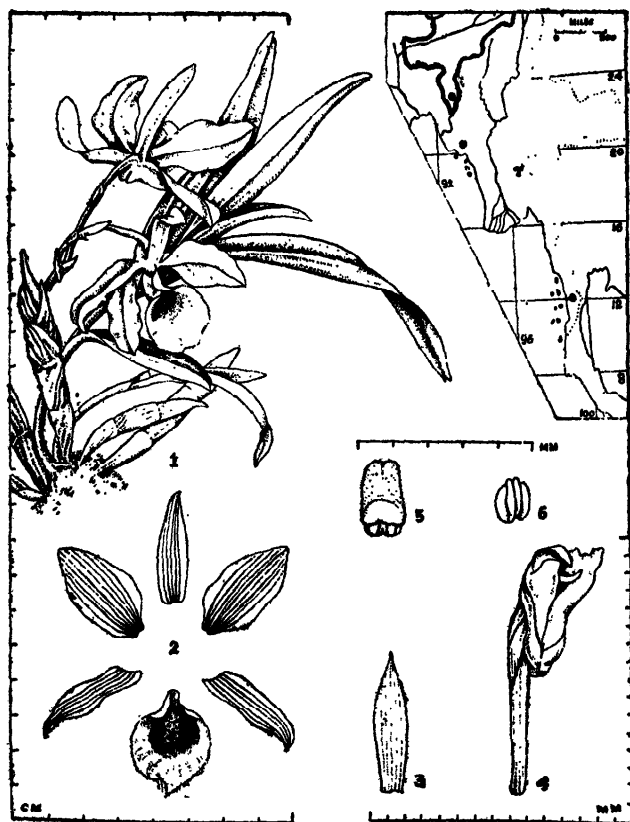


*Dendrobium bensoniae* Reichb. f.

1. Habit. 2. Perigon spread out. 3. Bract. 4. Column.
5. Operculum. 6. Pollinia from BSI(EC) 38042. Inset
map showing localities including type locality (T).

time on the basis of the N.O. plant No. 881 from the Mizo (Lushai) Hills. Incidentally, this additional locality extends in the north the hitherto known distribution of *Dendrobium bensoniae* Reichb. f.

The following short descriptive notes, with analytical illustration and inset distribution map, supplements earlier published data on this orchid.

Dendrobium bensoniae Reichb. f. in Bot. Zeit. 25: 230. 1867; Hook. f. Fl. Brit. Ind. 5: 739. 1890; Veitch Man. Dendrob. 21. 1889 (with fig.); Kraenzlin in Pfreich. 45: 46. 1957.

Stems erect, 4-8 mm thick, 3.5-7.5 cm long. Leaves 2-5, deciduous, 6-nerved. Flowers 2, ca 4.6 cm across, white with 2 dark purple blotches in the lip surrounded by a band of yellow. BSI (EC) 38042 (ASSAM).

ACKNOWLEDGEMENT

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RUBUS GHANAKANTAE ROLLA RAO ET JOSEPH—A NEW SPECIES FROM ARUNACHAL PRADESH

Rubus ghanakantae Rolla Rao et Joseph Sp. Nov.

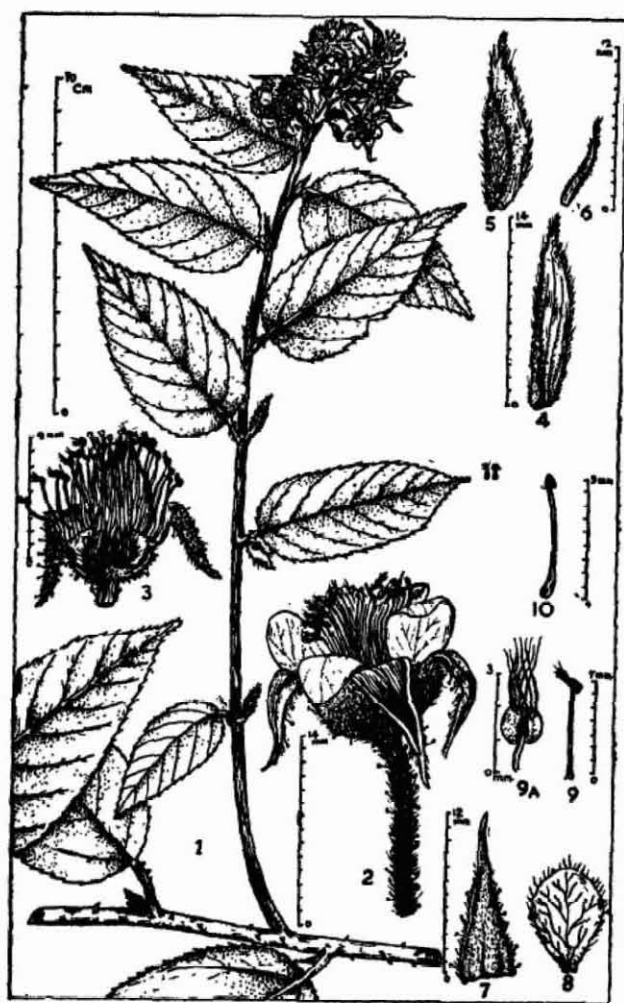
Affine *Rubus preptanthus* Focke speciem Siensis, sed ab omnibus generis speciebus notis differt praesentia pili cespitosus typicorum ad apicem ex omnis anthera.

Holotypus lectus ad Rahung-Bomdila (2,160 m alt.) in Kameng district, Arunachal Pradesh die 5 Junii 1957 et positus in CAL sub numero Rolla 8086A, Isotypi Rolla 8086 B-E varie distribuendi.

Rubus ghanakantae is to some extent allied to the Chinese species, *Rubus preptanthus* Focke, but is quite distinct from all the known species of the genus by the presence of characteristic tuft of hairs at the tip of each and every anther.

Prickly shrub, about 2 m high; prickles sparse, small, hooked, often absent on flowering twigs.

Mature stem glabrous; tender branches cottony-pubescent. Leaves simple, 4-12 × 1.5-4.5 cm, shortly petioled, stipulate, ovate to lanceolate, shortly acuminate, spinulose-serrate, glabrous on upper surface with fine pubescence along midrib and veins, lower surface densely pubescent; sometimes petiole and mid-rib on lower surface with small, tender-hooked spines; stipules entire, -14 mm × 3 mm, lanceolate, acute, longer than petiole, finely villous outside and glabrous inside, deciduous. Inflorescence -4 cm long, sub-corymbose, few flowered, terminal, velvety-tomentose sparsely intermixed with glandular, capitate bristles. Flowers -2.3 cm in diameter, creamy-white, pedicellate; pedicels -14 mm long, densely-tomentose, sparsely intermixed with glandular capitate bristles; bracts stipule-like -12 mm × 5 mm, oblong to lanceolate, sub-equally bifid at tip, densely



Rubus ghanakantae Rolla Rao et Joseph

Figs. 1-10: 1. Flowering twig. 2. Flower. 3. Sectional view of flower. 4. Stipule. 5. Bract. 6. Bractlet. 7. Sepal (adaxial view). 8. Petal. 9. Stamen. 9a. Ventral side of anther with tuft of hairs at top. 10. Carpel.

villous outside and glabrous inside; bracteoles setaceous, 5-7 mm long, less than 1 mm broad, densely villous outside; sepals 5, united, each -12 mm long and 4-5 mm broad at base, lanceolate, subulate at apex, thick, reflexed, densely tomentose outside; sparsely intermixed with glandular capitate bristles, finely pubescent inside; petals 5, free, inserted on calyx-cup, each -8 × 5 mm, creamy white, obovate, finely hairy on both surfaces; stamens numerous, each -7 mm long, uniseriate along the periphery of calyx-cup; filaments glabrous, anthers dorsifixed, with a tuft of fine hairs at the tip; hairs arising from the ventral side tip of each anther. Carpels numerous, free, each -9 mm long, glabrous, crowded at the centre of calyx-cup on the convex receptacle,

inter-mixed with long erect hairs; ovary and style glabrous; stigma laterally diverging, warted; ovule solitary. (Figs. 1-10).

The *Holotype* (Plate I) was collected along the moist soil slopes leading to the ascent of Bomdila, at about 2,160 m altitude nearly 4.5 km from Rahung, Kameng district, Arunachal Pradesh (92°30' E, 27°20' N) on the 5th June 1957 and deposited in CAL herbarium under *Rolla* 8086A. The various *Isotypes* *Rolla* 8086 B-E collected from the same locality have been distributed to different herbaria in India (ASSAM) and abroad (K, GH).



Plate I: *Holotype* of *Rubus ghanakantae* Rolla Rao et Joseph

While critically examining the material, every care has been taken to check up this taxon with reference to species described from the regions surrounding Arunachal Pradesh as available at Kew, including *Rubus preptanthus* Focke. A distinct type of indumentation with few flowered inflorescence and much larger calyx, separates this new species clearly from *Rubus assamensis* Focke.

Though rather too early to speculate the distribution of this species, as the species grows fairly

common along the type locality, it would, however, be quite possible to locate this species along the lower valleys of the Arunachal Pradesh Himalayas towards the east and also in Bhutan hills towards the west.

The authors have the pleasure of naming this species after Shri Chanakantha Deka, the veteran assistant of the Shillong Herbarium (ASSAM) who has rendered valuable service for the Flora of Assam.

ACKNOWLEDGEMENTS

The authors wish to express their thanks to the Director, Royal Botanic Gardens, Kew for his opinion and to the Director, Botanical Survey of India, for his encouragement.

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POLYGALA MARIESII HEMSLE.—NEW DISTRIBUTION IN INDIA

On a critical scrutiny of *Polygala* material from Assam, two specimens from Kameng district, Arunachal Pradesh, *Panigrahi* 6651 & 16025 were found to have been under wrong identification (*Polygala arillata* Buch.-Ham. var. *purpurascens* C. B. Cl. ex Mukherjee, and *P. arillata* Buch.-Ham. respectively). These were identical with a specimen from Naga Hills (*Bor* 18367) which had been identified as *Polygala mariesii* Hemsl., a species described on a collection of Maries & A. Henry from Ichang gorge of Hupeh in China (Jour. Linn. Soc. 23: 61. t. 2B figs. 7-13. 1886). Even though *Bor*'s plant from Naga Hills was correctly identified by S. K. Mukherjee, no mention of this species occurrence in India has been made in his monograph on Indian Polygalaceae (Bull. Bot. Soc.

Bengal, 12: 29-49. 1958); perhaps the specimen had been annotated later. This review of the material has made it possible to record the distribution from the original type locality in China to Kameng dist., Arunachal Pradesh in the west, and Naga Hills in the south. *Polygala mariesii* Hemsl. can be easily distinguished from *P. arillata* Buch.-Ham. and its varieties, by its compressed clavate capsules and densely pilose seeds.

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Thanks are due to Dr. A. S. Rao, Regional Botanist for helpful suggestions.

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TWO NEW ADVENTIVES TO THE SHILLONG FLORA

Shillong, founded about 1864 as a township has considerably grown during the century and with this growth, the complexion and contents of its vegetation too, has gradually changed. At different times, adventive species have entered and have become naturalised. In a detailed study of the flora of this hill station and now triple provincial capital (Assam, Meghalaya and Arunachal Pradesh), two fresh adventives were observed and are now reported.

Sauromatum guttatum (Wall.) Schott, not an unfamiliar aroid in other parts of India, this was hitherto unknown in Shillong. A gathering of a corm in foliage, from Mowprem, near the Hindu Mission (K. M. Dey 32631, May 1, 1964), was naturally presumed to be the locally common and familiar *Amorphophallus* sp. On transplanting in

the 'Woodlands' experimental garden the corm, devoid of foliage duly produced an oblong narrow dark-brown spathe with enclosed spadix (G. K. Deka 32354, June 23, 1965) which enabled its identification as *Sauromatum*. The single corm has proved prolific and notwithstanding repeated destruction of several corms, the plant has found it apparently congenial, periodically flowering and fruiting, and has established itself well in our garden (A. S. Rao s.n. April 7, 1966 & 38382, April 22, 1970). Both in foliage with its long cylindrical, upright, dark black green-spangled, stout, leaf-stalk and spreading palmately dissected leaves, as well as in bloom with its single upright oblong, contrastingly dark-brown and red respectively without and within the spathe, and the inner long cylindrical spadix, this plant also,