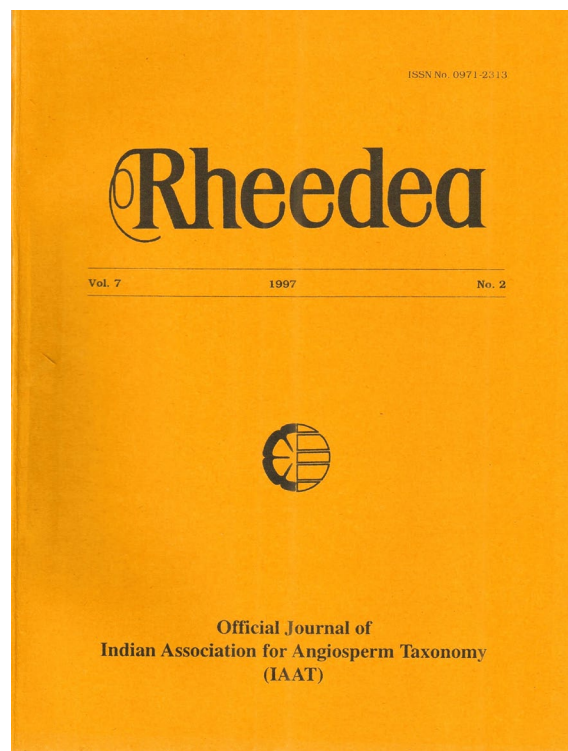




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## A new Species and some New Records of Orchids from Arunachal Pradesh, India

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### Abstract

Nine species of orchids including one new species viz., *Oberonia arunachalensis* are reported for the first time from Arunachal Pradesh as new additions to the state. Out of them, one species viz., *Gastrochilus suavis* Seidenf. is a new record to India. All the species are enumerated with brief descriptions and details of distribution.

### INTRODUCTION

Under a flora project on revisionary study of Monopodial (Vandoid) Orchids of Arunachal Pradesh, sponsored by the Department of Science and Technology, Govt. of India, various collection trips have been conducted to selected areas in Lohit, Changlang, West and East Kameng districts of the state from March to November 1996. During the tours, several species of orchids belonging to the Vandoid, Neottioid and Epidendroid groups were collected, of which some proved to be new species and some to be new distributional records either to Arunachal Pradesh or to India. The present paper deals with one new species of *Oberonia*, and eight new records of orchids which are not reported earlier from Arunachal Pradesh. All these orchids are enumerated below in alphabetical order with a brief description and notes on distribution.

### ENUMERATION

1. ***Cymbidium sinense*** (Jacks.) Willd., Sp. Pl. 4: 111. 1905; Du Puy & Cribb, Gen. *Cymbidium* 167, pl. 25. 1988.

*Epidendrum sinense* Jacks. in Andr., Bot. Repert. 3: t. 216. 1802.

*Cymbidium munronianum* auct., non King et Pantl. : Hegde, Arun. For. News 3(3): 4. 1980.

Terrestrial herbs growing in the shady places of semi-deciduous tropical rain forest floor. Plants upto 70 cm tall. Leaves 50-100 cm long, 4-5 cm broad, dark green, glabrous

**A. Nageswara Rao**

on the upper surface. Scape upto 60 cm tall. Flowers 15-20, large, green with maroon-red veins on sepals & petals and blotches on the epichile of lip. Sepals 3.5-4.0 cm long. Petals little shorter, hooded on the column. Lip deflexed at middle, 3-lobed; midlobe ovate-oblong, acute, 16-17 cm long, curved back.

*Flowering:* November.

*Distribution:* India (Arunachal Pradesh), China, Burma, Vietnam, Thailand, Ryukyus. Arunachal Pradesh: W. Kameng district, Tipi (200 m), *A.N. Rao 29427* (Orchid Herbarium, Tipi).

2. ***Gastrochilus bigibbus*** (Rchb. f. ex Hk. f.) Ktze., Rev. Gen. 2: 661. 1891; Seidenf., Opera Bot. 95: 303, fig. 197, pl. 35 a. 1988. (Fig. 1, A).

*Saccolabium bigibbum* Rchb. f. ex Hk. f., Bot. Mag. 95: t. 5767. 1867.

Leaves 2-3 cm broad, unequally bilobed with obtuse apex. Sepals and petals greenish yellow with or without faint minute purple dots, upto 6 mm long. Lip white blotched with purple along the rim of the sac; epichile fleshy, ovate, subacute, with side lobes at base with rose margin.

*Flowering:* October-November.

*Distribution:* India (Arunachal Pradesh, Sikkim), Burma, Thailand. Arunachal Pradesh: W. Kameng district, Tipi (Pagla nallah area, 2000 m), *A.N. Rao 28960, 29425* (Orchid Herbarium, Tipi).

3. ***Gastrochilus suavis*** Seidenf., Opera Bot. 95: 298, fig. 194, pl. 34c. 1988. (Fig. 1, B).

Stem short. Leaves 3-4 cm broad, unequally bilobed at apex. Flowers larger, upto 4 in a corymb. Sepals and petals above 10 mm long, densely dotted with red. Lip white with yellow tinge inside the spur, blotched with purple; epichile white and purple dotted on wings and yellow at the centre.

*Flowering:* October.

*Distribution:* India (Arunachal Pradesh), Thailand. Arunachal Pradesh: W. Kameng district, Tipi (Pagla nallah area, 2000 m), *A.N. Rao 29423* (Orchid Herbarium, Tipi).

*Note:* As Seidenfaden (1988) mentioned, this species is very closely allied to *Gastrochilus obliquus* (Lindl.) Ktze. but can easily be distinguished by the strong densely red spotted sepals and petals and few-flowered inflorescence.

A new species and some new records of Orchids

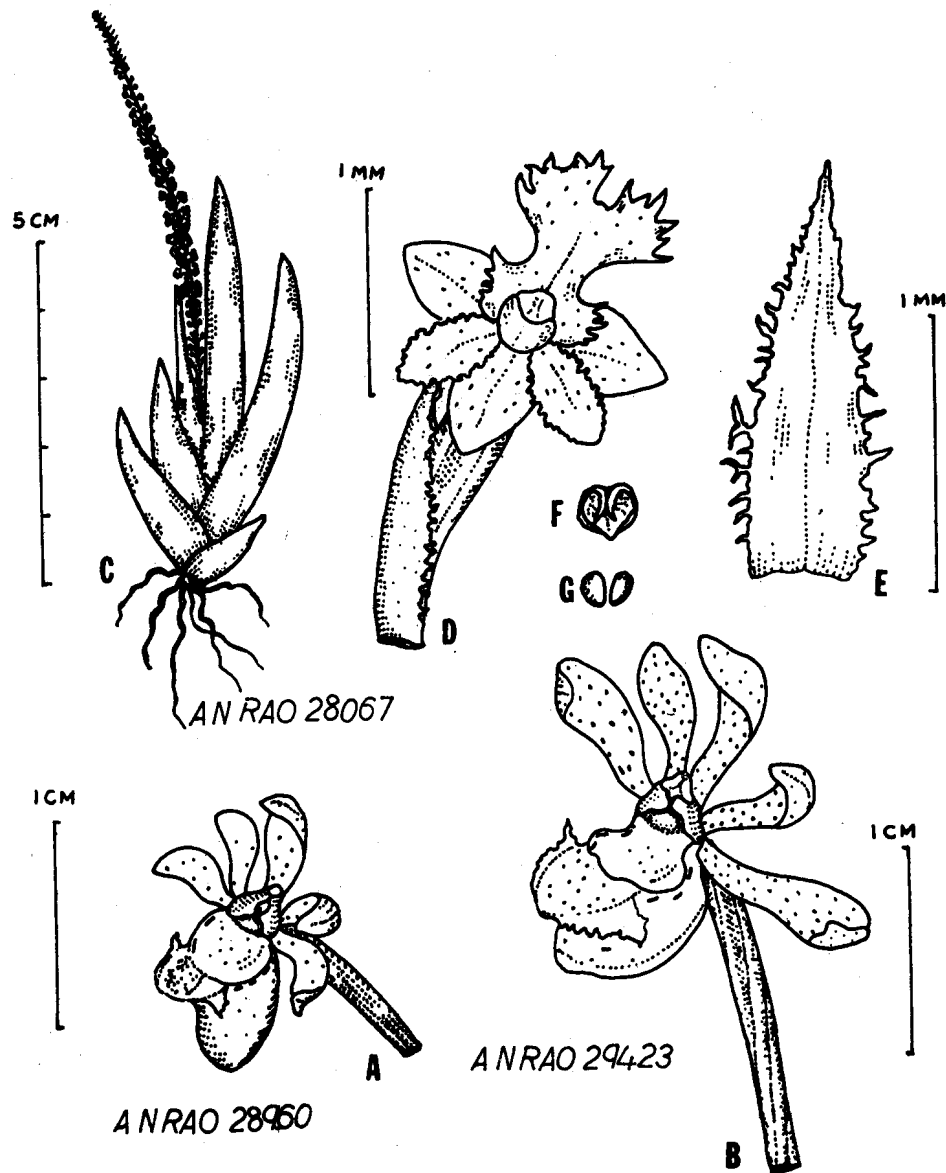


Fig. 1. A. Flower of *Gastrochilus bigibbus*; B. Flower of *Gastrochilus suavis*; C-G. *Oberonia arunachalensis* Nageswara Rao, *sp. nov.*; C. Plant; D. Flower; E. bract; F. Anther; G. Pollinia.

## A. Nageswara Rao

4. **Malaxis calophylla** (Rchb. f.) Ktze., Rev. Gen. 2: 673. 1891; Seidenf., Orch. Gen. Thailand III Dansk Bot. Ark. 33(1): 54. 1978.

*Microstylis calophylla* Rchb. f., Gard. Chron. 2: 718. 1879.

*M. wallichii* var. *brachycheila* Hk. f., Fl. Brit. India 5: 686. 1890.

*M. scottii* Hk. f., Fl. Brit. India 5: 687. 1890; King et Pantl., Ann. Roy. Bot. Gard. Calcutta 8: 17, pl. 20. 1898.

Terrestrial herb reaching upto 20 cm tall. Stem cylindrical, covered with sheaths at base. Leaves 3 or 4, white with brown band along the mid vein and brown spotted along margins, undulate at margins. Scape 10-15 cm long, with sterile bracts on peduncle. Raceme many-flowered. Flowers pale green or cream tinged with purple. Lip obscurely 3-lobed; lateral lobes oblong, acuminate; midlobe triangular and forked at apex.

*Flowering:* June.

*Distribution:* India (Sikkim, Arunachal Pradesh), Burma, Thailand, Cambodia, Malaya, Borneo. Arunachal Pradesh: W. Kameng district, Tipi (Pagla nallah, 200 m), A.N. Rao 28616 (Orchid Herbarium, Tipi).

5. **Oberonia falcata** King et Pantl., Journ. Asiat. Soc. Bengal 64 (2): 329. 1895; Scidenf., Dansk Bot. Ark. 25(3): 75. 1968; Ansari & Balakrishnan, Orch. Monogr. 4:41. 1990.

Pendulous epiphytes growing on moss covered branches of small trees in the subtropical wet evergreen forest. Stem slender, upto 10 cm long. Leaves small, distant, falcate. Inflorescence 7-9 cm long. Flowers small, pale green, arranged in distantly placed semi-whorls, lax towards apex of the rachis. Sepals ovate-oblong, petals oblong. Lip 3-lobed; midlobe with 2 oblong divergent lobules.

*Flowering:* July.

*Distribution:* India (W. Bengal, Sikkim, Arunachal Pradesh), Nepal, Bhutan, Vietnam, Thailand, Malaya. Arunachal Pradesh: W. Kameng district, Sessa (Diji nallah, 1200 m), A.N. Rao 29058 (Orchid Herbarium, Tipi).

6. **Oberonia arunachalensis** Nageswara Rao, *sp. nov.* (Fig. 1, C-G).

Affinis *O. kanburiensis* Seidenf. sed differt inflorescentiis quam foliis longioribus, floribus viridis, petalis ellipto-oblongis, l abello lobo dentato.

Typus: Lohit district, Kamlang (500 m), A.N. Rao 28067 (Holo-Orchid Herbarium, Tipi).

**A new species and some new records of Orchids**

Small epiphytes. Leaves 1.5-5.0 x 0.5 cm, jointed, upto 6. Spike upto 10 cm long, arcuate, longer than leaves, dense-flowered, without any flowers upto about 1.5 cm long from tip. Flowers green, arranged in irregular verticillate rows. Bracts ovate-lanceolate, as long as ovary with pedicel, ovate, subacute. Petals narrower, elliptic-oblong, erose at margin. Lip 3-lobed; lateral lobes dentate at margins; midlobe broadening from middle, bilobed with deep sinus; lobules sub orbicular, dentate at margins.

*Flowering:* July.

*Distribution:* India (Arunachal Pradesh). Arunachal Pradesh: Lohit district, Kamlang Reserve Forest on way to Chamba-glowlake area, 500 m, *A.N. Rao 28067* (Orchid Herbarium, Tipi).

7. **Papilionanthe uniflora** (Lindl.) Garay, Bot. Mus. Leafl. Harv. Univ. 23 (10): 372. 1974.

*Mesoclastes uniflora* Lindl., Gen. Sp. Orch. 45. 1830.

*Aerides longicornu* Hk. f., Fl. Brit. India 6: 44. 1891; King et Pantl., Ann. Roy. Bot. Gard. Calcutta 8: 211, pl. 281. 1898.

Pendulous epiphytes. Leaves terete, slender. Inflorescence extra-axillary. Flowers 1 or 2, upto 3.5 cm long, white with purplish tinge on lip. Lateral lobes of lip deeply bilobed, subulate, midlobe oblong, dilated at apex with a small fork.

*Flowering:* August.

*Distribution:* India (Nagaland, Meghalaya, Arunachal Pradesh), Bhutan. Arunachal Pradesh: W. Kameng district, Lama camp near Dirang (200 m), *A.N. Rao 29280* (Orchid Herbarium, Tipi).

8. **Phalaenopsis lobbii** (Rchb. f.) Sweet, Gen. Phal. : 53. 1980.

*Phalaenopsis parishii* var. *lobbii* Rchb. f. in Saunders' Refug. Bot. 2: t. 85. 1870.

*P. parishii* auct., non Rchb. f. : Hegde, Arun. For. News 3(3): 7. 1980 & Orch. Arun. : 78. 1984.

Small epiphytes. Roots very long, flat, undulate, green. Leaves usually 2, unequal, up to 20 cm long and 5 cm broad, elliptic-oblong, lustrous. Scape shorter than leaves, straight, few-flowered. Flowers about 2 cm across, white with chestnut colour bands on lip, widely opening, arranged in a line and facing oneside. Petals shorter than sepals. Lip mobile, 3-lobed, midlobe reniform.

**A. Nageswara Rao**

*Flowering:* March-April.

*Distribution:* India (Sikkim, Arunachal Pradesh, Assam), Burma, Vietnam. Arunachal Pradesh: Lohit district, Madhuvan near Namsai (400 m), *A. N. Rao 28292* (Orchid Herbarium, Tipi).

9. **Porpax elwesii** (Rchb. f.) Rolfe, *Orch. Rev.* 16: 8. 1908. *Scidenf., Bot. Tidsskr.* 72(1): 10. 1977.

*Eria elwesii* Rchb. f., *Gard. Chron.* 1: 402. 1883.

Tiny epiphytes. Pseudobulbs orbicular, dorso-ventrally flattened, 2-3 leaved. Leaves about 1.5 cm long, elliptic-oblong, acute, apiculate, sessile, green, deciduous just before flowering. Flower solitary, from the apex of the pseudobulb, purplish brown. Sepaline tube 7 x 3 mm, 3 lobes free at 1 mm long tip. Petals free, 4.5 x 2 mm. Lip 3 mm long, attached to column foot, deflexed from middle, papillose at central margins.

*Flowering:* September-October.

*Distribution:* India (Sikkim, Meghalaya, Arunachal Pradesh), Bhutan, Laos, Vietnam, Thailand, Malaya. Arunachal Pradesh: W. Kameng district, Mathapudung near Dirang (2000 m), *A. N. Rao 29365* (Orchid Herbarium, Tipi).

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