

An Enumeration of the Orchids of Ukhrul, Manipur

BY

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In 1948 Captain F. Kingdon Ward^{*} came to the Naga Hills to make botanical collections on behalf of the New York Botanic Garden. The writer was asked to associate himself with him and collect specimens for the Botanical Survey of India. The hunting ground chosen by Captain Kingdon Ward was the district of Ukhrul in the south-east corner of the Naga Hills. This place falls politically within the state of Manipur. Our base camp was the town of Ukhrul, the headquarters of the district. Ukhrul, which is better called a village, is 44 miles north-east of Imphal, the capital of Manipur.

Ukhrul is a hilly district with sandstone ridges and deep valleys. Elevation of the town of Ukhrul is 6,100 feet. The highest hill in the district is near Khayang on the Burma boundary, 45 miles east of Ukhrul, and this is about 2,850 m. (9,300 ft.) high. A little lower is the hill near Tosem Khulen, west of the Somra Tract of Burma, and 34 miles north-east of Ukhrul. Near Ukhrul there are the peaks of Khangkhroi, Karoi and Siroi or Sirohee, the first two being about 2,400 m. (8,000 ft.) high, while Siroi is about 2,550 m. (8,500 ft.).

We reached Ukhrul in February and stayed there up to the end of November, roaming about all the time and making collections between elevations of 900–2,700 m. (3,000 ft. to 9,000 ft.). The area is one of the richest in the types of vegetation, ranging from subtropical to temperate. The present paper is an enumeration of the orchids found in the district. Herbarium materials of all these species have been collected and living plants of about half as many were sent to the Lloyd Botanic Garden, Darjeeling.

Among these orchids *Arundina graminifolia* is the commonest on open slopes between 1,200 to 1,500 m. (4,000 ft. to 5,000 ft.). *Spathoglottis pubescens* with yellow flowers is also common at similar elevations. Dendrobiums predominate among the epiphytes at about 1,800 m. (6,000 ft.). Of these *Dendrobium ochreatum* with golden yellow flowers and tender leaves is abundant between 1,500 and 1,800 m. (5,000 and 6,000 ft.). Species of *Coelogyne* are common at 1,800 m. (6,000 ft.). *Phyllomphax galeandra* decorates the open slopes between 1,800–2,100 m. (6,000 ft.–7,000 ft.). *Anthogonium gracile* is common at 1,800 m. (6,000 ft.). Of this I saw flowers varying in colour from deep purple to almost pure white.

The most beautiful among the orchids collected in the area is *Vanda coerulea*, with its panicle of large violet flowers. This is common at 1,500 m. (5,000 ft.). *Phaius albus* is a terrestrial orchid with very pretty flowers which are white with orange lip. This is not so common as the preceding one. The two species of *Cymbidium* found in that locality, *Cymbidium elegans* and *C. giganteum*, are rare in the forests, while in almost every village they are found hung up in the front of huts.

The first collected orchid was *Phaius Wallichii* which was found in flower in March in one of the valleys. In April we saw *Calanthe gracilis*, *C. angusta*, *Stauroopsis undulatus*, *Dendrobium nobile*, *D. cariniferum*, *D. pulchellum*, *Coelogyne*

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^{*} See Journ. R.H.S., lxxiv, 288 (1949).

corymbosa and *Aerides Vindarum* come to flower. The number increased in the following months, and in July-August there were some fifty species flowering at a time. In September I collected nine species and in October added three more to my collection. In November, when it was rather chilly, the following four species were found to flower, *Coelogyne fimbriata*, *Pholidota protracta*, *Dendrobium longicornu* and *Eria coronaria*. The total number of species found was 73.

An interesting find is *Habenaria malintana* which is common in the Philippines and occurs also in the Malay Peninsula. It was found in Burma at Amherst by the seaside by Parish in 1874, but this not being a good specimen Hooker, in the Flora of British India (vi, 166), placed the species among those imperfectly known. In literature there is no record of its being found in Burma since then, nor in any part of India. In Ukhrul district it was found at different localities above and below 1,200 m. (4,000 ft.). A search in the Calcutta herbarium resulted in the discovery of another specimen, D. Prain No. 3 from Kohima. This was named as *Habenaria geniculata* (= *H. dentata*) which it resembles greatly except for the absence of the spur. With the discovery of this species in Assam the range of its distribution is further extended westwards.*

AERIDES VANDARUM Reichb.

Flowers white with purple tinge, fragrant.

Sirobee, 2,000 m., 21 Apr. 1948, S. K. Mukerjee 2779.

AGROSTOPHYLLUM CALLOSUM Reichb. f.

Lamlang, 2,000 m., 9 June 1948, S. K. Mukerjee 3000.

ANTHOXIPHYLLUM GRACILE Lindl.

Ukhrul, 2,000 m., 18 Aug. 1948, S. K. Mukerjee 3303.

ARUNDINA GRAMINIFOLIA (D. Don) Hochr.

Syn. *A. bambusifolia* (Roxb.) Lindl.

Flowers white with pale violet lip.

Ukhrul, 1,700 m., terrestrial orchid, 25 June 1948, S. K. Mukerjee 3121.

This is found also at much lower elevations.

BULBOPHYLLUM BICOLOR (Lindl.) Hook. f.

Tosen, 2,700 m., epiphyte, 2 Oct. 1948, S. K. Mukerjee 3572.

CALANTHE ANGUSTA Lindl.

Flowers white, fragrant.

Ukhrul, 1,700 m., 29 May 1948, S. K. Mukerjee 2918.

CALANTHE BILOBA Lindl.

Ukhrul, 1,700 m., 25 July 1948, S. K. Mukerjee 3733.

CALANTHE BREVICORNIS Lindl.

Perianth segments yellowish green, lip dull violet.

Sirobee, 2,600 m., 20 Apr. 1948, S. K. Mukerjee 2768; 2,300 m., 10 July 1948, S. K. Mukerjee 3189.

CALANTHE BREVICORNIS Lindl. var. WATTH Hook. f.

Flowers purple, lip yellow at base.

Tuisbar, 1,800 m., 4 Sept. 1948, S. K. Mukerjee 3437.

* It may be noted that a sheet in the Kew herbarium labelled Prain 2 & 3, Kohima, consists entirely of plants with spurred flowers and is therefore *Habenaria dentata* (Sw.) Schltr. *H. malintana* (Blanco) Merrill is represented at Kew by two unpublished records from the S. Shan States, and at Edinburgh by a specimen collected in the Katha district of Burma and by another from Tukdar, Darjeeling. The species is well known in Indo-China and Siam (see Lecomte, Fl. Gen. Indo-Chine, vi, 600: 1934). B. L. BURTT.

CALANTHE GRACILIS Lindl.

Lamdām, 2,000 m., 9 Apr. 1948, S. K. Mukerjee 2709.

Cirrhopetalum Mannii Mukerjee, *nom. nov.*

Syn. *Bulbophyllum Mannii* Reichb. f. in *Flora*, iv, 275 (1872); Hook. f., *Fl. Brit. Ind.* v. 780 (1890)—non *B. Mannii* Hook. f. in *Journ. Linn. Soc. Bot.* vii, 218 (1864).

Ukebrul, 1,500 m.; living plant was collected and sent to Lloyd Botanic Garden, Darjeeling, where it flowered.

COELOGYNE BARBATA Griff.

Flower white, lip brown inside.

Ukebrul, 1,800 m., epiphyte, 13 Sept. 1948, S. K. Mukerjee 3482.

COELOGYNE CORYMBOSA Lindl.

Ukebrul, 2,000 m., 24 Apr. 1948, S. K. Mukerjee 2812.

COELOGYNE FIMBRIATA Lindl.

Flower cream colour, lip with two teeth at throat.

Khangkehui, 2,300 m., epiphyte, 12 Nov. 1948, S. K. Mukerjee 3721.

COELOGYNE LONGIPES, Lindl.

Ukebrul, 1,900 m., epiphyte, 4 Sept. 1948, S. K. Mukerjee 3439.

COELOGYNE OVALIS Lindl.

Ukebrul, 2,000 m., 17 July 1948, S. K. Mukerjee 3244.

CRYPTOCHILUS SANGUINEUS Wall.

Flowers orange at base, red above.

Kbayang, 2,300 m., 16 June 1948, S. K. Mukerjee 3042.

CYMBIDIUM ELEGANS Lindl.

Tankul name—*Yangi wan*. Flowers pale yellow.

Ukebrul, 1,600 m., 14 Oct. 1948, S. K. Mukerjee 3622.

CYMBIDIUM GRANDIFLORUM Griff.

Chammu, 1,300 m., epiphyte, 18 June 1948, S. K. Mukerjee 3068; *Lamdām*, 2,000 m., 17 Oct. 1948, S. K. Mukerjee 3640.

DENDROBIUM CANDIDUM Wall. ex Lindl.

Flowers violet, lip yellow above.

Phungum, 2,000 m., 10 May 1948, S. K. Mukerjee 2855.

DENDROBIUM CARINIFERUM Reichb. f.

Nongbi Road, 1,700 m., 12 Apr. 1948, S. K. Mukerjee 2727.

DENDROBIUM CHRYSOTOXUM Lindl.

Flowers yellow, lip deep orange.

Ukebrul, 1,700 m., 22 May 1948, S. K. Mukerjee 2908.

DENDROBIUM DENUDANS D. Don.

Perianth segments white, lip chocolate.

Ukebrul, 1,700 m., epiphyte, 9 Oct. 1948, S. K. Mukerjee 3620.

DENDROBIUM ERIIFLORUM Griff.

Ukebrul, 1,800 m., epiphyte, 11 Sept. 1948, S. K. Mukerjee 3479.

DENDROBIUM LITUIFLORUM Lindl.

Perianth segments violet at base and apex, white at middle; lip with deep yellow patch at middle.

Tolloi, 1,600 m., 15 May 1948, S. K. Mukerjee 2879.

DENDROBIUM LONGICORNU Lindl.

Flowers white, lip yellow at middle.

Khangkehui, 2,000 m., 6 Nov. 1948, S. K. Mukerjee 3660.

Tosen, 2,300 m., epiphyte, 2 Oct. 1948, S. K. Mukerjee 3587.

DENDROBIUM MOSCHATUM Wall. ex D. Don.

Perianth segments white with violet tips; lip white, violet at base within.
Lamdang, 2,000 m., 4 May 1948, S. K. Mukerjee 2849.

DENDROBIUM NOBILE Lindl.

Perianth segments purple above, white below, lip deep chocolate inside.
Ukbrul, 2,000 m., 13 Apr. 1948, S. K. Mukerjee 2741; 28 Apr. 1948, S. K. Mukerjee 2814.

DENDROBIUM OCHREATUM Lindl.

Flowers deep yellow, lip chocolate near base.

Phungum, 2,000 m., 10 May 1948, S. K. Mukerjee 2856.

DENDROBIUM PORPHYROCHILUM Lindl.

Ukbrul, 2,000 m., epiphyte, 2 Sept. 1948, S. K. Mukerjee 3420.

DENDROBIUM PULCHELLUM Roxb.

Syn. *D. Dalbousieanum* Wall. ex Paxt.

Ukbrul, 2,000 m., 27 Apr. 1948, S. K. Mukerjee 2811.

DENDROBIUM TRANSPARENS Wall. ex Lindl.

Khamsang, 1,700 m., 9 May 1948, S. K. Mukerjee 2854.

ERIA CORONARIA Reichb. f.

Flowers white, lip with chocolate bands, yellow at the middle.

Khangkehui, 1,300 m., epiphyte, 14 Nov. 1948, S. K. Mukerjee 3725.

ERIA EXCAVATA Lindl.

Flowers dull yellow.

Sirobee, 2,600 m., epiphyte, 15 July 1948, S. K. Mukerjee 3237.

EULOPHIA BICARINATA (Lindl.) Hook. f.

Perianth segments chocolate brown, lip white at middle.

Chammu, 1,300 m., terrestrial, 15 June 1948, S. K. Mukerjee 3023.

EULOPHIA CAMPESTRIS Lindl.

Flowers pale pink.

Ukbrul, 1,800 m., terrestrial on open slopes, 7 May 1948, S. K. Mukerjee 2717.

GALEOLA LINDLEYANA (Hook. f. et Thoms.) Reichb. f.

Khangkehui, 1,700 m., terrestrial, partially shady place, 23 May 1948, S. K. Mukerjee 2917.

GEODORUM DILATATUM R. Br.

Kachai, 1,600 m., 3 June 1948, S. K. Mukerjee 2949.

GOODYERA FOLIOSA (Lindl.) Benth. ex Hook. f.

Flowers yellow.

Lamlang, 2,000 m., 29 Aug. 1948, S. K. Mukerjee 3395.

HABENARIA ACUIFERA Wall. ex Lindl.

Flowers golden yellow.

Paowi, 1,500 m., open slope, 9 Sept. 1948, S. K. Mukerjee 3461.

HABENARIA ARIETINA Hook. f.

Lip of flower pectinately winged.

Ukbrul, 2,000 m., open slope, 30 July 1948, S. K. Mukerjee 3268.

HABENARIA DENTATA (Sw.) Schltr.

Flowers white.

Phungum, 1,700 m., open slope, side lobes of lip fimbriate, 9 Sept. 1948, S. K. Mukerjee 3464; *Tosen*, 1,700 m., side lobes of lip crenate, 1 Oct. 1948, S. K. Mukerjee 3555.

HABENARIA MALINTANA (Blanco) Merr.

Syn. *H. pelorioides* Par. et Reichb. f.

Flowers white, spur absent.

Sirobee, 1,400 m., on steep slopes, 19 Sept. 1948, S. K. Mukerjee 3523.

This was found also at lower elevations.

HABENARIA RENIFORMIS (D. Don) Hook. f.

Lungbung, 1,500 m., on edge of forests, terrestrial, 24 Sept. 1948, S. K. Mukerjee 3529.

HERMINIUM ANGUSTIFOLIUM Benth.

Sirobee, 2,000 m., open slope, 15 July 1948, S. K. Mukerjee 3227.

LIPARIS BISTRIATA Par. et Reichb. f.

Ukhrul, 2,000 m., 16 May 1948, S. K. Mukerjee 2881.

LIPARIS DISTANS C. B. Clarke.

Upper petals of flower dull yellowish red.

Ukhrul, 2,000 m., outskirts of forests, 26 Sept. 1948, S. K. Mukerjee 3540.

LIPARIS PARADOXA (Lindl.) Reichb. f.

Ukhrul, 2,000 m., terrestrial, 24 July 1948, S. K. Mukerjee 3258; *Lomboi*, 1,500 m., 27 Aug. 1948, S. K. Mukerjee 3386.

MALAXIS LATIFOLIA Sm.

Syn. *Microstylis latifolia* (Sm.) J. J. Sm.

Microstylis congesta (Lindl.) Reichb. f.

Ukhrul, 2,000 m., terrestrial, 24 July 1948, S. K. Mukerjee 3257.

MALAXIS ACUMINATA D. Don.

Syn. *Microstylis Wallichii* Lindl.

Chammu, 1,000 m., near bamboo groves, 14 June 1948, S. K. Mukerjee 3020.

OBERONIA PYRULIFERA Lindl.

Toloi, 1,700 m., 15 May 1948, S. K. Mukerjee 2880.

ODONTOCHILUS PUMILUS Hook. f.

Sirobee, collected by Captain Kingdon Ward; flowering time—July.

OTOCHILUS ALBA Lindl.

Flowers small, white.

Khayang, 2,000 m., 16 June 1948, S. K. Mukerjee 3039.

PECTELIS SUSANNAE (Linn.) Raf.

Tankul name—*Chomja wan*. Flowers white with pale green sepals.

Paowi, 1,500 m., open slope, 9 Sept. 1948, S. K. Mukerjee 3463.

Peristylus Mannii (Reichb. f.) Mukerjee, **comb. nov.**

Syn. *Coeloglossum Mannii* Reichb. f. in *Linnaea*, xli, 54 (1877).

Habenaria gracillima Hook. f., *Fl. Brit. Ind.* vi, 163 (1894).

Ukhrul, 1,500 m., near the edges of rocks, 19 Aug. 1948, S. K. Mukerjee

3731.

PERISTYLUS STENOSTACHYUS Kraenzlin.

Sirobee, 2,000 m., on outskirts of forests, terrestrial, 12 July 1948, S. K. Mukerjee 3202.

Peristylus tipuliferus (Par. et Reichb. f.) Mukerjee, **comb. nov.**

Syn. *Habenaria tipulifera* Par. et Reichb. f., in *Trans. Linn. Soc.* xxx, 139 (1875).

Litan, 1,500 m., outskirts of forests, terrestrial, 25 Aug. 1948, S. K. Mukerjee 3364; *Ukhrul*, 1,700 m., open slope, 2 Sept. 1948, S. K. Mukerjee 3417.

PHAIUS ALBUS Lindl.

Tankul name—*Pham wan*. Flowers large white, lip yellow with orange stripes; spikes secund.

Ukbrul, 1,600 m., terrestrial, 7 June 1948, S. K. Mukerjee 2969.

PHAIUS WALLICHII Lindl.

Ukbrul, 1,200 m., 18 March 1948, S. K. Mukerjee 2457.

PHAIUS FLAVUS Lindl.

Syn. *P. maculatus* Lindl.

Perianth segments pale yellow, greenish above, lip white below, then yellow with orange in front-margin, vertical orange bands in the inside.

Lamlang, 2,000 m., terrestrial orchid with very large leaves with yellow spots, 1 June 1948, S. K. Mukerjee 2937.

PHOLIDOTA ARTICULATA Lindl.

Flower cream colour, lip yellow at tip.

Sirobee, 2,000 m., 12 July 1948, S. K. Mukerjee 3212.

PHOLIDOTA CALCEATA Reichb. f.

Ukbrul, 2,000 m., 1 June 1948, S. K. Mukerjee 2942.

PHOLIDOTA PROTRACTA Hook. f.

Epiphyte; flowers small, pale yellow, lip orange within.

Khangkhui, 2,300 m., 12 Nov. 1948, S. K. Mukerjee 3722.

PHYLLOMPHAX GALEANDRA (Reichb. f.) Schltr.

Syn. *Habenaria galeandra* (Reichb. f.) Benth. var. *major* Hook. f. Fl. Br. Ind. vi, 164 (1894).

Lip of corolla purple-violet.

Ukbrul, 1,700 m., open slope, terrestrial, 25 June 1948, S. K. Mukerjee 3118.

PLEIONE HOOKERIANA (Lindl.) O. Kuntze.

Syn. *Coelogyne Hookeriana* Lindl.

Bulb and lower portion of stem spotted with purple.

Sirobee, 2,600 m., 15 July 1948, S. K. Mukerjee 3238.

PLEIONE PRAECOX (Sm.) D. Don.

Syn. *Coelogyne praecox* (Sm.) Lindl.

Flowers purple, lip with yellow lines at the middle.

Sirobee, 2,500 m., 27 Oct. 1948, S. K. Mukerjee 3655.

SATYRIUM NEPALENSE D. Don.

Flowers pink.

Sirobee, 2,500 m., grassy field, 29 Aug. 1948, S. K. Mukerjee 3392.

SPATHOGLOTTIS PUBESCENS Lindl.

Flowers yellow, wings of lip red.

Ukbrul, 2,000 m., terrestrial, 22 July 1948, S. K. Mukerjee 3246.

SPIRANTHES SINENSIS (Pers.) Ames.

Sirobee, 2,300 m., open slopes, 19 Sept. 1948, S. K. Mukerjee 3732.

STAUROPSIS UNDULATUS (Lindl.) Benth. ex Hook. f.

Nongbi, 1,600 m., 12 Apr. 1948, S. K. Mukerjee 2726.

Khamsang, 2,000 m., 9 May 1948, S. K. Mukerjee 2805.

TROPIDIA CURCULIGOIDES Lindl.

Chatrik, 1,000 m., terrestrial, 9 Nov. 1948, S. K. Mukerjee 3702

VANDA CAERULEA Griff. ex Lindl.

Manipuri name—*Koach lei*.

Ukbrul, 1,300 m., 12 Sept. 1948, S. K. Mukerjee 3480.

VANDA PARISHII Veitch et Reichb. f.

Kachai, 1,200 m., 3 June 1948, S. K. Mukerjee 2946.