RESEARCH PUBLICATIONS
LIST OF RESEARCH PAPERS PERTAINING TO ORCHIDACEAE


The way of expressing numbers in the study of orchids of North-East India. NAGALAND.
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The way of expressing numbers in the study of orchids of North-East India.

By

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Abstract

As the floral formulae, the flowers in an inflorescence, the nerves of perianths and leaves, the presence of leaves per stem or pseudobulb, etc., of the Orchids by way of expressing numbers worked out by earlier workers proved essential as bases of identification, classification, etc. The present article attempts in modifying this line with a view to increase further, its essentiality.

I

Etymology and a required number

Before showing the way of expressing numbers in the study of Orchids of North-East India, it may here be well to start with Etymology, the science that deals with the investigation of the derivation and original signification of words. The word "Orchid" is derived from the Greek word "Orchis", which means testicles, alluded to the shape of tubers of some of these plants. Arithmetically, each of these words has the total number of alphabet equal to 6 (six). Thus:

\[
\begin{align*}
\text{ORCHID} & : 123456 \\
\text{ORCHIS} & : 123456 
\end{align*}
\]

The number 6 that comes from the above two words along with its numbers produced from it by a simple arithmetical process will be used in this paper to explain as easy and lucid as possible to those characteristics features of the plants which are rather complex in nature.

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II MODE OF LIFE

A 6 types of Orchids based on the mode of life are:

1. Epiphytes: that grow only upon other plants e.g. *Dendrobium densiflorum* Wall., etc.

2. Terrestrial: that grow only in full contact with the soil, e.g. *Habenaria gemonculata* D Don, etc.

3. Semi-Epiphytes: epiphytic in origin, but can acclimatise themselves to some other change habitats different from that restricted only as Epiphytes e.g. *Cymbidium eburneum* Lindl., etc.

4. Semi-Terrestrial: terrestrial in origin but have the capacity to grow in other change habitats different from that restricted only as Terrestrial, e.g. *Paphiopedilum fairianum* (Lindl.) Pfitz., etc.

5. Lithophytes: that grow on rocks, e.g. *Cymbidium tigrinum* Par., etc. Example of orchid cited here is a True Lithophyte so as to differentiate from those of Semi-Epiphytes or Semi-Terrestrial which when grow on cracks, fissures and crevices of rocks, are considered as Semi-Lithophytes or Chasmophytes.

6. Saprophyte: that grow in decaying organic matters, e.g. *Epipogium roseum* (Lindl.) D. Don., etc. With examples of leafless and non-green Orchids, they are Total Saprophytes. No Semi or Partial Saprophytic Orchids observed so far.

B. In splitting to 4 & 2, in this case is based on the roots which are partly related to the mode of life of the Orchids. Thus:

9 = 4 & 2, means:

4 (sl. nos. 1, 3, 4, 5) with aerial roots &
2 (sl. nos. 2 & 6) without aerial roots.

4 (sl. nos. 2, 3, 4, 6) with underground roots &
2 (sl. nos. 1 & 5) Without underground roots.
III. THE VEGETATIVE PARTS

A. 6 combinations of vegetative parts found in Orchids are:

1. R: e.g. Taeniophyllum khasianum Joseph et Yog.
2. RS: e.g. Epipogium roseum (Lindl.) Don, etc.
3. R: e.g. Paphiopedilum venustum (Wall.) Pfitz., etc.
4. RS: e.g. Arundina graminifolia (Don) Hochr., etc.
5. RS(p) L: e.g. Pleione maculata Lindl., etc.
6. RS(r) S(p) L: e.g. Coelogyne prolifera Lindl., etc.

N.B.

Explanation of symbols: R = roots; S = stems; S, r = rhizomes; S, o = pseudobulbs; L = leaves.

B. 6 in splitting to 4 & 2 in this case, is based on the presence/absence of the vegetative parts. Thus:

6 = 4 & 2. means:

4 (sl. nos. 3, 4, 5, 6) leafy & 2 (sl. nos. 1 & 2) leafless.
4 (sl. nos. 2, 4, 5, 6) stem & 2 (sl. nos. 1 & 3) stemless.
4 (sl. nos. 1, 2, 3, 4) pseudobulbous & 2 (sl. nos. 5 & 6) pseudobulbous.

IV. THE FLOWERS

A. 6 ways in explaining the flowers of the Orchids are:

1) 6: the sepals, petals, and the lip are the 6 showy, non-reproductive parts.
2) 5 & 1: of which 5 are more or less similar. A different 1 is the lip.
3) 4: the 4 basic terms used in them are the dorsal sepal; lateral sepals; petals & the labelum.
4) **3 & 1**: The stamen & pistil (reproductive organs), each is made up of 3 parts, where all, except 1 part of pistil, viz ovary, combine together to form the column.

5) **2**: There are 2 types of Orchid flowers, viz **MONANDRAE & DIANDRAE**.

6) **1 & 1**: **MONANDRAE** has 1 stamen whereas, **DIANDRAE** has 1 stamen more than it.

**N. B.**

6 here in splitting to 5 & 1; 4; 3 & 1; 2; 1 & 1 is done by a simple arithmetical process of division and subtraction. For example, by dividing 6 into highest & least numbers, we have 5 & 1; by subtracting these, we have 4, and so forth.

**B.** 6 in splitting to (a) 3 + 3 (b) 2 x 3. In this case, means to explain their trimerous characters allied to the other flowers of the Monocots. Thus:

(a) 6 = 3 + 3, means:
- 3 sepals + 3 petals
- 3 parts of stamen + 3 parts of pistil.

(b) 6 = 2 x 3, means:
- 2 stamens in DIANDRAE x 3 parts of each stamen.

V. **ORCHIDS WHILE FLOWERING**

A. **6 ways in explaining the Orchids while flowering are:**

1) **6**: not all flowers (Fl) open at a time in some species with these veg parts R, S(r), S(p), L and an infl of many-flfd that fruits (Fr) develop with last open flowers f.w.f. (fruiter while flowering), 6 parts seen at a time are R, S(r), S(p), L, Fr, e.g. **Coeogyno varis Grif., etc.**

2) **5 & 1**: (a) infl. and 1 petal is abor., but (i) flowers open almost together f.a.f. (fruiter after flowering), the above first 5 parts not the last 1 will be seen at a time, e.g. **S Authoritis sp.** Lindl., (ii) or, only 5 parts of
above but not this 1 part viz. L - f.w.f. (leafless while flowering) e.g. Tainia viridis-fusca Lindl., etc. (b) 5 parts will be seen in all species with above veg. parts and an infl. of 1-few flid - f.w.f. e.g. Bulbophyllum affine Lindl., Dendrobium macraei Lindl., etc (c) with these veg. parts R, S, L e.g. Oberonia myriantha Lindl., etc. or, R, S(p), Legh. Otochilus fusca Lindl., etc. with infl. of many flid., 5 parts seen ene R, S, 1, Fl, Fr and R, S(p). L, Fl, Fr, respectively due to the presence of the last 1 part viz. Fr - f.w.f.

3) 4 : (a) Species with these veg. parts R S e.g. Galeola falconeri Hook. f. and an infl. of many-flid., 4 parts seen are R, S, Fl, Fr - f.w.f. (b) Infl. of (a) but with these veg. parts R, S, L e.g. Vanda coerulae Griff ex Lindl., etc. or, R, S(p), L e.g. Phaius tankervillae (Alt.) Bl. etc., 4 parts seen at a time are R, S, L, Fl and R, S(p), L, Fl respectively - f.w.f.

4) 3 & 1 : (a) total number of parts seen as above will be for all species having, 3 veg. parts and an infl. of 1-few flid. e.g. Paphiopedilum insigne (Wall.) Pfitz., Porpax meirax K. & P., etc. - f.w.f. (b) 3 parts seen in all species with these veg. parts R, L e.g. Paphiopedilum venustum (Wall.) Pfitz., etc., or, R, S(p), L e.g. Epipogium rossum (Lindl.) D. Don., etc. for an infl. of 1-few flid. - f.w.f. (c) Species only these 3 parts seen viz. R, S(p), Fl e.g. Eulophia nuda Lindl., Pleione praecox (Smith) D. Don., etc., for without this 1 part viz. L - f.w.f.

5) 2 : Species with R viz. parts and an infl. of few - flid., R Fl are 2 parts seen- f.w.f. e.g. Paphiopedilum khasianum Joseph et Yog. This is the only species available so far in I.E. India with only R veg. parts.

6) 1 & 1 : As seen from above not only the 1 part viz. Fr related to flowering but also the 1 part viz. L, for this later as the former may present or absent in Orchids while flowering.

N.B.

6 here is produced to 5 & 1; 4; 3 & 1; 2; 1 & 1, by the same arithmetical process of division and substraction as explained in Chapter IV.
B. g in splitting to 1 1 1 1 1 (or g nos. 1), in this case means to explain this Chapter in a summarised form in the following 6 ways, that Orchids while flowering are related to:

1. Total number of vegetative parts
2. Leafing while flowering.
3. Leafless while flowering.
4. Total number of flowers in an inflorescence
5. Fruiting while flowering.
6. Fruitless while flowering.

VI. POLLINIA: THEIR NUMBER AND ARRANGEMENT

A. 6 Ways in arranging the pollinia of the Orchids are:

1) 2: with 2 pollinia that lie together, e.g. Vanda cristata Lindl., etc.
2) 2(1): with 2 pollinia joined under one pollinarium, e.g. Habenaria arietina Hook. f., etc.
3) 4: with 4 unpaired pollinia, e.g. Anthogonium gracile Lindl., etc.
4) 2(2): with 4 pollinia in 2 pairs, e.g. Callophyllum punctulatum Lindl., etc.
5) 8: with 8 pollinia that are 4 paired, e.g. Phreatia elegans Lindl., etc.
6) 2(4); with 8 pollinia that are pairing in fours, e.g. Eria stricta Lindl., etc.

B. 6 in splitting to 2 2 2 (or 3 nos. 2) in this case, means to explain that species of Orchids observed so far have only 3 types of total number of pollinia viz. 2, 4, 8, in which each has 2 kinds of arrangement. Thus:
2 (sl. nos. 1 & 2) with 2 pollinia; 2 (sl. nos. 3 & 4) with 4 pollinia and 2 (sl. nos. 5 & 6) with 8 pollinia.

ACKNOWLEDGMENT

The author is very much grateful to Dr. S.K. Jain, Deputy Director and Dr. S.K. Katak, Orchidologist, Botanical Survey of India, Eastern Circle, Shillong, for their valuable suggestion.
SOME NEW RECORDS OF EPIPHYTIC ORCHIDS FROM NAGALAND

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(Received 4 October; 1977; revised 11 May, 1978)

Abstract

48 species of epiphytic orchids belonging to 18 genera unreported so far from Nagaland are enumerated. The genera Ceratostylis, Ornithochilus, Rhynchostylis, Sarcanthus and Thunia are recorded for the first time. Each species is provided with short descriptive notes, locality and collection numbers. Five rare taxa are illustrated.

Introduction

Nagaland is situated at almost the extreme eastern end of India, approximately between 25-28° N and 93-96° E. The state falls in the botanical region of Assam according to Clarke (1897) and Chatterjee (1961). The eastern boundary of the state forms a part of the Indo-Burmese border and therefore is of added botanical and phytogeographical interest.

Very little is known with regard to the orchids of Nagaland. The total number of species reported so far does not exceed 85. Only 22 species belonging to 18 genera which flowered in late autumn, 1885, were listed by Clarke (1889, 1890). Hooker (1890-93) recorded only 24 genera and 49 species for Nagaland, while describing 507 species belonging to 85 genera of orchids for the eastern India and 1235 species belonging to 117 genera in the Flora of British India. Hooker (1895), Burkill (1924), Bar (1942) and Mitra (1958) have made some contributions to the knowledge of the orchids of Nagaland. Since then, there is no record of any published work on the orchids of this region. Despite the richness of the orchid flora of the largely unexplored/under explored forests of Nagaland, not much floristic work has yet been done on this family.

The author had an opportunity of visiting and botanising in several spots around Jafuhills, (ca 300m), Puledadze (ca 2375m), and Tseminyu (ca 1500m) of Kohima district of Nagaland in 1973, 1974 and 1976. All his collections have been preserved in the Regional Herbarium and the living specimens have been planted in the National Orchidarium, Botanical Survey of India, Shillong (Assam). The author himself had collected about 200 specimens of orchids from the areas of his work. But the purpose of this paper is to give an enumeration
only of those epiphytic orchids critically examined, observed and collected by the author and other earlier workers hitherto unreported from Nagaland, 48 species of epiphytic orchids belonging to 18 genera are described. Their identification has been verified with herbarium specimens, living materials and literatures available here. Only short descriptive notes (flowering time and colour of flowers), locality and collection numbers are given the detailed descriptions have been deliberately avoided as they are available in several works such as of Hock (1890-95); King and Pantling (1898); Santapau and Kapadia (1966).

**List Of Species**

<table>
<thead>
<tr>
<th>Species</th>
<th>Flowering Time</th>
<th>Colour of Flowers</th>
<th>Collector</th>
<th>Herbarium Specimen</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ceratostylis himalaica</em> Hook.</td>
<td>April</td>
<td>Pinkish</td>
<td>P.</td>
<td>(56278)</td>
</tr>
<tr>
<td><em>Coelogyne fimbriata</em> Lindl.</td>
<td>April</td>
<td>Pale brown</td>
<td>T.</td>
<td>(56226)</td>
</tr>
<tr>
<td><em>C. gardneriana</em> Lindl.</td>
<td>Nov.</td>
<td>White</td>
<td>T.</td>
<td>(56065)</td>
</tr>
<tr>
<td><em>C. ovalis</em> Lindl. (fig. 2)</td>
<td>March</td>
<td>Yellowish brown</td>
<td>P.</td>
<td>(56277)</td>
</tr>
<tr>
<td><em>C. prolifera</em> Lindl.</td>
<td>April</td>
<td>Brownish yellow</td>
<td>T.</td>
<td>(56235)</td>
</tr>
<tr>
<td><em>C. punctulata</em> Lindl.</td>
<td>April</td>
<td>White</td>
<td>P.</td>
<td>(56285)</td>
</tr>
</tbody>
</table>

*the numbers given in brackets represent herbarium specimens; unless the contrary is stated, the collector is the author; Months (time of flowering); Colours (colour of flowers of flowers); F. (Fulcrum): T. (Tseminyu); J. (Jalu hills).
EPIPHYTIC ORCHIDS FROM NAGALAND

D. Wardianum  W arner
March : white, purple tipped ; labellum with 2 dark purple blotches : T. (56215).

D. williamsoni  Day et Reichb. f.
May : white labellum with reddish streaks : P (56301).

Ephemerantha macraei  (Lindl.) P.F. Hunt. et Summerh.
May : white labellum purple streaked : T. (56227).

Eria bambusifolia  Lindl.
Nov. : yellowish brown ; labellum purple flushed : P. (56203).

E. confusa  Hook. f.
April : yellow, purple veined ; labellum midlo l e yellow : T. (56220).

E. coronaria  (Lindl.) Reichb. f. (fig. 4).
Nov. : white, labellum pinkish yellow P. (53191).

E. excavata  (Wall.) Lindl.
July : dirty white ; labellum pinkish yellow : P. 56270

E. vitatta  Lindl.
Nov. : greenish yellow ; ree striped : P. (56267).

Gastrochilus calcicolare  D. Don.
March : green, brown spotted ; labellum apex white : P. (56305).

Katharinea ampla  (Lindl.) Hawkse.
Nov. : yellowish red ; labellum dark purple : T. (56061).

Liparis bootanensis  Griff.
Scept. : yellowish brown  T (56224).

L. pusilla  Ridley.

Ornithochilus fuscus  Wall. ex Lindl.
July : yellow, red streaked : P. (56307).

Pholidota articulata  Lindl.
May : white, brownish tinged : T. (56220).

P. articulata  Lindl. var. Griffithii (Hock. f. : Ling & Pantl.

P. calceata  Reichb. f.

Pleione humilis  (Smith D. Don.
March : pinkish white ; labellum purple spotted : J. (S.R. Sharma 17477).

P meculata  (Lindl.) Lindl.
Nov. : white ; labellum base purple streaked, apex yellow blotched : T. (56232).

P praecox  (Smith D. Con.

Rhynchostylis Ratusi Bi.
April : white, purple spotted : T. (56253)

Saccolabium gemmatum  Lindl.
May : white, purple blotch ; petals & labellum light purple : P. (56293).

Sarcocidus appendiculatus  Hook. f. (fig. 5).
March : pale yellow, brown striped : P. (55273).

S. filiformis  Lindl.
July : purplish brown ; labellum pinkish yellow : P. (56291).

S. insectifier  Reichb. f.
May : greenish yellow, red striped : J. (N. L. Bor 22178).

S. secundus  Griff.
June : brownish J. (N. L. Bor 1015).

Thunia alba  (Lindl.) Reichb. f.
June : white ; labellum purple lined : T. (56255)

Vanda teres  will ex Lindl.
May : pale pink ; labellum with crimson spotted, lines : J. (Sriniivasan 22003).

Acknowledgements

The author is very much grateful to Sri S. K. Jain Director in-Charge, Botanical Survey of India for providing facilities. He expresses his thanks to Sri T. Jeyadev, former C. C. F. and Sri A. P. Mchanty. C. C. F., Government of Nagaland for rendering help.
during the author's botanical exploration trips to the
state.

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EPIPHYTIC ORCHIDS FROM NAGALAND

Fig. 1—Ceratostylis himalaica Hook. f.; 2 Coelogyne ovalis Lindl.; 3 Dendrobium chrysotoxum Lindl.; 4 Eria caronaria (Lindl). Reichb. f.; 5 Sarcanthus appendiculatus Hook. f.

(Reprint No: 3)
A NEW SPECIES OF *SUNIPIA* LINDL. (ORCHIDACEAE)  
FROM NAGALAND

BY T.M. HYNNIEWTA AND C.L. MALHOTRA

Botanical Survey of India, Shillong.

ABSTRACT

*Sunipia jainii* Hynniewta et Malhotra sp. nov. collected from Nagaland is described with illustrations. It is compared with *S. scariosa* Lindl. (only species of the genus *Sunipia* Lindl. reported so far from the tropical himalayas of Nepal, Sikkim and Khasi Hills) and a key to distinguish the two species is provided.

*Sunipia jainii* Hynniewta et Malhotra sp. nov. (Orchidaceae) differta *S. scariosa* Lindl., statura minore, scapo uniflore, floribus gialli, spalis et petalis punctis dense ordinatis purpureis glandularibus exteris maculosis, petalis, ciliatis labro quasi triangulo, margine involuto et ciliati, lamella sicac forma, pubescenti, carcosa, spissa, pilosa a basi ad apicem labri extendeante, sinu triangulo carinata basi.

Holotypus.—T.M. Hynniewta 56060 A,
Sunipia jainii Hynniewta et Malhotra sp. nov. (Orchidaceae) differs from S. scariosa Lindl. in its smaller size, l-flowered scape, yellow flowers, sepals

and petals blotched with densely arranged purple gland dots without, petals ciliate, a somewhat triangular, involute margin, ciliate lip, a pubescent fleshy, daggard-shaped, thick, hairy lamella extending from base to apex of lip, and a triangular keeled sinus at the base.

*S. jainii* Hymniewta et Malhotra sp. nov.—Epiphytes on *Quercus*. *Rhizomes* 1-1.5mm thick, creeping *Pseudobulbs* 4-12mm in diameter, ovoid or conical-ovoid, depressed at base, crowded or distant at 5-15mm, yellowish-green, 1-leaved. *Leaves* 15-50 × 3-10mm, petiolate, suberect, lanceolate, thick, subcoriaceous, many-nerved; mid nerve prominent along lower side, depressed above; base attenuate, apex notched; petioles 1-3mm long, winged. *Scapes* 5-8mm, 1-flowered, arising from base of pseudobulb, 2-3 sheathed; sheath dark-brown. *Flowers* yellow; sepals and petals blotched with densely arranged purple gland dots without, bracteate; bracts 10-14 × 8-10mm, concave, apex acute, membranous, with many dark brown nerves; sepals 3, laterals 20-23 × 6-8mm, falcate; base broad; apex acute, slightly keeled, 7-nerved, nerves dark brown; mentum attached to the broad foot of the column; dorsal sepal 19-22 × 6-8mm, lanceolate, concave; apex acute, keeled; base broad, 7-nerved; petals 14-16 × 4-5 mm, lanceolate; apex acute, margins ciliate, 3-nerved; lip 16-18 × 10-12mm, sessile, somewhat triangular in outline, 4-nerved; margins involute, ciliate; disc pubescent, with a fleshy daggard-shaped, thick, hairy lamella extending from base to apex of lip, a triangular, keeled sinus at base; column 3-4.5 × 1.2mm; foot 4 × 3 mm; apex toothed; rostellum bifid; anthers 2-celled; pollinia 4, two-paired, each pair stipitate, linear-oblong, 1-1.5mm long; ovary including pedicel 7-19mm, slightly grooved. Capsules 10-12 × 1-10mm oblong, stalked, 6-ridged; ridges extending from middle portion but not reaching apex.

Flowering and Fruiting: November.

*Holotype:* *T. M. Hymniewta* 56060 A, Tsemi, alt. 1200-1500m, Nagaland (INDIA), November 14, 1973, deposited in Central National Herbarium (CAL).

*Isotypes:* *T. M. Hymniewta* 56060 B-D, deposited in the Herbarium, Botanical Survey of India, Shillong (ASSAM).

This species is named after Dr S. K. Jain, Joint Director-in-charge, Botanical Survey of India, P.O. Botanic Garden, Howrah-3.

So far, only one species of *Sunipia* Lindl., i.e., *S. scariosa* Lindl. was known to occur from the subtropical himalayas of Nepal, Sikkim, alt. 1200-1800m, Khensi Hills, alt. 900-1200m and Tenasserim (Hooker, 1890). A key for distinguishing these 2 species is given below:

Scapes long, 150 mm. many-flowered; flowers greenish; lamella absent; margins of lip not ciliate............ *S. scariosa*

Scapes short, 5-8mm, 1-flowered; flowers yellow; lamella present; margins of lip ciliate............ *S. jainii*


(Reprint p. 4)
Some Additions to our Knowledge of the Terrestrial Orchids of Nagaland

By
T. M. Hynniewta

Botanical Survey of India, Shillong

15 species of terrestrial orchids belonging to 13 genera hitherto unreported so far from the state of Nagaland are given in this paper. Each species is provided with short descriptive notes, locality, names of collectors and their collection numbers. 4 taxa are provided with illustrations.

Introduction:

The terrestrial orchids of Nagaland are very little known. C. B. Clarke visited the area in late autumn, 1885, with a main object to compare the flora of transition formations with that of the sikkim Himalayas and the Khasi hills. He collected about 1000 plant specimens belonging to Angiosperms, Gymnosperms and Ferns, but only 11 species of terrestrial orchids. He gave an account of them in the *Journ. Linn. Soc. London* 25, 1890. His collections for many years formed the only source of information regarding these plants. Sir George Watt also visited this area in the same year, but his collections had never been published so far.

Apart from the early collections of C. B. Clarke cited and described by J. D. Hooker in the *Fl. Brit. India* 5 & 6 (1890-93) and also by George King & Robert Pantling in the *Ann. Roy. Bot. Gard. Calcutta* 8 (1898); J. N. Mitra in the *Fl. East. India* 1 (1958) and listed by I. H. Burkili in the *Rec. Bot. Surv. India* 10 (1924), there is no other account of these fascinating plants from Nagaland. Hence it is considered that a publication on the species collected by the author and other earlier workers kept in the Herbarium, Botanical Survey of India, Shillong, hitherto unreported so far from the state will be of use to persons interested in these plants, their family (Orchidaceae) and the flora of the region.

1Kanjilal et al (1934-40) Flora of Assam includes only a systematic study on the Dicots and the grasses. The other Monocots, the Gymnosperms and the Ferns collected by N. L. Bor, U. P. Kanjilal, G. K. Deka and others since 1921 have not been included.
Fig. showing the habits of:
A — *Paphiopedilum hirsutissimum* (Lindl.) Pfitz.;
B — *Anoectochilus sikkimensis* King & Pantl.;
C — *Calanthe alpina* Hook. f.;
D — *Phaius maculatus* Lindl.
Additional Species:

   
   *Fl.* (June); *flrs.* white, red spotted; J. H., *Hynniewta* 56205.

   
   *Fl.* (July); *flrs.* white, pink flushed; Pul., *Hynniewta* 56186.

   
   *Fl.* (Dec); *flrs.* pinkish, *labellum* white; J. H., *Hynniewta* 56218.

   
   *Fl.* (Sept.); *flrs.* white, green tipped, *labellum* lamellae dull red; J. H., *N. L. Bor* 20276.

   
   *Fl.* (June); *flrs.* purplish, *labellum* deep red; J. H., *N. L. Bor* 21078.

   
   *Fl.* (Sept.); *flrs.* purplish yellow or white; J. H., *G. K. Deka* 20264.

   
   *Fl.* (June); *flrs.* purple; Pul., *Hynniewta* 56297.

   
   *Fl.* (June); *flrs.* pale purple or greenish purple; J. H., *N. L. Bor* 21189.

   
   *Fl.* (Sept.); *flrs.* pale yellow, *labellum* white; J. H., *N. L. Bor* 15786 A.

    
    *Fl.* (May); *flrs.* purplish green, *labellum* purple spotted; Tizu Valley. *Atonor s. n.*

    
    *Fl.* (April); *flrs.* golden yellow; J. H., *Hynniewta* 56215.

    
   
   **Fl.** (April); **flrs.** greenish brown; **Pul., Hynniewta 56282.**

   
   **Fl.** (June); **flrs.** white; **J. H., N. L. Bor 21011.**

   
   **Fl.** (March); **flrs.** pale rose, **label.** white or pale yellow; **J. H., Hynniewta 5015.**

**REFERENCES**


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*J. H. (Jafu hills, ca 3000 m); Pul (Pulebadze, ca 2375 m); s. n. (Without number).*
Rediscovery of *Conidium tigrinum* Pers. ex Jack.

(Radii: 8; 5)
The Orchid Review

REDISCOVERY OF CYMBIDIUM TIGRINUM PAR. EX HOOK.
FROM INDIA by T. M. Hynniewta

During a recent botanical exploration trip to Nagaland (25-28° N. latitude and 93-96° E. longitude), an interesting species of Cymbidium Swartz. was collected, which on critical studies turned out to be C. tigrinum Par. ex Hook. This species was collected by George Watt from Khonoma (Nagaland), alt. 2666 m (Watt 11610) during May 1895. From herbarium records, it is evident that this species has not been collected from Nagaland or any place in India since then. Thus this is the first report of its discovery after a lapse of more than 80 years.

The present report is from Tseminyu (Nagaland), alt. 1500 m (Hynniewta 58234) and the flowering specimens were collected during April 1976. Some live specimens have been introduced in the National Orchidarium, Shillong and under observation for the last few years. Though they occur in the area as lithophytes, yet under cultivation, they do well in terrestrial conditions. They are planted in well-drained earthen pots (size 8-10 in.) with an aperture below (1-1½ in. diameter) in a mixture of leafmoulds, sand and powdered charcoal in the proportion of 6:3:1 respectively. They require generally diffuse light and a little amount of water.

The plant is distributed mainly in Tenasserim (type locality) and “on the Siam frontier”. Due to its decorative flowers, it is of high potential horticultural value, it was introduced into many botanical gardens of the world.

C. tigrinum Par. ex Hook. closely resembles C. lancifolium Hook., in its elliptic-lanceolate leaves and the few flowered racemes. But the presence of the pseudobulbs and the larger greenish-yellow flowers with purple blotches on creamy-white labellum separates it from the latter. The author feels that these diagnostic features coupled with a recognition sketch (Fig. 157) would enable future field botanists to locate this rare orchid in other regions of north-eastern India as well.

**Botanical Survey of India.**
Shillong (Meghalaya) India

Fig. 157: Cymbidium tigrinum.

"IT'S A SHORTER WAY . . ." by the Registrar of Orchid Hybrids

In the December 1972 issue of The Orchid Review I wrote at some length under the title “It’s a Long Way to Tip a Registrant!” The Editor has now invited me to update some of the points then recommended to those applying to register new orchid hybrids, and perhaps to add some new ones, in a series of brief monthly notes.

Having regard to the prime object of encouraging registrants to avoid practices which consume time unnecessarily in the registration office, and to adopt some which reduce processing time. I felt it appropriate to give this series the title as above. We are in a situation where a much increased inflow in the number of new applications needs to be offset by such time-saving practices as can be adopted: this is always under review in the registration office, subject to the over-riding need for accuracy. But there are so many ways in which registrants also can help, and this is really what these notes are all about.
record of *Echinodorus lancifolium* from Maryland.


(RePRINT NO: 6)
Fig. 1. *Eria bractescens* Lindl.: A-habit, B-flower, C-floral bract, D-perianths with labellum spread out, E-column, F-pollinia, G-anther.
29. RECORD OF *ERIA BRAC TESCENS* LIN DL. FROM NAGALAND

(With a text-figure)

During a botanical exploration trip to the state of Nagaland in 1973, an interesting species of *Eria* Lindl. (Orchidaceae) was collected, which is identified as *Eria bractescens* Lindl., a species hitherto reported from Sikkim (Hooker 1890, King & Pantling 1898, Mitra 1958) and Andaman islands (Seiden. & Smitinand. 1960). This note reports the occurrence of this taxon in Nagaland. Since the characters of the plant are represented by illustrations (Fig. 1, A-G), a brief description only is given here.

Epiphytic on *Quercus* sp., pseudobulbs yellowish brown, wrinkled, base with purplish sheaths; leaves pale green, subcoriaceous; peduncle pale yellow, suberect; raceme lax, slender; flowers pale pinkish yellow; floral bract pale yellow, reflexed; dorsal sepal narrowly elliptic, apex curved backwards; lateral sepals ovate, falcate with yellowish, conical mentum; petals linear oblong, apex revolute; labellum ovate, 3-lobed; side lobes deep pink, round, erect; mid lobe creamy, quadrate with 3 red lamellae; column pinkish yellow; anther 2-celled; pollinia 8, in fours, pale yellow.

Specimens examined: Pulebadze, c. 2375 m. Hywniewta 56298.

Flowering: April.

Distribution: Sikkim & Andaman islands (India), Bangladesh, Burma, Sumatra and Malaya to the Philippines, Laos, Cambodia, Thailand, Java.

But for its inflorescence, the plant resembles the glabrous herb *Eria confusa* Hook. f., but the differently coloured smaller flowers, reflexed floral bract and erect side lobes of labellum separate it from the later.

T. M. HYNNIEWTA

REFERENCES