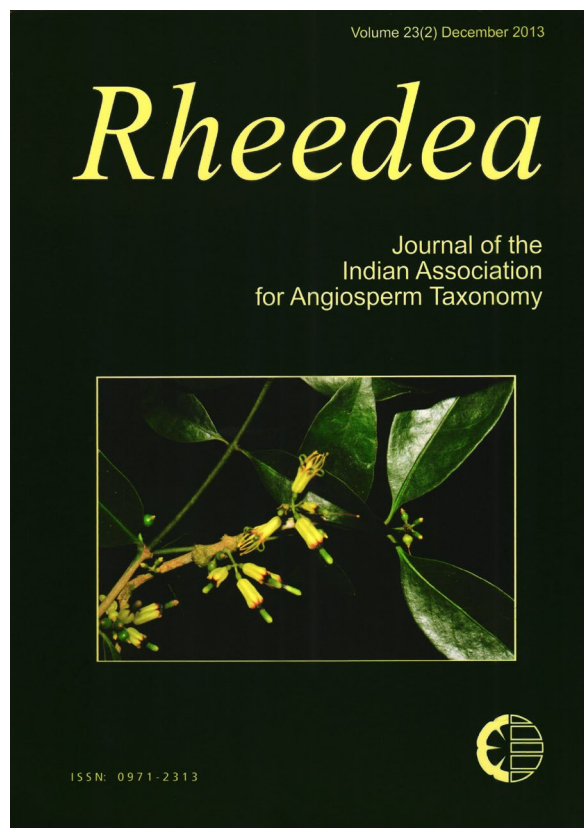




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# Recollection of *Epigeneium treutleri* (Orchidaceae) from Assam, Northeast India

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## Abstract

*Epigeneium treutleri* (Hook.f.) Ormerod, a rare orchid species has been recollected from Assam, India after a lapse of 122 years. A brief description with relevant notes and illustrated photographs is provided for easy identification.

**Keywords:** *Epigeneium treutleri*, Orchidaceae, Recollection, Assam, India

## Introduction

The genus *Epigeneium* belonging to the family Orchidaceae was proposed in 1932 by F. Gagnepain in the *Bulletin du Museum d'Histoire Naturelle*, Paris. The genus comprises about 35 species distributed from India, China, SE Asia and Indonesia to the Philippines (Pearce & Cribb, 2002). In India it comprises of 8 species (*E. amplum* (Lindl.) Summerh., *E. arunachalense* A.N. Rao, *E. chapense* Gagnep., *E. fargesii* (Finet) Gagnep., *E. fuscescens* (Griff.) Summerh., *E. naviculare* (N.P. Balakr. & Sud. Chowdhury) Hynn. & Wadhwa, *E. rotundatum* (Lindl.) Summerh. and *E. treutleri* (Hook.f.) Ormerod all confining to Northeast India (Chowdhery 2009; Rao, 2007, 2009, 2010). On a field tour to Dulong Reserve forest, Lakhimpur district, Assam during May, 2012 an unidentified *Epigeneium* species in vegetative condition was collected along with other angiospermic plants and introduced in the Botanical garden, Botanical Survey of India, Shillong. In the month of September 2012, the species bloomed and with critical study it was identified as *E. treutleri*. Subsequently, the identity was confirmed in consultation with relevant literatures (Hooker, 1890; Tang & Z.H.Tsi, 1984; Lucksom, 2007; Ormerod & Sathish Kumar, 2008) and the type material (*Epigeneium yunnanense* Tang & Z.H.Tsi) from PE herbarium, China. A thorough scrutiny of literature (Chowdhery, 1998, 2009; Hajra & De, 2011; Misra, 2007; Rao, 2007; Singh *et al.*, 2001) revealed that this species in India has not been recollected ever since its establishment by Hooker in 1890 from Sikkim as *Coelogyne treutleri*. Hence, it is reported here as a recollection from

a different locality i.e. Assam after a lapse of 122 years. Das & Jain, 1980 and Lucksom, 2007 reported the species to be rare, probably extinct or awaits fresh collection. Therefore the fresh recollection of this rare and interesting species *E. treutleri* from Assam, Northeast India authenticates its existence in the natural habitat that was overlooked in the past for so many years and is worth reporting for creating awareness for its *in-situ* and *ex-situ* conservation. The paper provides brief description, key to the Indian species, relevant notes, illustrated photographs and holotype of *Epigeneium yunnanense* Tang & Z.H.Tsi to facilitate easy identification of this species in the field.

## Key to the Indian species of *Epigeneium*

1. Plants with single leaf ..... 2
1. Plants with 2 leaves ..... 4
2. Flowers maroon coloured or reddish brown ... 3
2. Flowers dark purplish brown ..... **E. fargesii**
3. Flowers maroon, dorsal sepal 9-nerved .....  
..... **E. chapaense**
3. Flowers reddish brown, dorsal sepal 5-nerved ....  
..... **E. arunachalense**
4. Pseudobulbs more than 16 cm tall; flowers more  
than 7 cm across ..... **E. amplum**
4. Pseudobulbs less than 15 cm long; flowers less  
than 5 cm across ..... 5



**Fig. 1.** *Epigeneium treutleri*(Hook.f.) Ormerod: **a & b.** Habit; **c & d.** Inflorescence; **e.** Peduncle sheaths, **f.** Floral bract; **g & h.** Flower front & side views; **i.** Floral perigone with lip (front view); **j.** Column side views with pedicel and ovary; **k.** Anther front view; **l.** Pollinia. (Photographs a, b, c, h. N.Odyuo; d, e, f, g, i-l. Chaya Deori)

5. Lateral lobes of lip not touching the column ... 6  
 5. Lateral lobes of lip touching or overlapping the column ..... 7  
 6. Lateral lobes of lip broad; midlobe sub orbicular, apex truncate ..... **E. fuscescens**  
 6. Lateral lobes of lip narrow; midlobe rhombic to nearly orbicular, apex apiculate ..... **E. treutleri**  
 7. Petals oblong acute ..... **E. rotundatum**  
 7. Petals linear-lanceolate, acuminate .....  
 ..... **E. navicularis**

**Epigeneium treutleri** (Hook.f.) Ormd., Oasis 1(3): 3. 2000; Ormerod & Sathish Kumar, Rheedeia 18(2): 77. 2008; Pearce & Cribb, Orch. Bhutan, Edinb.: 432. 2002; Lucksom, Orch. Sikkim and North East Himalaya. Gangtok, 593. 2007. *Coelogyne treutleri* Hook.f., Fl. Brit. India 5: 837. 1890 & Icon. Pl. 22: t. 2105. 1894; Das & Jain, Fasc. Fl. India 5: 30. 1980. *Pleione treutleri* (Hook.f.) Kuntze, Revis. Gen. Pl. 2: 680. 1891. *Epigeneium yunnanense* Tang & Z.H. Tsi, Acta Phytotax. Sin. 22(6): 484. 1984. *Dendrobium treutleri* (Hook.f.) Schuit. & Peter B. Adams Muelleria 29: 66. 2011 **Fig.1**

*Type*: India, Sikkim Himalaya, *Treutler s.n.* (Holo. K)

Habit epiphytic. Rhizome branching covered with tubular membranous sheaths. Pseudobulb 1.5–2.5 × 0.4–0.7 cm, narrowly ovoid, arising from stout, creeping, naked rhizome at an interval of 2–4 cm apart. Leaves-2, base covered with large sheaths, golden yellow when dried, 2.5–4 × 0.7–1.5 cm, elliptic lanceolate, obtusely bifid at apex, 1-nerved. Inflorescence 1, hysteranthous; peduncle sheathed at base; sheaths 2, 8.5–9 × 4.5 mm, 6–7 nerved. Pedicellate ovary c. 15 mm long; floral bracts c. 9 × 4 mm, 7-nerved, sub-ovovate, obtuse, membranous. Flowers 3.5–4 cm across, front view pale brown, side view is light purplish-reddish, lip yellow with light purplish-reddish marks at the margin and disc towards hypochile. Dorsal sepal c. 18 × 9 mm (broader at base), broadly lanceolate subacute, 9-nerved; lateral sepals c. 20 × 9 mm (at the centre), broader at base (c. 12.5 mm), broadly lanceolate obtuse, 10 nerved. Petals 20–23 × 3–5 mm, linear lanceolate obtuse, 5-nerved. Lip 15–18 × 14–15 mm, 3-lobed; lateral lobes erect, narrowly oblong, rounded, c. 8 mm long; midlobe rhombic to nearly orbicular, apiculate; disc with 3-lamellae, outer most prominent and obliquely truncate, median shorter and very low. Column and foot c. 15.5–18 mm long, light brownish yellow; stielidia short. Anther 1.8–2 × 1.5 mm, oblong, yellow,

emarginated at apex, frontage entire. Pollinia 4, in pairs, c. 1 mm long, yellow. Capsule not seen.

*Flowering*: September–October.

*Specimen examined*: INDIA: Assam, Lakhimpur district, Ghagor, Dulong Reserve Forest 27° 27' 26.9" N and 94° 12' 06.3"E, 181 m, 18. 09. 2012, N. Odyuo & D. K. Roy 126286 (ASSAM!). CHINA: Yunnan, Taron-Baru Divide, Lungnan, 30.10.1938, T.T. Yu 20888 (PE!).

*Distribution*: India (Assam, Sikkim); Bhutan, China (Yunnan), Myanmar.

*Taxonomic note*: *E. treutleri* is based on Treutler's collection from Sikkim, India. Hooker, 1890 described this species as *Coelogyne treutleri* from Sikkim without specific locality and the type is deposited in Kew.

*Habitat*: *E. treutleri* was observed growing in a moist shady place on tree trunk of a single tree near streams in Tropical climate of 181 m altitude in Ghagor, Dulong Reserve Forest, Assam bordering towards Arunachal Pradesh.

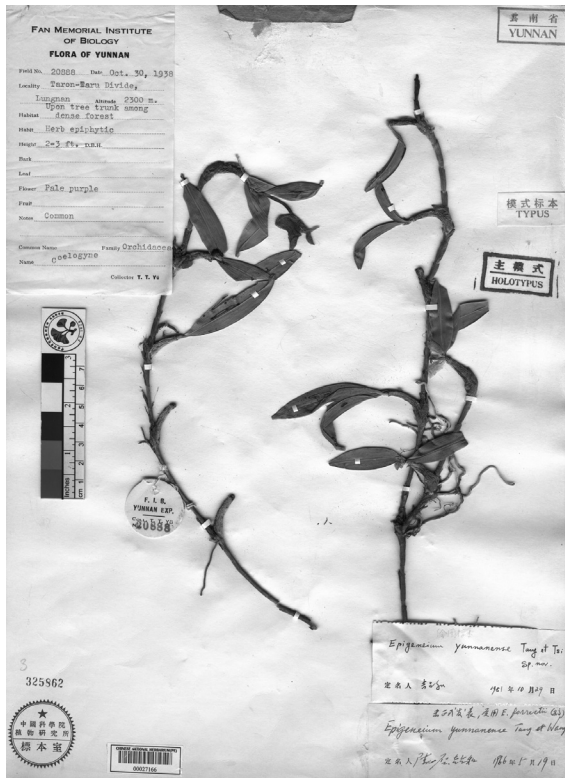
*Threat status*: Deforestation is the main threat to the orchid diversity in Dulong Reserve forest, Assam. The current population of the *E. treutleri* observed during the survey to Dulong Reserve forest was very less. The epiphytic species was found growing in a single host tree with few plants. Therefore the distribution of the species in the collected locality was very rare.

*Conservation*: The live plant of *E. treutleri* has been introduced in the Botanical Garden of Botanical Survey of India, Shillong as a means of ex situ conservation and it is surviving in the tree trunk of *Cerasus cerasoides* (Buch.–Ham. ex D. Don) S. Y. Sokolov along with other orchids.

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**Fig. 2.** Type of *Epigeneium yunnanense* Tang & Z.H. Tsi (PE)

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