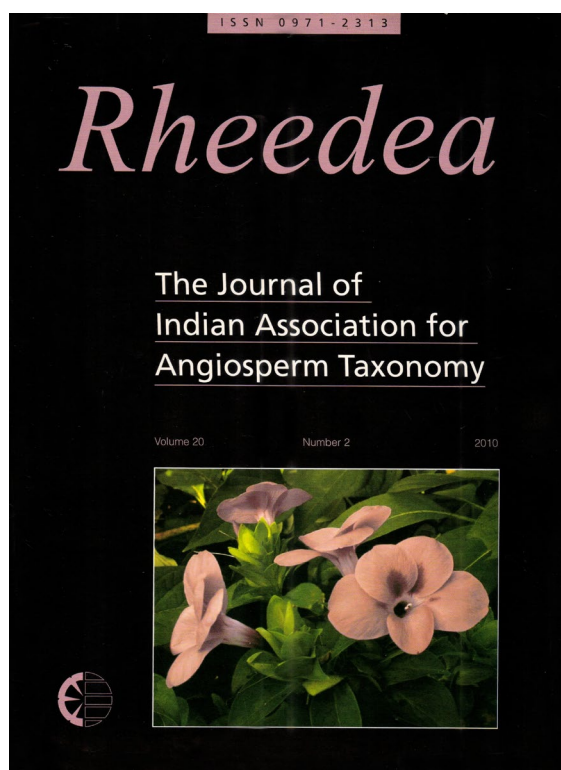




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Lectotypifications in *Goodyera* (Orchidaceae)

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Abstract

The names *Goodyera hemsleyana* King & Pantl., *Hetaeria fusca* Lindl. [= *Goodyera fusca* (Lindl.) Hook.f.] and *Neottia viridiflora* Blume [= *Goodyera viridiflora* (Blume) Lindl. ex D. Dietr.] are lectotypified and the photographs of the selected lectotypes are provided.

Keywords: *Goodyera*, Jewel Orchids, Lectotypification, Orchidaceae

Introduction

Goodyera R. Br. is a genus of predominantly terrestrial orchids which is represented by c. 90 species in world (Mabberley, 2008) and 14 species and a single variety in India. Many species of the genus are popularly known as 'Jewel orchids' for their beautifully reticulated, blotched or striped leaves. During the revisionary study of the subtribe Goodyerinae (Orchidaceae) in India for 'Flora of India' we found that the three names (including two basionyms) under the genus *Goodyera* need to be lectotypified.

Goodyera hemsleyana King & Pantl., J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 64: 342. 1896. **Fig. 1**

Lectotype (designated here): Senchal, 7000 feet, July 1892, *Pantling* 215 [CAL! (barcode no. CAL0000000625)]; **islectotype**: CAL! (barcode no. CAL0000000624); Photo!, BM; Photo!, BR; Photo!, K; Photo!, L; Photo!, P; Photo!, W].

King & Pantling (1896) cited 'Sikkim: on Senchal; elevation 7000 feet: flowering in July' in the protologue of *G. hemsleyana*. In their later work King & Pantling (1898) cited '*Pantling* no. 215' along with 'Sikkim: on Senchal; elevation 7000 feet: flowering in July'. Pearce & Cribb (2002), without examining any CAL specimen of *G. hemsleyana* and merely on the basis of assumption mentioned the holotype to be at CAL and isotypes at BM, K and W. But, during the present work two relevant specimens of *Pantling* 215 have been traced at CAL (barcode nos. CAL0000000624, CAL0000000625) and both of them were studied by Pantling before describing *G. hemsleyana*. Pearce & Cribb (2002) did not precisely



Fig. 1. Lectotype of *Goodyera hemsleyana* King & Pantl. (*Pantling* 215, CAL)

mention which one has to be treated as 'holo.' out of the two type specimens of CAL. Further, there is more than one type specimen present for *G.*

hemsleyana and thus, the term 'holo.' used by Pearce & Cribb (2002) is to be corrected as 'lecto.' or 'lecto-type'. But Article 9.8 of Vienna Code (McNeill *et al.*, 2006) cannot be applied to correct the typification (1st step lectotypification) done by Pearce & Cribb (2002) as their work has been published after 1 January 2001. In this context the CAL specimen (Pantling 215) with barcode number 'CAL0000000625' is designated here as lectotype (Fig. 1) of *G. hemsleyana* which is a perfect match with the description provided by King & Pantling (1896). Furthermore, the CAL-specimen (barcode no. CAL0000000625) bears notes written by Pantling for *G. hemsleyana*, strengthening our stand.

Hetaeria fusca Lindl., Gen. Sp. Orchid. Pl.: 491. 1840 ('*Aetheria fusca*').

≡ *Goodyera fusca* (Lindl.) Hook.f., Fl. Brit. India 6: 112. 1890.

Fig. 2

Lectotype (designated here): 'Origo inverto', Wallich Numer. List No. 7395 [Photo!, K-LINDL (left



Fig. 2. Lectotype of *Hetaeria fusca* Lindl. [= *Goodyera fusca* (Lindl.) Hook.f.] (Wallich Numer. List No. 7395, K-LINDL).

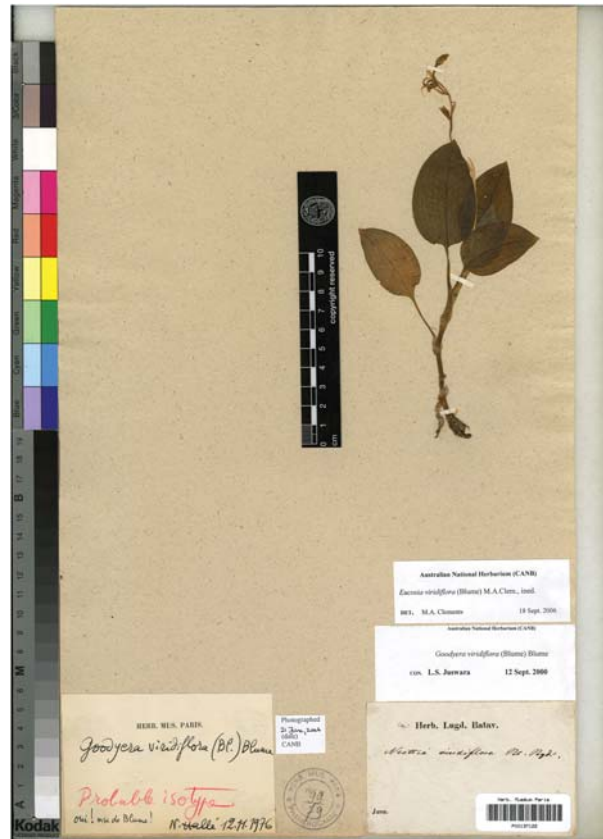


Fig. 3. Lectotype of *Neottia viridiflora* Blume [= *Goodyera viridiflora* (Blume) Lindl. ex D. Dietr.] (Blume s.n., P).

upper corner); isolectotype: Photo!, K-W]; paralectotype: Royle s.n. (Photo!, K-LINDL).

The type sheet (Fig. 2) preserved at K-LINDL with barcode number 'K000364518' possesses two specimens, both of which were cited by Lindley (1840) while describing *Hetaeria fusca*. The specimen mounted on left upper corner is a Wallichian specimen (Wallich 7395), whereas the other mounted on right upper corner was collected by Royle. Lindley (1840) described *H. fusca* as '5 – 7 inch' (12.7 – 17.8 cm) long plant based on both the specimens. The Wallichian specimen consists of only an inflorescence which is about 16 cm long whereas the specimen collected by Royle is a complete specimen (with both leaves and inflorescence) and about 12 cm long. However, the majority of the description (including floral parts) provided by Lindley (1840) for *H. fusca* was mainly based on the Wallichian specimen which is evident from the crude illustrations of the flowers and dissected floral parts drawn by Lindley on the sheet where the specimen was mounted. The flowers and dissected floral parts were kept in a packet attached with the Wallichian specimen which indicate that the species was described mainly based on it

(Wallich Numer. List No. 7395, K-LINDL). Hence this specimen has been chosen here as lectotype.

Neottia viridiflora Blume, Bijdr.: 408. 1825.

≡ **Goodyera viridiflora** (Blume) Lindl. ex D. Dietr., Syn. Pl. 5: 165. 1852. **Fig. 3**

Lectotype (here designated): Java, *Blume s.n.* [(barcode no. P00137122), Photo!, P].

Seidenfaden (1978) mentioned Java ('Salak') plant as type ('Blume's type') of *Neottia viridiflora* but he neither examined it nor mentioned where it was actually deposited. Pearce & Cribb (2002) mentioned 'holo. L not found, iso. P' and during the present study Dr. Gerard Thijssse of National Herbarium Netherland (L) also confirmed that the 'holotype' of *N. viridiflora* could not be traced at L. Averyanov (2008) though mentioned specimen at P as 'type', neither mentioned its status nor used the phrase 'designated here' (hic designatus) or equivalent which is essential (as on 1 January 2001 vide Article 7.11 of Vienna Code) for a valid lectotypification. Thus, the specimen (Fig. 3) with barcode no. P00137122 at P is designated here as lectotype of *N. viridiflora*.

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