Ken INOUE*: Notes on *Platanthera* (*Habenaria*) from Yunnan and northern Burma described by W. W. Smith

井上 健*: 雲南および北部ビルマ産スミス氏記載のツレサギソウ属植物の検討

Through the courtesy of the Herbarium of Royal Botanic Garden, Edinburgh, I have an opportunity to investigate the type specimens of *Habenaria* from Yunnan and northern Burma described by W. W. Smith (1921), some of which were afterwards transferred to *Platanthera* by Schlechter (1924) and Tang & Wang (1940). Some new informations were obtained from the investigation of these specimens and thus reported here.

1) **Platanthera hologlottis** Maxim. var. **glossophora** (W. W. Smith) K. Inoue, stat. nov. (Fig. 1A & Fig. 2)

Habenaria glossophora W. W. Smith in Notes Roy. Bot. Gard. Edinb. **13**: 206 (1921)—*Platanthera glossophora* (W. W. Smith) Schltr. in Fedde Repert. Sp. Nov. **20**: 381 (1924).

Flowers white and green (from the original description); leaves linear-lanceolate, 15–20 cm long, 12–16 mm wide.

Distr. Endemic to Yunnan (China).

Specimens examined. China, Yunnan, Hills to the north-west of Tengyueh (G. Forrest 8148, Type of *Habenaria glossophora*, E; G. Forrest 8148A, E).

In the original description, Smith states *Habenaria* (*Platanthera*) *glossophora* to be related to *P. henryi* and *P. interrupta*, both of which have been considered as synonyms of *P. minor* by recent authors. Vegetative and floral features of *P. glossophora* match well with *P. hologlottis*, and may be conspecific with it. However, slight differences may exist between them. *P. glossophora* has narrower leaves (about 1.5 cm wide) than *P. hologlottis*, and the latter has pure white flower color, whereas the former white and green as mentioned in the original description and seems to be a local race of the latter.

2) **Platanthera pugionifera** (W.W. Smith) Schltr. in Fedde Repeat. Sp. Nov.

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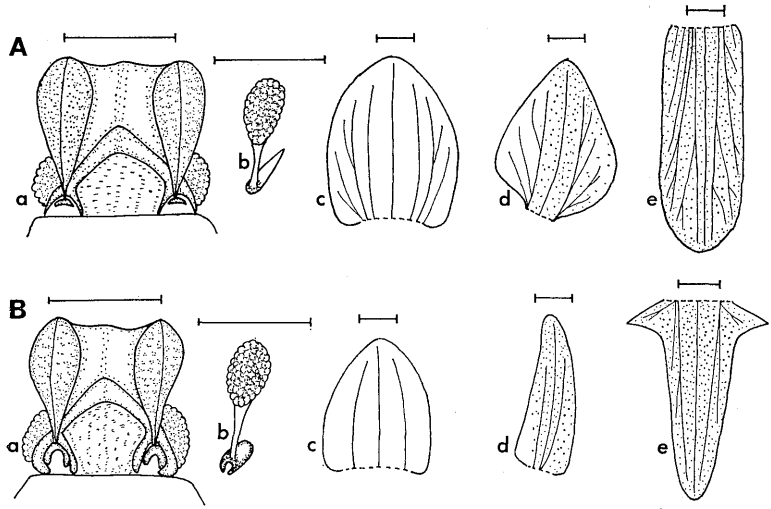


Fig. 1. A. *Platanthera hologloztis* var. *glossophora* (G. Forrest 8148A, Isotype of *Habenaria glossophora*, E). B. *P. pugionifera* (F. Kingdon Ward 920, Type of *Habenaria pugionifera*, E). a, front view of column; b, pollinarium; c, middle sepal; d, petal; e, lip. Scale 1 mm.

20: 381 (1924). (Fig. 1B & Fig. 3)

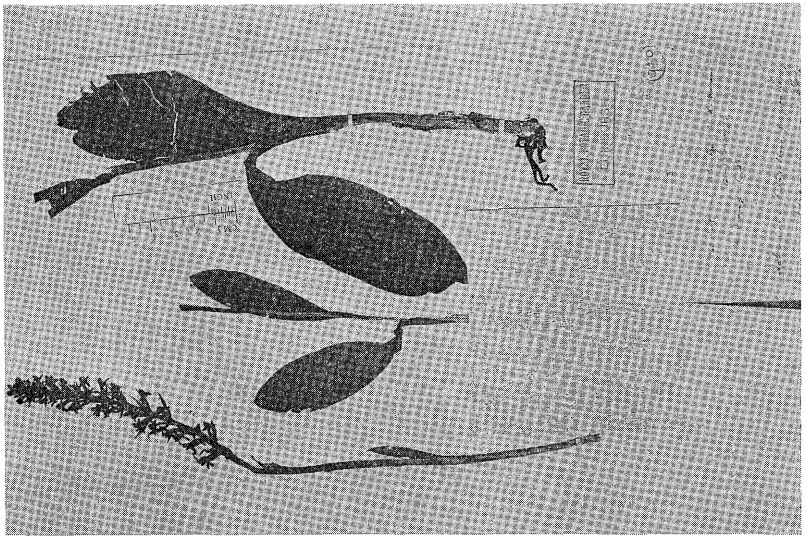
Habenaria pugionifera W. W. Smith in Notes Roy. Bot. Gard. Edinb. **13**: 209 (1921).

Distr. Endemic to W. China (Yunnan, Szechwan).

Specimens examined. China, N.W. Yunnan, Atuntze (F. Kingdon Ward 920, Type of *Habenaria pugionifera*, E; F. Kingdon Ward 921, E); Szechwan (no detailed locality, McLaven Ae98, E, pro parte).

Smith states that *Habenaria* (*Platanthera*) *pugionifera* is related to *Habenaria biermanniana;* however, this species has the intermediate features between *P. fuscescens* (=*Tulotis asiatica*) and *P. ussuriensis* (=*Tulotis ussuriensis*). Some floral characteristics such as small lateral lobes of the lip and strongly incurved viscidium surrounded by the bases of rostellum (Fig. 1B) indicate that this species belongs to Tulotis group of *Platanthera* and that it is closely related to *P. fuscescens*.

Compared with *P. fuscescens*, *P. pugionifera* seems to have the following differences: wider middle sepal (ovate, ca 3.5×1.8 mm), a little smaller lateral lobe of lip, a little shorter spur (7–7.5 mm long), oblong and lightly incurved



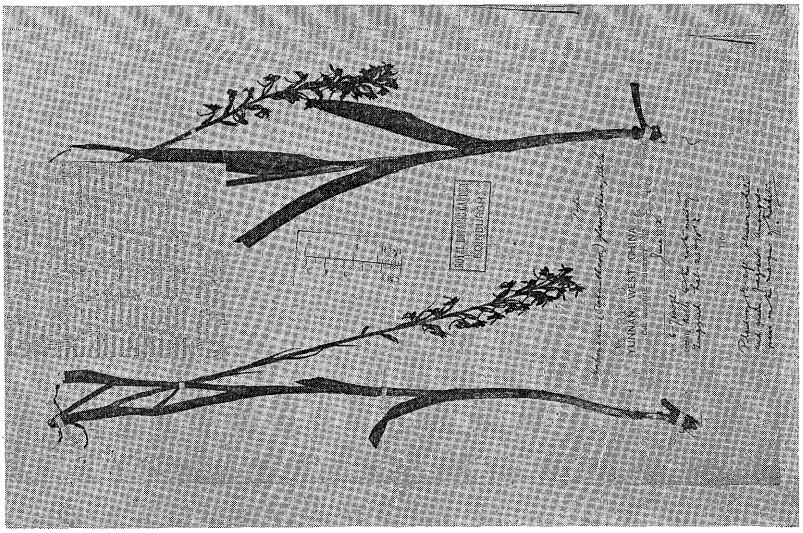


Fig. 2. (left). *Platanthera hologlottis* var. *glossophora* (G. Forrest 8148, Type of *Habenaria glossophora*, E).
Fig. 3 (right). *P. pugionifera* (F. Kingdon Ward 920, Type of *Habenaria pugionifera*, E).

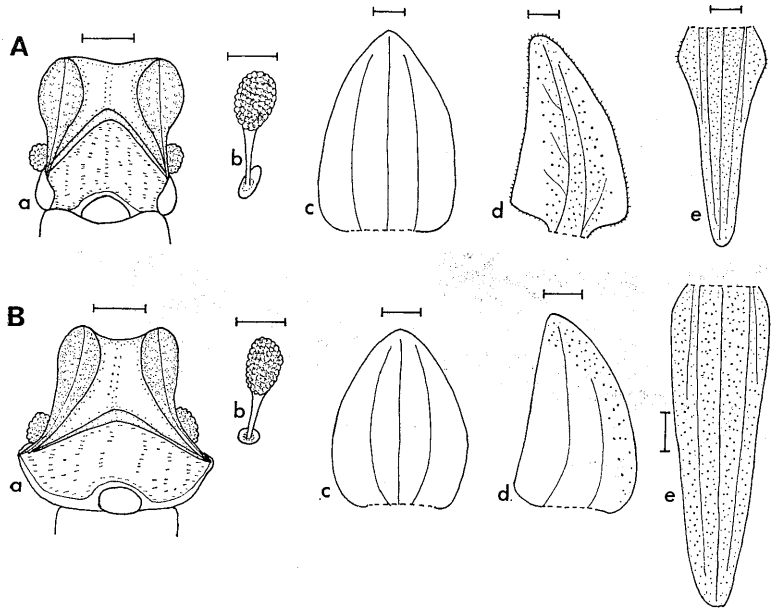


Fig. 4. A. *Platanthera oreophila* (G. Forrest 10631, Type of *Habenaria oreophila*, E). B. *P. minor* (G. Forrest 8402, Type of *Habenaria multibracteata*, E). a, front view of column; b, pollinarium; c, middle sepal; d, petal; e, lip. Scale 1 mm.

viscidium, and narrower leaves (oblanceolate, 9–14×2.5–4 cm). From these I consider *P. pugionifera* and *P. fuscescens* as independent species, although I cannot clearly show the extent of variations of the two species in China at this point. Future study may reveal the former as a geographical subspecies of the latter.

3) **Platanthera oreophila** (W. W. Smith) Schltr. in Fedde Repert. Sp. Nov. **20**: 381 (1924). (Fig. 4A & Fig. 5)

Habenaria oreophila W. W. Smith in Notes Roy. Bot. Gard. Edinb. **13**: 208 (1921).

Distr. Endemic to Yunnan (China).

Specimens examined. China, Yunnan, Mountains in the N. E. of the Yangtze bend (G. Forrest 10631, Type of *Habenaria oreophila*, E).

Platanthere oreophila seems to be related to *P. minor* and *P. angustata* at first impression. However, the former has minutely pubescent hairs on the

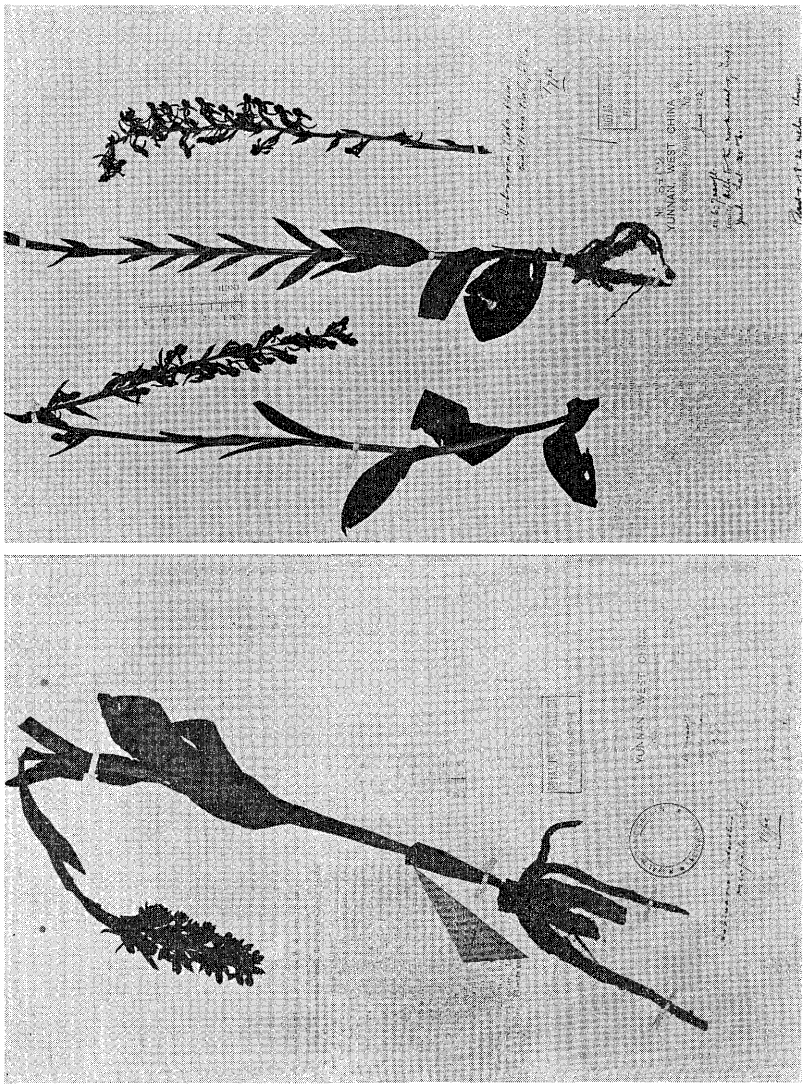


Fig. 5. (left). *Platanthera oreophila* (G. Forrest 10631, Type of *Habenaria oreophila*, E).
Fig. 6 (right). *P. minor* (G. Forrest 8402, Type of *Habenaria multibracteata*, E).

margin of lateral petals and the oblong viscidia. The petal with pubescent hairs is unique diagnostic character in this genus. Furthermore, this species has three tuberous roots. Such root-form indicates that the two-years-old tuberous root is still attaching and remaining alive. This feature is rarely found in this genus, but it is otherwise in *P. minor* and *P. angustata*.

4) **Platanthera minor** (Miq.) Reichb. f., Bot. Zeit. 75 (1878). (Fig. 4B & Fig. 6)

Habenaria multibracteata W. W. Smith in Notes Roy. Bot. Gard. Edinb. 13: 207 (1921), syn. nov.—*Platanthera multibracteata* (W. W. Smith) Schltr. in Fedde Repert. Sp. Nov. 20: 380 (1924).

Originally, Smith states that *Habenaria* (*Platanthera*) *multibracteata* is in comparison to *P. henryi* (=*P. minor*), but the habit is more leafy. The floral structure of *P. multibracteata* and *P. minor* are very similar, and the leafy forms of *P. multibracteata* sporadically occur in the populations of *P. minor*. Thus there is no reason to distinguish them specifically.

5) **Platanthera roseotincta** (W. W. Smith) Tang et Wang in Bull. Fan.

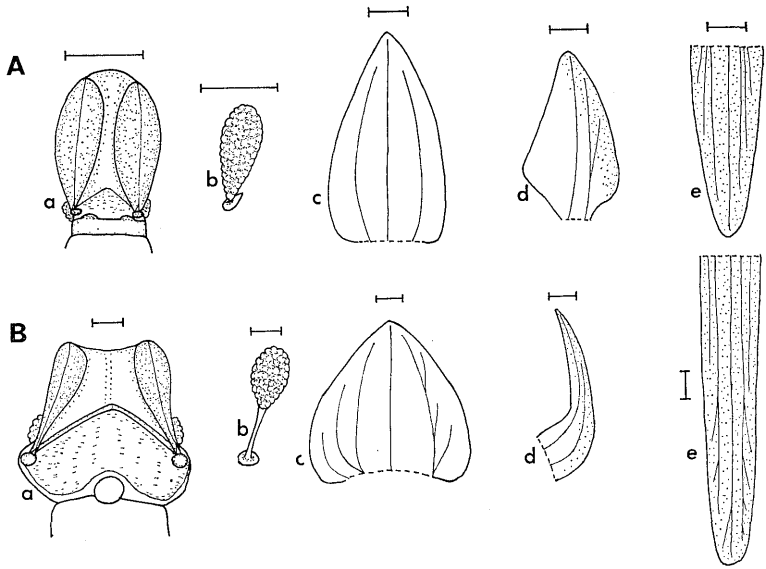


Fig. 7. A. *Platanthera roseotincta* (Ludlow et al. 5266, E). B. *P. chlorantha* (F. Kingdon Ward 784, Type of *Habenaria subulifera*, E). a, front view of column; b, pollinarium; c, middle sepal; d, petal; e, lip. Scale 1 mm.

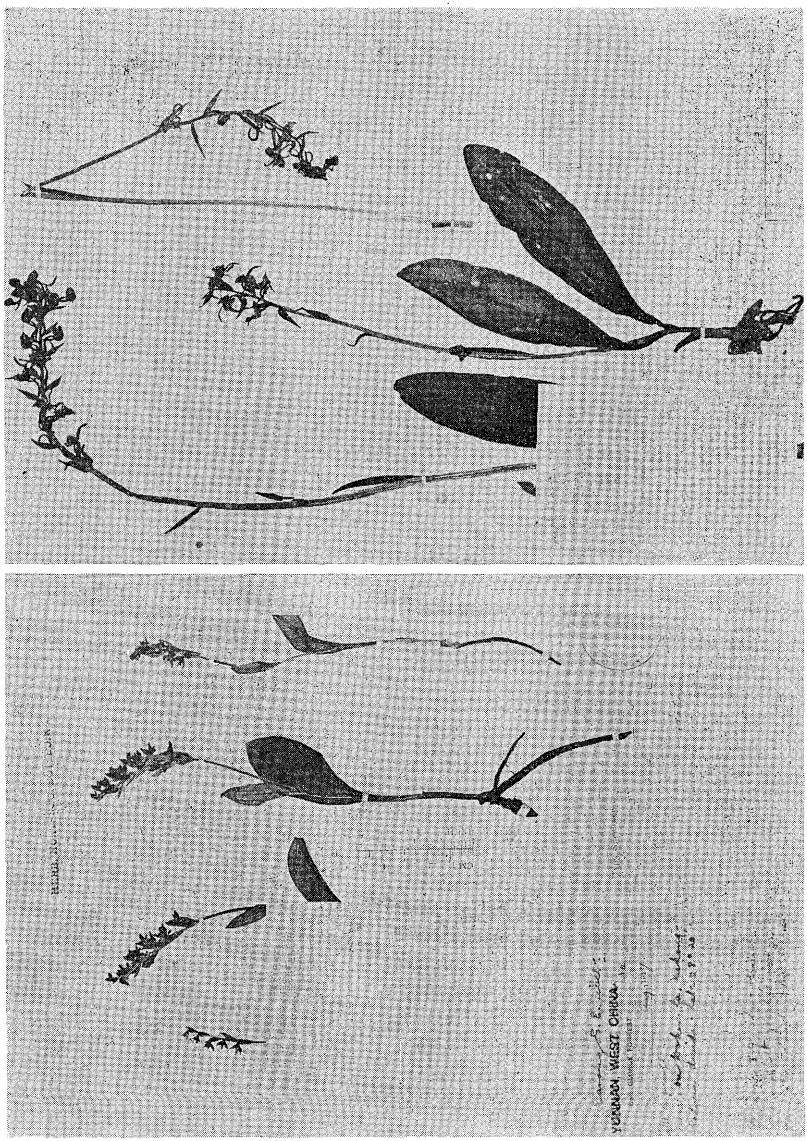


Fig. 8 (left). *Platanthera roseotincta* (G. Forrest 14743, Type of *Habenaria roseotincta*, E).
Fig. 9 (right). *Platanthera chlorantha* (F. Kingdon Ward 784, Type of *Habenaria subulifera*, E).

Mem. Inst. Biol. Bot. Ser. 10: 30 (1940). (Fig. 7A & Fig. 8)

Habenaria roseotincta W. W. Smith in Notes Roy. Bot. Gard. Edinb. 13: 210 (1921).

Platanthera altigena Schltr. in Fedde Repert. Sp. Nov. 20: 380 (1924).

Orchis doyonensis Hand-Mazz., Symb. Sin. 7: 1324 (1936)—*Galeorchis doyonensis* (Hand.-Mazz.) Soó in Act. Acad. Scient. Hungaricae, 12: 352 (1966)—*Galearis doyonensis* (Hand.-Mazz.) P. F. Hunt in Kew Bull. 26: 171 (1971)—*Chondradenia doyonensis* (Hand.-Mazz.) Vermeulen in J. Ber. Naturw. Verein Wuppertol. 25: 36 (1972).

Distr. S. E. Tibet, Yunnan and Upper Burma.

Specimens examined. S. E. Tibet, Tsarong Prov., Mekong-Slween Divide, on Doker-la (G. Forrest 14743, Type of *Habenaria roseotincta*, E); Kongbo Prov., Doshong La (Ludlow et al. 5266, E); E. Tibet, Moku-ji Pass (R. Farrer 1794, Isotype of *Platanthera altigena*, E). N. W. Yunnan, Mekong-Salween Divide, high part of Doyon-lumba (Handdel-Mazzetti 9694, Type of *Orchis doyonensis*, W); W. Yunnan, Salween valley, N'Maikha-Salween Divide, Chimili (G. Forresst 25036, E). Upper Burma, N'Maikha-Salween Divide, Chimili (R. Farrer 1150, E; G. Forrest 26959, E).

The generic position of this species is somewhat troublesome. This species was described under *Habenaria* by Smith (1921), and later transferred to *Platanthera* by Tang & Wang (1940). Handel-Mazzetti independently (1936) described *Orchis doyonensis*, which Tang & Wang (1940) considered as conspecific with *Platanthera roseotincta*, and it was either combined to *Galearis* (Hunt 1971) or to *Chondradenia* (Vermeulen 1972).

This diversity of opinions results from the difference on the generic deflnition and the misobservation on the column structure. Boiling the dried specimens of flowers of this species, I confirmed by careful observation that the viscidia of the pollinaria were separated, that is, not coherent as had been reported by Handel-Mazzetti and Vermeulen and that viscidia were naked and not enclosed in the bursicle. These features indicate that this species belong to *Platanthera*. The relationship with other *Platanthera* species is uncertain at present, and will be mainfested in the study by analysing the column structure of the fresh flowers in detail. At present I only suggest that this species could be specialized species in the genus from the peculiar features of perianth and column.

6) **Platanthera chlorantha** Cust. ex Reichb. in Moessl., Handb. 2: 1565 (1828). (Fig. 7B & Fig. 9)

Habenaria subulifera W. W. Smith in Notes Roy. Bot. Gard. Edinb. 13: 210 (1921), syn. nov.—*Platanthera subulifera* (W. W. Smith) Schltr. in Fedde Repert. Sp. Nov. 20: 381 (1924).

Distr. Widely distributed in the Eurasian Continent (from England to Korea).

Specimens examined. China, Yunnan, Mekong-Salween Divide (F. Kingdon Ward 784, Type of *Habenaria subulifera*, E); Yangtse-Mekong Divide, upper Schuba (Handel-Mazzetti 8862, W); Szechwan, Tatsien-lu (R. Cummingham 440, E).

Smith states that *Habenaria* (*Platanthera*) *subulifera* is related to *P. henryi* (=*P. minor*) and *P. interrupta* (=*P. minor*); however, in my opinion, this species is closely related to *P. chlorantha*. Vegetative features such as two large leaves basally located and floristic features such as cordate middle sepal, falcately lanceolate petal and wide anther connective indicate that *P. subulifera* is conspecific with *P. chlorantha*. *P. subulifera* has strongly curved, short spurs (ca 16 mm long), which suggests the occurrence of a local race. However, at present I cannot discuss about the variation of *P. chlorantha* in China. It may be neccesary to clarify the relationship with other taxa such as *P. freynii*.

I would like to express my thanks to the directors and the curators of the herbaria of Royal Botanic Garden, Edinburgh (E), and Naturhistorisches Museum, Wien (W), for the loan of the specimens: to Prof. K. Iwatsuki, Botanical Gardens, Faculty of Science, University of Tokyo for the arrangement of this study.

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エジンバラ植物園の厚意により雲南およびビルマ北部よりスミス氏が記載したツレサギソウ属植物の基準標本を検討し，いくつかの知見を得たので報告する。

1) *Platanthera glossophora* はミズチドリと同種と考えられるが，葉が細く花色が緑白色なので変種とした。2) *P. pugionifera* はヒロハノトンボソウに最も類縁があるが，背がく片が卵形，より小さな唇弁の側裂片，倒披針形の葉形などの特徴があり同一とは認められない。3) *P. oreophila* は花部にオオバノトンボソウなどと類似点があるが花弁の縁の細毛，2年間宿存する塊根，長だ円形の粘着体をもつなどの特徴がある。

4) *P. multibracteata* はオオバノトンボソウの葉数の多い1型であった。5) *P. roseotincta* はハクサンチドリ属の種とする意見もあり，所属が不明確であった。花の解剖から2個の粘着体が裸出している事を確認した。この特徴はこの種がツレサギソウ属である事を示している。6) *P. subulifera* は，根生状に出る2枚の葉，鎌形の花弁，広い葯隔などの特徴が *P. chlorantha* と一致しており，両者は同種と考えられる。

○シロバナアサマリンドウ（豊国秀夫） Hideo Toyokuni: A white-flowered form of *Gentiana sikokiana* Maxim. found in Ehime Pref.

1982年10月3日に愛媛県新居浜市銅山越で，新居浜西高等学校の伊藤隆之氏がアサマリンドウの白花品を採集された。未だ命名がないので，ここに記載・発表する。なお，仲介の労をとられた国立科学博物館の中田政司氏に感謝申し上げる。

Gentiana sikokiana Maxim. forma **albiflora** Toyokuni, f. nov.

Corolla alba et tubus corollae in parte inferiori dilute purpureo-punctulatus; cetera ut in f. *sikokiana*.

Nom. Jap. Shirobana-asamarindô (T. Itoh, nov.)

Hab. Pref. Ehime: Dôzangoe, Niihama (T. Itoh, Oct. 3, 1982—holotypus in TNS). （信州大学 教養部生物学教室）

□小林義雄： **日本中国 菌類歴史と民俗学** (Kobayasi, Y.: Historical and ethnobotanical mycology) 16+162+254 pp. 4 pls. 1983. 広川書店，東京. ¥25,000. 本書はこの方面の出版物としてはかってなかったものである点，先ず著者と出版者とに敬意と謝意とを表する。本書は3部に分かれている。第一部は東洋の古典菌誌と図譜で79の菌誌或は菌譜を列挙し，これに近代的な解説を附記したものである。日本のものが存外あることが興味を惹く。第2部は菌類民俗学・歴史資料で，ほとんど著者自ら採集した菌について古今東西の文献をさぐり，各地に散らばる資料・伝説・民俗を渉猟して，氏一流の博い視野から眺め且つは論じた珠玉篇である。その数は42件に及び，その半ばは日本菌学会報に1977-1981年に亘つて連載されたのを転載したものである。第三部は中国と日本の稀覯書10篇を選んで複製したもので，中にはいまだに出版されないのもあり，稀な本を随時看ることができるのはまことに有難い。列挙すると林息園：呉覃譜 (1703)，太上霊宝芝草品 (15世紀)，松岡玄達：怡顔斎菌品 (1761)，曾占春：皇和菌譜 (1791)，陳仁玉：菌譜 (1245)，潘之恒：広菌譜 (1596-1644)，佐藤成裕：温故斎菌譜 (1796)，坂本浩然：菌譜 (1834)，渋江長伯：覃譜 (1800頃)，曾占春：成形図説 巻31 (1831)，の10種である。 （前川文夫）