

Hiroshi HARA*: **New or noteworthy flowering plants
from Eastern Himalaya (4)**

原 寛*: 東部ヒマラヤ植物新知見 (4)**

16) ***Sunania filiformis*** (Thunb.) Rafinesque

var. ***kachina*** (Nieuwland) Hara in Journ. Jap. Bot. **37**: 329 (1962).

Specimens examined.

Sikkim: Balasan R. 7-8000 ft. (Dongboo for King, Nov. 10, 1875 in K, CAL);
without locality (S. Kurz in CAL).

Bhutan: Mirichome Dinpa, also Phanga Kurmed 3500 ft. (Cooper no. 4953
in BM).

Naga Hills: Kohima 3000 ft. (Clarke 40937A in K, 40937D in BM, 40937E
in CAL); ibid. 4500 ft. (Clark 41518 in E).

Assam: Nongstoin (Kanjalil 5967 in CAL); above upper Rotung 2500 ft.
(Burkill 36090 in CAL); above Babuk 3400 ft. (Burkill 37671 in CAL).

Manipur: Mayung 6000 ft. (Clarke 42039 in E).

N. Burma: Kachin Hill (Shaik Mokim, Nov. 1897 in US (typus), CAL); 6-
7000 ft. (Forrest 25000 in K, E, US); Ukhrol 5500 ft. (King.-Ward 17999 in
BM); (King.-Ward 21199 in E).

Sunania neofiliformis (Nakai) Hara in Journ. Jap. Bot. **37**: 330 (1962).

Specimens examined.

Sine loco speciale (Falconer 860 in K).

Kashmir: Sharda, Kishenganga Vally 6000 ft. (Jan Mohd 120 in BM);
Hazara Distr., Kagan Valley (Inayat 20128 in K, CAL); Sachan, Dara Panjul
(Inayat, Aug. 1899 in K); Pir Panjal & Gulmarg 2-4000 ft. (Stewart, Oct. 1872
in K); Chamba State, Chanju Valley 6000 ft. (Lace 1982 in E, CAL).

Punjab: Simla Distr., Chhachpur Rawingarh State 1800 m (Parker, Sep.
1938 in K).

When I published a paper on the genus *Sunania* in Journ. Jap. Bot. **37**: 326
(1962), the materials from Himalayas were very scanty, but in 1963 I had a
chance to examine richer materials from those regions. I wish to express here

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my sincere thanks to the directors and staffs of Royal Botanic Gardens at Kew, and Edinburgh, British Museum of Natural History in London, and Botanical Survey of India in Calcutta for their kindness in giving me facilities for my study in those herbaria.

It is now clear that all specimens collected from Sikkim, Bhutan, Khasia, Naga Hills as well as Upper Burma belong to *Sunania filiformis* var. *kachina*, whereas those from Kashmir and its adjacent Pakistan and Punjab are identical with *S. neofiliformis* (cf. Fig. 1). It is remarkable that *S. neofiliformis* is found in Western Himalaya far isolated from its main distribution area in China and Japan, and in this gap occurs *S. filiformis* var. *kachina*. The Kashmir specimens of *S. neofiliformis* are indistinguishable from those of Japan at least in outer morphological characters.

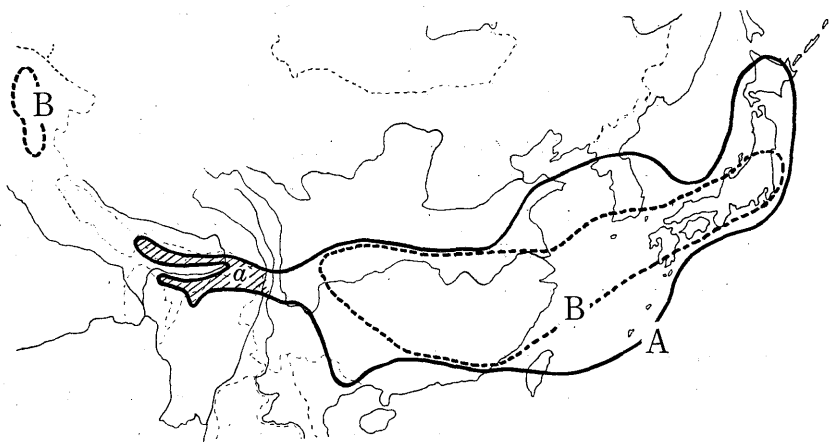


Fig. 1. A. *Sunania filiformis* (—). a. var. *kachina* (///). B. *Sunania neofiliformis* (---).

17) ***Skimmia arborescens*** T. Anderson ex Gamble in Journ. Linn. Soc. **43**: 491 (1916); in Kew Bull. **1917**: 302 (1917)—Huang in Act. Phytotax. Sin. **7**: 346, t. 66, f. 2 (1958).

S. Wallichii Hooker f. et Thomson ex Gamble, l.c. 492 (1916); l.c. 302 (1917), quoad specim. typic. ex Nepalia et Bootan.

Specim. typica examin. Nepal (Wallich 1821, lectotype of *S. Wallichii* designated by Lacaita in K); Bootan (Griffith 1815, syntype of *S. Wallichii* in K); Sikkim: Tookeria 6500 ft. (T. Anderson, no. 51, May 1862, type of *S. arborescens* in K).

Distr. E. Himalaya (Nepal to Bhutan), Manipur, N. Thai, and W. & S. China.

Skimmia melanocarpa Rehder et Wilson in Pl. Wilson. 2: 138 (1914), p.p.—Hand.-Mzt., Symb. Sin. 7: 629 (1933)—Huang, l.c. 349, t. 67, f. 2 (1958).

S. Wallichii Hook. f. et Thoms. ex Gamble, l.c. 492 (1916); l.c. 302 (1917), excl. typo—Kanai in Journ. Fac. Sci. Univ. Tokyo 8: 325 (1963).

Distr. E. Himalaya (Nepal to Bhutan, N. Assam), N. Burma, and W. China.

As pointed by Gamble and Lacaïta, two distinct species of *Skimmia* occur in Eastern Himalaya, and Gamble adopted the names, *S. arborescens* T. Anders. and *S. Wallichii* Hook. f. et Thoms. for them. But the latter name was used in a different sense from the original meaning.

It is apparent that Hooker f. at first distinguished the Eastern Himalayan plants as *S. Wallichii* from *S. Laureola* Hooker f., but he did not publish the name. In the Kew Herbarium, there exist two specimens bearing the name *S. Wallichii* in Hooker's own handwriting, one from Nepal (Wallich 1821) and the other from Bootan (Griffith 1815). Laciata in 1916 clearly selected the first specimen from Nepal collected by Wallich as the type of *S. Wallichii* in the Kew Herbarium. It is identical with *S. arborescens* Anders. which is typified by the specimen collected and named by T. Anderson. Gamble and Lacaïta, however, confounded it with another specimen from Nepal also collected by Wallich in 1821 which belongs to the other species, and the description of *S. Wallichii* was given unfortunately based on the latter specimen. So, in order to avoid confusion, *S. arborescens* is here adopted reducing *S. Wallichii* to its synonym.

On the other hand, the plant described by Gamble as *S. Wallichii* is very near to *S. melanocarpa* of China, as already stated by Gamble himself in 1917. But Gamble's description in 1916 of *S. Wallichii* that the fruits are 'coccineus' is also misleading, and he mentioned in 1917 that it has 'greenish rather dry berries.' So far as I have observed, the fruits of both species in Eastern Himalaya are black in mature. Handel-Mazzetti in 1933 has already referred a Sikkimese specimen to *S. melanocarpa*, and I cannot find any definite characters to separate the Eastern Himalayan plant from *S. melanocarpa* of China and they seem to be conspecific.

18) ***Impatiens Pradhani*** Hara, sp. nov.

Caules 20-60 cm longi ramosi glabri praecipue superiore late alati. Folia alterna superiore saepe conferta oblonga vel elliptica apice caudato-acuminata

marginē obtuse incurvato-serrata glabra 5-12 cm longa 1.5-4.2 cm lata breviter petiolata. Pedunculi e axillis superioribus ascendentes 5-12 cm longi. Inflorescentiae racemosae. Pedicelli radiati graciles 1-2 cm longi; bractae basilares ovals concavae apice longe callosio-apiculatae. Sepala orbicularia 4-5 cm longe callosio-apiculata. Flores mediocres lutescentes brunneo-purpureo-venosi glabri. Vexillum orbiculare 8-10 mm longum apice mucronulatum. Alae 30-38 mm longae, lobo basilare rotundato 5 mm longo praeditae, apice longissime caudato-attenuatae oblique descendentes. Labellum saccatum dependens 16-19 mm longum, ore antice appendice conico oblique descendente 10-13 mm longo distincte callosio-apiculato lutescente longe projectum, apice in calcar tenue incurvum 5 mm longum atro-purpureum abrupte contractum. Capsulae lineares.

Typus. Sikkim: prope Lagyap, alt. 2000-2300 m (K. C. Pradhan et Hara, Sep. 13, 1964, fl.) in TI.

The species is very close to *I. bicornuta* Wallich, but is distinguished from the latter in having broadly winged stems and longer projecting appendage at the mouth of lip.

19) **Monotropastrum humile** (D. Don) Hara in Journ. Jap. Bot. **36**: 78 (1961).

Monotropa humilis D. Don, Prodr. Fl. Nepal. 151 (1825).

M. nepalensis Wallich, Cat. no. 7252 (1832), nom. nud.

Monotropastrum macrocarpum H. Andres in Notizbl. Bot. Gart. **12**: 698 (1935), sine diagn. latin.; in Hand.-Mzt., Symb. Sin. **7**: 766, f. 23 (1936).

Monotropastrum ampullaceum H. Andres, l.c. 698 (1935), sine diagn. latin.

Monotropastrum pumilum H. Andres in Bot. Jahrb. **76**: 103, f. 1 (1953).

Monotropastrum Clarkei H. Andres, l.c. 105 (1953), sine diagn. latin.

Monotropanthum ampullaceum (H. Andres) H. Andres in Fedde, Rep. **64**: 88 (1961).

Specimens examined.

Himalaya. Kumaon (Wallich 7252, p.p. in K). Nepal: via ad Gossain Than (Wallich 7252, Jul. 1821—lectotype of *Monotropa humilis* D. Don in K); 3 miles E. of Timure 10500 ft. (Polunin 760, Jul. 1949 in BM). Sikkim: Tonglo 6-8000 ft. (Hooker f.—type of *M. Clarkei* in K); Tiger Hill, Darjeeling 2480 m. (Hara et al. Jun. 1960 in TI). Bhutan: Zado La 9000 ft. (Cooper 3249 Jul. 1914 in E); Laktang 7-8000 f. (K.-Ward 3051, May 1919 in E); Denchung 9000 ft. (Ludlow, Sherriff & Hicks 20908, Jul. 1949 in E). S. Tibet: Upper Chumbi Valley

12000 ft. (Gould 1585A, Sep. 1938 in K); Yigrong Valley 9-10000 ft. (K.-Ward 12156, Aug. 1935 in BM).

Khasia: 4-6000 ft. (Hooker f. & Thomson in K); Shillong 5200 ft. (Clarke 44112, Jun. 1886—syntype of *M. pumilum* in K).

Manipur: Nong Shong Khong 4000 ft. (Watt 6294, Apr. 1882—syntype of *M. pumilum* in K).

N. Burma: Crags of Shing Hong 27°25'N, 98°30'E (Farrer 1653, Jun. 1920 in E).

Laos: Pu Bia (Kerr 21048, Apr. 1932 in K).

China. Yunnan: bois de Ma-cal-chan 2500 m. (Delavay 4118, Aug. 1889— isoparatype of *M. macrocarpum* in K); Hupeh: Hsingshan, 8-9000 ft. (Henry 6999 in K).

Distr. Himalaya, Khasia, S. Tibet, Manipur, N. Burma, Indo-China, and W. & C. China.

var. **tripetalum** (Mikino) Hara, comb. nov.

Monotropa uniflora β . *tripetala* Makino in Journ. Jap. Bot. 3(7): 28 (1926).

Monotropastrum globosum var. *tripetala* (Makino) Honda, Nom. Pl. Jap. 254 & 511 (1939), nom. illegit.

Monotropastrum globosum H. Andres ex Hara in Icon. Pl. Asia-Or. 4(1): 327, t. 109 (1941); Enum. Sperm. Jap. 1: 3 (1949).

Neotypus. Honshu: Prov. Shinano, prope Honzawa-onsen, mont. Yatsugatake (Y. Yabe, Aug. 19, 1902) in TI.

Distr. Japan, Ryukyu, Taiwan, S. Kuriles, S. Saghalin, S. Ussuri, and Korea.

var. **glaberrimum** Hara, var. nov.

?*Monotropastrum arisanarum* H. Andres, l.c. 698 (1935) sine diagn. latin.

Petala intus filamentaque glabra.

Typus. Taiwan: Nimandaira, mont. Arisan (Hayata?, Apr. 1, 1914) in TI.

Distr. Taiwan, N. Burma, and S. Tibet.

Monotropastrum H. Andres is a very distinct genus, and is now known widely from Himalayas to Japan. Although it closely resembles *Monotropa uniflora* L. superficially, it clearly differs from the latter by smooth unilocular ovary with 6-13 parietal placentae, anthers opening by an elliptic lid, generally bluish stigma, indehiscent berry, and oval seeds without appendages. It flowers from May to August, earlier than *M. uniflora*.

This saprophytic plants, however, are highly variable by individual, espe-

cially in the size of stems, flowers and fruits, the shape of scaly leaves and tepals, the number of tepals, stamens, and placentae, and the shape of ovary. The wide range of variations observed in *Monotropastrum* of Japan was described and illustrated in Icon. Pl. Asia-Or. 4: 327, t. 109 (1941). A slender individual having a small flower with 3 petals, and a narrow ovary looks very different from a stout one with a larger flower and a subglobose ovary. The similar variations were also observed in the field near Darjeeling. Some species have been described mostly based on these variable characters, and they seem not to be separated specifically. The size of seeds (1 mm longa 1/2-3/4 mm lata) given by Andres in the original description of *M. macrocarpum* seems to be very doubtful. So far as the materials I have hitherto examined are concerned, the seeds are all about 0.3 mm long. The length of seeds (ca. 3.5 mm) of *M. globosum* in Icon. Pl. Asia-Or. 4: 328 (1941) is a misprint for 0.35 mm, as correctly printed in the Japanese text.

Having studied a large number of living and herbarium specimens from Himalayas to Japan, I came to the conclusion that it is better to treat all of them as a single variable species, as in the case of *Monotropa uniflora* L. or *Monotropa Hypopitys* L. As suggested in Journ. Jap. Bot. 36: 78 (1961), a few races can be recognized; i. e. var. *tripetalum* for a Japanese race with villose petals and filaments, and var. *glaberrimum* for a totally glabrous race.

For *Monotropa uniflora* β . *tripetala*, Makino did not cite any specimens in 1926, and no specimens annotated by him are found either in Makino Herbarium or in University of Tokyo. So a neotype is here selected from among the specimens which were referred to Makino's plant by Nakai in 1933. The name, var. *tripetala*, was first applied to a small form with 3 petals, but it is apparently not worthy of taxonomic recognition, as it is often growing mixed with a robust form with 5 petals in the same colony.

Besides the localities above mentioned, the genus *Monotropastrum* has been reported by H. Andres from S. Annam (Dalat) and Borneo (in litt. in 1964). *Monotropa uniflora* L. is also widely distributed in Asia, and I have examined the specimens from Himalayas (Punjab to Bhutan), Khasia, Lushai Hills, Naga Hills, China (Yunnan, Hunan, Hupeh), Taiwan, Korea, and Japan.

20) ***Polygonatum singalilense*** Hara, sp. nov.

Rhizoma repens tenue vel moniliformiter incrassatum 3-10 mm crassum. Caulis 12-25 cm altus suberectus striatus glaber, inferne foliis 2-3 vaginatis mem-

branceis praeditus. Folia 3-14 alterna vel praeter infima opposita (raro ternata) tenuia oblonga vel elliptica 3-4.5 (8) cm longa 5-14 (22) mm lata acuminata apice obtusiuscula utrinque glabra subtus glaucescentia. Flores axillares gemini nutantes; pedunculi 5-13 mm longi; pedicelli 3-7 (10) mm longi ebracteolati. Perianthia albida 8-11 mm longa 3-4 mm in diametro basi rotundata medio paullo constricta; lobi ovati 2.5-3 mm longi luteo-viridescentes. Stamina supra medium tubi inserti, filamenta brevissima ca. 1.2 mm longa glabra; antherae oblongae ca. 2.1 mm longae minute apiculatae. Pistillum ca. 6.5 mm longum; stylus 3 mm longus ad medium antherarum attingens.

Typus. Sikkim: Inter Migothang et Nayathang, mont. Singalila alt. 3700-3300 m (Hara, Kanai, Murata, Togashi et Tuyama, Jun. 1, 1960, no. 714, fl.) in TI.

The present species seems to be allied to *P. geminiflorum* Decaisne of W. Himalaya, *P. Wardii* Wang et Tang of N. E. Assam, and S. E. Tibet, and also to *P. Prattii* Baker of W. China.

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ミズヒキ属については本誌 37: 326 (1962) で見解を述べたが、当時はヒマラヤの資料が十分になかった。昨夏ヒマラヤ産の多くの標本をみた結果、分布図 (Fig. 1) に示したように東部ヒマラヤのものはすべて葉に長毛の多い var. *kachina* に属することが分った。一方遠く西方に離れてカシミール地方に隔離分布しているものは、外部形態ではシンミズヒキと区別ができないものであることを知り興味深く思った。

ミヤマシキミ類は西部ヒマラヤには紅果をつける種が分布しているが、東部ヒマラヤには2種あり何れも果実が黒熟する。その学名が混乱していたので正し、両種共中国にまで分布していることを明らかにした。

マルミノギンリョウソウ属は多くの資料を検討した末、ヒマラヤから中国を経て日本までのものを大きく1種にまとめる方がよいという結論に達した。かなり著しい変異が観察されるが、その変異の幅は日本産においてみられる変異の幅と大差ない。しかし日本産の方が花糸に太い毛が多く花被片の基部はよりふくらむ傾向があり、一応地理的変種とみなした。また花部まで全く無毛な型が、台湾・ビルマ北部などにあり、これも変種と認めた。

他にツリフネソウ属およびアマドコロ属の新種を1種ずつシッキム地方から記載した。