

K. M. PUROHIT\* & G. PANIGRAHI\*: **Notes on nomenclature  
and taxonomy of the *Spiraea bella* Sims complex  
(Rosaceae)**

K. M. プロヒット\*・G. パニグラヒ\*: *Spiraea bella* 群について

*Spiraea bella* Sims (1823), described and illustrated on the basis of plants raised from seeds originally procured from Nepal, is one of the common species of *Spiraea* in the Himalayas and because of its delicate foliage and colourful flowers is referred to the section Calospira of the subg. *Spiraea*.

Later K. Koch (1854) validated *Spiraea expansa* Wall. (Num. List no. 702, 1829, nom. nud.) with a description based largely on a plant cultivated in the Berlin Botanical Garden, originally derived from Kumaon. He cited the specimens in the Wallichian herbarium kept under the name *S. stellata* Wall. (Num. List sub no. 707, 1829, nom. nud.) as belonging to *S. expansa*. But his inclusion of *S. amoena* Spae (1846) as a direct nomenclatural synonym of *S. expansa* Wall. ex K. Koch, renders the latter as a superfluous illegitimate name. Consequently, *S. expansa* Wall. ex K. Koch must be deemed to be typified by the type of *S. amoena* Spae typified by a plant from Kumaon ('Kameon') cultivated in England (Art. 7.11 and Art. 63.1, ICBN 1978). Yet, Zabel (1893), without giving any reference to *S. amoena* Spae, accepted *S. expansa* Wall. ex K. Koch as a legitimate valid name. In the circumstances, the Himalayan species represented by *S. expansa* sensu K. Koch, non Wall. ex K. Koch (l.c.) would have been considered to be without a validly described name but for the fact that *S. expansa* Wallich 702, as also Wallich 707 (*S. callosa*, *S. stellata*) and Wallich 707 $\beta$  (*S. glauca*) are generally identified with *S. bella* Sims. var. *bella*, a view in conformity with that of J. D. Hooker (1878), who treated *S. bella* as a very variable species with "all manners of intermediate forms".

Although J. D. Hooker (l.c.) also included *S. fastigiata* Wall. (Num. List. no. 708, 1829, nom. nud.) as one of the synonyms of *S. bella* Sims, he observed: *S. fastigiata* Wall. with its "erect habit with stricter stouter branches and larger, ovate-lanceolate, acuminate leaves, may represent a distinct species from *S.*

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*bella* Sims proper", the latter being "characterized by more slender, prostrate habit with arched branches". He did neither refer to *S. amoena* Spae (1846), nor to *S. expansa* Wall. ex K. Koch. Incidentally, it may be stated that K. Koch (1854) was in error in referring to *S. fastigiata* Wall. to "Num. List. no. 699" in his observations under *S. bella* Sims. In point of fact, Wallich, Num. List no. 708 is named *S. fastigiata* and no. 699 as *S. cuneifolia* Wall. ( $\equiv$  *S. cuneifolia* Wall. ex Lindley, nom. superfl. illeg.;  $\equiv$  *S. canescens* D. Don)

Presumably following the lead from J.D. Hooker (l.c.), Schneider (1905) validly described *S. fastigiata* Wall. (Num. List. no. 708, 1829, nom. nud.) and segregated it from *S. bella* Sims as a distinct species. But his citation of *S. expansa* K. Koch, non Wall. 702, as a synonym of *S. fastigiata* Wall. ex Schneider is wrong, inasmuch as *S. expansa* Wall. ex K. Koch is a superfluous illegitimate name for *S. amoena* Spae. Although Schneider (l.c.) was correct when he stated that Wallich's original *expansa* (represented by Wall. 702) belongs to *S. bella* Sims, we do not subscribe to his further statement that *S. micrantha* J.D. Hooker is not distinct from *S. fastigiata* Wall. ex Schneider. They are taxonomically distinct as keyed below.

We also disagree with Rehder (1940) and Hara & Ohashi (1966) when they consider *S. fastigiata* Wall. ex Schneider as conspecific with *S. amoena* Spae. Although we agree with J.D. Hooker (l.c.) and Hara & Ohashi (l.c.) that *S. fastigiata* is "not specifically distinct from *S. bella*", we reduce the former as a variety of *S. bella* Sims. The key below sets out the diagnostic features between *S. bella* Sims and its infraspecific taxa, *S. amoena* Spae and *S. micrantha* J.D. Hooker :

- 1a. Leaves caudate at apices; flowers bisexual; follicles 1.5-2.0 mm long ..... *S. micrantha*
- 1b. Leaves not caudate; flowers dioecious; follicles 2.5-3.5 mm long.
  - 2a. Leaves pubescent above, rarely nearly glabrous, more densely pubescent beneath, usually ovate-lanceolate..... *S. amoena*
  - 2b. Leaves glabrous above,  $\pm$ pubescent only on the veins beneath, ovate to ovate-oblong..... *S. bella*
  - 3a. Follicles glabrous except at inner suture.....var. *bella*
  - 3b. Follicles  $\pm$ pubescent throughout.
    - 4a. Branches rigid, erect with apices convergent upwards.....

.....var. *fastigiata*

4b. Branches slender, lax and drooping.....var. *pubicarpa*

1) **Spiraea bella** Sims, in Curtis, Bot. Mag. 50: t. 2426, 1823; Yu & Lu in Yu, Fl. Rep. Popul. Sinic. 36: 16, 1974.

var. **bella**

Type locality. Native of Nepal ("Plant raised at the Fulham nursery from the seeds, presented to Mr. Milne by Robert Henry Jenkinson, from Nepal).

*Spiraea expansa* auct. mult. non Wall. ex K. Koch (1854); Wall. Num. List no. 702, 1829, nom. nud.; sensu Zabel Strauch. Spir. Deutsch. Gart. 58, 1893.

*S. callosa* Wall. Num. List no. 707, 1829, nom. nud.; non Thunb. 1784; nec sensu J.D. Hooker (1878).

*S. stellata* Wall. Num. List sub no. 707, 1829, nom. nud.

*S. glauca* Wall. Num. List no. 707 $\beta$ , 1829, nom. nud.

Distribution. India (Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, West Bengal, Sikkim, Arunachal Pradesh), Pakistan, Nepal, Bhutan, Burma, S. Tibet and W. China; cultivated in some parts of Europe as ornamental plants.

Representative specimens. INDIA. Jammu & Kashmir: Liddar Valley, 3050-3355 m, 17 Jul. 1893, J.F. Duthie 13087 (CAL, DD); Pahalgam, 2200-3000 m, 24 June 1959, T. A. Rao 9667 (BSD). Himachal Pradesh: Chamba, Bara forest, 2440 m, 23 May 1896, J. H. Lace 1386 (CAL, DD, BSIS); Kulu, June 1957, P. K. K. Nair s. n. (LWBSIP\*). Uttar Pradesh: Garhwal, Deota, 2440 m, May 1891, J. S. Gamble 23008 (CAL, DD, MH); near Jumnotri, 3050-3202 m, 21 June 1951, D. D. Awasthi 2515 (LWG). West Bengal: Darjeeling Dist, Tonglloo to Sandakphu, 2897 m, 29 May 1902, J. H. Lace 2254 (CAL, DD); Lloyd Bot. Garden, 14 May 1956, B. K. Nayar & party 30563 (LWG). Sikkim: Thangu, 3812 m, 28 Jul. 1960, K. C. Sahni 38 (DD); Lachoong, 3355 m, 13 Aug. 1892, G. A. Gammie 733 (CAL); Tonglloo, 3050 m, June 1906, G. H. Cave s. n. (DJ\*\*).

var. **pubicarpa** Yu & Lu in Act. Phytotax. Sinic. 18(4): 490, 1980.

Type. Xizang: Nyalam xian, 2300 m, 13 Aug. 1972, xizang exped. Med. Pl. 1131 (HP; Photo of a paratype, Gyirong, Qing-Zang Exped. Veg. Group 5116 in CAL!).

\* Abbreviated here for the herbarium of the Birbal Sahni Institute of Palaeobotany, Lucknow, India.

\*\* Abbreviated here for the herbarium of the Lloyd Botanic Garden, Darjeeling, India.

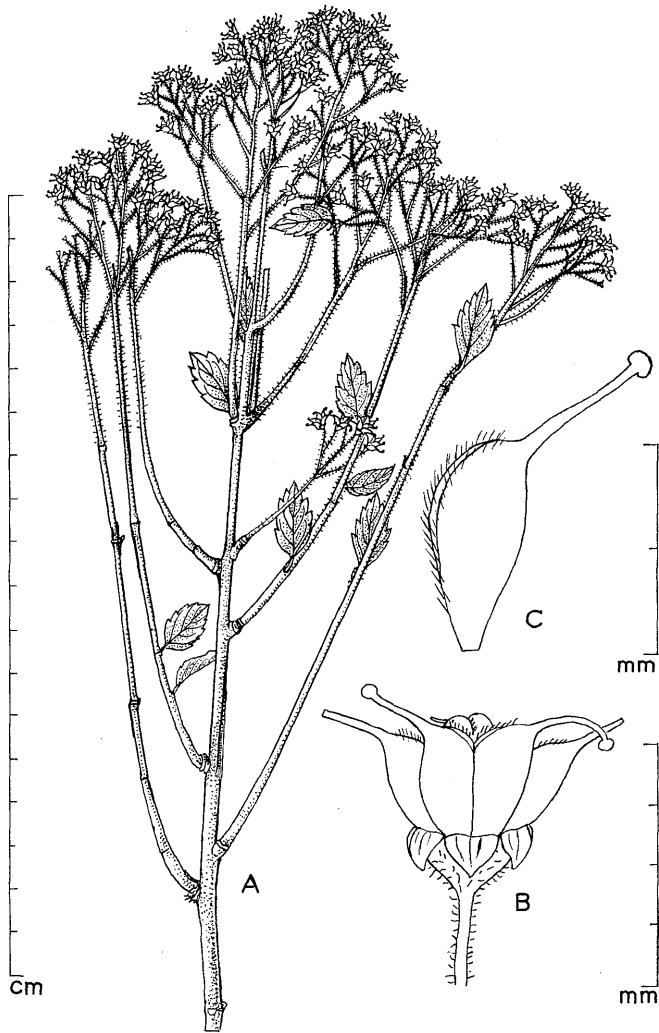


Fig. 1. *Spiraea bella* Sims var. *fastigiata* (Wall. ex Schneider) Purohit et Panigrahi. A. Habit showing the fastigiately branching and pubescent inflorescences. B. Aggregate of five follicles with reflexed persistent calyx and flexuously hairy pedicel. C. A single dehiscing follicle, hirsute at the inner suture and with capitate stigma.

Distribution. India (Jammu & Kashmir, Sikkim) and China.

Specimens examined in CAL. INDIA. Jammu & Kashmir: Burzil, 3202 m, Aug. 1905, A. Meebold 2952. Sikkim: above Lachung, near Yak Chu, 3050 m, 20 Aug. 1909, Smith & Cave 2599; Thangu, Sept. 1903, Prain s. n. (Acc. no. 145143).

var. **fastigiata** (Wall. ex Schneider) Purohit et Panigrahi, comb. nov., stat. nov. (Fig. 1 A, B, C).

*Spiraea fastigiata* Wall. ex Schneider in Bull. Herb. Boiss. Ser. 2, 5: 345, 1905, et 111. Handb. Laubh. 1: 471, 1905, p. p. excl. syn. *S. expansa* K. Koch.

Syntypes. Nepal, 1821, Wallich 708.1; Gossain than, Wallich 708.2 (K, K-WALL, microfiche CAL!).

*Spiraea fastigiata* Wall. Num. List no. 708. 1829, nom. nud.

Distribution. India (Himachal Pradesh, Uttar Pradesh, Sikkim), Nepal and China (Tibet).

Specimen examined in CAL. Wallich Num. List no. 708 labelled *Spiraea fastigiata* Wall. (Acc. No. 145173).

2) **Spiraea amoena** Spae in C. Morr. Ann. Soc. Agr. Bot. Grand. 2: 281, t. 72. 1846; Rehder, Man. Cult. Tr. Shr. ed 2: 336, 1940 (10th print 1962), p. p. excl. synonym. (Fig. 2).

Type locality. Kumaon ('Kameon').

*S. expansa* Wall. ex K. Koch in Gartenflora 3: 398, 1854; et Dendrol. 1: 330, 1869. p. p. excl. descript. incl. nomen tantum; Zabel, Strauch Spir. Deutsch. Gart. 58, 1893, nom. superfl. illegit. (Art. 7.11 & Art. 63.1, ICBN 1978).

Type. Same as for *S. amoena* Spae

Distribution. India. Uttar Pradesh, Kumaon (known from the type collection only).

Notes: No material from the Indian region studied does match with the t. 72 representing *S. amoena* Spae in C. Morr. Ann. Soc. Agri. Bot. Grand 2: 281, 1846. The two specimens, *Keshavanand* 564 and 1615 (DD) collected from Jammu & Kashmir in 1906 and 1909 respectively in fruiting condition, approach *S. amoena* Spae superficially in possessing terminal inflorescences and five villous carpels but they differ from it in having membranous, ovate-oblong leaves, rounded at base and almost glabrous lamina. *S. amoena* Spae, on the other hand, possesses oblong-lanceolate, thick leaves with white tomentose beneath and with stamens shorter than the petals.

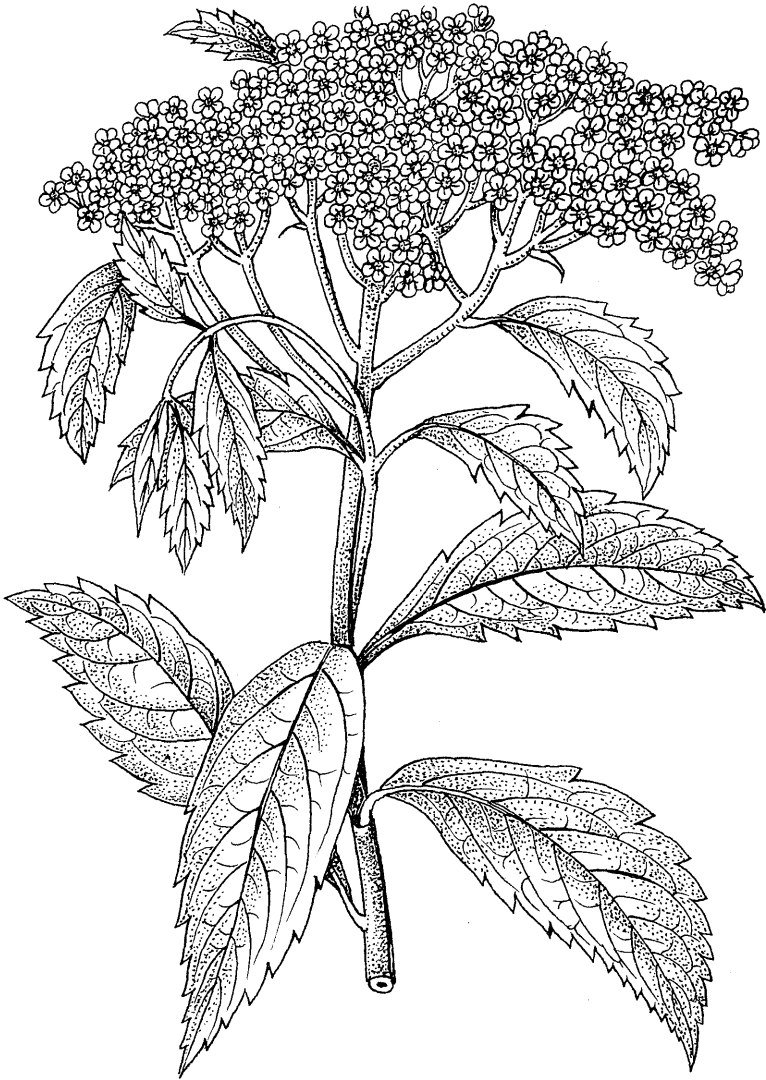


Fig. 2. *Spiraea amoena* Spae (adopted from Spae, op. cit. t. 72.)

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*Spiraea expansa* Wall. ex K. Koch を *S. amoena* Spae のシノニムとした。変異の大きい *S. bella* Sims に 3 変種 var. *bella*, var. *pubicarpa*, var. *fastigiata* (新組合せ) を認めた。*S. bella*, *S. amoena*, *S. micrantha* の検索表を与え、学名を整理した。