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

*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 707β (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. (≡S. cuneifolia Wall. ex Lindley, nom. superfl. illeg.; ≡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, ±pubescent only on the veins beneath, ovate to ovate-oblong ...................................................... S. bella

3a. Follicles glabrous except at inner suture ....................... var. bella
3b. Follicles ±pubescent throughout.

4a. Branches rigid, erect with apices convergent upwards...........
4b. Branches slender, lax and drooping. 


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).


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


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, Tongloo 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); Tongloo, 3050 m, June 1906, G.H. Cave s.n. (DJ**).


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 fastigiate 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.


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


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).


Type locality. Kumaon ('Kameon').


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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References


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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。

—12—