

A CATALOGUE AND LECTOTYPIFICATION OF THE TYPE MATERIALS OF SOME TAXA OF THE FAMILY CARYOPHYLLACEAE AVAILABLE AT THE CALCUTTA HERBARIUM (CAL.)

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ABSTRACT

A list of type materials of Caryophyllaceae available at the Central National Herbarium, Calcutta is provided and two new combinations are proposed.

INTRODUCTION

While working on the family Caryophyllaceae the author has come across a number of type specimens at the Calcutta Herbarium.

Syntypes of many species of the family Caryophyllaceae are available at the Calcutta Herbarium and lectotypes have been designated by the author after a study of their respective protologue and syntypes. The first part of the catalogue deals with lectotypification. A discussion regarding the selection of lectotypes has also been added in each case, showing the reasons for such selection.

Type materials of many Indian and Tibetan species of the family existing at the Calcutta Herbarium have been listed in the second part. Wherever possible, the names of the herbaria where the specimens are represented have been abbreviated within brackets following Lanjouw & Stafleu, *Index Herbariorum Part I, The Herbaria of the World*, ed. 5: 205 (1964).

PART I. LECTOTYPIFICATION

Silene caespitella Williams in J. Linn. Soc. Bot. 38: 403. 1909.

Lectotype: Gyangtse, Tibet, *Walton* 118 (CAL).

Williams cited nine specimens in the protologue: Phee mong, near Chumbi, 1878, *Dungboo* 1110; Chumbi, 1879, *Dungboo*

1111; Chumbi, 1882, *King's collector* 1210; Tibet, without locality, 1882, *King's collector* 164 and 1115; Lonok, 1903, *Younghusband* 213; Gyangtse, 1904, Capt. *Walton* 118, 1114 and 1108 (left hand specimen on sheet). After examination of these syntypes, the specimen *Walton* 118 has been chosen as the lectotype as it well agrees with the protologue.

S. subcretacea Williams in J. Linn. Soc. 38: 404. 1909.

Lectotype: Khamba fort, 1903, *Younghusband* 73 (CAL).

Williams cited the following specimens in the original description: Khamba fort, 1903, *Younghusband* 73-flowering specimens; Gyangtse, 1904, *Walton* 105, 1108-fruited specimens. Out of these syntypes, the first one, i.e. *Younghusband* 73 has been chosen as the lectotype.

S. jugora (Williams) Majumdar comb. nov. *Melandrium jugorum* Williams in J. Linn. Soc. 38: 406. 1909.

Lectotype: Gum-bo-teen, 2000 ft. above Chumbi, 1878, *Dungboo* no. 1143 (CAL).

Williams cited in the protologue the following three syntypes: Gum-bo-teen, 2000 m above Chumbi, 1878, *Dungboo* 1143; Lo-beang near Chumbi, 1882, *King's collector* 1219; Lo-beang, 1882, *King's collector* 1098. From among these, the first one has been

chosen as the lectotype as it well agrees with the protologue. The teeth of the capsules being bifid, the species is transferred to the genus *Silene*. Hence the new combination.

Silene gonosperma (Rupr.) Bocquet ssp. ***himalayensis*** (Rohrb.) Bocquet var. ***himalayensis*** in Candollea 22: 8. 1967.

Melandrium apetalum (L.) Fenzl var. *himalayense* Rohrb. in Linnaea 36: 220. 1869-70.

Lectotype: Tibet occ. regio alp. alt. 15-17000 ped., *T. Thomson* (G).

In the original description Rohrbach included two specimens: Sikkim alt. 3300-4150 m, *Hook.*, and Tibet occid. alt. 4400-5000 m, *Thomson*. Bocquet's (loc. cit.) indication of *Thomson's* specimen as the holotype is erroneous, and it should be lectotype according to Art. 7 (Note 3) of ICBN. However, the specimen cited by him at G is selected as the lectotype as it well agrees with the protologue.

S. indica Roxb. ex DC. var. ***bhutanica*** (W. W. Smith) Bocquet in Candollea 22: 13. 1967.

Lychnis bhutanica W. W. Smith, Notes Roy. Bot. Gdn. Edinburgh 10: 51. 1917.

Lectotype: Bhutan, Parshong, Timpu, 4000 m, in peat meadow, Sept. 1914, *R. E. Cooper* no. 2952. Fruiting specimen (E).

W. W. Smith cited in his protologue three specimens without any indication of holotype. One lectotype must therefore be chosen from among these syntypes (Art. 7 of ICBN). The holotype indicated by Bocquet has no existence at all and the word "bhutanica" is wrongly spelt in Bocquet's paper cited above. However the specimen Cooper 2952 at E is accepted as the lectotype. The other syntypes are: Bhutan, Parshong, Timpu, July 1914, *Cooper* 1878 (Flowering specimen), and flowering specimen in herb. Edin. cult. Bees Ltd. from seeds of no. 2952.

Hedona ischnopetala Williams in J. Linn. Soc. 38: 405. 1909.

Lectotype: Gum-bo-teen in the Chumbi district at 600 m, 1878, *Dunghoo* 1106 (CAL).

Williams cited only two specimens in the protologue out of which the above specimen has been chosen as the lectotype as it well agrees with the protologue. The other specimen remaining as the syntype is: Sikkim, Lachen, near the Tibetan frontier at 2700 m, 1885, *King's collector* 1211.

Stellaria semivestita Edgew. in Edgew. & Hook. f. Fl. Brit. Ind. 1: 230. 1874.

Lectotype: Choor, 6700 ft, 1848, *Strachey & Winterbottom* 9 (CAL).

Edgeworth cited the following three specimens in the protologue: Kumaon, 6-8,000 ft; Lohoo ghat and Dadooka Taola, *T. Thomson*; and Chaur, *Strachey & Winterbottom*. Out of these, the last one has been chosen as the lectotype.

S. subumbellata Edgew. in Edgew. & Hook. f. Fl. Brit. Ind. 1: 233. 1874.

Lectotype: Sikkim, Regio. Alp, 12-16000 ped., *J. D. Hooker* s.n. (CAL).

Edgeworth cited two syntypes in the protologue: Interior of Sikkim himalaya, alt. 12-16000 ft, *J.D.H.*; and Western Tibet, Nubra, 11-15000 ft, *T. Thomson*. From among these, the first one has been chosen as the lectotype, the second specimen remaining the syntype. In the Calcutta Herbarium, both are mounted on the same sheet.

S. webbiana (Benth.) Edgew. & Hook. f. Fl. Brit. Ind. 1: 230. 1874.

Leucostemma webbiana Benth. ex Royle Illustr. Bot. Himal. 81. 1834.

Lectotype: Kumaon, *Wall.* Cat. 642 (CAL).

Bentham cited the three following specimens in the protologue:

(1) Near Mutrogarh on the side of Budraj, *Royle*, s.n.;

(2) Sirmore, *Webb* s.n. and (3) Kumaon, *Wallich*. Out of these, the *Wallich* specimen has been selected as the lectotype.

S. himalayensis Majumdar in J. Ind. Bot. Soc. 44: 141. 1965.

Stellaria latifolia (Benth.) Edgew. & Hook. f. Fl. Brit. Ind. 1: 231. 1874.

Leucostemma latifolium Benth. ex Royle, Illustr. Bot. Himal. 81. 1834.

Lectotype: Kumaon, Wall. Cat. 643 (CAL).

Bentham cited the following two specimens in the protologue: Bhogtibba between Ganges and Jamuna rivers, Royle, s.n.; and Kumaon, Wallich. Out of these syntypes, the latter one has been chosen as the lectotype.

Stellaria gyangtsensis Williams in J. Linn. Soc. 38: 396. 1909.

Lectotype: Gyangtse, 1904, Walton 1120 (CAL).

Williams cited the following two specimens in the protologue; Gyangtse, 1904, Walton 41; and Gyangtse, 1904, Walton 1120. Out of these the latter one has been chosen as the lectotype.

Minuartia foliosa (Royle ex Edgew. & Hook. f.) Majumdar in J. Ind. Bot. Soc. 44: 142. 1965.

Arenaria foliosa Royle ex Edgew. & Hook. f. Fl. Brit. Ind. 1: 236. 1874.

Lectotype: N. W. India, Hb. Royle. (CAL).

Edgeworth & Hooker f. cited "Western subalpine Himalaya, alt. 9-13000 ft from Garhwal to Kashmir, Royle, Jacquemont, etc." From among the syntypes meant in the above lines, "N.W. India, herb. Royle" has been chosen as the lectotype.

M. kashmirica (Edgew.) Mattfeld in Engl. Jahrb. 57, Beibl. 126: 32. 1921.

Arenaria kashmirica Edgew. in Edgew. & Hook. f. Fl. Brit. Ind. 1: 236. 1874.

Lectotype: Kashmir, 5-6000 ped. T. Thomson. (CAL).

Edgeworth cited in the protologue "Western Temperate Himalaya, T. Thomson; Lahul, Jaeschke; and Western Tibet, Falconer" as the syntypes. The specimen from Kashmir (Western Himalaya) collected by Thomson has been chosen as the lectotype.

Arenaria blinkworthii McNeill in Notes Roy. Bot. Gdn. Edin. 24: 128. 1962.

Arenaria benthami Edgeworth in Hook. f. Fl. Brit. Ind. 1: 242. 1874.

Lectotype: Sikkim, J.D.H. (CAL).

Odontostemma glandulosum Benth. ex G. Don Gen. Syst. 1: 449. 1831.

G. Don cited "Bentham in herb. Linn. Soc." which becomes the holotype of *O. glandulosum*. Edgeworth cited "Kumaon, Blinkworth" and "Sikkim, alt. 10-12000 ft J.D.H." of which the second specimen has been chosen as the lectotype of *Arenaria benthami* Edgew. which also applies to the new name *A. blinkworthii*.

A. glanduligera Edgew. in Hook. f. Fl. Brit. Ind. 1: 240. 1874.

Lectotype: Sikkim, 14-18000 ped, Hooker, s.n. (CAL).

Edgeworth cited "Kashmir, Falconer"; "Barji Kang pass, Kumaon, 14500 ft, Strachey & Winterbottom" and "Interior of Sikkim, 14-18000 ft, J. D. Hooker" in the protologue. From among these the last specimen collected by Hooker is chosen as the lectotype.

A. cerastiiformis Williams in J. Linn. Soc. 38: 402. 1909.

Lectotype: Phari, 1877, King 4588 (CAL).

The syntypes cited in William's protologue are: 1. Phari, 1877, King 4588; 2. Phari, 1877, Dungboo 4588; 3. Phari 1879, Dungboo 1147; 4. Meerik pass, Chumbi 1884, King's collector 1207; 5. Giakong 1903, at 4500 m, Younghusband 1160. Out of these syntypes, King 4588 has been chosen as the lectotype.

A. acicularis Williams in J. Linn. Soc. 38: 400. 1909.

Lectotype: Tibet, King's collector 66 (CAL).

Williams cited the following specimens in the protologue: Kannali river, 1848, 4730 m, Strachey & Winterbottom s.n.; Tibet without locality, 1882, King's collector 66; Tibet without locality, King's collector 286; Khamba fort, 1903, Prain 1209; Gyangtse, 1904, Walton 95; Gyangtse 1904, Walton 1116; Phembu pass, north of Lhasa, Walton 1117; Yam Doh cho, 1904, Walton 1118; Lhasa

at 3600 m, 1904, *Waddell* s.n. Out of these *King's collector* 66 has been chosen as the lectotype.

PART II. HOLOTYPE & ISOTYPES

Silene indica Roxb. ex Otth in DC. Prodr. 1: 368. 1824.

Isotype: Nepal, 1821, *Wallich* 624 (CAL, K, E, G).

S. setisperma Majumdar in J. Indian Bot. Soc. 42: 649. 1963.

Lychnis inflata Wall. ex Benth. in Royle III. Bot. Himal. 80. 1834.

Isotype: Kumaon, *Wall.* Cat. 618 (CAL, K).

S. edgeworthii Bocquet in Candollea 22: 13. 1967.

Lychnis fimbriata Wall. Cat. 619. 1828.

Isotype: Uttar Pradesh, Kumaon, *Wallich* 619 (CAL, BM, C, E) Holo: K.

Lychnis eriostemon Wall. Cat. 620.

Isotype: Uttar Pradesh, Kumaon, *Wallich* 620 (CAL), Holo: K.

S. nigrescens (Edgew.) Majumdar, J. Indian Bot. Soc. 42: 647. 1963.

Lychnis nigrescens Edgew. in Hook. f. Fl. Brit. Ind. 1: 223. 1874.

Isotype: Sikkim, herb. Ind. Or. Hook. f. & Thoms. J. D. *Hooker* s.n. (sub *Lychnis tristis*). (CAL, C, E, G, P, S). Holo: K.

S. nepalensis Majumdar, J. Indian Bot. Soc. 42: 649. 1963.

Lychnis multicaulis Wall. ex Edgew. & Hook. f. in Fl. Brit. Ind. 1: 224. 1874.

Isotype: Nepal, 1821, *Wallich* 622 (CAL, BM, G, K). Holo: K.

S. khasiana Rohrb. in Linnaea 36: 259. 1869-70.

Isotype: Khasia, *J.D.H. & T.T* s.n. (CAL).

S. viridiflora forma *webbiana* Rohrb. Monog. *Silene*. 215. 1868.

Silene webbiana Wall. Cat. 627. 1828.

Isotype: Sirmur, *Webb, Wallich* Cat. 627 (CAL).

S. adenocalyx Williams in J. Linn. Soc. 38: 403. 1909.

Isotype: Khamba pass, alt. 1440 m., 1904, *Capt. Walton* 1104 (CAL).

S. lhassana (Williams) Majumdar comb. nov. *Melandrium lhassanum* Williams in J. Linn. Soc. 38: 406. 1909.

Isotype: Hills above the city of Lhasa, 1904, *Walton* 1112 (CAL).

The teeth of the capsules being bifid, the species has been transferred to the genus *Silene*.

S. falconeri (Rohrb.) Bocquet, Candollea 22: 9. 1967.

Melandrium falconeri Rohrb. Linnaea 36: 220. 1869-70.

Isotype: Tibet occid., *Falconer* 235 (iso. K, P, NY, CAL).

S. edoardi Bocquet, Candollea 22: 14. 1967.

Isotype: "Himalaya Bor. Occ. Regio. temp. alt. 7-10000 ped." sub. "*Lychnis indica* var. *L. nutans*" *Thomson* s.n. (C, E, K, P, OXF, CAL, MH) Holo. G.

S. maheshwarii Bocquet, Candollea 22: 4. 1967.

Isotype: Herb. Ind. Or. Hook. f. et Thoms. sub. *Lychnis brachypetala* "Tibet occ. Regio. alp. 10-15000 ped." *Thomson* s.n. (C, K, L, MH, CAL). Holo. G.

Gypsophila cerastioides D. Don. Prodr. Fl. Nep. 213. 1825.

Isotype: Gossain than, *Wallich* 644 (CAL).

G. sedifolia Kurz in Flora, 285. 1872.

Isotype: Zanskar, 3657 m, N. W. Frontier, *T Thomson* s.n. (CAL).

Dianthus cachemiricus Edgew. in Edgew. & Hook. f. Fl. Brit. Ind. 1: 214. 1874.

Isotype: Kashmir, herb. *Falconer* no. 211 (CAL).

Pseudostellaria cashmeriana Schaeftlein in Phytion (Ann. Rei. Bot.) 7: 195. 1957.

Isotype: Konain, shady ground, 8000 ft, *J. F. Duthie* 19768 (CAL).

- Pseudostellaria heterophylla** (Miq.) Pax
forma **nepalensis** Majumdar in J. Bombay
nat. Hist. Soc. 64(3): 589-590. 1968.
Holotype: Nepal, Namche-Tyanboche,
3450 m, *Banerjee & Shakya* 5655 (CAL).
- Stellaria vestita** Kurz in J. Bot. 11: 194. 1873.
Isotype: Momyen, Yunnan, *D. J. Ander-
son*, s.n. (CAL).
- S. monosperma** Buch.-Ham. ex D. Don,
Prodr. Fl. Nep. 215. 1825.
Stellaria crispata Wall. ex Edgew. & Hook.
f. Fl. Brit. Ind. 1: 229. 1874.
Isotype: Nepal, *Wallich* 633 (CAL).
- S. patens** D. Don, Prodr. Fl. Nepal. 215.
1825.
Stellaria longissima Wall. ex Edgew. &
Hook. f. Fl. Brit. Ind. 1: 232. 1874.
Isotype: Nepal, 1821, *Wallich* 632 (CAL).
- S. dianthifolia** Williams in J. Linn. Soc. 38:
396. 1909.
Isotype: Tibet, without locality, 1884,
King's collector 366 (CAL).
- S. mukerjeeana** Majumdar in Blumea 16(1):
268-269. 1968.
Holotype: Nepal, Muktinath, 4260 m.,
Shrestha & Bista 2462 (CAL).
- S. nepalensis** Majumdar & Vartak in J.
Indian Bot. Soc. 50: 215. 1971.
Holotype: W. Nepal, Pokhara, *V. D. Var-
tak* 462 (CAL).
- Brachystemma calycinum** D. Don Prodr.
Fl. Nep. 216. 1825.
Isotype: Nepal, *Wallich* 646/1 (CAL).
- Lepyrodiclis tenera** Boiss. Diagn. Pl. Or.
Nov. ser. 2, I: 84. 1853.
Isotype: Pushut, Afghanistan, *Griffith*
1669. (CAL).
- Arenaria ferruginea** Duthie ex Williams in
J. Linn. Soc. 33: 410. 1898.
Isotype: Kumaon, Kali valley, *J. F. Du-
thie* 2762 (CAL).
- A. globiflora** (Fenzl) Edgew. & Hook. f. Fl.
Brit. Ind. 1: 238-239. 1874.
Isotype: Nepal, Gossain than, *Wallich*
639 (CAL).
- A. polytrichoides** Edgew. in Edgew. &
Hook. f. Fl. Brit. Ind. 1: 237. 1874.
Isotype: Sikkim himalaya, 14000-17000 ft,
Hooker s.n. (CAL).
- A. perlevis** (Williams) Hand. Mazz. in Oest.
Bot. Zeits. 79: 32. 1930.
A. musciformis Wall. ex Edgew. & Hook.
f. Fl. Brit. Ind. 1: 237. 1874.
Isotype: *Wallich* 641 (CAL).
- A. densissima** Edgew. in Edgew. & Hook. f.
Fl. Brit. Ind. 1: 239. 1874.
Isotype: Gossain than, Nepal (alpine reg.),
Wallich 640 (CAL).
- A. ciliolata** Edgew. in Edgew. & Hook. f.
Fl. Brit. Ind. 1: 240. 1874.
Isotype: Sikkim Himalaya, 15-17000 ft,
without precise locality, *Hooker* s.n. (CAL).
- A. ciliolata** Edgew. var. **pendula** Duthie ex
Williams in J. Linn. Soc. 33: 421. 1898.
Isotype: Napalcha in Byans, Kumaon,
J. F. Duthie 2761 (CAL).
Holotype: K.
- A. melandryoides** Edgew. in Edgew. & Hook.
f. Fl. Brit. Ind. 1: 241. 1874.
Isotype: Sikkim himalaya, 14-18000 ft,
Hooker s.n. (CAL).
- A. thangoensis** W. W. Smith in Rec. Bot.
Surv. Ind. 4: 180. 1913.
Isotype: Thango, Sikkim, *Smith & Cave*
2572 (CAL, DD).
- A. sikkimensis** Majumdar in J. Indian Bot.
Soc. 44: 141. 1965.
A. debilis Hooker f. Fl. Brit. Ind. 1: 242.
1874.
Isotype: Alpine Sikkim Himalaya, *Hooker*
s. n. (CAL).
- A. griffithi** Boiss. Diagn. Pl. Or. Nov. ser.
2, I: 89. 1853.
Isotype: Kohi-baba, Afghanistan, *Griffith*
s.n. (CAL).
- A. melandryiformis** Williams in J. Linn. Soc.
38: 399. 1909. forma **glanduloso pubescens**
Isotype: Beong chin, Chumbi, *King's col-
lector* 1127 (CAL).
forma **magis hirsuta** Williams l.c.

Isotype: Syampoo, Chumbi, *King's collector* 123 (CAL).

Arenaria monantha Williams in J. Linn. Soc. 38: 401. 1909.

Isotype: Hills above Lhasa, *Walton* 1138. (CAL).

A. ramellata Williams in J. Linn. Soc. 38: 399. 1909.

Isotype: Karoo la, 15 miles from Lhasa, *Dunghoo* 1158 (CAL).

A. ischnophylla Williams in J. Linn. Soc. 38: 400. 1909.

Isotype: Khamba fort, *Younghusband* 107 (CAL).

A. monosperma Williams in J. Linn. Soc. 38: 398. 1909.

Isotype: Tibet without precise locality, 1882, *King's collector* 1119 (CAL).

A. bhutanica Majumdar & Babu in J. Arnold Arb. 50: 628. 1969.

Holotype & Isotype: Chila, on way to Paro, Bhutan, alt. 3630-4125 m, *G. Sen Gupta* 721. (CAL).

Kabulia akhtarii Bor et Fisch. in Indian Forester 65: 611. 1939.

Type: Kabul, Afghanistan, 7000 ft, *S. A. Akhtar* s.n. (CAL).