Taiwania, **53**(4): 410-413, 2008

Silene fissipetala (Caryophyllaceae), the Correct Name for *S. fortunei* from Continental China and Taiwan

J. F. Veldkamp[1]

(Manuscript received 16 June 2008; accepted 20 September 2008)

ABSTRACT: *Silene fortunei* Vis. (Caryophyllaceae), a species from Continental China and Taiwan, was originally invalidly published (De Visiani, 1847) and subsequently validated (Rohrbach, 1868), but then was a later homonym of *Silene fortunei* Hort. ex Regel (1863). It was also superfluous for *Silene fissipetala* Turcz. (1854) as their holotypes are isotypes of each other (McNeill et al., 2006, Art. 9 Note 2). A new varietal combination is proposed for *Silene kiiruninsularis* Masam.

KEY WORDS: Caryophyllaceae, China, seedlists, *Silene fissipetala, Silene fortunei, Silene kiiruninsularis,* Taiwan.

INTRODUCTION

From the beginning of the 19th century Botanical Gardens in Europe issued seed-exchange lists [see the International Code of Botanical Nomenclature (ICBN), Vienna 2006, McNeill et al., Art. 30.3] in which propagules (mainly seeds, but also tubers, bulbs, etc.) were advertised for distribution. Apparently for free, for prices were never mentioned. Occasionally new taxa or combinations were validly published in foot notes or appendices. These lists were printed in a very limited number and had a very ephemerical existence: after placing an order they were usually thrown away like the post order catalogues of today. If kept at all, they usually were placed in the files of Botanical Gardens, and not entered into the library catalogues of Herbaria. In this way they have become very rare, very hard to find, and the new names in them often have escaped attention. Many will have been lost forever. Sometimes the description of new taxa were verbatim copied by journals like Linnaea and the Annales des Sciences Naturelles, Botanique, with cryptic references to the original source, but as these journals were much better known later authors referred to these and so names have entered data bases like IPNI with wrong citations. The late Mr. L. Vogelenzang, succeeded by Mr. C. Lut, former Librarians of Leiden (L), have set themselves the task to find and collect the original lists and I have been asked to advise on the nomenclatural status of apparently "new names" (See http://www.nationaalherbarium.nl/seedlists/home.htm). One of these is the subject of the present paper.

1. National Herbarium of The Netherlands, Leiden University, PO Box 9514, 2300 RA Leiden, The Netherlands; Fax: 31.527.35.11; Email: veldkamp@nhn.leidenuniv.nl

De Visiani (1847) in a footnote to the seed list of Padua (1847) [copied verbatim by Schlechtendal (1851)] noted for *Silene fortunei* (Caryophyllaceae) "Vagatur in hortis sub nomine Lychnidis fortunei, a quo tamen genere abhorret ob ternarium stylorum numerum", or "It roves in gardens under the name of *Lychnis fortunei*, with which genus, however, it is inconsistent because of the number of three styles", or "This is not a *Lychnis* L., but a *Silene* L. because of its three styles". Both *Lychnis* and *Silene fortunei* are cited by IPNI as having been published by De Visiani in Schlechtendal (1851), but this place of publication is incorrect and it is obvious that the *Lychnis* combination is invalid, as it was not accepted by the author [Art. 34.1(a)].

As for the *Silene* name, this is one of those borderline cases where one can argue to and fro whether these words are sufficient for a validly published specific diagnosis. Several people I consulted agreed that they are not. A diagnosis according to the ICBN (2006) Art. 32.2 is "A statement of that which in the opinion of its author distinguishes the taxon from other taxa". The question here rises "what other taxa"? I argue that the taxa actually compared here are not species but genera: *Lychnis* and *Silene*. Because of the number of styles the species *Lychnis fortunei* according to De Visiani is a *Silene*, but not a word is said about any of its differences with "other taxa" in *Silene* (nor its "non-allies" in *Lychnis*, except of course for the three styles).

Recommendation 32B is somewhat more specific: "The ... diagnosis of any new taxon should mention the points in which the taxon differs from its allies". In these times of molecular phylogenies the term 'ally' is something to avoid unless such analyses have been made, but that is primarily a taxonomic and

臺灣大學學術期刊資料庫

secondarily a nomenclatural matter. Here it seems best to interpret this as 'differs from (*morphologically*) *similar* taxa'.

Clearly De Visiani intended to make a new combination, but there is no indirect reference to a published basionym, *Lychnis fortunei*, as defined by Art. 33.2, -3, and I have not found any earlier place where this combination was ever mentioned. The specific combination is therefore not validly published in this seed list, and, important to note, therefore has no type. If original material of plants cultivated in Padua (PAD) exists, this is to be regarded as vouchers. Letters to PAD whether any were there remained unanswered.

Lychnis or *Silene fortunei* was no doubt named after its collector, Robert Fortune (1812-1880), who was employed by the Horticultural Society of London. He must have found it during his first voyage to China (1843-1846). Centuria of his dried plants were announced by Hohenacker (1846). It would seem that there were also similar advertisements, seed lists, or pamphlets of his various shipments during that period and maybe the *Lychnis* is mentioned there. I have not traced any, but somehow De Visiani must have obtained material to grow in the Botanical Garden of Padua.

Fenzl (1851) listed a *S. fortunii* (!) H. Dresd. & Tergest. without a diagnosis and in the synonymy of *S. noctiflora* L., and so this name was also not accepted by the author and is invalid.

Another *Silene fortunei* Hort. was described by Regel in the St. Petersburg seedlist for 1863. It passed the censors on June 5th. He gave no explanation for the epithet, nor the original provenance of the species. He pointed out similarities with *S. noctiflora* and *S. ornata* Ait., and thus the species is very different from that of De Visiani. It has whitish petals with an emarginated apex and 4 coronal scales. De Visiani's species has pink petals, deeply laciniate, and 2 coronal scales (Rohrbach, 1868). I have found no reference to Regel's combination in subsequent literature [see e.g. Rohrbach (1868), Forbes and Hemsley (1886), Williams (1896: 193), Chowdhuri (1957), Ying (1996), and Zhou et al. (2001)]. Not having seen original material, the correct application of Regel's name is not known, but nomenclaturally it is valid and legitimate.

De Visiani's *Silene fortunei* was validated and typified by Rohrbach (1868) but the combination is a later homonym of that of Regel (1863), a publication he did not cite. As type he mentioned merely "in China (Fortune! in herb. Vindob.)". In 1870 he said that he now had better and more specimens to compare and so could provide a better description. He mentioned only two collections, one being "In insula Chusan (Fortune!)". This is indeed an additional collection and not the same as the one he cited in 1868. Two Fortune collections are mentioned by Forbes & Hemsley (1886): "without locality (*Fortune 36!*)" and " Chusan *(Fortune!)*". A possible solution is hampered by the fact that the specimens studied in Vienna (W) by Fenzl and Rohrbach were lost in WW II (Anonymous, 1951). The ones that Forbes & Hemsley saw are in the British Museum, London (BM), and Kew (K).

I therefore have to conclude that the one without locality ("in Chine") is *Fortune 36*, the type of both *S. fissipetala* and *S. fortunei* Vis. ex Rohrb., while the other one without a number is the collection from Chusan Isl. Therefore Art. 9. Note 2(c) makes Rohrbach's duplicate in W part of the "original material" of Turczaninow, and this being older than *S. fortunei* Vis. ex Rohrb. makes the latter a superfluous name.

CONCLUSION

Silene fissipetala is the correct name for what generally is known as *S. fortunei*.

There were 570 hits with Google on 8 June 2008 for *S. fortunei*, while the 2 for *S. fissipetala* were references to where it was used in the synonymy of the first combination.

This is a fairly well-known species in China and Taiwan and a medicinal plant of some fame. Several saponins have been extracted from its roots which may be useful in cancer treatments, and perhaps even (hopefully) against aids. These possible applications and the nearly complete obscurity of the presently correct name might be invoked as arguments for conservation.

Silene fissipetala Turcz.

Silene fissipetala Turcz., Bull. Soc. Imp. Nat. Moscou 27, 2, 4 (1854) 371, nom. superfl. — Type: *Fortune 36* (KW, holo; K, P, W, probably elsewhere as well), North China.

Silene fortunei [Vis., Sem. Rar. Hort. Patav. Coll. 1847 (1847) [4]; Vis. ex Schltdl., Linnaea 24 (1851) 181, nom. inval., sine descr.] Vis. ex Rohrb., Monogr. Silene (1868) 222; Linnaea 36 (1870) 688, non Regel (1863), nom. superfl.; C. Tang, Fl. Reipubl. Pop. Sin. 26 (1996) 283; S.-S. Ying, Fl. Taiwan, ed. 2, 2 (1996) 364, t. 169; L. Zhou et al., Fl. China 6 (2001) 72. — [*Lychnis fortunei* Hort. ex Vis., Sem. Rar. Hort. Patav. Coll. 1847 (1847) [4]; Linnaea 24 (1851) 181, nom. inval., in synon.] — Type: *Fortune 36* (W, holo, lost; K, KW, P, probably elsewhere as well), North China.

臺灣大學學術期刊資料庫

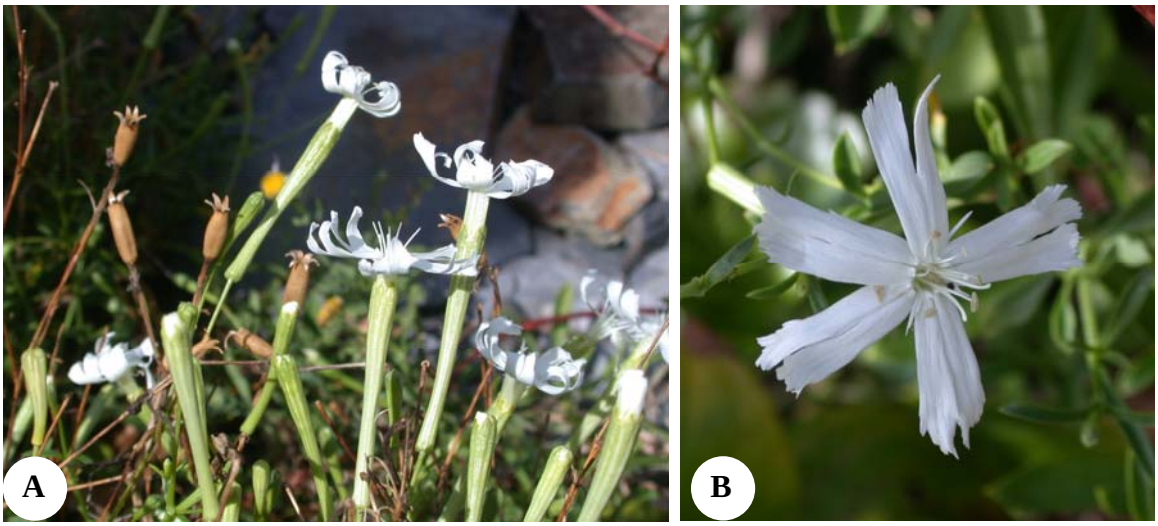


Fig. 1. *Silene fissipetala* Turcz. var. *kiiruninsularis* (Masam.) Veldk. A: Habit and habitat. B: A flower, note the terete calyx and the deeply bifid white petals (Photo by Mr. M.-J. Jung).

[*Silene fortunei* Vis. forma *angustifolia* Gilg, Bot. Jahrb. Syst. 34, Beibl. 75 (1904) 32, nom. inval., sine descr. ―Vouchers: *Nebel s.n., Zimmermann 265* (B, holo, lost). China, Tsingtau, Iltisberg].

Silene argyi Lév., Bull. Acad. Geogr. Bot. 28 (1914) 292 (n.v.); Lauener, Notes Roy. Bot. Garden Edinburgh 26 (1965) 346. ―Type: *d'Argy s.n.* (E, holo), China, Kiang-Sou, Vou-Tse-Hien, Long Chan. *Silene fortunei* Vis. var. *bilobata* Hosokawa, Trans. Nat. Hist. Soc. Formosa 23 (1933) 93, reprinted in Contrib. Herb. Taihoku Imp. Univ. 33 (1937) 93. ― Type: *Hosokawa 5155* (TAI, holo), Taiwan, Hualien, Taroko, Batakan. 12 August 1932. 4000' alt.

Distribution: China (Anhui, Fujian, Gansu, Hebei, Jianxi, S Shaanxi, Shandong, Shanxi, Sichuan), Taiwan.

Note: The var. *bilobata* was described as having usually non-viscose inflorescences and pink petals, only once incised. The taxon and its name have not been mentioned by later authors.

Silene fortunei Hort. ex Fenzl, nom. inval.

Silene fortunei Hort. ex Fenzl, Adversaria Bot. in Del. Sem. Hort. Vindob. (1851) [9], nom. inval., in syn. ("*fortunii*"). ― Voucher: Cultivated in Vienna? (W, holo, lost).

= ***Silene sp.***

Silene fortunei Hort. ex Regel

Silene fortunei Hort. ex Regel, Ind. Sem. Hort. Bot. Imp. Petrop. 1863 (after 5 June) 34. ―Type: Cultivated in St. Petersburg, extant? Regel's principal herbarium is in LE, and in many more institutes besides (n.v.).

= ***Silene sp.***

In Taiwan there is an endemic variety of "*Silene fortunei* Vis." for which a new combination is now required:

Silene fissipetala Turcz. var. ***kiiruninsularis*** (Masam.) Veldk., comb. nov**.** Fig. 1

Silene kiiruninsularis Masam., J. Soc. Trop. Agric. Taihoku Imp. Univ. 6 (1934) 570 ("*kiiruninsulatis*") & Errata (n.v.: "*kiiruuinsularis*" in IPNI); reprint in Contrib. Herb. Taihoku Imp. Univ. 37 (1934) 570, in Suppl. Contrib. Herb. Taihoku Imp. Univ., Gen. Index (1937) 21 ("*kiiruninsularis*); Hitobito, Ind. Taihok. III (1937) 11 ("*kiiruninsulatis*"). ― *Silene fortunei* Vis. var. *kiiruninsularis* S.-S. Ying, Colour. Illustr. Pl. Taiwan 4, Colour. Illustr. Herbac. Pl. Taiwan 1 (1980) 128, t. 41; Fl. Taiwan 2 (1996) 366 ("*kiruninsularis*"). ― Type: *Masamune 18 Jul 1934 "Ins. Keelung"* (TI, holo).

ACKNOWLEDGEMENTS

I very much thank Dr. C.-S. Kuoh (NCKU) for making available essential Taiwanese literature and the Chinese translation of the summary, and Dr. K. Gandhi (A) and D. H. Nicolson (US) for nomenclatural advise. Mr. M.-J. Jung (NCKU) kindly permitted me to use the photographs he has made. Mr. P. Kostense in WAG checked the copy of the J. Soc. Trop. Agric. 6 there. It was a pleasure to discuss these old seed lists with Mr. C. Lut (L).

臺灣大學學術期刊資料庫

LITERATURE CITED

Anonymous. 1951. Das Naturhistorisches Museum in Wien. Taxon **1**: 29.

Chowdhuri, P. K. 1957. Studies in the genus *Silene*. Notes Roy. Bot. Gard. Edinburgh **22**: 250.

De Visiani, R. 1847. Semina rariora in horto patavino collecta anno MDCCCXLVII quae commutanda exhibentur. Reprinted by Schlechtendal (1851), q.v. Padua, Italy. p. 4.

Fenzl, E. 1851. Adversaria botanica, Del. Sem. Hort. Vindob. Klopf & Eurich, Vienna. Austria. p. 9.

Forbes, F. B. and W. B. Hemsley. 1886. Enumeration of all the plants known from China, etc. J. Linn. Soc. **23**: 65.

Hohenacker, R. F. 1846. Verkäufliche Chinesische Pflanzen. Flora **29**: 592.

McNeill, J. et al. (eds.). 2006. International Code of Botanical Nomenclature. Regnum Veg. p. 146.

Regel, E. A. von. 1863. Index seminum quae hortus botanicus imperialis petropolitanus pro mutua commutatione offert 1863. St. Petersburg, Russia. p. 34.

Rohrbach, P. 1868. Monographie der Gattung *Silene*. Engelmann, Leipzig, Germany. p. 222

Rohrbach, P. 1870. Beiträge zur Systematik der Caryophyllinen. Linnaea **36**: 688-689.

Schlechtendal, D. H. R. 1851. Hortorum botanicorum plantae novae et adnotationes in seminum indicibus depositae. Linnaea **24**: 181.

Schlechtendal, D. H. R. 1852. Hortorum botanicorum plantae novae et adnotationes in seminibus indicibus et adversariis dispositae … Hortus vindobonensis. Ex adversariis botanicis. Linnaea **25**: 317-319.

Turczaninow, P. N. K. 1854. Animadversiones ad primam partem herbarii turczaninowiana nunc Universitatis charkowiensis. Bull. Soc. Imp. Nat. Moscou **27**, 2, 4: 371.

Williams, F. N. 1896. A revision of the genus *Silene*. J. Linn. Soc. **32**: 178, 193.

Ying, S.-S. 1980. Coloured illustrations of plants of Taiwan 4, coloured illustrations of herbaceous plants of Taiwan **1**: 128-129, t. 41. S.-S. Ying, Taipei, Taiwan.

Ying, S.-S. 1996. *Silene*. In: Huang, T.-C. et al. (eds.), Flora of Taiwan 2nd ed. **2**: 364, t. 169, f. 1-7. Editorial Committee, Dept. Bot., NTU, Taipei, Taiwan.

Zhou, L. et al. 2001. *Silene*. Flora of China **6**: 72, 485, t. 56, f. 3-7. Science Press, Beijing, China.

臺灣及中國大陸產石竹科蠅子草 (*Silene fortunei*) 之正確學名：*S. fissipetala*

J. F. Veldkamp[(1)]

(收稿日期：2008 年 6 月 16 日；接受日期：2008 年 9 月 20 日)

摘　　要

產於臺灣及中國大陸的蠅子草（石竹科）其學名 *Silene fortunei* Vis. 為不正當的出版 (De Visiani, 1847)。隨後雖經正當的出版 (Rohrbach, 1868)，但此名又在 *Silene fortunei* Hort. ex Regel (1863) 之後出現同名，且又是 *Silene fissipetala* Turcz. (1854) 的一個多餘學名。此乃基於它們的全模式與複模式彼此重複之故 (McNeill et al., 2006, Art. 9 Note 2)。本文就基隆蠅子草（*Silene kiiruninsularis* Masam）提出一新的變種組合。

關鍵詞：石竹科、中國大陸、蠅子草、*Silene fissipetala*、*Silene fortunei*、*Silene kiiruninsularis*、臺灣。

1. 荷蘭國家標本館，荷蘭萊登大學，PO Box 9514, 2300 RA Leiden, The Netherlands; Fax: 31.527.35.11; Email: veldkamp@nhn.leidenuniv.nl

臺灣大學學術期刊資料庫