

## New Names for East Asian Species of *Silene* L. (Caryophyllaceae)

Hiroyoshi OHASHI and Hideki NAKAI

Biological Institute, Graduate School of Science, Tohoku University, Sendai, 980-77 JAPAN

(Received on April 12, 1996)

New names for 11 taxa (seven species, one variety and three forms) of East Asian *Silene* are proposed: 1. *Silene baccifera* var. *japonicus*, 2. *S. bungeana*; 3. *S. cognata*; 4. *S. kiusiana*; 5. *S. miqueliana* and its f. *argyrata* and f. *plena*; 6. *S. sinensis* and its f. *verticillata*; 7. *S. sieboldii*; and 8. *S. wilfordii*.

Circumscription of the genus *Silene* L. has long been controversial, but there is a tendency in recent systematic works for expansion of the generic boundary of the genus to embrace neighbouring genera, *Melandrium* Roehl., *Lychnis* L., *Cucubalus* L. and others. Greuter (1995) proposed a new infrageneric system of *Silene* in the wide sense for the species of Greece where is, according to him, the area placed at the junction of two main centres of diversity of *Silene*, south Balkan Peninsula and S. W. Asia. He proposed new taxonomic positions for the genus *Lychnis* and *Cucubalus* as *Silene* subg. *Lychnis* (L.) Greuter and subg. *Silene* sect. *Cucubalus* (L.) Greuter, respectively. *Melandrium* was regarded as *Silene* subg. *Viscaria* sect. *Elisanthe* (Fenzl. ex Endl.) Ledeb. in his work. A historical change of generic treatments of the tribe Sileneae by various authors is clearly tabulated by Oxelman and Lidén (1995). They considered genera of the tribe based on a DNA sequencing study with morphological taxonomic characters. Phylogenetic trees presented by them show that *Lychnis* is not supported as an entity even in its broad circumscription and is included in *Silene*. They supported the broad concept of *Silene* including *Melandrium*, *Lychnis* and *Cucubalus* (Oxelman and Lidén 1995).

In Japanese flora, *Silene*, *Melandrium*, *Lychnis* and *Cucubalus* have usually been recognized as independent, for example, by Ohwi (1965, 1975) and Kitamura and Murata (1961, 1982). Ohwi and Ohashi (1974) transferred Japanese and Taiwanese species of *Melandrium* into *Silene*. In more recent Floras, for example, Kitagawa (1982, 1992) treated *Silene* (including *Melandrium*), *Lychnis* and *Cucubalus* as separate genera.

In this paper, we adopt the recent broad generic concept of *Silene* proposed by Greuter (1995) that includes *Melandrium*, *Lychnis* and *Cucubalus*. Scopoli (1771) is the first author who combined *Silene* with *Lychnis*, and he adopted *Lychnis* for the combined generic name. However, *Silene* is conserved against *Lychnis* to avoid production of about 700 new combinations under *Lychnis* instead of around 20 species of *Silene* (Rabeler 1992, Brummitt 1994).

***Silene baccifera*** (L.) Roth, Tent. Fl. Germ. 2(1): 491 (1789).

*Cucubalus baccifer* L., Sp. Pl. ed. 1, 1: 414 (1753).

*Lychnis baccifera* (L.) Scopoli, Fl. Carn. ed. 2, 1: 306 (1771).

var. ***japonicus*** (Miq.) H. Ohashi & H. Nakai,

comb. nov.

*Cucubalus baccifer* L. var. *japnicus* Miq. in Ann. Mus. Bot. Lugd. Bat. **2**: 210 (1866); Ohwi, Fl. Jap. Engl. ed. 432 (1965), & op. cit. 583 (1965); Kitagawa, Neo-Lineam. Fl. Mansh. 265 (1979), & in Satake & al., Wild Fl. Jap. Herb. Pl. **2**: 42 (1982); Ohwi & Kitagawa, New Fl. Jap. rev. ed. 663 (1992).

*Cucubalus japonicus* (Miq.) Worosch. in Bjull. Glavn. Bot. Sada Akad. Nauk. URSS **38**: 44, 50 (1960), & Fl. Sovet. Daljn. Vost. 189 (1966), & Opređ. Rast. Sovet. Daljn. Vost. 254 (1982).

*Cucubalus baccifer* auct. non L.: Kitamura & Murata, Col. Ill. Herb. Pl. Jap. **2**: 256, f. 494 (1961).

Distr.: Japan, S. Kuriles, S. Sakhalin, Amur, Ussuri, Manchuria and Korea.

Plants of this species in East Asia have often been recognized as identical with *C. baccifer* or a variety of *C. baccifer*. Recently, this variety was treated as a species different from its mother species, i.e., *Cucubalus japonicus*, because it has smaller seeds (ca. 1.2 mm long) than those of *C. baccifer* (ca. 1.8 mm long). In this paper, we follow a traditional treatment for the plants as a variety of *Silene baccifera*, but further studies are needed for its identification.

***Silene bungeana*** (D. Don) H. Ohashi & H. Nakai, comb. nov.

["*Literatis et vulgo Senno*" Kaempf., Amoen. Exot. 873 (1712)].

*Agrostemma bungeana* D. Don in Sweet, Fl. Gard. Ser. **2**: 317 (1831).

*Lychnis bungeana* (D. Don) Fisch. in Bot. Reg. **22**: t. 1864 (1836); Rohrb. in Linnaea **36**: 187 & 678 (1869 & 70); Forbes & Hemsley in J. Linn. Soc. **23**: 65 (1886).

*Lychnis senno* Siebold & Zucc., Fl. Jap. **1**: 98, t. 49 (1839), & in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. Münch. **4**(2): 185 (1845); Rohrb. in Linnaea **36**: 188 (1869–70); Franch. & Savat., Enum. Pl. Jap. **2**(2): 50 (1873); Forbes & Hemsley in J. Linn. Soc. **23**: 66 (1886); Ohwi, Fl. Jap. rev. ed. 585 (1965);

Icon. Cormophyt. Sin. **1**: 637 (1972); Iconogr. Corm. Sin. Suppl. **1**: 318, fig. 8562 (1982); Rev. Makino's New Ill. Fl. Jap. 98 (1989); Ohwi & Kitagawa, New Fl. Jap. rev. ed. 665 (1992); Vasc. Pl. Hengduan Mts. **1**: 417 (1993); H. Ohba in Siebold's Florileg. Jap. Pl. **2**: 94 (1993).

Distr.: Cultivated in Japan; native to China.

***Silene cognata*** (Maxim.) H. Ohashi & H. Nakai, comb. nov.

*Lychnis cognata* Maxim., Prim. Fl. Amur. 55, in adnota (1859); Forbes & Hemsley in J. Linn. Soc. **23**: 66 (1886), p. p.; Komarov, Fl. Manshur. **2**: 203 (1903); Gorschkova in Fl. URSS **6**: 695, t. 42, f. 6 (1936); Icon. Cormophyt. Sin. **1**: 638, f. 1275 (1972); Y. C. Chu in Fl. Pl. Herb. Chin. Bor.-or. **3**: 54, pl. 22, f. 1–3 (1975); Fl. Intramongol. **2**: 180 (1978); Kitagawa, Neo-Lineam. Fl. Mansh. 267 (1979); Worosch., Opređ. Rast. Sovet. Daljn. Vost. 254 (1982); S. He in Fl. Beijing ed. **2**, **1**: 203, f. 256 (1984); Y. C. Chu in Fl. Heilongjiang **4**: 313, pl. 84, f. 1–3 (1992); Czerepanov, Vasc. Pl. Russ. 168 (1995).

*L. fulgens* Fischer var. *congnata* (Maxim.) Regel, Pl. Radd. **1**: 331 (1862); Nakai, Fl. Korea. **1**: 81 (1909).

Distr.: Northern China: Inner Mongolia, Manchuria, Ussuri and Korea.

***Silene kiusiana*** (Makino) H. Ohashi & H. Nakai, comb. nov.

*Lychnis kiusiana* Makino in Bot. Mag. Tokyo **17**: 57 (1903); Matsum., Index Pl. Jap. **2**(2): 84 (1912); Makino & Nemoto, Fl. Jap. 293 (1931); Nemoto, Fl. Jap. Suppl. 198 (1936); Kitamura & Murata, Col. Ill. Herb. Pl. Jap. **2**: 258, f. 497 (1961); Ohwi, Fl. Jap. Engl. ed. 433 (1965), & op. cit. rev. ed. 584 (1965); Kitagawa in Satake & al., Wild Fl. Jap. Herb. Pl. **2**: 43 (1982); Rev. Makino's New Ill. Fl. Jap. 99 (1989); Ohwi & Kitagawa, New Fl. Jap. rev. ed. 664 (1992).

Distr.: Japan: western Honshu and Kyushu.

***Silene miqueliana*** (Rohrb.) H. Ohashi & H. Nakai, comb. nov.

*Lychnis miqueliana* Rohrb. in *Linnaea* **36**: 677 (1870); Maxim. in *Bull. Acad. Sci. St.-Pét.* **18**: 387 (1873), in adnota; Franch. & Savat., *Enum. Pl. Jap.* **1**: 49 (1873), **2**: 294 (1878); Matsum., *Index. Pl. Jap.* **2**(2): 84 (1912); Makino & Nemoto, *Fl. Jap.* 293 (1931); Nemoto, *Fl. Jap.* 198 (1936); Kitamura & Murata, *Col. Ill. Herb. Pl. Jap.* **2**: 257, f. 496 (1961); Ohwi, *Fl. Jap. Engl. ed.* 433 (1965), & op. cit. rev. ed. 584 (1965); Kitagawa in Satake & al., *Wild Fl. Jap. Herb. Pl.* **2**: 42 (1982); *Rev. Makino's New Ill. Fl. Jap.* 99 (1989); Ohwi & Kitagawa, *New Fl. Jap. rev. ed.* 664 (1992).

f. **miqueliana**.

Distr.: Japan. Honshu, Shikoku and Kyushu.

f. **argyrata** (Mizushima) H. Ohashi & H. Nakai, comb. nov.

*Lychnis miqueliana* f. *argyrata* Mizushima in *J. Jap. Bot.* **30**: 95 (1955); Hara, Sato & Kurosawa, *Fl. Karuizawa* 198, f. 8 (1974).

Flowers in colour print of this rare form is presented by Hara et al. (1974).

f. **plena** (Makino) H. Ohashi & H. Nakai, comb. nov.

*Lychnis miqueliana* var. *plena* Makino in *Bot. Mag. Tokyo* **23**: 16 (1909); Makino & Nemoto, *Fl. Jap. ed. 2*, 293 (1931).

*Lychnis miqueliana* f. *plena* (Makino) Okuyama in *J. Jap. Bot.* **30**: 43 (1955).

**Silene sieboldii** (Van Houtte) H. Ohashi & H. Nakai, comb. nov.

*Lychnis sieboldii* Van Houtte, *Fl. des Serres* **10**: 31 (1855); Ohwi, *Fl. Jap. rev. ed.* 585 (1965); Kitagawa in Satake & al., *Wild Fl. Jap. Herb. Pl.* **2**: 42 (1982); *Rev. Makino's New Ill. Fl. Jap.* 99 (1989); Ohwi & Kitagawa, *New Fl. Jap. rev. ed.* 665 (1992); H. Ohba in *Siebold's Florileg. Jap. Pl.* **2**: 95 (1993).

*Lychnis coronata* var. *sieboldii* (Van Houtte) L. H. Bailey; *Stand. Cyclop. Hort.* **4**: 1929 (1917), *Man. Cult. Pl. rev. ed.* 378 (1951); Makino & Nemoto, *Fl. Jap.* 1001 (1925).

*Lychnis fulgens* auct. non Fisch.: Franch. & Savat., *Enum. Pl. Jap.* **2**: 294 (1878).

Distr.: Japan: central Honshu (Nagano Pref.) and Kyushu.

A white-flowered form is recorded as *Lychnis sieboldii* f. *alba* Sugimoto [Nom. Jap.: Shirobanamatsumoto], but we could not trace the original publication of the name.

**Silene sinensis** (Lour.) H. Ohashi & H. Nakai, nom. nov.

[“Sen Sjun ra, vulgo Ganpi” Kaempf., *Amoen. Exot.* 873 (1712)].

*Lychnis coronata* Thunb. ex Murray, *Syst. Veg. ed.* 14, 435 (May–Jun. 1784); *Rev. Makino's New Ill. Fl. Jap.* 98 (1989); Wijnands in *Thunbergia* **12**: 17 (1990); H. Ohba in *Siebold's Florileg. Jap. Pl.* **2**: 94 (1993), in *Thunb. Draw. Jap. Pl.* 423 (1994).

*Lychnis coronata* Thunb., *Fl. Jap.* 183, t. 23 (Aug. 1784); Forbes & Hemsley in *J. Linn. Soc.* **23**: 66 (1886); Rohrb. in *Linnaea* **36**: 186 & 678 (1869 & 70); Matsum., *Index Pl. Jap.* **2**(2): 84 (1912); Makino & Nemoto, *Fl. Jap.* 1000 (1925); Merr. in *Com. Loureiro, Fl. Cochinchin.* 152 (1935); L. H. Bailey, *Man. Cult. Pl. rev. ed.* 378 (1951); Ohwi, *Fl. Jap. Engl. ed.* 433 (1965), & op. cit. rev. ed. 585 (1975); *Icon. Cormophyt. Sin.* **1**: 637, f. 1273 (1972); Ohwi & Kitagawa, *New Fl. Jap. rev. ed.* 665 (1992).

*Lychnis grandiflora* Jacq., *Pl. Rar.* **1**(4): t. 84 (1784), & in *Collectanea* **1**: 149 (1787); G. Don, *Gen. Hist. Dichl. Pl.* **1**: 415 (1831); *Siebold & Zucc., Fl. Jap.* **1**: 97, t. 48 (1839).

*Hedona sinensis* Loureiro, *Fl. Cochinchin.* 286 (1790).

*Agrostemma banksia* Meerb. *Pl. Sel. Icon. Pict. t.* 28 (1798); Ohwi & Kitagawa, *New Fl. Jap. rev. ed.* 665 (1992), pro syn. *L. senno*.

*Silene grandiflora* (Jacq.) H. Ohashi & H. Nakai in *J. Jpn. Bot.* **71**: 110 (1996), non Franch. [*Bull. Soc. Bot. France* **33**: 427 (1886)].

Distr.: Cultivated in Japan; native to China.

var. **sinensis**.

f. **sinensis**.

f. **verticillata** (Makino) H. Ohashi & H. Nakai, comb. nov.

*Lychnis coronata* var. *verticillata* Makino in Iinuma, *Sômoku-Dzusetsu* ed. 3, 2: 670 (1910); Makino & Nemoto, *Fl. Jap.* 1001 (1925).

**Silene wilfordii** (Regel) H. Ohashi & H. Nakai, comb. nov.

*Lychnis fulgens* Fisch. var. *δ. wilfordii* Regel, *Pl. Radd.* 1: 331 (1861); Rohrb. in *Linnaea* 36: 185 (1869).

*Lychnis laciniata* var. *japonica* Maxim. in *Bull. Acad. Sci. St.-Pétersb.* 11: 429 (1867), & in *Mél. Biol.* 6: 200 (1867); Franch. & Savat., *Enum. Pl. Jap.* 1: 48 (1873).

*Lychnis laciniata* var. *mandshurica* Maxim. in *Bull. Acad. Sci. St.-Pétersb.* 11: 429 (1867), & in *Mél. Biol.* 6: 200 (1867).

*Lychnis wilfordii* (Regel) Maxim. in *Bull. Acad. Sci. St.-Pétersb.* 17: 178 (1872), & op. cit. 18: 371 (1873); Franch. & Savat., *Enum. Pl. Jap.* 2: 294 (1878); Makino in *Bot. Mag. Tokyo* 8: 170 (1894); Gorschkova in *Fl. URSS* 6: 695 (1936); Ohwi, *Fl. Jap. Engl. ed.* 433 (1965), & op. cit. rev. ed. 584 (1965); Hara, Sato & Kurosawa, *Fl. Karuizawa* 60, f. 135 (1974); Kitagawa in Satake & al., *Wild Fl. Jap. Herb.*

*Pl.* 2: 43 (1982); Worosch., *Opred. Rast. Sovet. Dalyn. Vost.* 254 (1982); Rev. Makino's *New Ill. Fl. Jap.* 98 (1989); Ohwi & Kitagawa, *New Fl. Jap. rev. ed.* 665 (1992); Czerepanov, *Vasc. Pl. Russ.* 168 (1995).

*Lychnis laciniata* auct. non Lamarck: Maxim. in *Bull. Acad. Sci. St.-Pétersb.* 11: 429 (1867), in *Mél. Biol.* 6: 200 (1867).

Distr.: Japan: Hokkaido and central Honshu, Ussuri, Manchuria and Korea.

#### References

- Brummitt R. K. 1994. Report of the committee for Spermatophyta: 41. *Taxon* 43: 271–277.
- Greuter W. 1995. *Silene* (Caryophyllaceae) in Greece: a subgeneric and sectional classification. *Taxon* 44: 543–581.
- Kitagawa M. 1982. *Lychnis* L. In: Satake Y. et al. (ed.), *Wild flowers of Japan* 2: 42–43. Heibonsha, Tokyo (in Japanese).
- Kitamura S. and Murata G. 1961, 1982. Coloured illustrations of herbaceous plants of Japan (Cholipetalae). Hoikusha, Osaka (in Japanese).
- Ohwi J. 1965. *Flora of Japan*. Smithsonian Institution, Washington D. C.
- 1975. *Flora of Japan*, revised ed. Shinbundo, Tokyo (in Japanese).
- and Kitagawa M. (rev.). 1992. *New Flora of Japan*, rev. ed. Shinbundo, Tokyo (in Japanese).
- and Ohashi H. 1974. New combination in Japanese and Formosan *Silene* (Caryophyllaceae). *J. Jpn. Bot.* 49: 344–345 (in Japanese).
- Oxelman B. and Lidén M. 1995. Generic boundaries in the tribe Sileneae (Caryophyllaceae) as inferred from nuclear rDNA sequences. *Taxon* 44: 525–542.
- Rabaler R. K. 1992. (1034) Proposal to conserve 2490 *Silene* L. against *Lychnis* L. (Caryophyllaceae). *Taxon* 41: 126–128.
- Scopoli J. A. 1771. *Flora Carniolica*, ed. 2, 1. Krauss, Wien.

#### 大橋広好, 中井秀樹: 東アジアのマンテマ属 (ナデシコ科) の新学名

ナデシコ科マンテマ連の分類体系には問題が多く, 属の範囲に関して見解が定まっていない。分子系統学的研究 (Oxelman and Lidén 1995) の結果も利用した最近の体系では, マンテマ属 *Silene* の範囲は広くとられ, これまで別属とされてきたセンノウ属 *Lychnis* やナンバンハコベ属 *Cucubalus* などが包含されている (Greuter 1995)。また近年はマンテマ属に含められていること多いピランジ属 *Melandrium* もそのように扱われている。この広義のマンテマ属は約700種が記録

されており, その約半数は地中海地域に分布するとされている (Greuter 1995)。日本はマンテマ連の分布域の中心から遠く離れており, 属も種も数が少なく, 分布する種の形態の変異幅も狭い。このため, 日本では, これらの属の区別は容易であるように見える。しかし, 中国でみると, 例えばマンテマ属の種の多くは *Lychnis* や *Melandrium* として分類されたこともあり, これらの属間の区別が困難であることを示している。したがって, われわれは広義のマンテマ属を採用

することがよいと考える。そこで、本論文では日本と朝鮮に分布する東アジアの種類について、7種1変種3品種の学名をマンテマ属として整理した。新学名と和名の対照は次の通りである。

1. *Silene baccifera* (L.) Roth
  - 1-1. var. *japonicus* (Miq.) H. Ohashi & H. Nakai  
ナンバンハコベ
2. *Silene bungeana* (D. Don) H. Ohashi & H. Nakai  
センノウ
3. *Silene cognata* (Maxim.) H. Ohashi & H. Nakai  
チョウセンマツモト
4. *Silene kiusiana* (Makino) H. Ohashi & H. Nakai  
オグラセンノウ
5. *Silene miqueliana* (Rohrb.) H. Ohashi & H. Nakai
  - 5-1. var. *miqueliana*
    - 5-1-1. f. *miqueliana* フシグロセンノウ
    - 5-1-2. f. *argyrata* (Mizushima) H. Ohashi & H. Nakai  
シロガネセンノウ
    - 5-1-3. f. *plena* (Makino) H. Ohashi & H. Nakai  
ザクロガンピ
6. *Silene sinensis* (Lour.) H. Ohashi & H. Nakai
  - 7-1. var. *sinensis*
    - 7-1-1. f. *sinensis* ガンピ
    - 7-1-2. f. *verticillata* (Makino) H. Ohashi & H. Nakai  
クルマガンピ
8. *Silene sieboldii* (Van Houtte) H. Ohashi & H. Nakai  
マツモト
9. *Silene wilfordii* (Regel) H. Ohashi & H. Nakai  
エンビセンノウ  
(東北大学大学院理学研究科生物学教室)