

ON THE SYSTEMATIC POSITION OF THE SO-CALLED
VERONICA NIPPONICA (SCROPHULARIACEAE)

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(With 2 Text-figures)

The entry of the so-called *Veronica nipponica* into the Japanese flora was, so far as the author is aware, recorded at first by MAXIMOWICZ in 1886. He thought at that time the plant growing in the alpine belt of Central Honshu as being identical with Sakhalin, Kamchatkan and Unalaskan entities, and regarded it as *Veronica Stelleri* named by PALLAS ex LINK (1820) along with the plants from the above localities (Fig. 1). When YABE made a list of alpine

Veronica Stelleri Pall. in Willd. hb. Led. Fl. Ross. III, 247. DC. Prodr. X, 481. Cham. et Schlecht. in Linnaea, H, 557.

Nippon: alpe Hakusan, japonice Hime Kuwagata (R. Yatabe); *Sachalin*: valle fl. Nituinai et ad ripam fl. Plyi (Mitzul!); *Kamtschatka* (Merk!, Peters!): littore orientali prope Lopatkam (Rieder!); *Unalaska* (omnes!).

Planta *kamtschatica* foliis lanceolatoellipticis v. ellipticooblongis minoribus proxime ad *sachalinensem* accedit.

Fig. 1. The first citation of Hime-kuwagata as *Veronica Stelleri* by Maximowicz (Bull. Acad. St.-Petersb. 31: 72. 1886)

plants collected on Mt. Shirouma in 1903, he identified a plant in the alpine belt of Mt. Shirouma as *V. Stelleri*. MAKINO's view of regarding an alpine speedwell of Honshu as a distinct species *V. nipponica*, differing from *V. Stelleri* was published by MATSUMURA in his "Index Plantarum Japonicarum" in 1912, mentioning the following localities: Tsiokaisan, Gassan, Haksan, Komagatake (Sinano). Unfortunately, he introduced some confusion under *V. Stelleri*, where he but followed the opinion of MAXIMOWICZ, and not only the plants from the Kurils and Hokkaido, but also those from Mt. Iide, Mt. Shirouma and Mt.

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Tateyama were cited under this name. FURUMI in 1916 adopted MATSUMURA's view with no modifications. TAKEDA (1933, 1935, 1937) ended the confusion, and the status of *V. nipponica* as a distinct species differing from *V. Stelleri* was established. HARA in 1944 discussed on *V. Stelleri* as well as on *V. nipponica* and regarded var. *longistyla* of the former species published by KITAGAWA (1942) for the Manchurian *Veronica* growing on Mt. Changpai located on the border between China and Korea as identical with *V. yesoensis* published by NAKAI without Latin description in 1930, and published the view that the plants identified as *V. Stelleri* in Hokkaido were quite identical with var. *longistyla*. He also published var. *shinano-alpina* under the latter species.

During the course of compiling a new alpine flora of Japan, the present author noticed the *Veronica stelleri*-*V. nipponica* Complex in Japan with a good deal of interests, and as a result a new position was given to the so-called *V. nipponica* after the detailed examination of the very plant both in fields and in herbaria.

Veronica stelleri PALLAS ex LINK in SPRENGEL et SCHRADER et LINK, Jahrb. 1(3): 40. 1820.

var. ***longistyla*** KITAGAWA in Rep. Inst. Sci. Res. Manch. 4: 127. 1942.; Neolineam. Fl. Manshur. 574. 1979. -HARA in Jour. Jap. Bot. 20(3): 181. 1944.; Enum. Spermat. Jap. 1: 280. 1949. -YAMAZAKI in Jour. Fac. Sci. Univ. Tokyo III, 7(2): 147. 1957.; in SATAKE *et al.*, Wild Fl. Jap. 3: 110, pl. 94(1). 1981.; Alp Fl. Jap. 68, pl. 93(139). 1985. -TOYOKUNI in Jour. Asahikawa Univ. 5: 224. 1977. -SHIMIZU, New Alp. Fl. Jap. Color 1: 74. 1982. -LEE et YAMAZAKI in Kwanak Arboret. S.N.U. 4: 67. 1983.

Syn.-

V. alpina (non LINNAEUS) sensu HEMSLEY in Jour. Linn. Soc. Bot. 26: 198. 1890. -KOMAROV, Fl. Manshur. 3: 435. 1907.

V. yesoensis NAKAI, Rep. Veg. Daisetsu Mts. 54 et 71. 1930. *nom. nud. quia solum cum descript. brevi jap.*

Nom. jap. Hakuto-kuwagata (KITAGAWA 1942), Ezo-hime-kuwagata (HARA 1944)

Specim. exam. : Hokkaido. Prov. Ishikari : mt. Hakuun, 2,000m (H. TOYOKUNI); Takanega-hara, 1,700-1,900m (T. Shimizu); mt. Yupari, 1,500-1,600m (H. TOYOKUNI; T. SHIMIZU). Prov. Hidaka : mt. Esaomantottabetsu, 1,700m (M. WATANABE *et al.*); mt. Petekari, 1,200-1,730m (H. KOYAMA et N. FUKUOKA).

Area geogr. : Japonia (in alp. Hokkaido), China (in alp. orient.), Korea (in alp. bor.), Sachalin, Kuriles (austr.)

Localitas typi : Mt. Changpai (China orient.)

subsp. **nipponica** (MAKINO) TOYOKUNI, stat. et comb. nov.

Syn.-

V. alpina (non LINNAEUS) sensu MATSUMURA, Cat. Pl. Herb. Coll. Sci. Imp. Univ. 143. 1886.

V. Stelleri (non PALLAS) sensu MAXIMOWICZ in Bull. Acad. St.-Pétersb. 31 : 72. 1886, *quoad pl. ex Hakusan*.-YABE in Bot. Mag. Tokyo 17 : 25. 1903.-MIYOSHI et MAKINO, Pocket Atl. Alp. Pl. Jap. 1 : 44, pl. 22, f. 125. 1906.-MATSUMURA, Ind. Pl. Jap. 2(2) : 573. 1912, *quoad pl. ex Nippon*.-FURUMI in Bot. Mag. Tokyo 30 : 124. 1916, *quoad pl. ex Honto*.

V. nipponica MAKINO ex MATSUMURA, Ind. Pl. Jap. 2(2) : 572. 1912, *nom. nud.*-FURUMI in Bot. Mag. Tokyo 30 : 120 et 124. 1916.-MAKINO et NEMOTO, Fl. Jap. (ed. 1) 233. 1925, *excl. pl. ex Tisima*.-MAKINO et TANAKA, Man. Fl. Nippon 522. 1927.-TAKEDA, Kôzan-shokubutsu-dzui, 13, pl. 55. 1933.; in Bot. & Zool. 3(9) : 1736. 1935.; Kôzan-shokubutsu-dzui (ed. 2), 20, pl. 70. 1937.-HARA in Jour. Jap. Bot. 20(3) : 181. 1944.; Enum. Spermat. Jap. 1 : 277. 1949.-TAKEDA et TANABE et TAKENAKA, Ill. Man. Alp. Pl. Jap. 93, f. 65. 1950.-YAMAZAKI in Jour. Fac. Sci. Univ. Tokyo III, 7(2) : 147. 1957.; in SATAKE *et al.*, Wild Fl. Jap. 3 : 110, pl. 94(2). 1981.; Alp. Fl. Jap. 68. 1985.-SHIMIZU, New Alp. Fl. Jap. Color 1 : 73, pl. 22(72). 1982.

Nom. jap. : Hime-kuwagata (YATABE ex MAXIMOWICZ 1886)

Specim. exam. : Honshu. Prov. Shinano : mt. Mittsudake, 2,800m (H. TSUCHIYA); mt. Gaki, 2,500-2,641m (T. SHIMIZU); mt. Hotaka, 2,400-3,000m (T. SHIMIZU); mt. Jonen, 2,800m (Sem. Cl.); mt. Shirouma, 2,600-2,900m (Y. YAZAWA; T. SHIMIZU; H. TOYOKUNI; M. IKEGAMI)

Area geogr. : Japonia (in Honshu med. et bor. alpinus)

Localitas typi : Mt. Hakusan (Japonia med.)

var. **shinano-alpina** (HARA) TOYOKUNI, comb. nov.

Syn.-

V. nipponica var. *shinano-alpina* HARA in Jour. Jap. Bot. 20(3) : 182. 1944.; Enum. Spermat. Jap. 1 : 277. 1949.-TAKEDA et TANABE et TAKENAKA, Ill. Man. Alp. Pl. Jap. 93. 1950.-YAMAZAKI in Jour. Fac. Sci. Univ. Tokyo III, 7(2) : 148. 1957.; in SATAKE *et al.*, Wild Fl. Jap. 3 : 110. 1981.; Alp. Fl. Jap. 68, pl. 93(340). 1985.-SHIMIZU, New Alp. Fl. Jap. Color 1 : 73. 1982.

Nom. jap. : Shinano-himekuwagata (HARA 1944)

Specim. exam. : Honshu. Prov. Shinano : mt. Shogigashirayama, 2,500m (Sem. Cl.); mt. Daisenjodake, 2,900m (T. BABA); Hyakkendaira, Oshikamura, 2,700m (F. ITO); mt. Norikura, 2,400-2,600m (T. SHIMIZU; H. TOYOKUNI). Prov. Suruga : mt. Senmai-Warusawa, 2,900-3,140m (T. SHIMIZU *et al.*)

Area geogr. : Endemica in Japonia (in Honshu med. alpinus)

Localitas typi : mt. Arakawa (Honshu med.)

Veronica stelleri subsp. *nipponica* is slender; flowers are much smaller, and styles are very short attaining a length of only 1 to 2mm as compared

with subsp. *stelleri*, especially its variety *longistyla*. The style of the variety *longistyla* is usually 5-7mm in length, but of the variety in the alpine belts of Shiretoko peninsula as well as of Mt. Yupari is shorter, and is between 3.5 and 4.5mm in length. Such short-styled var. *longistyla* usually has broad ovate leaves which resemble those of the typical phase subsp. *stelleri* var. *stelleri*. In the alpine belt of the Taisetsu Mountains, Central Hokkaido, at high elevations, there occurs a slender form of var. *longistyla* that at a glance resembles subsp. *nipponica*, and its leaves are narrower and elliptical to oblong in outline, coming near to those of subsp. *nipponica* (Fig. 2), but the styles are always longer, expressing the characteristics of var. *longistyla*. The author considers that subsp. *nipponica* had been separated from the typical phase subsp. *stelleri* on high mountains of Honshu for a longer period and had acquired special characteristics before the alpine flora of Japan was established.

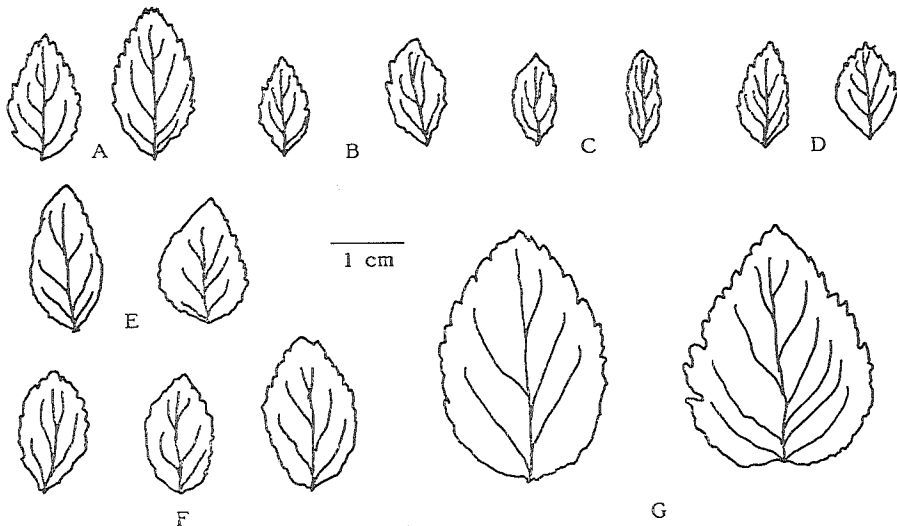


Fig. 2 Leaves in *Veronica stelleri* subsp. *nipponica* var. *nipponica* (B), var. *shinanoalpina* (A, C, D), and subsp. *stelleri* var. *logistyla* (E-G). Localities: A. Mt. Shogigashirayama, Prov. Shinano (2,500m), B. Mt. Mittsudake, Prov. Shinano (2,800m), C. Mt. Daisenjo, Prov. Shinano (2,900m), D. Mt. Norikura, Prov. Shinano (2,400m), E. Mt. Hakuun, Taisetsu Mts., Prov. Ishikari (2,000m), F. Mt. Petekari, Prov. Hidaka (1,200-1,730m) and. G. Mt. Yupari, Prov. Ishikari, (1,500-1,600m)

Veronica wormskioldii described from Greenland also resembles the dwarfish form of *V. stelleri* subsp. *stelleri* and subsp. *nipponica*: all these speedwells, the author thinks, appear to have derived from *V. alpina* described from the European Alps (circumpolar arctic element).

All the specimens examined are conserved in SHIN (Herbarium of Shinshu University).