

Hiroshi IKEDA^{a,*}, Akiko SHIMIZU^a and Carlos AEDO^b: Nomenclature and Typification of *Geranium yesoense* var. *pseudopalustre* (*Geraniaceae*)

^aThe University Museum, The University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo, 113-0033 JAPAN;

^bReal Jardín Botánico, Consejo Superior de Investigaciones Científicas, Pza. de Murillo, 2, 28014 Madrid, SPAIN

*Corresponding author: h_ikeda@um.u-tokyo.ac.jp

Summary: Nakai (1909a) described var. *pseudopratense* under *Geranium yesoense* Franch. & Sav., but soon corrected the name to var. *pseudo-palustre* (Nakai 1909b). According to the ICN Art. 51.1, this change is not allowed, and var. *pseudopratense* must be maintained. Nakai did not cite specimens when he described *G. yesoense* var. *pseudopratense*, or when he changed the name to var. *pseudopalustre*. We designate a specimen collected in Hakodate, Hokkaido (J. Matsumura s.n., 15 Aug. 1899, TI) as the lectotype for *G. yesoense* var. *pseudopratense*, because it is one of the specimens cited in the protologue of *G. miyabei* Nakai, a replacement name for *G. yesoense* var. *pseudopratense* and agrees most closely with the original description.

Geranium yesoense Franch. & Sav. (*Geraniaceae*) is a perennial herb, distributed in S. Kuriles, Hokkaido and northern Honshu (Akiyama 2001). *Geranium yesoense* is a polymorphic taxon, within which several infraspecific taxa have been proposed (Nakai 1909a, b, 1911, 1912, Takeda 1910, Tatewaki 1936, Hara 1949, Mizushima 1954).

Nomenclature for *Geranium yesoense* var. *pseudopalustre*

On grassy places near the seacoast of Hokkaido and northern Honshu, Japan, occurs a morphotype of *Geranium yesoense* characterized by shallowly incised leaves and a calyx with sparse, spreading hairs. Nakai (1909a) mentioned such plants in his key to the taxa of *Geranium* in Japan and adjacent regions and proposed for it the name “var. *pseudo-pratense*” in *The Botanical Magazine, Tokyo* in May 1909.

Soon after its publication, he corrected and changed the name, without comment, to “var. *pseudo-palustre*” in the same journal in October 1909 (Nakai 1909b). Presumably, Nakai had intended to name these plants after *G. palustre* L., since many specimens of this taxon had been identified as “*G. palustre* L.”, but he mistakenly used the name “*pratense*” in his first publication (Nakai 1909a), then attempt to correct it in his second publication (Nakai 1909b). Although “var. *pseudopalustre*” has been widely used in the literature (e.g., Ohwi 1953, 1965, 1984, Kitamura and Murata 1961, Shimizu 1982, Akiyama 2001), the *International Code of Nomenclature for algae, fungi, and plants* (ICN) (McNeill et al. 2012) states that “a legitimate name must not be rejected merely because it, or its epithet, is inappropriate or disagreeable, or because another is preferable or better known, or because it has lost its original meaning” (Art. 51.1). Therefore, “var. *pseudopratense*” must be maintained and adopted instead of “var. *pseudopalustre*” if one is to recognize these plants at the rank of variety under *G. yesoense*.

Typification for *Geranium yesoense* var. *pseudopratense*

Nakai later changed his mind again and treated *G. yesoense* var. *pseudopratense* as a species distinct from *G. yesoense*, which he named *G. miyabei* (Nakai 1912). In describing *G. miyabei*, he cited *G. yesoense* var. *pseudopalustre* (var. *pseudopratense*) as a synonym, and cited seven specimens. Since *G. yesoense* var. *pseudopratense* was treated as a



Fig. 1. Lectotype of *Geranium yesoense* Franch. & Sav. var. *pseudopratense* Nakai (J. Matsumura s.n., 15 Aug. 1899, TI).

synonym of *G. miyabei*, *G. miyabei* is considered to be a replacement name for *G. yesoense* var. *pseudopratense*. Therefore, *G. miyabei* is identical with *G. yesoense* var. *pseudopratense* and the type specimen of *G. yesoense* var. *pseudopratense* is the type specimen of *G. miyabei*. However, Nakai (1909a, 1909b) did not cite specimens when he described *G. yesoense* var. *pseudopratense* or var. *pseudopalustre*. We searched for specimens that Nakai himself indicated to be var. *pseudopratense* or var. *pseudopalustre*, but failed to locate any. It therefore seems reasonable to assume that the specimens collected before May 1909 that Nakai cited when he described *G. miyabei* were the original material used for describing *G. yesoense* var. *pseudopratense*. Because all the specimens cited for *G. miyabei* by Nakai were collected before May 1909, they can be considered to be among the original material for *G. yesoense* var. *pseudopratense*. Among the specimens, one collected in Hakodate, Hokkaido (J. Matsumura s.n., 15 Aug. 1899, TI) agrees most closely with the original description. We designate that specimen to be the lectotype (Fig. 1).

Taxonomic treatment

Geranium yesoense Franch. & Sav., Enum. Pl. Jap. 2: 305 (1879), ‘*yedoense*’.

var. *pseudopratense* Nakai in Bot. Mag. (Tokyo) 23: 103 (May 1909), ‘*pseudo-pratense*’, in clavi.

Geranium yesoense var. *pseudo-palustre* Nakai in Bot. Mag. (Tokyo) 23: (444) (Oct. 1909), nom. superfl.; R. Knuth in Engler, Pflanzenr. IV-129, Ht. 53: 581 & 583 (1912); Matsum., Ind. Pl. Jap. 2(2): 284 (1912); H. Hara in J. Jap. Bot. 22: 168 (1948); Ohwi, Fl. Jap.: 703 (1953); ibid., rev. ed.: 820 (1965); ibid., eng. ed.: 579 (1984); H. Hara, Enum. Sperm. Jap. 3: 7 (1954); Honda, Nomina Pl. Jap., rev. ed.: 135 (1957); Kitam. & Murata, Col. Illust. Herb. Pl. Jap. (Choripetal.): 90 (1961); Sugim., Key Herb. Pl. Jap. Dicot: 300 (1965); ibid., rev. ed.: 300 (1978); Okuyama, Terasaki’s Illust. Fl. Jap., 2nd

ed.: 398, f. 1543 (1979); T. Shimizu in Satake & al., Wild Flow. Jap. Herb. 2: 219, t. 206, f. 2 (1982); Ohwi & Kitag., New Fl. Jap., rev. ed.: 926 (1992); Hosoi, List Wild Vasc. Pl. Aomori Pref.: 31 (1994); Akiyama in K. Iwats. & al., Fl. Jap. IIb: 289 (2001), ‘*pseudopalustre*'; Takita, Hokkaidō Shokubutsu Zufu [Illustrated Flora of Hokkaidō]: 523 (2001).

Geranium Miyabei Nakai in Bot. Mag. (Tokyo) 26: 264 (Sep. 1912), for *G. yesoense* var. *pseudo-pratense*; in Rigakkai 10(5): 20, f. 14 (Nov. 1912); Makino & Nemoto, Nippon=Shokubutsu=Sōran (Fl. Jap.): 687 (1925); ibid., 2nd ed.: 610 (1931); Nemoto, Nippon=Shokubutsu=Soran=Hoi (Fl. Jap., Suppl.): 404 (1936); Terasaki, Zoku Nihon Shokubutsu Zufu [Illust. Fl. Jap. 2]: f. 2983 (1938); Honda, Nomina Pl. Jap.: 183 (1939).

Specimens examined: JAPAN. Hokkaido, Hakodate (J. Matsumura s.n., 15 Aug. 1899, TI-lectotype, designated here). Ibid. (K. Saida 7564 & 32333, 11 Aug. 1906, TNS). Shiribeshi, Zenibako (Y. Tokubuchi s.n., 15 Sep. 1889, TI). ibid., sea coast (J. Matsumura s.n., 2 Aug. 1899, 3 sheets, TI).

Japanese name: Hama-fūro.

Distribution: S. Kuriles, Hokkaido, Northern Honshu (Tohoku Distr.).

We appreciate Prof. Hideki Takahashi, Hokkaido University Museum, for his courtesy of sending a copy of the original description and a digital image of specimen. We also thank Dr. Sachiko Nishida, Nagoya University Museum, and Dr. Koji Yonekura, Tohoku University, for their invaluable comments on the manuscript. We appreciate Dr. Shinobu Akiyama, National Science Museum of Nature and Science, Tokyo, for allowing us to examine the specimens. We would like to give sincere thanks to Dr. David E. Boufford, Harvard University Herbaria, for critically reading and checking the English. This study was partly supported by JSPS KAKENHI grant numbers 25440203 (to H.I.) and 24501268 (to A.S.).

References

Akiyama S. 2001. *Geraniaceae*. In: Iwatsuki K., Boufford

- D. E. and Ohba H. (eds.), *Flora of Japan IIb*: 287–293. Kodansha, Tokyo.
- Hara H. 1949. Notes on the Japanese species of *Geranium*. *J. Jap. Bot.* **22**: 165–172 (in Japanese with Latin descriptions for new taxa).
- Kitamura S. and Murata G. 1961. Coloured Illustrations of Herbaceous Plants of Japan (Choripetalae). 390 pp. Hoikusha, Osaka (in Japanese).
- McNeill J., Barrie F. R., Buck W. R., Demoulin V., Greuter W., Hawksworth D. L., Herendeen P. S., Knapp S., Marhold K., Prado J., van Reine W. F. P., Smith G. F., Wiersema J. H. and Turland N. J. 2012. International Code of Nomenclature for algae, fungi, and plants (Melbourne Code). Koeltz Scientific Books, Koenigstein.
- Miyabe K. and Tatewaki M. 1936. Contributions to the Flora of Northern Japan VIII. *Trans. Sapporo Nat. Hist. Soc.* **14**: 255–270.
- Mizushima M. 1954. *Geranium yesoense* Franch. et Sav. var. *nipponicum* Nakai f. *leucanthum* Mizushima. In: Hara H. and Mizushima M., “List of vascular plants of the Ozegahara Moor and its surrounding districts”, p. 445, in “Scientific Researches of the Ozegahara Moor”.
- Nakai T. 1909a. Aliquot Novae Plantae ex Asia Orientale. *Bot. Mag. (Tokyo)* **23**: 99–108.
- Nakai T. 1909b. Chūi-subeki 2, 3 shokubutsu narabini seigo. [On several noteworthy plants and errors]. *Bot. Mag. (Tokyo)* **23**: (441)–(446) (in Japanese).
- Nakai T. 1911. Notulae ad Plantas Japoniae et Coreae. *Bot. Mag. (Tokyo)* **25**: 52–64.
- Nakai T. 1912. Notulae ad plantas Japoniae et Coreae VII. *Bot. Mag. (Tokyo)* **26**: 251–266.
- Ohwi J. 1953. *Flora of Japan*. 1383 pp. Shibundo, Tokyo (in Japanese).
- Ohwi J. 1965. *Flora of Japan*, revised edition. 1560 pp. Shibundo, Tokyo (in Japanese).
- Ohwi J. 1984. *Flora of Japan*, English edition 1067 pp. Smithsonian Institution, Washington DC.
- Shimizu T. 1982. *Geraniaceae*. In: Satake Y., Ohwi J., Kitamura S., Watari S. and Tominari T. (eds.), *Wild Flowers of Japan, Herbaceous Plants 2*: 217–221. Heibonsha, Tokyo (in Japanese).
- Takeda H. 1910. Beiträge zur Kenntnis der Flora von Hokkaido. *Bot. Mag. (Tokyo)* **24**: 253–261.

池田 博^a, 清水晶子^a, C. Aedo^b: ハマフウロ (フウソウ科) の学名とタイプ選定

ハマフウロは海岸近くの草地に生えるフウソウ科の多年草で、北海道から本州北部（東北地方）にかけて分布する。ハマフウロは通常エゾフウロ *Geranium yesoense* Franch. & Sav. の変種として扱われ、多くの図鑑では var. *pseudopalustre* Nakai が用いられる。

ハマフウロを最初に記載したのは中井猛之進で、1909年5月発行の「植物学雑誌」上において、学名を *G. yesoense* var. *pseudo-pratense* Nakai とした。しかし、その後の10月発行の同誌において、中井は var. *pseudo-pratense* を var. *pseudo-palustre* と訂正している。おそらく中井はハマフウロに対して「*G. palustre* L. に似た」という意味で “*pseudo-palustre*” と付けるつもりでいたが、手違いで “*pseudo-pratense*” としてしまったものと考えられる。しかしながら、「国際藻類・菌類・植物命名規約（メルボルン規約）2012」の51条1項には、「合法名は、その学名や形容語がふさわしくないとか気に入らない、それよりも別の学名の方が好ましいとかよく知られている、その学名が本来の意味を失ってしまった、というだけの理由によって廃棄してはならない」（大橋ほか訳 2014）である。*Geranium yesoense* var. *pseudopratense* は有効に発表されている以上、この学名を “var. *pseudopalustre*” に訂正することはできない。したがってハマフウロをエゾフウロの変種として扱う場合は、var. *pseudopratense* を用いるのが正しい。

ハマフウロのタイプ標本に関しては、var. *pseudopratense* の発表時には標本の引用がないことから、中井が発表時に用いたと考えられる原資料 (original material) を検討する必要がある。東京大学植物標本室 (TI) に収蔵されている標本を確認したが、明らかに中井が var. *pseudopratense* と指示している標本を見つけることはできなかった。一方、中井は後にハマフウロを独立種と考え、1912年に植物学雑誌においてハマフウロを *G. Miyabei* Nakai として7点の標本とともに発表した。その際に *G. yesoense* var. *pseudopalustre* (var. *pseudopratense*) を同時に挙げていることから、*G. miyabei* は *G. yesoense* var. *pseudopratense* に対する置換名と考えられる。したがって、中井が *G. miyabei* を記載する際に挙げた標本の中で、1909年5月以前に採集されたものが *G. yesoense* var. *pseudopratense* の記載の際にも用いられたと考えるのが合理的である。TI および TNS には *G. miyabei* の記載の際に中井が引用したと考えられる標本が7枚あった。これら全ては1909年5月以前に採集されたものであり、原資料と考えられる。その中から、松村任三が1899年に函館で採集した標本 (J. Matsumura s.n., 15 Aug. 1899, TI) を選定基準標本 (lectotype) に指定する。

^a東京大学総合研究博物館,

^bスペイン・Real Jardín Botánico)