

A NOTE ON ISOPYRUM ANEMONOIDES KAR. & KIR.

M. TAMURA* AND L. A. LAUENER

Isopyrum anemonoides Kar. & Kir. in Bull. Soc. Nat. Mosc. 15: 135 (1842); Maxim., Fl. Tangut. 1: 19, t. 8, f. 8 (1889); S. S. Ikonnikov in Trudy Pamir Biol. Sta. Bot. Inst. Tadzhik SSR, 20: 113 (1963); W. T. Wang & Hsiao in Acta Phytotax. Sin. 9: 321 (1964) excl. syn. *Isopyrum uniflorum* Aitch. & Hemsl., *Paraquilegia uniflora* (Aitch. & Hemsl.) Drumm. & Hutch. and "*Paraquilegia anemonoides* (Kar. & Kir.) Ulbr."

Syn.: *Paraquilegia anemonoides* (Kar. & Kir.) N. Schipcz. in Not. Syst. Bot. Petrop. 5: no. 4, 53 (1924)—non (Willd.) Ulbr. 1922 & 1925; Tamura in Kitamura, Fl. Afghan. 129 (1960); Gamajunova in Pavlov, Fl. Kazakhst. 4: 23, t. 2, f. 3 (1961) as *P. anemonoides* (Kar. & Kir.) Ulbr. & excl. syn. *Paraquilegia uniflora*.

Paropyrum anemonoides (Kar. & Kir.) Ulbr. in Notizbl. Bot. Gart. Berl. 9: 218 (1925).

Paraquilegia kareliniana Nevski in Trudy Bot. Inst. Akad. Nauk SSSR., ser. 1, fasc. 4, 295 (1937) et in Fl. Turkmen. 3: 93 (1948).

Paraquilegia afghanica Rech. f. in Anz. Österr. Akad. Wiss. Math.-Nat. 91: 72 (1954) syn. nov.

KAZAKHSTAN SSR. In fissuris rupium regionis subalpinae et alpinae Alatau ad fontes fl. Lepsa et Sarchan haud frequens, *Karelin & Kirilloff* 1162 (iso. *Isopyrum anemonoides*, K); Semirechensk District, 7 vi 1924, *N. D. Socalski* 258 (E); Turkestan, Uschchavi Alaisfit, Mts. Aleksandrovski, v 1880, *Fetissov* s.n. (TI).

AFGHANISTAN. Minjan Pass, 3960 m, on earth, clumps, flower white tinged rose, yellow scales, rare, 27 vii 1937, *Koelz* 12740 (holo. *Paraquilegia afghanica* W, iso—E); Kabul, Unai, Kuh-i-Qhalandaran, 3700 m, stony limestone slopes, foliage bluish green, flowers white outside greyish violet, nectaries orange, filaments and anthers yellow, 24 vi 1962, *Hedge & Wendelbo* W. 4491 (E); Parvan, Panjshir Valley, 3900 m, west side of Anjuman pass, loose habit on scree, flower white outside, violet blue inside, 22 vii 1962, *Hedge & Wendelbo* W. 5416 (E).

INDIA. Jammu & Kashmir, 3350–3660 m, above Dras, 25 viii 1894, *J. F. Duthie* 13788 (E). Himachal Pradesh, Chamba, on the way to the Kukti pass, 3660 m, 10 vi 1879, *Watt* 3171 (E).

CHINA. Kansu, shady rocks and ledges of Wolvesden (Lang Shih Tang), 2740–3666 m, *Farrer & Purdom* 610 (E). Rock clefts in the Wolvesden valley, 3050–3350 m, *Farrer & Purdom* 558 (E).

The purpose of this note is to clear up the nomenclatural confusion of *Isopyrum anemonoides* and to extend its synonymy.

Two separate and different taxa have been involved in this confusion, *Isopyrum anemonoides* Kar. & Kir. (1842) and *Aquilegia anemonoides* Willd. (1811).†

In their paper entitled "A revision of *Isopyrum* and its Nearer Allies"

* Osaka University, Japan.

† In Mag. Ges. Naturf. Fr. 5: 401, t. 9, = *Paraquilegia anemonoides* (Willd.) Ulbr.

Drummond and Hutchinson raised a new genus, *Paraquilegia*, consisting of four species. They united *Isopyrum uniflorum* Aitch. & Hemsl. (1875) and *I. anemonoides* Kar. & Kir. (1842) under the new combination *Paraquilegia uniflora*.

Four years later in 1924, Schipczinsky pointed out that "anemonoides" was the older name and published the combination *P. anemonoides* (Kar. & Kir.) N. Schipcz. He was obviously unaware that in 1922, two years earlier, Ulbrich (Feddes Rep. Beih. 12: 369) had used this combination when correcting Drummond & Hutchinson's *P. grandiflora* (Fisch. ex DC.) Drumm. & Hutch. to *P. anemonoides* (Willd.) Ulbr.

In a further paper in 1925 Ulbrich explained that *Isopyrum uniflorum* and *I. anemonoides* were not in fact synonymous (with which the present authors concur) and that *Paraquilegia uniflora* should refer only to Aitchison and Hemsley's new species. For *I. anemonoides* Kar. & Kir., Ulbrich created the new genus *Paropyrum* to accommodate *Paropyrum anemonoides* (Kar. & Kir.) Ulbr. giving at the same time, his reasons for separating *Paropyrum* and *Paraquilegia*. *Paropyrum* is now regarded by Wang & Hsiao (1964), and by us, as a Section of *Isopyrum*.

In a paper on the Flora of Kuhitang (1937), Nevski published the "new combination" *Paraquilegia kareliniana* (Drumm.) Nevski. Drummond's name, however, was unpublished and provided no basis for a new combination, although *P. kareliniana* Nevski was valid as a new name for *P. anemonoides* (Kar. & Kir.) N. Schipcz.—non (Willd.) Ulbr. Nevski included *I. anemonoides* Kar. & Kir. and *Paraquilegia anemonoides* (Kar. & Kir.) N. Schipcz. in synonymy, but made no mention of *Paropyrum*.

There remains but one other synonym to be considered, *P. afghanica* Rech. f., and there appears to be no difference between this species and *Isopyrum anemonoides* other than that of size. The plants and leaves of the Afghanistan collections are smaller than those from further east. Nevertheless, the Kansu collection of Farrer & Purdom 558 consists of both large and small specimens and as all the collections seen have flowers of the same size, and there are no other morphological differences, there seems to be no justification for maintaining *P. afghanica* as a separate species.

The specimens cited above have all been examined and their localities give some idea of the distribution. Nevski (1948) gives the distribution as S. Altai, montane Central Asia (except Kopet Dag and low arid ridges); Ikonnikov (1963) as Pamir Alai, Tien Shan, Dzhungarskiy Alatau, Iran, Dzungaria, Kashgarh, Tibet and Himalaya; Gamajunova (1961) as Central Asia, Iran, Himalaya, W China and Tibet. We have not seen specimens from Iran or Tibet, but accepting these areas, the species has an exceptionally wide distribution from Iran through Afghanistan, north to Tadzhikistan, Kazakhstan and Sinkiang and eastwards to Kashmir, Tibet, Chinghai and Kansu.