

Notulae Crassulacearum Asiae Orientalis (2)

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アジア産ベンケイソウ科植物の分類覚書 (2)

大場秀章

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4) *Hylotelephium tsugaruense* (Hara) H. Ohba is regarded as a variety of *H. ussuriense* (Komarov) H. Ohba. 5) The type of *Rhodiola komarovii* Boriss. falls in the variation range of *R. angusta* Nakai. The distribution pattern is discussed. 6) *Sedum kurilense* Vorosch. is conspecific with *S. kamtschaticum* Fischer.

I have had opportunities to examine the specimens preserved in the Komarov Institute, St. Petersburg, and realized many taxonomic and nomenclatorial problems. In this note I will comment upon three species treated in Komarov's Flora URSS, and discuss a distribution pattern of *Hylotelephium ussuriense* and *Rhodiola angusta*.

4) *Hylotelephium ussuriense* (Komarov) H. Ohba

Hylotelephium ussuriense was collected by Komarov at a valley of Suchan River which joins Peter the Great Bay, Far East of Russia. Borissova (1939) classified this in the genus *Sedum* the series Fasciculatae (in the sect. *Telephium*) with *H. pallescens*, *H. eupatorioides*, and *H. erythrocticum*. I transferred this to the genus *Hylotelephium* (Ohba 1977), and left all the series *Hylotelephium* (in the sect. *Hylotelephium*) (Ohba 1978).

Examined the authentic specimens (Fig. 1 and 2) I have awaked to the fact that *H. ussuriense* is

related to *H. tsugaruense*.

Hylotelephium ussuriense varies in the height of flowering stems and the shape, size and serration of leaves, and differs from *H. tsugaruense* only in having always opposite leaves. Both species share the most of conspicuous floral characters such as having exerted stamens with red-purple anthers and stipitate ovaries with slender styles, and the semi-globose inflorescences. The petals are slightly longer in *H. tsugaruense* than *H. ussuriense*, but the ranges seems to overlap.

From these the two are considered to be conspecific and separated into two geographical varieties.

Hylotelephium* [Ser. *Sieboldia*] *ussuriense (Komarov) H. Ohba in Bot. Mag. Tokyo **90**: 54 (1977); in J. Fac. Sci. Univ. Tokyo, Bot. **12**: 164 (1978).

Sedum ussuriense Komarov in Bull. Jard. Bot.

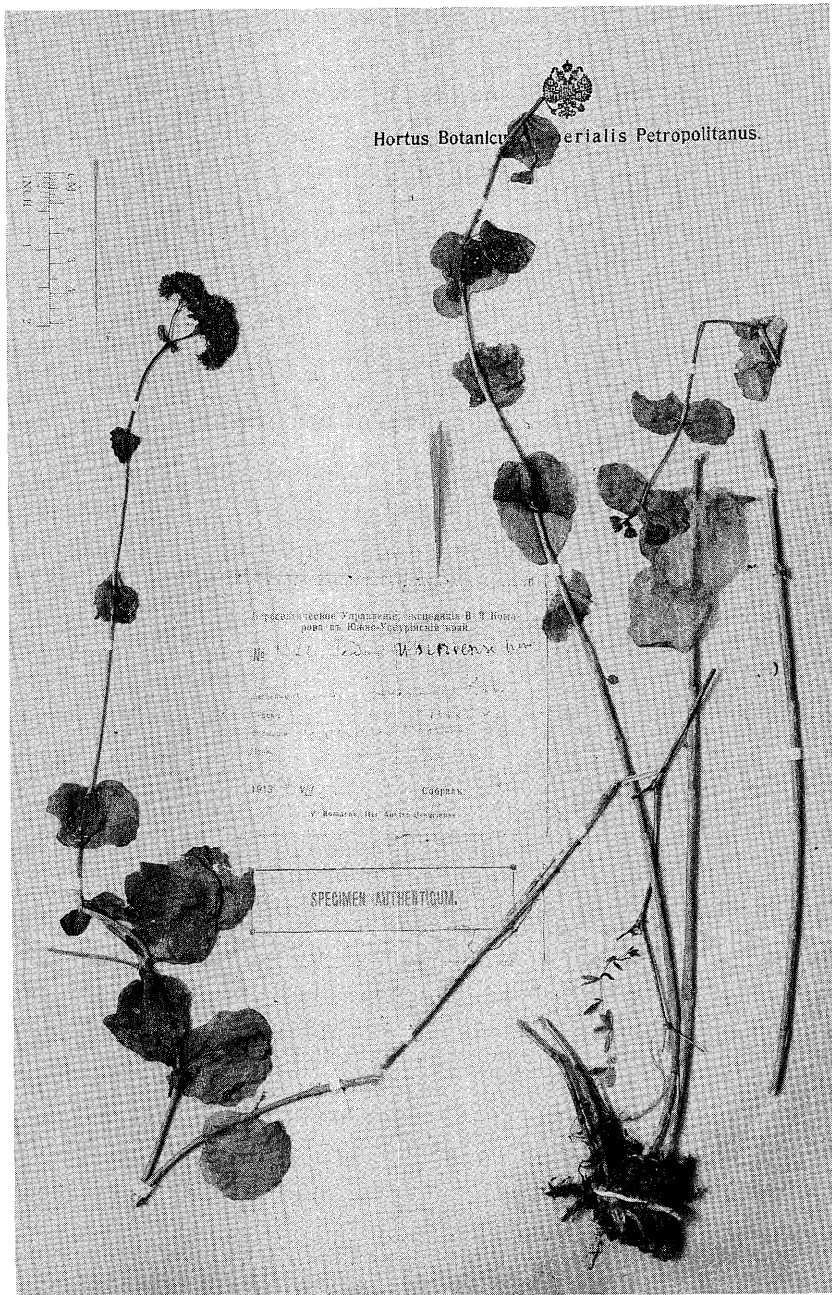


Fig. 1. *Hylotelephium ussuriense* (Lectotype of *Sedum ussuriense* Komarov).

St. Petersburg. **16**: 170 (1916) – Boriss. in Komarov, *FL. URSS* **9**: 61 (1939).

Lectotype: Russia. Far East: Peter the Great Bay, Suchan River (Komarov 1221 on 30 August

1913, LE [Fig. 1]; two isotypes in LE [Fig. 2]).

Distr. Peter the Great Bay (Suchan River valley), Far East of Russia (Fig. 3).

var. *tsugaruense* (Hara) H. Ohba, stat. nov.

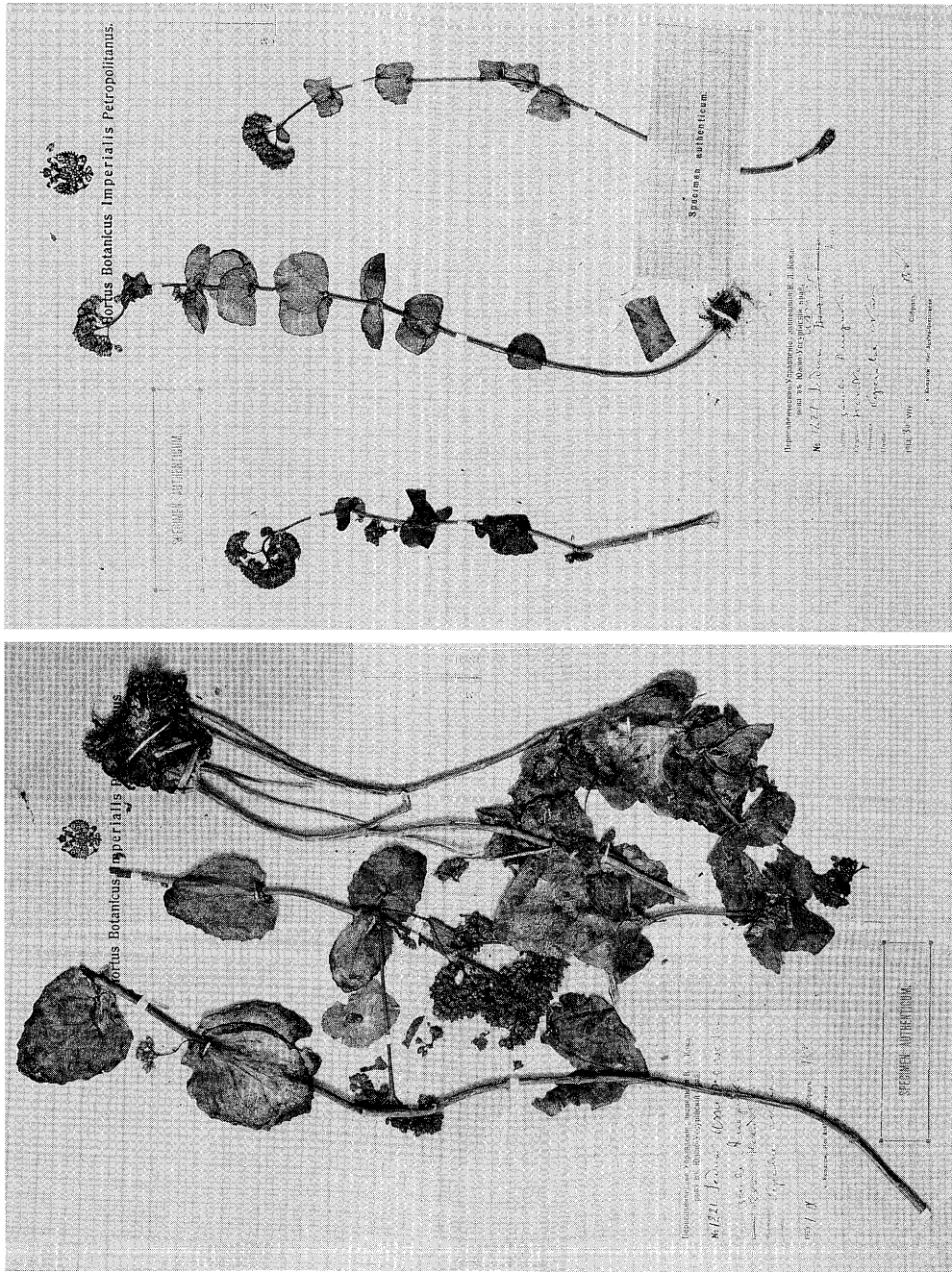


Fig. 2. *Hylotelephium ussuriense* (Isotypes of *Sedum ussuriense* Komarov).

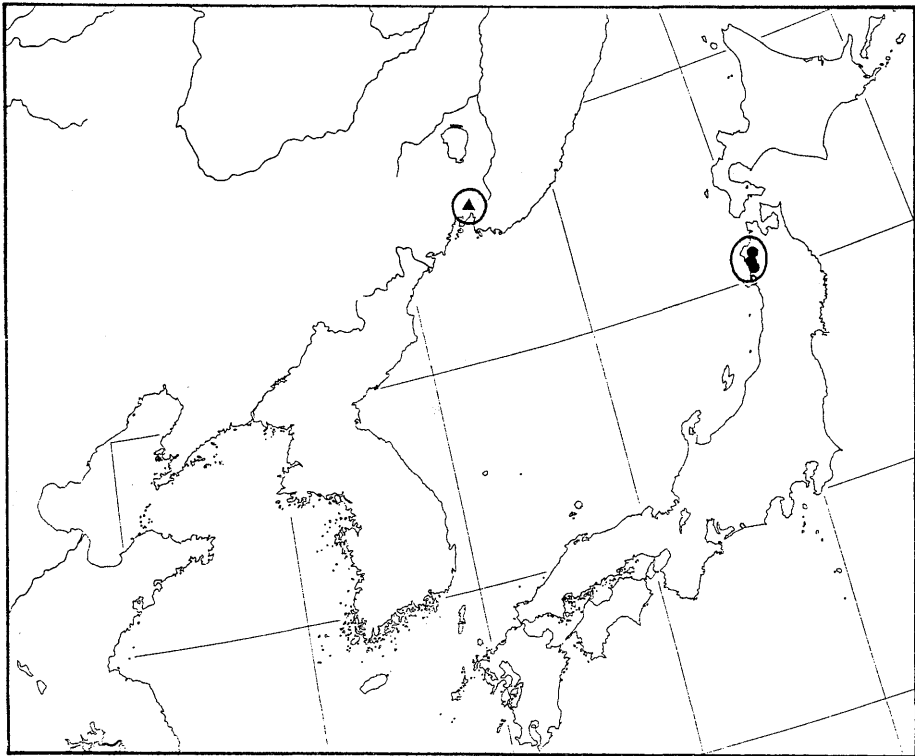


Fig. 3. Distribution of *Hylotelephium ussuriense*. Var. *ussuriense* (▲) and var. *tsugaruense* (●).

Sedum tsugaruense Hara in J. Jap. Bot. **32**: 376 (1957).

Hylotelephium tsugaruense (Hara) H. Ohba in Bot. Mag. Tokyo **90**: 54 (1978); in Satake et al., Wild Flow. Jap. Herb. **2**: 151, pl. 143-2 (1982).

Distr. The Japan sea side of northern Honshu (Akita and Aomori Pref.) (Fig. 3).

5) The identity of *Rhodiola komarovii* Boriss.

Borissova (1939) described *Rhodiola komarovii* based on two specimens collected by Schischin in 1921 at Khualaza volcano, Suchan district, Far East of Russia. Komarov and Alissova-Klobukova (1931) recorded *Sedum polytrichoides* Hemsl. from the Far Eastern region of URSS based on these specimens. Borissova (1939) realized that this is a species of *Rhodiola*, and distinguished from *R. crassipes* [= *R. wallichiana*] by the larger, robust rhizome, the small, linear leaves with margins

entire or nearly so, and the few-flowered inflorescence.

Fu (1980, 1984) reduced *R. komarovii* into the synonym of *R. angusta* Nakai, and reported the occurrence in Shangzhi Prefecture, Heilongjiang Province, NE China.

Recently I have examined the type specimens. These consist of a small dioecious, perennial plant with a massive rhizome, of which at the apex several flowering stems are probably fastigiate. The flowering stems 8–10 cm long with linear-oblongate or linear leaves evenly distributed throughout.

This is identical with *Sedum fenzelii* Fröd., which has been regarded as the synonym of *R. angusta* since Nakai (1938). The slender, around 8 mm long pistils, the little longer follicles and the narrowly lanceolate-elliptic, about 5 mm long

petals particularly attribute *R. komarovii* to *R. angusta*.

Rhodiola angusta, ranging North Korea and NE China to Suchan district east of Vladivostok, is presumed the vicariant of *R. ishidae* (Miyabe et Kudo) Hara from northern Honshu, Hokkaido, and S. Kuriles (Fig. 4).

The pattern in which the vicarious taxa are distributed in the east and the west side of Japan sea is similar to those of *Hylotelephium ussuriense*. There are considerable number of species distributed in the region from Far East of Russia to northern Japan through NE China (Manchuria) and Korea.

The pattern represented by these was named Koreano-Manchurian element by Koidzumi (1931). Hotta (1974) regarded these presence in Japan as remnant spread during the Ulm glacier age. The

two species might be thought as Koreano-Manchurian-element from their distribution.

The close species of *Rhodiola angusta* and *R. ishidae* is *R. alsia* and *R. cretinii* distributed from east Himalaya to SW China. It is *Hylotelephium sieboldii* for *H. ussuriense*.

Kanai (1963) distinguished two types in Japano-Himalayan distribution depending on the presence (type II) or absence (type I) in Korea. The pattern of *Clintonia udensis*, one of the representative species of his type II, is quite suggestive for considering the formation of patterns of the two cases of Sedoideae. These are favourable to be regarded as Sino-Japanese (including Japano-Himalayan) element.

Rhodiola angusta Nakai in Bot. Mag. Tokyo 28:304 (1914); in J. Jap. Bot. 14: 503 (1938) – H. Ohba in J. Fac. Sci. Univ. Tokyo, Bot. 13: 110

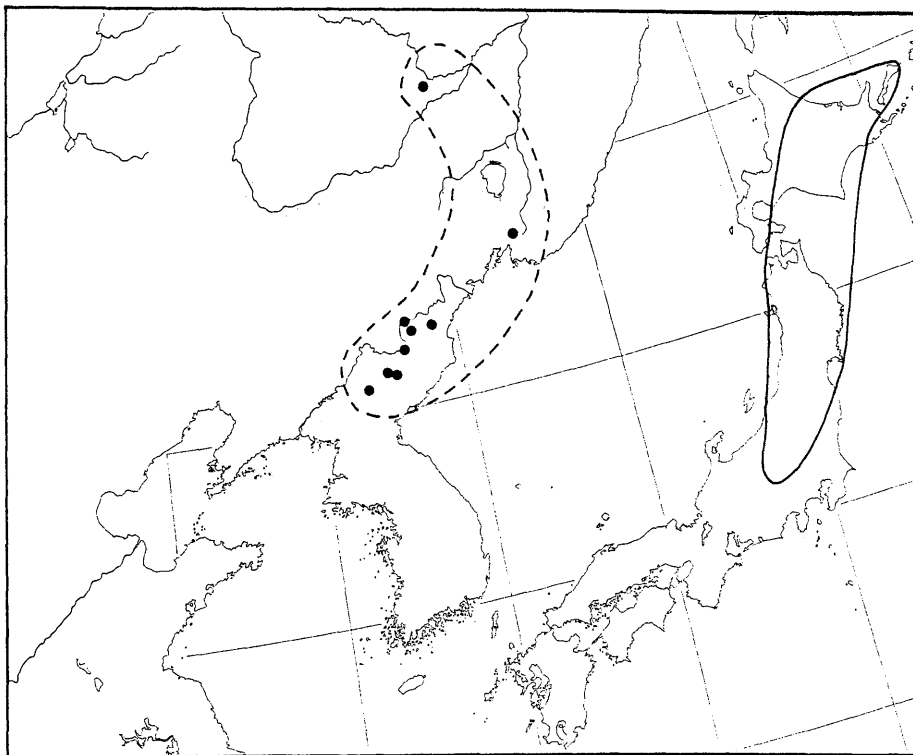


Fig. 4. Distribution of *Rhodiola angusta* (●, broken line) and *R. ishidae* (solid line).

(1981); S.H. Fu in T. N. Liou, Fl. Pl. Herb. Chin. Bor.-Orient. **4**: 177 (1980); in Fl. Reip. Pop. Sin. **34**: 182 (1984).

Sedum polytrichoides (non Hemsl.) Komarov et Alis., Key Pl. Far East **1**: 601 (1931).

Sedum fenzelii Fröd. in Acta Hort. Gothob. **10**: append. 156 (1935).

Rhodiola komarovii Boriss. in Komarov, Fl. URSS **9**: 38, 362 (1939).

Sedum komarovii (Boriss.) T.N. Liou, Claves Pl. Chin. Bor.-Orient. 124 (1959)

Sedum ohbae Kozhev. in Bot. Zhurn. **74**: 543 (1989).

Examined specimens. URSS. Oriens Extremus:



Fig. 5. *Sedum kurilense* Vorosch. (Voroschilov no. 10255).

Suchan District, Khualaza Volcano (Schischin no. 1823 on 9 June 1921, male, type of *R. komarovii*, LE; no. 1824 on 5 July 1921, female, LE).

6) *Sedum kurilense* Vorosch.

Voroschilov (1965) described *Sedum kurilense* from Kunashiri Island. *Sedum kurilense* (Fig. 5) agrees well with the coastal form of *S. kamtschaticum* Fischer in Hokkaido, and can not be separated from that species, which is distributed in Hokkaido, the Kuriles and Kanchatka, and varies greatly in the shape and size of leaves and the length and posture of flowering stems.

Sedum kamtschaticum Fischer in Index Sem. Hort. Petropol. 7: 54 (1840) – Borissova. in Komarov, Fl. URSS 9: 69 (1939), excl. pl. ussuriensi et sakhaliensi.

Sedum kurilense vorosch. in Bull. Princ. Bot. Gard. Acad. Sci. URSS, No. 60, 39 (19650, syn. nov.

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References

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- Koidzumi G. 1931. Foreword. In Mayebaru K., Florula Austro-Higoensis. Hitoyoshi (in Japanese).

要 旨

1992年は2度セント・ペテルブルクのコマロフ植物研究所を訪問する機会があった。ロシアのベンケイソウ科植物はBorissova女史によりよく研究されたが、問題も残っている。今回取り上げた種は環日本海型ともいえる分布をもつ、ウスリーミセバヤとツガルミセバヤ、ヒメイワベンケイとホソバナイワベンケイ、についてその分類上の問題点を指摘し、地理分布についてコメントした。さらに、*Sedum kurilense* Vorosch.がエゾノキリンソウと区別できないことを指摘した。