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Hiroshi HARA*: **Critical notes on some type specimens of
East-Asiatic plants in foreign herbaria (6)**

原 寬*: 欧米にある東亞植物基準標本の検討 (6)

16) **Ranunculus ternatus** Thunb. and **R. Vernyi** Franch. et Sav. *Ranunculus ternatus* has been used for three different species by different authors, and its application has not hitherto been fixed. Last year Ohwi again discussed the problem in this Journal 29: 365-369, and considered that *R. ternatus* is an ambiguous name, and that *R. extorris* Hance and *R. hakkodensis* Nakai should be adopted. However, I cannot agree with the Ohwi's opinion in the following points.

Even if we admit that Thunberg's original description of *R. ternatus* in 1784 is simple and incomplete and does not precisely agree with any species, we can typify it without much difficulties by his later interpretation. In 1824 Thunberg himself illustrated his *R. ternatus* in Pl. Jap. Nov. Sp. 8 cum tab., and the specimen which exactly coincides with his illustration is now extant in the Thunberg's herbarium at Uppsala. This specimen is the only one in his herbarium so named by Thunberg, and it should properly be chosen as the lectotype of *R. ternatus*, as already pointed out by Hand.-Maz. in 1939, according to Appendix I, Determination of types in the International Code of Botanical Nomenclature. The Thunberg's specimen as well as his illustration is apparently the same as *R. extorris* Hance in Ohwi's sense. There seems to be no reason why the specimen of *R. ternatus* in the Thunberg's herbarium should not be considered as the type, and why the name *R. ternatus* Thunb. should be rejected as a doubtful name as Ohwi did.

Unfortunately *R. ternatus* Thunb. was misapplied by DC. (1820 & 24) to a different plant, but as Ohwi in 1954 clearly pointed out, the specimen in the

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Delessert herbarium at Genève illustrated in Delessert, Icon. Select. Pl. 1: t. 25 (1820) cannot be the type of Thunberg's *R. ternatus*. Thus *R. ternatus* Thunb. which is typified by the specimen in the Thunberg's herbarium should be the correct name for the plant which is the same as *R. extorris* and *R. Zuccarini*.

Ranunculus ternatus was also used by mistake for another plants belonging to the group of *R. cantoniensis*, *R. Vernyi*, etc. They are common and variable weeds in Japan, and their taxonomy and nomenclature have been much confused. Recently Japanese taxonomists seem to agree with the Makino's view (1931) that there are two distinct species. One is a weed (2n=32) common in rice fields, having stems and petioles densely pubescent with patent hairs, and mature achenes ridged both on upper and lower sides, and shorter almost straight beaks. The other is a less hairy plant (2n=16) which is found also in montane districts, having achenes obscurely ridged near the upper edge only, and distinctly hooked longer beaks. For the former which is widely distributed south to China and Indo-China, the correct name is *Ranunculus cantoniensis* DC. (1824) as pointed out by Handel-Mazzetti. The latter has a little more northern range, and occurs only in the Japanese Archipelago, Korea, and north China. For that plant Koidzumi and Nakai used *R. Vernyi* Fr. et Sav., and I adopted in 1942 *R. quelpaertensis* (Lév.) Nakai (1913) and Ohwi in 1954 *R. hakkodensis* Nakai (1912).

The holotype of *R. Vernyi* Franch et Sav. (1873), 'Yokoska (Savatier no. 23)' in Mus. Nat. Hist. Paris, clearly belongs to this species, Franchet, however, has never supplied the description to that species, for he soon (1877) reduced it to *R. ternatus* Th. which he used in a wide sense including also the specimens of *R. cantoniensis* collected by Savatier near Yokoska and Tokyo.

Although Ohwi and Okuyama regarded *R. Vernyi* as a variety of *R. hakkodensis*, they belong, in my opinion, to different species. I have carefully observed *R. hakkodensis* Nakai in the living material for these three years. As compared with a common form of *R. Vernyi*, *R. hakkodensis* is a tender herb which occurs in subalpine wet places in northern Honshu, and its stems soon become procumbent and always produce new plants from the upper axils, its terminal leaflets are broad obovate (never acutish) with a very short petiolule (generally 1-3 mm long), the number of pistils in a flower is fewer, its styles are slender and almost straight when young, and its achenes have a long slender beak thin at the base. Whereas in *R. Vernyi*, its leaflets often become acutish and have always long petiolules (5-20 mm long), and its numerous pistils are congested in a globose head. Terminal leaflets

of well grown lower leaves of *R. Vernyi* attain 5-7 cm long with petiolules 10-35 mm long, while those of similar leaves of *R. hakkodensis* attaining 5-7 cm long have petiolules only 5-8 mm long. And it was proved by Miss S. Kurosawa that *R. hakkodensis* from Mt. Hakkoda has the same chromosomes as *R. Vernyi* in number and also karyotype.

I consider that *R. quelpaertensis* Nakai is the correct name for *R. Vernyi* as I did in 1942, and *R. hakkodensis* Nakai is an independent species.

Ranunculus ternatus Thunb., Fl. Jap. 241 (1784); Pl. Jap. Nov. Sp. 8 cum tab. (1824)—Koidzumi in Bot. Mag. Tokyo **39**: 314 (1925)—Hand.-Mazz. in Act. Hort. Gotob. **13**: 167 (1939).

R. extorris Hance (1866)—Ohwi in Journ. Jap. Bot. **29**: 368 (1954). *R. Zuccarinii* Miq. (1867)—Nakai in Bot. Mag. Tokyo **42**: 22 (1928). *R. coreanus* Lévl. (1909). *R. Taquetii* Lévl. (1911). *R. leiocladus* Hayata (1913). *R. lutchuensis* Nakai (1928). *R. formosanus* Masamune (1930).

Lectotype. Japonia in Herb. Thunb., Univ. Uppsala.

Ranunculus quelpaertensis (Lévl.) Nakai (1913)—Hara in Journ. Jap. Bot. **18**: 459 (1942). *R. Vernyi* Franch. et Sav. (1873), nom. nud.—Koidzumi (1925 & 30)—Nakai (1928). *R. glaber* (Lévl.) Makino (1931). *R. ternatus* var. *quelpaertensis* (Lévl.) Ohwi, Fl. Jap. 526 (1953), in Bull. Sci. Mus. Tokyo **33**: 72 (1953). *R. hakkodensis* var. *quelpaertensis* (Lévl.) et var. *glaber* (Boiss.) Ohwi et Okuyama in Journ. Jap. Bot. **29**: 368 (1954).

For further detailed synonymy and literature, confer Hara in Journ. Jap. Bot. **18**: 459 (1942).

Ranunculus hakkodensis Nakai in Bot. Mag. Tokyo **26**: 324 (1912).

Type. Honshu. Prov. Mutsu: in marshy places, Okawame, Mt. Hakkoda (H. Koriba, Aug. 1912 in Herb. TI).

17) **Primula Reinii** Franch. et Sav. This lovely primrose of Japan is growing confined to rocky cliffs on several mountains of central Honshu (Fig. 5). Its type specimen at Paris is said to have been collected on Mt. Haksan in prov. Kaga by Rein, but it was undoubtedly mislabelled, for this plant has never been found there by other collectors. Most probably Rein collected it on Mt. Hakone in prov. Sagami where is the only locality of the species visited by him. As the type specimen is a good match with specimens collected on Mt. Hakone, I presume that the type locality of *P. Reinii* is Mt. Hakone. *P. Reinii* has shallowly 5-9-lobed reniform or round leaves (Fig. 4. d, e) with often coarsely 3-toothed lobes which are softly pubescent with multicellular hairs at least when young, corolla-tubes (8-13 mm long) slightly longer than or almost twice as long as the calyx (5-8.5 mm long), and capsules slightly longer than the calyx to nearly twice as long.

The species is pretty variable in the size of all parts, the shape of calyx-lobes and corolla-lobes, and the colour of flowers. I have cultivated and observed various races of *P. Reinii* and its allies side by side in Tokyo, and came to the following

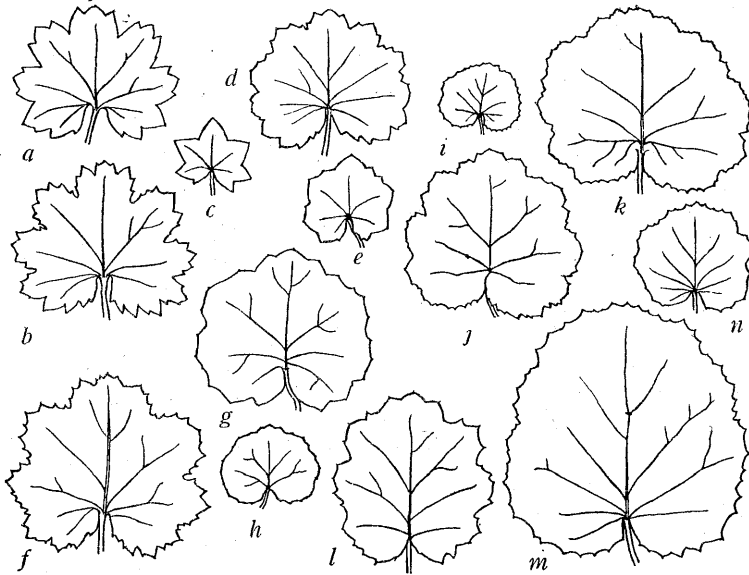


Fig. 4. Leaves of *Primula Reinii* and its allied species. a, b, c. *P. kitadakensis*. d, e, f. *P. Reinii* (f. from Mt. Omine). g, h. var. *myogiensis*. i, j, k. *P. rhodotricha*. l, m, n. *P. tosaensis* var. *brachycarpa*. $\times 10/17$.

conclusions. The plants from Mt. Hakone have often thick and short corolla-tubes, and short calyx-lobes obtuse and mucronate at the tip. Some from Mt. Tanzawa have leaves appressed hairy above when young, more acute calyx-lobes, and longer corolla-tubes. The specimen from Is. Mikurajima first found by T. Tuyama in 1952, is apparently the same as those from Mt. Hakone. The plants from Mt. Ōmine in prov. Yamato have often more sharply serrated leaves, and shorter capsules, but some individuals can hardly be discriminated from those of Mt. Hakone. One may call this race as *P. Reinii* var. *Okamotoi* (Koidzumi).

Primula tosaensis Yatabe of south-western Japan is allied to *P. Reinii*, but its typical form is easily separated from the latter in more robust habit, larger broadly ovate to roundish obscurely repand-lobed leaves which are minutely denticulated on the margin, and which are glabrous above from the first (often pulverulent but not

hairy), elongate corolla-tubes (15-18 mm) 2.5-3 times longer than the calyx which is 6-7 mm long with lanceolate acute lobes, and capsules (1-2.5 cm long) also 1.7-2.5 times longer than the calyx. However, the plants in the north-eastern part of the area of *P. tosaensis* approach *P. Reinii* in small size, roundish leaves, smaller calyces ((4) 5-6 mm), shorter corolla-tubes ((8) 10-12 mm) about twice as long as the calyx, and also shorter capsules (6-12 mm) equal to or twice as long as the calyx. But this plant is still distinguished from *P. Reinii* in its leaves which tend to be ovate with minute denticulation and which are glabrous from the first, and it is properly regarded as a northern race of *P. tosaensis* and is called var. *brachycarpa* (Hara) Ohwi. Some individuals have dark purplish leaves, peduncles, pedicels, and calyces.

The plant of Mt. Myogi which is the northernmost locality of this group shows somewhat intermediate characters between *P. Reinii* and *P. tosaensis* var. *brachycarpa*. Its leaves are similar to those of *P. Reinii* but its leaf-lobes are more obscure, and its corolla-tubes (9-12 mm long) are twice as long as the calyx (4-5 mm long). The characters of leaves, however, which are broader and coarsely few-toothed and are softly pubescent above when young, show a closer affinity to *P.*

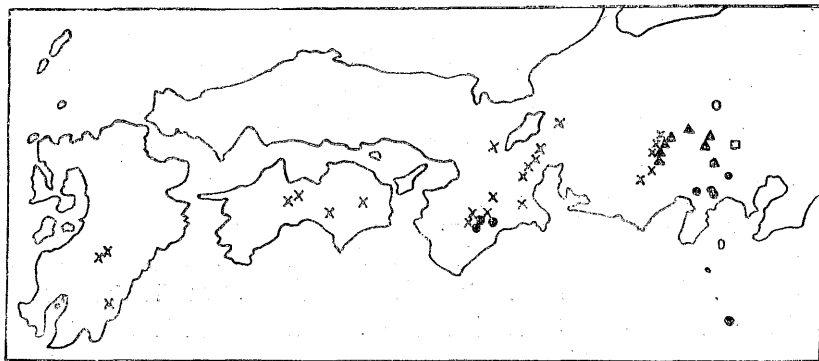


Fig. 5. Distributions of *Primula Reinii* and its allied species. Solid Dots: *P. Reinii*. Circle: var. *myogiensis*. Square: *P. rhodotricha*. Solid triangles: *P. kitadakensis*. Crosses: *P. tosaensis*.

Reinii than to *P. tosaensis*, and I consider that the plant is evidently a race of *P. Reinii* which is here described as var. *myogiensis*.

Primula kitadakensis Hara (*P. Hisauchii* Miyabe et Tatewaki) is also closely related to *P. Reinii*, but it has thin leaves with more deeply lobed (to 1/3-1/2) leaves and grows at the higher elevation (1300-2800 m high). It can be considered as a

geographical variety of *P. Reinii*, as Ohwi did.

Primula rhodotricha Nakai et F. Mackawa from Mt. Bukô is another puzzling race of this group. In having elongate corolla-tubes (13–18 mm long) more than twice longer than the calyx (5–8 mm long), and obscurely lobed leaves with small mucronate teeth, it comes near to *P. tosaensis*, but its leaves are more roundish (not ovate) and pubescent above when young as in *P. Reinii*. It also differs from both species in having dark reddish hairs on petioles and peduncles, and more deeply cleft calyces with lanceolate acute lobes (3.5–5 mm long). Its flowers attaining 3.5 cm in diameter are large for the size of plant. This plant shows intermediate characters between *P. Reinii* var. *myogiensis* and *P. tosaensis* var. *brachycarpa*. It may be regarded as an independent species, or in my opinion, as a variety of *P. Reinii* rather than that of *P. tosaensis*.

Primula Reinii Franch. et Sav., Enum. Pl. Jap. 2: 428 (1877)—Smith et Fletcher in Trans. Roy. Soc. Edinb. 61 (2): 439 (1946)—Hara, Enum. Sperm. Jap. 1: 94 (1949)—Ohwi, Fl. Jap. 925 (1953). *P. Okamotoi* Koidzumi (1923). *P. hakenensis* Nakai (1950).

Type. Honshu. Prov. Kaga: Mt. Haksan (Rein, fl.; Savatier no. 2911 in Herb. P). Probably collected on Mt. Hakone.

var. **myogiensis** Hara, var. nov. (Fig. 4. g, h)

Planta gracilis. Folia rotundata vel reniforme rotundata 1.5–5 cm in diametro primo parce albo-pubescentia leviter 7-lobata, lobis depresso rotundatis obscure pauci-dentatis. Calices 4–5 mm longi fere ad medium 5-lobati, lobis lanceolatis subacutis. Corollae 1.8–2.5 cm in diametro, tubi 9–11 mm longi calyce subduplo longiores. Capsula calyce subduplo longiora.

Type. Honshu. Prov. Kodzuke: Mt. Myogi (K. Sato, May 14, 1954, fl. in Herb. TI).

16) *Ranunculus ternatus* Thunb. (1784) は原記載が極めて不完全であるのでその同定について疑問の点があり、中井博士 (1928) はこの名を捨てられ大井博士 (1954) はその適用を留保された。しかし現行植物命名規約ではたとえ始め2種以上の混合品に基いて記載されたと思われる場合でも、その中の一を Lectotype として選び、それに基づいてその名の適用を定めなければならないことになっている。現在ウブサラの Thunberg Herb. には *R. ternatus* の標本は一枚あるだけで、それは 1824 年 Thunberg 自身が図解している図に全く符号するものであつて、これを Lectotype に選ぶのが規約上当然であり、Hand.-Mzt. (1939) も既にこの事をはつきり指摘している。従つてこの標本をタイプとした *R. ternatus* Thunb. の名は疑なくヒキノカサの正名である。

又キツネノボタンの種名に大井博士は *R. hakkodensis* Nakai を採用された。しかしツルキツネノボタンは我国北部亜高山帯の湿地に生じ、茎は常に花後上部葉腋に新苗を

生じて倒れる特性をもち、葉の頂小葉は倒卵形で決して尖らず小葉柄は極めて短く、雌蕊の数少く、花柱は基から細そく長く初めはほぼ真直である。東京で両者をこの3年間栽培して比較したがはつきり区別ができ、キツネノボタンとは別種と認めてよいと思う。

17) コイワザクラとイワザクラ この兩種は基準形では容易に識別できるが、往々その区別点として重視される花筒或は蒴果と萼との長さの比ははつきりしないことがある。各地からの色々な系統を栽培し生品で比較した結果、一番安定した兩種の特徴は一見変り易いと思われる葉にあることが分つた。即ちコイワザクラ系では葉は概ね円く5-9浅裂し、少くも若い葉には上面にも通常白い顕著な毛が生えているが、イワザクラ系では葉は長味があつて卵円形となり縁に細かい歯牙があり、上面は粉状の微毛はあるが長い毛はなく平滑に見える。妙義山産は全体やや小形で葉の裂片は浅く花筒は萼の倍以上の長さがあり、中井博士はシナノコザクラと同定されたが明かにコイワザクラ系で、その一型としてミョウギイワザクラと名付ける。コイワザクラ、オオミネコザクラ、ミョウギイワザクラは時に判別に苦しむ形があつて同一種であることは疑がない。遠江のナガバイワザクラはイワザクラそのものに近い。

この類の生品採集について援助して下さつた久内清孝、津山尙、山崎敬、佐藤邦雄その他の方々に深く感謝する。

○オニツルボの染色体 (得居 修) Osamu TOKUI: On the Chromosomes of *Scilla scilloides* var. *major*

本誌 29 卷 3 号にオニツルボ (新変種として) を発表した時、ツルボの倍数体かもしれないと書いておいた。その後ツルボの染色体構成を調べておられる九州大学理学部野田照三氏よりオニツルボの分譲の依頼をうけ、早速お送りした。その後昨年 12 月 14 日付のおハガキで、芳賀・野田両氏より御研究の結果を知らせて下さつたので、こゝに両氏の許可を得てそのままをのせて御参考にしたいと思います。

「..... 過日オニツルボの核型を観察しましたので御報告します。 $4x=34$ で、私共のきめたゲノム記号であらわせば、*AABB* の複二倍体です。しかし、植物研究雑誌に報告されたその個体の形態と、私共が福岡市近郊で採集した同じ核型の形態とを比較しますと、かなり差があるようで、生態型による相違があるのではないかと存じます。当方は種子稔性が高く、減数分裂でも $17II$ で、規則的な分離をします。農技研の栗山秀雄氏も、各地のツルボを調べておられますが、直接きいた所では、この核型のものが全国で最も広い分布を示し、生態型らしい分化もみとめられるそうです。」

以上、御報告下さつた芳賀・野田昭三両氏に厚く謝意を表します。(松山農科大学)