Preliminary Report on the Flora of Southern Hidaka, Hokkaidô (Yezo) IV

By

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With 1 Text-Figure

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29. *Ranunculaceae*

Aconitum L.

157⁽¹⁾****Aconitum corymbiferum*** NAKAI in Bot. Mag. Tokyo XXXI, p. 25 (1917); l. c. p. 224 (1917)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 49 (1930)

Syn. *Aconitum yuparense* (non TAKEDA) NAKAI, Veg. Apoi p. 49 (1930)

Nom. Jap. *Usuba-torikabuto* (NAKAI 1917).

Hab. in Mt. Apoi, Mt. Rakko, etc. Fl. Aug.-Sep.

Endemic in Yezo.

158⁽²⁾ ***Aconitum lusidusculum*** NAKAI in Bot. Mag. Tokyo XXXI, p. 26 (1917); l. c. p. 226 (1917)

Nom. Jap. *Teriha-bushi* (NAKAI 1917).

Hab. Shoya and Saruru. Fl. late Aug.—early Sep.

Endemic in Yezo.

159⁽³⁾****Aconitum yezoense*** NAKAI in Bot. Mag. Tokyo XXII, p. 136 (1908); l. c. XXXI, p. 226 (1917) (*yessoense*)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 49 (1930)

Nom. Jap. *Yezo-torikabuto* (NAKAI 1908).

Hab. in forests at the foot of Mt. Apoi, along Panke R. and Saruru. Fl. Aug.-Sep.

Endemic in Yezo.

Actaea L.

160⁽⁴⁾****Actaea acuminata*** WALLICH, Cat. no. 4726 (1830)—ROYLE, Illus. Bot. Himalay. Mts. I, p. 57 (1839)—KOMAROV, Fl. Mansh. II, p. 236 (1903)

Syn. *Actaea spicata* L. *a. melanocarpa* LEDEBOUR, Fl. Ross. I, p. 71 (1842)—

REGEL, Tent. Fl. Ussur. p. 12 (1861)—NAKAI, Veg. Apoi p. 49 (1930)
Actaea spicata L. *a. nigra* WILLD. 2. *f. acuminata* HUTH in ENGL. Bot.
 Jahr. XVI, p. 308 (1893)—NAKAI, Fl. Korea. I, p. 33 (1909)
Actaea spicata L. var. *nigra* (non WILLD.) auct. plur. quoad pl. ex
 Japon.—TATEW., Veg. Apoi p. 82 (1928)

Nom. Jap. *Ruiyō-shōma*.

Hab. in forests of Mt. Apoi (ex TATEWAKI), Saruru, etc.

Dist. Shikoku, Honshu, Yezo, Korea, Manchuria, Tibet, China, Himalaya and Southern Europe.

161⁽⁵⁾ **Actaea erythrocarpa** FISCHER in FISCHER et MEYER, Ind. Sem. Hort. Petrop. I, p. 20 (1835)—KOMAROV, Fl. Mansh. II, p. 237 (1903)—HULTÉN, Fl. Kamt. II, p. 102 (1928)—KOMAROV, Fl. Penin. Kamt. II, p. 118 (1929)

Syn. *Actaea spicata* L. var. *erythrocarpa* TURCZANINOW, Cat. Baikal. no 79 (1838)—LEDEB., Fl. Ross. I, p. 71 (1842)—REGEL, Pl. Radd. I, p. 119 (1861)—FR. SCHMIDT, Reis. Amur. u. Sachal. p. 32 & 108 (1868)—HUTH in ENGL. Bot. Jahr. XVI, p. 308 (1893)—NAKAI in Bot. Mag. Tokyo XXI, p. 128 (1907)—MATSUMURA, Ind. Pl. Jap. II-2, p. 101 (1912)—MIYABE et MIYAKE, Fl. Saghal. p. 22 (1915)—KUDO, Rep. Veg. N. Saghal. p. 128 (1924)

Actaea spicata L. subsp. *erythrocarpa* KORSH. in Acta Hort. Petrop. XII, p. 301 (1892)

Actaea spicata L. var. *rubra* (non WILLD.) BOISSIEU in Bull. Herb. Boiss. VII, p. 599 (1899)

Nom. Jap. *Akamino-ruiyōshōma*.

Hab. in forests near Shoya.

Dist. Northern Honshu, Yezo, Kuriles, Saghalien, N. Korea, Kamtchatka, Ussuri, Manchuria, Mongolia, Dahuria, Siberia and Europe.

This has the red globular bacca and the more slender pedicel than the former.

162^{(6)*} **Adonis amurensis** REGEL et RADDE in REGEL, Pl. Radd. I, p. 35 & 36, tab. II fig. 1, 2, a, b (1861)—KUDO, Rep. Veg. North. Saghal. p. 139 (1924)—TATEW., Veg. Apoi p. 84 (1928)—NAKAI, Veg. Apoi p. 49 (1930); in Bot. Mag. Tokyo XLV, p. 116 (1931)—KOMAROV et KLOBUKOVA-ALISOVA, Key Pl. Far East. Reg. USSR. I, p. 563, t. 171-172 (1931)

Syn. *Adonis amurensis* REG. et RAD. *a. uniflorus* MAKINO in Bot. Mag. Tokyo XV, p. 97 (1901)

Adonis amurensis var. *yezoensis* KUDO, Medic. Pl. Hokkaido pl. 44 (1922)

Nom. Jap. *Fukujusō*, *Oku-fukujusō* (Kudo 1922), *Amur-fukujusō* (Kudo 1924).

Hab. Mt. Apoi (ex TATEWAKI), Shoya, etc. Fruit May.

Dist. Kyushu, Honshu, Yezo, Saghalien, Korea, Manchuria and Amur.

Anemone L.

163⁽⁷⁾* ***Anemone debilis*** FISCHER apud TURCZ. in Bull. Soc. Nat. Mosc. XXVII-2, no. IV, p. 273 (1854)—HULTÉN, Fl. Kamt. II, p. 109 (1928)—KOMAROV, Fl. Penin. Kamt. II, p. 130 (1929)

Syn. *Anemone gracilis* FR. SCHM. var. *debilis* KOIDZ. in Bot. Mag. Tokyo XXXI, p. 139 (1917)

Nom. Jap. *Hime-ichige*.

Hab. on Mt. Rakko and Shoya. Fl. May.

*var. ***gracilis*** (SCHLECHTENDAL) HARA, comb. nov.

Syn. *Anemone ranunculoides* L. *β. gracilis* SCHLECHTENDAL in Linnaea VI, p. 574 (1831)

Anemone caerulea DC. var. *gracilis* LEDEB., Fl. Ross. I, p. 14 (1842)

Anemone linearis SCHLECHTD. ex LEDEB., l. c. pro syn.

Anemone gracilis FR. SCHMIDT, Reis. Amur. u. Sachal. p. 102 (1868)—KUDO, Rep. Veg. N. Saghal. p. 131 (1924)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 49 (1930)

Anemone coerulea ssp. *gracilis* var. *linearis* ULBRICH in ENGL., Bot. Jahrbuch. XXXVII, p. 218 (1906)

Anemone gracilis FR. SCHM. var. *linearis* KOIDZ. in Bot. Mag. Tokyo XXXI, p. 139 (1917)

Anemone debilis FISCH. var. *linearis* MAKINO et NEMOTO, Fl. Jap. ed. 1, p. 961 (1925); ed. 2, p. 316 (1931)

Nom. Jap. *Hosoba-himeichige* (KOIDZUMI 1917).

Hab. on Mt. Apoi, Shoya, etc. Fl. May.

Dist. sp. Kyushu, Honshu, Yezo, Kuriles, Saghalien, Ussuri, Ajan, Kamchatka and Bering Straits.

164⁽⁸⁾* ***Anemone flaccida*** FR. SCHMIDT, Reis. Amur. u. Sachal. p. 103 (1868)—KUDO, Rep. Veg. N. Saghal. p. 132 (1924)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 49 (1930)

Syn. *Anemone baicalensis* TURCZ. var. *laevigata* A. GRAY in PERRY'S Narr. Exp. Jap. II, p. 306 (1857)

Anemone laevigata KOIDZUMI in Bot. Mag. Tokyo XLIII, p. 395 (1929)

Nom. Jap. *Nirinsō*.

Hab. in the lower part of Mt. Apoi, Samani, Shoya, etc. Fl. May.

Dist. Honshu, Yezo, Saghalien, Korea, China, Manchuria and Amur.

I sometimes found a monstrous form which has green flowers, *A. flaccida* FR. SCHM. f. *viridis* TATEWAKI in Resear. Bull. Exp. For. Hokkaido Imp. Univ. VII, p. 191 (1932).

165⁽⁹⁾ **Anemone narcissiflora** LINNAEUS, Sp. Pl. ed. 1, p. 542 (1753) (ut *narcissifolia*)

Nom. Jap. *Hakusan-ichige*.

Hab. in the upper part of the ridge between Mt. Rakko and Mt. Tokachi.

Dist. Central & Northern Honshu, Yezo, Kuriles, Saghalien, Kamtchatka, Korea, China, Dahuria, Siberia, Altai, Himalaya, Asia Minor, Europe and N. America.

This species is very variable in all respects. In the plant on the Hidaka range, the lobes of the leaves have the acute apex and the pedicels are slender.

166⁽¹⁰⁾* **Anemone Raddeana** REGEL, Pl. Radd. I, p. 16, tab. I, fig. 2, 3, f, g (1861)—MATSUMURA, Ind. Pl. Jap. II-2, p. 105 (1912)—MIYABE et MIYAKE, Fl. Saghal. p. 9 (1915)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 49 (1930)

Nom. Jap. *Adzuma-ichige* (MAKINO 1897).

Hab. Mt. Apoi, Shoya, etc. Fl. early May.

Dist. Honshu, Yezo, Saghalien, Korea, China, Manchuria and Amur.

Aquilegia L.

167⁽¹¹⁾* **Aquilegia japonica** NAKAI et HARA, sp. nov.¹⁾

Syn. *Aquilegia flabellata* (non SIEB. et ZUCC.) FR. SCHMIDT, Reis. Amur. u. Sachal. p. 106 (1868)—MIYABE et MIYAKE, Fl. Saghal. p. 19 (1915)

1) *Aquilegia japonica* NAKAI et HARA

f. **globularis** (HONDA et KISHINAMI) NAKAI et HARA, comb. nov.

Syn. *Aquilegia akitensis* HUTH. f. *globularis* HONDA et KISHINAMI in Bot. Mag. Tokyo XLVII, p. 433 (1933)

Nom. Jap. *Tamazaki-miyamaodamaki* (HONDA).

Hab. Honshu.

var. **flavida** (NAKAI) NAKAI et HARA, comb. nov.

Syn. *Aquilegia akitensis* HUTH var. *flavida* NAKAI in Bot. Mag. Tokyo XLIV, p. 39 (1930)

Nom. Jap. *Kibana-miyamaodamaki* (NAKAI)

Hab. Korea.

Aquilegia Buergeriana var. *pumila* HUTH in Bull. Herb. Boiss. V, p. 1090 (1897)

Aquilegia glandulosa (non FISCHER) BOISSIEU in Bull. Herb. Boiss. VII, p. 597 (1899) pro parte.

Aquilegia akitensis (non HUTH) MAKINO in Bot. Mag. Tokyo XVII, p. 10 (1903)—MATSUMURA, Ind. Pl. Jap. II-2, p. 106 (1912)—TATEW., Veg. Apoi p. 82 (1928)—NAKAI in Bot. Mag. Tokyo XLIV, p. 38 (1930); Veg. Apoi p. 49 (1930)

Aquilegia sibirica var. *flabellata* FINET et GAGN. in Bull. Soc. Bot. France LI, p. 412 (1904) pro parte—TAKEDA in Bot. Mag. Tokyo XXIV, p. 236 (1910)—MATSUMURA, l. c. (1912) pro parte.

Aquilegia Fauriei (non LÉVEILLÉ 1902) LÉV. et VNT. ex LÉV. in Bull. Soc. Bot. France LIII, p. 389 (1906)—MATSUMURA, l. c. (1912)

Aquilegia flabellata f. *pumila* KUDO, Rep. Veg. N. Saghal. p. 129 (1924)

Aquilegia flabellata var. *pumila* KUDO in Rep. Exper. Forest Kyushu Imp. Univ. I, p. 65 (1931)

Aquilegia flabellata var. *pumila* OHWI in Acta Phytotax. et Geobot. III, p. 116 (1934)

Columna rhizomatis perennis crassa. Folia radicalia longe petiolata, petiolis basi vaginatis parce molliter hirsutis, ternata, petiolulis gracilibus parce hirsutis; lamina trisecta subtus parce molliter hirsuta flabellata tripartita, lobis vulgo 1–3-rotundato-incisis. Caulis 10–40 cm. altus 1–3-florifer praesertim apice molliter hirsutus vulgo 1–3-foliatus, foliis infimis interdum radicalibus conformibus, supremis parvis saepe bracteiformibus. Flores pulchri. Sepala petaloidea caeruleo-purpurea elliptica vel late elliptica apice rotundata vel obtusa usque ad 3 cm. longa 1.5 cm. lata. Petala apice lutescentia basi purpurascentia linguiformia apice rotundata sepalis distincte breviora. Calcar 8–20 mm. longa ad apicem sensim attenuata apice rectiuscula vel incurva. Stamina numerosa, interiora ad staminodia membranacea transformantia. Ovaria primo parce hirsuta demum glabra, stylis filiformibus persistentibus. Folliculi erecti 1.5–2.5 cm. longi nervosi. Semina numerosa fusiformia ca. 2 mm. longa nigra sub lente minutissime rugulosa.

Nom. Jap. *Miyama-odamaki* (MAKINO 1903), *Oku-miyama-odamaki* (Kudo).

Hab. in the upper part of Mt. Apoi, Mt. Horoman and Mt. Rakko Fl. June.

Typus. Honshu: prov. Shinano: in monte Shirouma (S. KODAMA—Aug. 20, 1908)

Dist. Cent. & North. Honshu, Yezo, Kuriles, Saghalien and Korea.

Aquilegia flabellata SIEBOLD et ZUCCARINI differs from this species by robust and glaucous stems and leaves, always incurved spur, more bluish sepals, petals white at the apex, etc. In the Koishikawa Botanic Gardens, specimens of this species either transplanted from the mountain or raised from the seeds, have been cultivated for many years, but their characteristics are always constant and are never confused with those of *A. flabellata*.

Callianthemum C. A. MEYER

168⁽¹²⁾***Callianthemum insigne** NAKAI in Scientific Knowledge VIII-1, p. 41 (1928); Veg. Apoi p. 34 & 49 (1930)—OHWI in Acta Phytotax. et Geobot. I, p. 301 (1932) pro parte.

Syn. *Isopyrum insigne* NAKAI in Bot. Mag. Tokyo XXXIII, p. 49 (1919)

Anemone insignis NAKAI in MATSUMURA, Icon. Pl. Koisik. IV, p. 85, pl. 255 (1921)

Callianthemum Miyabeianum TATEWAKI in Trans. Sapporo Nat. Hist.

Soc. X-1, p. 79 (1928); Veg. Apoi p. 83 & 129 (1928)—MAKINO et

NEMOTO, Fl. Jap. ed. 2, p. 320 (1931)

Nom. Jap. *Umezaki-sabanoo* (NAKAI 1919), *Ume-ichige* (NAKAI 1921), *Hidaka-sō* (TATEWAKI 1928)

Fig. 10. *Callianthemum insigne* NAKAI from Mt. Apoi.

Hab. on gravelly slopes in the upper part of Mt. Apoi and Mt. Horoman. Fl. late May—early Jun.

Dist. Yezo (Mt. Apoi and Mt. Horoman) and North Korea.

The variability in the shape of the leaves was already pointed out in

the Journal of Japanese Botany X, p. 677 (1934) (cf. Fig. 10). The type specimen of *C. Miyabeana* is a dwarf broad-leaved form.

Caltha L.

169⁽¹³⁾ ***Caltha fistulosa*** N. SCHIPCZINSKY in Not. Syst. Hort. Bot. Petrop. II, p. 166 (1921)

Syn. *Caltha palustris* L. var. *Barthei* HANCE in Ann. Sci. Nat. ser. 5, V, p. 205 (1866) fide Dr. KOIDZUMI.

Caltha palustris L. var. *typica* (non REGEL) FR. SCHMIDT, Reis. Amur. u. Sachal. p. 105 (1868)—MAKINO in Bot. Mag. Tokyo XIII, p. [200] (1899); l. c. XXII, p. 176 (1908)—NAKAI in Bot. Mag. Tokyo XXI, p. 127 (1907)—MATSUMURA, Ind. Pl. Jap. II-2, p. 107 (1912)—MIYABE et MIYAKE, Fl. Saghal. p. 16 (1915)

Caltha palustris L. f. *gigas* LÉVEILLÉ in FEDDE, Rep. Sp. Nov. VII, p. 102 (1909)—KUDO, Rep. Veg. North. Saghal. p. 127 (1924)

Caltha palustris L. var. *gigas* TAKEDA, Fl. Shikotan in Journ. Linn. Soc. XLII, p. 450 (1914)

Caltha Barthei KOIDZUMI, Fl. Symb. Or.-Asia. p. 77 (1930)

Nom. Jap. *Yezo-ryūkinkwa* (MAKINO 1899).

Hab. along Panke R.

Dist. Yezo, Kuriles, Saghalien, Korea and Eastern Siberia.

170⁽¹⁴⁾ ****Cimicifuga yesoensis*** KUDO, Contr. North. Saghal. p. 36 (1923); Rep. Veg. N. Saghal. p. 129 (1924) (ut *yezoensis*)—TATEW., Veg. Apoi p. 82 (1928)

Syn. *Cimicifuga simplex* (non WORMSKJORD) FR. SCHMIDT, Reis Amur. u. Sachal. p. 109 (1868)—MIYABE et MIYAKE, Fl. Saghal. p. 23 (1915)

Cimicifuga foetida L. var. *intermedia* (non REGEL) HUTH in Bull. Herb. Boiss. V, p. 194 (1897) pro parte—MATSUMURA, Ind. Pl. Jap. II-2, p. 107 (1912) pro parte.

Cimicifuga simplex WORMSK. var. *yesoensis* NAKAI in Bot. Mag. Tokyo XXX, p. 146 (1916)

Cimicifuga simplex var. *Matsumurai* NAKAI f. *villosa* NAKAI, l. c. p. 147 (1916) pro parte.

Cimicifuga simplex var. *intermedia* (non NAKAI 1916) NAKAI, Veg. Apoi p. 49 (1930)

Haec planta ex *C. simplex* caule elatiore, foliis majoribus latoribus multo herbaceis, inflorescentia ramosa atque racemis apice nutantibus abhoret.

Nom. Jap. *Yezo-shōma* (NAKAI 1916).

Hab. in forests of Mt. Apoi, Saruru-sandō, etc. Fl. Sep.

Dist. N. Honshu, Yezo, Kuriles, Saghalien and Kamtschatka?

Clematis L.

171⁽¹⁵⁾* **Clematis fusca** TURCZANINOW in Bull. Soc. Nat. Mosc. XIII, p. 60 (1840)—LEDEBOUR, Fl. Ross. I, p. 725 (1842)—MAXIMOWICZ in Bull. Acad. Imp. Sci. St.-Petersb. XXII, p. 213 (1876) pro parte—HULTÉN, Fl. Kamt. II, p. 117 (1928)—KOMAROV, Fl. Penin. Kamt. II, p. 150 (1929)

Syn. *Clematis kamtschatica* BONGARD in BONG. et MEYER, Verz. Saisang-Nor u. Irtysch. gesam. Pfl. p. 10 (1841)

Clematis fusca var. *kamtschatica* REGEL et TILING, Fl. Ajan. p. 19 (1858)—REGEL, Tent. Fl. Ussur. p. 2 (1861); Gartenfl. XIII, p. 356 in nota (1864)—TAKEDA in Bot. Mag. Tokyo XXIV, p. 237 (1910)

Clematis fusca a. *normalis* O. KUNTZE, Monogr. Clemat. p. 132 (1885)

Clematis fusca var. *typica* SCHNEID., Ill. Handb. Laubholzk. I, p. 279 (1904)

var. **yezoensis** MIYABE in sched. apud MAKINO in Bot. Mag. Tokyo XI, p. [332] (1897) nom. nud.—TAKEDA, l. c. pro syn.—MATSUMURA, Ind. Pl. Jap. II-2, p. 111 (1912)—NAKAI in Bot. Mag. Tokyo XXXIV, p. 43 (1920) pro parte (sphalmate *yeseonsis*).

Syn. *Clematis fusca* (non TURCZ.) FRANCHET et SAVATIER, Enum. Pl. Jap. II-1, p. 262 (1876)—HUTH in Bull. Herb. Boiss. V, p. 1064 (1897)—MATSUM., l. c. (1912)

Clematis fusca var. *mandshurica* (non REGEL) TAKEDA in Bot. Mag. Tokyo XXIV, p. 237 (1910) excl. syn.

Clematis fusca var. *kamtschatica* (non REGEL et TILING) TATEWAKI, Veg. Apoi p. 83 (1928)

Clematis kamtschatica (non BONGARD) NAKAI, Veg. Apoi p. 20 & 49 (1930)

Nom. Jap. *Kurobana-hanshōdzuru*, *Yezo-hanshōdzuru*.

Hab. on grassy slopes of Mt. Apoi and Mt. Horoman. Fl. Jul.

Dist. Honshu?, Yezo and Saghalien.

The Japanese plant is quite different from that of Manchuria and Korea, and its peduncle sometimes attains 20 cm. long. The good description was given by Dr. TAKEDA under the name of *C. fusca* var. *mandshurica*, l. c.

172⁽¹⁶⁾* **Clematis ochotensis** POIRET, Encycl. Suppl. II, p. 298 (1811)—DC., Prodr. I, p. 10 (1824)—KOMAROV, Fl. Penin. Kamt. II, p. 151 (1929)—NAKAI, Veg. Apoi p. 49 (1930)

Syn. *Atragene ochotensis* PALLAS, Fl. Ross. I-2, p. 69 (1788)

Atragene alpina L. var. *ochotensis* REGEL et TILING, Fl. Ajan. p. 20 & 23 (1858)—NAKAI in Bot. Mag. Tokyo XXI, p. 123 (1907)

Clematis alpina MILL. var. *ochotensis* O. KUNTZE, Monogr. Clemat. p. 163 (1885)

Clematis alpina (non MILLER) HUTH in Bull. Herb. Boiss. V, p. 1065 (1897) pro parte—MATSUMURA, Ind. Pl. Jap. II-2, p. 108 (1912) pro parte.

Clematis alpina MILL. var. *ochotensis* REGEL et TILING apud MAKINO in Bot. Mag. Tokyo XI, p. [330] (1897) nom. nud.—MIYABE et MIYAKE, Fl. Saghal. p. 3 (1915)—KUDO, Rep. Veg. N. Saghal. p. 134 (1924)—HULTÉN, Fl. Kamt. II, p. 118 (1928)—TATEW., Veg. Apoi p. 83 (1928)

Clematis alpina MILL. var. *normalis* (non O. KUNTZE) BOISSIEU in Bull. Herb. Boiss. VII, p. 583 (1899) pro parte—MATSUMURA, l. c. p. 109 (1912) pro parte.

Clematis alpina MILL. var. *ochotensis* FINET et GAGN. in Bull. Soc. Bot. France L, p. 552 (1903)

Clematis ochotensis POIRET var. *grandidentata* NAKAI, Veg. Apoi p. 50 (1930) nom. nud.

Nom. Jap. *Yezo-miyama-hanshōdzuru*.

Hab. in Mt. Apoi, Mt. Rakko, etc. Fl. late May—early Jul.

Dist. Honshu, Yezo, Kuriles, Saghalien, Korea, Manchuria, Ochotsk, Amur and Kamchatka.

Variety *grandidentata* is a form which has the oblong leaflets with few big teeth.

Ranunculus L.

173⁽¹⁷⁾***Ranunculus acris** LINNAEUS, Sp. Pl. ed. 1, I, p. 554 (1753)

var. **frigidus** REGEL, Tent. Fl. Ussur. p. 7 in adnota (1861)

Hab. in Mt. Horoman, C. Erimo, etc. Fl. Jun.—Jul.

Dist. Yezo, Kuriles, Saghalien, Korea, Manchuria, Ussuri, Amur and Kamchatka.

It is doubtful if this plant is identical with *R. acris* var. *Steveni* in TATEW., Veg. Apoi p. 84 and NAKAI, Veg. Apoi p. 50.

174⁽¹⁸⁾***Ranunculus Vernyi** FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 8 (1874) nom. nud.; II-1, p. 266 (1876)—KOIDZUMI, Fl. Symb. Or.-Asia. p. 78 (1930)—NAKAI, Veg. Apoi p. 50 (1930)

*var. **glaber** NAKAI in Bot. Mag. Tokyo XLII, p. 19 (1928)

Syn. *Ranunculus japonicus* var. *glaber* BOISSIEU in Bull. Herb. Boiss. VII, p. 594 (1899)

Ranunculus glaber MAKINO in Journ. Jap. Bot. VII-10, p. 31 (1932)

Nom. Jap. *Kitsune-no-botan*.

Hab. at the foot of Mt. Apoi, etc. Fl. Jul.

*var. **quelpaertensis** NAKAI, l. c. p. 21 (1928) ; Veg. Apoi p. 50 (1930)
—TATEW., Veg. Apoi p. 84 (1928)

Nom. Jap. *Yama-kitsunenobotan* (NAKAI)

Hab. along Horoman R., Nikanbetsu R., etc.

Dist. sp. Formosa, Liukiu, Kyushu, Shikoku, Honshu, Yezo, Kuriles,
Korea and China.

Thalictrum L.

175⁽¹⁹⁾ **Thalictrum aquilegifolium** LINNAEUS, Sp. Pl. ed. 1, I, p. 547
(1753)—KUDO, Rep. Veg. N. Saghal. p. 138 (1924)—HULTÉN, Fl. Kamt. II,
p. 134 (1928)—KOMAROV, Fl. Penin. Kamt. II, p. 154 (1929)

Nom. Jap. *Karamatsusō*.

Hab. in Mt. Ruchishi, Mt. Toyoni. Fl. Jun.

Dist. Honshu, Yezo, Saghalien, Korea, Ochotsk, Kamtchatka, Man-
churia, Amur, Dahuria and Europe.

176⁽²⁰⁾ ***Thalictrum integrilobum** MAXIMOWICZ in Bull. Acad. Imp. Sci.
St.-Pétersb. XXXII, p. 477 (1888)—MATSUMURA, Ind. Pl. Jap. II-2, p. 123
(1912)—TATEW., Veg. Apoi p. 84 (1928)—NAKAI, Veg. Apoi p. 20 & 50 (1930)

Nom. Jap. *Nagaba-karamatsusō*, *Samani-karamatsu*.

Hab. in valleys of Mt. Apoi, Mt. Horoman. Fl. Jun.

Endemic in Yezo (prov. Hidaka and Iburi).

This species is near to *T. tuberiferum* MAXIMOWICZ, and has the
tubercles on roots as in the latter.

177⁽²¹⁾ ***Thalictrum Thunbergii** A. P. de CANDOLLE, Syst. Nat. I, p. 183
(1818)—NAKAI in Bot. Mag. Tokyo XLII, p. 1 (1928)

*var. **majus** NAKAI, l. c. p. 4 (1928) ; Veg. Apoi p. 50 (1930)—TATEW.,
Veg. Apoi p. 84 (1928)

Nom. Jap. *Yezo-aki-karamatsu*.

Hab. in the lower part of Mt. Apoi. Fl. Aug.

var. **divaricatum NAKAI, l. c. p. 5 (1928)

Nom. Jap. *Ō-karamatsu*.

Hab. in the lower part of Mt. Apoi, Mt. Ruchishi. Fl. Jul.—Aug.

var. **tenuipes NAKAI, l. c. p. 5 (1928)

Nom. Jap. *Usuba-karamatsu*.

Hab. in Mt. Apoi, Mt. Horoman. Fl. Jul.

Dist. sp. Kyushu, Shikoku, Honshu, Yezo, Kuriles, Saghalien, Korea,
China, Manchuria, Ussuri, Kamtchatka, Amur and Dahuria.

This species is very polymorphous and the distinction between the

varieties above mentioned is not clear. Some of them rather resemble to var. *hypoleucum* NAKAI.

178⁽²²⁾***Thalictrum yesoense** NAKAI in Bot. Mag. Tokyo XLII, p. 6 (1928) ; Veg. Apoi p. 50 (1930)—TATEW., Veg. Apoi p. 84 (1928)

Syn. *Thalictrum foetidum* L. var. *glabrescens* TAKEDA apud TATEW., Veg. Apoi p. 84 (1928)

Nom. Jap. *Ko-karamatsu*, *Chabo-karamatsu*.

Hab. on rocks in the upper part of Mt. Apoi, Mt. Horoman and Aburakoma. Fl. Jun.

Endemic in Yezo.

'Shakotan' where FAURIE collected many interesting plants is not situated in Kuriles, but is in the province of Shiribeshi of Yezo. And this plant has not been recorded from Kuriles as yet.

This species resembles to a dwarf form of *T. Thunbergii*, but is more glaucous in all parts than the latter and sparsely glandular under the lens. Its leaves are arcuately divaricate and 5-6-(sometimes 4- or 7-)ternate-pinnate. Its leaflets are very small, 3-7 mm. long (rarely attain 1 cm. long), with nerves strikingly impressed on the upper surface, and minutely and densely papillose especially on the underside. It flowers a month or more earlier than *T. Thunbergii* at the same locality. Its pedicels are long; its carpels sessile, ellipsoid, 3-4 mm. long, with 8 longitudinal costae.

Trautvetteria FISCHER et MEYER

179⁽²³⁾***Trautvetteria japonica** SIEBOLD et ZUCCARINI in Abh. math.-phys. Akad. Wiss. Muenchen IV-2, p. 184 (1845)—TATEW., Veg. Apoi p. 83 (1928)—NAKAI, Veg. Apoi p. 50 (1930) ; in Bot. Mag. Tokyo XLV, p. 117 (1931)

Syn. *Trautvetteria palmata* (non FISCHER et MEYER) MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 4 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 6 (1874)

Trautvetteria palmata γ. *japonica* HUTH in ENGLER, Bot. Jahrb. XVI, p. 288 (1893)—MAKINO in Bot. Mag. Tokyo VIII, p. [377] (1894)—HUTH in Bull. Herb. Boiss. V, p. 1071 (1897)—BOISSIEU in Bull. Herb. Boiss. VII, p. 588 (1899)—MATSUMURA, Ind. Pl. Jap. II-2, p. 125 (1912)

Trautvetteria palmata var. *minor* LÉVEILLÉ et VANIOT ex LÉV. in Bull. Soc. Bot. France LIII, p. 388 (1906)

Nom. Jap. *Momiji-karamatsu*.

Hab. along Horoman R. and Mt. Rakko.

Dist. Honshu, Yezo and Kuriles.

This species is considerably variable in the shape of the leaves and the achenes. The plant of Honshu and South Yezo has always quite glabrous leaves and generally distinct styles, but in some individuals from Kuriles, the leaves are very sparsely hairy on the underside veins. The achenes are glabrous or sometimes sparsely hairy along the costa with white stiff hairs.

The plant of Saghalien is usually hairy on the underside veins of the leaves with long white stiff hairs, and the style is shorter, and it comes nearer to *T. carolinensis* VEIL of N. America. But taking its geographical distribution into consideration, I want to treat it as a variety²⁾ of *T. japonica*.

30. *Podophyllaceae*

Diphylleia MICHAUX

180⁽¹⁾ ***Diphylleia Grayi*** FR. SCHMIDT, Reis. Amur. u. Sachal. p. 109 (1868) —TAKEDA in Bot. Mag. Tokyo XXIV, p. 254 (1910)—MATSUMURA, Ind. Pl. Jap. II-2, p. 130 (1912)—MIYABE et MIYAKE, Fl. Saghal. p. 27 (1915)

Nom. Jap. *Sankayō*.

Hab. in forests near Shoya, in Mt. Rakko, etc. Fl. May.

Dist. Honshu, Yezo and Saghalien.

Glaucidium SIEB. et ZUCC.

181^{(2)*} ***Glaucidium palmatum*** SIEBOLD et ZUCCARINI in Abh. math.-phys. Kl. Akad. Wiss. Muenchen IV-2, p. 184 tab. I, B (1845)—MATSUMURA, Ind. Pl. Jap. II-2, p. 116 (1912)—TATEW., Veg. Apoi p. 82 (1928)—NAKAI, Veg. Apoi p. 50 (1930)

Nom. Jap. *Shirane-aoi*.

2) *Trautvetteria japonica* SIEBOLD et ZUCCARINI

var. **borealis** HARA, var. nov.

Syn. *Trautvetteria palmata* FISCHER et MEYER, Ind. Sem. Hort. Petrop. I, p. 22 (1835) pro parte—TRAUTV. et MEY., Fl. Ochot. p. 21 (1847)—KORSHINSKY in Acta Hort. Petrop. XII, p. 301 (1892)

Ranunculus pleurocarpus MAXIMOWICZ, Prim. Fl. Amur. p. 21 (1859)

Trautvetteria japonica (non SIEB. et ZUCC.) FR. SCHMIDT, Reis. Amur. u. Sachal. p. 30 & p. 108 (1868)—KOMAROV, Fl. Mansh. II, p. 303 (1903)—MIYABE et MIYAKE, Fl. Saghal. p. 11 (1915)—KUDO, Contr. N. Saghal. p. 37 (1923); Rep. Veg. N. Saghal. p. 135 (1924)

Differt a typo foliis subtus secus venas pilosis, pilis albis longis rigidulis, et stylis brevioribus.

Nom. Jap. *Oku-momiji-karamatsu* (nov.)

Hab. Sachalin: in monte Suzuya (H. HARA)—in monte Tosso (H. HARA)—in monte Ishiyama prope Shiretori (H. HARA).

Yezo: prov. Kitami: ad rivulum in monte Poronupri (H. HARA)

Dist. Yezo borealis, Sachalin, Ochotsk et Amur.

Hab. at the foot of Mt. Apoi, Shoya, etc. Fl. May.
Dist. Honshu and Yezo.

31. *Berberidaceae*

Berberis L.

182⁽¹⁾***Berberis amurensis** RUPRECHT in Bull. phys.-math. Acad. St.-Pétersb. XV, p. 260 (1857)—SCHNEIDER in Bull. Herb. Boiss. ser. 2, V, p. 665 (1905)—NAKAI, Veg. Apoi p. 50 (1930)—KOMAROV et KLOBUKOVA-ALISOVA, Key Pl. Far East. Reg. USSR. I, p. 564, tab. 173. III (1931)
Syn. *Berberis vulgaris* var. *amurensis* REGEL in Pl. Maak. p. 14; in Acta Hort. Petrop. II, p. 414 (1873)

Berberis vulgaris var. *japonica* REGEL, l. c. p. 415 (1873)—ITO in Journ. Linn. Soc. Bot. XXII, p. 427 (1887)—MAKINO in Bot. Mag. Tokyo X, p. [250] (1896)—MATSUMURA, Ind. Pl. Jap. II-2, p. 129 (1912)

Berberis Sieboldi (non MIQUEL) ITO, l. c. pro parte.

Berberis japonica (non R. BR.) SCHNEIDER, Ill. Handb. Laubholz. I, p. 315 (1905); in Bull. Herb. Boiss. ser. 2, V, p. 667 (1905)

Berberis Regeliana KOEHNE ex SCHNEIDER, l. c. p. 315 in adnota (1905); l. c. p. 667 in adnota (1905)—TATEW., Veg. Apoi p. 85 (1928)
Nom. Jap. *Hiroha-no-hebinoborazu*, *Ōba-no-hebinoborazu*.
Hab. in Mt. Apoi and Mt. Horoman. Fl. Jun.
Dist. Honshu, Yezo, Korea, Manchuria and Amur.

Caulophyllum MICHAUX

183⁽²⁾***Caulophyllum robustum** MAXIMOWICZ, Prim. Fl. Amur. p. 33 (1859)—MIYABE et MIYAKE, Fl. Saghal. p. 27 (1915)—KUDO, Rep. Veg. N. Saghal. p. 140 (1924)—TATEW., Veg. Apoi p. 84 (1928)—KOMAROV et KLOBUKOVA-ALISOVA, Key Pl. Far East. Reg. USSR. I, p. 564, tab. 173. II (1931)

Syn. *Caulophyllum thalictroides* (non MICHAUX) ITO in Journ. Linn. Soc. XXII, p. 428 (1887)—MATSUMURA, Ind. Pl. Jap. II-2, p. 129 (1912)
Nom. Jap. *Ruiyō-botan*.

Hab. in forests of Mt. Apoi, Shoya, etc. Fl. May.

Dist. Kyushu, Shikoku, Honshu, Yezo, Saghalien, Korea, China, Manchuria, Ussuri and Amur.

32. *Magnoliaceae*

Magnolia L.

184⁽¹⁾***Magnolia kobus** A. P. de CANDOLLE, Syst. Nat. I, p. 456 (1818)—

NAKAI, Veg. Apoi p. 20 & 50 (1930); Fl. Sylv. Korea. XX, p. 120, tab. XXIV (1933)

Nom. Jap. *Kobushi*.

Hab. in the lower part of Mt. Apoi. Fl. May.

*var. **borealis** SARGENT, Trees and Shrubs II, p. 57 (1908)—MIYABE et KUDO, Icon. Essent. For. Tree. Hokkaido II-15, p. 29, t. 45 (1927)—TATEW., Veg. Apoi p. 85 (1928)—NAKAI, Veg. Apoi p. 50 (1930)

Syn. *Magnolia borealis* KUDO, Medic. Pl. Hokk. t. 47 (1922)

Nom. Jap. *Kita-kubushi*.

Hab. in the lower part of Mt. Apoi, Shoya, etc. Fl. May.

Dist. sp. Kyushu, Shikoku, Honshu, Yezo and Quelpaert.

185⁽²⁾***Magnolia obovata** THUNBERG in Trans. Linn. Soc. II, p. 336 (1794)—MIYABE et KUDO, Icon. Essent. For. Tree. Hokkaido II-15, p. 27, t. 44 (1927)—TATEW., Veg. Apoi p. 85 (1928)—KOIDZUMI in Bot. Mag. Tokyo XLIV, p. 109 (1930)—NAKAI, Veg. Apoi p. 50 (1930)

Nom. Jap. *Hô-no-ki*.

Hab. in the lower part of Mt. Apoi, etc. Fl. Jun.

Dist. Liukiu, Kyushu, Honshu, Yezo, Southern Kuriles and China.

Schizandra MICHAUX

186⁽³⁾***Schizandra chinensis** BAILLON, Hist. Pl. I, p. 148 (1868)—TATEW., Veg. Apoi p. 85 (1928)—NAKAI, Veg. Apoi p. 50 (1930)—KOMAROV et KLOBUKOVA-ALISOVA, Key Pl. Far East. Reg. USSR. I, p. 523, t. 159 (1931)—NAKAI, Fl. Sylv. Korea. XX, p. 103, tab. XX (1933)

Syn. *Kadsura chinensis* TURCZANINOW in Bull. Soc. Imp. Nat. Mosc. VII, p. 149 (1837)

Nom. Jap. *Chôsen-gomishi*.

Hab. in the lower part of Mt. Apoi, Shoya, etc. Fl. Jun.

Dist. Honshu, Yezo, Southern Kuriles, Saghalien, Korea, China, Manchuria, Ussuri and Amur.

33. *Fumariaceae*

Corydalis DC.

187⁽¹⁾***Corydalis ambigua** CHAMISSE et SCHLECHTENDAL in Linnaea I, p. 558 (1826)—TAKEDA in Bot. Mag. Tokyo XXIV, p. 7 (1910)—KUDO, Fl. Paramush. p. 110 (1922)—TATEW., Veg. Apoi p. 85 (1928)—HULTÉN, Fl. Kamt. II, p. 142 (1928)—KOMAROV, Fl. Penin. Kamt. II, p. 159 (1929)—NAKAI, Veg. Apoi p. 50 (1930)

Nom. Jap. *Yezo-engosaku* (MAKINO 1894).

Hab. at the foot of Mt. Apoi, Shoya, etc. Fl. May.

Dist. sp. Yezo, Kuriles, Saghalien, Korea, Ochotsk and Kamtchatka.

At Shoya, I collected some specimens which belong to var. *genuina* f. *lineariloba* TAKEDA, l. c. p. 8 (1910) {=*C. ambigua* β . *amurensis* l. 2. *linearilobus* MAXIM., Prim. Fl. Amur. p. 37 (1859); *C. ambigua* var. *stenoloba* FRANCHET ex BOISS. in Bull. Soc. Bot. France XLVII, p. 314 (1900); *C. ambigua* var. *angustifolia* YATABE, Nippon-shokubutsuhen I, p. 121 (1900)}.

188⁽²⁾***Corydalis Maximowicziana** NAKAI in Bot. Mag. Tokyo XXXIII, p. 51 (1919)—KUDO, Rep. Veg. N. Saghal. p. 142 (1924)—TATEW., Veg. Apoi p. 85 (1928)—NAKAI, Veg. Apoi p. 51 (1930)—KOMAROV et KLOBUKOVA-ALISOVA, Key Pl. Far East. Reg. USSR. I, p. 576, tab. 176, 5 & 7 (1931)

Nom. Jap. *Yezo-kikeman*.

Hab. in the lower part of Mt. Apoi, Shoya, etc. Fl. May.

Dist. Honshu, Yezo, Southern Kuriles, Saghalien, Korea, Manchuria, Ussuri and Amur.

189⁽³⁾***Corydalis ochotensis** TURCZANINOW in Bull. Soc. Imp. Nat. Moscou XIII, p. 62 (1840)—KUDO, Rep. Veg. N. Saghal. p. 142 (1924)—TATEW., Veg. Apoi p. 85 (1928)—NAKAI, Veg. Apoi p. 51 (1930)

f. **Raddeana** NAKAI in Bot. Mag. Tokyo XXV, p. [235] (1911)

Syn. *Corydalis Raddeana* REGEL in Bull. Soc. Imp. Nat. Moscou XXXIV-2, p. 143 & 145, tab IV, 10 (1861)—MIYABE et KUDO, Mater. Fl. Hokkaido X, p. 4 (1921)

Nom. Jap. *Nagami-no-tsuru-keman* (NAKAI).

Hab. in valleys of Mt. Apoi. Fl. Aug.

Dist. sp. Kyushu, Honshu, Yezo, Kuriles, Saghalien, Korea, China, Manchuria, Ochotsk, Ussuri and Amur.

34. *Papaveraceae*

Chelidonium L.

190⁽¹⁾***Chelidonium majus** LINNAEUS, Sp. Pl. ed. 1, I, 505 (1753)—KUDO, Rep. Veg. N. Saghal. p. 141 (1924)—TATEW., Veg. Apoi p. 85 (1928)—NAKAI, Veg. Apoi p. 51 (1930)

var. **grandiflorum** A. P. de CANDOLLE, Syst. Nat. II, p. 99 (1821)—BUSCH in Fl. Sibir. et Or. Extr. I, p. 11 (1913)

Nom. Jap. *Kusa-no-wô*.

Hab. in the lower part of Mt. Apoi, Horoidzumi, etc. Fl. May-Jun.

Dist. sp. Throughout the world.

(To be continued)