Observations on the Flora of Japan.

(Continued from p. 122)

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Desmodium Maximowiczii Makino, nom. nov.

Desmodium podocarpum var. *latifolium* Maxim. in litt.;
Matsum. Shokubutsu Mei-i (1895), p. 104.

Desmodium oxyphyllum var. *villosum* Matsum. in Bot.
Mag., Tokyo, XXI. p. 59.

Nom. Jap. *Hiroha-no-nusubito-hagi*.

Hab. Japan.

Prunus Koidzumii Makino, sp. nov. (Fig. XII.)

Prunus Pseudocerasus Dipp. Handb. Laubholz. III. (1893),
fig. 253, vix non Lindl., excl. syn.

Prunus pseudo-Cerasus var. *γ. serrulata* subvar. *b. Sieboldi*
Makino in Bot. Mag., Tokyo, XXII. (1908), p. 102, pro parte.

A tree; branches cinereo-castaneous, with old lenticels; branchlets cinereo-castaneous or rufescent-castaneous, terete, glabrous, dispersed with punctiform lenticels; young branchlets foliiferous, terete, glabrous, smooth, light green and usually shaded with purple, dispersed with minute punctiform or fusi-form lenticels. Leaves obovato-elliptical, obovato-oval, or elliptical, rounded-obtuse or rounded or subcordate at the base, abruptly caudato-acuminate at the apex, duplicately dentato-serrate with deltoid or ovato-deltoid sharp teeth, membranaceous, green and not shining or slightly shining and dispersedly pubescent with patent hairs above, paler and pubescent with patent hairs beneath (hairs denser on midrib and veins also on

transverse main veinlets), 4–11½ cm. long, 2½–6½ cm. broad; veins about 8–10 on each side, erect-patent, slightly arcuate above, connected to the upper next one at the end near the margin; main veinlets transverse between veins, and small veinlets finely anastomosing between main veinlets; petiole pubescent with spreading pale hairs throughout, terete, narrowly canaliculate in front, with 1–2–3 sessile discoidal small purple glands in the apical portion

FIG. XII.

(the gland often placed on the basal portion of the margin of the blade), light green and usually shaded with purple in front, about 10–18 mm. long; young leaves softly and densely pubescent on both surfaces and in the petiole; midrib prominent beneath; stipules small, shorter than the petiole, shortly few-laciniate or subflabellately few-laciniate with subulate subulato-linear or linear sometimes lato-linear acuminate-tipped erect-patent lobes, or nearly so, glanduloso-fimbriate with erect-patent loose

ciliiform-denticles on margin, 3–15 mm. long, viridescent and shaded with purple, deciduous. Inflorescence protected with deciduous perulæ at the base, umbellately or corymboso-racemously 1–4-flowered, bracteate and often bracteolate; rachis light green, very slightly pubescent with patent hairs, attaining about 10 mm. in the longest one; common peduncle short, straight, light green, glabrous or very thinly pubescent above, 3–17 mm. long; bracts herbaceous, sessile, depressed-obovate, depressed-orbiculate, or orbiculate, broadly and shortly cuneate towards the base, truncato-rounded or rounded at the apex, glanduloso-denticulate with often purpurascent teeth, green and often thinly shaded with purple, flabellately veined, and reticulately venuled above, glabrous or very slightly pubescent at the base dorsally, $4\frac{1}{2}$ –10 mm. long, 4–10 mm. wide, sometimes the lowest one 3-lobed or flabellato-lobed, rarely attaining about 15 mm. long, 11 mm. wide; bracteoles placed in the basal portion of the pedicel, cuneato-obovate, rounded-obtuse at the apex, glanduloso-denticulate; perulæ imbricated, reflexo-patent in the inner ones, the lower ones small, chartaceo-crustaceous, shining, glabrous, semiorbiculate to semiorbiculato-ovate, obtuse, darkish-fulvous, the middle ones larger, membranaceo-subcrustaceous, ovate to obovato-oblong, obtuse, ciliated, pubescent above internally, the upper (inner) ones largest, herbaceous, viridescent and often shaded with purple, attaining about 12 mm. long and 5 mm. broad, spathulato-oblong, attenuated and cuneated below, shortly 3-fid (occasionally flabellately lobed) with obtuse or acutish lobules at the apex, glanduloso-ciliated, glabrous externally, tomentoso-pubescent with light-leather-coloured hairs internally, these of the leaf-bud often more or less larger and sometimes deep-3-fid in the interior one, the middle lobe often developed into a small petiolate leaf. Flower coetaneous or sometimes precocious, semi-double, or sometimes nearly simple, about 4 cm. across, dilute-rosy but usually deeper towards the upper margin of petals, lately turned to a purpurascent hue in bottom of corolla; pedicels short, erect or erect-patent, narrowly terete, thinly pubescent with pale-rufescent patent hairs, light-green and often shaded with purpuras-

cent hue, 12–23 mm. long. Calyx thinly pubescent, herbaceous, light-green and usually with a purpurascens shade, deciduous; tube short, obconico-obovate, acutely reduced and continued to the pedicel at the base, 4–6 mm. long, 3–4 mm. across in the top, pubescent hairs patent, the inner side yellowish-greenish and nectariferous in the lower half but white and lately purpurascens in the upper half; lobes 5 or 6 and often accompanied by the few small accessory ones between them, with close sinuses between lobes, patent, longer than the tube, 5–8 mm. long, 3–5 mm. wide, lato-ovate, ovato-elliptical, or oval-elliptical, obtuse or rounded or acutish at the apex, serrulate and thinly ciliated on margin, depressedly thin-pubescent externally, glabrous and slightly concave internally, triplinerved towards the median portion and reticulato-venuled towards the margin. Petals several to subnumerous, spreading, obovato-orbicular or obovato-oval, sessile and broadly cuneate at the base, emarginate with rounded lobes and a close sinus at the apex, entire, often plicate in centre, membranaceous, delicately reticulato-nervate, 16–21 mm. long, 13–18 mm. broad, deciduous. Stamens numerous, inserted on the throat of the calyx, erect-patent but erect in the inner ones, unequal in length, attaining about 9 mm. long in the outer longest ones, some of them often stipitato-petaloid; filament subulato-filiform, glabrous, white, lately gradually turned to purple; anther minute, rounded, minutely bifid at both ends, introrse, with oblong anther-cells, 1 mm. long, yellow. Ovary 1, small, ovoid, sessile, green, glabrous, smooth, $1\frac{1}{2}$ mm. long, 2-ovuled; style erect, slender, equal to or a little exserted upon the stamens in height, pale-green, light-green towards the stigma, glabrous but scantily pilose with spreading hairs at the base above the ovary, 11–14 mm. long; stigma small, truncate, oval to elliptical, concave in centre, light-green. Drupe.....

Nom. Jap. *Naden*.

Hab. Japan, cultivated (*T. Makino*!).

This is found in gardens, but its wild tract is yet unknown to us. Florists call it by the vulgar name of *Naden*. It differs from the various forms of *Prunus serrulata* Lindl., and

is unquestionably a distinct species, to which *P. pseudo-Cerasus* Lindl. (in Transact. Hort. Soc. VI. 1826, p. 91.) comes very near. The ramules of our species are quite glabrous, while those of *P. pseudo-Cerasus* Lindl. are pubescent after the author. I have named this graceful species in honour of Mr. G. Koidzumi, who devoted to the study of the Japanese *Rosaceae*.

Acer (Rubra) **rubrum** Linn. Sp. Pl. p. 1055, Cod. n. 7636.
var. pycnanthum (C. Koch) Makino.

Acer pycnanthum C. Koch in Miq. Ann. Mus. Bot. Lugd.-Batav. I. (1863-64), p. 250; Sieb. et Zucc. Fl. Jap. II. p. 86, tab. 143, fig. 1, et 1-4; Miq. Prol. Fl. Jap. p. 21, et in Archiv. Néerland. II. p. 470, 477, pro parte!; Franch. et Sav. Enum. Pl. Jap. I. p. 90, et II. p. 322, pro parte!; Maxim. in Mém. Biol. X. p. 591; Pax in Engler's Bot. Jahrb. VII. p. 254.

Acer rubrum Makino in Bot. Mag., Tokyo, XVI. (1902), p. 93 (Jap.); Koidzumi, Rev. Acer. Jap. (1911), p. 27, tab. 16.

Nom. Jap. *Hana-no-ki*, *Hana-kayede*.

Hab. Japan, central.

It grows always in dry places, and is not found yet in wild, but planted. Rarely the trunk attains about $1\frac{1}{2}$ m. in diameter, about 23 m. in height. This is only representative of the Sect. *Rubra* among the Japanese Maples.

Veronica japonensis Makino, nom. nov.

Veronica cana var. *decumbens* Makino in Bot. Mag., Tokyo, XXI. (1907), p. 32.

Stem repent, radicans.

Nom. Jap. *Tsuru-kuwagata* (T. Makino) *Yama-kuwagata*, *Koba-no-kuwagata*.

Hab. Japan, central, mountains.

Viola (Nomimium) **yedoensis** Makino, sp. nov.

Acaulescent; roots thickish, terete, elongate, perpendicular

or more or less spreading, often dividing from the base, with fine rootlets, pale. Leaves many, tufted, erect or erect-patent; blade (in the flowering time) narrowly lanceolate to ovato-lanceolate, obtuse with a subcallose tip at the apex, obtusotruncate to subcordato-truncate at the base, coarsely depressed-crenate, puberulent with short patent white hairs on both surfaces (but often subglabrous in the lower leaves), hoary-green above, paler beneath, ciliated, rather flaccid, about 2–6 cm. long, 1–1½ cm. wide; midrib prominent beneath, pale, pulvero-puberulent with short patent white hairs; veins about 5–9 on each side, loose, erect-patent, arcuate above; petiole usually long, about 2–6 cm. long in flower, narrowly viridi-alate (the alæ are the decurrency from the blade) on both edges above, pale-green and usually thinly purpurascens above, and pale below, flatish in front, rounded dorsally, puberulent with short patent white hairs; stipule long-adnate, about 1½–3½ cm. long, narrow, white or light purple above, thin, entire and usually very loosely short-glanduloso-ciliated, the free tip subulato-deltoid, subulate, or subulato-linear, acuminate, erect, scantily glanduloso-ciliated, 2–7 mm. long. Leaves after the flowering time increasing the size, subdeltoid-lanceolate, obtuse at the apex, cordato-auriculate and decurrent with the form of deltoid above at the base, depressed-crenate, white-puberulent except the lower shorter leaves (which are narrowly ovate to ovato-lanceolate), attaining about 8½ cm. long, 3½ cm. broad, green above, paler beneath, with about 5–9 erect-patent veins on each side of the midrib; petiole long, slender, semiterete, flatish in front, broadly canaliculate by the very narrow green alæ of both sides and light green moreover puberulent above, usually purpurascens towards the base. Scapes few to many, shorter than or equal to or slightly exserted upon the leaves, erect, slender, subangulate, very thinly purpurascens, puberulent with short patent white hairs, about 3–8 cm. long; bracts 2, below the middle or in the middle, adpressed, opposite, or subopposite, or sometimes alternate, angustately subulato-linear, acuminate, carinate dorsally, light purple and often viridescent above, glabrous, glanduloso-ciliated on the basal margin, 4–12 mm. long.

Flower about 18-27 mm. across, violet, inodorous, nodding. Sepals glabrous (but often slightly puberulent in back in those of the cleistogamous flowers), subulato-lanceolate or ovato-lanceolate, acuminate, entire, thin and narrowly scarious on margin, triplinerved, herbaceous, light green and sometimes thinly shaded with purple, 5-8½ mm. long (often very slightly longer in those of the cleistogamous flowers); basal-auricles depressed-square or semiorbicular, truncate or rounded or retuso-rounded at the apex, glabrous or thinly ciliolated (much so in those of the cleistogamous flowers) on margin, 1-1½ mm. long, those of the inner 2 much smaller and deltoid. Petals glabrous, entire, thin; upper 2 obovate or obovato-elliptical, rounded or subretuso-rounded at the apex, subcuneately attenuated and short-subunguiculate (slightly white in the anguis) at the base, 12-17 mm. long, 7-11 mm. broad; lateral 2 somewhat oblique in form, obovato-elliptical, rounded or retuso-rounded at the apex, subcuneate and subunguiculate at the base, naked (beardless) on the face, white and violet-veined towards the base, 13-17 mm. long, 6-9 mm. broad; lower one obovate, cuneately attenuated below, emarginato-rounded or emarginate at the apex, 12-16 mm. long, 8-11 mm. broad, violet and deep-violet-veined above, white and flabellately deep-violet-veined below or below and centrally; spur straight, oblong-tubular or linear-tubular, rounded or rounded-obtuse at the apex, often compressed laterally, violascent, glabrous, 7-8 mm. long. Stamens 3-4 mm. long; anther cream-pallid and sometimes violascent dorsally, rectangular-elliptical; connective-tip as long as the anther, ovate, acutish or obtuse, thin, rufescent; anther-appendages linear-filiform, attenuated above, viridescent, glabrous, 5-5½ mm. long. Ovary ovoid or ovoid-ellipsoid, glabrous, viridescent and sometimes thinly shaded with violascent tint, 1½-2 mm. long; style equal to or scarcely longer than the ovary, clavately enlarged towards the stigma, geniculate near the base, pale, glabrous; stigma deltoid marginate, truncate, with obtuse angles; ovules many, ellipsoid. Capsule ellipsoid, 3-facial with obtuse angles (the face with very shallow vertical grooves, the middle groove is the sutural

line), obtuse and mucronate with the style-base at the apex, with the persistent green calyx at the base, about 8 mm. long.

Nom. Jap. *Nodzi-sumire* (nov.).

Hab. Prov. MUSASHI: Tokyo and Its Vicinities (*T. Makino!*).

Viola (Nomimium) **minor** Makino, nom. nov.

Viola Patrinii var. *minor* Makino in Bot. Mag., Tokyo, VI. (1892), p. 50, et XVI. (1902), p. 126.

Root elongate, white. Leaves usually long-petiolate, oval-deltoid to deltoid with a subauriculato-cordate to subhastato-sagittate base and an obtuse or acutish apex in fruit; petiole slender. Flower small, violet.

Nom. Jap. *Hime-sumire*.

Hab. Japan.

Viola (Nomimium) **Maximowicziana** Makino in Bot. Mag., Tokyo, XVI. (1902), p. 128.

Viola Selkirkii forma major Maxim. in litt. (1888).

Viola serpens Yatabe, non Wall.

The reflexed calyx is a noteworthy point.

forma typica Makino.

Leaves dull green, often albo-variegated along nerves above.

Nom. Jap. *Ko-miyamasumire*.

Hab. Japan, mountains.

forma rubescens Makino.

Leaves dark-rubescens when fresh, not variegated. Otherwise as in the type.

Nom. Jap. *Aka-komiyamasumire*.

Hab. Prov. MUSASHI: Mt. Takao (*T. Makino!*).

Viola (Nomimium) **obtusa** Makino, nom. nov.

? *Viola sylvestris forma obtusa* Miq. Prol. Fl. Jap. p. 86.

Viola ovato-oblonga var. *obtusa* Makino in Bot. Mag., Tokyo, XXI. (1907), p. 59.

Viola odorifera Makino, MSS.

Viola sylvestris var. *odorifera* Makino (1904).

Viola fragrans K. Tanaka, non Sieber, nec Wiesb.

Flowers purple, odoriferous.

Nom. Jap. *Nioi-tachitsubosumire*.

Hab. Japan, fields and hills.

Not uncommon over Japan.

var. Chibai Makino, var. nov

Flower white.

Nom. Jap. *Shirobana-nioitachitsubosumire*.

Hab. Prov. RIKUCHÛ: Mukaiyama near Ichinoseki (*Yoshio Chiba*! May 2, 1909).

Viola* (Nomimium) *grypoceras A. Gray in Perry's Exped. Jap. II. p. 308.

Viola sylvestris γ. *grypoceras* Maxim. in Mém. Biol. IX. p. 743.

Viola longepedunculata Franch. et Sav. Enum. Pl. Jap. II. p. 286.

Viola sylvestris var. *japonica* Makino in Bot. Mag., Tokyo, XVI. (1902), p. 146.

Viola canina ε? *japonica* Ging. in DC. Prodr. I. (1824), p. 298.

Nom. Jap. *Tachi-tsubosumire*.

Hab. Japan.

Common.

forma albiflora Makino.

Viola sylvestris var. *japonica* *forma albiflora* Matsum. Ind. Pl. Jap. II. 2, p. 380.

Stems tufted, ascending, glabrous. Leaves smaller, long-petiolate, deltoid or ovato-deltoid, subcordato-truncate at the base, obtuse at the apex, depressed-crenate, membranaceous, glabrous, 15–22 mm. long, 15–24 mm. broad, finely fusco-punctate when dried; stipule laciniato-fimbriate. Flower white, long-peduncled; bracts above the middle of the peduncle, linear. Sepals subulato-lanceolate, acuminate. Petals oblong.

Nom. Jap. *Shirobana-tachitsubosumire*.

Hab. Prov. TOSA: Mt. Yokogura (*T. Makino*!).

Merely a form with the white flower; it is met with occasionally.

Viola (Nomimium) **dissecta** Ledeb. Fl. Alt. I. (1829), p. 255, et Fl. Ross. I. (1842), p. 244; Maxim. Prim. Fl. Amur. p. 47.

Viola pinnata β . *dissecta* Turcz. Fl. Baic.-Dah. I. p. 178; Regel, Pl. Radd. I. p. 222; Maxim. in Mél. Biol. IX. p. 717, Fl. Tangut. p. 79, et Enum. Mongol. p. 79; Franch. Pl. David. I. p. 41.

This species is, I think, distinct from *Viola pinnata* Linn. The mode of the dissection of the leaves of this species rather resembles those of *V. pedata* Linn. than those of *V. pinnata* Linn.

var. chærophylloides (Regel) Makino.

subvar. a. typica Makino.

Viola pinnata δ . *chærophylloides* Regel, Pl. Radd. I. (1861), p. 222.

Root elongate, white. Leaves long-petiolate, pedately trisected with distinct petiolules; those in the flowering time many-dissected into angustate lacinae; those in fruit much larger and much longer petiolate, segments lanceolate to broadly ovate, acuminate at the apex, all decurrent-cuneate at the base, lacinate and dentate, lacinae lanceolate or angustately lanceolate, acuminate. Flower white, but marked with violet veiny lines towards the base in the lower petal, sometimes shaded with purple in the back of the upper petals, odoriferous, about $1\frac{1}{2}$ –2 cm. across, lower than or exserted upon the leaves; scape viridescent and usually shaded with purple, bi-bracteate below the middle. Sepals lanceolate or ovato-lanceolate, often obtuse at the apex, green. Petals obovate or obovato-oval; spur oblong or narrowly oblong.

Nom. Jap. *Nanzan-sumire*.

Hab. Prov. TOSA: Mt. Kuromori (*R. Yatabe*! herb. Sc. Coll. Imp. Univ. Tokyo, Aug. 3, 1888); Prov. HIGO: Mt. Aso (*T. Makino*! Aug. 30, 1907), Nanataki-mura (*Kisaburô Miyake*! Aug. 15, 1906); Prov. BUNGO: Mt. Uba-dake (*T. Makino*! Aug. 1911).

(Distrib.) Corea.

forma Sieboldiana (Maxim.) Makino.

Viola pinnata var. *Sieboldiana* Maxim. in Mém. Biol. IX. p. 718 (1876); Franch. et Sav. Enum. Pl. Jap. II. p. 646.

Viola chærophylloides var. *Sieboldiana* Makino in Bot. Mag., Tokyo, XIX. (1905), p. 87.

Viola Sieboldiana Makino, l. c. p. 144 (Jap.).

Leaves pedately trisected with petiolules, those in flower and in fruit dissected into constantly angustate lacinae. Flower white, odoriferous, about $1\frac{1}{2}$ – $1\frac{1}{3}$ cm. across; scape bi-bracteate below the middle.

Nom. Jap. *Higo-sumire*.

Hab. Japan, mountains.

(Distrib.) Corea.

This form is probably identical with the type of *V. dissecta* Ledeb., or merely a form of it. The flowering specimens are difficult to distinguish from those of var. *chærophylloides* (Regel) Makino.

subvar. b. multifida Makino.

? *Viola pinnata* β. *multifida* Regel, Pl. Radd. I. p. 221.

Viola dissecta var. *chærophylloides* subvar. *Takahashii* Makino, MSS.

Leaves long-petioled, 5-parted with narrow and closed sinuses, orbiculate or obovate in outline, subcordate at the base, membranaceous, glabrous, pedato-palmately nerved, about 3–5 cm. long, $2\frac{1}{2}$ – $4\frac{1}{2}$ cm. broad; lobes confluent at base, narrow, obtuse-tipped, inciso-dentate or inciso-sublobuled with obtuse-pointed teeth, cuneate towards the base; mid-lobe larger and lanceolate; lateral upper lobes linear-lanceolate; lateral lower lobes smallest, ovate to ovato-lanceolate, often 2-parted; petiole attaining about 8 cm. long in flower. Flower as in the type; scape bi-bracteate below the middle.

Nom. Jap. *Momidzi-sumire* (nov.).

Hab. Corea: Mt. Nanzan (*A. Takahashi!*; *S. Iwasa!*).

An intermediate one between the *typica* and the next *subvar. albida* (Palib.) Makino. In Mt. Nanzan this occurs in the locality of middle height between the *typica* and the next one,

the *typica* growing near the foot, next one in the higher altitude. Leaves resemble those of *Viola pinnata* Linn.

subvar. c. albida (Palib.) Makino.

Viola albida Palib. Consp. Fl. Kor. I. (1898), p. 30, tab. 3, fig. 2.

Viola dissecta var. *chærophylloides* subvar. *simplicifolia* Makino, MSS.

Leaves long-petiolate, simple, not dissected, deltoid or ovato-deltoid, cordate at the base, short-acuminate at the apex, usually irregularly crenato-dentata obtuso-dentate or inciso-dentate, green, $1\frac{1}{2}$ –12 cm. long, $1\frac{1}{2}$ – $8\frac{1}{2}$ cm. wide. Flower white, marked with violet veiny lines towards the base of the lower petal, about $1\frac{2}{3}$ —nearly 3 cm across, odoriferous; scape bi-bracteate below the middle, viridescent and usually purpurascens. Sepals lanceolate, viridescent. Petals oblong or obovate, lateral ones bearded; spur oblong.

Hab. Corea: Keifukukyū in Keijō (*K. Jō*!), Mt. Nanzan (*T. Uchiyama*!; *A. Takahashi*!; *S. Iwasa*!) Mt. Hokkanzan (*S. Iwasa*!).

var. eizanensis Makino, var. nov.

Viola pinnata var. *dissecta* Miq. Prol. Fl. Jap. p. 84; Franch. et Sav. Enum. Pl. Jap. I. p. 40, nec Turcz. nec Regel.

Viola pinnata var. *chærophylloides* Maxim. in Mém. Biol. IX. p. 718; Franch. et Sav. l. c. II. p. 646, non Regel.

Viola chærophylloides Makino in Bot. Mag., Tokyo, XIX. (1905), p. 17, non *V. pinnata* δ . *chærophylloides* Regel.

Viola pinnata Franch. et Sav. l. c. II. p. 291 (in consp. spec.), non Linn.

Acaulescent; roots elongate, few, with fine rootlets, white, rhizome erect, thick, sometimes very thick, protected by vaginæ above, sometimes attaining 3 cm. long. Leaves few-several- or sometimes subnumerous-tufted, long-petiolate, trisected with distinct petiolules, glabrous or puberulent on nerves and towards the margin and also ciliated, subflaccid, membranaceous, green, heteromorphous; those of the flowering time attaining about 9 cm. long and 7 cm. broad; segments ovate broadly ovate or oblong in outline, deeply dissected into lanceolate or linear-lanceolate acutish- or obtuse- or acuminate-tipped

pauci-lacinulated lacinæ, obtuse (rarely acute) to subcordate at the base, the lateral segments usually pedately 2-divided, with a shorter petiolule; petiole slender, about $2\frac{1}{2}$ –12 cm. long; stipules adnate, membranaceous, viridescent, the upper free portion narrowly subulate and very acuminate; those in fruit much larger sized and much longer petioled, cordate at the base, trisected with distinct petiolules, usually ample; segments ovato-lanceolate, elliptical-ovate, or ovate, acuminate, subinciso-serrato-dentate or coarsely crenato-serrate, simple, or often 2-sected in the lateral ones, often 3-parted in the middle one, cordate or subcordate at the base in the lateral ones, but cuneate to obtuse or subcordate at the base in the middle one, attenuated towards the apex, attaining about 14 cm. long, nearly 6 cm. broad; petiole attaining about 26 cm. long. Flowers few to several to a stock, lower or higher than leaves, rather large, about $2\frac{1}{4}$ – $2\frac{3}{4}$ cm. across, often odoriferous, mainly dilutely rosy with rosy veins or sometimes pale; scape 4–13 cm. in height, glabrous, viridescent and often shaded with purple, bracteate in the lower portion; bracts 2, opposite, subulato-linear, acuminate, often purpurascent. Sepals glabrous, lanceolate or lato-lanceolate, acute, slightly larger and usually subfalcate in the lower 2, entire and not ciliated, with 3 main nerves, often shaded with purple, 12–18 mm. long including the basal auricles, 2– $3\frac{1}{2}$ mm. broad; basal auricles rectangular or subflabellato-rectangular, dentate or inciso-dentate at the apex, $2\frac{1}{2}$ –7 mm. long, those of the lateral sepals very minute and deltoid. Petals: upper 2 obovato-oval or obovato-elliptical or elliptical, rounded or subemarginate at the apex, shortly subunguiculate at the base, 13–18 mm. long, 8–10 mm. broad; lateral 2 scarcely longer than the upper ones, obovato-oblong, rounded at the apex, attenuated below, slightly barbate near the base, 14–19 mm. long, 7–9 mm. broad; lower one squal to the lateral ones in length except the spur, obovato-elliptical, subcuneate below, emarginate or nearly so at the apex, 7–11 mm. broad; spur oblong-elliptical to oval, rounded at the apex, straight, about $5\text{--}6\frac{1}{2}$ mm. long, purpurascent or pale. Stamens 5 mm. long; anther oblong; connective-tip hardly

shorter than the anther, ovato-oval, oval-elliptical, or ovato-deltoid, rounded or acutish at the apex, membranaceous, rufous; appendages linear, gradually attenuated above, obtuse at the apex, slightly dilated at the base, 5–6 mm. long. Ovary conico-ovoid, acute towards the style, glabrous, about 3 mm. long; style usually scarcely longer than the ovary, obscurely geniculate near the base, clavately enlarged above; stigma obovate, shortly rostrate. Capsule ellipsoid, acute at the apex, glabrous, 10–16 mm. long.

Nom. Jap. *Eizan-sumire*, *Ezo-sumire*, *Kakuremino*.

Hab. Japan, mountains.

Remarkable by having the peculiar large leaves after flower.

var. simplicifolia Makino.

Viola chærophylloides forma simplicifolia Makino in Bot. Mag., Tokyo, XIX. (1905), p. 17.

Nom. Jap. *Hitotsuba-czosumire*.

Hab. Prov. SHIMOTSUKE: Mt. Nikkô (*T. Makino*!).

Viola (Nomimium) **nipponica** Maxim. in Mém. Biol. IX. p. 739, in nota (1876), non Makino.

? *Viola hirta* var. *japonica* Maxim. l. c. p. 738.

Viola hirta var. *japonica* Auct. Jap.

Nom. Jap. *Aoi-sumire*.

Hab. Japan.

Common.

Viola (Nomimium) **Savatieri** Makino in Bot. Mag., Tokyo, XVI. (1902), p. 125.

Viola incisa var. *acuminata* Franch. et Sav. Enum. Pl. Jap. I. p. 41, et II. p. 284; Maxim. in Mém. Biol. IX. p. 720.

Viola Patrinii var. *acuminata* Makino, l. c. XIX. (1905), p. 73.

Nom. Jap. *Edo-sumire*, *Ezo-no-sumire*, *Doraba-sumire*, *Nokogiri-sumire*, *Azami-sumire*.

Hab. Japan.

Rare.

var. multifida (Franch. et Sav.) Makino.

Viola incisa β . *multifida* Franch. et Sav. Enum. Pl. Jap. II. p. 284.

Viola multifida Makino in Bot. Mag., Tokyo, XVI. (1902), p. 125, non Mill. nec Willd.

Viola chrysanthemifolia Makino, ined.

Leaves incresing the size after anthesis; blade attaining 9 cm. long, 7 cm. wide; petiole attaining $21\frac{1}{2}$ cm. long.

Nom. Jap. *Kikuba-sumire*.

Hab. Prov. MUSASHI: Tokyo, cultivated (*T. Makino*!); Prov. SHINANO, spontaneous (*K. Yazawa*!).

***Viola* (Nomimium) *Iwagawai* Makino, sp. nov.**

Acaulescent, small; rhizome erect or ascending, slender, loosely articulated, loosely issuing fibrous delicate white roots, about $\frac{1}{2}$ – $2\frac{3}{4}$ cm. long. Leaves small, long-petiolate, few-several-tufted, often spreading, deltoid or depressed-deltoid, obtuse at the apex, truncate or subcordato-truncate and minutely short-subdecurent to the petiole at the base, 3– rarely 4–crenate on each margin, membranaceous, green and slightly pubescent with white hairs on nerves towards the margin, paler and quite glabrous beneath, 4–9 mm. long, 4–10 mm. broad; veins 2–3 on each side, loose; petiole filiform, glabrous, viridescent, apertous, 1 – $3\frac{1}{3}$ cm. long; stipule about $1\frac{1}{2}$ – $2\frac{1}{2}$ mm. long, adnate, the free portion subulate. Scape filiform, about $3\frac{1}{3}$ cm. long in fruit in my specimens, glabrous, bracteate below the middle; bracts 2, approximate, linear. Sepals lanceolate, attaining about 3 mm. long. Capsule glabrous, about 4 mm. long.

Nom. Jap. *Yakushima-sumire* (nov.).

Hab. Prov. ÔSUMI: Isl. Yakushima, shady places on mountains (*T. Makino*! Sept. 1909).

This species comes near *Viola Tashiroi* Makino of Yaeyama Archipelago, from which it differs by the smaller size, invariably deltoid leaves, and slender and loosely articulated rhizome. I have named this in memory of Mr. Kakunojô Iwagawa, who was in the botanical excursion with me to the Island in September 1909.

(*To be continued.*)