Observations on the Flora of Japan.

(Continued from p. 184.)

By

T. Makino.

*Lecturer of Botany in the Science College,
Imperial University of Tokyo.*

***Halophila euphlebia* Makino, sp. nov. (Fig. XV.).**

Halophila ovalis Hayata, Mater. Fl. Formos in Journ. Coll. Sc. Imp. Univ. Tokyo, XXX. 1 (1911), p. 309, non Hook. fil.

A submerged marine perennial herb. Stem long-creeping, hypogæous, laxly ramose, rooting at nodes, stout-filiform, 1–1½ mm. in diameter, glabrous, pale; internodes about ½–4 cm. long; root one to a node, long, filiform, clothed with white delicate root-hairs. Leaves in pair at each node of the stem, arising upon sand or mud, petiolate, enclosed the base of petioles with one of scales, which are placed at each node of stems; lamina oblong, broadly oblong,

FIG. XV. *mag.*

or oval-elliptical, rounded or rounded-obtuse at the apex, obtuse at the base, quite entire, herbaceous, thickly membranaceous, smooth, glabrous, thickish towards the straight midrib, green, not hyaline on margin, 13–21 mm. long, 6–11 mm. broad, penninerved with lateral veins which are connect a broad middle costa and the marginal nerves; lateral veins numerous and about 16–18 on each side, distinct, spreading (sub-erect-patent), subclosely parallelly arranged, simple and bifurcate at the base; the upper ones hardly arcuate upwards, the middle ones sub-straight, and the lower ones hardly arcuate downwards, the branches of the bifurcate vein sometimes again connate or one of them connate to the neighboring one, the area limited by two veins broadly linear; the marginal nerve truly marginal but the upper portion very scarcely intramarginal, or sometimes entirely slightly intramarginal; petiole shorter or longer than the lamina, slender, glabrous, purpurascenscent as well as the very base of the lamina, not dilated at the base, slightly short-dilated under the lamina and about $1\frac{1}{3}$ mm. wide, $\frac{1}{2}$ – $3\frac{3}{4}$ cm. long; scales 2, short, placed at the node, spuriously opposite, vaginate, inner 1 (Fig. XV. a) conduplicate enclosing the base of petioles and 1-nerved, outer 1 (Fig. XV. b) amplexicaul above the node and sub-3-nerved, any one thinly membranaceous, hyaline, broad, transversely elliptical, emarginate at apex, 5–6 mm. long. Flowers.....

Nom. Jap. *Ô-umihirumo* (nov.), *Umi-koban* (nov.).

Hab. Prov. Awa in Shikoku: Shishikui in Kaifu-gôri (*D. Nikai!* herb. Sc. Coll. Imp. Univ. Tokyo, Aug. 22, 1906).

(Distrib.) Isl. Pratas (*T. Kawakami!* June 1908).

This species differs from *Halophila ovalis* Hook. fil. and *H. ovata* Gaud. in having the broader and thicker leaves, marginal or sub-intramarginal nerves, numerous and closely arranged lateral veins, and purpurascenscent petiole.

Halophila ovalis (R. Br.). Hook. fil. Fl. Tasm. II. p. 45; Miq. Fl. Ind. Bat. III. p. 230; Boiss. 'Fl. Orient. V. p. 2'; Benth. Fl. Austral. VII. p. 182; Aschers. 'in Nuor. Giorn.

Bot. Ital. III. p. 301, 'et in Linnæa, XXXV. p. 173 ; Journ. Bot. (1875), p. 113 ; Matsum. in Bot. Mag., Tokyo, IX. (1895), p. 69 ; Makino in Bot. Mag., Tokyo, X. (1896), p. 318. (Fig. XV.)

Caulinia ? *ovalis* R. Br. Prodr. Fl. Nov. Holl. (1810), p. 339.

Kerneria ? *ovalis* Schult. Syst. Veg. VII. (1829), p. 170.

Halophila ovata F. Muell. Fragm. Phytogr. Austral. VIII.

(1872-74). p. 219 ; Hook. fil. Fl. Brit. Ind. V. p. 663 ; Trimen, Handb. Fl. Ceyl. IV. p. 128 ; Ito in Ann. Bot. XIII. (1899), p. 465 ; Wright in Journ. Linn. Soc. XXXVI. p. 3 (1903) ; Matsum. Enum. Pl. Jap. II. 1, p. 32, non Gaudich.

? *Thalassia stipulacea* Miq. Fl. Ind. Bat. III. p. 226, excl. citatio., non Koen.

Barkania punctata Ehrb. Symb. Phys. Bot. in Abhandl. Berl. Akad. I. p. 429.

Halophila madagascariensis Steud. Nomencl. Bot. ed. 2, I. p. 720.

Halophila Kotschyana Fenzl, ex Aschers. in Linnæa, XXXV. p. 713.

Nom. Jap. *Umi-hirumo* (J. Matsu-mura in Bot. Mag., Tokyo. IX. p. 69).

Hab. Prov. SAGAMI : Misaki (*Y. Yabe* ! herb. Sc. Coll. Imp. Univ. Tokyo, July 19, 1899 ; *T. Nakai* !

herb. ibid. Aug. 1909, floriferous !) ; Prov. SANUKI : Kôzai (*T. Makino* ! Sept. 4, 1906) ; Prov. NOTO : Uchi-ura (*K. Okamura* ! herb. ibid. Dec. 18, 1902), Nanao (*T. Ichimura* ! herb. ibid. Aug. 3, 1910).

The congener *Halophila ovata* Gaudich. in Freyc. Voy. Bot. (1826). p. 430, tab. 40, fig. 1 ; Ostenfeld in Philipin Journ. Sci. IV. Suppl. p. 67, is hitherto unknown in Japan, but while the above *H. ovalis* Hook. fil. exists there.

FIG. XVI. *mag.*

Cymodocea (Amphibolis) **asiatica** Makino, sp. nov.
(Fig. XVII.)

Perennial, not robust. Rhizome creeping, hypogæous, slender, terete and striate, about 2 mm. across, with nodes which are hardly prominent, rooting, subligneous and leather-coloured when dry; internodes long, about 3–4 cm. long; branches one to each node, erect, very short, about 1 cm. or a little more long, ending a tuft of leaves at the top, often loosely 1- or 2-cicatriscate, subligneous when dry; roots one or two to each node, long, terete, with branchlets except the basal portion, attaining about 12 cm. in length. Leaves about 3 and tufted at the top of branches, closely placed and alternate, clasping each other with convolutely inflexed-margined sheaths, sessile, 2-seriate; sheath light leather-coloured, cuneate, complanate, contracted towards the base, separated from the lamina by a transverse line, membranaceous, about 13–22 mm. long, about 8 mm broad but about 14–15 mm. broad when laid open, longitudinally subnumerous-nerved and with very loose delicate transverse venules between the nerves, very thin and subhyaline and looser-nervate towards the entire margin, truncate with a short free transversely narrow entire nerved subhyaline ligule, which is produced and auriculate into a small cuspidate tip at the both sides; that of the inner-

FIG. XVII.

a, slightly magnified. *b*, magnified.

most leaf very short and rudimentary; the outermost old one free from the fallen lamina; lamina plane, membranaceous, firm, darkish when dried, broad-linear, often more or less falcate, subtruncato-rounded and not scarious at the apex, slightly serrulate with short acutish and depressed-obtuse minute teeth towards the apex but otherwise quite entire, 3–8 cm. long, $4\frac{1}{2}$ –7 mm. wide, about 14–15-nervate and with very loose transverse delicate venules between nerves; midrib scarcely stronger. Genitals unknown.

Nom. Jap. *Ryûkyû-amamo* (nov.).

Hab. LIUKIU: Naha in Isl. Okinawa (*S. Kanagusuku*! April 1911).

This marine phanerogam comes very near *Cymodocea ciliata* Ehrenb., from which it differs in having the smaller feature, elongate internodes of the rhizome, much shorter branches, fewer nerves of leaves, and not emarginato-retuse apex and not scarious apical margin of the lamina, etc; it is more closely allied to *C. antarctica* Endl., which has the leavers of the truncate apex with acute angles or teeth (after Benthams) or “semilunati emarginata” apex (after Græbner).

Salvia pygmæa Matsum. in Bot. Mag., Tokyo, XI. (1897), p. 71, et Ind. Pl. Jap. II. 2 (1912), p. 549.

Flowers smaller than those of *S. Ranzaniana* Makino. Stamens and style much exserted.

Nom. Jap. *Hime-tamurasô* (nov.).

Hab. LIUKIU: Isl. Okinawa (*H. Kuroiwa*!), Ôgimi in Isl. Okinawa (*J. Matsumura*! herb. Sc. Coll. Imp. Univ. Tokyo, May 1897); YABYAMA ARCHIPELAGO: Mt. Omoto-dake in Isl. Ishikaki (*S. Kanagusuku*! July 1911).

In size this species is like *Salvia Ranzaniana* Makino; it is probably a variety of *S. japonica* Thunb. (= *S. japonica* var. *intermedia* Makino).

Scirpus lacustris Linn. var. ***Tabernæmontani*** (Gmel.) Trautv. ex Regel in Act. Hort. Petrop. VII. (1881) p. 559.

forma albo-viridis Makino, nov.

Culm alternately and elegantly white and green; sheath and reduced blade usually also so.

Nom. Jap. *Shima-futoi*.

Hab. Prov. MUSASHI: Tokyo, cultivated (*T. Makino*!).

A garden form.

Scirpus cyperinus (Linn.) Kunth, Enum. Pl. II. p. 170.

Eriophorum cyperinum Linn. Sp. Pl. ed. 2, p. 77.

var. karuisawensis Makino.

Scirpus karuisawensis Makino in Bot. Mag., Tokyo, XVIII. (1904), p. 119.

Spikelets often glomerate.

Nom. Jap. *Ko-aburasusuki* (*T. Makino*).

Hab. Prov. SHINANO: Karuisawa (*T. Makino*! Sept. 1904).

Themeda triandra Forsk. Fl. Æg.-Arab. (1775), p. 178.

var. japonica (Willd.) Makino.

Anthistiria japonica Willd. Sp. Pl. IV. (1805), p. 901; Spreng. Syst. Veg. I. p. 291 (*Anthesteria*); Steud. Syn. Pl. Gram. p. 401.

Anthistiria arguens var. *japonica* Anderss. ex Miq. Prol. Fl. Jap. p. 178; Franch. et Sav. Enum. Pl. Jap. II. p. 191.

Themeda Forskalii §. *major* subvar. *japonica* Hack. Andropog. in DC. Monogr. Phanerog. VI. p. 662.

Themeda Forskalii var. *japonica* Hack. in Bull. Herb. Boiss. VII. (1899), p. 642.

Themeda triandra var. *major* subvar. *japonica* Rendle in Journ. Linn. Soc. XXXVI. p. 378.

Stipa arguens Houtt. Nat. Hist. XXXI. (1782), tab. 92, fig. 1, et Linn. Pfl.-Syst. XII. (1785), tab. 92, fig. 1, excl. descr.

Andropogon ciliatum Thunb. Fl. Jap. p. 40.

Nom. Jap. *Karukaya*, *Me-garukaya*.

Hab. Japan.

Arthraxon hispidus (Thunb.) Makino, nom. nov.

Phalaris hispida Thunb. Fl. Jap. (1784), p. 44; Willd. Sp. Pl. I. p. 330; Rœm. et Schult. Syst. Veg. II. p. 407.

Lasiolytrum hirtum Steud. in Flora (1846), p. 18, et Syn. Pl. Gram. p. 12.

Arthraxon ciliaris Beauv. Agrost. (1812), p. 111, tab. 11, fig. 6; Franch. et Sav. Enum. Pl. Jap. II. p. 187; Hack. in Bull. Herb. Boiss. VII. (1899), p. 642; Rendle in Journ. Linn. Soc. XXXVI. p. 359.

Arthraxon japonicus Miq. Prol. Fl. Jap. p. 176.

Nom. Jap. *Kobuna-gusa*.

Hab. Japan.

Isachne globosa (Thunb.) O. Kuntze, Rev. Gen. Pl. (1891), p. 778.

Milium globosum Thunb. Fl. Jap. (1784), p. 49; Willd. Sp. Pl. I. p. 360; Pers. Syn. Pl. I. p. 74; Rœm. et Schult. Syst. Veg. II. p. 321; Spreng. Syst. Veg. I. p. 251; Steud. Syn. Pl. Gram. p. 34.

Agrostis globosa Poir. Encycl. Suppl. I. p. 257.

Echinochloa globosa Kunth, Enum. Pl. I. p. 73.

Halopus globosus Steud. l. c. p. 99.

Eriochloa japonica Kunth, l. c. p.

Panicum antipodum Spreng. l. c. p. 314; Steud. l. c. p. 94.

Isachne australis R. Br. Prodr. Fl. Nov. Holl. I. p. 196; Kunth, Enum. Pl. I. (1833), p. 136; Benth. Fl. Austral. VII. p. 625, et Fl. Hongk. p. 414; Miq. Prol. Fl. Jap. p. 164; Franch. et Sav. Enum. Pl. Jap. II. p. 164; Hack. in Engler's Bot. Jahrb. VI. (1885), p. 50, et in Bull. Herb. Boiss. VII. (1899), p. 643, 2. Sér. IV. (1904), p. 528; Rendle in Journ. Linn. Soc. XXXVI. p. 321.

Nom. Jap. *Chigo-zasa*.

Hab. Japan.

Polypogon misere (Thunb.) Makino, nom. nov.

Festuca misera Thunb. Fl. Jap. (1784), p. 52; Willd. Sp. Pl. I. p. 427; Pers. Syn. Pl. I. p. 95; Rœm. et Schult. Syst. Veg.

II. p. 732 ; Spreng. Syst. Veg. I. p. 356 ; Kunth, Enum. Pl. I. p. 410 ; Steud. Syn. Pl. Gram. p. 315.

Polypogon Higegaweri Steud. Syn. Pl. Gram. p. 422 ; Hack. in Bull. Herb. Boiss. VII. (1899), p. 648, et 2 Sér. IV. (1904), p. 528.

Polypogon littorale Asa Gray, Pl. Jap. p. 328 ; Miq. Prol. Fl. Jap. p. 166 ; Franch. et Sav. Enum. Pl. Jap. II. p. 167, non Sm.

Nom. Jap. *Hie-gaeri*.

Hab. Japan.

Trisetum flavescens (Linn.) Beauv. Agrost. p. 88.

Avena flavescens Linn. Sp. Pl. p. 80.

Trisetum pratense Pers. Syn. Pl. I. p. 97.

var. bifidus (Thunb.) Makino.

Bromus bifidus Thunb. Fl. Jap. (1784), p. 53 ; Willd. Sp. Pl. I. p. 431 ; Roem. et Schult. Syst. Veg. II. p. 664, in nota ; Kunth, Enum. Pl. I. p. 423 ; Steud. Syn. Pl. Gram. p. 319.

Trisetum cernuum A. Gray, Pl. Jap. p. 328, excl. syn. ; Franch. et Sav. Enum. Pl. Jap. II. p. 173, non Trin.

Trisetum flavescens Miq. Prol. Fl. Jap. p. 167, excl. syn., non Beauv.

Nom. Jap. *Kanitsuri-gusa*.

Hab. Japan.

Chrysanthemum morifolium Ramatuelle in Journ. d'Histoire Naturelle, II. (1792), p. 240 ; Henry in Gard. Chron. (1902), I. p. 301, fig. 93 ; Hook. fil. Bot. Mag. sub tab. 7874, *Chrys. indicum* Linn.

a. sinense (Sabine) Makino.

Chrysanthemum sinense Sabine in Trans. Linn. Soc. XIV. (1825), p. 145.

Dendranthema sinensis Des Moulins in Actes Soc. Linn. Bordeaux, XX. (1855), p. 562.

Pyrethrum sinense DC. Prodr. VI. p. 62 ; Maxim. in Mém. Biol. VIII. p. 517.

Pyrethrum sinense γ . *plenum* Maxim. l. c.

Chrysanthemum sinense γ . *plenum* Makino, ined.

Chrysanthemum sinense var. *hortensis* Matsum. Ind. Pl. Jap. II. 2 (1912), p. 639.

Capitula simple, semidouble, or double, small- medium- or large-sized, variable in colour.

Nom. Jap. *Kiku*.

Hab. Japan, cultivated.

This was introduced formerly from China, and now is very commonly cultivated in gardens. The ligulate florets of a certain race (*forma edule* Makino.—Jap. *Ryôri-giku*, with yellow flowers) and the leaves of any race are edible.

β . **genuinum** Hemsley in Henry, l. c. p. 301.

Chrysanthemum sinense *a. spontaneum* Makino in Bot. Mag., Tokyo, XXIII. (1909), p. 18.

Pyrethrum sinense *a. sinense* Maxim. l. c.

Chrysanthemum sinense *a. sinense* Makino, Ill. Fl. Jap. I. no. 8. (1891), p. 2, tab. 48.

forma japonense (Fig. XVIII.): plant attaining about 1 m. in height. Stem usually divided into 3 main branches in the middle. Leaves thick, cordate at the base, pinnati-lobed cleft or parted. Outer involucre bracts shorter, thicker, narrower, linear, scarioso-rounded tipped, densely albo-tomentose. Capitulum medium-sized, corymbosely disposed, usually many. Ligule white, equal to or shorter or longer than the diameter of the disc.

Nom. Jap. *Nodzi-giku* (Wild Chrysanthemum).

Hab. Japan, southern.

EXPLANATION OF FIG. XVIII.—1. Flowering branch. 2. One of leaves. 3. Do. 4. Hairs on leaves. 5. One of the capitula, with the short ligules. 6. Do., with the long ligules. 7. Vertical section of a capitulum. 8. One of the involucre scales. 9. Ligulate floret. 10. Do. indicating the nerves of the ligule. 11. Upper portion of the style of the ligulate floret. 12. Tubular floret. 13. Do. 14. Upper portion of the style of the tubular floret. 15. Tubular floret, the corolla laid open. 16. Do., vertical section. 17. Ovary, with the base of the style. 18. Stamens and the upper portion of the style.

FIG. XVIII.

19. Syngenesious anthers laid open, accompanied by the filaments. 20. Basal and apical portions of the anthers. 21. Floral diagram of the tubular floret. 22. Achæmium. 23. Do., vertical section. 24. Embryo. 25. Do., oblique view. 1, 2, 3, 4, 5 and 6 reduced, others magnified. This figure is taken from my "*Illustrations of the Flora of Japan*" vol. I. no. 8, pl. XLVIII, and reduced than the original size.

Lonicera japonica Thunb. Fl. Jap. p. 89.

var. Miyagusukiana Makino, var. nov.

Stem scandent, terete, thinly puberulent, badio-castaneous; branches terete, gracile, subtomentoso-puberulent with curved and adpressed short hairs, densely foliiferous throughout. Leaves small, opposite, short-petiolate, ovato-oval to ovato-oblong, mucronato-rounded at the apex, obtuse at the base, entire and very thinly ciliolated below on margin, glabrous but very thinly puberulent on the midrib on both surfaces, coriaceous, green and shining and impressed-veined above, paler and loosely reticulate-veined beneath, 8–27 mm. long, 5–15 mm. wide; midrib prominent beneath; veins few on each side, very loose, erect-patent, connate above; veinlets loose. Peduncle axillary, 2-flowered, extremely short (subsessile), puberulent and glandular among hairs; bracts 2, opposite, short-petiolate, erect-patent, oblong-lanceolate, ovato-oblong, or narrowly oblong, acute on both ends, entire, coriaceous, nearly glabrous, 4–6½ mm. long, the petiole thinly puberulent, 1–2 mm. long; bracteoles 4, squamiform, subulate or ovato-subulate, obtuse- or acutish-tipped, thick, ciliated and glandular on margin, often thinly puberulent dorsally, 1½–2 mm. long. Flowers sessile, about 2½ cm. long, odoriferous? Calyx 2 mm long; lobes 5, erect and adpressed on the corolla-tube, connate into a short tube at the base, broadly linear, obtuse at the apex, entire, ciliated and glandular on margin, very thinly puberulent or nearly glabrous dorsally, thick. Corolla narrow, bilabiate and parted down to the middle, puberulent with deflexed hairs and glandular externally on the tube and the lower portion of the limb, glabrous internally; tube narrow, terete; limb: outer lip broader and cuneate, 4-lobed at the

top, the middle sinus more shallow than the lateral sinuses, lobes elliptical in the middle one and oblong in the lateral 2, rounded at the apex; lower lip as long as the upper lip, simple, then recurved, linear, rounded at the apex. Stamens 5, inserted on the throat of the corolla, nearly as long as the corolla; filament filiform, glabrous; anther broadly linear, $2\frac{1}{2}$ –3 mm. long. Style equal to the stamen in height, filiform,

glabrous; stigma capitate. Ovary shortly obovoid, glabrous, $1\frac{1}{2}$ mm. long, 3-celled, thick-walled, with the rather thin dissepiments, few-ovuled in each cell.

Nom. Jap.
Hime-suika-
dzura (nov.).

Hab. LIUKIU
(*H. Kuroiwa*!;
S. Kanagusu-
ku!).

It appears at the first sight to be a distinct species but is a variety of *L. japonica* Thunb. The leaves are smaller denser and thicker, and the flower smaller.

FIG. XIX.

a, c. mag. b. nat. size.

***Lonicera shikokiana* Makino, sp. nov. (Fig. XIX.)**

Lonicera cerasina Maxim. in litt., non Mél. Biol. X. p. 64. (1877).

A deciduous shrub; branches et branchlets terete, glabrous, pale-drab, branchlets often opposite, erect-patent, the base of young branchlet, which are green, with the bud-scales; scales imbricated, glabrous but ciliated on margin, lower ones smaller and depressed-deltoid, middle ones deltoid to semiorbiculato-deltoid or ovate, upper ones larger, thinner, elliptical to spathulate, membranaceous, the innermost one much larger and often spathulato-linear, attaining about 15 mm. long. Leaves opposite, petiolate, oblong to oblong-lanceolate, sometimes lanceolate, long-acuminate with an obtuse or acute point, usually acute or sometimes obtuse and not oblique at the base, entire and ciliated with erect-patent hairs, thinly membranaceous, concolorous, glabrous on both surfaces but thinly pubescent towards the margin above, and very thinly and minutely glandular on the midrib as well as the lower portion of the lower veins above, $2\frac{1}{2}$ – $7\frac{1}{2}$ cm. long and $\frac{2}{3}$ – $3\frac{1}{3}$ cm. broad in flower; veins 4–8 on each side, delicate, erect-patent, arcuate upwards; veinlets inconspicuous; petiole erect-patent canaliculate and very thinly glandular in front, glabrous dorsally, 3–9 mm. long. Peduncle axillary, arising from the lower portion of the branchlets of this year, gracile, glabrous, green, 5–9 mm. long; bracts erect-patent, filiform-linear, acute, thin, subhyaline, entire and thinly glanduloso-ciliated, 1-nerved, longer than the ovary, 3–4 mm. long; bracteoles closely adpressed on the face of ovaries, 4 and greatly connate in the lateral sides but slightly connate in the front and back, as long as or somewhat shorter than the ovary, oval, rounded at the apex, entire, concave, loosely 1–2-nerved, glandular-ciliated on margin and thinly glandular towards the margin internally, glabrous externally, thinly herbaceous. Flowers geminate, sessile, coetaneous, about 11–12 mm. long. Calyx minute, very thin, meniscoid, very short, 4-lobed with semiorbiculato-deltoid or semiorbiculate obtuse- or acutish-tipped teeth and widely open sinuses, glabrous but

glanduloso-ciliated on margin, enerved, $\frac{1}{2}$ mm. long, $1-1\frac{1}{3}$ mm. across. Corolla sulphureous, bilabiate, parted down more than the middle, thinly pubescent on the throat and tube except the basal portion internally, very minutely ciliated towards the apex of lobes, otherwise glabrous; limb: upper lip broad, suborbiculate, about 5 mm. broad, shortly 3-4-lobed, lobes ovato-oval or oval-orbicular, rounded at the apex, with close sinuses, then reflexed dorsally; lower lip narrowly oblong, obtuso-rounded or subtruncato-rounded at the apex, entire, about $2\frac{1}{3}$ mm. broad; tube short, oblong, contracted at the very base, lunately subgibbose on the external side above the base, about 3 mm. long. Stamens 5, inserted at the throat, a little exserted or slightly lower than the corolla or about one-half as long as the limb; filament stout-filiform, glabrous, longer or sometimes shorter than the anther; anther linear, yellow, about 2 mm. long. Style filiform, glabrous, as long as or longer than the stamens in height; stigma large, fungiform-capitate. Ovaries small, ellipsoid or ovoid-ellipsoid, sometimes short-attenuated at the top, glabrous, both ones connate at the base or to the middle, $2-2\frac{1}{3}$ mm. long, 2-celled, 2-ovuled in each cell. Berry globose, scarlet.

Nom. Jap. *Usuba-hyôtamboku* (Kimei Fudzino).

Hab. Prov. TOSA: Mt. Yokogura (*T. Makino*!), Nanokawa (*K. Watanabe*!); Prov. AWA in Shikoku: Mt. Kôtsu in Oye-gôri (*D. Nikai*! herb. Sc. Coll. Imp. Univ. Tokyo).

A species very closely allied to *Lonicera cerasina* Maxim. having the very thin leaves. It belongs to the subgenus *Chamæcerasus*, section *Isoxylostium*, subsection *Cerasinæ*.

Rhamnus Kanagusukii Makino, sp. nov.

A shrub, glabrous. Branches terete, cinereously drab-brown; branchlets dense, alternate or opposite, patent or erect-patent, often spinose at the apex. Leaves small, alternate or fasciculate, very shortly petiolate, oblong to lanceolate or spathulate, obtuse or emarginate at the apex, acute or cuneate at the base, entire or obscurely crenate, very slenderly revolute on margin beneath when dry, coriaceous, 6-24 mm. long, 3-9

mm. broad; midrib prominent beneath; veins few (2-4) on each side, erect-patent, arcuate upwards, delicate; petiole 1-4 mm. long. Flower..... Fruit small, globose, glabrous, about 4 mm. across, provided with a persistent rounded calyx-tube at the base; pedicel gracile, glabrous, about 5-5½ mm. long.

Nom. Jap. *Hime-kuroumemodoki* (nov.).

Hab. LIUKIU: Mansamô at the foot of Mt. Onna in Isl. Okinawa (*Saburô Kanagusuku*! July 5, 1910).

A species having the smallest leaves among the Japanese *Rhamni*.

(*To be continued.*)