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A Contribution to the Knowledge of the Flora of Nippon.

(Continued from p. 14.)

By

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Phyllospadix iwatensis Makino, nov. sp.

A marine submerged perennial; rhizome repent, thick, terete, smooth, viridescent, with old basal portion and old light-gilvous fibres (not dense) of leaves, $5\frac{1}{2}$ -11 cm. long in my specimens; roots short, stout-fibrous, terete. Leaves fascicled, long and slender, angustate-linear, attaining about I m. in length, 2-4½ mm. broad, rounded at the apex, long and angustately sheathing at the base, entire but minutely scarioso-serrulate above on margins, flat, slightly thick (rather thin), rather firm in texture, smooth on both surfaces, green but fuliginous (not black) when dried, 3-nerved. Pedicel basal, solitary, simple, naked, angustate, flat, about 8 cm long; pistillate spike as that of Ph. Scouleri Hook., compressed, about 4 cm. long, 8 mm. broad; bracts 2-seriate, linear-lanceolate, obtuse at the apex, entire, thin, 10-11 mm. long; fruits rather many, secund on the flat spadix which is enclosing within the sheathing spathe (about $5\frac{1}{2}$ cm. long), compressed, rounded, entire-margined, deeply cordate-sagittate at the base, shortly beaked above, about 5 mm. wide; the upper appendage of spathe long and angustate, leaf-like.

Nom. Nipp. Hai-sugamo (nov. nom.).

Hab. Prov. RIKUCHÛ (=IWATE Prefecture): Miyako Peninsula (Т. Макио! 1929.).

This species may probably be growing among (not on) rocks in the surf. I have added now this new one to the Nipponese *Phyllospadix* (containing the two species of *Ph. japonica* Makino and *Ph. Scouleri* Hook.); the rhizome is as that of *Ph. Torreyi* S. Watson.

Lysichiton album Makino, nov. comb.

Lysichitum camtschatcense var. album Hort. Lysichiton camtschatensis auct. pl. non Scнотт. Nom. Nipp. Midzubashô. Hab. NIPPON, central and northern. Spathe pure white.

Pulsatilla cernua Spreng. var. flava (Makino) Makino, nov. comb.

Anemone cernua var. flava Makino in Journ. Jap. Bot. III. No. 6, p. 22 (1926).

Nom. Nipp. Kibana-okinagusa. Hab. Prov. HIDA.

Ranunculus (Batrachium) kadzusensis Makino in Journ. Jap. Bot. VI. No. 4, p. 8 (1929).

An submerged aquatic perennial; rhizome creeping in mud, rooting at nodes, fistulose, smooth, white; roots fibrous, slender, terete, white. Stem long and slender, loosely ramose, attaining about 3-4 mm. across at the base, slightly compressed, with many nodes, fistulose, smooth, viridescent, thinly pubescent; internodes rather short. Leaves alternate, very shortly petiolate, 1½-3 cm. long, 2½-4 cm. broad, transversely elliptical to oblong in outline, divaricately quinquefid, glabrous, slightly rigid, green or dull green; ultimate segments numerous, about 3-13 mm. long, fine, capillaceous, gradually tapering above, not collepsing when removed from the water; petiole 3½-9 mm. long, viridescent, very shallowly canaliculated in front, rounded and pubescent dorsally, broader below, with a stipular short sheath (sheath adnate to the basal portion of petiole) at the base, membranaceous, nearly orbiculate, about 4 mm. wide, with very close vertical areolae, ciliated on margin; 1st 3 petiolules shorter than the petiole, the lateral 2 slightly stouter and a little longer than the middle one, about $3\text{--}6\,\mathrm{mm}$. long. Flower solitary, pedicellate, expanding upon the water surface, appearing in the younger portion near the extremity of stem, small, 8-11 mm. across; alabastra small, globose; pedicel leaf-opposite and exceeding the leaves in length, erect, terete, smooth, glabrous or very scantily pubescent, bractless, about 1-2 cm. in flower but longer in fruit. Sepals 5, sessile, patent, shorter than the petals, oblong to elliptical, obtuse or rounded at the apex and base, entire and scarious on margins, thin, concave within, glabrous, dark violaceo-viridescent above, 1-nerved, subcaducous, 2-3 mm. long, $1\frac{1}{8}$ -2 mm. wide. Petals 5, patent, obovately oblong or obovately elliptical, shortly obovate-subcuneate below and very shortly unguiculate at the base, rounded at the apex, entire, thin, $3\frac{1}{2}-5\frac{1}{2}$ mm. long, $2-3\frac{1}{2}$ mm. wide, white, but yellow at the basal portion, with a minute squamiform truncate nectary above the base, 5-nerved, deciduous. Stamens subnumerous, about 9 in number, much shorter than the petals, erect-patent, yellow; filament arcuate upwards, stout-filiform, hardly enlarged above, somewhat compressed antero-posteriorly, $1\frac{1}{2}-1\frac{2}{3}$ mm. long; anther ovate-elliptical, minute, about $\frac{1}{2}$ mm. long, with yellow pollen. Ovary-cluster depressed-ovoid, many-carpellary, light green, 1½ mm.

long, 2 mm. across, sessile; ovary obliquely globose-ovoid, compressed laterally, smooth, glabrous, about $\frac{3}{4}$ mm. long; style shorter than the ovary, short-subulate, straight, very minutely puberulose, yellowish-green. Fruit-cluster terminating the pedicel (which has the length of about $2-3\frac{1}{4}$ cm.), depressedly ovoid-globose, rounded above, truncate at the base, many-carpellary, viridescent and purplish-darkish, about $3\frac{1}{2}$ mm. long, 4 mm. across; achene obliquely oval or oval-obovate, compressed laterally, glabrous, smooth in fresh but transversely wrinkled when dried, rounded dorsally in fresh but carinate when dried, slightly bow out ventrally, $1\frac{1}{3}$ mm. long, $1\frac{1}{3}-1\frac{1}{2}$ mm. broad; carpophore small, $1\frac{1}{2}$ mm. long, globose, pubescent with curved upwards and spreading pale hairs.

Nom. Nipp. Hime-baikwamo.

Hab. Prov. KADZUSA (T. MAKINO!); Prov. SHIMOOSA (T. MAKINO!).

This species is found growing in the streams or the stagnant water in the districts near sea, and sometimes it passes into the temporary terrestrial form by the dryness of water. Flowers May-July.

Diervilla sanguinea NAKAI.

α. Nakaii Makino.

Diervilla sanguinea Nakai in Nakai et Koidzumi, Trees and Shrubs in Jap. Prop. ed. 2, p. 697, fig. 316 (1927).

Flower constantly reddish-purple.

Nom. Nipp. Birôdo-utsugi (NAKAI).

Hab. Prov. MUSASHI: Kariyose-yama (T. Makino!).

β. versicolor Makino, nov. var.

Flower often slightly smaller than the type, at first pale, then changing into purplish-rose. Leaves as the type.

Nom. Jap. Nishiki-birôdoutsugi (nov. nom.).

Hab. Prov. MUSASHI: Kariyose-yama (T. Makino!).

Chrysanthemum Makinoi Nakai, var. chrysanthum Makino et Sakaguchi, nov. var.

Rev-flowers yellow!

Nom. Nipp. Kibana-ryûnôgiku (nov. nom.).

Hab. Prov. KII (T. OKABE!).

Very rare.

Kruhsea streptopoides (Ledeb.) Kearney, var. melanococca Makino, nov. var.

Berry black.

Nom. Nipp. Kuromi-no-himetakeshimaran (nov. nom.).

Hab. Prov. SHIMOTSUKE: Nikkô (T. MAKINO!).

Polygonum Persicaria L. var. pubescens Makino, nov. var.

Stem thinly hirsute-pubescent below.

Nom. Nipp. Ke-harutade (nov. nom.).

Hab. Prov. MUTSU: Mt. Osore-zan (T. Makino!); Prov. SHIMOTSUKE: Nikkô (T. Makino!).

Phellodendron nikkomontanum Makino, nov. sp.

Branchlets terete, smooth, rufous when dry, dispersed with minute punctate lenticels. Leaves opposite, petiolate, impari-pinnate, 13-32 cm. long, 11-24 cm. wide, deciduous; rachis slender, terete, pubescent with crispate short hairs; lateral leaflets 2-5-jugate, opposite but subopposite in the lower ones, shortly petiolulate; the odd terminal leaflet long-petiolulate; blade oblong-ovate, elliptical-ovate, or ovate-lanceolate, attenuatedly acuminate at the apex, subacute obtuse rounded or retuse-rounded at the base, which is often oblique in those of the lateral ones, inconspicuously very depressed crenate and thinly ciliated on margins, chartaceo-membranaceous, green and with the puberulent midrib and veins above, subglaucous and with the softly and densely palepubescent midrib and veins beneath, about 6-13 cm. long, 2-6 cm. wide; petiolule densely pubescent, erect-patent and 4-7 mm. long in the lateral leaflets, but 10-30 mm. long in the odd terminal leaflet; midrib prominent beneath; veins spreading, many on each side, arcuate upwards; veinlets finely and rather obviously anastomosing; petiole terete, puberulent, swollen at the base, 3-9 cm. long. Fructiferous cyme terminating the dichotomous short ultimate branchlets, peduncled, very divaricately ramose, short and broad, about 4-6 cm. long. Fruit shortly pedicellate, globose, smooth, glabrous, at first green, black when ripe, about 6-7 mm. across; peduncle straight, about 2-3½ cm. long.

Nom. Nipp. Nikkô-kiwada (nov. nom.).

Hab. Prov. SHIMOTSUKE: Mt. Nikkô (T. MAKINO!).

Prunus Lannesiana (Carrière) Wilson, var. speciosa (Koidzumi) Makino, nov. comb.

forma a. simpliciflora MAKINO.

Prunus Jamazakura B. speciosa Koidzumi.

Prunus donarium subsp. speciosa Koidzumi.

Prunus serrulata var. albida subvar. speciosa Makino.

Nom. Nipp. Oshima-zakura.

Hab. Prov. IDZU: Isl. Oshima.

forma b. semiplena Makino, nov. f.

Flower semi-double, white, slightly shaded with rose.

Nom. Nipp. Usugasane-ôshima (nov. nom).

Hab. Prov. SAGAMI: Manadzuru, planted (T. Makino! March 29, 1931).

(To be continued.)

ERRATA.

Page 5, for Japonolilion read Japonolirion.

- line 3 from bottom, for T. osense read J. osense.

Page 11, the upper corner, for 1913 read 1931.