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## A Contribution to the Knowledge of the Flora of Japan.

*(Continued from p. 4.)*

By

**Tomitarô Makino.**

***Illicium religiosum* SIEB. ET ZUCC. var. *Masa-Ogatai* MAKINO, nov. var.**  
(Fig. I.)

*I. Masa-Ogatai* MAKINO, MSS.

An evergreen shrub, erect, ramose; branches dark-brown, finely striate; branchlets few-verticillate, erect-patent, terete, glabrous, smooth, viridescent. Leaves pseudo-verticillate, petiolate, spreading, fallen off in 2nd or 3rd year, oblanceolate or broadly oblanceolate, moderately acuminate with an acute tip, acutely or cuneately attenuated towards the base, entire, thickish, coriaceous, glabrous, deep-green above, paler beneath, with a special odour when injure,  $4\frac{1}{2}$ -8 cm. long,  $1\frac{1}{2}$ -3 cm. wide; midrib light green, slightly elevated on both sides below; veins loose, erect-patent, inconspicuous; petiole slightly compressed antero-posteriorly, glabrous, arcuate upwards, 7-13 mm. long, light green. Flowers in the axil of leaves of the 2nd or 3rd year, solitary, pedicellate, sub-nodding, slightly odoriferous,  $2\frac{1}{2}$ - $3\frac{1}{2}$  cm. across, stramineo-coloured (after SACCARDO's Chromotaxia); pedicel slender, spreading or erect-patent, somewhat arcuate downwards, terete, glabrous, light green, with caducous bracts and soon become naked, scaly at the base, 15-27 mm. long; bracts 1-3, elliptical, ovato-elliptical or ovato-oblong, obtuse at the apex, membranaceous, concave, spreadingly ciliolated on margins, attaining 7 mm. long and 4 mm. broad, several-veined; scales (basal) small, imbricated, few, ovato-orbiculate to depressed-orbicular, obtuse or mucronato-obtuse at the apex, ciliolated, thickish,



*Illicium religiosum* SIEB. ET ZUCC.  
var. *Masa-Ogatai* MAKINO.

(reduced in size)

Fig. I.

about 1 mm. long, deciduous. Perianth subnumerous, imbricated, stellately spreading, slightly recurved, usually broadly linear, obtuse at the apex, narrowly revolute on both margins backwards, entire, spreadingly minute-ciliated on margins, glabrous on both surfaces, thickish, one-nerved, attaining about 17 mm. long, the inner one slightly shorter, narrower, angustato-linear, about 2 mm. wide, the outer ones shorter and broader, elliptical, attaining 6 mm. wide. Stamens about 3-serial, 11-15 in number, nearly erect or erect-patent,  $3\frac{1}{2}$ -4 mm. long, glabrous; filament broad, spathulato-oblong, thick, compressed antero-posteriorly, entire on margins,  $1\frac{1}{3}$ - $1\frac{2}{3}$  mm. broad, pale-yellowish; anther shorter than the filament, linear-oblong or linear-ovate, introrse, dehiscence longitudinal,  $1\frac{1}{4}$ - $1\frac{1}{2}$  mm. long; connective thick, yellowish; cells linear, with white pollen. Pistils in 8 carpels, erect, connivent, whorled and 1-serial on the short pyramidal axis, which is short-subclavately protrude at the apex, longer than the stamens, glabrous, 5 mm. long; ovaries obliquely ovate, prolonged into a style above, compressed laterally, thick-walled, one-ovuled, greenish; style erect, at first slightly stellately arcuate backwards then erect and straight, longer than the ovary, gradually tapering into a subulate form above, narrowly stigmatiferous on the inner edge, pale-greenish. Alabastrum elliptical, greenish-straw-coloured. Flowers in early spring.

Nom. Jap. *Okinawa-shikimi* (nov.).

*Hab.* Prov. MUSASHI: Tôkyô, cultivated from Okinawa of Ryûkyû by MASASUKE OGATA.

This variety is very closely allied to the type of *Illicium religiosum* STEB. ET ZUCC., but differs from the latter by having the more ciliated perianth. I have named this new variety in honour of Mr. MASASUKE OGATA, who was collected in the above-mentioned locality.

**Hamamelis flavo-purpurascens** (MAKINO) MAKINO, nov. comb.

*Hamamelis obtusata* forma *flavo-purpurascens* MAKINO in Journ. Jap. Bot. I. no. 2 (1916), p. 8.

Nom. Jap. *Nishiki-mansaku*.

*Hab.* JAPAN.

**Sedum aggregatum** (MAKINO) MAKINO, nov. comb.

*Cotyledon aggregatum* MAKINO in Bot. Mag., Tokyo, XXIV. (1910), p. 72, fig. 2.

Nom. Jap. *Ko-iwaringe*.

*Hab.* JAPAN, northern, near sea.

There are three forms, viz., **a. glaucum** MAKINO with the glaucous leaves; **b. subglaucum** MAKINO with the sub-glaucous leaves; **c. viridis** MAKINO with the green leaves.

**Sedum Iwaringe** (MAKINO) MAKINO, nov. comb.

*Cotyledon Iwaringe* MAKINO in Bot. Mag., Tokyo, XVI. (1902), p. 142.

Nom. Jap. *Iwaringe*.

*Hab.* JAPAN, usually cultivated.

***Sedum japonicola* MAKINO, nov. nom.**

*Cotyledon japonica* MAXIM. in Mém. Biol. XI. p. 724 (1883).

*Sedum spinosum* THUNB. Fl. Jap. (1784), p. 186, non *Cotyledon spinosa* L.  
Nom. Jap. *Tsume-rengé*.

*Hab.* JAPAN, widely but laxly distributed all over.

***Sedum Boehmeri* (MAKINO) MAKINO, nov. comb.**

*Cotyledon Boehmeri* MAKINO in Herb. Sc. Coll. Imp. Univ. Tokyo.

*Cotyledon malacophylla* var. *Boehmeri* MAKINO in Bot. Mag., Tokyo, XVI.  
(1902), p. 214.

Nom. Jap. *Komochi-rengé*.

*Hab.* JAPAN, northern.

***Sedum orientoasiaticum* MAKINO, nov. nom.**

*Cotyledon sikokiana* MAKINO Illustr. Fl. Jap. I. no. 8 (1891), p. 2, tab. 49.

Nom. Jap. *Chabo-tsumerengé*.

*Hab.* JAPAN, subalpine.

***Sedum polycephalum* (MAKINO) MAKINO, nov. comb.**

*Cotyledon polycephala* MAKINO in INUMA'S *Sômoku-Dzusesetsu*, ed. 3, II. 8,  
p. 54, tab. 48.

Perennial, about 15 cm. high; sterile rosulae aggregated with short stolons.  
Stem erect, with many leaves. Leaves linear, thick, succulent, glabrous,  
smooth, unispinose at the apex. Flowers densely clustered forming a terminal  
raceme, yellowish-viridescent. Stamens commonly 5.

Nom. Jap. *Yatsugashira*.

*Hab.* JAPAN.

***Gentiana iseana* MAKINO, sp. nov.**

Perennial, about 3 decim. high, glabrous. Stem slender, terete with 4  
fine elevated longitudinal lines, more or less ramose. Leaves opposite, lanceo-  
late or ovato-lanceolate, acuminate at the apex, acute and sessile or very  
shortly petiolate at the base, subsabrous and crispate on margins, 3-6½ cm.  
long, 1¼-1½ mm. wide, triplinerved. Flowers 1 or 2-4-fasciculate on the top of  
the main stem or branches, with leafy opposite bracts under the flower, 3-5½ cm.  
long. Calyx-tube obconico-tubular, 1½-2 cm. long; lobes 5, spreading, lanceolate  
or ovato-lanceolate, acuminate at the apex, usually obtuse at the base, ½-2½ cm.  
long, green. Corolla campanulate, attenuated below, 1½-2 cm. across, with  
ovato-deltoid acutish- or obtuse-tipped 5 lobes and 5 short accessory lobules,  
violaceo-caeruleous. Genital organs included.

Nom. Jap. *Ise-rindô* (nov.).

*Hab.* Prov. ISE: Yamada, on hill (T. MAKINO! 1924.).

This is probably a hybrid between *Gentiana sikokiana* MAXIM. and *G.*  
*scabra* BUNGE var. *Buergeri* MAXIM., where these both species are found growing  
in the same place. (To be continued.)