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A Contribution to the Knowledge of the Flora of Japan.
(Continued from p. 12)

By

Tomitaro Makino.

Quercus takaoyamensis Makino, nov. sp. (?= Q. acuta Thunb. × Q. sessilifolia Bl.)

A rather large tree. Branches slender, griseo-fuliginous; young branchlets olivaceo-viridescent, covered with drab wool at first but soon glabrous. Leaves petiolate, oblong-ob Lanceolate, abruptly short-acuminate, cuneate towards the base, entire but incumbent-serrate towards the apex, coriaceous, shining, glabrous, green above, pale-green beneath, 9-17 cm. long, 2½-5 cm. broad; midrib prominent beneath; veins erect-patent, about 10-14 on each side; veinlets finely reticulated beneath; petiole 1½-1⅔ cm. long, thick at the base. Rachis of the female spike short or very so, 1-2-fructiferous.

Nom. Jap. Ōtsukubunmegachi (nov.).

Hab. Prov. MUSASHI : Mt. Takao (K. Hisauchi, T. Makino!).

Probably this is a hybrid between Quercus acuta Thunb. and
Q. sessilifolia Bl., both of which are found growing near the present tree. The branches are laxer and the leaves larger than those of Q. sessilifolia Bl. to which it comes very near. The long petiole is like that of Q. acuta Thunb.

Saxifraga sarmentosa Link. fil. Suppl. p. 240.

var. viridifolia Makino, nov. var.
Leaves dark-green and not mottled with white above, purplish beneath.
Nom. Jap. Ao-yukinoshita (nov.).
Hab. JAPAN, cultivated, rare.

Rhynchosia acuminatifolia Makino, nov. nom.
Rhynchosia volubilis var. acuminata Maxim. in Mém. Biol. IX. p. 70.
Hab. JAPAN.

Euphorbia Watanabei Makino, nov. sp.
Perennial, about 4 decim. high, glabrous. Stem erect, straight, rather stout, terete. Leaves numerous, rather dense, sparse, erect-patent or spreading, sessile or nearly so, narrowly lanceolate, acuto-acuminate at the apex, cuneato-acute at the base, entire, thickly membranaceous, darkish when dried, 5-8 cm. long, ½-1 cm. wide; midrib slender, prominent beneath; veins not conspicuous; terminal leaves 5, spreading, yellowish, lanceolate, acute or short-acuminate, entire, thin, sessile, about 2½-3½ cm. long, 10-11 mm. wide. Ray 5, erect-patent, about 3½ cm. long, slender; bracts patent, ovato-oval, sessile, entire, acute at the apex, obtuse at the base, thin, yellow, 10-13 mm. long, 8-11 mm. wide. 2nd ray 3, erect-patent, 6-7 mm. long; 2nd bracts 2, spreading, ovato-orbicular, sessile, acute at the apex, rounded and hardly puberulent at the base, entire, thin, yellow, 6-8 mm. long, 6-7 mm. wide. Involucrc very shortly stipitate, erect, turbinato-campanulate, about 3 mm. long; tube thin, 13-nerved (2 to a gland and nearly close-placed; 1 to a tooth and patently laxly pinnate with venules towards the apex); teeth ovato-subsquare or ovato-oval, bifid, thinly membranaceous, 1-nerved, slightly shorter than the glands; glands 4, transversely sublunato-oblong, thick, depressed-rounded and sometimes obscurely emarginate on the outer margin, 1½ mm. long, 2½-2¾ mm. wide; bracteoles (of the inner of the involucre) slightly longer than the tube of involucre, very thinly membranaceous, scarious, deeply 2-parted; partitions erect, spathulato-cuneate, irregularly long-ciliated. Male flowers many; pedicel rather stout, erect. Stamen exserted, nearly 2 mm. long; anther-cells didymous, compressed-globular. Female flowers exserted; pedical stout, recurved. Ovary globose, verrucose; styles 3, as long as the ovary, erect, bifid. Flowers in July-August.

Nom. Jap. Fuji-taigeki (nov.).

This new species was found and collected by the late JUNSHIRO WATANABE of Yokohama, and the specimen was sent to me for the determination; I have named this in honour of the collector. The ray and leaves at the top of the plant are yellow, on account of which this species bears a very peculiar appearance. The stem and leaves are like in *Euphorbia Jolkini* Boiss., but the stem is more slender, leaves more tapering, and terminal leaves, bracts and 2nd bracts are yellow in colour. This species grows in the mountain district, while *E. Jolkini* Boiss. is found always on sea side in Japan.

*Sasa Shimidzuana* MAKINO, nov. sp.

Rhizome repent. Culm erect, about 12 decim. high, ramose above, slender, terete, smooth, fistulose, about 3–4½ mm. across, green and often purpusascent; nodes somewhat prominent; branches one to each node, ascendingly erect, closely encircling with sheaths, with the white waxy bloom under the node when young. Leaves about 2 to 5 towards the top of branches, palmately arranged; lanceolate or oblorg-lanceolate, acuminate, acutish to rounded at the base, shortly petiolate, coriaceo-chartaceous, scabrous on margin, about 10–28 cm. long, 2½–4½ cm. broad, green and glabrous above, glaucous and thinly pubescent below beneath, narrowly albo-marginate by the decay in winter; midrib slender, prominent beneath; veins 7–10 on each side; veinlets very finely tessellate; petiole 3–12 mm. long; ligule depressed-semiorbicular, coriaceous, densely short-puberulent outside; sheath long, closely encircled, finely striate, green, often purpuraceous, at first hirsute-pubescent with depressed hairs but usually then glabrate from the fall of hairs, ciliated, coriaceous.


Hab. Prov. SAGAMI: Hakone, near Ashinoyu (T. MAKINO!, K. Hisauchi!).

This species is found rarely on the mountain of Hakone, and it has an ally to *Sasa nana* MAKINO, from which it differs by having the pubescent sheath. It is probably a hybrid between *Sasa spiculosa* MAKINO and *S. Tokugawina* MAKINO. I have named it in memory of Mr. TOTARO SHIMIDZU, member of the Yokohama Botanical Society.

**Pseudosasa** MAKINO, nov. gen.

*BAMBUS A* HACK. ex parte, non Schreb.

*ARUNDINARIA* SIEB. ET ZUCC. non Michx.

*SASA* MAKINO ET SHIBATA ex parte.

The diagnosis will appear in the forecoming number.

**Pseudosasa japonica** (SIEB. ET ZUCC.) MAKINO, nov. comb.


*Sasa japonica* MAKINO in Bot. Mag., Tokyo, XXVI. p. 13, fig. 2.

Hab. JAPAN, wild and cultivated.

**Pseudosasa spiculosa** (Fr. Schm.) Makino, nov. comb.

*Arundinaria kurilensis* β. spiculosa Fr. Schm. Reis. im Amurl. u Sachal. p. 198.

*Sasa spiculosa* Makino in Bot. Mag., Tokyo, XXVI. p. 12.


*Arundinaria borealis* Makino in Bot. Mag., Tokyo, XIV. p. 20.

*Sasa borealis* Makino et Shibata in Bot. Mag., Tokyo, XV. p. 24, tab. 1, fig. 7-16.


Hab. JAPAN, wild.

**Pseudosasa Owataii** Makino, nov. comb.

*Arundinaria Owataii* Makino in Bot. Mag., Tokyo, XXI. p. 16.


Hab. JAPAN: Yakushima, mountain.

**Arundinaria variegata** (Siebold) Makino in Bot. Mag., Tokyo, XXVI. (1912), p. 15.

var. **Tsumorii** Makino, nov. var.

A small rather tufted bamboo, about 4 decim. high. Rhizome repent, ramose. Culms erect, slender, terete, smooth, green, fistulose, often subflexuous, about 1½-1⅔ mm. across, with a ring of the white waxy bloom under the node; nodes apart, slightly prominent, puberulent mixed with lax pubescent hairs. Leaves distichous, palmately arranged towards the top of the culm in the upper ones, narrowly lanceolate or lanceolate, acuminate with a very sharp point at the apex, rounded or obtuse at the base but acute in the few superior ones, spinuloso-ciliated on margin but merely ciliated with rather long hairs towards the base, glabrous above, glabrous or slightly puberulent beneath, thinly chartaceous, richly white-variegated, 4-11 cm. long, 7-19 mm. wide; midrib very slender, prominent beneath; veins about 5 on each side; petiole very short, 1½-2 mm. long; puberulent in front; ligule very short, truncate, puberulent dorsally, ciliated; sheath closely encircled, striated, glabrous, green, ciliated on margin, fimbriated with long white beards at the shoulders.

Nom. Jap. Toyora-zasa (nov. nom.).

Hab. Prov. NAGATO: Kantama-mura in Toyora-gōri, cultivated (Shigeo Tsumori! 1918).

A charming bamboo of gardens, with the white variegated leaves. It is allied to the type of *A. variegata* Makino, but the latter differs from the former by having the narrower, firmer and constantly pubescent (on the under side) leaves.

*(To be continued.)*