

NEW SPECIES, VARIETIES AND COMBINATIONS FROM THE HERBARIUM AND THE COLLECTIONS OF THE ARNOLD ARBORETUM¹

ALFRED REHDER

With plate 74

Ilex ficoidea Hemsl. in Jour. Linn. Soc. xxiii. 116 (1886). — Loesener in Nov. Act. Leop.-Carol. Akad. Naturf. lxxviii. 328 (Monog. Aquifol.) (1901).

Symplocos tetramera Rehder in Sargent, Pl. Wilson. ii. 598 (1916. — Chung in Mem. Sci. Soc. China, i. 211 (Cat. Trees Shrubs, China) (1924). — **Synon. nov.**

CHINA. K w a n g t u n g : Hongkong, *C. Ford* (? isotype of *I. ficoidea*); same locality, without collector, Feb. 1892; Lantao, Herb. Hongk. no. 8251; Loh fan shan, *C. O. Levine*, nos. 606 and 1567, Oct. 27-30, 1916 and Aug. 15, 1917; Lung tou shan, *S. P. Ko*, no. 50283, Apr. 2, 1930. F u k i e n : in woods and open thickets, *R. C. Ching*, nos. 2227 and 2231, Aug. 3, 1924. C h e k i a n g : 50 li north of Sia-chu, *R. C. Ching*, no. 1646, May 24, 1924; 130 li of Wen-chou, *R. C. Ching*, nos. 1848 and 1862, June 17, 1924; 80 li northeast of Tai-suan, *R. C. Ching*, no. 2206, July 22, 1924; Hang chow, *T. Tang & W. Y. Hsia*, no. 365, July 18, 1927; Tai-pai-shan, *Y. L. Keng*, no. 1145, Aug. 24, 1927. A n h w e i : Wu Yuan, *K. Ling*, no. 7858, Aug. 24, 1924. H u n a n : in monte Yun-schan prope urbem Wukang, *Wang-Te-Hui, Handel-Mazzetti*, no. 12810, Apr. 1919; prope urbem Tchang-scha, *Handel-Mazzetti*, no. 11609, Apr. 13, 1918. Y u n n a n : Puerh, *A. Henry*, no. 13273 (holotype of *Symplocos tetramera*); between Muang hing and Szemao, *J. F. Rock*, no. 2740, March 2-12, 1922.

Ilex ficoidea resembles in its general aspect and particularly in its leaves and in the axillary clusters of its flowers so closely certain species of *Symplocos*, as *S. anomala* Brand, *S. congesta* Benth. and *S. crassifolia* Brand, that also other botanists besides myself had placed in the herbarium specimens of this *Ilex* under the genus *Symplocos*. When

¹Continued from p. 222.

describing Henry's no. 13273 as *Symplocos tetramera* I explained the different shape of the pistil by the assumption that the ovary was rudimentary and the unusual reduction of the number of stamens by reference to some South American species of *Symplocos* with only four stamens.

Ilex ficoidea has not yet been recorded from western China and in central China only from Changsha, Hunan (Handel-Mazzetti, no. 11609) and from Wukang, Hunan (Handel-Mazzetti, no. 12810, as var. *brachyphylla* Hand.-Mazz.). Henry's no. 13273 differs somewhat from typical *I. ficoidea* in the shorter and stouter petiole, about 5 mm. long, and in the shorter acumen of the leaves. Rock's no. 2740 which also has been distributed as *Symplocos tetramera*, is similar but the leaves are comparatively narrower and generally oblong and of thinner texture.

Acer sikkimense Miq. var. **serrulatum** Pax in Bot. Jahrb. VII. 215 (1886); in Engler, Pflanzenr. IV-163, p. 34 (1902). — Rehder in Sargent, Trees & Shrubs, I. 180 (1905). — Fang in Contrib. Biol. Lab. Sci. Soc. China, VIII. 178 (1932).

CHINA. Y u n n a n : Feng-cheng-lin Mt., forests, south of Red River, alt. 7000 ft., *A. Henry*, no. 10640 (tree 10 ft.); west of Talifu, Mekong watershed, en route to Youngchang and Tengyueh, *J. F. Rock*, no. 6834, Sept.-Oct. 1922; Shweli river drainage basin, environs of Tengyueh, *J. F. Rock*, no. 8014, Feb. 1923; without precise locality, *G. Forrest*, nos. 9759 and 26233.

HIMALAYA: Bengal, *Griffith*, no. 936 (holotype; not seen).

Acer sikkimense agrees with *A. Davidi* in having oblong-ovate leaves without lobes, but differs in their caudate-acuminate apex, subcordate base, glabrous under side, entire or nearly entire margin and in the shorter pedicels and longer racemes. In the variety the leaves are closely and sharply serrulate.

In my account of the Maples of the sect. *Macrantha* (pp. 211-222) I unfortunately overlooked this Chinese variety of an Himalayan species. In the key it should precede *A. Davidi* from which it is easily distinguished by the closely and finely serrulate margin of the leaves and their glabrous under side which in *A. Davidii* is more or less rufous-tomentose along the veins at least when young.

Acer Davidi Franchet in Nouv. Arch. Mus. Paris, ser. 2, VIII. 212 (Pl. David. II. 30) (1884). — Fang in Contrib. Biol. Lab. Sci. Soc.

China, VIII. 177 (1932). — Rehder in Jour. Arnold Arb. xiv. 213 (1933). — Add the following synonym:

Acer laxiflorum Pax var. β *ningpoense* Pax in Engler, Pflanzenr. iv.-163, p. 36 (1902). — Rehder in Sargent, Trees & Shrubs, I. 180 (1905).

CHINA. C h e k i a n g : Ningpo-Berge, *E. Faber*, in 1886 (holotype in Herb. Berol.; photo. and fragments in A. A.).

In my account of the Chinese Maples of the *Macrantha* section in the last number of this Journal I had omitted *A. laxiflorum* var. *ningpoense*, because I had not seen the type and doubted very much the possibility that a variety of the western *A. laxiflorum* should occur near Ningpo. I have now received through the kindness of Professor R. Pilger of the Botanical Museum at Berlin-Dahlem an excellent photograph and fragments of the type specimen which proves that the specimen does not belong to *A. laxiflorum* but is a slight variation of *A. Davidi* with indistinctly lobulate leaves and horizontal wings of the fruit. It differs from *A. laxiflorum* in the ovate-oblong leaves not 3—5-nerved at the base and abruptly narrowed into a remotely serrulate acumen entire toward the tip, in the irregular crenate-dentate serration, and the practically glabrous under side, while in typical *A. laxiflorum* the leaves are sharply serrulate with acuminate teeth, distinctly 3-lobed and 3—5-nerved at the very base, with an elongated triangular-ovate middle lobe gradually narrowed in a closely and sharply serrulate caudate acumen, and are even at maturity more or less rusty pubescent on the veins. From slightly lobed forms of *A. Grosseri* Pax Faber's Ningpo specimen differs chiefly in the oblong or oblong-ovate shape of the leaf, its crenate-dentate serration and the not clearly 3-nerved base.

***Rhamnus crenata* S. & Z. var. *discolor*, var. nov.**

A typo recedit foliis subtus albido-tomentosis, nervis utrinsecus 8-12. — Frutex; folia elliptica vel obovato-oblonga ad oblongo-oblancoolata, subito acuminata, basi late vel sensim cuneata, circiter 8×4 to 10×3 .

CHINA. C h e k i a n g : open thickets, alt. 4400 ft., *R. C. Ching*, no. 2536 (type), Aug. 31, 1924 (shrub 15 ft.); southern Chekiang, open thickets, alt. 4200 ft., *R. C. Ching*, no. 2461, Aug. 24, 1924 (shrub 8 ft.).

On account of the whitish tomentose under side of the leaves this variety looks quite different from the type, but I can find no other characters to separate it from *R. crenata* which shows considerable

variation in the shape and also in the pubescence of its leaves, except that the leaves have about 8—12 pairs of lateral veins while in typical *R. crenata* they have only 5—9 pairs.

The two specimens cited above differ considerably in the shape of the leaves: no. 2536 has generally elliptic leaves about 8 cm. long and 4 cm. broad, broad cuneate at base, while no. 2461 has narrow-oblong to oblong-oblongate leaves 8—10 cm. long and 2.5—3 cm. broad, cuneate at base, but one leaf is oblong-obovate 9 cm. long and 4.5 cm. broad.

***Rhamnus utilis* Dcne. var. *hypochrysa* (Schneid.), var. nov.**

Rhamnus crenatus E. Pritzl in Bot. Jahrb. xxix. 460 (1900), pro parte. — Non Sieb. & Zucc.

Rhamnus hypochrysus C. K. Schneider in Notizbl. Bot. Gart. Mus. Berlin, v. 76 (1908); Ill. Laubholzk. II. 290, fig. 198 p-q, 199 o-p (1909); in Sargent, Pl. Wilson. II. 252 (1914).

CHINA. Szechuan: Nanchuan, *A. von Rosthorn*, no. 1585 (syntype of *R. hypochrysus* in Herb. Berlin); Nanchuan Hsien, *W. P. Fang*, no. 1415, June 6, 1926. Shensi: Lin-hua-zao near Kin-lin-san, *G. Giral-di*, nos. 931, 932; Fu-kio, *G. Giral-di*, no. 940 (syntypes of *R. hypochrysus* in Herb. Berlin). Northern Honan: Yungning, Tsi-li-ping, alt. 1000 m., *J. Hers*, no. 1368, Sept. 30, 1919; Yungning, Yo-tze-ping, alt. 900 m., *J. Hers*, no. 820, Oct. 4, 1919. Hopei: Tang-san, *F. N. Meyer* (seeds only); plants raised from these seeds distributed as U. S. Dept. Agr. no. 17909 in Arnold Arb. coll. 1909 and 1914 (in part). Fukien: Enghok Hsien, *H. H. Chung*, no. 1342, April 14, 1923; Dionghoh, Ne-lan-san, Herb. Fukien Christ. Coll. no. 11729, Aug. 6, 1926.

This variety differs from typical *R. utilis* chiefly in the pubescent branchlets and pubescent leaves. In the type specimens of *R. hypochrysus* and in Fang's no. 1415 the pubescence is rather dense and distinctly yellow, while in the specimens from Honan the pubescence is somewhat slighter and not or scarcely yellow. In the Fukien specimens which have rather small leaves, the yellowish pubescence is still slighter and the branchlets are only very sparingly pilose or nearly glabrous, so that these specimens closely connect typical *R. utilis* with the variety. From the seed collected by *F. N. Meyer* near Tang-san, which is apparently the same as Tang-shan between Tien-tsin and Yung-ping-fu, and distributed from the U. S. Department of Agriculture under no. 17909, both forms, the glabrous and the pubescent with distinctly villous branchlets, were raised. It, therefore, does not seem possible to maintain *R. hypochrysa* as a distinct species.

Though Decaisne describes his species as with "foliis . . . subtus puberulis," almost all the numerous specimens in this herbarium except those cited above, have the leaves nearly or quite glabrous. A specimen, however, collected by C. Schneider in 1903 in the nursery of Simon-Louis at Plantières near Metz from a plant marked "R. utilis, original from Decaisne" has the leaves loosely and yellowish pubescent on the under side and when young also slightly so above, but the branchlets are glabrous; this agrees exactly with Decaisne's description.

It, therefore, appears that the type of *R. utilis* is the form with only slightly pubescent leaves but glabrous branchlets, and that the form with the leaves quite glabrous or slightly pubescent only on the veins beneath, may be considered a distinct form and distinguished as ***R. utilis* f. *glabra***, forma nova, of which E. H. Wilson, no. 622, from Fang Hsien, Hupeh, may be designated as the type.

Ampelopsis Delavayana Planchon in De Candolle Monog. Phaner. v. 458 (1887).

Amelopsis aconitifolia Bge. γ *tomentella* Diels & Gilg in Bot. Jahrb. xxix. 465 (1900). — **Synon. nov.**

CHINA. Szechuan: Nan-chuan, Bock & von Rosthorn, no. 1540 (holotype of *A. aconitifolia* var. *tomentella*; photo. in A. A.; flowering branch).

Ampelopsis aconitifolia f. *tomentella* the type of which I have seen in the herbarium of the Botanic Museum at Oslo, though superficially quite similar to *A. aconitifolia* f. *setulosa* Diels & Gilg, agrees with *A. Delavayana* Planch. in the occasional presence of undivided only slightly lobed leaves, the shallow serration of the leaflets and the rather short peduncles about as long as the cyme itself. *Ampelopsis aconitifolia* Bge. never has undivided leaves, the leaflets are rather deeply serrate to pinnatifid and the loose and smaller cymes are borne on slender peduncles longer than the cyme. In fruit the two species differ considerably in the color of the berries; the pubescence varies in the two species and glabrous and pilose forms occur in both.

The other forms described (l. c.) by Diels and Gilg: f. *glabra*, f. *setulosa* (pr. parte typ.) and f. *cuneata* belong without doubt to the variable *A. aconitifolia*.

Wilson's specimen no. 1070 (Veitch Exped.) placed in the Berlin Herbarium with *Ampelopsis aconitifolia* f. *tomentella* belongs to *Vitis Piasezkii* Maxim. To *V. Piasezkii* belongs also Henry, no. 6479, one of the syntypes of *Ampelopsis aconitifolia* f. *setulosa*.

***Agapetes stenantha*, spec. nov.**

Plate 74

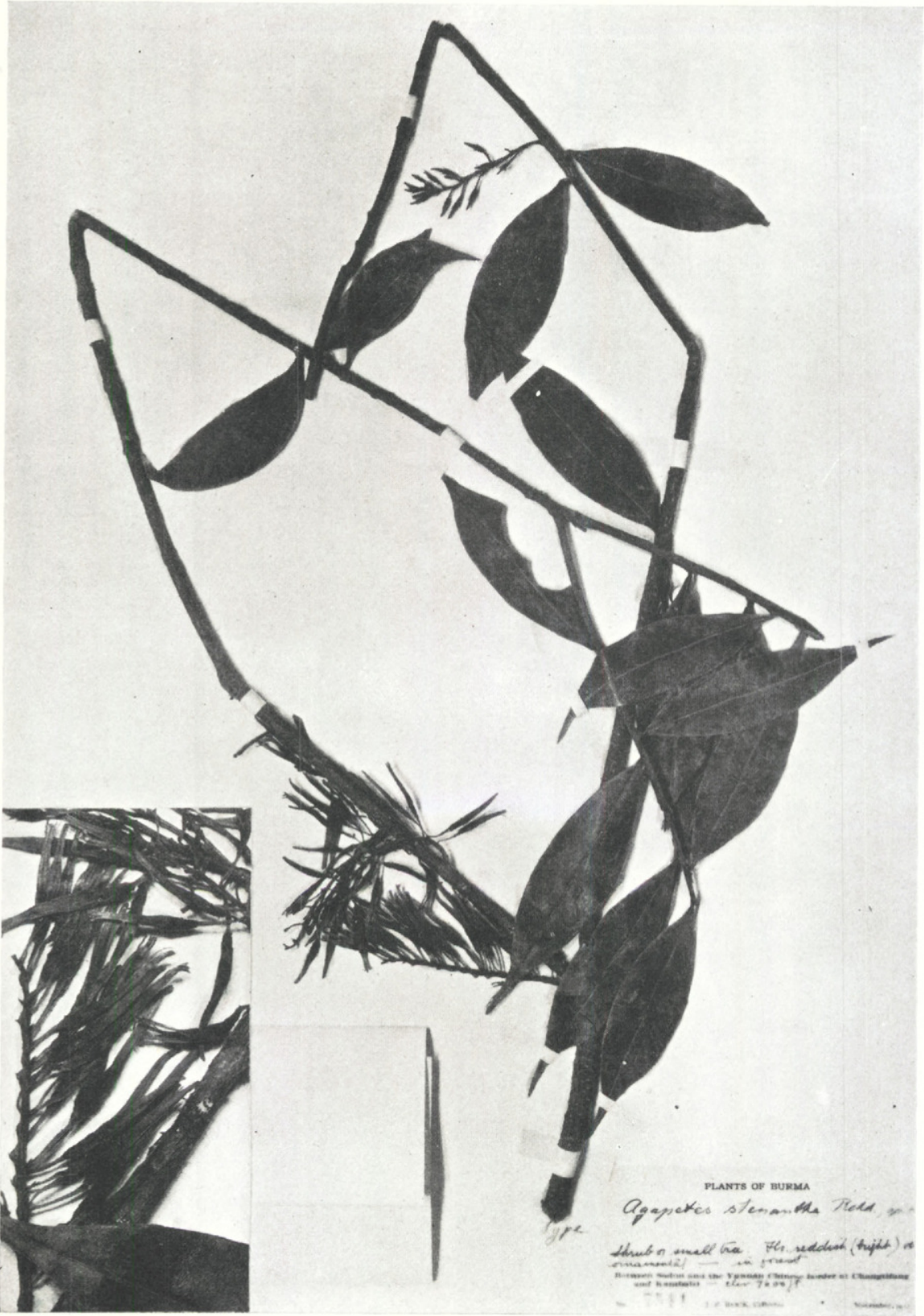
Frutex vel arbor parva, glabra, ramis cinereo-fuscis lenticellatis. Folia coriacea, lanceolata, 6.5—9 cm. longa et 2—2.4 cm. lata, longe acuminata, basi in petiolum brevissimum 1—2 mm. longum attenuata, integra, supra laete viridia, subtus pallidiora, costa media utrinque elevata, nervis utrinsecus 6-7 supra fere obsolete subtus in sicco levissime elevatis. Racemi axillares e gemmis nudis in ramulis biennibus vel vetustioribus, 5—8 cm. longi, multiflori (floribus circiter 18—25); Flores rubescentes, graciliter pedicellati pedicellis 5—8 mm. longis, bractea lanceolata circ. 2 mm. longa rubescente membranacea decidua suffultis, basi bracteolis 2 bractee similibus sed saepius paullo minoribus munitis, apice articulatis; dentes calycinis triangulari-lanceolati, circ. 3 mm. longi, dorso costati costis in tubum ovarii fere aequilongum decurrentibus; corolla anguste cylindrica apicem versus leviter angustata, circ. 2 cm. longa et medio 3 mm. lata, subalato-costata, lobis linearibus 1 mm. latis apice obtusiusculo mucrone reflexo munitis, valde inaequalibus, sinu altissimo circiter mediam corollam attingente; stamina stylo paullo breviora superne in tubum stylum arcte cingentem cohaerentia, antheris pilosulis 5 mm. longis apice in tubum gracilem circ. 1 cm. longum attenuatis, basi in calcar pilosulum, 1.5 mm. longum filamentum glabrum fere aequans productis; stylus glaber, corollam aequans, apice clavatus; ovarium 2-2.5 cm. longum, glabrum.

BURMA: between Sadon and the Yunnan Chinese border at Changti-fang and Kambaiti, alt. 7600 ft., *J. F. Rock*, no. 7514, Nov. 1922 (shrub or small tree, flowers bright reddish, very ornamental).

This distinct new species is characterized by the very narrow tubular flowers about 2 cm. long and only 3 mm. wide, borne in many-flowered elongated racemes and by the lanceolate long-acuminate leaves attenuate at base and 6.5—9 cm. long. It differs in the elongated many-flowered racemes from all Asiatic species except *A. vaccinioides* Dunn which is easily distinguished by the short campanulate corolla and the larger leaves rounded or subcordate at base, and except *A. corallina* Cowan which differs in the lanceolate corolla-lobes and apparently glabrous anthers without spur.

(*To be continued*)

HERBARIUM, ARNOLD ARBORETUM,
HARVARD UNIVERSITY.



AGAPETES STENANTHA Rehd.



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