

HONDURAS: "Yagua." Common, associated with *Orbignya Cohune*, El Modelo, near Villanueva, Dept. Cortés, alt. 60 m., April 13, 1951, Allen 6144 (TYPE in Herb. Esc. Agr. Panam.; dupl. in Herb. Allen).

Closely related to *R. regia* var. *maisiana* L. H. Bailey, but differing in the more robust habit, differently shaped fruits, and the attachment of the seeds to the endocarp.

## NEW RUBIACEAE FROM PANAMA

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In a miscellaneous lot of Rubiaceae sent to the writer for determination from the Missouri Botanical Garden Herbarium, five new species were found. Four of these were collected by Paul H. Allen, and the fifth by the Von Hagens.

### **Chimarrhis decurrens** Steyermark, *sp. nov.*

Arbor 15-20-metralis; ramulis glabris, hornotinis in lineis decurrentibus pilosulis; foliis petiolatis, petiolis 6-9 mm. longis glabris marginibus decurrentibus laminae puberulis exceptis; laminis membranaceis ovato-ellipticis apice acuminatis basi acutis 7-8.5 cm. longis 2.2-5 cm. latis supra glabris costa media parce puberula excepta, subtus plerumque glabris axillis barbatis et costa media atque nervis principalibus parce strigillosis exceptis, costa media subtus prominente, nervis lateralibus utroque latere 6-8 subtus prominulis; stipulis vetustioribus triangulari-cuspidatis denticulatis 3 mm. longis intus atque basi pilosulis; cymis axillaribus multifloris 2-3.5 cm. longis longipedunculatis; pedunculis angulatis in lineis decurrentibus dense pilosulis 3-4.5 cm. longis; pedicellis gracilibus ca. 1 mm. longis glabris; calyce cum hypanthio 2 mm. longo turbinato glabro, calycis lobis prominentibus inaequalibus ovatis vel ovato-oblongis rotundatis vel late obtusis 0.5-0.75 mm. longis 0.3-0.4 mm. latis glabris; corolla 4-4.25 mm. longa extus minute sed dense strigillosa, tubo 2.5-2.75 mm. longo intus aequaliter dense piloso, lobis ovato-oblongis apice rotundatis 1.5-1.75 mm. longis 1.25 mm. latis intus parce pilosis; staminibus paullo exsertis, filamentis glabris 0.75-0.9 mm. longis, antheris late oblongis 1 mm. longis; capsulis non visis.

PANAMA: tree 15-20 m., flowers white, very common, El Valle, provincia de Coclé, alt. 600 m., 28 June 1946, *Paul H. Allen 3566* (TYPE in herb. Chicago Nat. Hist. Mus., ISOTYPE in herb. Mo. Bot. Gard.).

This species of *Chimarrhis* is easily distinguished by the conspicuous lobes of the calyx, the strigillose outer surface of the corolla, and the peculiar pubescence of the young stems and peduncles in decurrent lines. From *Chimarrhis parviflora* Standl. of Panama it differs in the uniform pubescence over the entire inner surface of the corolla tube, the longer corolla, the conspicuous calyx lobes, the strigillose outer surface of the corolla lobes, and the decurrent lines of pubescence of the inflorescence.

***Chione panamensis* Steyermark, sp. nov.**

Arbor, ramis glabris; internodiis 1.2-3 cm. longis, stipulis deciduis; foliis petiolatis, petiolis 8-11 mm. longis glabris; laminis subcoriaceis elliptico-ovatis 6-10.5 cm. longis 3-5 cm. latis apice obtuse acutis vel obtusiusculis basi acutis, subtus pallido-viridibus, costa media subtus prominente, nervis lateralibus utroque latere 5-6 subtus prominentibus, utrinque glaberrimis; inflorescentiis terminalibus cymoso-corymbosis in anthesi 4 cm. longis et 6.5 cm. latis laxe multifloris 2-4 cm. longe pedunculatis, pedicellis crassis 4-13 mm. longis; hypanthio clavato 3-5 mm. longo basin versus sensim attenuato; calyce 2.5-3 mm. longo, margine paullo lobato, lobis late rotundatis vix 1 mm. altis; corollae tubo 5 mm. longo basi 4 mm. lato, lobis 4 late rotundatis 3 mm. longis 4.2 mm. latis intus glabris; staminibus vix exsertis, antheris oblongis 3.5-3.75 mm. longis, filamentis 5 mm. longis 0.8 mm. latis; stylo 6.5 mm. longo; fructibus elliptico-oblongis 1.4-1.5 cm. longis 8 mm. latis calyce persistente coronatis.

PANAMA: flowers white, fruit red, in cloud forest, Cerro Horqueta, Boquete region, provincia de Chiriquí, alt. 2167 m., 1 July 1940, *Cristine & Wolfgang von Hagen 2137* (TYPE in herb. Chicago Nat. Hist. Mus., ISOTYPE in herb. Mo. Bot. Gard.).

The species most closely resembles *Chione costaricensis* Standley, but differs in several respects. The stamens are not conspicuously exserted as in *Chione costaricensis*, the filaments

and anthers are shorter (measurement of anthers of the type specimen of *Chione costaricensis* showed them to be 4.5 mm. long), the corolla lobes and corolla tube are shorter, and the leaves are more coriaceous with fewer pairs of lateral nerves which are much more prominent on the lower leaf surface. The calyx lobes are barely evident in *Chione panamensis*, barely reaching 1 mm. high, whereas in *Chione costaricensis* they are more prominent and are 1.2-3 mm. long.

**Coussarea darienensis** Steyermark, *sp. nov.*

Arbor 10-metralis, ramulis sulcatis glabris, internodiis 2.5-5 cm. longis; foliis petiolatis, petiolis 1.2-1.5 cm. longis glabris vel minute puberulentibus, laminis firme membranaceis late elliptico-oblongis vel oblongo-obovatis 8-16 cm. longis 3-7 cm. latis apice subito acuminatis basi cuneatim acutis utrinque glabris axillis subtus barbatis nervorum exceptis, costa media subtus prominente, nervis lateralibus utroque latere 8 subtus prominulis arcuato-adscendentibus; inflorescentia terminali cymoso-paniculata 5 cm. longa 5.5-7 cm. lata densiuscule multiflora 1.5-1.75 cm. longe pedunculata, ramis 1.5-2.5 cm. longis, basalibus oppositis vel verticillatis adscendentibus minute dense puberulentis, floribus omnibus pedicellatis, subumbellatim cymosis, cymis multifloris congestis, pedicellis 2-3 mm. longis minute puberulentis; hypanthio ca. 2 mm. longo minute puberulenti, calyce campanulari 2.3-3 mm. longo glabro obscure denticulato, dentibus late triangularibus obtusis; corolla alba extus glabra, tubo 4.6 mm. longo intus parte superiore pilosa, lobis lineari-oblongis rotundatis 7.5 mm. longis 1.5 mm. latis; antheris lineari-oblongis 4.2 mm. longis; filamentis 0.75-1 mm. longis; stylo 9 mm. longo.

PANAMA: flowers white, tree 30 feet along Río Chico, vicinity of Yaviza, provincia de Darién, alt. 33 m., 9-11 June 1947, *Paul H. Allen 4576* (TYPE in herb. Chicago Nat. Hist. Mus., ISOTYPE in herb. Mo. Bot. Gard.).

This species is characterized by the relatively crowded flowers arranged cymosely paniculate, with the corolla glabrous without, pilose on the upper half within, minutely puberulent peduncles and branches of the inflorescence, and leaves glabrous

except for the barbate axils of the lower surface. The flowers are larger and coarser than in *Coussarea colonis* Standl., but smaller than in *C. Austin-Smithii* Standl.

It resembles *Coussarea mexicana* Standl., from which it differs in the type of inflorescence, more slender peduncles and branches of the inflorescence, and more elongated branches of the inflorescence.

***Ravnia longifilamentosa* Steyermark, sp. nov.**

Frutex epiphyticus 2-2.6-metralis, ramulis glaberrimis carnosis angulatis; petiolis 3-5 mm. longis; laminis crassocoriaceis lanceolato-ellipticis 6.5-12 cm. longis 2.2-4 cm. latis apice abrupte acuminatis basi subacutis integerrimis glaberrimis, costa media utrinque vix prominente, nervis lateralibus obscuris vel obsoletis; stipulis late ovatis apice rotundatis 3 mm. longis 3 mm. latis; floribus ad apices ramulorum brevipedicellatis, pedicellis crassis 2 mm. longis, calyce ad 2 cm. longo, limbo in lacinas 5-6 diviso, laciniis lanceolato-linearibus 10-11 mm. longis 1.5-2 mm. latis apice obtusis glabris, tubo cylindrico-oblongo 10 mm. longo 5 mm. diam.; corolla rosea hypocrateriformi glabra, tubo 3.5-4 cm. longo 5-7 mm. diam., lobis plerumque 6 reflexis lineari-oblongis apice rotundatis 1.8-2 cm. longis 3-3.5 mm. latis; staminibus 6 in parte media tubi insertis, filamentis 25-28 mm. longis glabris longi-exsertis, e fauce 9-10 mm. longe extensis, antheris linearibus 5 mm. longis; stylo 5.5 cm. longo.

PANAMA: flowers salmon pink, fairly frequent bushy epiphytic shrub 6-8 feet tall, on upper forested southern slopes of Quebrada Velo, vicinity of Finca Lérida, province of Chiriquí, alt. 1631 m. 25 July 1947, *Paul H. Allen 4744* (TYPE in herb. Chicago Nat. Hist. Mus., ISOTYPE in herb. Mo. Bot. Gard.).

This noteworthy species bridges the gap between the genera *Coutarea* and *Ravnia*. In Standley's key to genera of Cinchoneae in *N. Am. Fl.* 32: 94-95; 1921, this species would fall with *Coutarea* and *Exostema* under the division of "anthers borne on long filaments" as opposed to "anthers sessile or on very short filaments" reserved for *Blepharidium* and *Ravnia*. The elongate and long-exserted filaments of the new species rep-

resent certainly a tendency in the direction of *Coutarea*, but the possession of fleshy-coriaceous leaves, epiphytic habit, and rose-colored corollas at once aligns the plant with *Ravnia*, with which it is here considered congeneric. The main points of difference possessed by *Ravnia longifilamentosa* as contrasted with *R. triflora* Oerst. and *R. Pittieri* Standl. are the elongate, long-exserted filaments, and hypocrateriform corolla with reflexed narrow linear-oblong lobes.

***Ravnia panamensis*** Steyermark, sp. nov.

Frutex epiphyticus 0.5-1-metralis, ramulis glaberrimis carnosus in sicco sulcatis; petiolis ca. 2 mm. longis; laminis crasso-coriaceis elliptico-lanceolatis 6.5-12 cm. longis 2.3-4 cm. latis apice acuminatis basi subobtusis vel acutiusculis, costa media utrinque subprominente, nervis lateralibus supra subimpressis utroque latere 7-8 subtus obsolete; stipulis ligulato-oblongis apice rotundatis 2.5 cm. longis 5.5 mm. latis; floribus ad apices ramulorum solitariis subsessilibus; calyce ad 1.3 cm. longo, limbo in lacinas 5 divisio, laciniis inaequalibus linearibus obtusis ad 8 mm. longis 0.5-2 mm. latis, tubo cylindrico 5 mm. longo 4.5 mm. diam., corolla salmonearosea hypocrateriformi superne sensim ampliata, tubo 3 cm. longo superne 1.6 cm. lato basi 4 mm. lato, lobis 5 inaequalibus late rotundatis 6-7 mm. longis plerumque 8-9 mm. latis; staminibus 6 vix exsertis, in parte superiore tubi insertis; filamentis 4-5 mm. longis glabris; antheris linearibus 5-5.5 mm. longis; stylo 3.3 cm. longo.

PANAMA: flowers salmon pink, terminal, solitary; leaves fleshy; branching epiphytic shrub 1-1.5 m., North Hills, El Valle de Antón, provincia de Coclé, 29 June 1946 (TYPE in herb. Chicago Nat. Hist. Mus., ISOTYPE in herb. Mo. Bot. Gard.).

This second new species from Panama differs from *Ravnia longifilamentosa* in having the stamens scarcely exserted, shorter and broader corolla lobes, which are not reflexed, shorter style and filaments, and shorter corolla.

From *Ravnia Pittieri* Standl. and *R. triflora* Oerst., the only other species, the new species is distinguished by the infundibuliform corolla widely amplified above, the more exserted stamens, broader corolla lobes, and shorter corolla.