

SIMARUBACEAE

Lowland species

PICRAMNIA sp. ? A small tree 20 ft. high, in woods at Foothills Camp, Esmeralda, 378, is apparently an undescribed species of this genus, but its flowers are too immature to permit proper diagnosis.

BURSERACEAE

Lowland species

PROTIUM GUIANENSE (Aubl.) March. A shrub at Fish Creek, Esmeralda, 962; Tree Savannas at Esmeralda, 319, 329; foothills of Mount Duida, 750 ft., 883; a widely distributed species through northern South America.

PROTIUM PANICULATUM Engl. Middle Camp near Esmeralda, a small tree with white flowers, 348, 957; known only from the general region of the Casiquiare River.

TRATTINICKIA BURSERAEFOLIA Mart. Rocky top of Esmeralda Ridge, 210; highly variable and well distributed through tropical South America.

TRATTINICKIA BURSERAEFOLIA Mart., var. QUINQUEJUGA Engl. Rocky top of Esmeralda Ridge, 195, 211. This variety is endemic to Esmeralda, where it was originally collected by Spruce. It probably deserves elevation to specific rank.

MALPIGHIACEAE

Lowland species

BYRSONIMA CHRYSOPHYLLA HBK. Large bushy tree at the edge of high water, Camanaos on the Rio Negro, northern Brazil, 122; Brazil and Peru, mostly at low altitudes.

BYRSONIMA CRASSIFOLIA (L.) HBK. Rocky top of Esmeralda Ridge, 203; a common species of wide distribution, ranging from Cuba and Panama to Bolivia and Paraguay.

Heteropterys oblongifolia Gleason, sp. nov. Ramis glabris subteretibus; foliis sessilibus subcoriaceis lineari-oblongis obtusis margine coriaceis basi acutis utrinque glabris et reticulato-venosis; paniculis elongatis tenuissime strigosis bracteis patulis brevibus subacutis obdatis; racemis 1-6-floris; sepalis glandulas 8 duplo excedentibus recurvis utrinque dense pubescentibus; petalorum longe unguiculatorem laminis rotundato-ovatis basi truncatis incisodentatis; staminibus 10 alternatim paullum inaequalibus basi connatis, antheris arcuatis glabris dorso atro-maculatis; stylis subaequalibus rectis; samarae ala arcuatim adscendente membranacea.

Stems glabrous, subterete, the internodes 1-5 cm. long; leaves sessile, subcoriaceous, linear-oblong, 5-9 cm. long, 1-2 cm. wide, obtuse, coriaceous and

thickened on the margin, acute at base, glabrous, the lower side slightly paler; veins lightly elevated and finely but conspicuously reticulate on both sides; panicles terminal and from the upper axils, slender, 10–15 cm. long, thinly strigose, racemes spreading, the lowest up to 4 cm. long, 1–6-flowered; bracts spreading, oval, subacute, 1–2 mm. long; pedicels 0.4 mm. in diameter, 5–10 mm. long; glands 8, elliptic-oblong, 2 mm. long; sepals revolute, triangular, acute, densely pubescent on both sides, exceeding the glands by 2 mm.; petals with claw 2.7 mm. long, the yellow blade round-ovate above a truncate base, incised-dentate, 3 mm. long and wide; stamens 10, alternately slightly unequal, the filaments flat, narrowly triangular, glabrous, about 2 mm. long, connate for two fifths of their length; anthers broadly oblong, somewhat arcuate, 0.8 mm. long, the connective with a dark purple spot on the back; ovaries ellipsoid-trigonal, 0.9 mm. long; styles nearly straight, slightly divergent, stout, 2.2 mm. long, glabrous, stigmatic at the inner angle of the apex; samaras 15 mm. long, the wing semi-obovate, thickened on the outer margin, 5 mm. wide, rounded above, thinly brown-pubescent, extending down the inner face of the body to a minute obscure basal appendage.

Grand Savanna at Esmeralda, 288, 297 (type); the former described by the collector as a low woody straggling shrub. This one also differs considerably from the type in the shape of the leaves, the longest being 76 by 29 mm., the broadest 58 by 30 mm.; in correlation with the broader outline they are also rounded at both ends. *H. oblongifolia* is a member of the section *Stenopterys* Nied. and is probably most closely related to *H. Grisebachiana* Nied., which has leaves of a broader outline, pubescent on both sides, and obtuse sepals glabrous within.

LOPHANTHERA LONGIFOLIA (HBK.) Griseb. River banks and flood sands, Muyrapenima, on the Rio Negro, northern Brazil, 53; distributed through the valley of the Amazon and also reported from southern Brazil.

Species of Mount Duida

BYRSONIMA BRACTEOLARIS Benth. A low bushy tree or shrub with pink flowers, on hillsides at Central Camp, 4800 ft., 566, 595; dry crests of Savanna Hills, 4400 ft., 740. The species has been known only from Schomburgk's original collections near or on Mount Roraima, with which our specimens agree precisely.

Byrsonima cretacea Gleason, sp. nov. Fruticosa; ramis novellis dense brunneo-tomentosis; petiolis brevibus crassis; stipulis ovatis acuminatis erectis; foliorum laminis coriaceis ovato-oblongis apice rotundatis basi cordatis amplexicaulibus supra glabris subnitentibus subtus indumento albido cretaceo obtectis; racemis brevibus et pedunculis pedicellisque dense tomentosis; calyce 10-glanduloso sepalis triangulari-ovatis recurvatis extus tomentosis; filamentis glabris teretibus; connectivo non producto verruculoso; thecis basi breviter

productis apice introrse barbatis ceterum glabris; ovario glabro; stylis subulatis.

"A straggling tree" (Tate); branches of the season stout, densely tomentose with purple-brown matted hairs, those of the second season nearly or quite glabrous, the internodes 4–7 cm. long; stipules intrapetiolar, broadly triangular-ovate, erect, 5–6 mm. long, sharply acute, densely tomentose on the back; petioles very stout, 3–4 mm. long, densely tomentose on the back, apparently glandular on the sides; blades coriaceous, ovate-oblong, the lowest of each season's growth 30 by 17–25 mm., the upper gradually larger to as much as 73 by 54 mm., broadly rounded and sometimes minutely apiculate at the summit, entire, deeply cordate at base, the rounded auricles 8–11 mm. long; lateral nerves about 15 pairs, ascending at about 70°, essentially plane and finely reticulate above; upper surface dark green, somewhat shining, glabrous; lower surface completely covered with a dense white chalky separable indument; inflorescence of 1 or 2 crowded terminal racemes 6–8 cm. long, of which the basal 2 cm. is sterile, densely red-brown tomentose, its branches jointed near the base, above which the pedicel is as much as 16 mm. long; bracts deciduous, lanceolate, long-acuminate, subcordate and sessile at base, glabrous above, densely tomentose beneath; sepals connate for about two fifths of their length and bearing 10 obovate glands 2.8 mm. long, the free tips exceeding the glands by 3.2 mm., strongly recurved at tip, acute, fleshy, glabrous within, tomentose without; petals broadly ovate, slightly erose, rounded at the summit, rounded below to a somewhat decurrent base, 6.5 mm. long, 5.5 mm. wide, on claws 2.3 mm. long, the fifth petal slightly larger with a stouter clavate claw; filaments 3.7 mm. long, glabrous, red; connective stout, brown, semiterete, 1.3 mm. long, rounded on the back and at the summit, minutely verruculose, minutely exceeding the thecae; thecae 1.4 mm. long, prolonged at base 0.2 mm., contiguous and somewhat widened upward, pilose at the tip with 6–8 stiff introrse hairs 0.6–0.8 mm. long; ovary subglobose, glabrous; styles terete, sharp, straight, slightly divergent, 4 mm. long; receptacle densely brown-tomentose within (Pl. 28, fig. 2).

Hillsides and flat ground at Central Camp, 4800 ft., 533. The collector notes that the petals are white and the leaves "peppered with brown" beneath; this appearance proves to be caused by the copious growth of an alga. The position of the species in the genus is clearly in subgenus *Brachyzeugma*, section *Eriolepis*, subsection *Brachypus*, series *Brachybotrys*, where it is obviously related to *Byrsonima variabilis* Juss. Its distinguishing features are the larger flowers, the smaller anthers, the deeply cordate leaves, and especially the continuous chalky coating of the lower surface of the leaves.¹

¹ A common, straggly, small tree with long weak ascending branches. It is widely distributed in the slope forest and brush, being also equally common at Provisional Camp and among the *Tyleria* woods at Central Camp.—G. H. H. T.

DIACIDIA VESTITA (Benth.) Jackson. A slender tree 20 ft. high, with yellow flowers, the persistent calyx enlarging and turning red at maturity of the fruit, stream-bank at Central Camp, alt. 4800 ft., 563. This well marked species, neglected by recent authors, has been known only from the original collection of Schomburgk in the region of Mount Roraima.¹

VOCHYSIACEAE²

Lowland species

Qualea esmeraldae Standl. sp. nov. Ramuli crassi fusci glabri, internodis brevibus; folia brevissime petiolata crasse coriacea opposita, laminae marginatae oblongae vel ovali-oblongae apice rotundatae vel emarginatae et mucronatae, basi rotundatae, glabrae, venis creberrime gracillimis; inflorescentia pauciflora, ciciiniis 1–2-floris, floribus magnis breviter pedicellatis, alabastris elongato-oblongis acutiusculis, calcare pedicello paullo brevior cylindrico c. quartam calycis partem metiente; anthera dense barbata; capsula ellipsoidea glabrata rotundato-trigona apice acuta et in stylum elongatum sensim attenuata.

Branchlets stout, fuscous, glabrous, subterete, the internodes 1.5–2.5 cm. long; leaves thick-coriaceous, very shortly petiolate, opposite, the thick petioles 4–7 mm. long, glabrous; leaf-blades glabrous, oblong to oval-oblong, 7–9.5 cm. long, 3.5–5 cm. wide, broadly rounded or shallowly emarginate at the apex, rounded at the base, conspicuously marginate, yellowish-green on the upper surface, the venation prominulous, brownish and much paler beneath, the costa stout, prominent, the veins very numerous and approximate, diverging at nearly a right angle, united to form a distinct and regular collective nerve less than 1 mm. from the margin; inflorescence terminal, simply racemose, 4–11 cm. long, rather few-flowered, the rachis angulate, minutely ferruginous-puberulent, the internodes 1 cm. long or less, the flowers solitary or geminate, the stout pedicels 4–5 mm. long, sparsely puberulent; bractlets at the base of the pedicel minute; calyx-segments coriaceous, ciliate, the outer ones broadly ovate, acute, 3 mm. long, the third and fifth broader and twice as long, the blade of the fourth broadly elliptic, carinate, 18 mm. long, obtuse, sparsely ferruginous-puberulent, the spur 5 mm. long, cylindric, obtuse; petal suborbicular, 2 cm. long, glabrous, with numerous short broad crispate lobes near the apex; filament very thick, glabrous, 8 mm. long, the anther 1 cm. long, densely barbate along one side; style stout, about 2 cm. long, glabrous; ovary ferruginous-hirsute; capsule ellipsoid, rounded-trigonous in cross section, 2.5 cm. long, glabrate, densely and minutely tuberculate, obtuse at the base, acute at the apex and gradually narrowed to the base of the persistent style.

¹ This plant, a good-sized tree with straight trunk six to eight inches in diameter, was first observed along the stream a short way below Central Camp. Here it was rather common.—G. H. H. T.

² By Paul C. Standley.