

Sonora, and at Mazatlán, Sinaloa, and may well have spent much of the period from 1827 to 1832 in mining centers in the western states of Mexico. If one may judge by the specimens cited by Hemsley, Coulter collected very few plants in western Mexico. From Zimapán, as pointed out above, approximately 300 species are listed in the *Biologia Centrali-Americana*; from Real del Monte almost 150 species are noted, and from Zacatecas about 50. From all western Mexico together, however, scarcely 75 specimens are cited, and more than half of these are from "Sonora Alta," which may refer to the region about Guaymas or to the region about Yuma visited by Coulter in 1832.

LITERATURE CITED

- COULTER, THOMAS. *Notes on Upper California*. Journ. Roy. Geog. Soc. London 5: 59-70. 1835.
- COVILLE, FREDERICK V. *The botanical explorations of Thomas Coulter in Mexico and California*. Bot. Gaz. 20: 519-531, pl. 35 (map). 1895.
- DECANDOLLE, A. P. [A postscript to his monograph on the Cactaceae.] Mem. Mus. Hist. Nat. Paris 17: 107-119. 1828.
- HEMSLEY, W. BOTTING. *Biologia Centrali-Americana. Botany*, vols. 1-4. 1879-1888.
- HUMBOLDT, A. DE. *Atlas géographique et physique du royaume de la Nouvelle-Espagne*. Paris, 1812.
- ROMNEY ROBINSON, JOHN THOMAS. [No title—A brief sketch of Coulter's life.] Proc. Roy. Irish Acad. 2: 553-557. 1844.
- WARD, H. G. *Mexico in 1827*, vol. 2, 730 pp., with map. London, 1828.

BOTANY.—*Four new species of Acanthaceae from Guatemala*.¹ E. C. LEONARD, U. S. National Museum. (Communicated by WILLIAM R. MAXON.)

Recent studies of the Acanthaceae of Guatemala, especially of material collected by Julian A. Steyermark on the 1939-40 expedition of the Field Museum of Natural History to that country, have resulted in the recognition of four new species described herewith.

Dyschoriste skutchii Leonard, sp. nov.

Herba, caulibus puberulis; lamina foliorum ovalis vel suborbicularis, apice obtusa vel rotundata basi angustata, parce hispidula; petioli tenues; inflorescentia subcapitata, terminalis, bracteis oblanceolatis; calyx glaber vel parce hirsutus, segmentis subovatis; corolla lilacina, minute pubescens; ovarium glabrum.

Stems usually numerous, prostrate, erect or ascending from a short woody base, puberulous, the hairs retrorsely curved, white, the roots thick-fibrous; leaf blades oval to suborbicular, up to 18 mm long and 14 mm wide, obtuse or rounded, cuneate at base, bright green, darker above, sparingly hispidulous (the larger hairs confined to costa and veins), sometimes ciliate toward base, the costa and veins (usually 4) prominent; petioles slender, up to 3 mm long, more or less puberulous, sometimes ciliate; flowers crowded in heads at the tips of the

branches; bracts oblanceolate, somewhat smaller than the leaves but resembling them in most respects; calyx up to 13 mm long, the tube 3 mm long, glabrous or sparingly hirsute, the segments subulate, hirsute, the hairs white, spreading, up to 0.75 mm long, but gradually shorter and very minute toward the bristle-like tips of the lobes; corolla lavender, minutely and inconspicuously pubescent, about 13 mm long, the narrow portion of the tube about 5 mm long and 1.5 mm in diameter at base, narrowed to 1 mm just above base, thence gradually expanded to 4 or 5 mm at throat, the limb about 8 mm broad, the lobes rounded; stamens 3 and 4 mm long, the anthers ovate, the minute white mucronate tips of their basal lobes slightly divergent; ovary glabrous; mature capsules not seen.

Type in the U. S. National Herbarium, no. 1586098, collected on an open hillside near Tecpam, Department of Chimaltenango, Guatemala, altitude 2,100 meters, July 22, 1933, by A. F. Skutch (no. 474). *Lehmann* 1524 from Huehuetenango, Guatemala, altitude 1,500 meters, and *Steyermark* 33063, collected on dry slopes of pine woods just southwest of Minas de Cromá, Department of Jalapa, Guatemala, are also this species.

Dyschoriste skutchii is related to *D. capitata* (Oerst.) Kuntze but is amply distinct in its oval or suborbicular leaves and in its puberu-

¹ Published by permission of the Secretary of the Smithsonian Institution. Received December 15, 1942.

lous stems. In *D. capitata* the leaves are obovate and the stems pubescent, with longer and more spreading hairs. The latter species seems to be limited to southern Mexico.

***Dicliptera vulcanica* Leonard, sp. nov.**

Frutex, caulibus parce pilosis; lamina foliorum ovata, breve-acuminata, basi obtusa vel acuta, in petiolum decurrens, parce hirsuta; petioli tenues, pilosi; cymae pedunculatae; bracteae floriferae herbaceae, pilosae, puberulae, bractea posterior linearis, anterior oblanceolata; bracteae laterales angusto-lanceolatae vel subulatae, chartaceae, puberulae; calycis segmenta lanceolato-subulata, papilloso-puberula et pilosa; corolla subrufa, pubescens, labio superiore leviter emarginato, minute apiculato, inferiore oblongo, trilobo, lobis parvis, rotundatis; capsulae parvulae; semina plana, orbiculata, fulva, minute verrucosa.

Shrub up to 2 meters tall; stems sparingly pilose, the hairs white, spreading or retrorsely curved, up to 1 mm long, more or less arranged in 2 lines, or the lower portions of the stems glabrous; leaf blades ovate, up to 10 cm long and 5 cm wide, short-acuminate (the tip blunt), acute or obtuse at base and decurrent on the petiole, thin, drying dark green, sparingly hirsute, the hairs spreading, 0.5 to 1 mm long, confined chiefly to costa and veins (6 or 7 pairs); petioles slender, up to 2.5 cm long, pilose; flowers borne in axillary peduncled cymes (3 flowers in each cluster), the peduncles up to 6 cm long, sparingly pilose, usually branched at tip, each bearing 3 to 5 stalked flower-clusters; bracts subtending the secondary peduncles subulate, up to 5 mm long, pilose, the pair of outer floral bracts herbaceous, both pilose and puberulous (at least some of the hairs glandular), the posterior one linear, about 10 mm long and 1.5 mm wide, acute, the anterior one oblanceolate, 13 mm long and 3.5 mm wide, acute, the interior floral bracts narrowly lanceolate or subulate, up to 8 mm long and 1 mm wide, chartaceous, puberulous, the hairs papilliform; calyx 7 to 8 mm long, the tube subglabrous, the segments about 6 mm long, lance-subulate, 1 mm wide at base, thence gradually narrowed to a slender tip, the pubescence a mixture of minute papilliform hairs and longer pointed ones; corolla 33 mm long, dull reddish, finely pubescent, the tube about 13 mm long, the lower portion about 3 mm

broad for 8 mm of its length, thence gradually and somewhat obliquely enlarged to 6 mm at throat, the posterior lip oval, about 6 mm wide, rounded, shallowly emarginate and minutely apiculate, the anterior lip oblong, about 5 mm wide, the 3 lobes rounded, about 1 mm long and wide or slightly wider, the middle one ciliate; capsule 12 mm long, 5 mm broad, puberulous; seeds flattened, orbicular, 3 mm in diameter, brown, minutely verrucose, or smooth with age.

Type in the herbarium of the Field Museum of Natural History, no. 1045321, collected at base of barranca along stream between Tajumulco and Loma Buena Vista, on the north-western slope of Volcán Tajumulco, Guatemala, altitude 2,300 to 2,800 meters, February 28, 1940, by Julian A. Steyermark (no. 36861); isotype in U. S. National Herbarium, no. 1820956.

This well-marked species is characterized by the thin hirsute leaf blades, the peduncled cymes, and the peculiar minute papilliform hairs of the calyx and bracts.

***Odontonema steyermarkii* Leonard, sp. nov.**

Frutex glaber; lamina foliorum ovata vel oblonga, acuminata, basi angustata, in petiolum decurrens; panicula parce ramosa; bracteae subulatae, ciliolatae; pedicelli tenues; calycis segmenta subulata, parce puberula; corollae tubus pallide ochraceus, lobis lilacinis, ovalibus, rotundatis; ovarium glabrum.

Glabrous shrub up to 2 meters high; leaf blades ovate to oblong, up to 18 cm long and 8 cm wide, acuminate (the tip blunt), narrowed or rounded at base and decurrent on the petiole, the costa and veins prominent; petioles up to 3 cm long; inflorescence a sparingly branched panicle, the flowers borne in umbels of usually 3 to 6 flowers each, the lowermost of these peduncled (5 mm long, successively shorter toward tip), the uppermost sessile; bracts subtending the peduncles subulate, 1.5 mm wide at base, gradually narrowed to a slender tip, ciliate, those subtending the umbels similar but slightly smaller; pedicels slender, up to 6 mm long; calyx 3.5 mm long, the segments subulate, about 3 mm long and 0.5 mm wide at base, sparingly puberulous toward tip; corolla up to 24 mm long, 2 mm in diameter at base, narrowed about 5 mm above base to 1 mm,

thence enlarged to about 4 mm at throat, the tube pale buff, the lobes lilac, oval, 5 mm long and 2.5 mm wide, rounded at tip; ovary glabrous; fruit not seen.

Type in the Herbarium of the Field Museum of Natural History, no. 1046653, collected along road between Finca Pirineos and Calahuché, Department of Quezaltenango, Guatemala, altitude 1,200 to 1,300 meters, January 27, 1940, by Julian A. Steyermark (no. 35020); isotype in the U. S. National Herbarium, no. 1820953.

This species may be recognized by its narrow, sparingly branched panicles of flowers, which are said by the collector to be pale buff and lilac.

Odontonema galbanum Leonard, sp. nov.

Frutex, caulibus glabris vel parce et minute pubescentibus; lamina foliorum oblonga, longe acuminata, basi angustata, plus minusve falcata; panicula angusta, terminalis; bracteae subulatae, glabrae; calyx glaber, segmentis subulatis; corolla glabra, galbana, labio superiore bilobo, lobis parvis, rotundatis, ciliolatis, inferiore trilobo, lobis ovalibus, parce ciliolatis; ovarium glabrum.

Shrub up to 2 meters high; stems glabrous or sparingly and minutely appressed-pubescent;

leaf blades oblong, up to 36 cm long and 5.5 cm wide, long-acuminate (the tip often curved), gradually narrowed at base, rather thin, veiny, the costa and lateral veins (usually 10 to 12 pairs) fairly prominent; inflorescence a narrow terminal panicle 20 cm long, the flowers borne in small sessile or subsessile umbels, the pedicels up to 5 mm long, these and the rachis glabrous; bracts of the rachis subulate, 3 mm long and 1 mm wide at base or less, keeled, glabrous, those subtending the pedicels similar but smaller; calyx glabrous, 2.5 to 3 mm long, the segments subulate; corolla glabrous, greenish yellow, up to 27 mm long, 2 mm in diameter at base, narrowed to 1.5 mm just above base, the throat 3 mm in diameter, the lips 5 mm long, the upper lip 2-lobed, the lobes 1.5 mm long, rounded, ciliolate, the lower lip of 3 oval lobes 3 mm wide, rounded, sparingly ciliolate at tip; ovary glabrous; fruit not seen.

Type in the U. S. National Herbarium, no. 1790033, collected in moist forest near Baranca Hondo, above Lake Lajas, Department of Escuintla, Guatemala, altitude about 1,200 meters, January 31, 1939, by Paul C. Standley (no. 63875). *Standley* 65014, collected at essentially the same locality, is also of this species.

Odontonema galbanum is easy to recognize by its slender glabrous panicle of greenish-yellow flowers.

ENTOMOLOGY.—*Some undescribed species of flies of the genus Baccha* (Syrphidae).¹ F. M. HULL, University of Mississippi. (Communicated by ALAN STONE.)

This paper presents descriptions of several species of *Baccha*. These flies were found among material lent for study by Dr. C. L. Fluke, whom I wish to thank for his kind assistance in my study of the genus. The types are in Dr. Fluke's collection. Paratypes where available are in the author's collection.

Baccha boadicea, n. sp.

Related to *gracilis* Williston. Distinguished by the small spot in the center of the wing and by the larger size.

Male.—Length 9.5 mm. Head: face and front shining black, both yellowish-white pubescent along the sides, the former bluish centrally and

with yellow pile; the face in profile without tubercle and barely concave beneath the antennae. The pile of the front is dark brown centrally. The antennae are orange, widely black above on the third joint. The vertex is shining black with black pile in front, yellow behind. Thorax: mesonotum shining black, nonvittate, short golden pilose, the humeri brown, the pleura brownish black with yellow pile and pollen, the scutellum shining black with creased rim, short yellow pile and fringe. Squamae pale. Abdomen: elongate, slender, dark brown, the first joint almost black, the third laterally yellow on the base on each side, the yellow extending about two-fifths the length of the segment. Fourth segment obscurely but narrowly yellow basally, its basal pile yellow,

¹ Received November 4, 1942.