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BOTANY.—*New composites from Salvador.* S. F. BLAKE, Bureau of Plant Industry.

The extensive botanical collections made in Salvador in 1921–22 by Mr. Paul C. Standley of the U. S. National Museum contain three new species of Asteraceae, which are described below. The new genus *Rensonia* is the first known Central American representative of a small group of the subtribe Melampodinae which has hitherto consisted of the medium-sized genus *Silphium* of the United States, the monotypic *Schizoptera* of Ecuador, and the small genus *Moonia* of Australia, India, and Ceylon. The new species of *Zexmenia* is also interesting from a geographical point of view, as its nearest relative is a Brazilian species.

Vernonia standleyi Blake, sp. nov.

Shrubby, 1 to 1.6 meters high, branched above, the branches sometimes supra-axillary; stem stoutish, sometimes zigzag, grayish-barked, striatulate, sessile-glandular, puberulous above, glabrate below; leaves alternate; petioles naked, puberulous, 2 to 5 mm. long; leaf blades elliptic-oblong or elliptic, 6 to 9 cm. long, 1.3 to 3 cm. wide, acuminate, acutely or acuminately cuneate at base, subentire or serrulate with about 15 pairs of small acute teeth, firm-papery, above dotted with sessile yellowish glands, finely puberulous, glabrate except along the veins, beneath paler green, gland-dotted and not densely short-pilose with flexuous hairs, more or less glabrescent except along the nerves, featherveined, the lateral veins about 6 pairs, prominulous beneath, the veinlets few and prominulous beneath; heads discoid, 5-flowered (rarely 4-flowered), 8 mm. high in fruit, numerous, sessile or subsessile in dense rounded clusters 1 to 3 cm. thick at tips of branches and stem and on short axillary branchlets; involucre 5 or 6-seriate, graduate, 4.5 mm. high, the outermost phyllaries ovate, the middle ones ovate-oblong, the innermost linear and deciduous, all indurate and whitish, greenish along costa above, obtuse to acutish, the innermost glandular on back and sparsely arachnoid-ciliate, thin-margined, the others glandular and more or less villous dorsally and densely arachnoid-ciliate; corollas whitish (?), hispidulous especially on tube, 5.5 mm. long (tube 2.5 mm., throat 0.5 mm., teeth 2.5 mm.); achenes

somewhat obcompressed-turbinate, 2.5 mm. long, 7-ribbed, whitish, densely ascending-pilose, bearing a short glabrous collar at apex; pappus 2-seriate, white, copious, the outer aristae numerous, 0.8 mm. long, the inner 3.5 mm. long.

Type in the U. S. National Herbarium, no. 1,135,594, collected on brushy hillside near Santa Ana, Department of Santa Ana, Salvador, altitude 655 to 800 meters, January 8, 1922, by Paul C. Standley (no. 19703).

ADDITIONAL SPECIMENS EXAMINED: SALVADOR: Pine forest, vicinity of Santa Ana, altitude 655 to 900 meters, January 28 to 30, 1922, *Standley* 20413.

A member of the section *Eremosis*, nearest *Vernonia triflosculosa* H.B.K., but distinguished by its usually 5-flowered heads, its densely arachnoid-ciliate phyllaries (the outermost ovate, not suborbicular or suborbicular-ovate as in *V. triflosculosa*), and the much more conspicuous glabrous collar at apex of achene. The species is abundant on the slopes along the railroad in the Department of Santa Ana, forming large masses, which are conspicuous because of the white pappus of the closely crowded heads.

Rensonia Blake, gen. nov.

Shrub; leaves opposite, ovate, slender-petioled, large, serrate, scabrous; heads small, heterogamous, radiate, in terminal cymose panicles, the rays pistillate, fertile, the disk sterile; involucre turbinate-campanulate, 2-seriate, equal or subequal, the phyllaries 8 or 9, oblong-obovate, erect, indurate below, thick-herbaceous above; receptacle small, flat; outer pales flattish, the inner narrow, complicate; pistillate flowers about 8, about 1-seriate, their corollas ligulate, yellow, apparently small; disk flowers hermaphrodite, sterile, about 20, their corollas tubular, with slender tube, much longer cylindric-funnelform throat, and 5-toothed limb; anthers with minutely sagittate bases and ovate terminal appendages; style (hermaphrodite flowers) undivided, above thickened and hispidulous; ray achenes obovate, obcompressed, epappose, not at all coherent with the subtending phyllaries or the pales of the disk, 2-winged, the wings submembranous, narrow, nerved, entire or lacerate above, prolonged above the achene into two triangular lacerate teeth; disk achenes inane, elongate-clavate, trigonous, wingless, their pappus a short, thick, entire, hispidulous crown, with or without a single short, slender awn.

This genus is named for Dr. Carlos Renson, who has been connected with the Salvador Department of Agriculture for more than thirty years, and whose botanical collections, a series of which is in the U. S. National Herbarium, are the most extensive made in Salvador prior to Mr. Standley's trip. It is a member of the Heliantheae-Melampodinae, to be inserted between *Silphium* L. and *Schizoptera* Turcz. The former genus, no species of which is known south of the United States, consists of tall herbs with large, broadly campanulate or subglobose heads and 2 or 3-seriate rays. The monotypic genus *Schizoptera* Turcz.,[1] known only from Ecuador, is an herb with a campanulate involucre of membranous-herbaceous outer and

[1] See Blake, Hook. Icon. Pl. **31:** *pl. 3058*. 1916, and Contr. Gray Herb. n. ser. **52:** 34. 1917.

membranous-scarious inner phyllaries, biseriate rays, and disk achenes epappose or with 2 awns but no corona.

Rensonia salvadorica Blake, sp. nov.

Shrub 2 to 5 meters high, oppositely branched; stem slender, scabrid-strigillose, gray-barked, subterete, striatulate, the younger branches angulate; petioles naked, strigillose, 2.5 to 8.5 cm. long; leaf blades ovate, 9 to 26 cm. long, 3.5 to 10 cm. wide, acuminate and usually somewhat falcate, acutely cuneate (sometimes abruptly so) at base, serrate except toward base and at apex with about 45 pairs of depressed acutely callous-tipped teeth, thin, above deep dull green, rather densely and very harshly hispidulous with mostly deciduous hairs with lepidote-tuberculate persistent bases, beneath slightly lighter green, evenly short-strigose with slightly harsh hairs and along the veins sparsely hispid or hispidulous, triplinerved above the base and loosely prominulous-reticulate beneath; heads (flowers fallen) 6 to 7 mm. high, about 5 mm. thick, about 20 in a terminal, ternately divided, convex, cymose panicle 4 to 7 cm. wide, its branches densely strigillose, the bracts very small, the slender pedicels 1 to 2 cm. long; involucre 5 to 7 mm. high, strigillose, the firm thickish phyllaries oblong-obovate, 1.5 to 2 mm. wide, acute, callous-tipped, 3 or 5-nerved; ray flowers scarcely seen; disk corollas (over-mature) 5 mm. long (tube 1 mm., throat 3.2 mm., teeth ovate, 0.8 mm.); pales narrow, firmly scarious, acuminate, strigillose, about 5 mm. long; ray achenes broadly obovate, 5.2 to 5.8 mm. long and 2.5 to 2.8 mm. wide (including wings), the body obovate, blackish, 4 mm. long, 2 mm. wide, nerveless, hispidulous toward apex outside, nearly glabrous inside, the wings erect-nerved, continued into triangular teeth, the teeth and sometimes the upper part of the wings lacerate and minutely ciliolate; disk achenes 3.2 to 3.5 mm. long, hispidulous toward apex, the corona 0.3 mm. high, the awn 0.7 to 1.2 mm. high.

Type in the U. S. National Herbarium, no. 1,135,663, collected in the wooded ravine of the Río Ataco, among mountains back of Ahuachapán, Department of Ahuachapán, Salvador, altitude 800 to 1000 meters, January 10, 1922, by Paul C. Standley (no. 19783).

ADDITIONAL SPECIMENS EXAMINED: SALVADOR: Along stream, vicinity of Ahuachapán, January 14, 1922, *Standley* 19964. In forest, Sierra de Apaneca, region of Finca Colima, Department of Ahuachapán, January 17 to 19, 1922, *Standley* 20090.

This shrub bears the vernacular names "canilla," "tatascamillo," and "vara de zope." Unfortunately all three collections are too mature to show the character of the flowers well. A single imperfect ray adhering to one of the heads was yellow, nearly linear, and appeared to be scarcely longer than the style branches. All the flowers are probably yellow. The species is very similar in general appearance to *Perymenium strigillosum* (Robins. & Greenm.) Greenm.

Zexmenia iners Blake, sp. nov.

Erect or decumbent annual, 25 to 50 cm. high, freely branched; stem slender, densely spreading-hirsutulous with somewhat uncinate hairs and sparsely hispid with straight wide-spreading hairs, glabrate below; leaves opposite essentially throughout; petioles 2 to 10 mm. long, hirsutulous and hispid-ciliate; leaf blades of the stem leaves ovate or oblong-ovate, 2.5 to 7 cm. long, 1.2

to 3.3 cm. wide, acute or acuminate, acutely cuneate at base, depressed-serrate (teeth 4 to 8 pairs), thin, evenly but not densely uncinate-hirsutulous on both sides, evenly tuberculate-hispid on surface above, hispid chiefly on the veins beneath, triplinerved well above the base, green on both sides; branch leaves smaller; heads solitary in the forks of the stem and at tips of branches, in flower slender, about 6 mm. wide, in fruit hemispheric, about 1 cm. wide; peduncles slender, pubescent like the stem, 1 to 5 cm. long; disk in anthesis 7 mm. high, 3 mm. thick; involucre 2-seriate, obgraduate or subequal, 6 to 8 mm. high, the phyllaries few (about 6), the outer lanceolate or narrowly oblong-lanceolate, 1.5 to 2 mm. wide, obtuse or acutish, herbaceous for the upper half of their length, pale and usually 1-ribbed below, erect, pubescent like the stem and hispid-ciliate, the inner similar but usually shorter and broader, with shorter usually acute herbaceous tips; rays 3 to 5, fertile, orange yellow, the lamina suborbicular, 3 to 3.5 mm. long, 2.8 to 3 mm. wide, bilobate with sometimes bidentate lobes, densely hirsutulous on back on the two chief nerves; disk flowers about 5 to 7, orange yellow, puberulous and ciliolate on the teeth and with a puberulous ring at base of throat, 3.8 to 4.5 mm. long (tube tubular-funnelform, 1.5 to 2 mm., throat funnelform, 1.5 to 1.8 mm., teeth ovate, 0.7 mm.); pales scarious, obtuse, wing-keeled to below the apex, 7 mm. long; ray achenes (with wings included) broadly oval-obovate, 5.5 mm. long, 3.5 to 4 mm. wide, the wings about 1 mm. wide, short-ciliate and erose, prolonged above the achene as rounded ears, not adnate to the pappus cup, often purplish-spotted, the body of achene obovoid, obcompressed, 4 mm. long, 1.5 mm. wide, blackish, tuberculate-hispidulous especially on midline, with a conspicuous callous appendage on each face at base; pappus a short-stipitate, lacerate, squamellaceous corona about 1.5 mm. high (including the neck), and 1 to 3 awns 2 mm. high or less, or the latter sometimes obsolete; disk achenes similar but compressed, the pappus awns 2, unequal, 1 to 1.5 mm. long.

Type in the U. S. National Herbarium, no. 1,139,183, collected in sand along a stream, near Armenia, Department of Sonsonate, Salvador, April 18, 1922, by Paul C. Standley (no. 23498).

OTHER SPECIMENS EXAMINED: SALVADOR: In hedgerow, vicinity of San Salvador, altitude 650 to 850 meters, December 20, 1921, to January 4, 1922, *Standley* 19414. Wet soil along stream, vicinity of San Salvador, March 30 to April 24, 1922, *Standley* 23300. Wet thicket, vicinity of Santa Emilia, Department of Sonsonate, altitude 135 meters, March 22 to 25, 1922, *Standley* 22259.

Among North American species *Zexmenia iners* is nearest *Z. hispida* (H.B.K.) A. Gray and *Z. longipes* Benth., from both of which it differs in its annual root, smaller heads on much shorter peduncles, and tiny, roundish rays. *Z. rudis* Baker of Brazil, the only annual species of the genus hitherto known, is more closely related to *Z. iners*, but has considerably larger leaves and rays.

ENTOMOLOGY.—*New genera and species of sucking lice.* H. E. EWING, Bureau of Entomology, U. S. Department of Agriculture. (Communicated by S. A. ROHWER.)

In this paper are described four new genera and three new species of Anoplura, or sucking lice. The material upon which these genera