

BOTANY.—*New species of plants from Salvador. III.*¹ PAUL C. STANDLEY, National Museum.

Zamia herrerae Calderón & Standl., sp. nov. (Fig. 1).

Leaves few, the petioles slender, scarcely half the length of the rachis, glabrous, furnished with a few remote stout spines 1–2 mm. long, similar spines present also on the rachis; leaf rachis very slender, about 35 mm. long; leaflets about 50, nearly linear, 15–22 cm. long, 8–13 mm. wide, 17 to 21-nerved, thick, very lustrous, paler beneath, the margins bearing a few distant (about 2 cm. apart) appressed spine-tipped teeth, the lower third of the blade entire, the blades gradually attenuate from the lower third to the tip; inflorescence and fruit unknown.

Type in the U. S. National Herbarium, no. 1,165,680, collected in the vicinity of Sonsonate, Salvador, July 17, 1923, by Dr. Salvador Calderón (no. 1682).

Although known only from sterile material, there is little doubt that the present plant represents an undescribed species of this interesting genus, of which several other Central American representatives are known. This is probably the first *Zamia* to be reported from the Pacific coast of Central America.

The species is named in honor of Sr. Dr. Héctor Herrera of Sonsonate, an enthusiastic scientist and promoter of scientific work, whose delightful hospitality we have experienced upon the occasion of several visits to that city.

Aeschynomene calderoniana Standl., sp. nov.

Slender shrub, 1–2 m. high, with few branches, the young branchlets densely puberulent; stipules caducous; petioles short (mostly 6–10 mm.), the leaf rachis 2–5.5 cm. long, finely appressed-pubescent or glabrate; leaflets 5–10 pairs, oval-oblong or oblong-obovate, 9–18 mm. long, 5–8 mm. wide, broadly rounded at apex and obscurely mucronate, obliquely rounded at base, nearly sessile, rather thick, when young sparsely setose-strigose but soon glabrate, the venation beneath laxly reticulate and somewhat prominent, the costa central or nearly so; flowers in few-flowered axillary racemes shorter than the leaves, dark purple, the rachis densely puberulent, the pedicels about 4 mm. long; calyx 2–2.5 mm. long, covered with short appressed whitish hairs; standard petal 6–7 mm. long, suborbicular, densely whitish-sericeous outside, the other petals nearly as long, glabrous; joints of the fruit 1 or 2, semiorbicular or nearly so, 10–15 mm. long, 6–8 mm. wide, thin, nearly smooth, densely whitish-strigillose or finally glabrate.

Type in the U. S. National Herbarium, no. 1,136,211, collected on dry open hillside above Santa Ana, Salvador, January, 1922, by Paul C. Standley (no. 20367).

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Fig. 1. *Zamia herrerae* Calderón & Standl.
(About one-fourth natural size)

A well-marked species, not closely related to any of those previously reported from Central America or Mexico. It is named in honor of Sr. Don Oscar Núñez Calderón, who was a helpful and highly esteemed companion during nearly a month spent in the western departments of Salvador.

***Machaerium marginatum* Standl., sp. nov.**

Shrub 3-4 m. high, the trunk armed with large stout spines; young branchlets thick and succulent, sparsely pilose; stipules 8-12 mm. long, oblong-lanceolate, compressed, thick and indurate, spinose, densely pilose-sericeous on both surfaces; leaves long-petiolate, the petioles slender, sparsely pilose or glabrate; leaflets subopposite, about 13, the petiolules stout, 4-5 mm. long, sparsely short-pilose or glabrate, the blades oblong or oblong-elliptic, 8-13 cm. long, 3-5.5 cm. wide, abruptly acuminate, rounded at base, thick, very lustrous, when young sparsely pilose and puberulent beneath along the costa, elsewhere glabrous, the venation conspicuous but little elevated, the margin cartilaginous-thickened; inflorescence terminal, forming a very large panicle, much branched, the branches copiously short-pilose or somewhat tomentose, becoming glabrate, bearing also numerous scalelike trichomes, these lance-subulate, broadened at base, pilose, terminating in a slender yellow bristle, the scales upon the ultimate branchlets setiform; bracts similar to the stipules, indurate; flowers in short racemes, the pedicels about 2 mm. long; bractlets lanceolate or ovate, nerved, bearing numerous subulate-setiform yellowish hairs; calyx 5 mm. long, obtuse at base, sparsely yellow-setose, obliquely 5-dentate, the teeth broadly triangular, obtuse, finely appressed-pubescent; petals dirty pinkish white, the standard 8-9 mm. long, abruptly recurved, densely whitish-sericeous outside, the other petals glabrous, the keel petals slender-clawed, united above; ovary linear, strongly curved, densely appressed-pilose, the style slender, glabrous.

Type in the U. S. National Herbarium, no. 1,137,184, collected on a dry brushy slope near San Vicente, Salvador, altitude about 400 meters, March, 1922, by Paul C. Standley (no. 21381).

The type specimen consists of flowering material, without leaves, the shrub being leafless at flowering time. The description of the leaves is drawn from *Standley* 20146, collected on the Finca Colima, Sierra de Apañeca, Departamento de Ahuachapán, in January of the same year. The second collection consists only of leaves, but there is little doubt that it represents the same species. The vernacular name given at the Finca Colima was *sangre bravo*.

Machaerium marginatum is perhaps related to *M. pachyphyllum* Pittier, a Panaman species, but it is not likely to be confused with any plant of the genus previously reported from Central America. Sterile specimens collected by the writer at Quiriguá, Guatemala, in March, 1922, (no. 23935) represent either the same or a very closely related species, and I have also seen specimens from Oaxaca, Mexico, which are perhaps conspecific.

Banisteria rosea Standl., sp. nov.

Large woody vine, the branches slender, brownish, the young branchlets densely and loosely sericeous but soon glabrate; petioles 3-6 mm. long, glabrate; leaf blades elliptic or elliptic-ovate, 2.5-6 cm. long, 1.5-3.5 cm. wide, acute to very obtuse at apex, rounded or obtuse at base, thin, when young densely and loosely appressed-pilose but soon glabrous, pale beneath, bearing near the base of the blade 2-4 sessile glands; inflorescence of lax few-flowered axillary panicles 4-6 cm. long, their branches slender, loosely tomentose or finally glabrate, the bracts leaflike, 5-7 mm. long; pedicels slender, mostly 4-6 mm. long, bearing 2 small bractlets about the middle; sepals 2.5-3 mm. long, oval, rounded at apex, sericeous, the glands scarcely half as long as the sepal body; petals 4-5 mm. long, pink; samaras 1 or 2, about 2.5 cm. long, densely or sparsely strigose, the wing thin, dilated toward the apex and 7-8 mm. wide, thickened along the dorsal margin, the body coarsely reticulate-veined, not crowned.

Type in the U. S. National Herbarium, no. 1,137,424, collected in a ravine at the base of the Volcán de San Vicente, near the town of San Vicente, Salvador, March, 1922, by Paul C. Standley (no. 21663). Also collected in flower at La Unión in February, 1922, *Standley* 20653.

Related to *B. retusa* (Donn. Smith) C. B. Robinson and *B. purpurea* L. *Banisteria rosea* is a handsome vine of the lowlands of Salvador, its abundant flowers at a distance resembling apple blossoms. At La Unión the vernacular name of *florecita de pensamiento* was given for it.

Acalypha salvadorensis Standl., sp. nov.

Plants apparently annual, more than 30 cm. high, erect, the stems densely cinereous-puberulent, with elongate internodes; stipules minute; petioles very slender, 1.5-3.5 cm. long, puberulent and with a few short gland-tipped hairs (these present also upon the stems); leaf blades ovate or broadly ovate, 3-4.5 cm. long, 1.5-3 cm. wide, acute or the lowest obtuse, rounded or obscurely emarginate at base, evenly and rather finely crenate, thin, on the upper surface sparsely setulose-hirsute and scaberulous, beneath finely pubescent; plants monoecious, the staminate spikes axillary, subglobose, usually less than 2 mm. long, borne on slender peduncles 2-4 mm. long; pistillate spikes terminating the main branches and much reduced ones (about 1 cm. long) borne on short leafy axillary branches; terminal spikes very dense, 2.5-5 cm. long, about 1 cm. thick, the rachis densely cinereous-puberulent; bracts reniform, 5-7 mm. long, sparsely white-hirsute and densely short-pilose, also with numerous short gland-tipped hairs, the margin with about 8 very short obtuse teeth; styles divided into numerous slender filiform branches; capsule 2 mm. in diameter, broader than high, obtusely lobate, finely pubescent; seeds subglobose, grayish, closely foveolate.

Type in the U. S. National Herbarium, no. 1,165,685, collected in San Salvador, Salvador, July, 1923, by Dr. Salvador Calderón (no. 1741).

The plant is of a decidedly weedy and ordinary appearance, but it is not matched by an herbarium material available, nor does it agree with any description with which it has been compared.

Croton payaquensis Standl., sp. nov.

Shrub, 1 m. high or less, or often nearly wholly herbaceous, sparsely branched, the branches densely covered with a pubescence of white or yellowish, appressed, sessile trichomes consisting of numerous radiating branches; stipules subulate, entire, caducous; petioles stout, 5–12 mm. long, densely stellate-tomentose; leaf blades oblong-ovate to ovate-oval, 2.5–7 cm. long, 1.5–4 cm. wide, rounded at apex, broadly rounded or subcordate at base, thick, obscurely glandular-denticulate, densely stellate-tomentose on both surfaces or in age glabrate and green above, whitish beneath, eglandular; flower spikes axillary, sessile, sometimes 6 cm. long and many-flowered but often very short and few-flowered, the flowers short-pedicellate; staminate flowers subglobose in bud and 1–1.5 mm. in diameter, petaliferous; stamens about 8, the receptacle densely white-pilose; pistillate calyx sparsely stellate-pubescent or glabrate, the five lobes lance-oblong, subequal, acute; young fruit densely stellate-tomentose, becoming glabrate; styles bipartite, the branches densely stellate-pubescent below, glabrous above.

Type in the U. S. National Herbarium, no. 1,151,991, collected on the Cerro de la Olla, on the Guatemalan frontier near Chalchuapa, Salvador, in 1922 by Dr. Salvador Calderón (no. 1024). The following additional specimens have been examined:

SALVADOR: Santa Ana, *Standley* 20351. Laguna de Maquigüe, *Standley* 20941.

Similar in general appearance to *C. cortesianus* H.B.K., which, however, is conspicuously distinct in its acute leaves which are glabrous on the upper surface. At Maquigüe the vernacular name was given as *friegga-plato*. The specific name is derived from Payaquí, a name given in preconquest times to the region about the Lake of Güija.

Ophellantha Standl., gen. nov.

Small trees, the indument scant, of simple hairs; leaves alternate, petiolate, membranaceous, penninerved, remotely denticulate; stipules 2, small, spinose, persistent; flowers monoecious, long-pedicellate, solitary or fasciculate on axillary spurs; staminate calyx 5-parted, the lobes in anthesis slightly imbricate; petals 5, distinct, entire, much longer than the calyx, sessile, ciliate; disk large, densely short-hirsute; stamens numerous (50 or more), irregularly inserted over the disk, the filaments elongate, filiform, glabrous; anthers small, 2-celled, dehiscent by 2 introrse slits, each cell bearing at the apex a short filiform appendage; rudimentary ovary absent; sepals of the pistillate flower 5, becoming large and leaf-like after anthesis; petals not seen; margin of the disk very shallowly 5-lobate; ovary 2-celled, sessile; styles 2, stout, nearly or quite distinct, bifid for one-third their length; ovules solitary; capsule 2-celled, the cells loculicidally and septically bivalvate, separating from the persistent flattened column; seeds large, ecarunculate, smooth or nearly so; cotyledons broad and plane, the endosperm fleshy.

Type species, *Ophellantha spinosa* Standl.

Ophellantha is apparently to be referred to the *Acalyphae-Chrozophorinae* of the family Euphorbiaceae, and in the key to the genera of that group

given by Pax in Engler's *Pflanzenreich*² it would run at once to *Speranskia*, a genus of herbaceous plants occurring in China. *Ophellantha* is clearly distinct in various important characters from each genus of the group treated by Pax. All the other genera of the group have a 3-celled capsule, but it may be that a 2-celled fruit is not constant in the Salvadorean plant.

Ophellantha spinosa Standl., sp. nov.

Tree, 4.5-6 m. high, the branchlets slender, brownish, with few large elevated lenticels, the young branchlets rather sparsely furnished with short acicular appressed hairs; stipular spines 3-5 mm. long, much enlarged at base; leaves on young branchlets alternate, no branches of the preceding years fasciculate at the nodes, the petioles slender, 10-14 mm. long, pubescent like the branchlets; leaf blades elliptic or ovate-elliptic, 5-9 cm. long, 2.5-5.5 cm. wide, acute or short-acuminate, with blunt tip, acute at base and decurrent upon the petiole, thin, green above, paler beneath, furnished along the nerves with appressed acicular hairs, glabrate elsewhere, densely appressed-ciliate, obscurely and remotely glandular-denticulate, the margin often slightly repand; pedicels slender, 1.2-1.8 cm. long; staminate sepals broadly ovate, 1-1.5 mm. long, appressed-pilosulous; petals oval, green, about 5 mm. long, rounded at apex, glabrous, ciliate; disk 4 mm. in diameter, the filaments 4-5 mm. long; pistillate sepals oblong-elliptic, in fruit about 1.5 cm. long, obtuse or acutish, denticulate, 5-nerved, foliaceous, green, glabrate, sparsely ciliate; styles 5-6 mm. long, appressed-setulose; capsule 1.5 cm. long, appressed-setulose or glabrate, smooth, the walls very thick; seeds about 10 mm. long and 6-7 mm. broad, glabrous, the surface irregularly mottled with brown and grayish.

Type in the U. S. National Herbarium, no. 1,137,579, collected in a thicket on the mountain slopes above Izalco, Departamento de Sonsonate, Salvador, March, 1922, by Paul C. Standley (no. 21819).

The vernacular name of the tree was given as *limoncillo*.

Triumfetta calderoni Standl., sp. nov.

Shrub or tree, often 6-8 m. high, with smooth pale bark and spreading open crown; stems densely covered with a double indument of fine stellate hairs and of coarse stiff spreading ones; petioles 3-7 cm. long, densely tomentose; leaf blades mostly ovate or rounded-ovate, 9-15 cm. long, 5-11 cm. wide, rather abruptly acuminate or long-acuminate, rounded or subcordate at base, coarsely and irregularly crenate-dentate, sometimes obscurely 3-lobate or angulate, stellate-setulose or stellate-tomentulose on the upper surface or finally glabrate, beneath pale and usually densely stellate-tomentose; panicles terminal and axillary, often very large in fruit, the branches densely stellate-tomentose; pedicels 2-3 mm. long or in fruit longer; sepals oblong-linear, 4-5 mm. long, not appendaged at apex, minutely tomentose outside; petals oblong, glabrous, about one-third as long as the sepals; fruit 5-7 mm. long (including the bristles), covered with numerous very slender bristles, these densely pilose with stiff spreading whitish hairs.

² IV, 147: 10. 1912.

Type in the U. S. National Herbarium, no. 1,151,087, collected in the vicinity of San Salvador, Salvador, December, 1921, by Dr. Salvador Calderón (no. 78). The following additional collections also represent the same species:

SALVADOR: San Salvador, *Calderón* 354, 1257; *Standley* 19114. San Marcos, Departamento de San Salvador, *Standley* 22782. Tonacatepeque, Departamento de San Salvador, *Standley* 19475.

A well-marked species, characterized by its densely pilose fruit and minute petals.

***Abutilon calderoni* Standl., sp. nov.**

A much-branched shrub, 1-3 m. high, the branchlets terete, covered with a minute close grayish tomentum; petioles slender, 5-11 cm. long; leaf blades broadly ovate-cordate to orbicular-cordate, 8-17 cm. long, 5.5-14 cm. wide, rather abruptly acuminate or long-acuminate, deeply cordate at base, shallowly and finely crenate, often rather remotely so, sometimes obscurely 3-lobate near the apex, thin, green above, thinly and extremely minutely stellate-pubescent, beneath covered with a fine close grayish stellate tomentum; flowers orange, mostly in large open pyramidal terminal panicles; pedicels slender, 1.5-3.5 cm. long, jointed near the base; calyx lobes ovate, 5-6 mm. long, acute, densely pubescent, appressed or spreading in fruit; petals 12-15 mm. long, glabrate outside, spreading; stamen tube about 7 mm. long, stellate-pubescent, much enlarged below; carpels 10 or 11, 8 mm. long, 2 or 3-seeded, obtuse or rounded at apex, stellate-tomentose.

Type in the U. S. National Herbarium, no. 1,152,613, collected in waste ground in San Salvador, Salvador, in 1923 by Dr. Salvador Calderón (no. 1639). The following additional specimens have been examined:

SALVADOR: San Salvador, *Standley* 22676. Volcán de San Salvador, *Standley* 22984.

A specimen collected by Dr. Calderón at Zacatecoluca in March, 1922, (no. 330) differs from the typical form only in having the branches, especially those of the inflorescence, pilose with long spreading stiff hairs. It is probably only a variant form, and may be known as *Abutilon calderoni* var. *longipilum* Standl. (type, U. S. Nat. Herb. no. 1,151,348). The vernacular name of the Zacatecoluca plant is *malva*.

Abutilon calderoni is a relative of *A. giganteum* (Jacq.) Presl, which is distinguished by its substantially larger carpels.