

SCIENTIFIC RESULTS OF EXPLORATIONS BY THE U. S. FISH COMMISSION STEAMER ALBATROSS.

[Published by permission of Hon. Marshall McDonald, Commissioner of Fisheries.]

No. XVI.—PLANTS COLLECTED IN 1889 AT SOCORRO AND CLARION ISLANDS, PACIFIC OCEAN.

BY

DR. GEO. VASEY AND J. N. ROSE,
Botanist and Assistant Botanist, Department of Agriculture.

Among the various islands visited by the *Albatross* in her voyage along our Pacific coast in the year 1889 were Socorro and Clarion. A small and fragmentary collection was made from each of these islands. It is to be regretted that an arrangement had not been made for a large and careful collection, not only from these but from many other interesting points visited by this ship. We are indebted to Mr. Charles H. Townsend, the ornithologist of the expedition, for this collection, which he made in connection with his other work.

Socorro Island is the largest of the Revillagigedo group, and is about 260 miles south of Cape St. Lucas, Lower California, in latitude $18^{\circ} 43' 14''$ and longitude $110^{\circ} 54' 13''$. It is about 24 miles long by 9 miles broad. It contains a small mountain, which rises to the height of 2,000 feet. Clarion or Cloud lies to the south and west of Socorro, in latitude 18° and longitude $114^{\circ} 50'$.

The flora of these islands is doubtless tropical and similar to that of Mexico. The total number of species found on the two islands was twenty-six; eighteen are from Socorro and twelve from Clarion Island, four of which they have in common. One from Socorro has hitherto been found only in Southern Lower California. Three new species and variety are now described, one from Clarion, the others from Socorro. There are three species of Sapindaceæ from these islands, three Leguminosæ from Clarion Island, three Compositæ and two Gramineæ from Socorro, and two Euphorbiaceæ, one from each island.

These plants were collected in March, 1889.

PLANTS FROM CLARION ISLAND.

PORTULACACEÆ.

Portulaca pilosa L.

STERCULIACEÆ.

Waltheria Americana L.

ZYGOPHYLLACEÆ.

Tribulus cistoides L.

SAPINDACEÆ.

Dodonæa viscosa L.

Sapindus, sp.

LEGUMINOSÆ.

Erythrina, sp.

A single leaf of some Leguminous plant, similar to *E. crista-galli*, but the leaflet is obovate and obtuse.

Phaseolus, sp.

The whole plant cinereous, pubescent, leaflet, oval, entire; peduncle, 6 inches long; flower, purple. It resembles *P. atropurpureus* Moc. in some respects, but the leaves are dissimilar. It seems nearest No. 183 of Parry and Palmer (from Central Mexico, 1878), having similar leaves, petiole, and flowers, but the calyx lobes are more slender.

Sophora tomentosa L.

RUBIACEÆ.

Spermacoce, sp.

A single specimen obtained.

CONVOLVULACEÆ.

Ipomœa, sp.

Glabrous throughout: leaves three lobed, cordate at base; lobes obtuse to acute or even acuminate: peduncles long, five to six flowered: calyx with long acuminate lobes: corolla large (2 to 3 inches long), purple. The material of this species is poor and can not be properly identified. It does not match anything in the National Herbarium. The calyx and corolla is very similar to *I. insularis*, of Sandwich Islands, but the leaves are quite different.

LABIATÆ.

Teucrium Townsendii sp. nov.

Low and diffuse herb almost glabrous: lower leaves (1 inch long) oblong with cuneate base, coarsely dentate: floral leaves (5 to 9 lines long) crowded, ovate, obtuse, entire: flowers solitary in the axils of

the leaves on pedicels 2 to 3 lines long: calyx 2 to 3 lines long, deeply five-lobed into ovate lanceolate divisions: corolla, lilac, 10 lines long, longer than the leaves, the lower lobes 5 lines broadly oval: seeds scarcely roughened, glabrous.

This species is very distinct from any North American representative of this genus. It resembles *T. laciniata* in its general habit, but its leaves are very different, all its floral leaves being entire and the lower ones merely dentate; the seed is also similar but smaller. *T. glandulosum* of Cedros Island has the floral leaves entire, but it is a taller form with a loose inflorescence, long pedicels and different seeds. We take pleasure in dedicating this species to the collector, Mr. Charles H. Townsend.

EUPHORBIACEÆ.

Euphorbia, sp.

PLANTS FROM SOCORRO ISLAND.

PORTULACACEÆ.

Portulaca pilosa L.

Only a single fruiting specimen.

STERCULIACEÆ.

Waltheria Americana L.

The inflorescence is unusually open and somewhat cymose.

ZYGOPHYLLACEÆ.

Tribulus cistoides L.

A very common plant on this island.

SAPINDACEÆ.

Cardiospermum Palmeri sp. nov..

Climbing over bushes; stems canescent-tomentose: leaves tomentose on both sides, biternate on petioles, half inch long; leaflets from 1 to 1½ inches long, sessile or on petiolule 3 to 4 lines long, ovate or oblong, coarsely dentate: peduncles 3 inches long: flowers rather large: the two outer sepals a half line long, broadly ovate, a little hirsute; the two inner, 2 lines long, oblong, glabrous; the two hypogynous glands short and rounded: petals white: capsule membranous, 12 to 18 lines in diameter, minutely hirsute to almost glabrous. C. H. Townsend, Socorro Island, March, 1889; Dr. Edward Palmer, La Paz, Lower California (No. 68), January 20, 1890.

Mr. Townsend got only a few capsules and a single leaf. Dr. Palmer's collection contains both flowers and fruit, and enables us to characterize this as a good species; this specimen has somewhat narrower

leaflets and more glabrous capsules, but in other respects is like the Socorro Island plant. Dr. Palmer says it is very rare in Lower California.

Two species were collected near Dr. Palmer's station by Xantus in 1859 and 1860. Neither of these was Dr. Gray able to definitely determine on account of poor material. One he refers to "*C. molle*, H. B. K. ?," of which but a single specimen was collected. This we have not seen; it may possibly be the same species, but ours is certainly not *C. molle*. The other species of Xantus was referred to as "*Cardiospermum*, sp. nov." Mr. Watson thinks it may be *C. tortuosus*, although Dr. Gray was doubtful. (See Watson, Bibliographical Index, p. 79.) Bentham's plant was collected by Mr. Hind in 1837, from Magdalena Island, and Mr. Brandegee has collected it from the original station this past season. He did not find it at all on the main-land. Our plant is clearly not this species. *C. Halicacabum*, the only other species from the peninsula, is almost glabrous, with smaller flowers. Four or five other species occur in Mexico, but differ in hypogynous glands, foliage, etc.

The species to which it comes nearest is *C. Loxense*, H. B. K., from Peru, South America, but this has leaves with petiole $1\frac{1}{2}$ to 2 inches long, the outer sepal half the length of the inner, and with the capsule "pubescenti-hirtelles," etc.

Dr. Gray referred here, with some uncertainty, a plant from Wilkes's expedition, with perfectly glabrous capsules. Our plant resembles it, but has broader leaflets, longer peduncles, etc.

Dodonæa viscosa L.

RUBIACEÆ.

Spermacoe (*Boneria*), sp.

Species resembling *S. podocephala* Gray.

COMPOSITÆ.

Erigeron, sp.

Viguiera deltoidea Gray, var. *Townsendii*, var. nov.

Leaves entire and opposite: thinner and with less scabrosity than the type: rays five to eight.

Perityle *Socorroensis* Rose. Bot. Gaz., xv, 118. The type.

SOLANACEÆ.

Physalis glabra Benth. (?)

This may be a new species, but the material is insufficient and for the present it is referred to the above species. It is quite glabrous throughout: the largest leaves $1\frac{1}{2}$ inches long, cordate at base, obtuse at apex: corolla small (2 lines broad), with a large purple eye, anther bluish green.

ACANTHACEÆ.

Elytraria tridentata Vahl.

VERBENACEÆ.

Lantana involucrata L.

ARISTOLOCHIACEÆ.

Aristolochia brevipes Benth.

Probably this species, but material very scanty.

LORANTHACEÆ.

Phoradendron rubrum Griseb.

A single specimen sent without flower or fruit; the identification is uncertain; the leaves correspond very well with specimen in the National Herbarium.

EUPHORBIACEÆ.

Euphorbia, sp.

CYPERACEÆ.

Fimbristylis, sp.

GRAMINEÆ.

Cenchrus myosuroides H. B. K.

Heteropogon contortus R. & S.

FILICES.

Cheilanthes Wrightii Hook.

“Probably this species, but material too poor for exact determination.” H. Seaton.

MARCH 5, 1889.