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GOSSYPIUM FROM GUATEMALA

WITH TWO PLATES

BY

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RUBELZUL COTTON: A NEW SPECIES OF GOSSYPIUM FROM GUATEMALA

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The Kekchi Indians at Rubelzul, a part of the Finca Trece Aguas, a few miles from Senahú in Alta Verapaz, Guatemala, cultivate about their door yards the distinct type of cotton described below. An examination of the region and questioning of the natives failed to throw any light upon the origin of this cotton. It is undoubtedly a distinct, local species and has probably been cultivated by these Indians for several hundred years.

Its most prominent feature is the remarkable development of the calyx which reaches proportions not known in any other species. Seeds from the plants at Rubelzul when grown in richer soil at a considerable higher altitude in Guatemala or when planted in Florida or Texas show this very large calyx in an even more exaggerated degree. Next to the calyx the most distinguishing feature is the three deep, cuneate nectaries at the end of the pedicle, instead of the usual circular or reniform shape of the nectaries found in that position. The shape of these nectaries was retained by the plants cultivated in Texas and was recognizable in hybrid plants having the Rubelzul cotton as one parent. The plants grown in Texas from the Guatemalan seed were so affected by the new conditions as to be otherwise almost unrecognizable. All the vegetative characters were much exaggerated, the plants becoming large, spreading bushes with leaves ten inches across.

The fiber being longer and of finer quality than the species commonly planted by the Kekchi Indians this cotton was favored for their door-yard cultures.

The size and form of the calyx indicate at once the specific distinctness of the plant which may be technically described as follows:

GOSSYPIUM IRENAEUM *Lewton, new species*

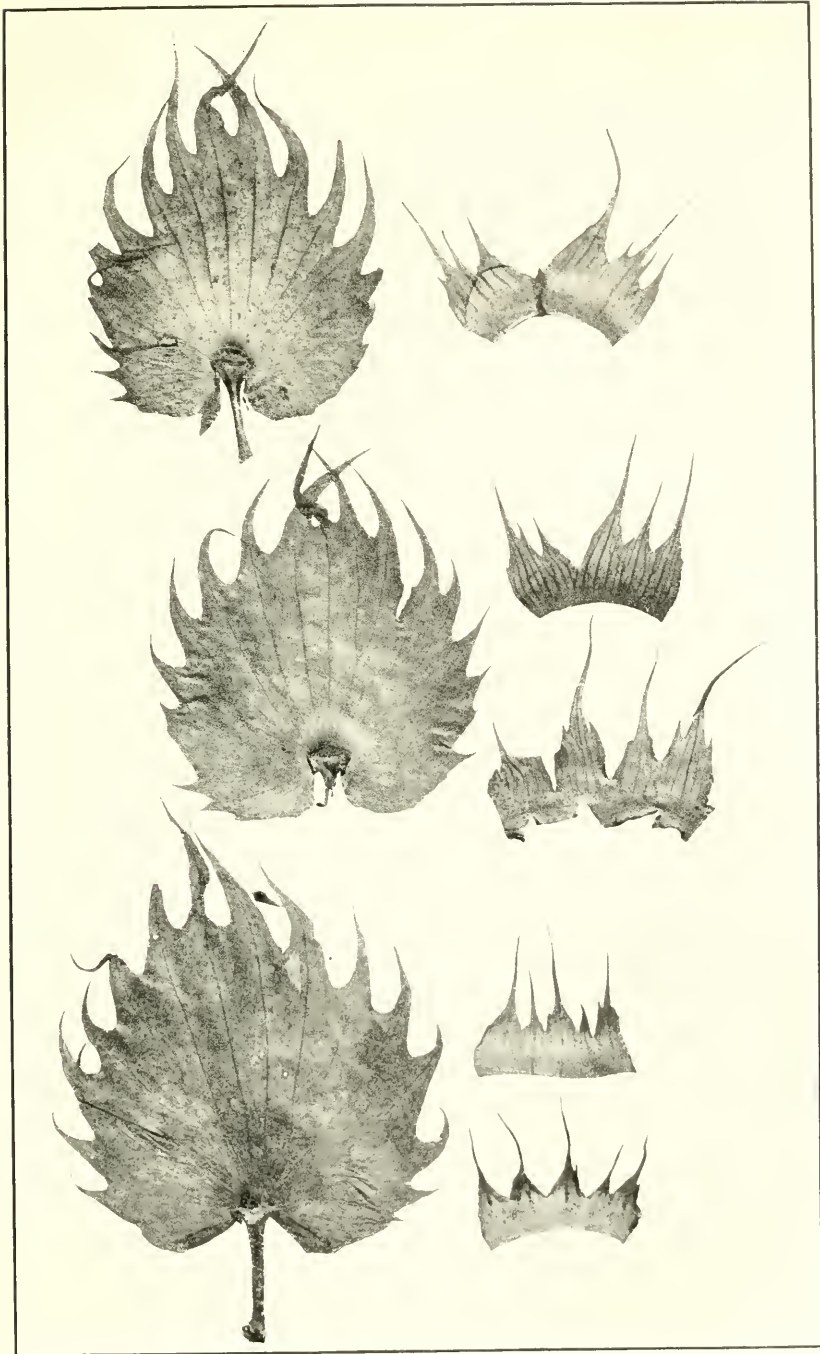
Plant a large, lax, spreading bush, 6-10 feet high, broadly pyramidal in outline; main stem erect but weak, becoming woody. Vegetative branches very long, beginning close to ground, horizontal, the ends curving upwards; axillary limbs few and small; fruiting branches

beginning below middle of the plant, lowest ones very long, becoming successively shorter, not clustered; ends of branches very hairy, hairs retained on under side of old branches. Leaves 3- to 5-lobed like Upland cotton; lobes ovate acute; hairy on the main veins above; leaf nectaries variable, rhomboidal or cuneate. Stipules not prominent, broad, persistent. Involucral bracts, large for the genus, nearly orbicular in outline; laciniae 12-17, the longest 2-2.5 cm., very hairy on the margins; nectaries at end of pedicle 3, large, deep, cuneate, very active at anthesis. Bractlets not present. Calyx adpressed to corolla, deeply 5-lobed, the lobes often trifid, the divisions subulate, the middle one nearly twice as long as the calyx tube; external nectaries usually 3, broadly triangular, smooth; floral nectary narrow, the hairy band not conspicuous. Flower buds well protected by calyx until anthesis, and young bolls protected for several days. Petals medium sized, like those of Upland cotton, very pale yellowish white, no red spots on the claws. Bolls 5 cm. long, conical, long and sharply pointed, usually 3-locked, not opening well; valves thin, but tough and woody, when old recurving with strong hooked points; black glands on bolls numerous, but well below the surface and obscure. Seeds 7-9 per lock, free, black, without fuzz except for tuft of white hairs at pointed end. Lint abundant, white, strong, fine, soft, 3 cm. long.

Perennial; growth and fruiting continuous except in wet, cold weather and late, cold spring. Crop mostly borne on extra-axillary fruiting branches.

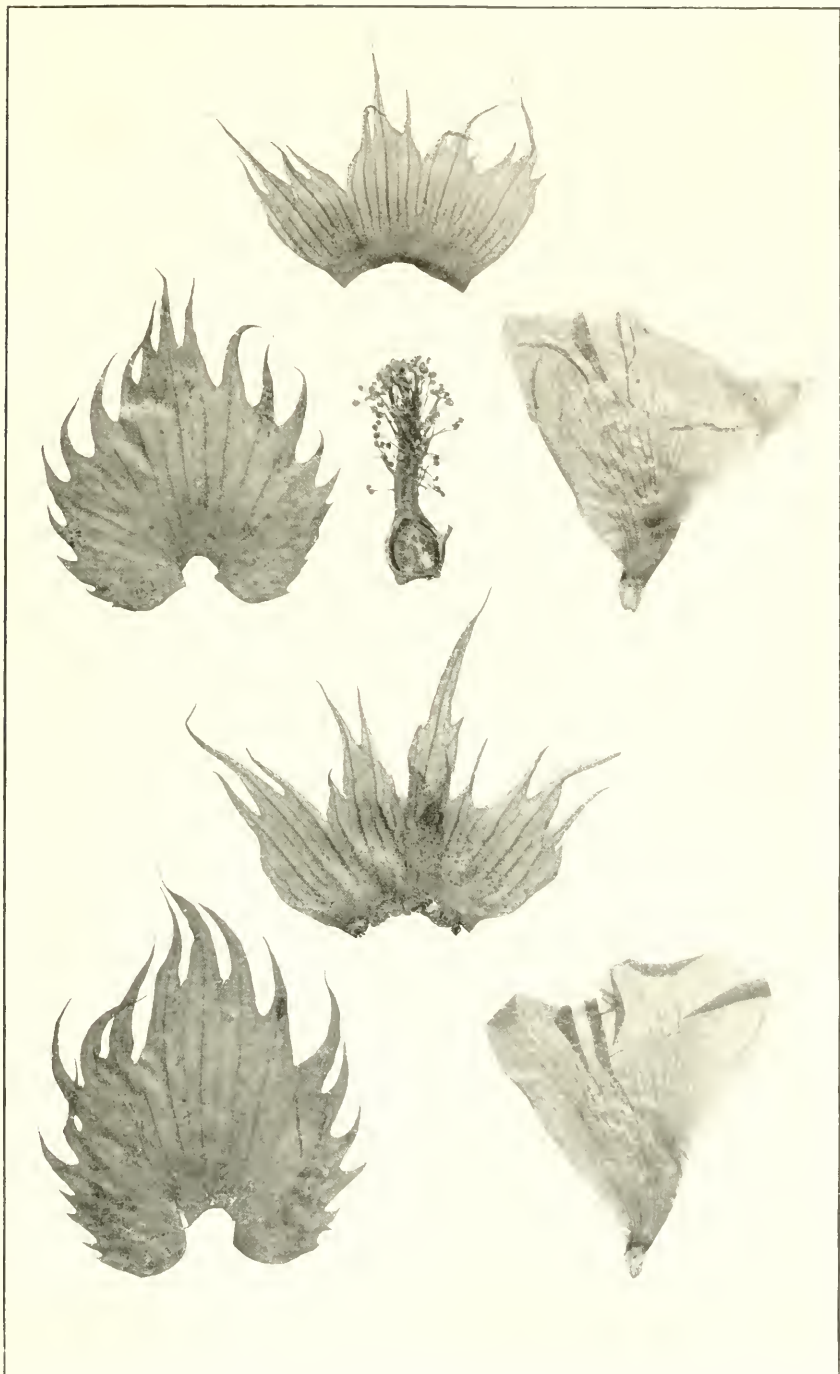
Type in U. S. National Herbarium, No. 691080; grown in Miami, Fla. (Lewton, No. 1007), July 24, 1908, from seed obtained at Rubelzul, Finca Trece Aguas, Alta Verapaz, Guatemala, by F. L. Lewton in May, 1906.

Specific name from *εἰρηναῖος*, as the species appears to be confined to the province of Alta Verapaz.



FLOWERS OF RUBELZUL COTTON (*GOSSYPIMUM IRENAEUM*)

Dissected to show involucre bracts and calyx. From the original plants at Rubelzul, Guatemala
(Natural size)

FLOWERS OF RUBELZUL COTTON (*GOSSYPIMUM IRENAEUM*)

Dissected to show involucral bracts, outer and inner surfaces of calyx, trifold calyx lobes, staminal column and petals. From offspring of the original plants, grown at Finca Trece Aguas, Alta Verapaz, Guatemala
(Natural size)