



On edge of prairie west of Lake George, Florida, December 6, 1918.—*Opuntia ammophila* with stout trunk and many branches. Notice the abundant long and slender spines and the small fruits. This is the most abundantly fruited prickly-pear in Florida, except *O. Dillenii*. Owing to the lateness of the season most of the berries have fallen. In spite of the vicious armament the half-wild cattle of the region browse on the young joints of these large plants which often grow in quite extensive colonies.

This was the plant which first aroused my interest in the prickly-pears of Florida, and one of the more striking characters it exhibited was the numerous tuberous roots. For some time it was thought that this character was peculiar to *Opuntia austrina*, but later investigations have shown that *Opuntia Pollardi*, *O. ammophila*, and *O. Drummondii* produce tuberous roots; but none of them to the extent that the species under consideration does.

Opuntia austrina is a short-lived plant. Every year or two the individual plants break down and new ones start afresh either from the tuberous roots or from the old joints. It may be that there is some relation between the fibrous and tuberous rooted species and longevity. At any rate, the plants with fibrous roots seem to be longer lived as individuals than those with tuberous roots.

4. *Opuntia ammophila* Small, sp. nov.

Plant erect, more or less branched throughout or ultimately with a stem 1-2 m. tall or more, becoming 1-2.5 dm. in diameter, bearing several spreading branches near the top, thus tree-like, tuberous at the base: joints various, those of the main stem elongate, ultimately fused on the ends and subcylindric, those of the branches typically obovate or cuneate, varying to elliptic or oval, thickish, 0.5-1.7 dm. long, becoming gray-green: leaves stout-subulate, 6-10 mm. long, green: areolae relatively numerous, conspicuous on account of the densely crowded long bristles, especially on the older joints, the marginal ones, at least, armed: spines very slender, solitary or 2 together, reddish or red, at maturity gray, mostly 2-6 cm. long, nearly terete, scarcely spirally twisted: flowers several on a joint: sepals lanceolate, acute or slightly acuminate: buds sharply pointed: corolla bright-yellow, 5-8 cm. wide; petals cuneate or obovate, notched and prominently apiculate, scarcely erose: stigmas cream-colored: berries obovoid, 2-3 cm. long, more or less flushed with red-purple, many-seeded: seeds about 4 mm. in diameter. [Plate 224.]

Inland sand-dunes (scrub), peninsular Florida.—Type specimens from south of Ft. Pierce, collected in December, 1917, by J. K. Small. They are in the herbarium of the New York Botanical Garden. Living plants are also in the conservatories of the Garden, as well as in the plantation at Buena Vista, Florida.

My attention was first attracted to this species on the large sand-dunes south of Fort Pierce, in a region that has turned out to be the southern end of its geographic range. It reaches its best development, however, in the northern part of its range west of Lake George. It differs from all our other species in the gray-green color, the numerous elongate, very slender, often deflexed, spines, and in the small, thick-obovoid fruits. In spite of its vicious armament, the cattle that range through the country west of Lake George often browse upon it.

This plant is the most conspicuous native prickly-pear in Florida, and curiously enough, in proportion to its striking habit, the most neglected one. It is confined to the so-called "scrub" or inland quiescent sand-dunes which range in a general way through the lake region and the east Florida flat-woods, from the region west of Lake George to that east of Lake Okeechobee.

The first definite record of *Opuntia* in Florida begins with the record of the discovery of a large prickly-pear about the western shores of Lake George by William Bartram in the latter part of the eighteenth century.¹ His account of the plant he observed suggests a form with the habit of *Opuntia Ficus-indica*; but this species could not have been established there at that early date, and, further, he describes the berries as purple and charged with juice. One could imagine that he found a plant or a colony of the plant just described; but its fruits are conspicuously small, at least relatively so in proportion to the size of the plant, and they are not particularly juicy, in fact they are rather dry.

The writer recently visited the country west of Lake George, traveling many miles through it for the purpose of rediscovering the Bartram plant, but without success. If Bartram did find a particularly smooth and large-fruited prickly-pear, such as he describes, the cattle may have exterminated it by this time. Thus the Bartram *Opuntia* still remains a mystery.

¹ Travels through North and South Carolina, Georgia, East and West Florida 161.