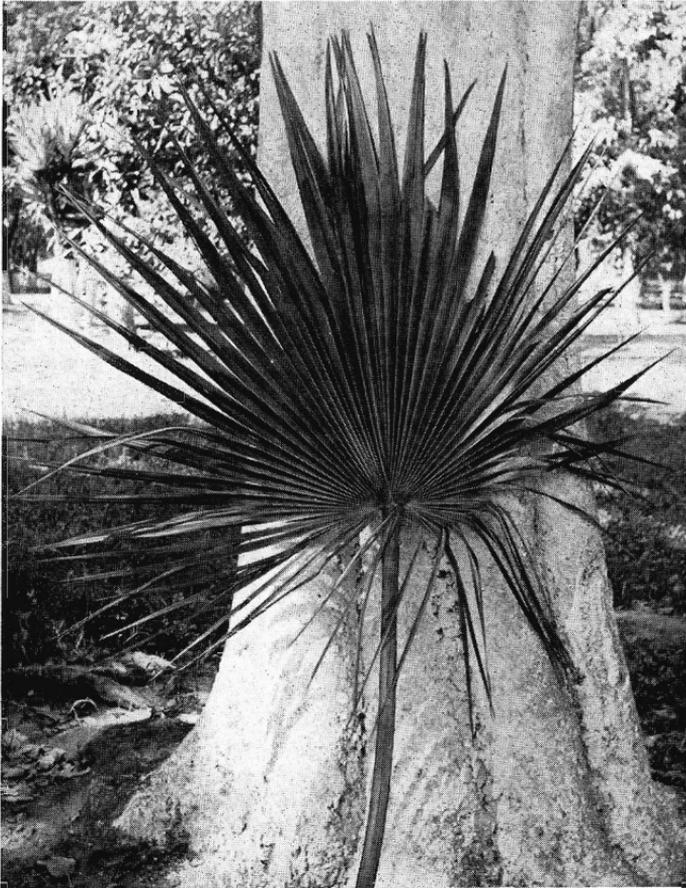


The species appears to be variable. In fact, one of my native helpers says there are two kinds of it in the mountains about Santa Catarina, but the differences he points out have seemed to me to be only variants due to location, exposure or other circumstances; yet this is a problem for a local botanist sometime to work out.

Much variation is observed in the armature of the petioles. The margins are typically callous-dentate, I think, although smooth examples are common. I have chosen what I consider to be a fair sample for Fig. 92. Sometimes a petiole is nearly or quite unarmed near its top but strongly toothed toward its base. One must be prepared for smoother edges when the petioles have been carried long distances in the hands of native collectors.

† 5. *Brahea prominens*, spec. nov. Figs. 92C, 93D, 94D, 96, 97, 98.

Valida erecta palma; truncus 8-10 m. alta, 30 cm. diam. basi, compacte

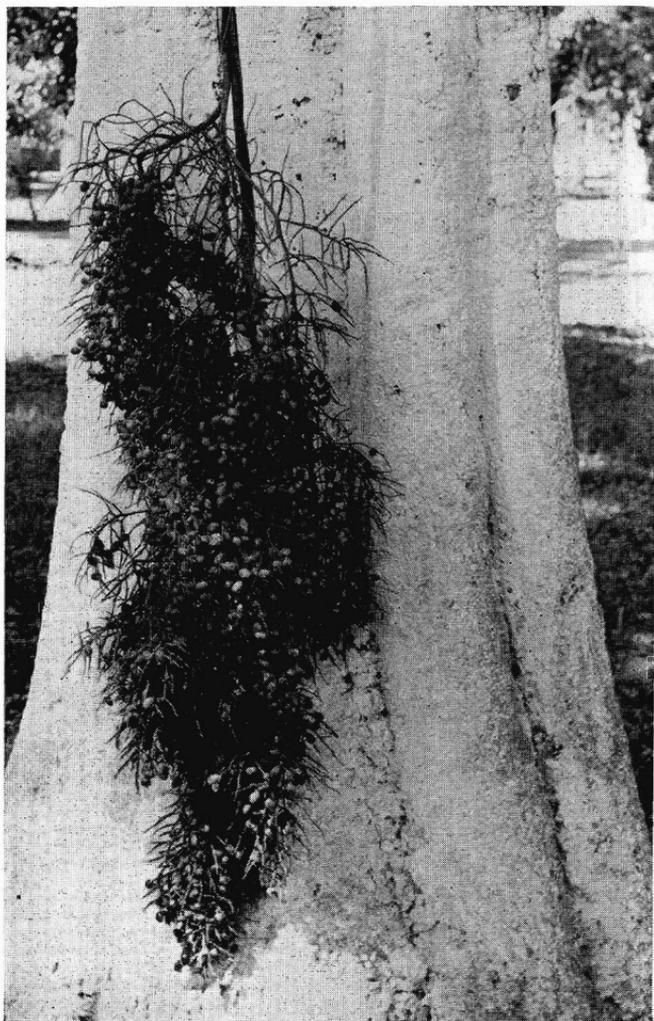


annularis; folia 1 m. vel plus lata et longa, glaucissima subter, lætévirentia supra, glabra; segmenta 50-70 vel plura, valde angusta vel attenuato acuta, 1-2 cm. lata basi; filamenta pauca et brevia, venæ parallelæ multæ, nullæ venæ transversæ; petiolus ad 180 cm. longus, non dentatus; hastula conica et brevis: spadix in longissimo pedunculo, excedens folia et pendens cum fructifera et 3-4 m. longa; rachillæ 5-8 cm. longæ, rectæ vel pæne rectæ, pæne vel admodum glabræ, flores non depressi; floris gemmæ 2-3 mm. longæ, glabræ, acutæ: fructus lutescens,

97. LEAF OF BRAHEA PROMINENS. Oaxaca.

16-17 mm. longus, 10 mm. crassus, vel 13-14 mm. longus cum siccus, rectus in latere ventrali, convexus in latere dorsali, apex obliquus; embryon dorsale et medio.

Stout erect tree; trunk 8-10 m. tall, 30 cm. thick at base, not quite straight, not oblique at bottom, abundantly ringed from the falling of petioles: leaves orbicular in ambitus, 1 m. and more across, prominently silvery underneath with a flaky glaucous covering, light green above, glabrous throughout, blade divided to the middle or below into 50 and more narrow-long-pointed segments that are 1-2 cm. in width below the split, points very slender, deeply plicate or folded, with many closely placed parallel veins and practically no cross-veins, filaments few and very short, midrib on rachis continued about 15 cm. on under side of leaf; petiole very long (180 cm.), plano-convex in outline, glaucous, not toothed on margin, hastula somewhat conic and lacking any marked membranous margin: spadix very long and in fruit exceeding the leaves and hanging beneath the coma or crown, the nearly cylindrical sheathed peduncle longer than the fruiting part (in one measurement peduncle from base to fruiting part 74 inches long, fruiting part itself 48 inches long, a total of 122 inches), much branched, rachillæ or ultimate branchlets 5-8 cm. long and straight or only indifferently curved and glabrous or only very lightly pubescent but not tomentose, flowers closely placed and not sunken; flower-buds 2-3 mm. long at period of anthesis, glabrous, the cupulate calyx occupying one-third to one-half the length, connivent and slightly striate imbricate corolla-lobes forming a pyramidal apex: fruit beetle-shaped, straight or flattened on ventral



98. FRUIT-CLUSTER OF BRAHEA PROMINENS. Oaxaca.

side, 16-17 mm. long and 10 mm. thick when fresh, drying to 13 or 14 mm. long and about 9 mm. thick, light dull yellow or greenish-yellow, the outside pulp scant, apex with a very short oblique point, cupule very small with sharp petal-lobes, embryo about midway up the back and opposite the small podium and micropyle.

One conspicuous tree planted on Pasco Juárez, lado oriente, city of Oaxaca, Mexico, *Bailey 533* (type), origin of tree unknown. Limestone cliffs above Trece Aguas, Alta Verapaz, Guatemala, altitude 3,000 feet, *Cook & Doyle no. 3* in National Herbarium, Washington, collected 1914. The Oaxaca tree was brought to my attention in 1938 by photographs and specimens sent by Professor Conzatti. I found the tree in full fruit in March, 1940, and the photographs herewith (Figs. 96-98) were made by me then. It is a prominent palm in the park.

† 6. *Brahea bella*, spec. nov. Figs. 92D, 93F, 94C, 99, 100.

Parva erecta palma, 4-10 m. alta; truncus rectus, 20-25 cm. crassus basi, annulatus: folia lucido-virens supra et subter, non glauca; lamina 150 cm. longa et lata, profunde divisa in longa et angustissima segmenta 2 cm. lata basi; filamenta brevissima, inconspicua; petiolus moderate longus, non dentatus, vel tantum aliquid irregularis in marginibus; hastula brevi-conica, lato margine: spadix brevior quam folia, rachillæ graciles, 2-8 cm. longæ, 1-2 mm. crassæ, albo-tomentoso-pubescentes, compacte floriferæ; floris gemmæ glabræ, 1-2 mm. longæ, obtusæ; flores 3-3.5 mm. alti anthesi, petala brevi-acuta: fructus albo-tomentosus cum juvenis sed serius pæne vel admodum glaber, cum maturus lato-oblongus, 12-13 mm. longus, 10-11 mm. latus, satis viridis vel rufescens, minor cum siccus, valde curvatus in dorso, brevi-acutus apex obliquus.

Erect tree 4-10 m. tall; bole straight and post-like, not oblique at base, 20-25 cm. thick near ground, nearly bare and no shag below the coma or crown, rather closely and not deeply ringed, with a few fragments of petiole fibers persisting now and then: leaves very bright green on both sides, not glaucous or bluish, glabrous, more or less glossy and shining in the sun, limp and at length hanging and with no attitude of stiffness or rigidity, tending to break over at the margin of the palman and giving them something of the look of a *Washingtonia*; leaf-blade 1.5 m. more or less long and broad, deeply divided into 50 and more segments 2 cm. broad toward base and split into two parts that extend to long and very narrow slender ends, strongly parallel-veined and somewhat cross-hatched, filaments very short and not conspicuous; petiole plano-convex, striate lengthwise, margins mostly unarmed or only roughish except toward base where short teeth may be present, hastula short-conic and usually bordered with a broken membrane: spadix shorter than leaves, the many ultimate branchlets or rachillæ 2-8 cm. and only 1-2 mm. thick, white-tomentose-pubescent, closely flowered; flower-buds glabrous, somewhat immersed below the tomentum, 1-2 mm. high, obtuse, the petals imbricate; flowers very small, about 3-3.5 mm. high at expansion, the short-acute petals somewhat exceeding the 6 stamens, filaments much expanded at base and forming a cup: fruit at first white-tomentose but becoming nearly or quite