

(F.); El Quebracho, above El Zamorano, about 950 m., November 29, 1946, *Standley 323* (F.); near Hoya Grande, 1400 m., February 1947, *Williams & Molina 11982* (BH.).

Paurotis Schippii, Burret, in *Notizbl. Bot. Gart. Berlin*, xii, 304 (1935).

Paurotis Schippii is apparently a third species of this alliance judging from the description. Neither isotype nor matching collections have been located, hence formal combination is not made. It is obviously not a true *Paurotis* having as it does a thick solitary trunk and unarmed petiole. Nor does it appear to be conspecific with *E. salvadorensis*, differing in the white-ceraceous lower leaf-surface, unarmed petiole, fuscous rather than gray-tomentose rachillæ and glabrous flowers. The latter are glomerulate, hence it is not a *Brahea* as suggested by Burret in discussion where a provisional combination was made. Placement of this species must wait until authentic or topotypic specimens are available for study.

BRAHEA

With the exception of a new taxon described herein, the species of *Brahea* have been discussed previously in this journal (*Gent. Herb.* vi, 177-195, 1943). They fall in two rather clearly defined subdivisions as indicated by the following synopsis and key to the new species. Complete flowering and fruiting series of all species are necessary before an expanded key can be prepared.

- A. Flower-buds and flowers sessile or slightly elevated on slender tomentellous rachillæ: rachillæ becoming more or less glabrous in fruit with prominent raised floral scars: leaves pliable, the segments nearly flat, green above and conspicuously waxy-glaucous below, the secondary veins scarcely distinct from the tertiary veins and not connected by cross-veinlets; petioles unarmed.
 - B. Arborescent: spadices more or less pendulous, at least in fruit: fruit large, 16-17 mm. long when fresh shrinking to 13-14 mm. when dry.
 - *B. calcarea*, *B. prominens*
 - BB. Acaulescent or nearly so: spadices erect from outer circle of leaves: fruit small, 7-8 mm. long or less.
 - *B. Moorei*
- AA. Flower-buds and flowers distinctly immersed in the thickish densely tomentose rachilla: rachilla remaining tomentose in fruit with sometimes conspicuous but scarcely elevated floral scars: leaves stiff, the segments strongly plicate and often drooping at the tips, green above and below or sometimes glaucous below, the secondary veins numerous, conspicuously coarser than the tertiary veins, connected by elevated cross-veinlets below; petioles denticulate to coarsely callous-dentate.
 - B. Petals glabrous or with rare scattered hairs; sepals prominent, glabrous with apical tuft of short hairs: ultimate rachillæ 4-8 cm. long, more or less rigid in bud and in fruit.
 - *B. Berlandieri*, *B. bella*
 - BB. Petals prominently canescent at base, glabrous at apex; sepals scarcely prominent, canescent: ultimate rachillæ 5-15 cm. long, more or less flexuous at anthesis and in fruit.
 - *B. dulcis*, *B. Conzattii*

† **Brahea Moorei**, L. H. Bailey, spec. nov. Fig. 90.

Planta acaulis: folia erecta, flabellata, supra atroviridia, subtus glaucescentia petiolis inermibus 37-47 segmentis linearibus ad 48 cm. longis et ad

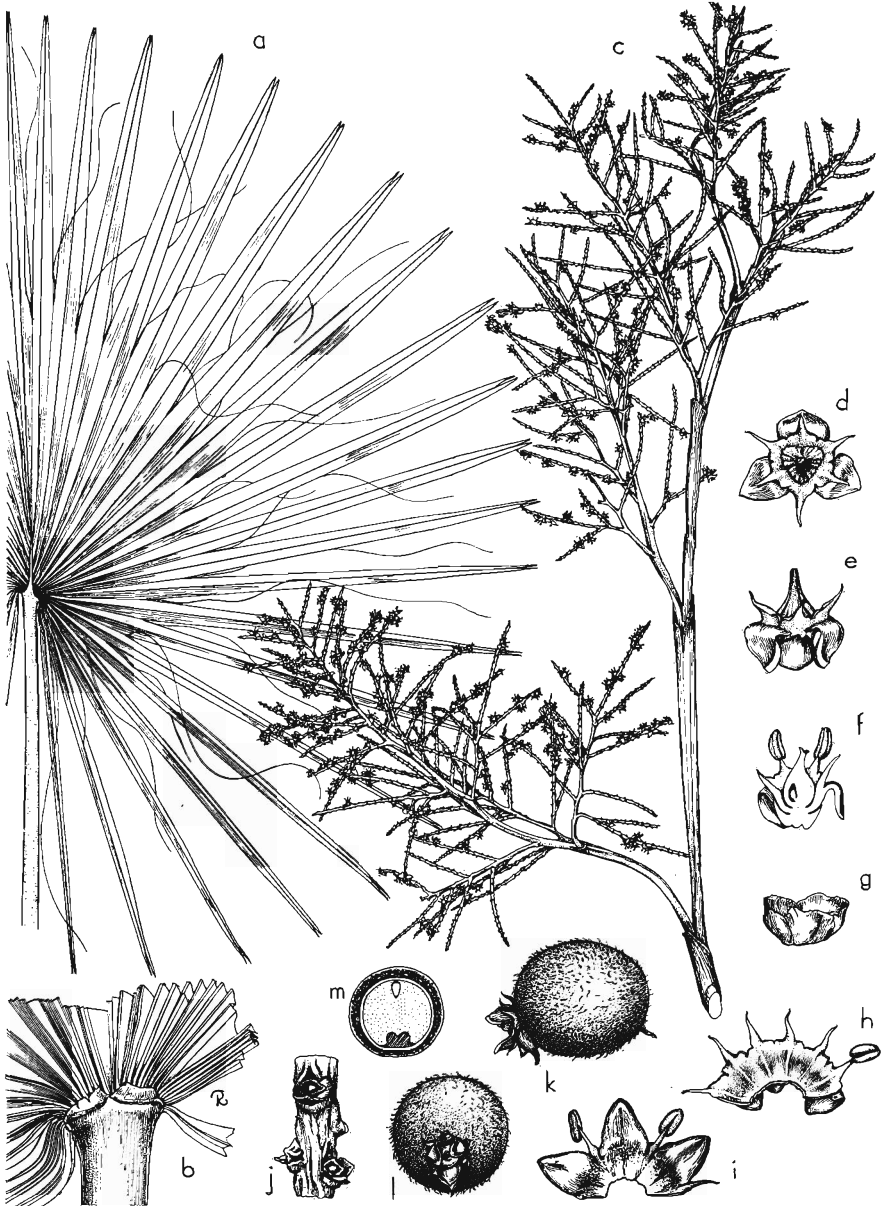
28 mm. latis nervis secundariis et tertiis similibus sine nervulis connexis: spadix erectus ad 3 m. altus 4-5 ramis biramosis; rachillæ elongatæ, tenues, leviter tomentosæ: flores sessiles sepalis 1-1.5 mm. altis puberulis petalis 3.5 mm. altis reflexis ad basin canescentibus ad apicem glabris: fructus 6-7 mm. longus ellipsoidalis vel subglobosus; semen fere globosum albumine plano leviter excavato.

Acaulescent from a thick crown or more rarely from a short trunk not more than 3 dm. high (fide Meyer & Rogers): leaves erect and spreading; petioles to 6 dm. long or more, unarmed, glaucescent, flat above, rounded below; hastula short, obliquely truncate with short truncate membranaceous ligule; blade scarcely costapalmate, rather stiffly flabellate, nearly flat, dark green above, conspicuously glaucous below, irregularly divided one-half or more to the base into 37-47 segments; segments linear, shortly to deeply bifid at the apex with filiferous margins, to 20 or more rarely 28 mm. wide at middle, to 48 cm. long, rather soft and pliable with a prominent primary nerve and numerous closely-spaced secondary and tertiary nerves, the secondaries not or scarcely distinguishable from the tertiaries and without connecting cross-veinlets: inflorescence interfoliar from outer circle of leaves, erect, 1.7-3 m. high with 4-5 or more widely spaced branches above the middle; spathes about 6 on the peduncle and 4-5 subtending primary spadix-branches, the lowermost short, laterally bicristate, the remainder tubular, closely sheathing; primary branches of spadix twice-branched, the rachillæ slender, elongate, slightly flexuous or straight, 1-1.5 mm. wide, 6-10 cm. long, whitish tomentellous in bud, becoming glabrate or glabrous in fruit: flowers 3.5 mm. high, hermaphrodite, solitary, sessile in the axil of a thick-based triangular puberulent rachilla-bract and a lateral scarious puberulent triangular floral-bract; sepals white-puberulent, free and imbricate in bud, becoming glabrescent and somewhat cupular at anthesis, 1-1.5 mm. high and broadly rounded at apex; petals lightly imbricate at base in bud, valvate above, united with filament-tube to above the calyx at anthesis, the free lobes 2 mm. long, strongly reflexed, white-canescens at base, glabrous above, not strongly veined, acutish; stamens 6, filaments broadly triangular, connate in a tube at base surrounding the gynœcium, and rather abruptly tapered to a subulate apex, anthers oblong in outline, introrse, dorsifixed and versatile, more or less sagittate at base, 1 mm. long; carpels 3, connate centrally, tapered to subulate connate styles, canescent at base: mature fruit purplish, 6-7 mm. long, puberulent or becoming glabrous, ellipsoid to nearly globose with subapical ventral stigmatic point; exocarp thin, wrinkled in drying; mesocarp thin, with few long flattish fibers and scant mealy pulp; endocarp fragile; seed nearly globose, 6-7 mm. diameter without prominent raphe, endosperm plane with lightly intruded testa below the raphe, embryo lateral.

Mexico: Hidalgo, District Jacala; La Placita, near km. 260 on highway between Zimapán and Jacala, alt. 1600-1700 m., September 8 & October 30, 1949, *H. E. Moore 5018*, type (immature and mature fruit from same spadix); same locality, April 26, 1947 *Moore 2639* (in flower) and July 11, 1948, *Moore & Wood 3891* (immature fruit); upper level of Barranca de Tepetates between Jacala and Tepetates, September 21, 1949, *Moore*

5038 (in young bud) (all BH.): Tamaulipas; Dulces Nombres, alt. 1850 m., June 18, 1948, *F. G. Meyer & D. J. Rogers no. 2553* (BH., MO.).

An infrequent but handsome small palm with much the aspect of



90. *BRAHEA MOOREI*. a, leaf $\times \frac{1}{6}$; b, hastula $\times 1$; c, terminus of spadix $\times \frac{1}{8}$; d, e, f, flower face, side, section $\times 3$; g, calyx $\times 4$; h, i, corolla expanded, inner and outer view $\times 3$; j, fruiting rachilla $\times 5$; k, l, fruit $\times 2$; m, fruit cross-section $\times 2$.

Sabal minor for which it was at first mistaken. In the district of Jacala it inhabits more or less shaded limestone outcrops in oak or oak and cedar woods and is seldom found in full sun. One sterile but especially luxuriant plant was seen growing in the depths of a lime sinkhole in the region of Puerto de la Zorra between Jacala and Tierra Colorada. In the Barranca de Tepetates it grows with an arborescent *Brahea* related to if not identical with *B. Berlandieri* but is readily distinguished, even in the sterile state, by the stiffly flabellate leaves with dark green upper surface, conspicuously glaucous lower surface and fine nervature.