

spinulose: spathe about 2-3 dm. long and 5 cm. broad, sparsely covered with hair-like prickles 1-2 cm. broad with whitish bulbous base; spadix 18-20 cm. long, short-branched at apex, axis not continued, decurved peduncle flat and roughly brown-tomentose: fruit large, obovoid, 4.5-5 cm. long, 2.5-3 cm. thick, broadest above the middle, abruptly narrowed to short point, long-tapered to base; calyx-cup large, 1-1.5 cm. deep, double, inner cup thrice longer than the outer and irregularly deeply lobed.

Trinidad: at MacNair, *Bailey 114*. Striking plant for its narrow leaflets and large obovoid nuts; spines of leaf-rachis and petiole often 5 cm. and more long.

†10. *Bactris Cateri*, spec. nov. Fig. 170.

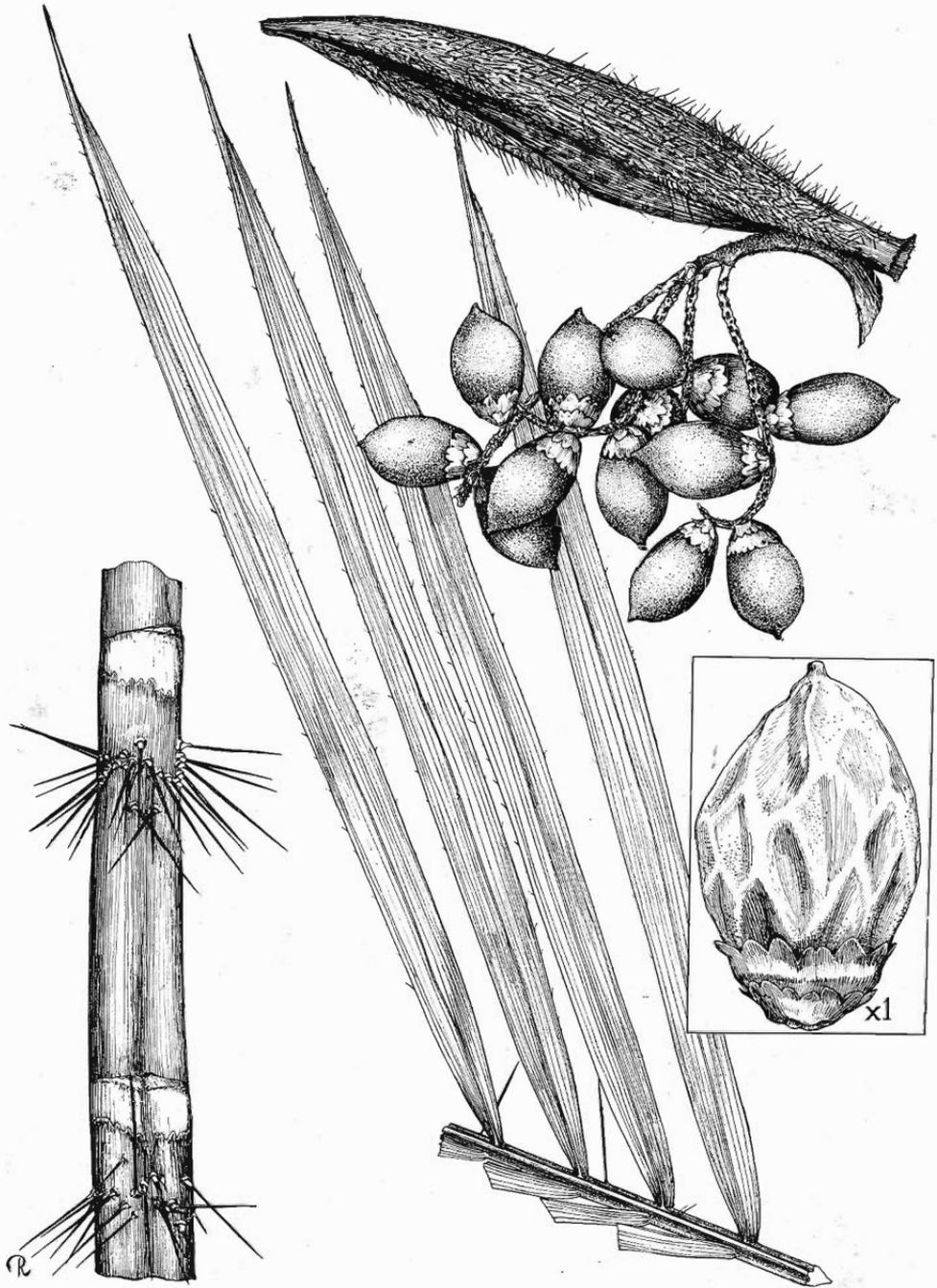
Coloniata, gracilis, lepidus, 6-10 m. alta: folia erecto-curva, conduplicata, uniformiter pinnata, spinosa in rachi petioloque, breviter armata in marginibus et nervis subter; pinnæ angustæ, 2-2.5 cm. latæ, longo-acuminatæ: spatha 3 dm. longa, 5 cm. lata, obsita spinis nigris basi alba 1 cm. vel minus longis; spadix 2-3 dm. longa, ramosa apice, axis non continuus: fructus elliptici, 4-5 cm. longi, 2-2.5 cm. crassi, angustati in utrasque partes, rostrum prominens; calyx duplicatus, 1 cm. vel plus longus, margo non profunde dentatus.

Erect, growing in dense clumps and colonies, 6-10 m. tall, foliage upright and trough-shaped, boles slender and well armored: leaves 1 m. and more long, evenly pinnate, heavily armed on the scurfy angled axis where the very sharp prickles may reach 6-8 cm. long, petiole heavily covered with short and long spines; pinnæ narrow, seldom more than 2-2.5 cm. broad, midrib underneath and margins sharply spiculate, lighter colored underneath, apex long-acuminate, lateral nerves several and prominent: spathe about 3 dm. long and 5 cm. broad, well covered with short black hair-like prickles not much if any exceeding 1 cm. long with the white base bulbous, narrowed at base to a manubrium or peduncle; spadix 2-3 dm. long, curved flat peduncle brown-tomentose, short ascending branches at apex and axis not continued, mature branches or rachillæ rough with points: fruit elliptic, broadest at or below the middle and tapered both ways, 4-5 cm. long, 2-2.5 cm. thick, beak prominent; calyx-cup duplicate, 1 cm. plus long, margin shallowly and almost obtusely scalloped.

Trinidad: Arena, San Rafael, *Bailey 100*; making attractive colonies along roads and open trails. Named in compliment to John Cater, Senior Assistant Conservator of Forests, who has aided greatly in finding the palms of Trinidad.

†11. *Bactris albonotata*, spec. nov. Fig. 171.

Erecta, 2-3 m. alta, truncus 3-4 cm. diam. spatiis vacuis 12-15 cm. longis inter fascias albas 2-3 cm. latas et circulos spinarum deflexarum 3-4 cm. longarum alterna, spinæ basi alba bulbosaque: folia interrupte pinnata, 1 m. vel plus longa, rachis spinis nigris 1-4 cm. longis, petiolus valde aculeatus; pinnæ 4-5 dm. longæ, gradualiter acuminatæ, 2 cm. vel plus latæ, margines spinulosi: spatha 2-3 dm. longa, 4-5 cm. lata, aculeata aculeis basi alba 1-2 cm. longis; spadix circa 2 dm. longa, axis non continuus:



171. *BACTRIS ALBONOTATA*, with prickly-edged pinnae, uniform pointed nuts one of which full size is at the right, and conspicuous white-ringed trunk. $\times \frac{1}{3}$.

fructus longo-elliptici, 5 cm. longi, 2-3 cm. lati, longi-rostrati; calyx 1-1.5 cm. longus, duplicatus, margo multi-dentatus.

Strong and erect, 3-5 m. tall; trunks several growing together but distinct from each other, 3-4 cm. thick, with blank bare spaces 12-15 cm. long between white bands 2-3 cm. broad, and below the bands rings of



172. *BACTRIS BEATA* native by a pond in Trinidad (central pinnate fronds) engraved from a print made twenty-five years ago. Beata: *excellent*.

deflexed spines 3-4 cm. long with white bulbous base: leaves interruptedly pinnate, 1 m. plus long, angled rachis with black spines now and then 1-4 cm. long, petiole very prickly with short little spines underneath and longer ones (to 5 cm.) with white base at intervals; pinnæ 4-5 dm. long, very gradually acuminate, 2 cm. or less broad, margins spinulose, lateral nerves few and strong: spathe about 2-3 dm. long and 4-5 cm. broad, narrowed to base, thinly provided with white-based prickles 1-2 cm. long with smaller spinelets underneath; spadix about 2 dm. long, simple with short branches at top and axis not prolonged, the flat peduncle more or less brown-tomentose: fruit long-elliptic to oblong, 5 cm. long when dry, 2-3 cm. thick, long-beaked; calyx-cup 1-1.5 cm. long, double, margin many-toothed, obtuse.

Trinidad: Arena, San Rafael, *Bailey 168*, in low place by stream among trees; trunks when split used for wattles in building; planted in Botanic Garden, Port-of-Spain, *Bailey 685* (collected 1922), as *Bactris major*, a name then employed for *Bactris* in general in Trinidad. Said to be known as Roseau palm.

†12. *Bactris beata*, spec. nov. Figs. 172, 173.

Coloniata, erecta, 3-4 m. alta, truncus spinosus, non albonotatus: folia 1 m. longa, interrupte pinnata, rachis sparsis spinis 3-4 cm. longis; petiolus gracilis, spinis variatis albo-bulbosis basi; pinnæ 6 dm. longæ, 2-3 cm. latæ, minute laterali-nervatæ, margines plus vel minus spinulosi: spatha 3 dm. longa, 4-5 cm. lata, obsita gracilibus nigris aculeis basi alba 1 cm. vel minus longis; spadix 2 dm. longa, ramosa prope apicem, axis non continuus: fructus pæne globulares, 3 cm. longi, 2.25 cm. lati, non attenuati; calyx duplex, .75 cm. altus, obtuse dentatus.

Attractive, erect, 3-4 m. tall, coloniate, trunks spiny not albonotate: leaves 1 m. long, expanding nearly flat, interruptedly pinnate; rachis flat but ridged, with scattered spines of uniform length 3-4 cm.; petiole slender, spines of different lengths and most of them white-bulbous at base, .5-4 cm. long; pinnæ 6 dm. long, 2-3 cm. broad, the upper ones not long-acuminate, finely side-veined, margins more or less spinulose: spathe 3 dm. long, narrowed at base to peduncle, 4-5 cm. broad, abundantly covered with black slender prickles 1 cm. or less long that bear a white bulbous base; spadix about 2 dm. long with rough-tomentose decurved shank and ascending branches from near the apex and without upstanding points after fruiting, axis not continuous: fruit nearly oblong, about 3 cm. long, 2.25 cm. broad, not attenuate at either end; calyx-cup shallow, of 2 nearly equal series, .75 cm. deep, margins obtusely scalloped.

Trinidad: at waters edge, Mayaro, *Bailey 667* (collected 1922), a handsome plant.

†13. *Bactris Swabeyi*, spec. nov. Fig. 174.

Arbor valde spinifera: folia uniformiter pinnata, 1 m. longa, rachis multis spinis 4-10 cm. longis, petiolus dense spinosus; pinnæ angustæ firmæque, 6 dm. longæ, 1-1.5 cm. latæ, nervi laterales validi, margines aliquid spinulosi prope apicem: spatha 2-3 dm. longa, 5 cm. lata, spinis