

† *Bactris Alleniana*, spec. nov. Fig. 118.

Arundinacea, aliquid gregaria; truncus 3 m. altus, 2.5 cm. crassus, nodi circa 6-8 cm. inter se distantes, spinæ graciles, dispersæ, 1-2 cm. longæ: folia 1.5-2 m. longa, regulariter pinnata, conspicue aureo-hirsuta supra et infra et in rachide; pinnæ oppositæ et alternæ, 30-40 cm. longæ, 3-4 cm. latæ, apex caudatus, costa media et aliquot nervi laterales inermes; rachis albescentibus spinis 2-5 cm. longis: cymba 15-20 cm. longa, tecta fuscis pilis 1 cm. vel plus longis; fructifera spadix densa, circa 10 cm. longa et lata: fructus oblongus, 10-12 vel 14 mm. latus, planum in culmine, rostrum prominens, inerme et glabrum; cupula non profunda, lobi pauci et obtusi.

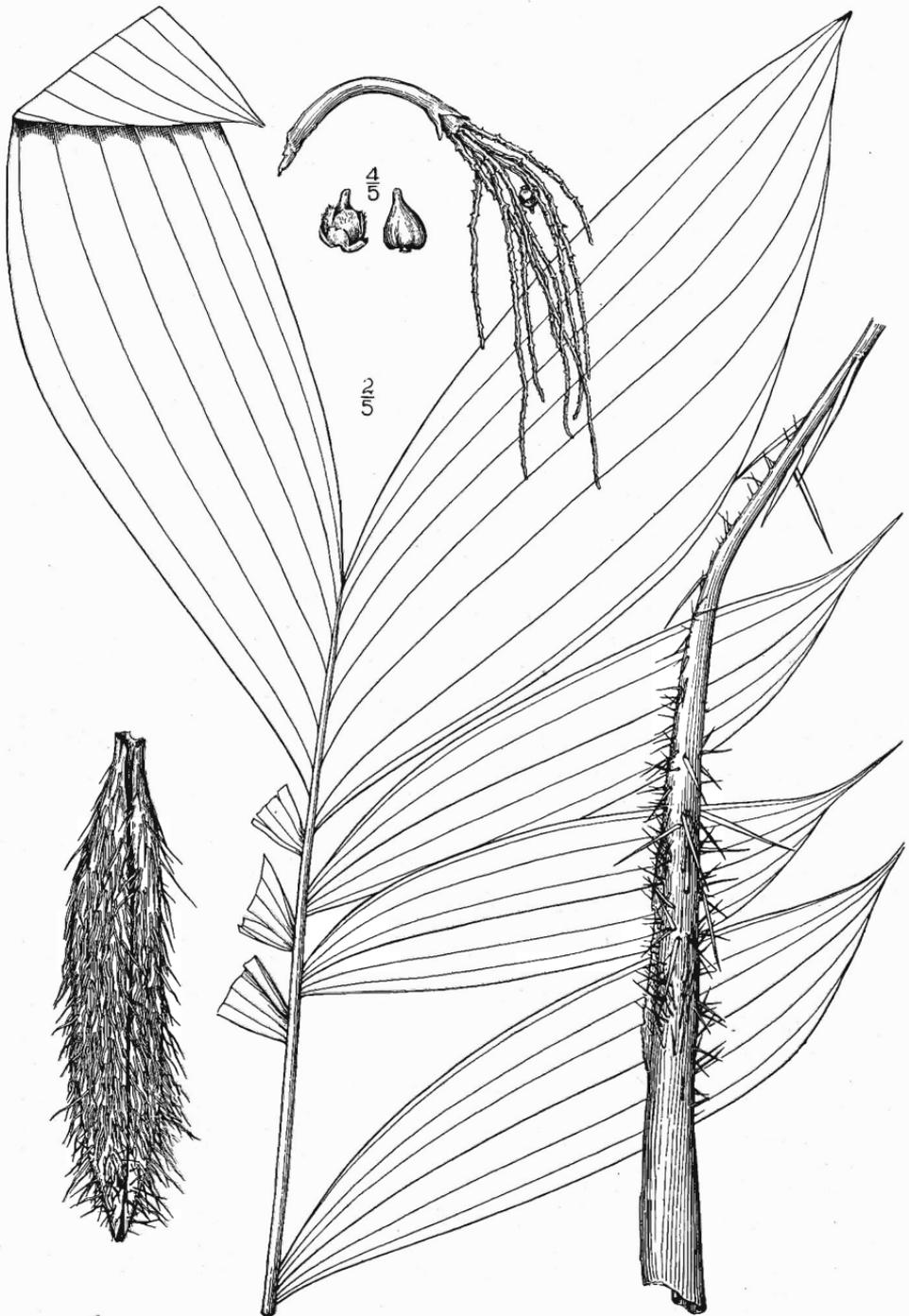
Trunks few to several, 3 m. tall and about 2.5 cm. thick at base, arundinaceous or cane-like, the prominent nodes about 6-8 cm. apart, with scattered very thin spreading spines 1-2 cm. long, canes pithy in cross-section: mature leaves 3-4 at apex of each cane, 1.5-2 m. long, soft or thin in texture, evenly pinnate, both surfaces and rachis conspicuously hirsute and exposing a golden glint in sunlight; pinnæ opposite and alternate, 30-40 cm. long, 3-4 broad, apex produced into a very slender tail-like extension, midrib not very prominent and attended on either side by 3 or 4 strong side-nerves, hairs numerous but particularly prominent on veins underneath, spineless; rachis very hirsute and bearing many light colored white-based spines 2-5 cm. long and which may be somewhat longer and more conspicuous on the petiole; leaf-sheaths conspicuously long, tightly clasping the cane, armed with both dark colored and light colored weak spines: cymbas or spathes attached among old leaf-bases on under side of crown, 15-20 cm. long, very densely woolly with tawny hairs 1 cm. and more long, the small outer or primary cymba little or not at all hairy; flowering spadix dense, about 10 cm. across either way, with very many slender rachillæ; staminate flowers pedicelled: fruit oblate, 10-12 or more mm. across, flat on top, beak prominent, unarmed, glabrous, striate; cupule shallow, with few obtuse lobes.

Hills north of El Valle de Anton, Province Coclé, elevation about 700 m., *Allen 1804, 2574* (type), *2951*, in deep shade.

† *Bactris fuscospina*, spec. nov. Fig. 119.

Gracilis, arundinacea, 3 m. alta; truncus 1.5-2 cm. crassus, nodi circa 5 cm. inter se distantes, internodi pæne vel admodum nudi, spinæ fere brunneo-atræ et 2-3 cm. longæ: folia 1 m. et plus longa, irregulariter pinnata, lucida, glabra; petiolus armatus latis, fuscis, reflexis fusco-acuminatis spinis 4-4.5 cm. longis; pinnæ 12-16 in utroque latere rachidis, alternæ et vacuis spatiis, 20-25 cm. longæ, 2.5-9 cm. latæ, juga terminalis latissima, conspicue multi-costata et transverso-venata, margines inermes, apex acuminatus et interdum brevi-caudatus: cymba 15-20 cm. longa, tecta fuscis spinis 2 cm. vel minus longis; fructifera spadix 10 cm. longa et lata: fructus (immaturus) oblongo-conicus, prominenter rostratus, glaber; cupula 5 mm. alta, sepala pæne separata et striata, petala urceolata et setosa.

Slender, leafy, arundinaceous, 3 m. tall; trunk 1.5-2 cm. thick, pithy, nodes about 5 cm. apart and usually spiny on at least one side, internodes



119. LEAF, SPINY PETIOLE, SETOSE SPATHE, SPADIX of *Bactris fuscospina*. Pistillate flower and pistil at top.

nearly or quite nude, main spines mostly brown-black and 2-3 cm. long; leaves 1 m. and more long, glossy, glabrous, unequally and abruptly pinnate; petiole more or less scurfy or furfuraceous, very unevenly armed on the sheath with brown and tawny spines 5 mm.-3 cm. long; rachis glabrous or with traces of furfur, bearing on the lower part and petiole many broad tawny dark-tipped reflexed spines 4-4.5 cm. long; pinnæ 12-16 either side the rachis, alternate and with long unoccupied spaces, 20-25 cm. long, 2.5-9 cm. broad, the terminal pair much the broadest, midrib often not definite, other ribs few to several and very prominent and with indistinct cross-veins between them on the upper surface, margins unarmed, apex acuminate and sometimes short-caudate: cymba 15-20 cm. long, narrow, densely covered with tawny spines 2 cm. or less long; fruiting spadix 10 cm. long and broad, rachillæ indifferently pubescent: fruit (immature) oblong-conic, prominently beaked, glabrous; cupule 5 mm. deep, outer series of 3 nearly separate striate lobes, inner series deeper and urceolate with a nearly entire margin and the exterior prominently strongly setose (the setæ likely to perish with handling).

Cerro Campana, Province Panama, *Allen 2086*.

† *Bactris divisicupula*, spec. nov. Fig. 120.

Gracilis, 4 m. alta, arundinacea; truncus 2.5 cm. vel minus crassus, nodi 6-7 cm. inter se distantes, internodi nudi; folii vagina longa, vaginata, ferens fusco-albas planas spinas 3 mm.-4 cm. longas: folia lucida, glabra, 1 m. vel minus longa, alterna, interdum valde pauca, ferens spinas planas in nonnullis partibus rachidis; pinnæ inermes, 30-40 cm. longæ, aliæ 4-5 cm. latæ, aliæ 9-10 cm. latæ, anguste caudatæ, prominenter 5-7-nervatæ: cymba 15-20 cm. longa, dense tecta fusci-albis planis aculeis; fructifera spadix 8-9 cm. longa et lata, breves rachillæ pubescentes: fructus oblato-pyriformis, 11-14 mm. crassus et longus, culmen planum, rostratum, inerme, striatum; cupula divisa in 3 latos lobos extra et intra.

Slender, 4 m. tall, trunk arundinaceous, 2.5 cm. or less thick, pithy in center, nodes 6-7 cm. apart and the intervals nude, leaf-sheaths long and tightly closing and thickly provided with brownish-white black-based flat spines 3 mm.-4 cm. long: leaves glossy and glabrous, 1 m. or less long, irregularly pinnate, bearing flat spines between the pinnæ on some parts of the rachis and the pinnæ sometimes few; pinnæ 30-40 cm. long, some of them 4-5 cm. broad and others (particularly the terminal pair) as much as 9 or 10 cm. broad, apex slenderly caudate, the 5-7 prominent nerves widely spaced and the midrib not much more prominent than they; rachis nearly terete, glabrous except for indistinct lines of furfuraceous pubescence: cymba maturing often below the falling leaves, 15-20 cm. long, densely clothed with tawny flat prickles 2 cm. or less long; fruiting spadix short, 8-9 cm. across either way, the few short branches or rachillæ pubescent: fruit oblate-pyriform, 11-14 mm. thick, top flat, beak pronounced, surface glabrous and when dry faintly striate, thin mesocarp adhering tightly to the large nutlet; cupule strongly divided into broad lobes or parts in each series.

Northwest rim of El Valle de Anton, Province Coelé, about 600 m altitude, *Allen 1817*.