

high; petals 7 mm. high, incurved and thickened at apex; staminodial cupule urceolate, truncate, obscurely separated from petals: fruit depressed-globose and short-rostrate, brown and green, ca. 17 mm. diameter, 15 mm. high; exocarp smooth drying roughened; mesocarp thin with few fibers; endocarp depressed-globose, 16 mm. wide, 14 mm. high, pale brown, prominently pitted, pores about median with flat pale radiating fibers.

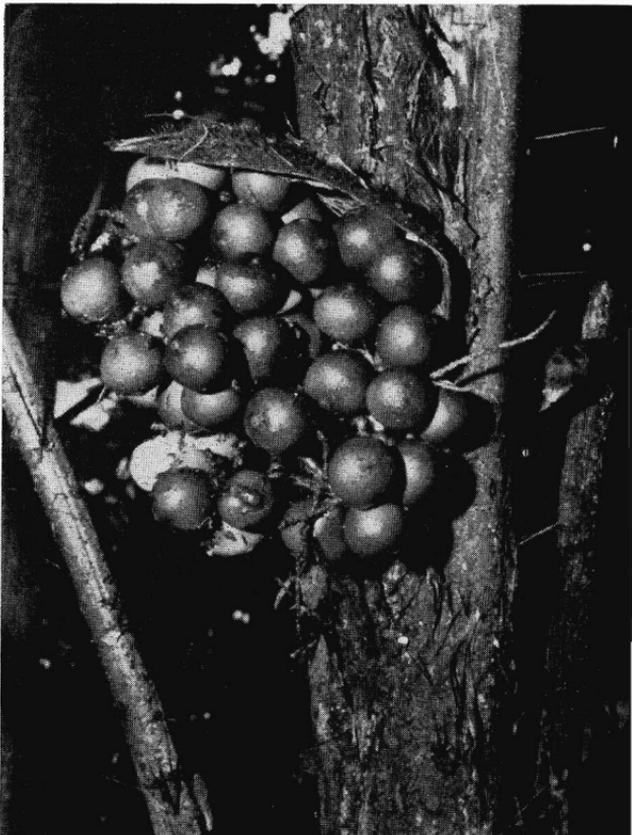
Colombia: Nariño; beyond Junin, alt. 2000 ft., November 14, 1946, M. B. & R. Foster 2164 (BH. type; A. isotype).

Aiphanes gelatinosa appears to be related to *A. echinocarpa*, Dugand in its long narrow pinnæ and thick lower rachillæ but is distinct in the glabrous fruit, longer and broader pinnæ, and aculeate more densely pubescent rachillæ. *A. linearis*, Burret and *A. Kalbreyeri*, Burret, also similar in shape of the pinnæ, are distinct in having aculeate or setose fruit and *A. Lindeniana*, Wendl. differs in having smaller and 4-6-grouped pinnæ along an armed rachis. *A. Schultzeana*, Burret of Ecuador has the same type of spadix but has short deltoid-cuneate pinnæ and the calyx only one-half as long as the corolla.

According to the collectors, *A. gelatinosa* has the flowers and fruit encased in jelly. Dried gelatinous masses are to be found in the flowers but the exact nature of the secretion has not been determined.

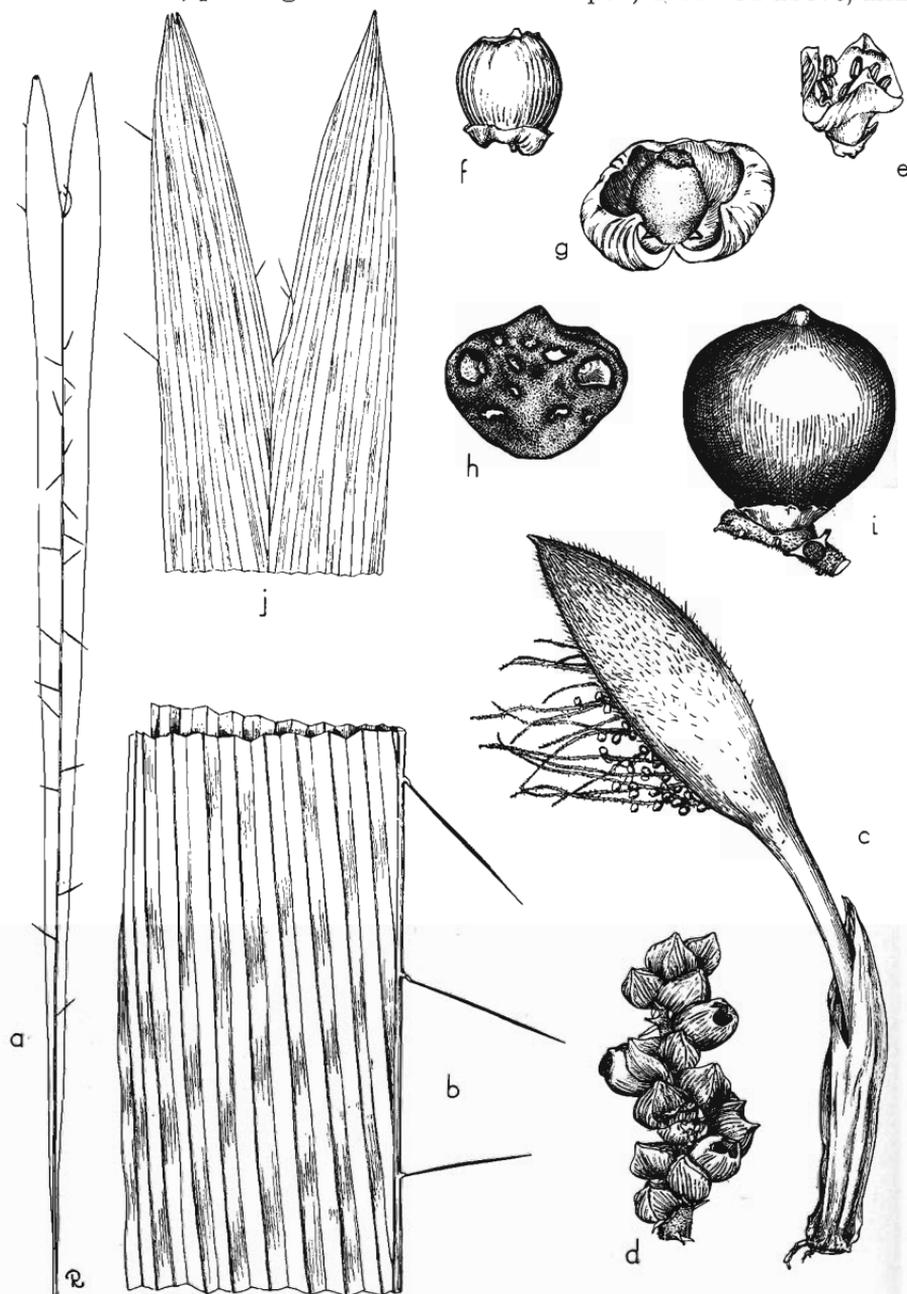
† *Bactris militaris*,
spec. nov. Subgen.
Eubactris. Figs.
88, 94, 95.

Coloniata; caules 5-20 ad 5 m. alti: folia 6-8 erecta cuneato-ob lanceolata, integra, ad 3.1 m. longa, 25.5 cm. lata rachibus armatis: spadix ad 48.5 cm. longus; spathæ duæ, exteriore inermi interiore aculeis ad 4 mm. longis armata; flores masculi 4 mm. longi, staminibus 6; flores feminei 4 mm. longi staminodia carentes: fructus turbinatus, 15-17 mm. altus.



94. *BACTRIS MILITARIS*, fruiting spadix. Photograph by Paul Allen.

Stoloniferous in clumps of 5-20 canes averaging 3-5 m. high and 4 cm. in diameter: leaves 6-8, erect; petiole unarmed (where seen), rounded, fulvous-lepidote-tomentose; rachis 2.8 m. long, fulvous-lepidote-tomentose, rounded below, prolonged in a short awn at apex, unarmed above, armed



95. *BACTRIS MILITARIS*. a, leaf in outline $\times 1/21$; b, leaf section, dorsal view $\times 1/3$; c, spadix $\times 1/3$; d, portion of rachilla $\times 2$; e, staminate flower $\times 4$; f, g, pistillate flower, side and expanded $\times 4$; h, endocarp $\times 1 1/2$; i, fruit $\times 1 1/2$; j, tip of leaf $\times 1/9$.

below with stout, rounded or two-sided pale-based black spines 4.5-8.5 cm. long; blade glabrous, green above, darker and semi-iridescent below when dry, 3.1 m. long, 25.5 cm. wide at apex of rachis, elongate cuneate-oblongate in outline, entire, very gradually expanded from a narrowly cuneate base to the bifid apex, the apex 40 cm. long on inner margin; margins entire, sparsely armed toward apex with few short, round, pale-based black spines to 3.5 cm. long; primary nerves about 20 on each side at an angle of about 15° with the rachis: spadices 30-48.5 cm. long; spathes 2, the outer ancipitous, 13-19 cm. long, 2-2.5 cm. wide, fulvous-tomentose becoming glabrate in age, unarmed, the inner long-peduncled, the manubrium 14-24 cm. long, the cucullus 16-25 cm. long, densely fulvous-tomentose, sparsely armed with slender pale-based brown spines to 4 mm. long; rachillæ 14-23, 15-6 cm. long, the rachis to 10 cm. long: staminate flowers 4 mm. long, greenish, asymmetric, irregularly dispersed on the lower half of the rachilla, crowded toward the apex, shortly pedicellate, the pedicels bracteolate; calyx to 1 mm. high, three-lobed the lobes acute; petals united below about a fleshy torus, the free lobes irregularly deltoid; stamens 6, filaments subulate, inflexed at apex in bud, anthers elliptic, ca. 0.75 mm. long; pistillode lacking: pistillate flowers greenish, ovoid, to 4 mm. long, irregularly disposed on lower half of rachilla; calyx ca. 1 mm. high, obscurely 3-lobed, undulate when dry; corolla to 4 mm. high, urceolate at anthesis, loosely cupular and irregularly crenate in fruit; staminodia 6, minute; ovary short-stipitate, ovoid, stigma broad, dark, irregularly rounded, sessile: fruit red at maturity, glabrous, turbinate and mammillate-umbonate (in siccu), 15-17 mm. high, 15-17 mm. diameter; exocarp thin, closely fibrous and finely striate in siccu; mesocarp thin, somewhat fibrous and adherent to endocarp; endocarp blackish, ca. 13 mm. diameter, 1 mm. thick, turbinate, bearing broad deep pores at or slightly above the middle; seed depressed, embryo lateral.

Costa Rica: Provincia de Puntarenas, Canton de Osa, vicinity of Jalaca farm, Golfo Dulce Area, very common near Tinoco station on the Palmar-Golfito R.R. in heavy forest but not seen elsewhere, alt. 100 feet, April 30, 1949, *Paul Allen 5276* (BH. type, US. isotype); forest between Rio Esquinas and Palmar, vicinity Tinoco station, July 13, 1951, *Allen 6264* (BH.); lowland forest near Tinoco station, August 28; 1951, *Allen 6296* (BH.).

Among the North American species of *Bactris*, *B. militaris* is perhaps closest to *B. Wendlandiana* in its simple leaf and much-branched spadix. It differs from that species and all others having simple leaves in the great length of the blade that is generally held in an erect position. A clump of plants brings to mind a group of soldiers. The leaf resembles that of *B. bifida*, Mart. in some respects but the latter has a simple spadix. It may also be compared to *B. Cuesco*, Engel of Venezuela, which has smaller leaves, prominently rostrate fruit and strongly aculeate inner spathe.

This unusual palm is described complete with flowers and fruit thanks

to the efforts of that keen collector Paul Allen who made additional trips to the type locality to secure fruit and photographs.

† *Chamædorea erumpens*, spec. nov. § *Chamædoropsis*. Figs. 96, 97.

Coloniata; caules numerosi, ad 3 m. alti: folia ca. 4, regulariter pinnata, glabra; pinnæ lanceolatæ, ad 27.5 cm. longæ, 30 mm. latæ vel apicalæ ad 9 cm. latæ, uninervatæ apicalibus exceptis, cum utrinque 14-15 tum apicales 2-3-nervatæ cumve utrinque 5-6 tum apicales 7-9-nervatæ: spadices interfoliata vaginam erumpentes vel demum infrafoliati; spathæ 5 pedunculum 4.5-8.5 cm. longum æquantales vel excedentes; 6-11 rachillæ 7.5-15 cm. longæ; flores masculi 1-1.2 mm. alti, petalis liberis, pistillodiis columnaribus; flores feminei 3 mm. alti, petalis acutis, staminodiis 6 squamiformibus; fructus 8 mm. diam., niger; semen globosum 6 mm. diam.

Soboliferous; stems to 40 in a clump, to 3 m. high or more, 11-17 mm. diameter, internodes 21.5-6.5 cm. long: live leaves about 4, regularly pinnate, glabrous; sheath 16.5-20 cm. long, striate; petiole 4.5-7 cm. long, convex below, canaliculate above; rachis 42-47.5 cm. long, convex below, bifacial above; pinnæ 14-15 on each side, the terminal 2-3-nerved, the remainder 1-nerved with a pair of prominent secondary and numerous closely spaced fine tertiary nerves on either side, or 5-6 with the terminal pair 7-9-nerved, lanceolate, gradually tapered to a subfalcate shortly acuminate apex or the upper merely acute, not decurrent at base, green, concolorous, thin, the basal 7-18 mm. wide, to 20 cm. long, the median 25-30 mm. wide, to 27.5 cm. long, the subapical 15 mm. wide, 15 cm. long, the apical 2.5-3 or to 9 cm. wide, 11-15 cm. long: staminate spadix interfoliar, erumpent at base of sheath, green; peduncle 4-5.5 cm. long; spathes 5, closely sheathing, the lower short, the fourth often nearly equalling the rachis and concealing the incomplete fifth; rachis 2-4.5 cm. long; rachillæ 6-11, simple or the lower rarely once or twice furcate, 7.5-15 cm. long, 2 mm. diameter (in vivo): flowers yellow, somewhat sunken in a lax more or less tristichous spiral; sepals very shortly connate at base, imbricate above, 1-1.2 mm. high, thickened basally; petals shortly connate at base, valvate above, thickish, not coherent at apex, 3 mm. high (in vivo), the apex incurved and more or less flattened; stamens 6, about three-fourths as high as petals, filaments connate at base but not forming a stipe, free above, abruptly narrowed from a broad base, anthers brownish (in vivo), introrse, dorsifixed at the middle, the locules separate above; pistillode columnar, 3-lobed at apex, slightly shorter than petals, the apex prominently visible at anthesis: pistillate spadices green at anthesis, orange in fruit, mostly infrafoliar, to 7 in flower or fruit at once; peduncle 5.5-8.5 cm. long; spathes 5, similar to those of the staminate spadix; rachis 1-2.3 cm. long; rachillæ 4-6, all simple, 9-10.5 cm. long, 3 mm. diameter (in vivo), becoming thickened in fruit, grooved below each alveolus: flowers yellow, somewhat sunken in a lax more or less tetrastichous spiral; sepals imbricate, 1-2 mm. high, to 1 mm. thick at the gibbous base, drying yellow; petals imbricate, ovate, acutish, 3 mm. high, drying brown; staminodia 6, minute and scale-like, generally bilobed; ovary subglobose, ca. 1.2 mm. high, stigmas sessile, erect or slightly recurved, papillate, ovules attached near apex of cavity: fruit globose, 8 mm. diameter, black; exocarp thin, finely reticulate; mesocarp thin, yellow,