

staminate above, the upper to 8 cm. long and primarily staminate: staminate flowers (recovered from cobwebs on leaf) 2.5 mm. high x 2.5 mm. wide; sepals ca. 1.5 mm. long, more or less deltoid, acute, not produced nor thickened at base; petals 3 mm. long, 2 mm. wide, ovate; stamens 6, shorter than petals, filaments united in a broad ring at base, anthers ovoid, ca. 0.8 mm. long, pistillode a minute central protuberance: pistillate flowers all fertilized and in young fruit; sepals nearly reniform, ca. 6 mm. wide x 4 mm. high, irregularly crenate, hyaline-margined; petals ca. 6 x 6 mm., brown-margined, the perianth becoming cupular in fruit; staminodial cupule irregularly truncate; ovary glabrous: immature fruit blue-red, subglobose, 13-15 cm. long x 13-15 cm. wide, smooth when fresh drying roughened, abruptly short-rostrate; exocarp thin; mesocarp thin, pulpy with few flat fibers; endocarp globose, 11-13 mm. diameter, brown, grooved but scarcely pitted between the pores, the pores slightly above the middle with numerous appressed radiating flat dark fibers; seed not formed.

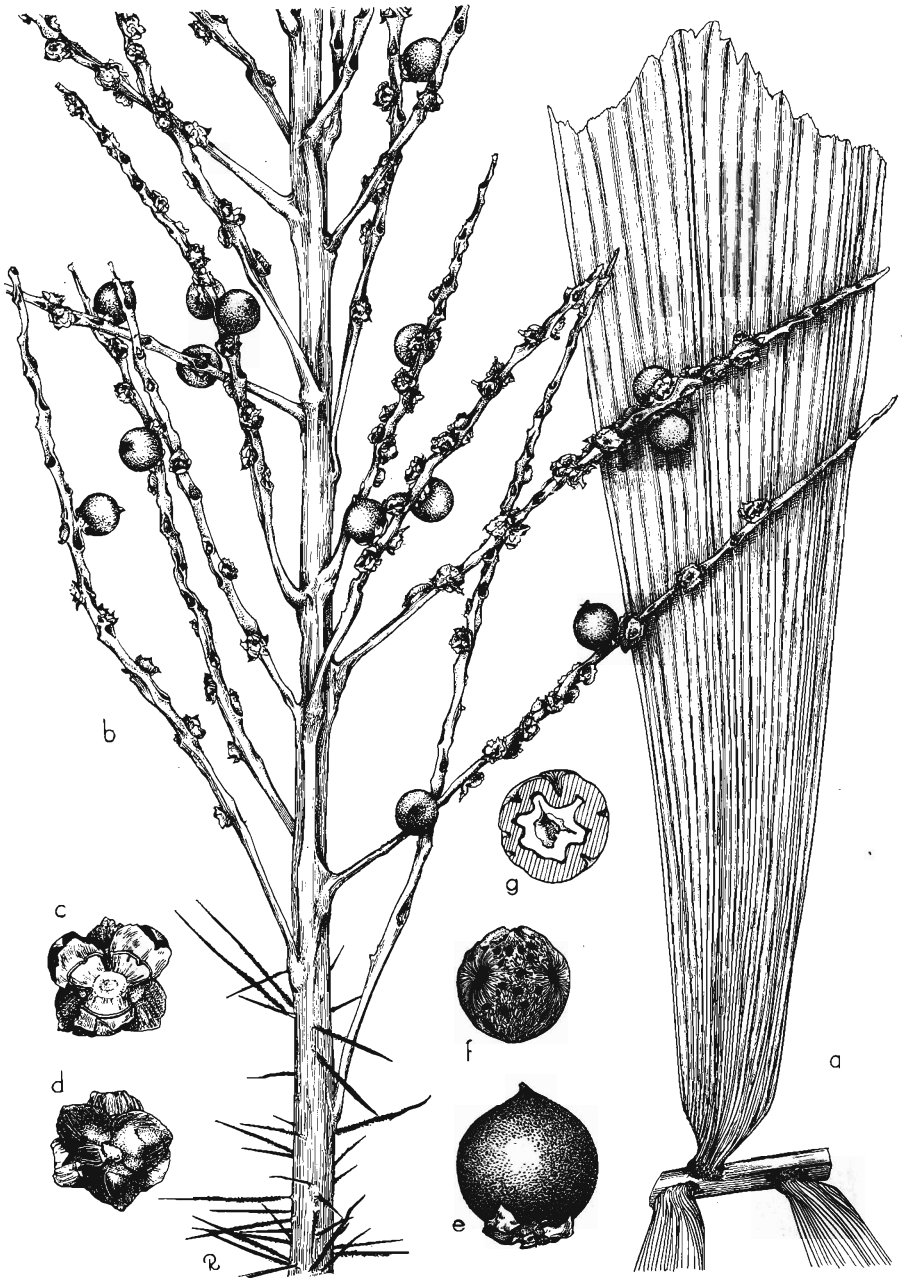
Colombia: Province Cundinamarca; in former dense forests near Fusagasaga, alt. 9000 feet, October 12, 1946, *M. B. & R. Foster 1870* (BH. type, A. isotype).

The small crowded pinnæ of this species are probably borne in two planes along the rachis and in their several characters are distinctive. Comparison of the leaf illustrated here from a flattened specimen with the crude illustration of *Martinezia disticha*, Linden, in *Gartenflora*, xxviii, t. 977 (1879) shows a certain resemblance. The latter, however, must be considered a nomen confusum for the illustration is so crude as to be unplaceable and no description is provided. In its scarcely pitted endocarp, *Aiphanes concinna* differs from most species for which fruit is known.

† **Aiphanes Fosteriorum**, spec. nov. Subgen. *Brachyanthera*. Fig. 92.

Coloniata; caules ad 10 m. alti, 10 cm. lati, horride armati: folium completum non visum; rachis inermis minute hirsuta; pinnæ alternæ, cuneatæ ad 45 cm. longæ apicibus 13-14 cm. latis eroso-lobulatis et 1-2 cm. productis, supra nitidæ, glabræ, subtus plus minusve dense hirsutæ et aculeatæ, ca. 23-venosæ: spadix simpliciter ramosus, robustus, ca. 3 m. longus; spathæ ignotæ; pedunculus tomentosus, setulosus et spinosus spinis tomentosis ad 6 cm. longis; rachis inermis; rachillæ ad 30 cm. longæ vel ultra, 3-6 mm. latæ, hispidulosæ; flores masculi ignoti: flores feminei in rachillam immersi, perianthio sub fructu accrescenti ca. 6 mm. alto, cupula staminodiorum irregulariter lobata, 2.5 mm. alta: fructus ruber, globosus, rostratus, 16-17 mm. diam.; endocarpium 14-15 mm. diam., globosum, foveatum, foraminibus vix super medium insertis fibris tenuibus tectis.

Colonial; stems to 10 m. high, 10 cm. thick with very long spines: leaves incompletely known; sheath fuscous-furfuraceous, densely brown-hispid and armed with stout, flattish, pale-based deciduous-tomentose spines 1-5.5 cm. long; petiole not seen; rachis unarmed, hispidulous becoming glabrous; pinnæ alternate on the leaf fragment seen, broadly cuneate, to 45 cm. long, 13-14 cm. broad at the erose-lobulate apex, longest along the midvein, the upper margin produced 1-2 cm., glossy and



92. AIPHANES FOSTERIORUM. a, pinna $\times \frac{1}{3}$; b, spadix portion $\times \frac{1}{3}$; c, d, pistillate perianth in fruit, face and back $\times 1\frac{1}{2}$; e, fruit $\times 1$; f, g, endocarp, side and cross-section $\times 1$.

glabrous above, paler and more or less densely brown-hirsute below, ca. 23-veined, the veins about equal, impressed above, prominent, and minutely aculeate below: spadix simply branched, robust, ca. 3 m. long (fide collectors); spathes unknown; peduncle 1.5 cm. diameter, deciduous-tomentose, hispidulous, and moderately armed with stout flat deciduous-tomentose black spines to 6 cm. long; rachis similar but unarmed above base and densely hispidulous toward apex; rachillæ numerous, stout, ca. 6 mm. wide at insertion, 3-4 mm. diam. above, to 30 cm. long or more, densely setulose; staminate flowers unknown; pistillate fls. more or less deeply immersed in rachis, the perianth accrescent in fruit, petals 6 mm. high, acute, deltoid, slightly exceeding the sepals, united basally, staminodial ring ca. 2.5 mm. high, irregularly lobed: fruit rose-red at maturity, globose, rostrate, 16-17 mm. diameter; exocarp thin, smooth, drying roughened; mesocarp thin with few fibers; endocarp globose, chocolate-brown, 14-15 mm. in diameter, 2-4 mm. thick, deeply pitted, pores at middle with slender radiating fibers; seed irregular, albumen plane.

Colombia: Province Nariño; Altaquer, alt. 3500 feet, November 10, 1946, *M. B. & R. Foster 2117* (BH. type, A. isotype).

The relationship of this species is not readily determined but in the large size, large pilose pinnæ and unusual spadix with pubescent spines it is distinct from any species heretofore described.

† *Aiphanes gelatinosa*, spec. nov. Subgen. *Brachyanthera*. Fig. 93.

Coloniata; caules armati, alti et graciles: folia regulariter pinnata; rachis inermis; pinnæ oppositæ utrinque 15 vel plures uninervatæ terminalibus latoribus exceptis fere lineares, 50-60 cm. longæ, 3.5-5.5 cm. latæ, supra glabræ, subtus dense minuteque albo-granulatæ nervo medio et margine dense breviterque aculeati: spadix pendulosus, simpliciter ramosus; pedunculus ca. 1 m. longus, dense fusco-villosus et spinis ad 9 cm. longis armatus; rachillæ ca. 30 infimis applanatis et subfasciatis ad 25 cm. longis, 1.5 cm. latis, infra flores masculi et feminei glomerati supra flores masculi gerentibus, supremis tenuibus principaliter staminatis; flores masculi delapsi; flores feminei densi profunde immersi sepalis et petalis subæqualibus 6-7 mm. altis; cupula staminodiorum urceolata, truncata: fructus depresso-globosus, 16 mm. diam. 14 mm. altus; endocarpium foveolatum foraminibus vix super medium insertis fibris tenuibus tectis.

Colonial; stems tall and slender, ringed with continuous 45° spiral of spines that point downward: leaves regularly pinnate, the rachis unarmed, hirsutulous or glabrate; pinnæ opposite, 3-4 cm. apart, 15 or more on each side, the terminal broad, several-nerved, remainder 1-nerved with numerous secondary nerves, nearly linear in outline, 50-60 or more cm. long, 3.5-5.5 cm. wide, obliquely truncate, erose-dentate and scarcely produced at apex, glabrous above, densely and minutely white granulate below, the prominent midnerve and upper margin densely short aculeate below, secondary nerves ca. 10 to a side, glabrous or sparsely aculeate: spadix pendulous, simply branched; spathes unknown; peduncle ca. 1 m. long, 1.5 cm. thick, densely fuscous-villous and armed with crimped, angled, deciduous-villous shining brown spines to 9 cm. long; rachis 25 cm. long, densely pilose and aculeate; rachillæ ca. 30, the lower 10-12 applanate and subfasciate, densely pilose and aculeate at base, to 25 cm. long, 1.5