

Fig. 48 - *Astrocaryum urostachys* - fruits.

20. *Astrocaryum perangustatum* F. Kahn et B. Millán, sp. nov. (Fig. 49, 50).

A sectionis Ayri speciebus fructu perangustato differt.

Kahn F. 3232, Peru (Holotype: P, Isotypes: AAU, K, NY, USM).

A medium-sized, single-stemmed palm. Stem up to 4 m high, 20-23 cm in diameter, with some spines in groups, partially or totally covered with dead leaf sheaths. Leaves 8-14; sheath and petiole green, black-setose, 117-190 cm long, sheath fibrous at margins, densely armed with black, terete to flattened, slightly flexuous, grayish-floccose, 4-6 cm long, spines, and with others, up to 40 cm long, intermixed on abaxial side, petiole short, densely armed on upper lateral parts of convex abaxial side; rachis up to 4.5 m long, black-setose, armed with a few flattened, up to 4 cm long spines, usually in groups of 2-3; pinnae 92-110 per side, regularly arranged in one plane, abaxial side golden, satiny; basal pinnae 88-91 cm long, 1.5-4 cm wide; median pinnae 117-132 cm long, 9-11 cm wide; apical pinnae 34-41 cm long, 2.5-5 cm wide. Inflorescence erect; prophyll 66-87 cm long, 24-26 cm wide; abaxial side flattened, adaxial side convex with out sides flattened; peduncular bract 116-127 cm long, 36 cm wide when open, inserted 52-54 cm from rachis, abaxial side with a grayish-brown indumentum, or yellowish without indumentum, with a few light brown setae and some flattened, flexuous, whitish-floccose, 1 cm long spines in the upper part; peduncle 1.2 m long, 5.1-5.5 cm x 4.4-4.5 cm in cross-section beneath rachis, 9.2-12.2 cm x 7.1-9 cm at base, with some small, flexuous, whitish-floccose, 0.5 cm long spines between rachis and bract insertion; rachis 57-61 cm long; rachillae many, proximal part 0.3-5 cm long, distal part bearing staminate flowers 8-11 cm long, with transparent, clavate hairs, one pistillate flower inserted 1 cm from the rachis. Staminate flower with sepals connate basally, 1.1 ± 0.2 mm long; petals 3.5 ± 0.3 mm long; stamens

6; *anthers* 1.5 ± 0.1 mm long; *filament* 1.7 ± 0.2 mm long; pistillode short, 3-parted. *Pistillate flower* with *calyx* urceolate to cylindrical, 9.2 ± 0.5 to 11.4 ± 0.7 mm long, glabrous, 3-dentate; *corolla* 3-denticulate with limb ciliate, 8.3 ± 0.5 to 10.9 ± 0.8 mm long, with flattened, yellowish, flexuous, 1-2 mm long setae; *staminodial ring* entire, 4 mm long, 6-denticulate (or laciniate 3-9.5 mm long, rigid, spiny at margin); *pistil* tomentose, whitish, with 1-1.5 mm long spines; *stigmas* 3, 4-5 mm long. *Fruit* turbinate to oblong, asymmetrical, very narrow basally, 7.1-8.7 cm long including a 0.5-1 cm long rostrum, 2.5-2.6 cm wide, with a 0.5-1-(2) cm long pedicel; *pericarp* covered with dense, shiny brown, 4 mm long spines; *mesocarp* fleshy, thin at maturity; endocarp bony, acuminate basally; *perianth* with *corolla* irregularly dentate, 19-24 mm long, with a few setae, *staminodial ring* crenulate, 14-16 mm long, *calyx* glabrous, 3-5 lobed, 9-13 mm long.



Fig. 49 - *Astrocaryum perangustatum* in an open area in the Palcazu River valley.

Specimens observed:

PERU - *Kahn* 3230 (USM), 3231 (K, P), 11 Jan 1992, 500 m, Pasco, Oxapampa, La Merced-Villa Rica road, Puerto Capelo village. *Kahn* 3232 (AAU, K, P, NY, USM), 13 Jan 1992, 400 m, Pasco, Oxapampa, Villa Rica-Iscozacin road, San Juan de Cacazu village. *Smith* 4045 (MO, P, USM), 15 May 1983, 10°09'S, 75°19'W, 350 m, Pasco, Oxapampa, Chuchurras River drainage, Belén on the Comparichimas River.

Distribution: In the central and southeastern piedmont of Peru, 380-800 m in elevation.

Ecology: In understory of forests on steep slopes, frequent in open areas.

Uses: Liquid endosperm of unripe fruit is drunk.

Vernacular names: chonta (P)

Notes: *Astrocaryum perangustatum* is characterized by the fruit being remarkably narrow basally, and the pinnae very wide (up to 11 cm), golden and satiny beneath.

21. *Astrocaryum gratum* F. Kahn et B. Millán, sp. nov. (Fig. 51).

Palma solitaria; differt a *Astrocaryum macrocalyx* Burret et *Astrocaryum perangustatum* Kahn et Millán annulo staminodiali deminuto vel 6 staminodiis dentiformibus.

Kahn F. & Llosa J.A. 2147, Peru (Holotype: P; Isotypes: CAY, K, USM).

A medium-sized, single-stemmed palm. Stem 3-10 m high, 17-20 cm in diameter, with some spines in groups; sheaths of dead leaves persistent on about 1 m under the crown. Leaves 8-12; sheath and petiole up to 2 m long, purplish, fibrous at margins, densely setose, armed with dense, flattened, black, up to 15 cm long spines on abaxial side, these shorter on lateral sides of petiole; rachis 4.6-5 m long, black-setose, with up to 3 cm long spines in groups of 2-3; pinnae 90-110 per side, regularly arranged in one plane; basal pinnae 105-131 cm long, 1.9-3 cm wide; median pinnae 134-145 cm long, 5-7 cm wide; apical pinnae 40-61 cm long, 2.5-12.5 cm wide. Inflorescence and infructescence erect; prophyll 1 m long, 11-12 cm wide, abaxial side with dense, dark brown, 3-5 mm long setae, adaxial side smooth or with dense, short setae; peduncular bract 90 cm long, inserted 40 cm from rachis, with scattered black and dense tawny setae, and flattened, black, 2-3 cm long spines at apex; peduncle 1.3 m long, section oval, 4 x 3 cm near rachis, 7 x 4 cm at base; rachis up to 70 cm long; rachillae many, proximal part glabrous, 2-4.5 cm long, distal part bearing staminate flowers in low density, 11.5-15 cm long, covered with transparent, clavate to globose hairs, one pistillate flower inserted 0.5-1 cm from the rachis. Staminate flower with sepals 0.6-0.7 ± 0.1 mm long; petals 2.8 to 2.9 ± 0.2 mm long, slightly connate basally; stamens 6; anthers 1.3-1.5 ± 0.1 mm long; filament up to 1.3 mm long; pistillode 3-parted. Pistillate flower with calyx ovoid to pear-shaped, slightly 3-dentate, with a few minute setae, margin ciliate, 6.4 ± 0.4 to 9.6 ± 0.7 mm long; corolla urceolate, slightly shorter than calyx, 5.4 ± 0.4 to 9.1 ± 0.5 mm long, with setae or 0.5 mm long spines, margin ciliate; staminodial ring 0.9 to 2.5 ± 0.4 mm, very short or reduced to 6 teeth; pistil wide basally and tapered into a slender style, brown-tomentose, with white setae; stigmas 3, 3-4 mm long. Fruit turbinate to obovate, depressed, 3.9-6.7 cm long, 2.7-3.9 cm wide, with a pedicel, up to 3.5 cm long; pericarp orange with brown to black, flexuous, 1-3 mm long setae; mesocarp fleshy, up to 1.2 cm thick; endocarp bony, turbinate, slightly acuminate and curved basally, 2.6-4.3 cm long, 1.7-2.3 cm wide; perianth with corolla cup-shaped, crenate, lacinate, or irregularly lobed, 9-18 mm long, staminodial ring wavy, 6-denticulate, 4-10 mm long, calyx deeply lobed, 5-12 mm long.

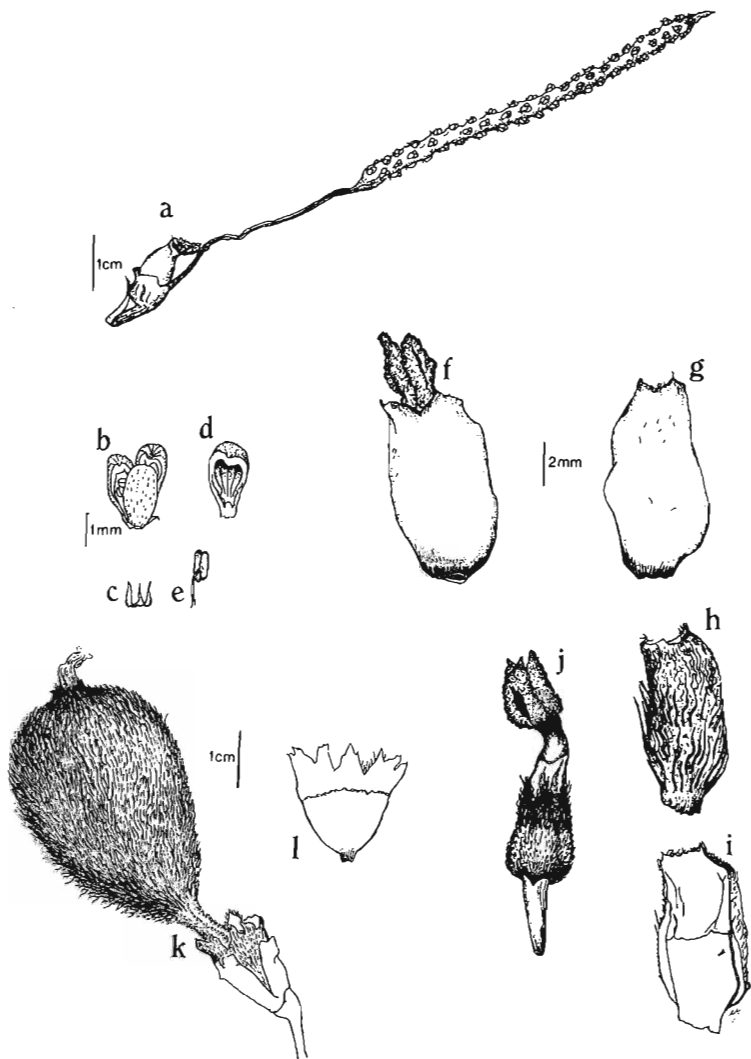


Fig. 50 - *Astrocaryum perangustatum* - a. rachilla; b. staminate flower; c. calyx; d. petal; e. stamen; f. pistillate flower; g. calyx; h. corolla; i. staminodial ring in corolla; j. pistil; k. fruit; l. perianth in fruit: corolla with staminodial ring. (Material used: Kahn 3232; Smith 4045)