

FIG. 5. *S. orinocensis*. Parts of petiole and basal leaf sheath (left and center) and part of leaf blade with pinnae.

which have acute or oblique tips rather than acuminate tips, and shorter, obovate, non-beaked fruits rather than longer, ovate, beaked fruits ( $2.5 \times 2.2$  cm., rather than  $3 \times 1.9$  cm.). The new species is also related to *S. stenopetala* Burret from Venezuela, but this species has narrower pinnae (up to 2.8 cm. wide) and ovate fruits up to 3.7 cm. long with a beak about 8 mm. long.

Besides *S. allenii* and *S. orinocensis*, *S. sancona* (H.B.K.) Karsten also has been reported from Colombia. The latter species has wider pinnae (up to 4.5 cm.) arranged in tight clusters of three or four, and the perianth of the female flowers has prominent veins. *S. argentea* (Engel) Becc. and *S. chiragua* (Karstan) Wendl., originally described from Colombia, have been relegated to *species dubia* because of inadequate descriptions and lack of type material.

#### ***Syagrus duartei* Glassman, sp. nov. Figures 6-9.**

Palma acaulis. Folia ca. 125 cm. longa; piniis utrinque 64 in gregibus dispositis; spadix (pars ramosa) ca. 35 cm. longa, rachillae ca. 5-8; flores masculi et 16-20 et 10-15 mm. alti; flores feminei 20-25 mm. alti; fructus 3 cm. longus et 3 cm. diam.

Acaulescent palm. Petiole up to 7 cm. long, 1.5 cm. wide, sheathing base up to 20 cm. long, deteriorating into separate marginal fibers with age; rachis of leaf up to 84 cm. long; pinnae up to 64 pairs, mostly in close clusters of 3 (occasionally



FIG. 6. *S. duartei*. Serra do Cipó. Acaulescent plants growing in rocky outcrops.



FIG. 7. *S. duartei*. Serra do Cipó. J.C. Gomes holding leaves and spadices.

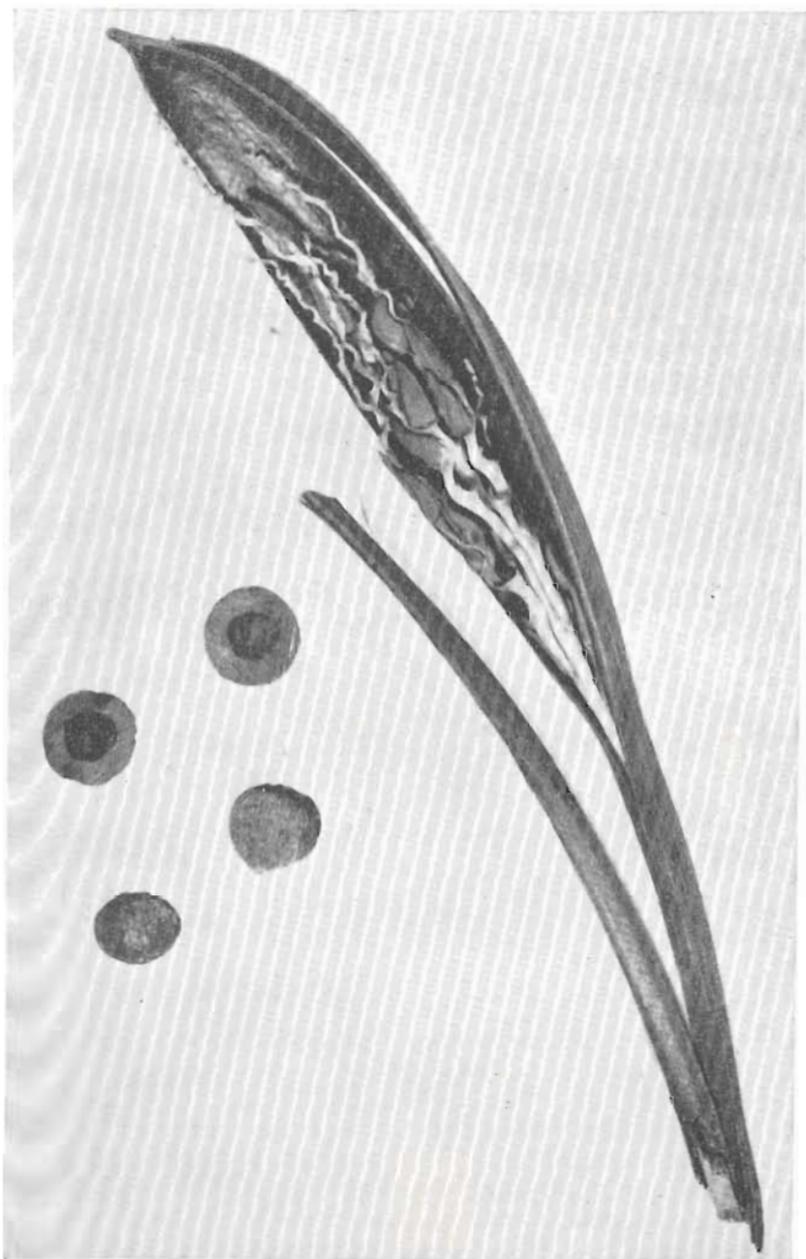


FIG. 8. *S. duartei*.- a. Holotype (RB). Spathe and spadix showing rachillae and flowers (right). b. Glassman and Gomes 8033 (CHI). Sectioned and whole fruits (left).

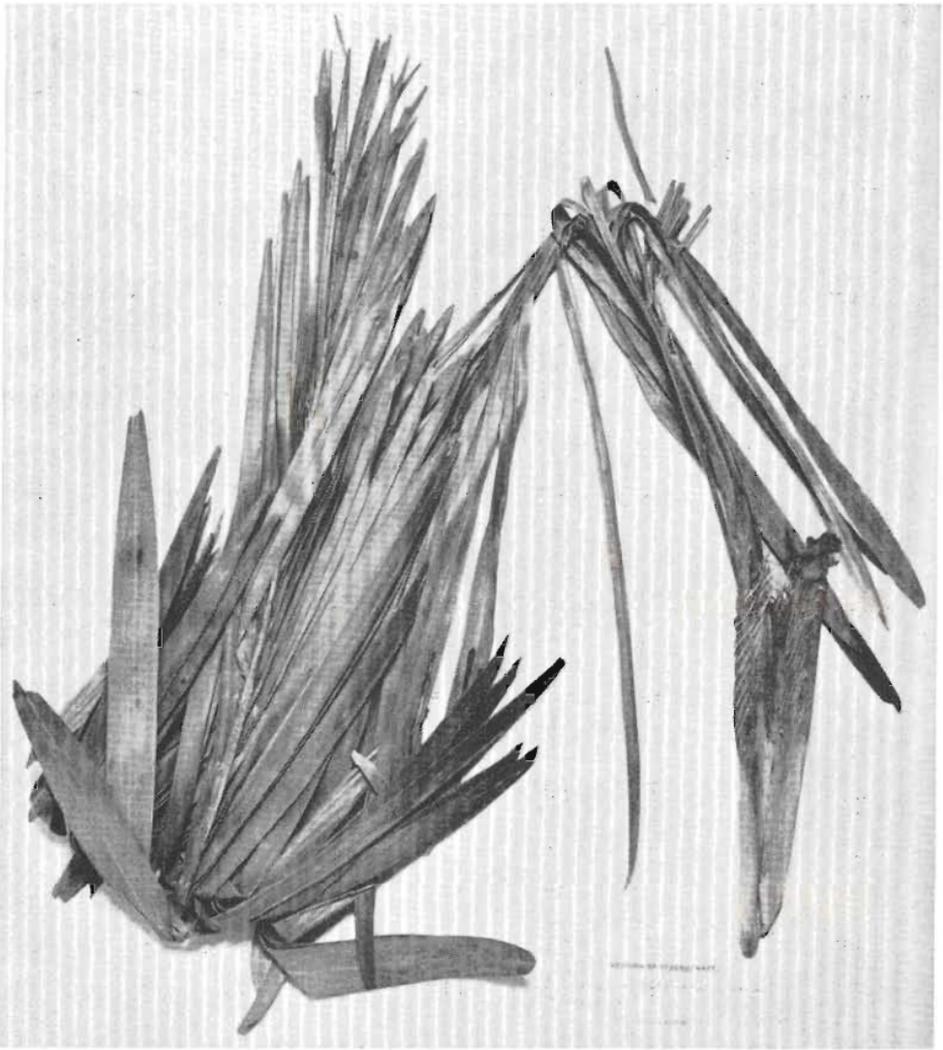


FIG. 9. *S. duartei*. Holotype (RB). Whole leaf (folded) showing basal leaf sheath, petiole and closely clustered pinnae.

2 or 4 in a cluster), upper surface glaucous, becoming eglaucous with age, middle ones up to 34 cm. long and 2.4 cm. wide, mostly with oblique or obtuse tips; expanded part of spathe up to 45 cm. long and 5 cm. wide, brownish tomentose to glabrous on outside; branched part of spadix up to 35 cm. long, branches 5-8 in number, each branch up to 22 cm. long; lower male flowers 16-20 mm. long and those above 10-15 mm. long, sepals 3-4 mm. long; female flowers mostly 20-25 mm. long and 6-8 mm. wide, occasionally smaller (16-19 mm. long); fruit more or less turbinate, up to 3 cm. long and 3 cm. in diam., endocarp 6-8 mm. thick, cavity smooth; seed not seen.

BRAZIL: State of Minas Gerais, Serra do Cipó, growing between blocks of quartzite, very frequent, Aug. 24, 1961, A. P. Duarte 5706

(RB, holotype); same locality data, alt. 1300 m., July 10, 1965, *S. F. Glassman & J. C. Gomes 8033, 8034, 8035, 8036* (CHI).

*Syagrus duartei* does not seem to be closely related to any other acaulescent species of *Syagrus*; however, it resembles most closely *S. glaucescens* Glaz. ex Becc. (Figs. 10–11), a tree up to 3 m. tall and known only from the vicinity of Diamantina, Minas Gerais. Both species have a spathe and spadix about the same size and clustered pinnae of approximately the same length and width with oblique tips. Besides overall size, the new species differs from *S. glaucescens* in having fewer and longer spadix branches (5–8, rather than 12–16 and up to 22 cm., rather than up to 12 cm.), and turbinate rather than broadly ovate fruits with an endocarp 6–8 mm. thick rather than 2–4 mm. thick.

*S. duartei* is common in rocky outcrops of Serra do Cipó covering a radius of about 10 km. It does not occur on the lower level areas of this mountain range where a trunkless species of *Allooptera* is found. *S. pleioclada* Burret, another acaulescent palm, grows in the same general rocky areas as the new species, but at slightly lower elevations and it seems to be less frequent.

### ***Syagrus mendanhensis* Glassman, sp. nov. Figures 12–13.**

Palma acaulis. Folia ca. 90–120 cm. longa; pinnis utrinque 18 in gregibus dispositis; spadix (pars ramosa) ca. 21 cm. longa, rachillae ca. 9; flores masculi 8–10 mm. alti; flores feminei 12 mm. alti; fructus 3 cm. longus et 0.9 cm. diam.

Acaulescent palm. Leaf 3–4 feet long *vide* Archer; petiole up to 37 cm. long, about 1 cm. wide, sheathing base not seen; rachis of leaf up to 58 cm. long; pinnae about 18 pairs, in loose clusters of 2–4, occasionally single, glabrous on both surfaces, middle ones up to 38 cm. long and 0.9 cm. wide, mostly with acuminate tips, intervals between clusters mostly 3–5 cm.; expanded part of spathe about 30 cm. long and 3.2 cm. wide; branched part of spadix 21 cm. long, branches up to 9 in number, each branch up to 16 cm. long; male flowers 8–10 mm. long; female flower 12 mm. long, 5 mm. wide; fruit (immature) oblong-ovate, up to 3 cm. long and 0.9 cm. in diam.; beak about 4 mm. long; seed not seen.

BRAZIL: State of Minas Gerais, vicinity of Mendanha, along road, Sept. 24, 1936, *W. A. Archer 4086* (BH, holotype-flowering; U. S.-fruiting).

*Syagrus mendanhensis* has the same general appearance as *S. pleioclada* Burret (Figs. 14–15), another acaulescent palm from Serra do Cipó. Both species have their pinnae arranged in loose clusters (with fairly long intervals between clusters) and have acuminate tips, and the female flowers are approximately of equal length. *S. mendanhensis* can be easily distinguished from the latter species by the longer