which however are not especially handsome or showy, being at first white, fading to dull yellow. The shrub abounds on some of the south-facing, steep, arid slopes of the Sierra de los Cuchumatanes, among bare rocks exposed to the full force of the sun.—*Paul C. Standley* and *Louis O. Williams.*

TWO NEW FAN PALMS FROM CENTRAL AMERICA

Paul H. Allen

RECENT FIELD WORK in Honduras and Costa Rica has brought to light two undescribed species of *Cryosophila*, both common palms used for thatch in their respective localities. Since the genus is not a large one, it seems desirable to provide a key for the separation of all of the entities thus far known from Mexico and Central America.

Flowering scapes bracteate throughout their entire length.
C. guagara

Flowering scapes bracteate only on the basal half.
Main axis of the inflorescence bearing dense fascicles of short, undivided branchlets.
C. Cookii

Main axis of the inflorescence bearing short, branching panicles.

Leaves with oblique cross veins between the primary longitudinal nerves, which can be clearly seen without a lens.

Fruits short, ovoid to globose.
C. albida

Fruits elongate, pyriform.
C. Warscewiczii

Leaves without conspicuous oblique cross veins between the primary longitudinal nerves.

Fruits 16-18 mm. in diameter.
C. Williamsii

Fruits 12 mm. in diameter.
Spathes 15-20 cm. long.
C. argentea

Spathes 5-10 cm. long.
C. nana

Cryosophila Williamsii *P. Allen, sp. nov.*

Folia in segmenta numerosa profunde dissecta sed omnino fissura profunda specierum aliarum carentia, venis transversis secundariis nullis; fructus laevis, globosus, albus, ca. 1.5 cm. diam.; flores et spathae ignotae.

Slender, fan-leaved palms, 2.5-6 m. in height, the solitary trunks armed throughout with whitish, branching root-spines. Mature plants typically with 12-20 live fronds, which average about 1.5 m. in diameter, the upper surface dull green, while the lower surface is conspicuously silvery, with a minute appressed pubescence. Hastula very small and blunt, averaging about 12 mm. in width. Fronds deeply dissected into numerous segments, but completely lacking the profound central cleft present in most of the other species. Individual segments from 38-44 mm. in width, with falcately divergent, bifid tips, which may become nearly unciform in some examples, particularly near the apex of the frond. Fruiting scapes usually 1 or 2, semi-erect or arching (never pendulous), the main axis 25-30 cm. long, the terminal half with very closely crowded, smooth, white, globose fruits which average 16 mm. in diameter. Flowers and spathes unknown.

HONDURAS: very common in climax rain forest, known locally as "Mojarilla", the fronds used for thatch. West shore of Lake Yojoa, near Punta Gorda, Dept. Santa Bárbara, 660 m., Feb. 14, 1952, *Paul H. Allen & Alphonse Chable 6472* (TYPE in the Herb. Esc. Agr. Pan.; DUPL. in the author's herb.).

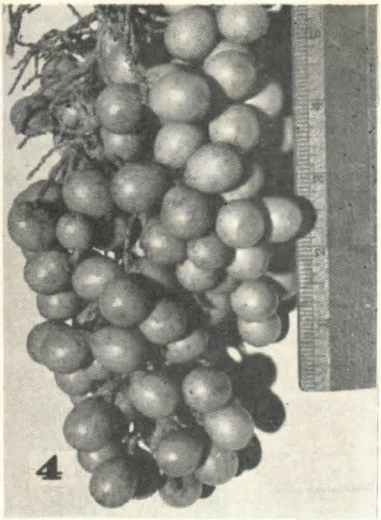
Allied to *Cryosophila albida* and *C. argentea*, but differing in the complete absence of the characteristic deep central division in the fronds, the absence of transverse secondary veins, in the much more compact fruit clusters and other characters. It is with great pleasure that this attractive species is dedicated to Dr. Louis O. Williams, who has done so much to revive interest in the neglected field of Central American botany.

Cryosophila guagara *P. Allen, sp. nov.*

Folia magna, subtus argentea et minute adpresse pubescentia, profunde in medio partita; inflorescentiae elongatae,

Fig. 1. **Cryosophila Williamsii** P. Allen, showing habit of the species.

Fig. 2. **Cryosophila guagara** P. Allen, showing habit of the species.



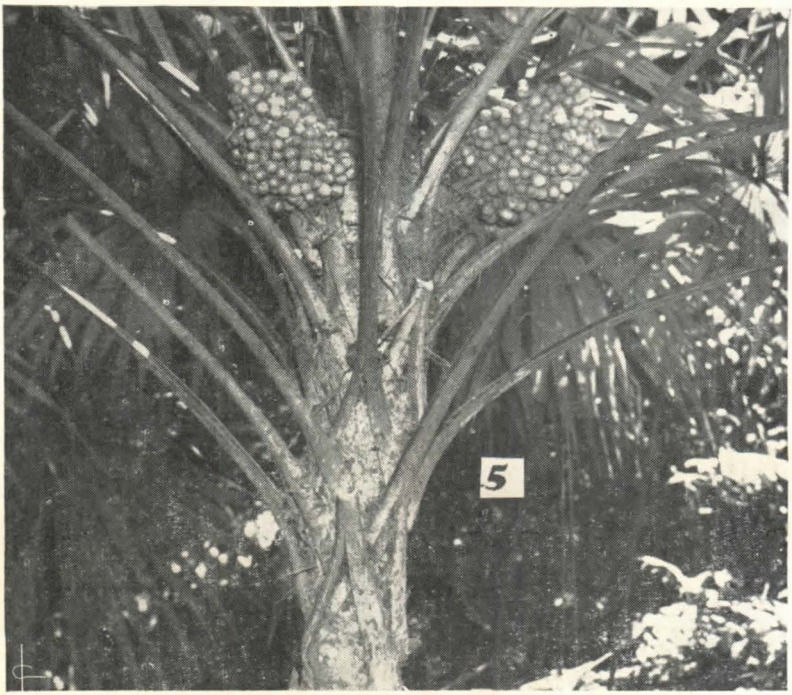


Fig. 3. **Cryosophila guagara** P. Allen, showing detail of the crown and inflorescence and fig. 4, showing detail of the fruit.
Fig. 5. **Cryosophila Williamsii** P. Allen, showing detail of the crown and fruit.

pendulae, in tota longitudine bracteis stramineis papyraceis usque ad apicem obtectae; fructus fere globosus,16-18 mm. diam.

Slender, single-stemmed, fan-leaved palms, 3.5-6 m. in height, the trunks armed throughout with extensive branching root-spines. Mature plants with 12-15 live fronds, the flabellate blades averaging about 1.6 m. in diameter, the dark glossy green upper surface contrasting strongly with the silvery white under surface, which has a minute, appressed pubescence. The fronds are strongly bifid, with a deep central cleft which divides the blade to within about an inch of the short, broadly triangular hastula, which averages about 32 mm. in width. Individual frond segments vary in width from 4-6 cm., usually with a shortly bifid, falcately divergent tip, the entire upper surface being covered with a dense network of short, irregular transverse veins between the primary nerves. Inflorescences 1 to 3, elongate, pendulous scapes, to about 1 m. in length, clothed throughout in 25-40 broad, straw-yellow papery bracts. Flowers produced on 14-18 short, branching panicles, which are spirally arranged on the main axis of the inflorescence. Individual panicles average about 8 cm. in length, the slender strands densely covered with the fleshy white, nearly globose flowers, which average about 2 mm. in diameter. Fruiting clusters commonly seen without bracts, or with a few bracts retained at the base, the main axis 60-97 cm. long, the terminal 35-46 cm. being closely covered with the nearly globose, smooth, waxy white fruits which are about 16-18 mm. in diameter. These contain a single seed, having a plane endosperm, and lateral embryo.

COSTA RICA: forests near Tinoco station, Prov. Puntarenas, sea level, October 29, 1952, *Paul H. Allen 6602*. (TYPE in the herb. Esc. Agric. Panamer., DUPL. in the author's herb.).

A very striking species, immediately separable from all others in the genus by the elongate, pendulous inflorescences, which are covered with conspicuous straw-yellow bracts to the very apex. The species is common in the lowland rain forest of the Golfo Dulce area in Costa Rica, where it is known as "Guagara". The fronds are much used locally for thatch.