

A New Copernicia Hybrid From Cuba

B. E. DAHLGREN AND S. F. GLASSMAN

Chicago Natural History Museum and University of Illinois

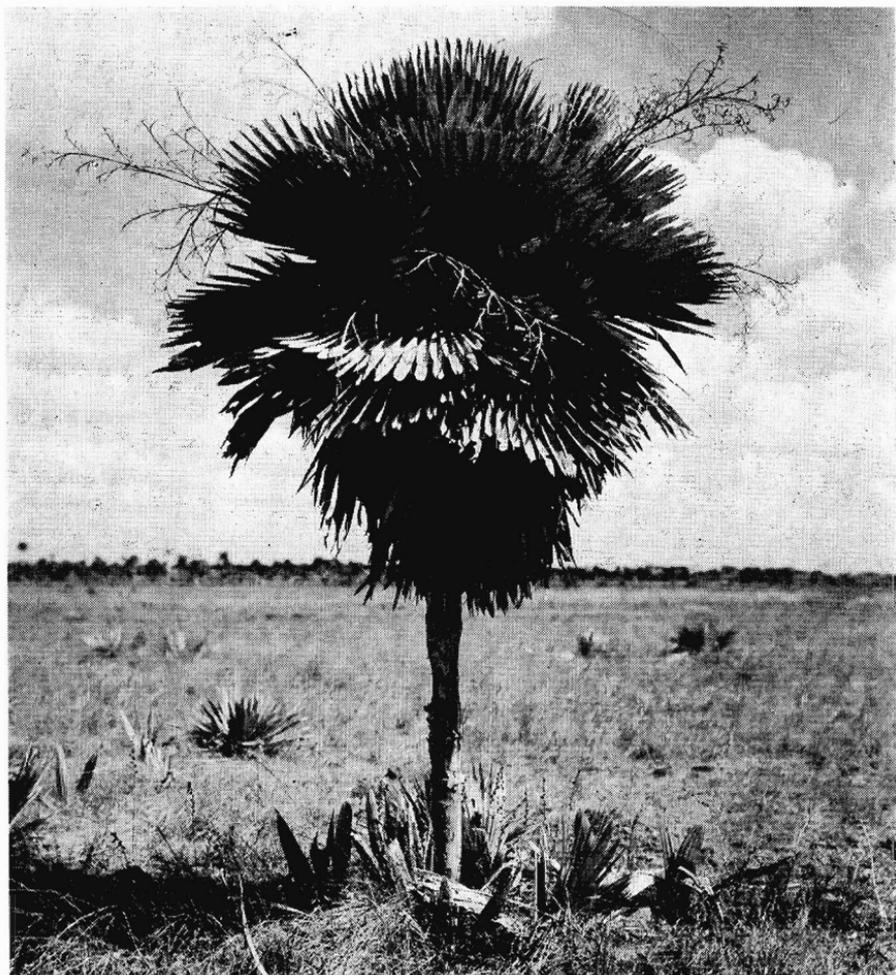
Copernicia hospita Mart. is a widely distributed endemic in Cuba. In a number of localities it is suspected of hybridizing with several other species of *Copernicia*, namely *C. Baileyana* Leon, *C. Cowellii* Britt. & Wils., *C. Leoniana* Dahlgr. & Glassm., *C. macroglossa* Wendl. ex Becc., and *C. rigida* Britt. & Wils. In contrast, *C. Cowellii*, another Cuban endemic, has a restricted distribution. It is found only in the northeastern part of Camaguey province, from near the city of Camaguey to several miles north of Minas. Much of this region is an extensive savanna, with clay soils two to eight inches thick and underlain by serpentine rock (See H. H.

Bennett & R. V. Allison, *Soils of Cuba*, Washington, 1928). The vegetation here is subjected to frequent grass fires, apparently set off by sparks from railroad trains which run through the region.

Besides *C. Cowellii*, the other important palms growing in the savanna are *C. hospita*, *C. macroglossa* and several species of *Coccothrinax*. Here and there are large numbers of trees which appear to be intermediate between *Copernicia hospita* and *C. Cowellii*. At least 60 of these plants were recognized by the senior author. In Table I the differences between the three taxa are listed, and figures 43-45 illustrate some of these differences. Apparently, these

Table I. Comparison of three Copernicias

	<i>Cowellii</i>	× <i>Shaferi</i>	<i>hospita</i>
Height of Mature Trees	4-8 ft.	6-11 ft.	10-18 ft.
Leaf Blade			
Length	Up to 60 cm.	Up to 90 cm.	Up to 109 cm.
Distribution of Wax	Densely white waxy on lower surface, green or with light coat of wax above	Densely white waxy on both surfaces	Densely grayish waxy on both surfaces
Stigmata	Prominent on lower surface, absent above	Prominent on lower surface, absent or inconspicuous above	Prominent or inconspicuous on both surfaces
Inflorescence			
Branches			
Length	3-4 cm.	1.5-3 cm.	0.75-1.5 cm.
Width	1.0-1.5 mm.	1.5-2 mm.	1.5-2.5 mm.
Floral Bracts	Mostly folded backwards	Mostly horizontal or folded backwards	Mostly horizontal
Average number of flowers per cm. of branch	12-14	18-20	24-26
Flowers			
Length	4-6 mm.	4.0-4.5 mm.	4-5 mm.
Width	1.5 mm.	1.5-2.0 mm.	2.0-2.5 mm.
Distribution in Cuba	Confined to northeastern Camaguey	Confined to northeastern Camaguey	Reported from all six provinces



43. *Copernicia* × *Shaferi* at Cromo. Photo 490.144.

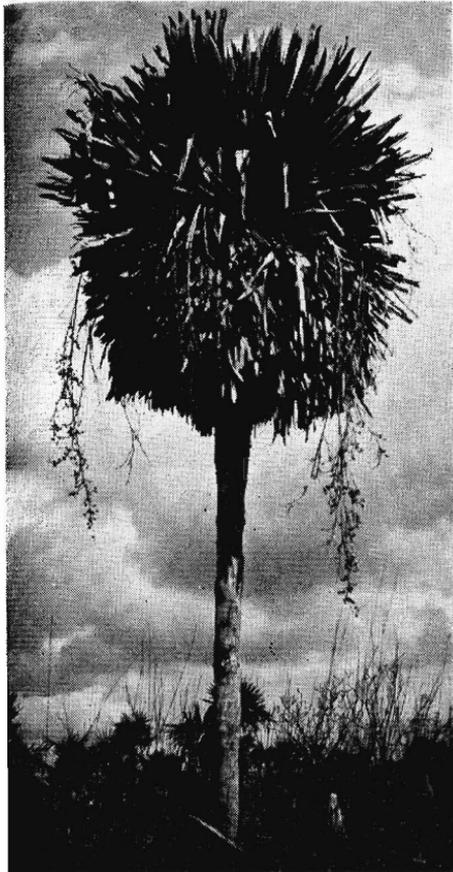
hybrid plants produce viable seeds; a number of seedlings and young plants were found growing near the bases of many of the mature trees. Furthermore, Mr. Eugene Kitzke of S. C. Johnson & Son has successfully germinated seeds from some of the hybrids at Racine, Wisconsin.

Although cytological preparations of root tips of plants of the three taxa listed above were made by the late Dr. John M. Beal of the University of Chicago, further study is necessary before definite conclusions can be reached. It

is hoped that pertinent information regarding the karyotypes of most of the species of *Copernicia* will be available by the time our revision of this genus is completed.

Apparently, the earliest report of possible hybridization between *C. Cowellii* and *C. hospita* was by N. L. Britton (*Journ. N.Y. Bot. Gard.* 13: 74-76, 1912); however, since no one has named or described this taxon in the literature, we do so here:

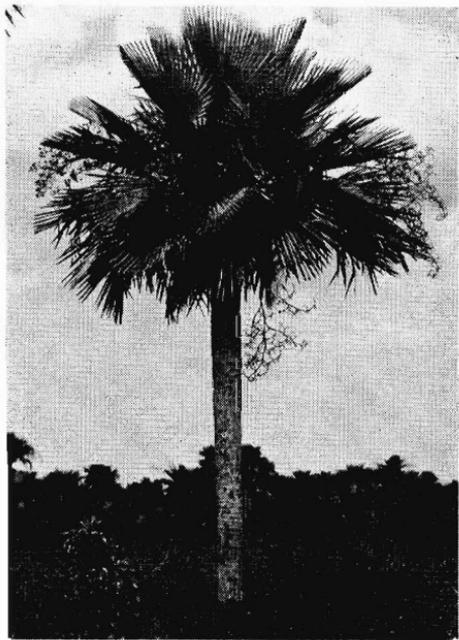
Copernicia × *Shaferi* Dahlgren & Glassman, hybr. nov.



44. *Copernicia Cowellii*. An unusually tall tree in savanna northeast of Minas. Photo 510.035.

Palma 2—3.5 m. alta. Lamina 55—90 cm. longa, utrinque ceram dense albam ferens, infra cum punctis rubris conspicuis notata, supra punctis vere aut sensim absentibus. Ramuli floriferi 1.5—3.0 cm. longi, 1.5—2.0 mm. lati. Flores 4.0—4.5 mm. longi, 1.5—2.0 mm. lati, bracteolis aequis aut retrorsim plicatis; modus 18—20 florum per 1 cm. ramuli. Alioquin *C. Cowellii* Britt. & Wils. et *C. hospita* Mart. similis.

Tree 2—3.5 m. tall. Leaf blade 55—90 cm. long, densely white waxy on both surfaces, with conspicuous red stigmata below; stigmata absent or inconspicuous above. Flowering branches



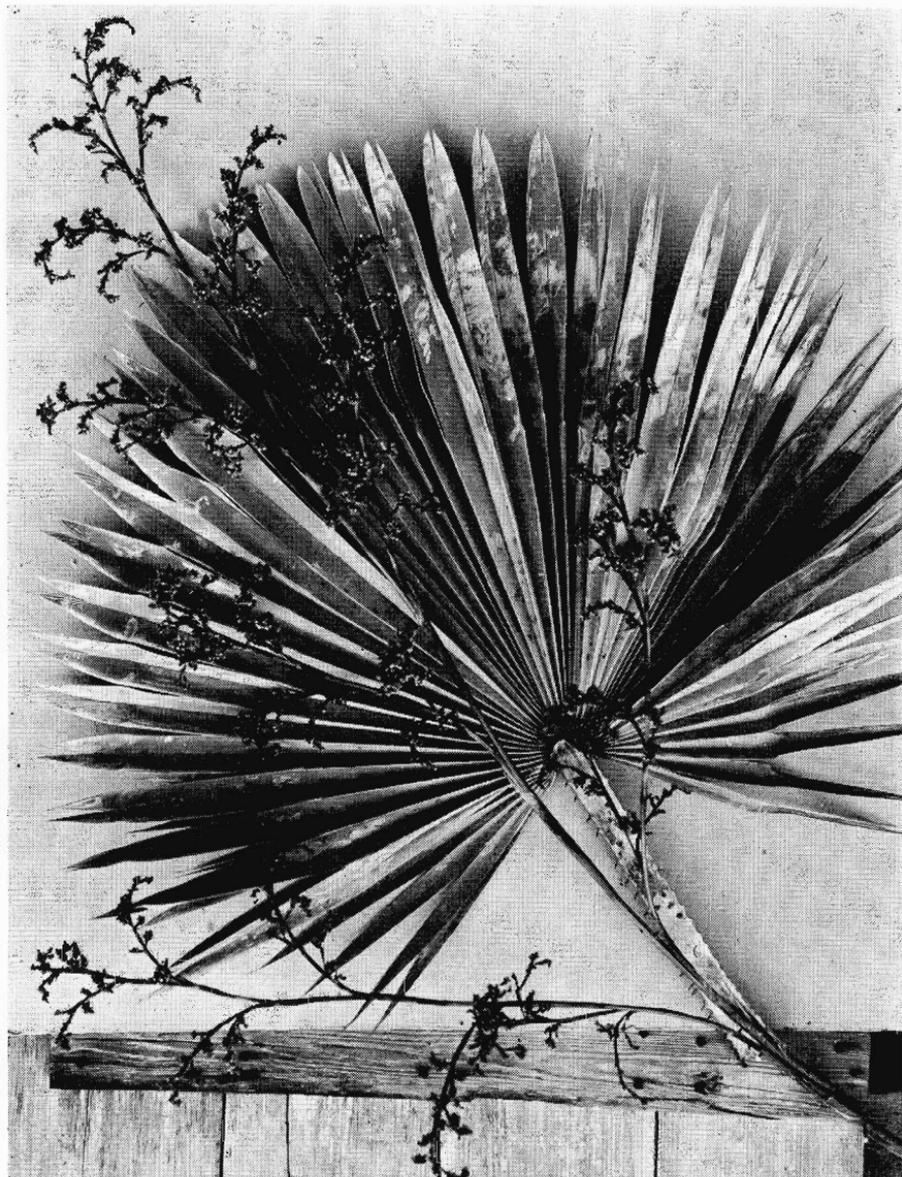
45. *Copernicia hospita* at Finca Los Cocos. Photo 480.226.

1.5—3.0 cm. long, 1.5—2.0 mm. wide. Flowers 4.0—4.5 mm. long, 1.5—2.0 mm. wide, bracteoles horizontal or folded backwards; each centimeter of branch with an average of 18—20 flowers. Otherwise with the characters of *C. Cowellii* and *C. hospita*.

We are describing this taxon in honor of the late J. A. Shafer who made many collecting trips in Cuba at about the same time as did N. L. Britton, Percy Wilson, and other members of the New York Botanical Garden in the early 1900's.

All specimens examined are deposited in the herbaria of the Chicago Natural History Museum and the University of Illinois, Navy Pier, Chicago.

CAMAGUEY: Camino al Cueva de Anton, March 4, 1953. *Dahlgren* 53/040 (TYPE—leaf and inflorescence in flower); 2 km. N.E. of Minas. Feb. 10, 1948, *Dahlgren & Cutler* 48/027; Camino Anton, April 3, 1950, *Dahlgren* 50/019, April 11, 1950, *Dahlgren &*



46. *Copernicia* × *Shaferi*. Specimen (Dahlgren 53/010) from Cromo showing waxy upper leaf surface and part of inflorescence.

Cutler 50/042; Villa Napoli schoolhouse, near Santayana, March 10, 1954, *Dahlgren & G. Moore* 54/017; Cromo, Feb. 8, 1951 and March 3, 1951, *Dahlgren & Macbride* 51/037 and 51/054, Feb. 6, 1953, *Dahlgren* 53/010, Feb. 17, 1955, *Dahlgren* 55/004, 55/005.

We are most grateful to S. C. Johnson & Son for the generous financial assistance which made the trips to Cuba possible; and to Dr. Francis Drouet of New Mexico Highlands University for valuable suggestions in the preparation of this paper.