



3. *Syagrus cearensis*. A Habit; B Section of leaf rachis showing inserted leaflets; C Leaf; D Inflorescence; E Primary branch; F Basal portion of primary branch showing staminate flowers with pedicels along side the larger pistillate flowers; G Receptive pistillate flower; H Staminate flower showing the narrowly lanceolate sepals; I Fruit covered with lepidote tomentum; J Cross-section of mature fruit showing a distinct central seed cavity. Habit, leaf and fruit drawn from MBC accession number 94654*E and inflorescence and flowers drawn fresh from 94654*Q. All scales are in 1 cm units except as marked. Drawn by Wes Jurgens.

4. Map showing distribution of *Syagrus cearensis*.



cross between *S. coronata* and this new clustering species, *S. cearensis*. While there were many similarities with *S. oleracea* that led botanists to identify it as such, it is sufficiently distinct (see Table 1) to distinguish it as its own species rather than a simple clustering form of *S. oleracea* or even another similar species, *Syagrus picrophylla* Barb. Rodr., which has also been confused with *S. oleracea*.

***Syagrus cearensis* Noblick, sp. nov.**

Palma caespitosa vel solitaria trunco conspicue articulo, foliis 2.3–3.5 m irregulariter pinnatis, foliolis centralibus ad 1 m longis 3.5–4 cm latis concoloribus. Inflorescentia ad ca. 1.2 m longa, rachillis ca. 35–45, floribus masculis ca. 12–21 × 5–7 mm, femineis 17–25 × 8–10 mm. Fructus lepidotus longior quam latus ca. 4 cm longus, endocarpio ad 5 mm crasso. Semen cavitatem ferens. Typus: Brazil, Ceará, Município de Pacatuba, Noblick *et al.* 4951 (Holotypus EAC; isotypi FTG, IPA, NY).

Unarmed, solitary or clustering palm in clusters of usually 2–4 stems growing in one plane, to multi-stemmed clusters. Trunk to 4–10 m tall and 10–18 cm diam., internodes 9–16 cm long at the base and shortening to 2–7 cm long towards the apex, producing a rough trunk with slightly stepped

nodes. Leaves 10–15 in crown, leaf sheath together with petiole ca. 90–100 cm long, sheathing leaf base 18 cm long or more, ca. 18 cm wide at the base, fibrous with papery membrane disintegrating between the fine principal warp fibers, persisting along the margins of the pseudopetiole (apparent petiole); true petiole absent or to 2 cm long and 4 cm wide by 2 cm thick, but often smaller, channeled adaxially, often with a raised central ridge, rounded abaxially, pseudopetiole (true petiole plus part of the sheath) ca. 40–50 cm long; rachis 2.3–3.2 m long, a fine light brown to grayish indument covering the abaxial side of the sheath, continuing up the abaxial side of the petiole and sometimes onto the lower portion of the leaf rachis, the upper parts of the leaf rachis becoming glabrous with age; leaflets medium green color becoming lighter when dried, concolorous, adaxial surface with prominently raised transverse veins when dried, leaflets ca. 100–130 along one side, irregularly distributed in loose clusters of 2–5 along rachis and inserted in divergent planes, ramenta absent, tomentum absent at leaflet insertion and along the abaxial midvein; basal leaflets 80–95 cm long by 2–2.5 cm wide, middle leaflets 68–100 cm long and 3–4 cm wide, apical leaflets 31 cm long and 0.4 cm wide, usually one lobe of the asymmetric tip attenuate, the other rounded, occasionally both rounded. Androgynous

Table 1. A comparison between *Syagrus cearensis* and two other closely related species, *S. oleracea* and *S. picrophylla*.

Character	<i>Syagrus oleracea</i>	<i>Syagrus picrophylla</i>	<i>Syagrus cearensis</i>
Habit	Solitary	Solitary	Solitary, but more frequently clusters, usually 2–4 or more
Petiole cross-section	Channeled	Channeled	Channeled but often with a raised mid- ridge on adult leaves
Leaflet margin (as seen in cross-section)	Inconspicuous submarginal vein	Inconspicuous submarginal vein	Conspicuous adjacent submarginal vein
Leaf margin (as seen in cross-section)	Neither notched nor swollen	Neither notched nor swollen	Notched or swollen adaxially
Peduncular bract indument	Glabrous	Glabrous	Often with a fine waxy lepidote
Primary branch subtending bract	Laterally broadened, truncate	Laterally broadened, truncate	Deltoid or sometimes absent
Basal staminate flowers	Sessile	Sessile to rarely short pedicellate	Often short pedicellate
Staminate sepal shape	Short deltoid	Short deltoid	Linear to lanceolate
Pistillate sepal and petal indument	Glabrous	Glabrous	Basal portion often with waxy lepidote, especially on petals
Pistil shape	Cone-like	Cone-like	Ovoid
Staminode length (mm)	1–2	1–2	>3
Staminode shape	Irregular	Irregular	6-dentate
Fruit indument	Apically lepidote	Apically to upper half densely lepidote	Usually entire fruit densely lepidote
Cupule ring length (mm)	2–3	1–2	3 or more
Central seed cavity	None	None	Large, distinct

inflorescences interfoliar, 45–85 cm from the first basal primary branch to the apex; prophyll ca. 30–45 cm long; peduncular bract woody, sulcate, exterior covered with a thin indumentum, ca. 102–115 cm or more long including a beak 4–11 cm long, expanded or inflated portion 50–74 cm long, 13–16 cm diam. and a 14–26 cm perimeter and 1–3 mm thickness; peduncle ca. 40–80 cm long, somewhat flattened in cross-section, 2.5–3 × 1.5–2.5 cm diam., sparsely lepidote; rachis 33–60 cm long, primary branches 35–45, glabrous, 9–17 cm long at the apex, 30–50 (–106) cm at the base, 11–13 mm diam. at the base and 2–3 mm diameter

at the tip, each primary branch, especially the lower ones, subtended by a deltoid rachis bract ca. 5 mm long, pistillate portion 12–16 cm long with 10–22 pistillate flowers or fruits per primary branch, staminate portion 16–20 cm long. Staminate flowers yellow, arranged in triads with pistillate flowers on the lower portion or in dyads or singly on the upper portion of the primary

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5. *Syagrus cearensis* in its natural habitat in the mountains near Pacatuba, Ceará.



branch, 12–21 × 5–7 mm, sepals and petals 3; sepals (3–)5–6 × 0.5–1 mm, strongly keeled and slightly connate at the base; petals valvate, 12–20 × 4–5 mm with acute tips, nerves indistinct; stamens 6, 6–8 mm long, anthers 4–6 mm long, filaments 2 mm long; pistillode trifold and less than 0.5 mm long. Pistillate flowers oblong and pyramidal, usually slightly lepidote on the basal portion, 17–25 × 8–10 mm; sepals 3, imbricate, 14–25 × 7–10 mm wide; petals 3, unnerved to slightly nerved, imbricate at the base but (upper 5–7 mm) valvate at the tips, 11–14 × 6–8 mm; staminodal ring about 3 mm high, 6-dentate; pistil lepidote on upper portion, glabrous on lower behind the staminodal ring, 10 × 6 mm, stigmas 3, 2 mm long. Fruit light orange when mature, color often obscured by a thin dark brown indument, about as long as wide, 3.5–4.0(–5) cm long and 3–4 cm diam. with a 7–10 mm thick mesocarp and 3–5 mm thick endocarp, endocarp ca. 4 × 2.3 cm. Seed ellipsoid, ca. 1.8 × 1.2 cm, and with a substantial central cavity ca. 6 mm diam. (Fig. 3).

COMMON NAME: *catolé* or *coco babão* (*babão* translates as mucus or slobber and refers to the slimy juices of the mesocarp).

ETYMOLOGY: The specific epithet honors one of the states to which the palm is native, Ceará, Brazil.

DISTRIBUTION AND ECOLOGY: Brazil, locally common in mountainous areas and seasonal forests in the states of Ceará, Pernambuco, Paraíba, and Alagoas. Growing at the base of the mountains or in pastures at an altitude of about 100–750 m above sea level (Fig. 4).

PHENOLOGY: Flowering and fruiting probably throughout the year, but collected in flower and fruit during the months of July to September.

SPECIMENS EXAMINED: BRAZIL. Alagoas. União dos Palmares, 19 Nov 1985, *R. P. Lyra-Lemos & A. I. L. Pinheiro 1049* (PEUFR); 19 Nov 1985, *R. P. Lyra-Lemos & A. I. L. Pinheiro 1050* (PEUFR); São José da Lage, near AL-110, 17 Oct 1986, *R. P. Lyra-Lemos & G.L. Esteves 1240* (PEUFR). Ceará. 1929, *Dahlgren s.n.* (F-613592); Forteleza region, near Mejecana, 1935, *Dahlgren s.n.* (F-620753a); Maranguape, 1940 *Dahlgren s.n.* (F-619724); Maranguape, Serra da Pacatuba (close to Forteleza), top and bottom of the Serra, *Luiz Antonio F. Matthes s.n.* 1993 (FTG);

Pacatuba, Serra de Aratanha, 29 km S. of Forteleza, 3°58'S, 38°32'W, 600–700 m, 12 Aug 1994, *Noblick et al. 4951* (Holotype, EAC; isotypes IPA, FTG, NY); Araçoiaba, Olho d'Água, 8 km N of Araçoiaba, 4°15'S, 39°00'W, 13 Aug 1994, *Noblick et al. 4953* (FTG, IPA). Paraíba. Santa Rita, 20 Aug 1962, *Sérgio Tavares 960* (UFP); Conde, 22 km N of Goiana, Pernambuco on BR-101, 14 km N of the Paraíba/Pernambuco state border, 7°22'40.5"S, 34°57'26.6"W, 1 Jul 1997 *L. R. Noblick & J. T. de Medeiros-Costa 5132* (IPA). Pernambuco. Tapera, 1929, *B. Pickel 1208* (IPA); Pombos, 1966, *Medeiros-Costa 66-0003* (IPA); Goiana, 1966, *Medeiros-Costa 66-0009* (IPA); Triunfo, 27 Mar 1970, *Medeiros-Costa 133* (IPA); Pombos, 1969, *Glassman & Costa 8701* (F); 2 km W of Neves, associated with *S. coronata* and *S. x costae*, 1969, *Glassman & Costa 8706* (F).

USES: This palm has great ornamental potential. The especially attractive character is its tendency to grow in pairs or as twins (Fig. 1 & 5).

In summary, *Syagrus cearensis* merits recognition. Some of the distinct attributes of this species are the common clustering habit with the strong tendency towards twins, fruit nearly as long as wide, evenly covered with a fine dark brown lepidote indument, presence of deltoid rachis bracts, sepals of staminate flowers usually narrowly linear and strongly keeled and a rather large distinct interior seed cavity. I am unaware of any other species of *Syagrus* with such a large seed cavity. Because of its predisposition to form twins, this species is a great ornamental.

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LITERATURE CITED

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