Syagrus stenopetala, a Good Species

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1. Clustering stems of *Syagrus stenopetala*.

The distinctness of *Syagrus stenopetala* is confirmed.

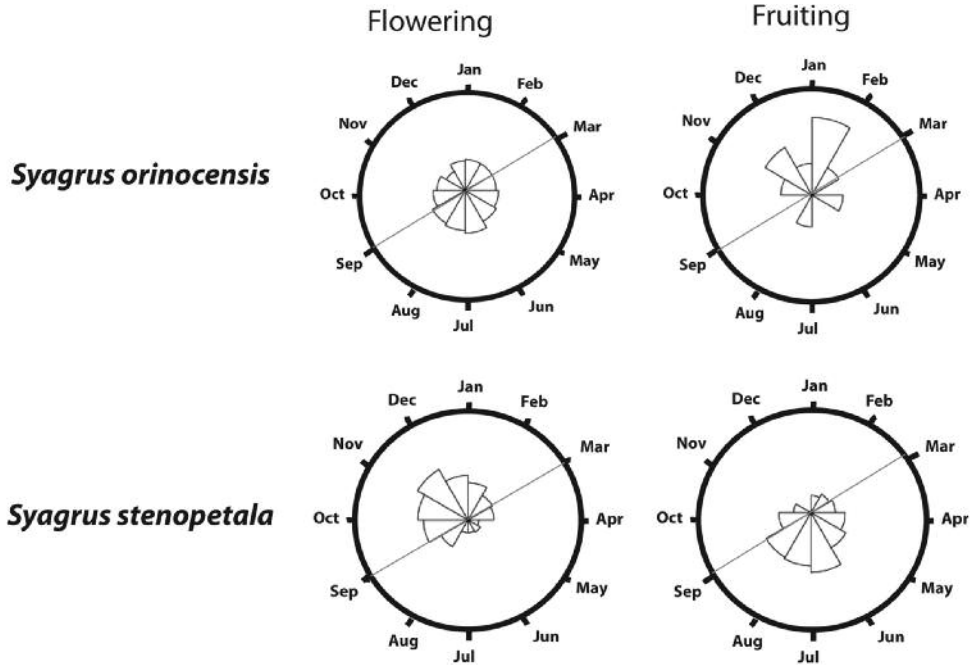
In 1969, Dr Sidney Glassman placed *Syagrus stenopetala* Burret in synonomy with *S. orinocensis* (Spruce) Burret (Glassman 1969) and continued to propose this in his 1987 revision of *Syagrus* (Glassman 1987), even though H.E. Moore had suggested to him that the populations near Carababo, Venezuela (a locality of *S. stenopetala*), may represent a distinct taxon. Glassman (1969) originally sank the species because "The types resemble each

2. Solitary stem of *Syagrus orinocensis* showing a prominently swollen base both on this tree and on the one just behind and to the right.

other in the pinnae being arranged in loose clusters of 2–3 and 2.0–2.4 cm wide." He wrote that the fruits of *S. stenopetala* appeared rather long (3.4–3.7 cm) and relatively narrow (1.3–1.5 cm in diameter). Then he commented that the fruit was probably immature, while failing to notice that these immature fruits were longer than the normal upper limits (3.4 cm) of the mature *S. orinocensis* fruits that he described. Nevertheless, other palm taxonomists initially accepted Glassman's change (Henderson et al. 1995, Govaerts & Dransfield 2005).

In 1991, as I worked on a morphological and anatomical analysis of *Syagrus* (Noblick et al. in press), I noted that the dried inflorescences, flowers and fruit of *S. stenopetala* appeared to be more robust than those of *S. orinocensis* suggesting again that the two might be distinct and so I separated them. After personally observing and collecting both in the wild in 1994, I became convinced that they were different. Fred Stauffer independently came to the same conclusion and defended the distinctiveness of *S. stenopetala* (Stauffer 1996). He justified the two species with a detailed table comparing and contrasting some 28 differences that he found. Among some of the differences that Stauffer found separating *S. stenopetala* from *S. orinocensis* are clustering (Fig. 1) vs. solitary stems (Fig. 2), stem hardly thickened at the base vs. prominently thickened at the base, 13–17 leaves in the crown vs. 10–12 leaves, longer peduncular bract (140–150 cm vs. 87–90 cm), longer

3. Flowering and fruiting events for *Syagrus orinocensis* and *S. stenopetala* showing their nearly opposite flowering and fruiting times. Gray line divides spring-summer from fall-winter seasons.



rachillae (38–40 cm vs. 24–30 cm) and a larger number of rachillae (65–70 vs. 40–50). The two also grow in very different habitats, with *S. stenopetala* growing near the northern, dry, coastal mountains of Venezuela in semi-deciduous forests or dry spiny savannas, while *S. orinocensis* grows in the southern, wet, Amazonian region of Venezuela near the Orinoco River, growing on rocky granitic outcrops. Today, the name has gradually regained acceptance (Hokche et al. 2008, Govaerts et al. 2012).

In the wild the differences in size and habit are distinctive, but in cultivation sometimes these differences blur with *S. orinocensis* occasionally clustering (under stress) and *S. stenopetala* not growing as robustly and even occasionally growing with a single stem.

Recently, I became aware of still another difference between the two species. Montgomery Botanical Center has been collecting phenological data (flowering and fruiting cycles) on these two species since 1999. While working on another paper, I discovered that these two species have nearly opposite phenologies. More specifically, *S. stenopetala* flowers mostly in the fall and winter and fruits in the spring and summer, while *S. orinocensis* fruits mostly in the fall and winter and flowers slight more in the spring and summer (Fig. 3). Reinstating *S. stenopetala* was the right thing to do and has now been further verified by a decade-worth of phenological data.

Literature Cited

Glassman, S.F. 1969. Studies in the palm genus *Syagrus* Mart. II. Fieldiana Botany 32(8): 77–103.

Glassman, S.F. 1987. Revisions of the palm genus *Syagrus* Mart. and other selected genera in the *Cocos* alliance. Illinois Biological Monographs 56: 1–230.

Govaerts, R. and J. Dransfield. 2005. World Checklist of Palms. Royal Botanic Gardens, Kew pp. 223.

Govaerts, R., J. Dransfield, S. Zona, D.R. Hodel and A. Henderson. 2012. World Checklist of Arecaceae. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; http://apps.kew.org/wcsp/ Retrieved 29 Oct 2012.

Henderson, A., G. Galeano and R. Bernal. 1995. A Field Guide to the Palms of the Americas. Princeton University Press, Princeton, New Jersey.

Hokche, O., P.E. Berry and O. Huber (Eds.). 2008. Nuevo Catálogo de la Flora Vascular de Venezuela: 1–859. Fundación Instituto Botánico de Venezuela.

Noblick, L.R., W. Hahn and M.P. Griffith. (accepted for publication in 2012). Structural cladistic study of Cocoseae, subtribe Attaleinae (Arecaceae): Evaluating taxonomic limits in Attaleinae and the neotropical genus *Syagrus*. Brittonia (in press).

Stauffer, F.W. 1996. Contribución al estudio de *Syagrus stenopetala* Burret (Arecaceae, Arecoideae, Cocoeae: Butiinae). Una palma endémica de Venezuela. Acta Bot. Venez. 19(2): 25–38.