

HORTUS EXOTICUS

Beiträge zur Freilandkultur Winterharter Exoten in Mitteleuropa



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Alle Winterhärtezonen im Hortus Exoticus beziehen sich auf die mittleren langjährigen Temperaturminima, nach Heinze und Schreiber (1984), siehe auch Hortus Exot. 2006/2: 33–34.

Zone 6a: –23,3 bis –20,6 °C

Zone 6b: –20,5 bis –17,8 °C

Zone 7a: –17,7 bis –15,0 °C

Zone 7b: –14,9 bis –12,3 °C

Zone 8a: –12,2 bis –9,5 °C

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2. Erwünscht sind Beiträge, die sich mit dem Thema "winterharte Exoten" in Mitteleuropa beschäftigen oder themenverwandt sind. Sprache möglichst Deutsch oder Englisch, Abstract in Englisch und (nicht mehr als sechs) Keywords, alphabetisch geordnet. Möglichst maximal acht Seiten Text. Gemäß Duden hinter Interpunktionen - außer bei Datumsangaben - bitte stets ein Leerzeichen.

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5. Für unverlangt eingesandte Manuskripte besteht kein Abdruck- und Rückgaberecht.

Umschlagphoto: Blütenstand von *Sabal minor* (Jacq.) Pers., Mike J. Papay / Sergio Quercellini

Dieses Werk ist urheberrechtlich in allen seinen Teilen geschützt. Jede Verwertung außerhalb der engen Grenzen des Urheberrechtsgesetzes ist ohne Zustimmung des Verlages unzulässig und strafbar. Dies gilt insbesondere für Vervielfältigungen, Übersetzungen und Mikroverfilmungen, sowie die Verarbeitung und Speicherung in elektronischen Medien oder auf optischen Speichern.

***Sabal minor* ‘Blountstown Dwarf’**

By Sergio Quercellini

Abstract. The genus *Sabal* Adan. comprises 15 species among which *Sabal minor* (Jacq.) Pers. shows a great number of cultivars. After some considerations of this genus, *S. minor* ‘Blountstown Dwarf’ is treated in detail with reference to the remarkable differences from the typical *S. minor*. - With 9 figures.

Keywords: Corypheeae - Northern Florida - *Sabal minor* - taxonomy

The genus *Sabal* Adan. is spread in the American continent and ranges from the southeastern United States to Venezuela through the Caribbean Islands and Central America. The meaning of the name *Sabal* was not given by Adanson.

The first monograph on this genus was written by Beccari in 1907 containing 18 species inclusive eight new taxa. In 1934 Bailey made a revision of the genus recognizing 22 species. Later, in 1944, Bailey published a further monograph on *Sabal* increasing the number up to 26. Finally, in 1990, Zona published the most recent monograph on the genus reducing the number to 15:

- *Sabal etonia* Swingle, *S. miamensis* Zona, *S. minor*;
- *Sabal causiarum* (Cook) Becc., *S. domingensis* Becc.,



Fig. 1 Infructescencia of a typical *Sabal minor*

S. maritima (Kunth) Burret;
- *Sabal mauritiiformis* (Karst.) Griseb. & Wendl., *S. yapa* Wright ex Becc.;
- *Sabal uresana* Trel.;
- *Sabal pumos* (Kunth) Burret, *S. rosei* (Cook) Becc.;
- *Sabal bermudana* Bailey;
- *Sabal guatemalensis* Becc., *S. mexicana* Mart.;
- *Sabal palmetto* (Walter) Lodd. ex Schult.

The species above have been grouped on the base of some common characters.

In 1991 the Mexican botanist H. Quero described a new species called *Sabal gretheriae* Quero, spread in the State of Quintana Roo, Yucatan, Mexico, very similar to *S. mexicana*, differing from it in having larger fruits. There are, however, some doubts whether it is a species or an ecological modification because of its remarkable similarity to *S. mexicana*.

The flowers of all *Sabal* species are hermaphrodite and therefore it is difficult to obtain hybrids among them in comparison with species bearing bisexual flowers (Goldman et al. 2011). Nevertheless some cultivars are reported as natural hybrids, namely:

-*Sabal* ‘Birmingham’. The first specimen was found in a private garden in the town of Birmingham, Alabama, but it was grown from seeds from California. It is a very cold hardy cultivar that grows extremely slow and forms a trunk. When it matures it resembles a small *S. bermudana*.

- *Sabal* ‘Brazoria’. A very limited population of this palm grows in an area of about 24 hectares in the Brazoria County, Texas, together with typical *S. minor* specimens. It is an aerial trunked hybrid, the leaves are costapalmate and large, the fruits are small. After a molecular analysis performed recently using samples of this palm (see the previous quotation), it seems that its parents are very probably *S. minor* and *S. palmetto*.

- *Sabal* ‘Riverside’. Found in Riverside, California. It has been reported to be the fastest growing *Sabal* species. Because of its very large fronds it is considered a hybrid between *S. bermudana* and *S. domingensis*.



Fig. 2 *Sabal minor* 'Blountstown Dwarf' with an inflorescence-stalk during anthesis, photo Mike J. Papay

All *Sabal* species show two unequivocal characters in common:

- thornless petioles;
- presence of the costa on the lamina. It can be less or more remarkable depending on the single species.

Among the 15 species above, three have a subterranean trunk: *Sabal etonia*, *S. miamensis* and *S. minor*.



Fig. 3 Flowering *Sabal minor* 'Blountstown Dwarf', photo Mike J. Papay

Considering *S. minor*, it is important to stress that it can be distinguished from the other two subterranean trunked ones by the following characters:

- a) the inflorescence, branched into two orders, is erect and commonly it reaches beyond the leaves (Fig. 1);
- b) the leaves are poorly costapalmate with a rounded shape ranging from about 150° up to 270°.

Many *Sabal minor* cultivars were reported over all during the last 30 years, as there are:

- *Sabal minor* 'Bear Creek', growing in the Kendall County Texas. The leaflets are a bit narrower and the inflorescence is very upright and taller than that of the typical *S. minor* species.
- *S. minor* 'Castor Dwarf', growing near the town of Castor in Bienville Parish, Louisiana, has very narrow leaf segments.
- *S. minor* 'Emerald Island Giant' is spread along the coast of the North Carolina near Emerald Island. It is much taller and shows huge leaves.
- *S. minor* 'Mc Curtain County', growing in the Mc Curtain County, Oklahoma. Exceptionally cold hardy. Seedlings of this variety survived at -31 °C.
- *S. minor* 'Oriental Giant', growing near the town of Oriental, Pamlico County, North Carolina. Really a giant cultivar, up to 2,5 m tall.
- *S. minor* 'Woodville', found near Woodville, Mississippi, was reported as exceptionally large.
- *S. minor* 'Louisiana'. It grows only in few swampy areas of Louisiana and Texas rarely among the typical *S. minor*. It develops a short trunk, the leaves are more glaucous and a little more costapalmate.
- *S. minor* 'Tamaulipas' was discovered in a subtropical site of the Tamaulipas State, Northern Mexico. It is said to grow three times faster than the species, with

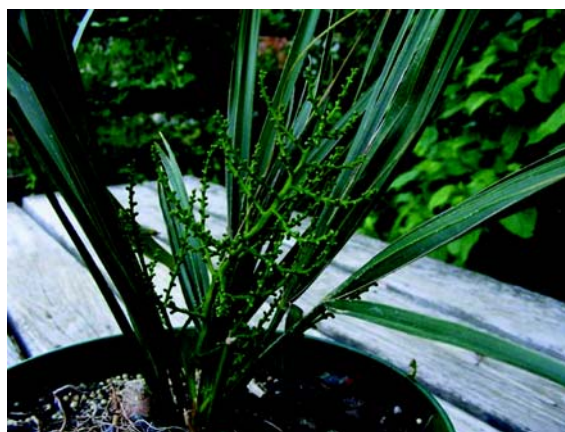


Fig. 4 Detail of the inflorescence during anthesis, photo Mike J. Papay

larger leaves and seeds.

- *S. minor* 'Blountstown Dwarf', found in Blountstown, Florida, west of Tallahassee. Reported as a very dwarf form (Fig. 2 and 3).

All the cultivars above show, more or less, the typical *S. minor* characters (a and b) except the 'Blountstown Dwarf'. Ramp and Thien (1995) reported: "A population of unusually small individuals was observed on the Apalachicola River flood plain near Blountstown, Florida. Here the largest reproductively mature individuals scarcely reached 40 cm in height". Looking at some pictures of *S. minor* 'Blountstown Dwarf' presented to the author by M. J. Papay, one could add that this specimen:

- has a short inflorescence (20–25 cm), much shorter than the leaves, intrafoliar (Fig. 4 and 5);
- It has narrow leaves, rounded only to 40°–45°. Furthermore, each leaf shows two or more segments joined together (Fig. 7).



Fig. 5 Detail of the flowering inflorescence, photo Mike J. Papay

If we compare the fruit size of the typical *Sabal minor* with that of other *Sabal* species, we can easily see that they are absolutely the smallest, about 8.5–9 mm in diameter (Beccari 1907). On Nov. 22th, 2011, the author received from M. J. Papay five spherical fruits from the first inflorescence of a 'Blountstown Dwarf' specimen. The fruits showed a remarkable smallness, a feature that sometimes occurs when a palm pushes out its first inflorescence (Fig. 7). 40 days after sowing all the five seeds germinated with typical characters of the *Sabal* genus, that is remote-ligular germination with an entire and elongated eophyll (Uhl & Dransfield 1987, fig. 8).



Fig. 6 Detail of the hermaphrodite flowers, same plant as figure 5, photo Mike J. Papay

The seeds are approximately 2/3 diameter of the *S. minor* seed (Fig. 9).

Though there is no molecular analysis available for *Sabal minor* 'Blountstown Dwarf', it belongs to the genus *Sabal* without doubt. In particular the flowers are typical *Sabal* flowers with six petals, six stamens, each corresponding to every petal, three joined carpels showing a head-like stigma at the end of the three short styles. Furthermore, as far as it is possible to observe in the picture (Fig. 6), the flowers are hermaphrodite showing regular male (filaments and anthers) and female (carpels, styles, stigmas) parts. This is also confirmed by the fruits on the inflorescence (Fig. 7) of Mike J. Papay's specimen because during its flowering there was no other blooming *Sabal* in a range of at least 15 miles (Mike J. Papay, pers. comm.). The flowers were self-pollinated as it happens in the genus *Sabal*.

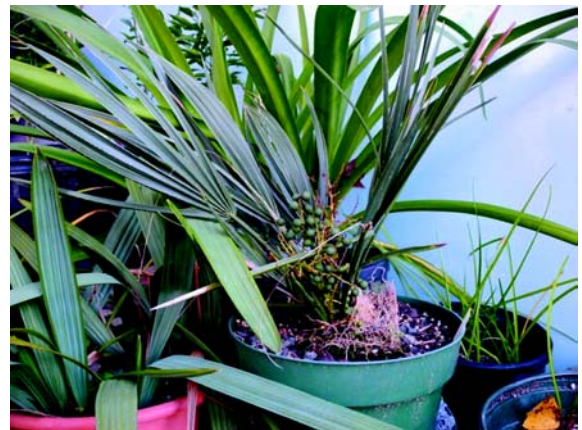


Fig. 7 Detail of the leaves and of the infructescencia, photo Mike J. Papay

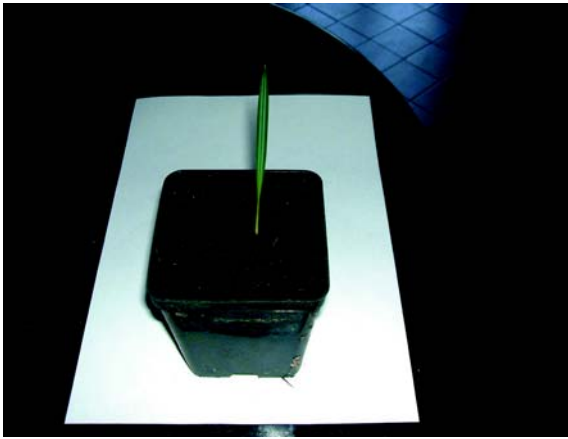


Fig. 8 *Sabal minor* 'Blountstown Dwarf' seedling

This variant should be sought after in cultivation by its size as it could be grown also in small gardens. Furthermore, even if it is spread in the wild in Florida, the *Sabal minor* 'Blountstown Dwarf' proved to be rather cold hardy. Mike J. Papay reported to the author that the specimen in his garden endured -14°C without damages and he expects it can survive at -18°C with leaf damages. About the growth, it can be considered as slow as *S. minor*.

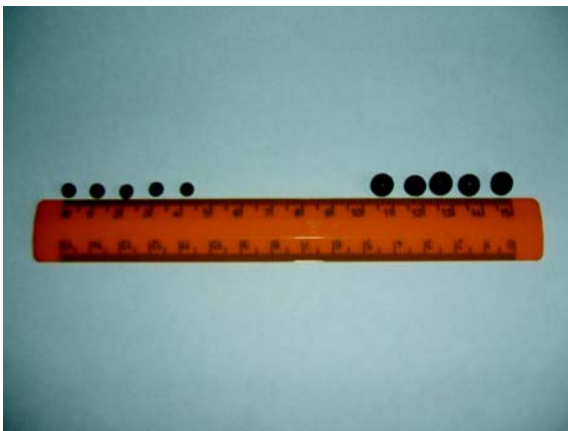


Fig. 9 Comparison between *S. minor* 'Blountstown Dwarf' seeds (on left) and typical *S. minor* ones (on right), scale is 20 centimeter

Further detailed observations in the field and on cultivated plants are needed for this interesting form also in order to evaluate the remarkable differences from the typical *S. minor*. Is it merely a variety or a possible new species?

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