

*Principes*, 40(1), 1996, pp. 24–26

## The Red Sea *Hyphaene* of Saudi Arabia

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Hot, baking deserts, nomadic bedouin with camel caravans and sporadic oases dotted with date palms are typical stereotypes that characterize our awareness of Saudi Arabia. These desert scenes from the past still occasionally permeate contemporary Saudi Arabia.

Fortunately for the palm enthusiast, exotic palm trees occupy certain geographical pockets of Saudi Arabia with greater frequency than the apparently ubiquitous date palm. Recently, I travelled to the Red Sea town of Shuqayq and documented *Hyphaene* there (Fig. 1). Even among this unusual genus of multi-trunked palms, the variety that is found along the Red Sea and in neighboring “wadis,” i.e., valleys, is a particularly alluring species (Fig. 2).

The excursion to the Red Sea is as much an adventure as documenting the *Hyphaene*. The point of embarkation to the Red Sea was Khamis Mushayt, once reputed as a trading terminal along the Frankincense Road. The distance from Khamis Mushayt to Shuqayq is only 90 miles. The diversity of landscape and vegetation en route, however, is astonishing. Khamis Mushayt is located at 7,000 feet and Shuqayq is at sea level. In contrast to coastal Saudi Arabia, Khamis Mushayt resembles the American Southwest. Weathered granite buttes and plateaus abound in the area with nearby mountain peaks soaring to 9,500 feet.

A dramatic change in scenery occurs not far outside Khamis. After a brief placid drive through the countryside, the road suddenly dives serpentine-fashion from the precipice of an escarpment. The journey continues to be a breathtaking experience until the road reaches sea level. Along the way, sheer canyon walls give way to wide valleys. Road and bridge construction crews wage an ongoing attempt to repair the damage caused by rogue flash floods. Towards the bottom of the escarpment, meadows appear. Occasional banana plantations offer passersby unexpected tropical viewing

pleasures in this climatic anomaly. The geographical and climatic variety provide enough diversity to sustain one for the remaining barren drive to Shuqayq.

The typically hum-drum drive from Shuqayq to the remote beach area is now punctuated by sand drifts that present themselves as respectable road barriers. This is the season for the “Kama-seen” winds which originate in eastern Africa. These formidable winds wreak havoc from the western Saudi coast to Yemen. It is common to see brown skies and then have a downpour of mud-rain which results from airborne dust mixing with humid coastal air. The early morning hours, however, provide excellent opportunities to view the *Hyphaene* (Figs. 3–5).

*Hyphaene* sp. extend for miles and thrive in this Red Sea region. The coastal *Hyphaene* are extremely salt tolerant and maintain lush fronds (Fig. 6). With ready access to saline water sources the adult palms are usually encircled by healthy progeny. The palm foliage is so thick, that close inspection is necessary to detect the bifurcated trunks.

The *Hyphaene* found in the wadis, on the other hand, often appear as solitary specimens with few progeny surrounding them. They are self-cleaning and leave a stark silhouette of their bare multi-stemmed trunks against the skyline, especially the ones which have reached a stately height of 25 feet or more.

The fronds of this *Hyphaene* sp. are a glossy green. The palm has orange-green petioles. These petioles are well-armored with black razor-sharp thorns that can tax the motivation of the most ardent seed collector.

The mature fruit of this *Hyphaene* sp. have a muted black hue. They are usually 2–3½ inches in length and 2–2½ inches in diameter. Mature fruit often weigh four ounces (Fig. 7).

A primary factor in selecting fruit with viable



1. Mature *Hyphaene* in the background with juveniles in the foreground. 2. A 20' high *Hyphaene*, a nice specimen palm. 3. A group of healthy, thick-trunked individuals. 4. A number of *Hyphaene* enjoying close proximity.

seed seems to be the degree to which the spongy husk surrounding the hard seed case is impregnated with oils. The less mature fruit or older dehydrated ones lack a high oil content and are dry. The husks of the mature fruit with viable seed are impregnated with oils to such a degree that cutting away the pliable husk results in sticky pruning blades. Removing the husk from the seed releases the fragrant gingerbread aroma that has aptly earned this palm its nickname of the "gingerbread" palm.

Saudi Arabia hosts a surprising diversity of palms. *Hyphaene* are certainly flourishing along the coastal area near Shuqayq and in outlying

wadis. These exotic and robust Red Sea *Hyphaene* sp. are attractive specimen palms that would certainly enhance the reserve of *Hyphaene* that are currently available to palm enthusiasts.

*(Editorial Comment:*

*Hyphaene* is a very confusing genus. The main problem is that many of the species described in the past were based on fruits alone—in some instances, fruits imported into Europe as samples of vegetable ivory for the button trade. Botanists such as Beccari, without seeing the plants in the field, were faced with a difficult problem—how to provide reference points for doum palms, when all that were available were separate fruits. Fortunately Beccari described his new species in minute



5. A juvenile specimen. 6. A group of Red Sea *Hyphaene*. 7. A fruit and seed with tape to show size.

detail and discussed them at length. Furthermore, nearly all his types, and a few others too, are still to be found in the Herbarium of the Istituto Botanico in Firenze, Italy. So, armed with some understanding of the variation that occurs in the wild, the taxonomist can then interpret the type collections. When I prepared the account of *Hyphaene* for the Flora of Tropical East Africa, I was fortunate to spend some time in Kenya and Tanzania. This allowed me to see that one could sometimes find up to six "species" of *Hyphaene* in the same infructescence—in other words, fruits that matched six different type specimens could be found on the same tree. Fruit shape varies a great deal, and so species based on fruit shape are very often merely variants of a previously described species.

The nomenclatural jungle of over 40 odd names in the East African region could be reduced to a mere four names, which I believe are the names for four "good" species. Unfortunately the doum palms of the Horn of Africa and the Red Sea coast of Arabia remain poorly known, and so I do not feel confident to make the synonymies that are undoubtedly necessary in this region and I am thus reluctant to name the beautiful doum palms in Michael Otiér's article. The fruits appear to be unlike those of true *H. thebaica* and more like those of Indian *H. dichotoma*. What is needed is a good survey of doum palms throughout the region.

JOHN DRANSFIELD

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