

3. *Hyphaene sinaitica* Furtado spec. nov.

H. thebaica sec. Mart. Hist. Palm. 3: 22 (1849); Hart. Fauna & Flora of Sina, Petra & Wady 'Arabah': 9, 28 & 111 (1891); Zohary, Arb. Flor. Israel & Transj. in Imp. For. Inst., Oxford, Paper 26: 12 (1951); Tomlinson, Anat. Mon. 2 Palmae: 158 (1961) omino pro parte. **Figure 3.**

H. coriacea ? sec. Busse in Karst. et Schenck, Veget. Bildr. 5 ser. fasc 7 t.44 (1907) quoad palmas austro arabicas.

Ab *H. dichotoma*, cui affinisissima, fructibus dimidio minoribus, ambitu irregulariter obovato-oblongis et in sectione transversa tetragonoideis, vel apicem versus compressis fere bifacialibus ambitu obovatis, cum epidermide fragili partim discolore lineata, paulo rimulosa, et sarcocarpio osseoso multo tenuiore differt.

Caulis dichotomus. Fructus circa 5 cm. altus, 4.5 cm. latus, 4–4.5 cm. crassus, nitidus, atro-bodius, obovato-oblongus, ventre obscure carinatus et plus minusve porcatus, interdum apicem versus sensim angustatus, sectione transversa tetragonoideus vel tetragonoideo-bifacialis, cum epidermide partim fracta et retiforme marmorata aut delapsa, etiam profunde rimulosa. *Sarcocarpium* in parte fibroso 6–8 mm. crassum; in parte osseosa circa 2 mm. orassum. *Putamen* ovatum, basi oblique truncatum, circa 3 cm. altum, 2.5 cm. in diam. cum pariete 1.5–2 mm. crasso. *Albumen* conforme, cum pariete 5–7 mm. crasso; embryo apicalis.

PALESTINA: Wadi Tabba, ad versus meridiem a Eileth (Goldring — sn. 15–5.69, holotypus, K).

This palm was first reported by Hart (1891) from Aqaba, but Zohary (1951) found the species near the road between Aqaba and Um Rashrash. Later he noted several trees of different ages at 8 km north of Aqaba and remarked: "This is the northernmost station of a tree so widely distributed in tropical regions. Here it grows at approximately sea-level, on alluvial, somewhat saline soil and ripens normal fruits."

Here again there is a faint echo of Haeckel's view regarding mercurial changeability of the characters of *H. thebaica* in response to climatic conditions, although the climate in Aqaba could not have been very much different from that in some parts of Lower Egypt where the species has a restricted distribution. The fruit of *H. thebaica* is always conspicuously carinate, broadly truncate at the base and much narrowed towards the apex. Its epidermis is light brown or spadiceous and remains intact. In *H. sinaitica*, on the other hand, the fruit is obovate and obscurely carinate, with its epidermis dark brown and partly discoloured in lines so as to give it a net-like appearance. In addition it cracks in parts rather deeply in dry sarcocarp.

Martius, relying on the reports of several travellers, remarked that *H. thebaica* occurred in several parts of Arabia in Sinai, along the West coast Arabia (Yambu, Medina, etc.) and also in Oman. Blatter recorded the species from Shaik Othman in Aden, and Busse suspected the species from South Arabia to be *H. coriacea*.

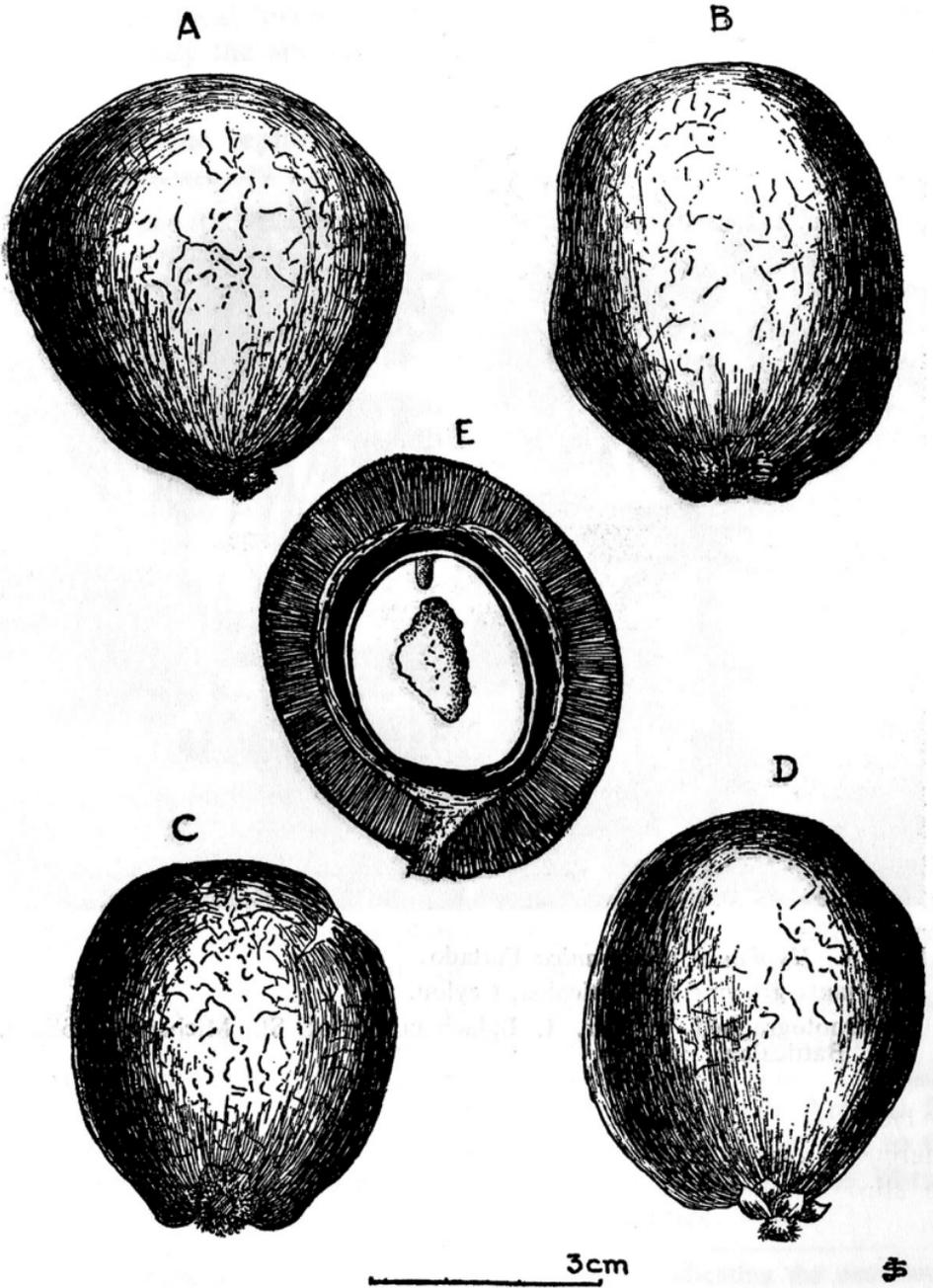


Fig. 3. *Hyphaene sinaitica* Furtado (ex collectione fructuum holotypica)
 Fructus diversi, forma variabiles, omnes obovoidei, basin versus tetragonoidei, apicem versus plus minusve plerumque compressi, parte compressa nunc dorso, nunc ventre, nunc latere, vel rarius dorso ventrique obscure sita.

Though from geographical considerations these records may be for *H. sinaitica*, the possibility of the existence of more than one species* should not be excluded; for unless the species is widely distributed through the ocean currents, isolation in habitat tends to produce local forms in *Hyphaene* species. There is a need therefore to study the specimens from different places on the coast of Arabia.

4. *Hyphaene reptans* Becc. in Agric. Col. 2 (3): 151 (1908) & Borasseae: 49 t.45 fig 6 (1924).

SOUTH ARABIA: Wadi Hadiea, Hadramaut, alt. 400 m. (Lundt — K); Abrail, alt. 650 m. (Lundt — K).

The palm is said to have a trailing stem which is flat on two sides and branches. From the ligule (hastula) the illustrated leaf which is thought to be of an adult plant appears to be juvenile. Fruit is not known.

However, *H. dankaliensis* var *haycockensis* Becc. (Borass: 29 (1924)) is from the Haycock island in the Red Sea on the side of South Arabia. Its stem is reported to be 4–5 cm. high. *H. reptans* might be allied to this, but the nature of the stem of the latter is not known.

Acknowledgements

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* A supply of *H. thebaica* fruits arrived lately, indicating the occurrence in Saudi Arabia.