

## A Further New Species of Cycad from the Transvaal

by

R. A. Dyer

**Encephalartos cupidus** R. A. Dyer, sp. nov., planta pygmaea foliolis plus minusve glaucis, marginibus utrinque 2-5-spinosis, megasporophyllorum vulticulo terminali 2.5-3 cm lato, 1.5-2 cm alto distinguitur.

Planta solitaria vel basi ramosa, truncis usque 75 cm altis cylindricis 20-30 cm diam. *Folia* plus minusve glauca lineari-oblonga prope basin attenuata, circa 1 m longa, foliolis infirmis 1-3 spinosis reductis, petiolorum basibus lanatis glabrescentibus sed pulvinis extus permanente lanatis, foliola mediana lineari-lanceolata acuminata 10-15 cm longa, rariter usque 19 cm, 10-13 cm lata, pungentia, marginibus utrinque 2-5-spinosis. *Strobilus masculinus* subcylindricus usque 18 cm longus, 5 cm latus, pedunculo 5-10 cm longo, microsporophylla congesta, mediana 2.2-2.5 cm longa, 1.7-1.9 cm lata; bulla glabra circa 5 mm prominens; vulticulus terminalis, circa 4.5 × 4.5 mm. *Strobilus femineus* immaturus glaber ovoideus, 18-20 cm longus, 10 cm latus; megasporophylla mediana circa 3 cm longa; bulla 3.5-4 cm lata, circa 2.5 crassa, 5-8 mm longa; lobi 2 laterales incurvi circa 5 mm longi; vulticulus terminalis 2.5-3 cm latus, 1.5-2 cm altus, margine paulo prominenti.

Type: Transvaal, Pilgrim's Rest Division, cultivated at White River, D. van Heerden sub PRE 30546 (PRE, holo.).

Plants unbranched or branched from the base, up to about 75 cm tall, 20-30 cm in diam., covered by alternate series of leaf-bases and bracts; bracts about 5 cm long, lanceolate, acuminate, whitish woolly on outer surface. *Leaves* about 1 m long, linear to narrowly oblong in general outline, slightly narrowed to apex and to base; rhachis more or less straight or spreading and curved, with the tip up-turned rather than recurved, more or less glaucous-green; pulvinus about 3.5 cm broad and long, woolly on outer surface; petiole-like base 4-8 mm long, up to 10 mm diam., tomentose when young, glabrescent; leaflets more or less glaucous-green, inserted up to 3 cm apart towards base, usually closer and more crowded in the upper half and often slightly overlapping, in V disposition from rhachis, reduced to 2-3 prickles at the base; median leaflets linear-lanceolate, more or less equal-sided, curved slightly upwards, 10-15 cm long, rarely up to 19 cm, 10-13 mm broad, about 17-nerved, usually with both upper and lower margins with 2-5, rarely more, forward-directed sharp prickles about 4-7 mm long and terminating in a single prickle or rarely with 2-3 sub-equal apical prickles. *Cones*: male and female apparently usually solitary from apex of stems, dissimilar, glabrous. *Males cones* (nearly mature, slightly dried out) with peduncle 5-10 cm long, subcylindric, about 18 cm long, 5 cm diam. about the middle, narrowed to apex and base; median scales spreading at right angles to axis, congested, 2.2 cm long, 1.7 cm broad; cuneate at base, with



PLATE 1.—*Encephalartos cupidus*: left, male stem with cone (PRE 30546a); right, female stem with cone (PRE 30546b).

microsporangia extending to margins and 3-5 mm from terminal facet; upper surface more or less flat with indication of keel, becoming minutely honey-combed on drying; bulla glabrous, projecting about 5 mm, up to 1.7 cm broad, 6-7 mm thick vertically; upper facet humped in centre with narrow shoulders; lower facet is a continuation of the sporangial surface; terminal facet 4-5 mm broad and 4-5 mm wide vertically, slightly concave. *Female cones* (immature) 18-20 cm long, about 10 cm in their greatest diam., slightly narrowed to apex, glabrous, bright apple-green, with short stout peduncle, subtended by slender woolly bracts; median scales about 3 cm long; bulla protruding 5-8 mm, 3.5-4 cm broad, about 2.5 cm thick vertically, with lateral ridges extending into incurved lobes about 5 mm long clasping the seeds, with the median clasping lobe broadly rounded (extension of upper facet); upper facet irregularly shaped, sometimes with 1 or 2 indistinct ridges, sometimes more or less rounded, fairly



PLATE 2.— *Encephalartos cupidus*, young plant producing suckers from base (PRE 30546c).

smooth; lower facet receding more or less at right angles from the terminal facet; terminal facet irregular in shape; 2.5-3 cm broad, 1.5-2 cm wide vertically, fairly smooth, with slightly raised rim; seeds immature.

TRANSVAAL. — 2430 DA (Pilgrim's Rest Division): cultivated at White River, *D. van Heerden*, sub PRE 30546; PRE 30546a (male cone); b (female cone); c (small plant); Blyde River Nature Reserve (farm Steenveld). *Alberts*, Nature Conservation Officer, sub PRE 30545a (male plant); b (female plant); c (sterile plant).

The first evidence received of the present new species was a leaf sent to the Botanical Research Institute, Pretoria, by Mr. J. S. Oliver from a plant in cultivation in the garden of Mr. David van Heerden of White River. The

parent plant had originated some time back from the farm Steenveld on the border of the Pilgrim's Rest and Lydenburg districts in the eastern Transvaal. The area has since been incorporated in the Blyde River Nature Reserve.

Between Mr. van Heerden and Nature Conservation Officers of the Transvaal Province, and Dr. Leistner of the Botanical Research Institute, sufficient material has been made available for a fairly full description to be prepared. So far, however, only 2 immature female cones have been seen. They agree closely in essential characters and have a conspicuously large terminal facet to the scales. These, together with its dwarf habit, somewhat glaucous leaves and strongly prickly leaves, distinguish the species from among its southern neighbours. On the characters mentioned, its nearest relative appears to be *E. munchii* Dyer & Verdoorn, described from south of Vila Pery in Mozambique. The latter species, however, has far larger cones, the males of which are more than one on a plant, tall and lax.



PLATE 3.—*Encephalartos cupidus*, plant in natural habitat in Blyde River Nature Reserve, Eastern Transvaal.

The full distribution range of *E. cupidus* has not yet been surveyed but it is likely to be of strictly limited extent. The colony which was investigated by Mr. G. Alberts on the farm Steenveld covers a few square miles and consists of approximately 120 specimens. The locality is still rather inaccessible and the terrain very rough, as indicated by the name of the farm meaning stony ground.

Astonishment was expressed in 1964, when first describing *Encephalartos inopinus* R. A. Dyer, that an undescribed species of this remarkable genus should be discovered at this comparatively late stage in the botanical exploration of southern Africa. And now, five years later, another undescribed species has been brought to light.

So great is the interest in specimens of *Encephalartos* to adorn gardens, both public and private, that the specific epithet given here, meaning 'desirous' could be applied in its good sense to any species of the genus. However, the strict protective laws and penalties designed to ensure the sanctity of plants in their native habitats are, in fact, insufficient to safeguard plants or to deter some collectors. Thus unfortunately the tarnished meaning of the specific epithet implying a passionate desire, to the extent of greed or lust, would also be appropriate on occasions. At the same time it is well to remember that protective laws should not impede the bringing to light of new scientific information and this should be borne in mind by those empowered to administer regulations for Nature Conservation.