



Fig. 2. *Sclerosperma profiziana*. A habit; B detail of trunk; C, D, E leaves; F basal part of petiole with leaf sheath; G various developmental stages of immature inflorescence; H inflorescence with prophyll removed; J detail of inflorescence with very young fruits; K detail of proximal part of inflorescence, peduncular bract partly removed, at staminate anthesis; L staminate flower from distal part of inflorescence at staminate anthesis; M infructescence with immature fruits, peduncular bract opened; N seedling. A from photo Hall & Enti GC 36150, B from photo Moore 9883, C – E, from Profizi 840, F, K, L, N from Gillet 279a (BR), G, M from Laurent 1054, H, J from Gillet 279a (WAG). DRAWN BY HANS DE VRIES.

(Nkomi, Orungu); akóra, mvyè (Fang); manga (Éshira, Bavarama, Bavunugu, Bapunu, Balumbu, Bavili, Baduma, Banzabi, Benga, Masangu, Ngowé); maga (Mindumu, Ambèdè); makaga (Apindji, Bavové); mbègò (Mitsogo); kóndjò (Ivéa); ingutuku (Bakota); mèkutuku, mèkétséké (Bakèlè); and mèngo-kulu, mèkétséké (Béséki).

Some of these refer to *Sclerosperma walkeri*, as no distinction is made between these species by local people. **USES.** The leaves are used for thatch throughout its range either whole or in an admixture with *Raphia* (Burkill 1997). In Gabon, the leaves are specifically used for the entrance of Bwiti temples, because of the silvery indumentum on the underside. In Cameroon, the petioles are reported to be used for mattresses (*van der Burgt* 312a). The young fruits, with the endosperm still relatively soft, are consumed locally.

NOTES. *Sclerosperma dubium* was described on the basis of a carpological collection in the Hamburg museum. Beccari stated that he initially considered the specimen to belong to *S. manni*. However, upon closer examination, he considered it to be sufficiently different with respect to the reticulation on the kernel and the position of the embryo. The botanical museum in Hamburg houses three samples collected by Wölfert, all bearing the same label information, one bottle contains a single fruit with the kernel cut lengthwise that is obviously well developed, 20 × 25 mm. This specimen can easily be matched with *S. manni*, and was identified as such on the label. Two other bottles contain a seemingly identical set of kernels, with *Sclerosperma* sp. written on the label. The dimension and the shape of the seeds match the protologue of *S. dubium*. We therefore consider these specimens to be the syntypes. The seeds in these two samples are on average smaller than those expected for *S. manni*, but it might well be that the seeds are not yet fully developed. Despite the slightly different colour and external aspect of the seeds, we consider them to fall well within the range of *S. manni*, and in the absence of any further diagnostic details, we hereby consider *S. dubium* to be a synonym of *S. manni*.

2. *Sclerosperma profiziana* Valk. & Sunder. sp. nov.

affinis *S. manni* sed caule 0.1 – 2 m altus; folia integra non praemorsa, interdum bifida. Infructescentiae rhachis, 6 – 10 cm longus, fructus c. 30 in quoque.

Typus: Congo (Kinshasa), Bas-Congo, terr. Madimba, Kisantu, '1913', *Gillet* 279a (holotypus WAG!, isotypus BR!, K!)

Gillet & *Pâque* (1910: 49) as Mabondo; *De Wildeman* (1928: 309) as *S. manni*; *Renier* (1948: 83) as *S. mabondo* De Wild.; *Descoings* (1961: 47) as *S. mabondo* De Wild.; *Tuley* (1995: 96) as *S. mabondo*; *Profizi* (manuscript) as *S. gilletii*;

Sclerosperma mabondo De Wild.; **nomen nudum.**

Sclerosperma gilletii Profizi (manuscript); *Harley* (1999: 108); *Harley* & *Dransfield* (2003: 3); **nomen nudum.**

Short or acaulescent, clustering palm to 6 (– 12) m height. *Stem* if evident, 1 – 2 m tall, rather stout, closely ringed with leaf scars. *Leaves*, undivided, very large, deeply bifid in juveniles, ascending; sheath to 40 cm, splitting opposite the petiole, margins fibrous; petiole robust, 60 – 100(– 400) cm long, adaxially channelled, abaxially rounded proximally, becoming triangular distally; rachis 150 – 200(– 450) cm long, abaxially rounded, adaxially with a prominent ridge, blade elongate-cuneate in outline, 20 – 60(– 140) cm at its largest width, undivided except for the bifid apex where the rachis is continued in a fibre and the margins are up to 15 cm long, blade adaxially shining dark green, abaxially glaucous and with small scales along the veins, margins minutely toothed, transverse veinlets not evident. *Inflorescence* solitary, interfoliar, concealed among the leaf bases and sometimes partially obscured by accumulated debris, spicate; peduncle to 15 cm long, elliptic in cross-section to 3 cm wide, densely tomentose; prophyll to 23 cm long; peduncular bract to 45 cm long; rachis at anthesis to 25 cm long, stout. *Staminate flowers* sepals 3, distinct 5 × 6 mm; petals 3, distinct 5 – 8 × 11 – 15 mm, obovate to elliptical; stamens c. 100, filaments very short, ±triangular, anthers elongate; pistillode lacking. *Pistillate flowers* larger than the staminate, broadly ovoid; sepals 3, connate in a 3-lobed, glabrous cupule or margins of two sepals distinct and imbricate, somewhat angled by mutual pressure; petals 3, distinct, asymmetrical. *Rachis of infructescence* 6 – 10 cm long, bearing up to 30 fruits. *Fruit* globose to obovoid, 3 – 3.5 × 3.8 – 4 cm to 4 – 4.5 × 2.5 – 3 cm (not yet mature). *Seed* globose to obovoid 3 × 3.5 cm to 3.5 × 3 cm (Fig. 2).

DISTRIBUTION. *Sclerosperma profiziana* has a clearly disjunct distribution with a population in southwest Ghana, and the other population in the larger tributary of the Congo River. A photographic record for southeast Nigeria of a *Sclerosperma* with undivided or minimally bifid leaves (*Tuley* 1995) is not corroborated by a herbarium voucher and so its presence in Nigeria is awaiting confirmation. Map 1.

GHANA. Western Region, 1 – 2 miles S of Ankasa F. R., 3 March 1971, *H. E. Moore Jr*: 9883 (BH!); Ankasa F. R., 29 June 1966, *J. B. Hall s.n.* (K!); probably 1 – 2 miles S of Ankasa F. R., 1966, *J. B. Hall s.n.* (BH!); Ankasa F. R., 29 Dec. 1966, *J. B. Hall* GC 36150 (BH!, K!); Neung North forest reserve, Adaieye hamlet (few huts), near 'mile 7' by mining road/track that runs W from Tarkwa–Takoradi road, branching W just S of Tarkwa. Fairly close to a huge open mining area,

and to the northern boundary of Neung forest reserve, 15 Nov. 2005, *W. D. Hawthorne* 205C 001 (FHO, WAG!); Enchi, Boi Tano Forest reserve, deep inside Boi Tano forest reserve, about half way toward western boundary and southern boundary with Tano R, from Samreboi. Somewhere in or near comt ?21, 2 Nov. 2000, *W. D. Hawthorne* 200B 183 (FHO!, GC, WAG!).

CONGO (BRAZZAVILLE). Pool, Dist. de Kindamba, N du village Tension, sur la rivière Moukala, 480 m, 2 April 1991, *Profizi, J. P.* 838 (K!); 480 m, 2 April 1991, *Profizi, J. P.* 840 (BR!); 480 m, 2 April 1991, *Profizi, J. P.* 841 (K!).

CONGO (KINSHASA). no date, *J. Gillet s.n.* (BR!); April 1914, *J. Gillet* 351 (BR!); **Bas-Congo**, Terr. Madimba, Kisantu, 1913, *J. Gillet* 279a (BR!, K!, WAG!); Lula Lumene, rivière Lumene, 1902, *J. Gillet* 2288 (BR!); **Kasai Oriental**, Rivière Movo (terr. Bakwanga), 5 Sept. 1957, *L. Liben* 3648 (BR!); **Maniema**, entre Okanga et Bena Camba, Nov. 1896, *A. Dewèvre* 1095 (BR!); **Orientale**, Mogandjo au N de Isangi, 10 March 1906, *M. Laurent* 1054 (BR!).

ANGOLA. Lunda Norte, islands in the Luembe R, 2002, *N. Grobbelaar s.n.* (K!).

HABITAT. *Sclerosperma profiziana* is found on relatively dry patches in swampy areas, in valley bottom forest, in forest that is often waterlogged or along streams.

CONSERVATION STATUS. Although this species is geographically locally common, it is highly localised with many geographical disjunctions. As such we suggest that, while the species may be classified as Lower Risk within the sub-category Near Threatened, given the extent of habitat loss throughout its range, particularly in West Africa, it could become Vulnerable in the medium-term future.

ETYMOLOGY. The species has been named after Jean-Pierre Profizi (8 June 1954 at Marseille) to acknowledge his efforts to clarify the status of this species.

VERNACULAR NAME(S). Tua (Zima, Ghana), Tu (Lari, Téké, Soundi, Congo [Brazzaville] Pool), Tuu (Bambenga, Congo [Brazzaville] Pool), Mabondo (Congo [Kinshasa], Bas-Congo), Mangobo (Congo [Kinshasa], Maniema).

USES. The leaves are widely used for thatch, and preferred to the *Sclerosperma* with divided leaves. In general, smaller leaves are used for thatch, as these are not yet damaged by the wind. In former times, the hard kernel was used to make rings and has been the subject of studies for its use as vegetable ivory for button manufacturing.

NOTES. *Sclerosperma* with undivided leaves was considered as a mere aberrant form of *S. mannii* in Anglophone taxonomic literature (Russell 1968). The circumscription of *S. mannii* in the 'Flora of tropical West Africa' was therefore very broad, accommodating the variation in leaf shape and the occasional formation of a small trunk, as observed in southwest Ghana. This species concept was also

adopted for the 'Genera Palmarum' treatment (Uhl & Dransfield 1987), despite the astonishing pictures of two extremely different leaf shapes (p. 149) based on the collections by Moore in Ghana and Gabon in 1971 (Moore 1971). However, in Francophone literature the name 'mabondo' emerged in the beginning of the 20th century to describe a *Sclerosperma* with undivided leaves from the Congo tributary. This name was used as a species epithet and ascribed to De Wildeman, although he never validly published this name. In 1990 and 1991, Jean-Pierre Profizi made elaborate collections of a *Sclerosperma* with undivided leaves in Congo (Brazzaville). He subsequently linked his material to "*S. mabondo*", prepared a taxonomic treatment of the species and made a first attempt to revise of the genus *Sclerosperma*. However, his manuscript was never published.

The fertile collections available for Ghana are very limited. The inflorescences at male anthesis (*Hall & Enti* GC 36150) appear to be of much more modest dimensions than those of specimens available from Congo. No fruit collections from Ghana are known and, as the infructescence is obviously accrescent, this further hampers delimitation of the species. We therefore consider all collections with undivided leaves that originate from Ghana and the larger Congo tributary to belong to the same species.

The material stored in a box at BR (with the external label 'Gillet 279') is a mixture of various collections, which apparently arrived at different dates. Two sheets, one with field tag 279, the other with an apparent original field label 279, were collected in 1899 (and probably arrived at BR in 1900); these represent a *Sclerosperma* with divided leaves, identified as *S. walkeri*. A third, (at present) unmounted, 'sheet' in a cover represents a *Sclerosperma* with undivided leaves. The species represented by this collection was apparently locally called Mabondo: a separate piece of paper states, "éléments botaniques du *Sclerosperma* sp. 'Mabondo' du frère Gillet de Kisantu pour le Jar Bot de Bruxelles". This leaf strongly resembles the two duplicates of 279 present at K and WAG; on the K and WAG sheet, the collection date mentioned is 1913, but this date does not figure in the BR box. In the K and WAG duplicates, two inflorescences are present; similar inflorescences are found in the BR box. These inflorescences, the single cover sheet with undivided leaf at BR, and the K and WAG duplicates are renumbered to 279a. Also present in the box at BR is a linen bag with a label mentioning the vernacular name 'Niagangu/Magangu', numerous kernels, a single fruit that fits exactly in an unlabelled infructescence, and an unlabelled infructescence with mature fruits attached. This material is renumbered as *Gillet s. n.* and identified as *S. walkeri*.