

INTRODUCTION

In March 1972, W.F. Stuurman collected material of a peculiar, large-leaflet *Acacia* Mill. near Burgersfort, in the province of Limpopo (then eastern Transvaal), South Africa. Burgersfort and its surrounds form part of the Sekhukhuneland Centre of Endemism (Van Wyk & Smith 2001), a region traditionally inhabited mainly by people of the Pedi cultural group. No other specimens matching the nine sheets of *Stuurman W34* were found in subsequent years (Ross 1975, 1978, 1979). The identity of this *Acacia* remained uncertain and the collection in some respects vanished into obscurity. In the course of taxonomic work on the genus *Acacia* in southern Africa, the first author embarked on a dedicated search for plants matching the Stuurman collection. An area within a 10 km arc north of Burgersfort was targeted, especially an isolated quartzite mountain surrounded by rock strata of the prevailing Bushveld (Igneous) Complex. In March 2003, plants matching the original collection were discovered in the designated area. Field observations and a comparative morphological study confirmed that the plants represent a distinct new species of *Acacia* subgenus *Acacia* that is here formally described. Ross (1975, 1978, 1979) provides comments on and a provisional description of *Stuurman W34* as an 'insufficiently known species'. The present contribution has benefited greatly from Ross's pioneering work.

***Acacia sekhukhuniensis* P.J.H.Hurter, sp. nov.**, ab *A. robusta* floribus luteis (non cremeis), anthesi medio aestate (non primo vernifera), leguminibus chartaceis (non lignosis) semina pauciora minora continentibus, et foliis maioribus cum nervis prominentibus in superficie abaxiali differt. Etiam ab *A. karroo* foliis glandularibus, foliis valde maioribus, pedunculo longiori, corolla breviori et leguminibus inter seminibus non constrictis differt.

TYPE.—Limpopo, 2430 (Pilgrim's Rest): Sekhukhuneland, Farm Schlickmannskloof 258KT, 1 324 m, (–CB), 26-11-2003, T. Mukoma & P.J.H. Hurter 17 (PRE, holo.; NBG, PRU, iso.).

Illustration: Ross: 145, fig. 130 (1979).

Small tree up to 3.5 m tall, trunk slender. Branches fastigate, ascending, striate, blackish brown; new growth conspicuously striate, ferruginous. Stipules in pairs, spinescent, 30–50 mm long, white, glabrous, attenuate, pungent,

antrorse, basally thickened. Bark coarsely flaking or splitting to reveal a reddish brown inner layer on young shoots. Leaves dull green, glabrous, bipinnately compound, pulvinus yellow at maturity; petiole sulcate, 0.5–20.0 mm long; primary leaves with large, raised, crateriform, petiolar nectary gland, often absent in secondary leaves; rachis sulcate, 0–20 mm long, terminating in a short, rigid, persistent, deflexed hook or claw, at least one nectary gland at junction of distal pinna pair; rachillae 1 pair on secondary leaves, 2 to 3 pairs on primary leaves, distichous, 30–65 mm long, midrib raised, dotted with small raised glandular structures between each leaflet pair, terminating in a short, rigid, persistent, deflexed hook or claw; leaflets distichous, 5–9 pairs per rachillae, oblong to obovate-oblong, 8–18 × 3–9 mm, entire, eglandular, apex mucronulate, terminal pairs largest, asymmetrical, base oblique, midrib and usually several other basal and lateral veins ± raised and conspicuous on abaxial surface only. Inflorescences capitate, globose, bright yellow, 6–16 mm diam., borne on new growth, fascicled on axillary peduncles; peduncle 24–45 mm long, glabrous below involucrel, or with few random, small yellow glands above involucrel, glutinous when young, often with shards of villose hairs; involucrel bracteate, 1.0–2.2 mm long, halfway to two thirds up the peduncle, dotted with small red glands, androgenous florets always present between bracts. Flowers bright yellow, dichlamydeous. Bracteole spatulate, glandular, apices with sparse villose hairs. Calyx campanulate, pentamerous, glabrous, 2.0–2.5 mm long, ascending, apices weakly pubescent, clasping corolla. Corolla campanulate, pentamerous, membranaceous; lobes ± united, free above calyx, ligulate, 2.5–3.2 mm long, ascending, edges and apex papillate. Stamens numerous; filaments 6.0–7.5 mm long. Ovary slightly stipitate, ventricose, septate, 2–3 mm long, surface with a few pustulate waxy globules; style 2–3 mm long. Pods dehiscent, falcate, complanate, valves venous, 40–115 × 6–11 mm, 4–10-seeded, sparsely covered with a few non-pustular glands, margins not constricted between seeds at maturity. Seeds elliptic, 6–11 × 4–6 mm, areole elliptic, 4–6 × 2–4 mm. Figure 7.

Diagnostic features and affinities: *Acacia sekhukhuniensis* is unlikely to be confused with any other species of *Acacia* in Africa; in the field it superficially resembles *Albizia anthelmintica* on account of its exceptionally large leaflets. Ross (1975, 1979) provisionally compared *A. sekhukhuniensis* with both *A. karroo* Hayne and the sympatric *A. robusta* Burch. subsp. *robusta*; he also alluded to the possibility that it might be of hybrid origin. However, *A. sekhukhuniensis* differs markedly from both these taxa. The inflorescences and flowers of *A. robusta*

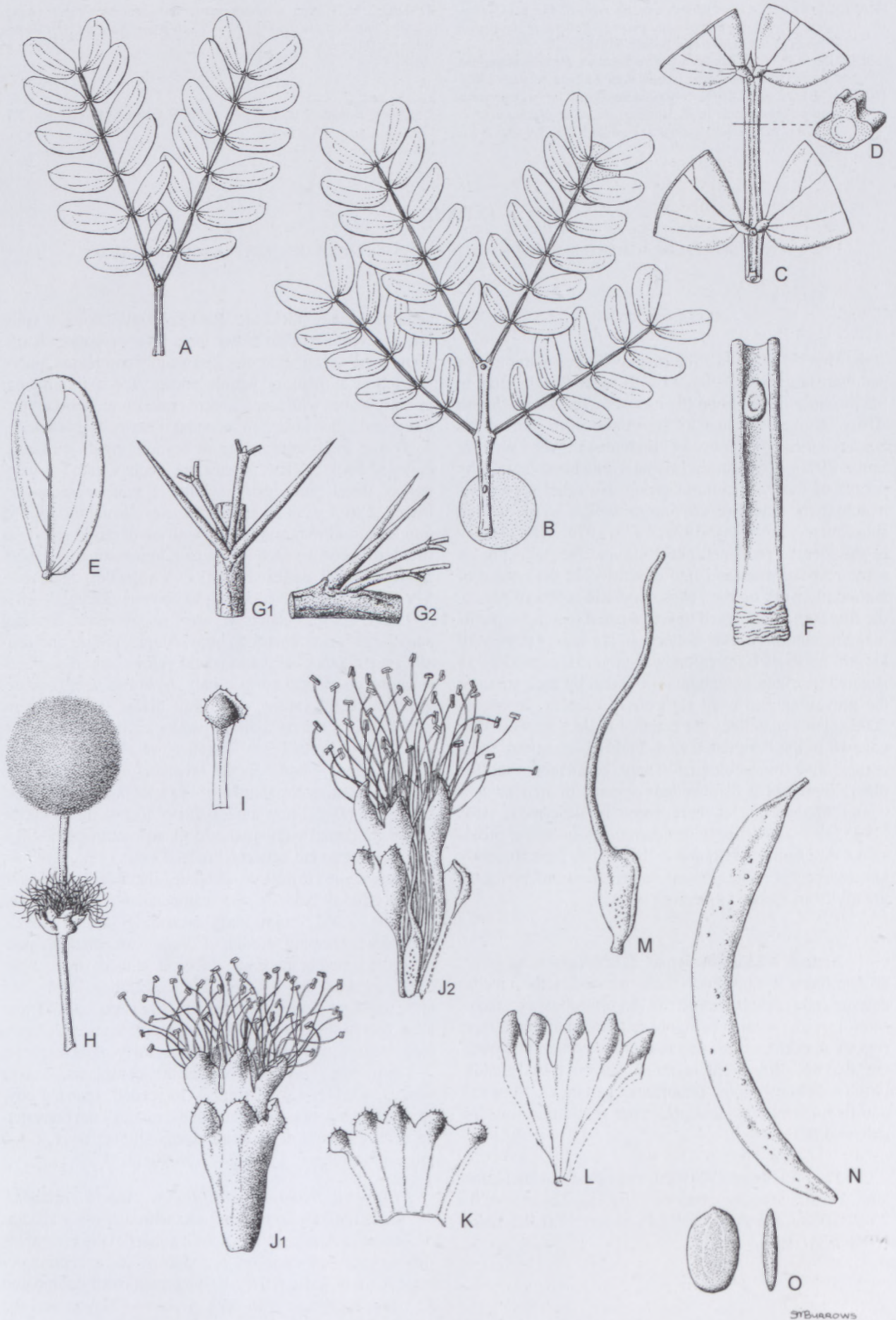


FIGURE 7.—*Acacia sekhukhuniensis* P.J.H. Hurter. A, primary leaf, $\times 0.9$; B, secondary leaf, $\times 0.9$; C, rachillae, $\times 4.4$; D, c/s rachillae, $\times 17.5$; E, leaflet, $\times 2.6$; F, petiole, $\times 4.4$; G₁, G₂, stipules, $\times 0.9$; H, inflorescence, $\times 1.7$; I, bracteole, $\times 8.7$; J₁, J₂ floret, $\times 8.7$; K, calyx, $\times 8.7$; L, corolla, $\times 8.7$; M, gynoecium, $\times 17.5$; N, pod, $\times 0.9$; O, seed, $\times 1.7$. Drawn by S. Burrows.

subsp. *robusta* are white or pale cream-coloured, compared with yellow in *A. sekhukhuniensis*. Moreover, flowering in *A. robusta* subsp. *robusta* takes place in early spring (September–October), whereas *A. sekhukhuniensis* flowers in midsummer (December–January). The papery pods of *A. sekhukhuniensis* are quite different from the much larger and robust woody pods of *A. robusta* subsp. *robusta* and contain much smaller and less robust seeds. Leaflets of *A. sekhukhuniensis* are at least twice the size of the largest ones recorded for *A. robusta* subsp. *robusta* and in addition have somewhat raised veins on the abaxial surface, a feature not found in the latter.

Acacia sekhukhuniensis also differs conspicuously from *A. karroo* in the morphology of the leaves, inflorescences, flowers and pods. Leaflets of *A. sekhukhuniensis* are up to ten times larger than those of *A. karroo* and in addition have somewhat raised veins on the abaxial surface, a feature not found in the latter. Secondary leaves of *A. sekhukhuniensis* always consist of only two glandular rachillae, whereas those of *A. karroo* are eglandular and always consist of three or more pairs. In *A. karroo* the peduncle is conspicuously shorter and less robust than that of *A. sekhukhuniensis*. Flowers of *A. karroo* are very different from those of *A. sekhukhuniensis* in that the corolla lobes are fused above the calyx to form a short tube with lobes reflexed, whereas in *A. sekhukhuniensis* the corolla lobes are much shorter, ascending and not fused into a short tube above calyx. Pods of *A. sekhukhuniensis* are much wider than those of *A. karroo* and unlike the latter, are not constricted between the seeds.

In the field, *Acacia sekhukhuniensis* could potentially also be confused with the sympatric *A. exuvialis*, member of a distinct group of southern African acacias with conspicuous glandular-glutinous pods, the glands being sessile, pustular, and usually dark-coloured (Ross 1971). Also in this group are *A. borleae*, *A. nebrownii*, *A. permixta*, *A. swazica*, *A. tenuispina*, and *A. torrei*. *Acacia sekhukhuniensis*, however, differs markedly from all these taxa in having much larger leaflets—larger than in any other known African member of *Acacia* subgenus *Acacia*—rachillae with a raised midrib, prominent glands between each leaflet pair and pods that are much more robust and neither covered by sessile, pustular glands, nor glutinous.

Ross's (1975, 1979) allusion to the possibility that *A. sekhukhuniensis* might be of hybrid origin seems unfounded as no likely putative parents are to be found in the area and the population does not exhibit Mendelian patterns of variation expected in a hybrid population. Rather, *A. sekhukhuniensis* appears to be a palaeoendemic species of a relictual nature.

Distribution and habitat: at present, *A. sekhukhuniensis* is known only from the type locality (Figure 8), an isolated, flat-topped quartzite mountain near the northeastern boundary of Sekhukhuneland. Biogeographically this locality falls within the Sekhukhuneland Centre, a region rich in endemic plants (Van Wyk & Smith 2001). The recently described *A. robbertsei* P.P.Swartz (Coates Palgrave 2002) as well as several other undescribed species of *Acacia* (unpublished data) are known to be

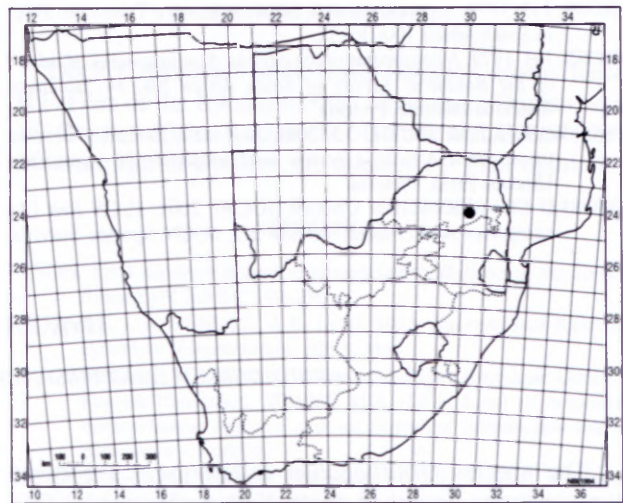


FIGURE 8.—Distribution of *Acacia sekhukhuniensis* in South Africa.

endemic to this local centre of endemism. Plants of the new species occur gregariously in open woodland and wooded grassland on quartzite ridges locally overlain by deep deposits of what appears to be a relictual Kalahari-type sand. Much of the vegetation in the area has been impacted on negatively by human activities; an estimated 60% has been transformed by urban sprawl and subsistence farming lots, with overgrazing by domestic livestock prevalent throughout. *A. sekhukhuniensis* is considered to be threatened and could in future be assessed as Critically Endangered [World Conservation Union (IUCN) 2001], mainly due to its extremely small extent of occurrence and the fact that much of Sekhukhuneland is under considerable threat from urban sprawl, heavy grazing pressure and extensive, destructive mining activities, mainly for various heavy metals and dimension stone.

Etymology: the specific epithet refers to the geographical area where this species occurs, namely Sekhukhuneland, a region named for King Sekhukhune I (1814–1882) of the Bapedi tribe.

Other specimen examined

LIMPOPO.—2430 (Pilgrim's Rest): Sekhukhuneland, 10 km N of Burgersfort, (–CB), W.F. Stuurman W34 (PRE, PRU).

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