

INTRODUCTION

Although material of *Aloe vanrooyenii* Gideon F.Sm. & N.R.Crouch from Weenen was known to well-known aloe expert, Dr Gilbert W. Reynolds, he noted (Reynolds 1950: 266) in a somewhat noncommittal way that plants 'appear to be outlying forms of *A. barbertoniae*'. However, Reynolds acknowledged that both morphological and phenological differences were evident: Weenen plants flowered later in the year (October and November) and bore more crowded marginal teeth on the leaf. Our view is that *A. barbertoniae* Pole Evans is a distinctly subtropical entity centred on Nelspruit and Barberton in Mpumalanga and that material from the KwaZulu-Natal Midlands is sufficiently different to warrant recognition at species rank. Pending a full pan-African revision of *Aloe* sect. *Pictae* Salm-Dyck, we regard the closest affinities of the new taxon to lie with *A. parvibracteata* Schönland. Although Van Wyk & Smith (2004) followed the proposed inclusion of *A. barbertoniae* in *A. greatheadii* Schönland var. *davyana* (Schönland) Glen & D.S.Hardy (Glen & Hardy 1987), we consider that *A. barbertoniae* will likely be reinstated in the course of a re-evaluation of *A. sect. Pictae*. On the other hand, *A. parvibracteata* has a geographical distribution range centred in the mountainous areas to the east and south of Nelspruit, Mpumalanga. Although extending into northeastern KwaZulu-Natal, this allied species is a distinctly winter-flowering entity, which has longer, less deltoid-shaped leaves which are paler green or distinctly purple, and smaller fruit.

One of the main distinguishing characters of *A. vanrooyenii* is the large size of its erect, matt green to purple-brown, cylindrical-oblong fruit. In the fresh condition, shortly before dehiscence and seed dispersal, individual capsules are typically 25–28 × 14–18 mm. In the dry condition, and on herbarium specimens, the fruit shows slight shrinkage, yielding capsules of (20–)21(–22) × (10–)12 mm. In fact, this is the only maculate aloe in which the robust inflorescence peduncle and side branches carrying developed fruit, cannot support the weight of the large, mature capsules and invariably bend towards the ground.

Aloe vanrooyenii, flowering between October and November, is the only early summer-flowering maculate aloe from KwaZulu-Natal (Van Wyk & Smith 2004). To the north of its distribution range, predominantly in the Gauteng and Limpopo Provinces, *A. transvaalensis* Kuntze, which is often included in the synonymy of *A.*

zebrina Baker, flowers from November to April. These species respectively occupy similar summer-reproductive niches in what is essentially more open grassland and savanna vegetation.

***Aloe vanrooyenii* Gideon F.Sm. & N.R.Crouch**, sp. nov., apparenter *A. parvibracteata* Schönland arctissime affinis, a qua fructibus capsularibus constanter multo majoribus, fasciis perlatis albis longitudinalibus secus margines secus quos capsulae dehiscunt ornatis, mensibusque aestivus florens differt.

TYPE.—KwaZulu-Natal, 2830 (Dundee): alongside road in hilly country, 25 km from Muden towards Weenen (–CC), (S 28.93140, E 30.25385), *N.R. Crouch* & *G.F. Smith* 2 (NH, holo.).

Small, slow-growing, herbaceous, succulent, perennial herb, very rarely branching from base, not forming clusters, consisting of small to medium-sized, densely foliate, open rosettes, 240–300 mm diam. *Roots* terete, 4–5 mm diam. *Stems* usually absent, if rarely present then up to 80 mm long and 45–55 mm diam., erect. *Leaves* 15–20, rosulate, attenuate, tapering to apex, 120–150 mm long, 60–80 mm broad at base, basally sheathing, distinctly spreading, apex dry, reflexed, dry leaves persistent; upper surface shallowly and broadly canaliculate, flat near base, shiny pale green, spotted, spots pale milky green to whitish, variously shaped and sized, often ± confluent in transverse bands; lower surface convex, uniformly milky green, rarely with longitudinal darker greenish striations, sometimes with small teeth arranged in a central row near leaf apex; margins with a whitish, near-translucent edge, armed with very pungent teeth; teeth brownish orange, recurved like shark's teeth, 3–4 mm long, 3–4 mm apart, ± evenly spaced; leaf sap drying translucent, cut end eventually turning purple. *Inflorescence* a sparsely branched panicle, 500–800 mm tall, branched at or near lower third with 1 or 2 branches, lowest branches re-branched; 2 or 3 panicles produced consecutively, peduncle and branches below racemes sometimes sterile bracteate, branches subtended at base by thin, scarious, pale brown, many-nerved bracts up to 40 mm long, 15–22 mm broad at base. *Peduncle* basally plano-convex, 10–20 mm broad at base, matt greenish brown with a soft, whitish bloom, sometimes sterile bracteate. *Racemes* cylindrical to slightly conical, laxly flowered, flowering portion 250–470 × 70–90 mm; buds suberect, horizontal or subpendulous, somewhat congested at apex, lowest open flowers horizontal to subpendulous, racemes varying



FIGURE 9.—*Aloe vanrooyenii*. A, habit, $\times 0.8$; B, dried capsules showing prominent white marginal strips along which fruit dehisces, $\times 0.8$; C, seeds showing short wings, $\times 0.8$; D, raceme removed from an inflorescence, $\times 0.8$. Artist: Gillian Condy.

in size according to age of plants, larger in old plants, smaller in young plants. *Bracts* amplexicaul, small, thin, scarios, dirty brownish white, margins creamy white, 8–10 mm long. *Pedicels* 8–10 mm long. *Flowers* 33–38 mm long, swollen at base, basal swelling 8–10 mm diam., cylindric-trigonous, usually monochrome; buds with creamy white tips, otherwise uniformly orange or red; mature flowers 8 mm diam. in middle, distinctly trigonously indented above ovary, thence enlarging towards throat and forming wide open mouth; outer segments free for 8–15 mm from apex, free portion with 1 distinct, central, somewhat more intense orange or red section, with 1 mm broad creamy white border and subacute, recurved apex; inner segments broader than outer ones, with 1.0–1.5 mm broad creamy white border and more obtuse, spreading apex, dorsally adnate to outer ones for their greater length. *Stamens* 6, hypogynous; filaments slightly flattened, pale lemon-yellow, 30–33 mm long, all 6 of equal length, withering concertina-like with age; anthers small, purple-black, versatile, exerted for

up to 3 mm. *Ovary* 6–7 \times 3 mm, pale greenish yellow; style 25–30 mm long, minutely capitate; stigma small. *Fruit* a large capsule, erect, matt green to purple-brown, cylindric-oblong, 25–28 \times 14–18 mm, apically truncate, trilocular, dehiscent loculicidally, chartaceous to woody when dry, margins of valves, along which split occurs, broad, white, very conspicuous, for some time wrapped in remains of dry perigone. *Seed* angled, 2.0 \times 2.5 mm, dark brown with pale brown to greyish white wing. Chromosome number: unknown. Figure 9.

Distribution: the species is centred around Ladysmith, and is known from the Dundee, Harrismith and Underberg Districts (Figure 10). Within this region it is commonly found as a thornveld savanna component.

Eponymy: the species is named after Mr Gert van Rooyen of Greytown who prompted further investigation into wild populations of the species.

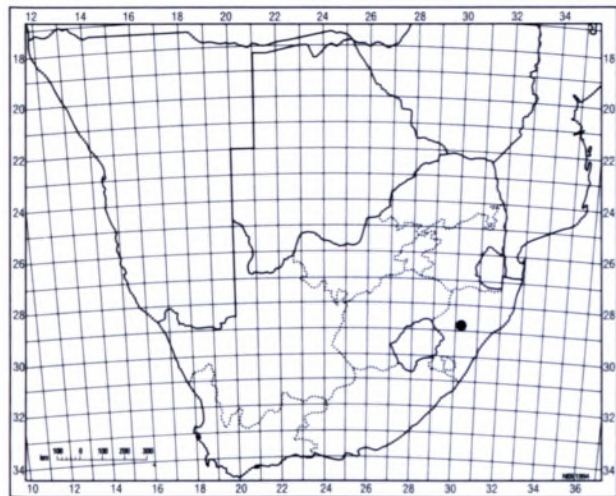


FIGURE 10.—Known distribution of *Aloe vanrooyenii* based on specimens at NH and NU.

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