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# *Stapelia engleriana* the “iceberg” species from southern Africa

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Currently *Stapelia* is viewed as a genus of 28 species from southern Africa. It is found south of S. Angola, S. Zambia and central Mozambique but has its greatest diversity especially in Namibia and South Africa and also in Botswana and Zimbabwe (Bruyns, 2005). Some species such as *Stapelia gigantea*, *S. grandiflora* and *S. hirsuta* have quite widespread distribution patterns. In contrast other species are very localised, the most extreme example being *S. remota* that is apparently only known from a single locality in the Baynes Mountains of Namibia. (However, this may be a hybrid of uncertain origin, since despite efforts it has not been recollected.)

The characteristics of *Stapelia* include succulent stems that are usually erect, 4-angled, finely pubescent or more rarely almost glabrous. Flowers of stapelias are extremely variable in size, ranging from those of *S. similis* that are a mere 2 cm diameter, to the goliath of the genus, *S. gigantea*, in which some clones have flowers with the colossal diameter of 40 cm, making these amongst the largest flowers of all flowering plants on the planet! Flower surface texturing is also widely variable: some are very hairy (e.g. *S. hirsuta*) whereas others are smooth and shiny (e.g. *S. schinzii* var. *bergeriana*).

Generalities aside, the species showcased here, *S. engleriana*, has several unique features. This species was first described in 1905 by the German collector Rudolf Schlechter (1872–1925) based on a living plant he found at the Botanical Garden and Museum, Dahlem, Berlin (Bruyns, 2005). He dedicated it to Adolf Engler, the then Director. Although Schlechter travelled widely in South Africa he never actually collected this species himself (Gunn & Codd, 1981).



Fig. 1 - *Stapelia engleriana* in a 35 cm diameter pan photographed in 2008. Photo: Colin Walker

However, according to White & Sloane (1937) this species appears to have been collected as early as 1841. Since its first description in 1905 the species has been widely collected and is now known to be quite widespread in the dry parts of SW Karoo in the Western Cape Province of South Africa but is of more regular occurrence in the Great Karoo. Bruyns (2005) says that “plants usually grow on stony shale or tillite slopes under stones or small bushes, often sheltering under or growing socially with shrubs of *Rhigozum obovatum*” (Bignoniaceae).

*Stapelia engleriana* is a most distinctive species that can be reliably identified even when not in flower, a feature that does not apply to many species of this diverse genus. The stems are fairly thick and 4-angled in cross section with short tubercles but what makes the plant unique is that these stems are prostrate to rhizomatous, a feature found in only one other southern African stapeliad, namely *Stapeliopsis saxatilis* (Bruyns, 2005). This feature is why I’ve titled this article the “iceberg”



Fig. 2 - Flower of *Stapelia engleriana* about 2 cm in diameter. Photo: Tina Wardhaugh.

Fig. 3 - *Stapelia engleriana* in a 13 cm diameter pot in fruit in 2004. Photo: Colin Walker.

stapelia, i.e. the majority of the plant is hidden below the surface of the ground! This rhizomatous habit is rare but does occur in other stapeliads, for example in the Macaronesian *Apteranthes burchardii*. My plant of *S. engleriana* (Figure 1) reached its maximum size in a 35 cm diameter pan. When this was depotted the pan was nearly filled with underground rhizomatous stems up to 30 cm long and 22 mm across, shortly pubescent and grey-green in colour with some reddish mottling especially when grown in full sun.

The plant reached its peak of perfection in time for the BCSS National Show in 2012 when in full flower (Figure 1), it achieved the accolade of a second prize in the unrestricted pot-sized class for a member of the “*Stapelia* group”. Individual flowers are unusual and indeed unique for a stapelia since these are small, about 2 cm diameter (Figure 2), are produced on a stalk up to 2 cm long, whilst the flowers themselves point downwards, have a shallow tube with the corolla lobes folded back, making the flowers somewhat button-like. In contrast most stapelia flowers are wide open with the lobes pointing outwards. This unusual flower presentation mode begs the question: what pollinates these flowers and how is this achieved? As yet there are no answers to these questions in the literature. Surface texturing to the flowers is of longitudinal raised veins, dark purple-brown in colour, slightly shiny and glabrous (free from hairs) except along the lobe edges.

Regardless of the pollination mechanism I achieved successful fruit production in 2004 (Figure 3). My plant was then in a 13 cm diameter hanging pot and produced 5 paired fruits in an open greenhouse with no intervention from me. Each of the paired follicles was up to about 12 cm long, pale lilac in colour with darker mottling. I didn't collect the seed so I can say nothing about the seed viability or germination. This turned out to be a one off event since my plant never produced any other fruit in subsequent years.

Sadly after achieving crowning glory at the show the plant went into decline and suffered a mealy bug attack from which it never recovered. Currently (2018) I am starting the plant again with a new rooted cutting.

The uniqueness of this species has never been questioned. It has, however, suffered just one taxonomic change: Leach (1982, 1984) reinstated the genus *Tromotriche* Haw. and this species became *T. engleriana* (Schlechter) Leach together with just two other species. This move was relatively short-lived since Bruyns (1995) expanded *Tromotriche* to 11 species, later reduced to 9 species (Bruyns, 2005), but returned *T. engleriana* to *Stapelia*.

*Stapelia engleriana* is truly a unique species and in my experience is easy to grow, flower and even occasionally fruit. What it lacks in flower size compared with, for example, *S. gigantea*, it makes up for in interest especially through its “iceberg” growth habit.

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### References

- BRUYNS, P.V. (1995) A re-assessment of the genera *Tridentea* Haw. and *Tromotriche* Haw. *So. Afr. J. Bot.*, **61**: 180–208.
- BRUYNS, P.V. (2005) *Stapeliads of Southern Africa and Madagascar*. 2 vols. Umदाus Press, Hatfield, South Africa.
- GUNN, M. & CODD, L.E. (1981) *Botanical exploration of southern Africa*. A.A. Balkema, Cape Town.
- LEACH, L.C. (1982) The reinstatement of *Tromotriche* Haw. (Stapeliaceae). *J. S. Afr. Bot.*, **48**: 425–426.
- LEACH, L.C. (1984) A revision of *Tromotriche* Haw. (Asclepiadaceae). *J. S. Afr. Bot.*, **50**: 549–562.
- WHITE, A. & SLOANE, B.L. (1937) *The Stapeliaceae*. 2<sup>nd</sup> ed., Abbey San Encino Press, Pasadena, California.