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Kalanchoe 'Margrit's Magic' (Crassulaceae), a new cultivar from South Africa

Gideon F. Smith[1,2], Estrela Figueiredo[1,2] & Roy Mottram[3]

1. Department of Botany, P.O. Box 77000, Nelson Mandela University, Port Elizabeth, 6031 South Africa
2. Centre for Functional Ecology, Departamento de Ciências da Vida, Universidade de Coimbra, 3001-455 Coimbra, Portugal. (email: smithgideon1@gmail.com; epnfigueiredo@gmail.com).
3. Whitestone Gardens, Sutton, Thirsk, North Yorkshire YO7 2PZ, U.K. (email: mottram.roy@gmail.com).

Summary: A small, shrubby representative of *Kalanchoe* Adans. (Crassulaceae) that is in cultivation in South Africa is described as a cultivar, *K.* 'Margrit's Magic' Gideon F.Sm. & Figueiredo. The likely parentage (*K. manginii* Raym.-Hamet & H.Perrier and *K. pubescens* Baker) of the cultivar, although speculative, is discussed. Unlike some similar cultivars, *K.* 'Margrit's Magic' does extremely well terrestrially, in virtually any soil type, even heavy clays. The cultivar is very cold-hardy and has striking foliage and flowers. Plants are multibranched, with the branches remaining erect to somewhat leaning. The coin- to heart-shaped leaves of this cultivar are borne sub-densely dispersed along the stems and branches. They are bright green with a reddish margin, which becomes more pronounced in full sun. The flowers are uniformly crimson red. The combination of these characters clearly separates this cultivar from other *Kalanchoe* cultivars.

Zusammenfassung: Ein kleiner, strauchiger Vertreter der Gattung *Kalanchoe* Adans. (Crassulaceae), der in Südafrika kultiviert wird, wird als ein Kultivar beschrieben, *K.* 'Margrit's Magic' Gideon F. Sm. & Figueiredo. Die wahrscheinliche Abstammung (*K. manginii* Raym.-Hamet & H.Perrier und *K. pubescens* Baker) des Kultivars, obwohl spekulativ, wird diskutiert. Im Gegensatz zu einigen ähnlichen Kultivaren wächst *K.* 'Margrit's Magic' terrestrisch sehr gut, in praktisch allen Bodenarten, sogar in schweren Tonerden. Der Kultivar ist sehr kälteresistent, hat auffällige Blätter und Blüten. Die Pflanzen sind stark verzweigt, die Triebe wachsen aufrecht bis etwas geneigt. Die münz- bis herzförmigen Blätter dieses Kultivars entsprossen nicht sehr dicht den Trieben und Triebästen. Sie sind hellgrün mit einem rötlichen Rand, der sich bei voller Sonneneinstrahlung verstärkt. Die Blüten sind gleichmäßig purpurrot. Die Kombination dieser Merkmale unterscheidet diesen Kultivar deutlich von anderen *Kalanchoe*-Kultivaren.

Introduction

In South Africa the genus *Kalanchoe* Adans. is best known in horticulture for a few indigenous species that have become popular as rockery or accent plants, or as sprawling groundcovers. These are, predominantly, *K. longiflora* Schltr. ex J.M.Wood, *K. luciae* Raym.-Hamet, and *K. sexangularis* N.E.Br. Madagascan species of *Kalanchoe*, such as *K. tubiflora* (Harv.) Raym.-Hamet and *K. fedtschenkoi* Raym.-Hamet & H.Perrier, are available in South Africa, but nowadays largely avoided in domestic horticulture, given their tendency to become weedy and naturalised, and in some cases invasive, if surplus material is irresponsibly discarded. *Kalanchoe blossfeldiana* Poelln. in its various colourful incarnations remains popular in florist's shops, however.

In some parts of the world, a selection of Madagascan species has been used in breeding programmes aimed at making material especially suitable for cultivation terrestrially and in hanging baskets available to the horticultural trade (Van Voorst & Arends, 1982; Shaw; 2008). In this paper a Madagascan kalanchoe, evidently of hybrid origin, is described as a cultivar, *Kalanchoe* 'Margrit's Magic' Gideon F. Sm. & Figueiredo (Figure 1). The likely parents of the cultivar are the variable *K. manginii* Raym.-Hamet & H.Perrier (Hamet & Perrier de la Bâthie 1912) and *K. pubescens* Baker (Baker, 1887: 470).

Figure 1. Material of *Kalanchoe* 'Margrit's Magic', here grown terrestrially in a metal container in South Africa's Gauteng Province, flowers prolifically in early spring in a fairly heavy, clayey soil. Photograph: Gideon F. Smith.

Figure 3. The orange flowers of *Kalanchoe pubescens*, one of the putative parents of *K.* 'Margrit's Magic', are distinctly pubescent, a trait shared by this new cultivar. The inside of the corolla lobes of *K. pubescens* has a striking, red-veined pattern. Photograph: Roy Mottram.

Background

Literally hundreds of *Kalanchoe* cultivars have been selected and in many instances mass-produced and internationally distributed and marketed (Shaw, 2008). Some of these are derived from superior forms of the pure species, while others were selected from interspecific hybrids that were deliberately created, especially using Madagascan material (Graf, 1980: 682–689, 1637–1638; Graf, 1992: 187–188, 1080–1081; Huxley, 1992: 728–730; Brickell, 1998: 577–578; Brickell, 2003: 593–594; Bryant *et al.* 2005: 740–741).

One of the most popular species that has been used in the production of small-growing, horticulturally superior strains and cultivars is the Madagascan *Kalanchoe manginii*. One advantage of hybrids and cultivars that involve *K. manginii* is their ability to thrive in beds and pots, as well as in hanging baskets.

Figure 2. The bright orange, pendent flowers of *Kalanchoe manginii*, one of the putative parents of *K.* 'Margrit's Magic', are generally more campanulate in shape than those of this new cultivar. Note the entire margins of the leaves.
Photograph: Roy Mottram.

Figure 4. The red-margined, orbicular to cordate leaves of *Kalanchoe* 'Margrit's Magic' are finely pubescent, while the blades are virtually glabrous.
Photograph: Gideon F. Smith.

Kalanchoe manginii has been used in numerous hybrids, some of which are very similar in appearance. Some of these hybrids have been given formal cultivar names, while others are simply sold in plant nurseries and florist shops under informal names. In the interests of a stable nomenclature for these hybrids, we here formally name our material as a cultivar, *K.* 'Margrit's Magic'.

The *International code of nomenclature for cultivated plants (ICNCP* or *Cultivated Plant Code)* (Brickell *et al*., 2016: 44, Recommendation 27D.1.) states that: "When publishing a new cultivar name, the parentage and history of the cultivar, the derivation or meaning of the cultivar epithet,

Table 1. Comparison of selected vegetative and morphological characters of *Kalanchoe manginii*, *K.* 'Margrit's Magic', and *K. pubescens*.

#	Character	*Kalanchoe manginii*	*Kalanchoe* 'Margrit's Magic'	*Kalanchoe pubescens*
1	Plant and leaf texture	Glabrous	Blade glabrous; margin pubescent	Pubescent
2	Leaf shape	Obovate to ovate	Orbicular to cordate	Ovate-lanceolate
3	Leaf margin	Usually entire	Entire to weakly crenate	Crenate-dentate
4	Flower shape	Urceolate	Cylindrical to campanulate	Campanulate
5	Flower colour	Reddish pink to bright red	Crimson red	Orange yellow to red

Table 2. Vegetative and reproductive morphological differences between *Kalanchoe* 'Tessa' and *Kalanchoe* 'Margrit's Magic'.

#	Character	*Kalanchoe* 'Tessa'	*Kalanchoe* 'Margrit's Magic'
1	Habit	Pendent	Erect to leaning
2	Leaf shape	Narrowly ovate	Orbicular to cordate
3	Leaf colour	Mid-green	Bright green
4	Flower disposition	Pendent	Erect to pendent, usually spreading
5	Flower colour	Orange-red	Crimson red

and the names of the raiser or breeder, nominant, and introducer should be stated when known." We were unfortunately unable to trace information on the history and breeder(s) of *Kalanchoe* 'Margrit's Magic'.

Notes on *Kalanchoe* 'Margrit's Magic'

Based on a comparison of the vegetative and reproductive morphology of *Kalanchoe* 'Margrit's Magic' with that of a number of Madagascan *Kalanchoe* species, we speculate that *K. manginii* (Figure 2) and *K. pubescens* (Figure 3) are the putative parents of *K.* 'Margrit's Magic' (Table 1). *Kalanchoe manginii* is entirely glabrous, while *K. pubescens* is entirely pubescent. The pubescence inherited from *K. pubescens* is especially evident on the leaf margins of *Kalanchoe* 'Margrit's Magic', while the leaf blades are virtually glabrous (Figure 4), as in *K. manginii* (Figure 2). The leaf margins of *K. manginii* are most commonly entire (Figure 2), while those of *K. pubescens* are crenate-dentate; those of *K.* 'Margrit's Magic' are intermediate, being weakly crenate-dentate. In inflorescence architecture, *K.* 'Margrit's Magic' tends to be closer to *K. pubescens*, also in that the inflorescence and flowers of our material are completely minutely pubescent (Figure 5).

Kalanchoe material for which the name 'Margrit's Magic' is here published has similarities with plants sold under the name *K.* 'Tessa', a name that is firmly entrenched in the nomenclature of *Kalanchoe* cultivars (Purveur & Harbour, 1996). *Kalanchoe* 'Tessa' is a hybrid between *K. gracilipes* (Baker) Baill. (Baillon, 1885: 469) and *K. manginii*. However, our material differs in that the flowers are not perfectly pendent as in *K.* 'Tessa' (see Brickell, 1998: 578, bottom of second column; Brickell, 2003: 594, bottom of second column), with the majority of the flowers being borne horizontally (spreading) or even almost vertically (Figure 5). The flowers of *K.* 'Margrit's Magic' are intensely crimson red (rather than orange-red as commonly in *K.* 'Tessa'), more or less cylindrical (not as campanulate as in *K.* 'Tessa'), and all the plant parts, including the flowers, of *K.* 'Margrit's Magic' are minutely pubescent, and not predominantly glabrous (Figure 6).

Nomenclature of *Kalanchoe* 'Margrit's Magic'

Kalanchoe 'Margrit's Magic' Gideon F.Sm. & Figueiredo, **cult. nov.**

Parentage:

Kalanchoe species [possibly *K. manginii* Raym.-Hamet & H.Perrier]

Kalanchoe species [possibly *K. pubescens* Baker]

Description of *Kalanchoe* 'Margrit's Magic':

Perennial, few- to many-leaved, multi-branched, glabrous or finely pubescent, tuft-forming succulent, to 60cm tall. *Stems* brown to

Figure 5. Close-up of an inflorescence of *Kalanchoe* 'Margrit's Magic'. The flowers are variously disposed, from pendent to nearly vertically, but usually spreading. The flowers are a crimson red colour and, in contrast to those of 'typical' *K. manginii*, one of the postulated parents of the cultivar, almost perfectly cylindrical.
Photograph: Gideon F. Smith.

Figure 7. Ms Margrit Bischofberger, who is commemorated in *Kalanchoe* 'Margrit's Magic', in her garden in Winterthur, Switzerland, with an *Epiphyllum* hybrid.
Photograph taken in 2004 by Markus Graf.

reddish brown, older internodes with longitudinal light brownish or greenish stripes, woody, somewhat brittle, few, unbranched or sparsely branched, erect to leaning, sometimes creeping, rooting along the way, leaning branches developing short, near-woody stilt-like roots, nodes thickened, round; sterile and reproductive stems smooth to finely pubescent. *Leaves* opposite-decussate, subsessile to distinctly petiolate, green to variously infused with red, succulent, lower

Figure 6. The crimson red flowers of *Kalanchoe* 'Margrit's Magic' are, like the leaf margins, finely pubescent. Photograph: Gideon F. Smith.

Figure 8. Two large tubs planted with *Kalanchoe* 'Margrit's Magic'. The plants were pruned on the sides shortly after the main flowering season (winter-spring). To the right of the two tubs *Crassula multicava* Lem. (Crassulaceae) is grown in a container placed on a wire chair.
Photograph: Gideon F. Smith.

older ones spreading to horizontal to decurved, upper younger ones ± vertical, papery on drying; *petiole* to 20mm long, channelled above, not clasping the stem; *blade* 10–30 × 10–20mm, obovate to orbicular to cordate or somewhat oblong, flat,

curved upwards towards margins; *apex* rounded-obtuse; *base* cuneate; *margins* entire to weakly crenate especially in upper ⅔, pubescent. *Inflorescence* 18–20cm tall, a terminal, branched, erect, apically sparse to dense, few- to many-flowered, flat-topped cyme with several dichasia, rounded when viewed from above, branches opposite, erect, subtended by very small leaf-like bracts, without leafy branchlets in axils; *peduncle* bright red, minutely white-hairy; *pedicels* slender, 8–10mm long. *Flowers* erect to pendent, usually spreading, bright crimson red (tube and lobes), light green at level of calyx, cylindrical to campanulate; *calyx* light reddish green, strongly infused with small red spots especially towards sepal margins; *sepals* 4, ± separate, basally fused for ± 1 mm, ± 4–6 × 3–4mm, triangular-lanceolate, acute-tipped, hardly contrasting against light green basal part of corolla tube, minutely white-hairy; *corolla* 18–20mm long, slightly enlarged above the middle, not twisted apically after anthesis, bright crimson red, light green lower down, minutely white-hairy, drying purple-red; *corolla tube* 16–18mm long, cylindrical, distinctly 4-angled, box-shaped-square when viewed from below, bright crimson red, light green lower down, minutely white-hairy; *lobes* 4.5–5.0 × 4.5–5.0mm, ovate to suborbicular, rounded at apex, apiculate, bright crimson red. *Stamens* inserted at about the middle of the corolla tube, included; *filaments* 6–7mm long, thin, yellow; *anthers* 0.5mm long, purplish brown. *Pistil* consisting of 4 carpels; *carpels* 6–7mm long, light green; *styles* 8–9mm long; *stigmas* capitate, whitish yellow; *scales* ± 2mm long, narrowly columnar to slightly linear, light yellowish green. *Follicles* brittle, grass spikelet-like, enveloped in dry, purplish remains of corolla, dull whitish green, 6–7mm long. *Seeds* 0.50–0.75mm long, light brown. *Chromosome number*: unknown.

Flowering time

Plants flower in mid-to late-winter and well into spring (southern hemisphere).

Voucher specimen

SOUTH AFRICA. GAUTENG PROVINCE.—2528 (Pretoria): suburb Weavind Park in Pretoria, (–CB), 25º44'01.04"S 28º16'09.74"E, 30 September 2017, *G.F. Smith & E. Figueiredo 53* (PRU).

Eponomy:

Kalanchoe 'Margrit's Magic' is named for Ms Margrit Bischofberger ([Winterthur, Switzerland] 1942–) (Figure 7), German literature and history graduate, and former secondary school teacher, presently of Aadorf, Switzerland, who has been growing and studying cacti and succulents for many decades. An early supporter of the International Crassulaceae Network (ICN) [see: http://www.crassulaceae.ch/de/home], Sedum Society, and numerous other succulent plant societies, she saw to the eventual migration and further development of the ICN's website and its content to Switzerland. She remains interested in a wide range of succulents, but devotes most of her time to the Crassulaceae, especially the genus *Echeveria* DC.

Common names:

Afrikaans: rooi kandelaar
English: red chandelier plant

Cultivation and propagation

The *Kalanchoe* selection illustrated here grows equally well in hanging baskets, especially in semi-shade, as well as when planted directly in the soil or in containers (Figure 8). Material will thrive outdoors in mild climates, but also grows well indoors under comparatively low light conditions. Horticulturally it performs best outdoors in mild, subtropical climates, but will also, perhaps somewhat surprisingly, quite easily tolerate minimum winter temperatures that drop slightly below 0°Celsius.

Propagation is from stem cuttings that are taken in early summer, after plants have finished flowering and the dry inflorescences have been removed. Such stem cuttings can be placed directly in the soil, and will soon strike root. Cuttings will flower within a single season.

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