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Sansevieria mikephillipsii, a new species from an old cultivar

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Abstract

More than 20 years ago, in the first issue of the journal Sansevieria, the late Mike Phillips described a new species with no formal naming and no herbarium records. He provisionally named the *Sansevieria* collected by Ernst Specks in the Kitonga Gorge as *Sansevieria* sp. 'Kitonga'. The new species is the only one in its genus to have a distinctive spur at the end of the leaf groove. The authors correct the deficiency with a full description and name the new species: *Sansevieria mikephillipsii*.

Introduction

Sansevieria sp. 'Kitonga' is a well-known cultivar originally distributed by Ernst Specks from the Kitonga Gorge in central Tanzania (Fig. 1). The late Mike Phillips (Butler, 2021) provided a description of it in the first issue of the journal *Sansevieria* (Phillips, 2001), and Chahinian (2005) included it in his book on sansevierias. It is widely available and in *Sansevieria* collections worldwide.

For unknown reasons, Phillips did not take the necessary steps to change this cultivar into a species. He did not provide a name, other than *Sansevieria* sp. 'Kitonga', and he did not format his description in a way that stated that it was a new species he was describing. Finally, he apparently did not prepare herbarium specimens. The following description is from Phillips (2001), amended to remove English measurements in favor of metric ones and edited slightly for clarity:

> Collected by: Ernst Specks (ES425 [ES 20425]). Kitonga Gorge, lringa Province, Tanzania. Description: Stemless, leaves cylindrical, 13 to a growth, ascending, straight and/or curved, smooth and/or slightly rough and highly glossy, 20-56 cm long, 19-25 mm thick and wide at the point approximently one third the leaf length, terminating in an extended leaf tip 25-32 mm long, born white drying to brown and leaving a blunt hard end, the main channel has rounded edges, up to 127 mm long, 6 mm wide, and 4 mm deep, terminating with a round end and spur 5 mm high, 10 shallow furrows even when fully turgid, very dark green with fainter light green markings, mostly with new growth and seem to fade with age. (Overall appearance is like that of a hunting spider.) Flower-stem: 1.040 m high, 7 mm thick at base tapering to 2 mm at the tip, bearing 4 membranous sheaths 38 mm long on the basal part and a spike-like raceme of flower-clusters above. Flowers: 7-10 in a cluster, flower-tubes 25 mm long closed and 30 mm long open, flower-base bulbous 4 mm wide, stamens 7-8 and 28 mm long, sepals [tepals] 4-6, 5 mm long. Flowered: August 2000 but did not produce any seeds. Has now produced three small offsets from above soil level.

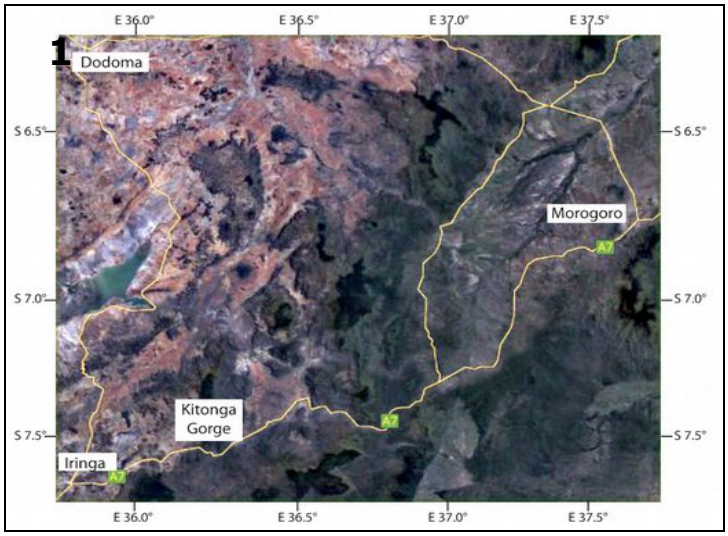

Fig. 1 – Map showing the location of Kitonga Gorge in central Tanzania.

Fig. 2 – *Sansevieria mikephillipsii* flowering in cultivation in Tucson, Arizona, USA.

Fig. 3 – S*ansevieria mikephillipsii,* a close up of part of the inflorescence showing the clustering of flowers on the rachis, some closely spaced laterally.

Fig. 4 – *Sansevieria mikephillipsii*, part of a leaf with the spur typical of the species, which distinguishes it from all other *Sansevieria*. (Foto: Mike Phillips)

Plants of 'Kitonga' are widely available and are part of the *Sansevieria* collection at Arid Lands Greenhouses in Tucson, Arizona. In the late winter of 2022, plants in Tucson flowered, enabling a formal description and elevation of this cultivar to species status.

***Sansevieria mikephillipsii* R.H. Webb & L.E. Newton sp. nov.** (Fig. 2–4)

Related to many stoloniferous cylindrical-leaf species in East Africa, especially *S. suffruticosa*, but differs in a number of characteristics including a distinctive conical spur at the end of the leaf channel, generally fewer leaves per rosette, and a lax inflorescence with fewer flowers per cluster.

Type locality

Tanzania, Kitonga Gorge, approximately 60 km east-northeast of Iringa, Tanzania. Approximate location is latitude S 7.65°, longitude E 36.20°, elevation 1000 m, *Specks ES* 20425 (DSM, holo), date of collection is unknown.

Etymology

This species is named for the late Mike Phillips (1947-2020), who was an early influential member of the International Sansevieria Society (Butler, 2021) and who made a preliminary description of this species 21 years before we observed it flowering.

Description

Acaulescent, stoloniferous, clumping perennial to about 30 cm height; stolon 1.2 cm diameter, tan epidermis. Leaves 5 (-7) in a rosette, ± opposite on stem, spreading, stiff, cylindrical, (33-) 40 (-42) cm long by 1.5 cm thick, widest about halfway from base to tip, tip chartaceous and withered transitioning reddish to white; leaf with a tightly folded channel (17-) 22 (-24) long and 8-10 mm deep at leaf base, terminating in a distinctive spur (1-) 2 (-5) mm long and conical in form (Fig. 4); leaf base 1-1.5 cm thick, basal bracts triangular, white, and chartaceous 4 × 13 cm with fibrous tip 2 (-5) mm; all sides of the leaves are dark green with lighter green transverse banding on some leaves, sides bearing 3 (-4) shallow longitudinal grooves, surfaces smooth to slightly roughened with some leaf bases very rough. Inflorescence simple, lax, with total length of 75-85 cm long × 5 mm wide, light green with whitish speckling, infertile portion 30 cm long, bearing 3 triangular bracts 40 × 10 mm, chartaceous, spacing of 7-9 cm; flowers in clusters (helicoid cymes) nearly revolute on rachis that are subtended by purplish white bracts (1-) 8 (-10) mm long and 1 mm wide bearing nectar at their base, flower clusters arranged vaguely alternately on the fertile portion of the inflorescence and spaced (3-) 4 (-5) cm apart with some closely spaced around the stem (Fig. 3), giving the impression of denser flower clusters; (1-) 2 flowers per cluster, slightly inclined from the inflorescence, opening early evening, closing before dawn, with slight to no fragrance, total closed flower length 21 mm long, greenish-yellow color, pedicel 1 × 2 mm and light violet, ovary greenish-yellow, bulbous, 2 × 1 mm, floral tube 9 mm long, 2 mm in diameter narrowing to 1 mm diameter above ovary, tepal lobes strongly reflexed, canaliculate 12 × 1 mm with a roundish tip, both sides white; filaments exerted 12-13 mm and attached at base of tepals, anthers light yellow,

2 mm long, and attached asymmetrically to the filaments; style exserted 13 mm, translucent, with a tiny stigma ~1 mm diameter and capitate. Seeds not seen.

Distribution

The original plants were distributed by Ernst Specks of Exotica Nursery in Germany (*Specks ES* 20425) and propagated from material originally collected in the Kitonga Gorge of central Tanzania (Fig. 1). At present, this species is only known from a general but small area in central Tanzania.

Discussion

Sansevieria mikephillipsii is distinctive primarily because of a small spur at the end of the channel in the leaf. This spur – absent from some leaves, particularly juvenile ones – is prominent on a number of mature leaves and is diagnostic of the species. No other species of *Sansevieria* have such a spur. Other characteristics that make this species different from similar cylindrical leaf species in eastern Africa include a generally lower number of leaves per rosette, (Table 1).

There are two important discrepancies between the description given in Phillips (2001) and in this paper. First, Phillips reports "13 leaves to a growth," although his photograph (Phillips, 2001, Figures 2) shows only 8 leaves, one of which might be juvenile. In looking at our plants, we found 4-5 basal, juvenile leaves. We believe the discrepancy between the "13 leaves to a grown" and our 5-6 leaves is a reflection of growth conditions in the UK, where Phillips lived, and the southwestern US, as well as whether juvenile leaves are included in the count or not.

Second, and more puzzling, Phillips (2001) reports 6-7 flowers per cluster whereas we found 2-3. Again, the photograph in Phillips (2001, Fig. 2) does not corroborate this many flowers in the easily discernible clusters. We believe the difference has to do with some flower clusters being very close to one another laterally on the inflorescence (Fig. 3), giving the false appearance of more flowers per cluster.

Table 1. Comparison of two descriptions of *Sansevieria mikephillipsii* with other members of the *Sansevieria suffruticosa* group (modified from Webb and Newton, 2016).

Species	*Sansevieria bella*	*Sansevieria gracilis*	*Sansevieria downsii*	*Sansevieria mikephillipsii* (Phillips)	*Sansevieria mikephillipsii* (this paper)	*Sqnsevieria suffruticosa*	*Sansevieria laevifolia*
Protologue	Newton (2000)	Brown (1911)	Chahinian (2000)	Phillips (2001)	this paper	Brown (1915)	Webb and Newton (2016)
Number of leaves per rosette	to 8	8-12	6-14	13*	4-5	7-18	to 15
Average leaf length (cm)	70	80	14-45	20-56	33-42	60	85
Average leaf thickness (mm)	to 35	6-10	32	19-25	15	12-18	15-20

Species	*Sansevieria bella*	*Sansevieria gracilis*	*Sansevieria downsii*	*Sansevieria mikephillipsii* (Phillips)	*Sansevieria mikephillipsii* (this paper)	*Sqnsevieria suffruticosa*	*Sansevieria laevifolia*
Leaf color	gray-green	light green	light green	dark green	dark green	gray-green	green
Leaf mottling-banding	vivid banding	none	none	light banding	light to no banding	vivid banding	light to no banding
Leaf surface roughness	rough	smooth	smooth	smooth-rough	smooth - rough	rough	smooth
Inflorescence height (cm)	60	30	to 160	100	75-85	38	60
Flowers per cluster	7	2	3-5	6-7**	2-3	5	4
Flower length (mm)	33	37	12	30	21	25	50

***** The presence of juvenile leaves could explain the difference between the Phillips (2001) leaf numbers and this paper.
***** Closely spaced flower clusters on the inflorescence, which occur irregularly, could explain the higher number of flowers per cluster given in Phillips (2001) and this paper.

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