



~ Gardening with Bulbs ~

The Bulb Garden

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My Journey with *Scadoxus*

Pieter van der Walt

Pieter grew up, lives, works, and gardens below the sun-baked slopes of the Magaliesberg mountains, some of the oldest mountains on earth, in and around the small town of Hartbeespoort, to the west of Pretoria.

Growing up in a nursery environment, he could speak "plant" before learning English as a second language. He is currently studying horticulture part-time and working the family nursery full-time.

He's been collecting bulbs since a very early age, and initially his interest centered

around the Amaryllidaceae, but as time went by his palette only grew more diverse. He says, "I am a self-confessed chlorophyll junkie!"—Ed.

When I started collecting bulbs in my early teens, *Scadoxus* was one of the first groups of bulbs to catch my attention, and I actively sought them out. My journey with them quickly led me to discover many more species of *Scadoxus*

us beyond the borders of South Africa and indeed many other genera and families of bulbous plants altogether. Once I had exhausted all the South African species, I reached a dead-end and it seemed impossible to acquire any more species without extensive travels through darkest Africa, so naturally I started dreaming of botanical expeditions into uncharted wilderness where I would doubtless discover many new species of



Scadoxus pole-evansii, photo by Pieter van der Walt.

plants unknown to science! Fortunately, there appeared an article on *Scadoxus* by Graham Duncan

in the June 2001 issue of *Veld & Flora* (the Botanical Society of South Africa's quarterly publication). The article dealt mainly with the South African species, but made brief mention of *Scadoxus pole-evansii* from Zimbabwe. And in the December 2001 issue there appeared a letter of appreciation from Mrs. Mary Clarke of Nyanga, Zimbabwe, with a

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photo of their native *S. pole-evansii*. This was the first depiction of *S. pole-evansii* I had ever seen and it took my breath away!

I managed to obtain Mrs. Clarke's telephone number and without any hesitation I rang her up to talk about their beautiful native *Scadoxus pole-evansii* in the hope that she would be able to help me obtain material of it. In the generous habit of so many plant peo-

most useful reference on the genus and I have used it extensively over the years and in preparing this article.

I have yet to go on safari through tropical Africa, but I've made many friends on my journey with *Scadoxus*, a journey that is still far from nearing its end! It is my hope that this two-part article will serve to familiarize and enthuse many more collectors with this rewarding genus. In part one, I will sketch an overview of the genus and its relation to the rest of the

CHARACTERISTIC	HAEMANTHUS	SCADOXUS
BULB	Bifarious	Rhizome or globose bulb with rhizomatous parts
LEAVES	Distichous, usually thick and fleshy, no distinct middle nerve, sometimes hairy	Not distinctly distichous, herbaceous in texture, distinct middle nerves, always glabrous
DISTRIBUTION	South Africa and Namibia	Tropical Arabia and Africa as far south as the Eastern Cape

Table 1, above: Differences between *Haemanthus* and *Scadoxus*

Table 2, below: Table 2: Differences between *S. multiflorus* subsp. *multiflorus*, subsp. *katharinae*, and subsp. *longitubus* (Friss and Nordal 1976)

	SUBSP. MULTIFLORUS	SUBSP. KATHARINAE	SUBSP. LONGITUBUS
PERIANTH TUBE	4–15 mm	12–22 mm	15–26 mm
PERIANTH SEGMENTS (LENGTH)	12–32 mm	18–30 mm	15–28 mm
PERIANTH SEGMENTS (WIDTH)	0.5–2.5 mm	2.2–4 mm	1.4–3.4 mm
DISTRIBUTION	Southern to tropical Africa excluding lowland rainforest areas of West Africa and coastal shrub in South Africa	Swaziland and coastal areas of Kwazulu Natal and the Eastern Cape, South Africa	Lowland rainforest Sierra Leone to Ghana

ple the world over, to whom I am indebted, she sent me a bulb and a number of seeds. This acquisition enabled me to add even more species to my collection through trading with other passionate collectors to whom I am most grateful.

The next step on my journey was a visit to Dr. Robert Archer, a botanist at the Pretoria Botanical Garden's herbarium, who kindly showed me around and photocopied Inger Nordal's revision of the genus *Haemanthus* for me. His encouragement and assistance went a long way to fuel my enthusiasm for the genus. Inger Nordal's work has proven to be the single

family as well as discuss the three South African species, *Scadoxus puniceus*, *S. membranaceus*, and *S. multiflorus*. Part two will cover the remaining six African species and a section on cultivation.

Introduction

The genus *Scadoxus* belongs to the Amaryllidaceae, a large cosmopolitan family of monocotyledonous flowering plants, most of which possess true bulbs and all of which are at least considered bulbous. There are some 59 genera in the family, with more

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than 850 species! The family centers around three main areas of diversity: the Peruvian Andes, eastern Brazil, and South Africa.

According to Meerow, the family can be divided into fifteen tribes based on DNA sequencing. This classification places *Scadoxus* in the bacate fruited African tribe *Haemanthaceae* together with *Clivia*, *Cryptostephanus*, *Gethyllis*, *Apodolirion*, and the closely related *Haemanthus*. *Scadoxus* was still considered part of the genus *Haemanthus* not too long ago. In 1836 Rafinesque first coined the name *Scadoxus*, commenting

“umb. glor.”—which could be taken to mean “glorious umbel” from *doxus*, meaning “glorious,” and *sca*, meaning “obscure,” which rather confuses the issue. But it was only in 1976 that Friis and Nordal divid-

ed the genus *Haemanthus* into two new genera, *Haemanthus* and *Scadoxus*, based on morphological differences and distribution patterns. (See Table 1.)

Scadoxus puniceus

This was the first species I collected because it forms a conspicuous part of the local bulbous flora around Pretoria, where I grew up. I still have that first accession in my collection today—it is an exceptionally nice

bright scarlet form with large umbels consisting of more than 600 individual flowers!

Scadoxus puniceus is a variable species throughout its large but disjunct distribution range, occurring from the Eastern Cape through KwaZulu Natal (KZN), the Free State, Gauteng, North West, Mpumalanga, and Limpopo provinces of South Africa, and then again in Tanzania and Ethiopia. This peculiar disjunct distribution most likely represents a relict



Scadoxus puniceus, photo by Mary Sue Ittner

of an earlier continuous distribution from the Cape to Ethiopia during more humid periods.

Ecologically, this is a highly adaptable species growing from full shade to full sun and from sea level to 1,700 m (5,577 ft.) in South Africa. From 2,000 to 2,700 m (6,561 to 8,858 ft.) in Tanzania, they favor more humid areas such as swamps, montane grassland, and montane forests, where they have even been recorded growing as epiphytes.

Plants range from 0.5 to 1 m (20 to 39 in.) tall, producing two to seven leaves, forming an attractively spotted pseudostem (false stem) ranging from 5 to 50 cm (2 to 20 in.) tall. On the short end of this scale, there are forms from the Eastern Cape province of South Africa that almost completely lack any pseudostem.

Scadoxus puniceus is a summer-growing and winter-dormant species.

Forms from the northern and eastern parts of South Africa are hysteranthous, flowering in spring or early summer before the leaves develop, while those

from the southern parts are synanthous, flowering in early autumn toward the end of the growing period.

The leaves of this species can be quite variable, with some plants boasting broad (up to 15 cm [6 in.]) leaves with entire margins, whereas others have narrow (5 cm [2 in.]) leaves, which can sometimes be extremely attractively undulated.

The specific epithet *puniceus* means “scarlet” or “carmine,” accurately describing the color of the five to eight involucral bracts surrounding the dense conical inflorescence, consisting of 30 to more than 100 flowers. The color and size of these bracts can, however, vary greatly from pure green to brown, red, and dark violet, usually corresponding with the color of the cataphylls (the reduced leaves at base of the pseudostem).

The floral bracts are usually

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equal or slightly longer than the petals and remain erect and intact at least until the early fruiting stages. There seems to be a certain degree of negative correlation between the coloring of the bracts and the flowers, so that especially richly colored bracts support flowers of more inconspicuous color, while greenish bracts often support reddish flowers. However, the combination of red flowers with red bracts is not rare either.

Flower color ranges from yellowish-green to greenish-pink, pink, vermillion, and scarlet, while the stamens are usually of a darker hue. There are also rare forms of which the flowers are pure white or pale green.

Altogether this is an attractive and easy-to-grow species with many distinct and worthwhile morphs to seek out and collect.

Scadoxus membranaceus

I first encountered *Scadoxus membranaceus* growing in the coastal forests north of Durban while holidaying there with my parents many years ago. These were an exceptionally small form of the species, growing no more than 15 cm (6 in.) tall with proportionally tiny umbels—these make very “cute” container plants.

This is an evergreen species flowering toward the end of summer and into early autumn. *Scadoxus membranaceus* is restricted to coastal habitats in the Eastern Cape and KZN provinces of South Africa, where they prefer the sandy soils and shade of coastal forests.

Unlike *Scadoxus puniceus* and *S. multiflorus*, *S. membranaceus* does not produce a pseudostem; instead, the two to six leaves arise directly from the bulb where the leaf stalks and peduncle are attractively spotted brownish-purple. Plants are relatively low growing,

reaching a maximum height of no more than 50 cm (20 in.). New leaves develop simultaneously or shortly after flowering.

The specific epithet *membranaceous* refers to the thick parchment-like texture of the involucral bracts in this species. The small conical umbel of ten to thirty flowers, no larger than 2 to 5 cm (.78 to 2 in.), is enclosed within four to five large, more or less equal bracts of 3.5 to 5.5 cm (1.37 to 2.16 in.) long. These conspicuous bracts usually surpass the flowers in length and lend this species its distinctive look. The bracts can be green, brown, red, or any combination of



Scadoxus membranaceus, photo by Mary Sue Ittner.

these colors and remain intact and erect until the fruiting stage. Flower color varies from greenish to pinkish and orange. There are also forms of this species in which the flowers, involucral bracts, and leaf bases are plain green. I refer to one such clone in my collection as ‘Green Goblin’.

S. membranaceus is a beautiful and

worthwhile species to grow due to its compact size and evergreen habit, coupled with its rather distinct flowers.

Scadoxus multiflorus

Scadoxus multiflorus is a variable and widespread species. Three subspecies of are recognised based primarily on flower morphology and distribution. These characteristics are summarized in **Table 2** (see page 2).

Scadoxus multiflorus subsp. *multiflorus*

Scadoxus multiflorus subsp. *multiflorus* might have the largest distribution and be the most widely cultivated (continued to next page)

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ed member of the genus, yet it remains inexplicably uncommon in cultivation in South Africa where it is native, and plants with provenance are equally scarce the world over. This may be partly due to the fact that it is such a widespread and “common” species and, as a result, many do not realize the value of localized forms, which may differ slightly or significantly from one area to another.

Throughout their large continuous range, from South Africa to tropical Africa and the Arabian Peninsula, *Scadoxus multiflorus* subsp. *multiflorus* exhibits an extraordinary amount of variation, most notably with regard to general robustness. Plants range from 15 cm (6 in.)-tall dwarfs to slender 1 m (39 in.)-tall specimens, producing two to eight leaves that form a pseudostem up to 60 cm (23.6 in.) long, the base of which can be attractively spotted red-brown to purple.

The ecological range for this species is equally diverse, ranging from grassland to woodland, forests, montane grassland, and forest, and occurring from sea level up to 2,700 m (8,858 ft.). *Scadoxus multiflorus* subsp. *multiflorus* is a summer-growing and winter-dormant species and is hysteranthous, producing leaves only after the flowers are spent. This trait is dependent on moisture, however, and plants growing in humid areas such as lowland rainforest or mountainous areas might have their leaves and flowers present at the same time. In South Africa and south tropical Africa flowering usually occurs from October to December, but elsewhere in its distribution flowering usually follows the rainy season.

As the specific epithet *multiflorus* suggests, this species does have “many flowers,” ranging from as few as 10 up to 200 in a spherical umbel of 5 to 26 cm (2 to 10 in.) in diameter, surrounded by five to ten thin, papery, colorless bracts that droop during anthesis. Petals are of a lighter pinkish-orange hue than the filaments, which are usually bright scarlet. *Scadoxus multiflorus* subsp. *multiflorus* generally has a much shorter perianth tube and narrower filaments than the other two subspecies.



Scadoxus multiflorus subsp. *katharinae*, photo by Mary Sue Ittner.

Scadoxus multiflorus subsp. *katharinae*

Scadoxus multiflorus subsp. *katharinae* is arguably one of the most spectacular, rewarding, and easily grown members of the genus. The name commemorates the English botanical artist and plant collector Katharine Saunders, who came to Natal in the 1850s.

This subspecies has a considerably narrower distribution, extending from the northeastern parts of the Eastern Cape through KZN and into Swaziland, occurring mainly from sea level up to 750 m (2,460 ft.) in association with coastal swamp forests where they occasionally grow on floating mats of debris in slow-

flowing streams and swamps.

Plants of *Scadoxus multiflorus* subsp. *katharinae* are robust, growing up to 1.2 m (47 in.) tall, with the leaves arranged like a parasol atop an attractively spotted pseudostem. Nearly evergreen, they go dormant only briefly right before the new leaves emerge in spring. Plants are synanthous, producing their flowers during January to March (mid- to late summer) when the leaves are already well developed.

The globose inflorescence consisting of 40 to 200 pinkish-red flowers can be 12 to 20 cm (4.7 to 7.87 in.) in diameter, surrounded by five to ten thin, papery, colorless bracts that droop during anthesis similarly to subsp. *multiflorus*. *Scadoxus multiflorus* subsp. *katharinae* has an intermediate flower tube, but broader petals than the other two subspecies.

Scadoxus multiflorus subsp. *longitubus*

Scadoxus multiflorus subsp. *longitubus* is a little-known subspecies originating from Sierra Leone to Ghana, where it is found in lowland rainforest from sea level to 850 m (2,788 ft.).

Plants are relatively slender, growing up to 70 cm (27.5 in.) tall, with the leaves and flowers developing simultaneously. Flowering occurs from January to April and consists of a relatively small inflorescence of 8 to 14 cm (3.15 to 5.5 in.) with only ten to eighty flowers. *Scadoxus multiflorus* subsp. *longitubus* has a longer flower tube than the other two subspecies. This subspecies is extremely rare in cultivation.

