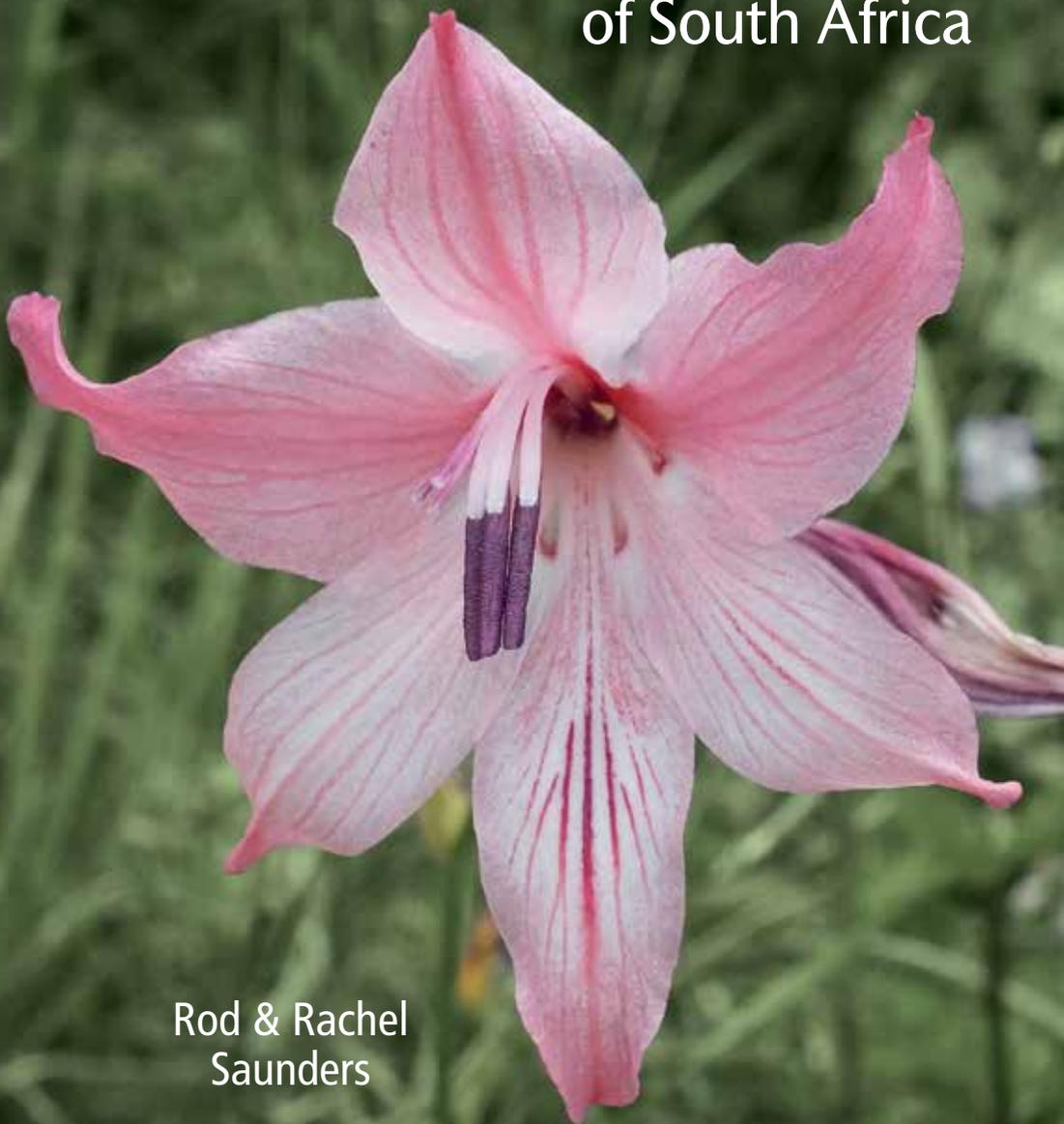


Saunders' Field Guide to
GLADIOLI
of South Africa



Rod & Rachel
Saunders

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Preface

It was around 2012 that Rod and Rachel Saunders began what was to be the last project of their extraordinary botanical lives – a quest to find and photograph every known species of *Gladiolus* in South Africa. The search took them to archives and books; to experts, gardeners, guides and researchers; and to mountains and plains throughout the sub-region. Sometimes the plants were easy to find, well-known, prolific and easy to identify. Other times, they were more elusive. Occasionally they had to wait long periods – until after a fire perhaps, or until they happened to be in a place when conditions were just right. At times, plants were no longer to be found in the locations in which they had previously been recorded. Owing to human impact some locations had changed beyond recognition.

The Saunders' passion fuelled expeditions and enthusiasms, a wide network of fellowship and a deep commitment to further recording this elegant plant.

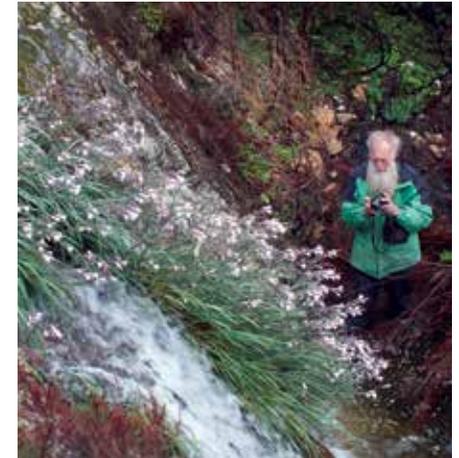
In February 2018, returning from a film-making trip in KwaZulu-Natal, Rod and Rachel were abducted and murdered. By then, they had found and photographed all but one of the known *Gladiolus* species they sought. Although their laptop and field notes have never been recovered, there is a partial record of their search including a photographic collection, email correspondence, jotted notes about locations or whom to speak to about specific species, scrawled directions and phone numbers.

The Saunders family asked close friends to complete their project of creating a field guide, drawing from what remains of Rachel's handwritten notes, documents, and Rod and Rachel's extensive archive of photographs. Working with publications in print and the Saunders' archive, together with the assistance of many in the South African botanical network, and through monies raised from donations across the world, we have completed the work Rod and Rachel began. The book you hold is the result.

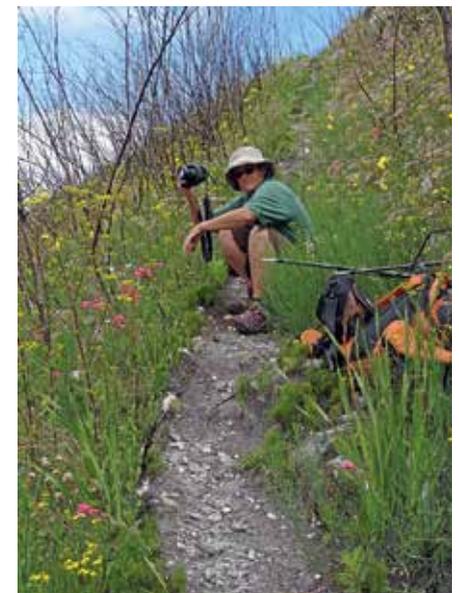
**Fiona C. Ross, Professor of Anthropology,
University of Cape Town,
March 2021**



Rachel and Rod Saunders in the field.



Rod Saunders records *Gladiolus aquamontanus*.

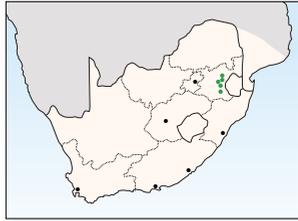


Rachel Saunders with *Gladiolus crispulatus*.

Gladiolus paludosus

paludosus = of marshes; referring to its habitat.

Gladiolus paludosus is found in marshy areas in Mpumalanga. Its mauve to pink flowers appear from mid-October to mid-November. It is sometimes confused with *G. crassifolius*, which has smaller flowers, appearing late in summer.



J F M A M J J A S O N D

STATUS Vulnerable

DESCRIPTION **Plant** 35–55cm. **Corm** globose, papery, with cormlets on short stolons at base. **Cataphylls** pale green and membranous, firm textured. **Leaves** 4–6, 7–10mm wide, soft textured, lanceolate and short, reaching midway up stem; moderately thickened margins and hyaline midrib lightly raised. **Spike** erect, sometimes branched, with 5–9 flowers but occasionally up to 20. **Bracts** up to 20mm, pale to grey-green. **Flowers** mauve to pink to reddish; lower lateral tepals with dark mauve or purple diamond-shaped or semicircular band across the midline. Perianth tube 10–14mm. **Anthers** yellow or light mauve. **Pollen** yellow. **Capsules** almost round. **Seeds** yellowish brown, winged. **Scent** unscented.



Mauve or purple markings can be seen on the lower tepals.



Rounded capsules release yellowish-brown, unevenly winged seeds.

DISTRIBUTION Mpumalanga. The centre of distribution seems to be Middelburg and eMakhazeni, south to eMkhondo and Wakkerstroom, and north to Dullstroom.

ECOLOGY & NOTES Grows in or near marshes and vleis that are wet all year round or dry out for only a few months. Plants flower after the first rains in October and November or later, blooming before the surrounding flora has grown to its full height. This species is not often seen, seemingly becoming rare. Many of the areas where it was once common are now forested or grazed by stock. Human activities are changing waterways. In the summer of 2015, a year of late rains, we found two populations in flower in mid-December. In 2017 a population at Verlorenvlei had plants that were still in flower in late January, in wet grassland but not in marshes.

POLLINATORS Probably adapted for pollination by long-tongued bees.

SIMILAR SPECIES May be confused with *G. crassifolius*.

	Flowers	Leaves	Habitat
<i>G. paludosus</i>	early summer, upper tepal 20–25mm long	margins moderately thickened	marshy
<i>G. crassifolius</i>	late summer, upper tepal 18–22mm long	heavily thickened margins and veins	grassland often at higher altitudes, also serpentine soils



Short pale bracts support medium-sized flowers.



Spikes are erect, the flowers with short perianth tubes.



G. paludosus's flowers are second and alternating.



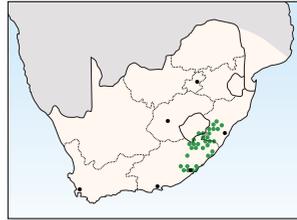
An unspecified beetle exits the perianth. Note the dark markings on the lower tepals.



G. paludosus grows in or near vleis and marshlands, here, flowering near Chrissiesmeer, Mpumalanga.

Gladiolus oppositiflorus

Referring to the distichous arrangement of flowers on the spike.



J F M A M J J A S O N D



G. oppositiflorus, mauve-pink form.

Gladiolus oppositiflorus has distinctive, oppositely ranked flowers. In the Eastern Cape, flowers tend to be pink or mauve, while in KwaZulu-Natal, the flowers are salmon-coloured and the plants shorter. Flowering is mostly February to March, but may begin earlier and/or end later.

DESCRIPTION Plant 60–160cm. **Corm** depressed-globose; papery tunics form a neck around the stem. **Cataphylls** up to 10cm above ground, velvety and green. **Leaves** 7–8 blades, ±18mm wide, firm; margins and midrib strongly thickened and velvety. **Spike** erect and unbranched, 7–15 or more flowers in two ranks up to 180° apart. **Bracts** green and hairy, inflated, sheathing base of floral tube. **Flowers** large, pale pink to mauve, pink-purple or salmon; lower 3 tepals with reddish streak. Perianth tube 40–50mm. **Anthers** light mauve. **Pollen** cream. **Capsules** narrowly oblong. **Seeds** broadly and evenly winged. **Scent** unscented.

DISTRIBUTION Found in southern KwaZulu-Natal and the Eastern Cape. Two variants used to be treated as subspecies: those from coastal areas in the Eastern Cape occur mainly in the vicinity of East London, whereas the other variant occurs further inland, at higher altitudes.

ECOLOGY & NOTES Found in full sun in grassland. Plants from coastal areas are often evergreen, whereas the inland form found at higher altitudes is deciduous. The coastal form is taller with flower spikes of 1m or more and flowers 180° apart; the inland form is shorter with flowers 100–150° apart. Intermediates between the two forms have been found. This was a very important species in early *Gladiolus* breeding; many garden hybrids and cut flowers have genes from this plant. Natural hybrids with *G. saundersii* (p102) have been found.

POLLINATORS Thought to be long-tongued flies, possibly *Prosoeca ganglbaueri*.

SIMILAR SPECIES *G. mortonius* (section *Densiflori*) is most likely to cause confusion: it has similar-coloured flowers, also occurs in the Eastern Cape, and flowers at the same time of year. *G. sericeovillosus* and *G. elliotii* also have inflated floral bracts and flowers in two ranks; however, both have much smaller flowers and occur much further north.

	Perianth tube	Anthers	Bracts	Spike
G. oppositiflorus	40–50mm	11mm	inflated, inner bracts have margins united around the ovary	distichous (flowers arranged in two opposed ranks)
G. mortonius (sect. <i>Densiflori</i>)	30–45mm	12–15mm	not inflated	secund



Sword-shaped leaves form a loose fan.



Softly pubescent bracts sheath the flowers.



The flowers are two-ranked ranked up the stem.



Note the reddish throat and base of the perianth.



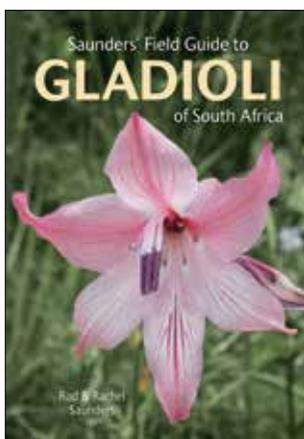
This salmon form has distinct red streaks on the lower tepals.



Tall coastal pink form, here in the Eastern Cape.



Salmon-pink form in grasslands, KwaZulu-Natal.



Saunders' Field Guide to GLADIOLI of South Africa

Rod and Rachel Saunders

THE BOOK

The genus *Gladiolus* has fascinated plant collectors, taxonomists and the general public for centuries. Known for their spectacular flowers, these highly adapted and specialised plants occur throughout Africa, Madagascar, Europe and the Middle East. South Africa is home to more than half of the world's *Gladiolus* species and the Western Cape is the heart of species diversity.

Saunders' Field Guide to Gladioli of South Africa is the first of its kind to offer a complete photographic record of the 166 species that occur in the region. Posthumously completed, this book is the culmination of the Saunders' long search to find and photograph every known species of *Gladiolus* in South Africa. It includes:

- An introduction comprising a brief history of gladioli, information about the morphology and taxonomy of the genus, and guidelines for use in the field.
- Detailed descriptions of the main floral parts of each species, along with information about ecology, pollinators, similar species and conservation status; field notes were written by Rachel Saunders.
- Over 1,000 exquisite photographs taken *in situ* detailing morphology and habitat.
- Up-to-date distribution maps indicating where species have been recorded.
- A glossary of terms with illustrations unpacking difficult terminology.

**A coveted record of the life's work of a couple
who contributed to botany and horticulture in South Africa;
it will be treasured by anyone with an interest in these magnificent flowers.**

THE AUTHORS

Rod and Rachel Saunders travelled and hiked widely in search of seed for their company, Silverhill Seeds, and were also partners in a micropropagation enterprise. Internationally respected for their knowledge of South Africa's indigenous plants, their passion for bulbs led them into this project. Unfortunately their work on the book was cut short when they were abducted and murdered during a field trip in 2018.

Fiona C. Ross is Professor of Anthropology at the University of Cape Town. She established the Saunders Guide Trust to secure the Saunders' work on gladioli and to complete the guide that they had begun before their deaths.

SALES POINTS

- Accessible coverage of all known gladioli in South Africa
- Identification at a glance
- Full-colour photographs of all species described
- Expert authors

In memory
of two
dedicated
botanists

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