

# *Gladiolus pubigerus*

by Cameron McMaster,  
African Bulbs, Napier



*Gladiolus pubigerus*. Photo: Cameron McMaster.

Fire is a natural phenomenon in the grasslands of the summer rainfall areas. All grassland species are adapted to regular spring flowering, and in fact many species are dependant on regular fires to flower, set seed and germinate in the brief window of opportunity after a grass fire. A rare and fascinating *Gladiolus* is one such species.

On 7 September 2000 a devastating fire swept the eastern spur of the Amatola Mountains above Stutterheim in the Eastern Cape, destroying hundreds of hectares of pine plantation. While the loss of the timber was a tragedy, the hundreds of hectares of mountain grassland adjacent to the plantations that had been protected from fire for many years was also burned, triggering a profusion of spring flowers. The grassland adjacent to the plantations is almost pristine, having been protected from grazing livestock for many years. However, being also protected from regular fires, many fire-dependant species had not had the opportunity to flower for some years in the moribund sward. At this time my wife and I were engaged in a survey of the flowering plants of the Amatolas and the fire afforded us a unique opportunity to record these species.

On 25 October, nearly six weeks after the fire, I set out after the early mist had cleared to explore Kologha Ridge near Dohne Peak. Near the summit of the ridge my heart skipped a beat when I saw at my feet, a number of small gladioli that in thirty years of exploring

these wonderful mountains, I had not seen before. An interesting feature was the strongly scented yellow-green inflorescence cocked at right angles to the stem. I spent the next half hour happily taking pictures and preparing a specimen for pressing and identification. We subsequently identified it as *Gladiolus pubigerus*, a species having only been recorded twice before in the Eastern Cape in the 1800s. A quest to unlock the secrets of this rare plant was to be an important part of my botanizing for the next few years.

Extensive searching rewarded us with another small population a little lower down on the northern slopes of Dohne Peak – these were growing with *Gladiolus wilsonii*, a fairly common species in this area. On 29 October I explored an area about a kilometre east of the first site and was again rewarded by another population of *G. pubigerus*, this time growing in the company of *Gladiolus longicollis*. *Gladiolus wilsonii* and *G. longicollis* are not dependant on fire for flowering.

In early November I observed another single specimen on the lower slopes of Protea Hill some 5 km to the west of the original discovery site, and later in the day a further single specimen on Red Ridge, a high point near the top of the range. By now my thirst for new populations was insatiable and the very next day, I climbed Mt Thomas, a further 5 km eastwards along the range. This part of the range is accessible to cattle and is heavily grazed; and

the grass was cropped short. While unpalatable species such as *Cyrtanthus tuckii* and *Cyrtanthus suaveolens* were widespread, it was only after very careful searching that I came across one degenerate specimen each of *Gladiolus pubigerus* and *G. longicollis* on the lower slopes. Ten days later I went back to the second site on the lower northern slopes of Dohne Peak where I saw *Gladiolus pubigerus* with seed capsules forming, and also a pink specimen: confirmation of the observation in the description that the occasional pink form occurs.

Why had we not noticed it before and why had it not been recorded regularly in the Eastern Cape? Confined to montane grassland, it is uncommon and not widespread, occurring in small isolated populations here and there. Plants have only two and rarely three leaves, the lower one basal - sheathing the lower half of the flowering stem and giving the plant a very grass-like appearance. Its flowers are inconspicuous and can easily be overlooked. Finally, it appears to be dependant on fire to flower. Repeated visits to all the sites where we first found it did not reveal any further flowering plants in years when there were no fires.

According to Peter Goldblatt and John Manning (*Gladiolus in southern Africa*, 1998, p.158) the first record of *Gladiolus pubigerus* appears to be a collection by C.F. Ecklon and C.L. Zeyher in October 1832 when they were in the Eastern Cape. A second col-



lection was made in 1860 in 'British Kaffraria' by Thomas Cooper. His specimen formed the basis for G Baker's *G. pubescens*, described in 1876. Realizing the name was a homonym, G.J. Lewis renamed the species *Gladiolus pubigerus* in 1954. Known from just a handful of collections, *Gladiolus pubigerus* was found again by O.M. Hilliard and B.I. Burt in Natal in the 1970s. Believing it to be an undescribed species they named it *G. pugioniformis* in 1979, but this name now falls into synonymy.

*Gladiolus pubigerus* appears to be fairly widespread, occurring from the Amatola Mountains in the Eastern Cape to near Pilgrims Rest in Mpumalanga and, except in the Natal Midlands, appears to be rare. Ours was one of the few records from the Eastern Cape and there are no records from the former Transkei area of the Eastern Cape.

It was in October 2002, two years

later, that we came across it again on the recently burned road verges on the farm Quagga Heights in the Cathcart district. This farm is on an elevated spur on the northern foothills of the Amatolas at an altitude of 1320 m and about 10 km east of our original record. We found it in seed and were able to identify it as *G. pubigerus* by the right-angled tilt of the upper flowering stem and the pubescent leaves sheathing the short lower stem. Anxious to obtain seed, we marked the plants with strips of coloured plastic bag tied to the fence. This action had a serious consequence. The landowner, Michael Sheard, who had been plagued by stock theft, suspected that these markers might have been placed there by prospective thieves and reported them to the local police! Fortunately we were able to explain them later and the Sheard family is now aware of the rarity of this plant and the importance of preserving it and the many other spe-

cial species that occur on their farm.

In 2003 there was another fire in the same area and a wider search along the Toise/Quanti road on 31 October and again on 4 November, revealed numerous specimens in full flower on either side of the road.

They were most numerous within the road enclosure where they have been protected from grazing livestock, together with the numerous species of ground orchids that occur in the area. The importance of road verges as a repository of many of our rare and endangered species is highlighted by this observation.

Once again flowering specimens were only seen in areas of the grassland that had recently been burned. We kept this population under close observation and were able to photograph the seed capsules. On our last visit in December, the seed was ripe, a period of six weeks having elapsed between flowering and ripe seed.

BELOW: Typical habitat of *Gladiolus pubigerus*. They are most numerous on the road enclosures where they have been protected from grazing livestock. Photo: Cameron McMaster  
Map: Sally Adam, Technodraft.



**They were most numerous within the road enclosure where they have been protected from grazing livestock, together with the numerous species of ground orchids that occur in the area.**

