

First complete account of the genus *Lachenalia* published

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South Africa is home to 6% of the world's approximately 370 000 plant species, making it the country with the richest temperate flora in the world. This dazzling diversity includes many large genera, and it is not often that a monograph appears that describes an entire, large genus. *Lachenalia* (also known as Cape hyacinths or *violittjies*) is one such large genus. It has 133 known species that are confined to South Africa and (marginally) southern Namibia. These endemic plants have been popular with specialist bulb growers worldwide for over 100 years. The publication in 2012 of a comprehensive account of the genus marks the culmination of the life's work of two 20th-century South African plant taxonomists whose work between 1929 and 2012 has spanned more than eight decades.

Early records of *Lachenalia* date back to the late 17th century. In 1880, the Kew botanist John Baker published an account that described 27 species, divided among six genera. Baker later described more species, which culminated in 1897 in a monograph (published in the 6th volume of *Flora Capensis*) that recognised 42 species in five sub-genera. Most of the subsequent taxonomic work was done by Ms Winsome Barker, first curator of the Compton Herbarium at Kirstenbosch. Her first publication on the genus appeared in 1930, and over the next 59 years she described 47 new species and 11 new varieties. It was always her intention to publish a monograph on the genus, but the goal ultimately eluded her. Her last taxonomic description appeared in 1989, and she passed away in 1994 at the age of 87. In 1978, Graham Duncan took up a position at the Kirstenbosch Botanical Gardens, where he met and was influenced by Barker. Duncan is now Curator of the Bulbous Plants Living Collection at the Kirstenbosch Gardens, and over 35 years he has described a further 38 species of *Lachenalia*. In 1988, he published *The Lachenalia Handbook*, which illustrated and described 88 species. The handbook did not provide a comprehensive coverage of the genus, and was intended 'to collate available information so as to provide horticulturists and informed gardeners with a list of valid species names...and notes on identification and cultivation'. Almost another quarter of a century was to pass before the final goal of complete treatment was to be realised.

The information in this book arises from a combination of a great deal of searching in the field, horticultural efforts to grow and propagate specimens, and scientific endeavour. As a horticulturalist, Duncan has gained enormous insights from working with this genus for over three decades. He has combined this experience with scientific study, having recently completed a MSc degree that dealt with the cladistics of the genus, and which provided a sound basis for this book. Attention is also drawn to the work of others who have shown that differences in basic chromosome numbers result in breeding barriers between sympatric *Lachenalia* species whose flowering periods overlap. Thus, although many hybrids have been produced by horticulturalists, they are very rare in the wild. The book even contains a portrait of the 6-year-old Charles Darwin holding a potted hybrid *Lachenalia*, dated ca. 1816. The fact that certain species of *Lachenalia* exhibit a high degree of morphological variation has in the past led to confusion regarding their taxonomy, but the book points out that most species are in fact distinct and easily identified. Species with a similar (morphological) appearance are also not necessarily more closely related. In the 1988 *Lachenalia Handbook*, species were arranged by similar appearance (for ease of identification), and this has been interpreted by other scientists as indicating genetic relatedness. These questions are discussed in some detail, and provide a sound basis both for identifying species and understanding how they are related.

As is the case with so many Cape plants (the genus is concentrated in the southwestern Cape), many (over 50) are critically endangered, endangered or vulnerable, most of which is a result of habitat destruction for agriculture or urban development. Duncan recalls some of the 'highs' of his field career, including finding thousands of flowering specimens of *Lachenalia matthewsii* that had been considered extinct for over 40 years and finding an elusive specimen of the inconspicuous *L. maximiliani* under their parked car after a long and unsuccessful search of the surrounding area.

Although it has had a long gestation period, the resultant monograph has been worth the wait – it is a beautifully produced book. There are separate chapters on the history of the genus, cultivation and propagation, ecology and conservation, and biology. The largest section (over two-thirds of the book) is devoted to the taxonomic treatment; 11 new species are described for the first time. Each species is illustrated by means of full-colour photographs, and distribution maps are also provided. There is also a list of insufficiently known names (e.g. *Lachenalia cooperi* – 'Type not found, described from a cultivated plant'), and excluded taxa (previously described species that subsequently merged with other species). Other useful features include a key to the species, a table showing month-by-month flowering times for all species, and a glossary of terms for the uninitiated. The book is a blend of art and science, enhanced by 39 colour paintings of species by nine artists (17 of them by Barker). No taxonomic monograph is ever the final word – new species will be discovered, and changes to nomenclature will occur. However, *The Genus Lachenalia* will no doubt stand as one of the significant milestones of South African botanical publishing for decades to come. It will be a very welcome addition to the libraries of botanists, horticulturalists, conservationists and collectors of Africana.

