



Two new species of *Oxalis* (Oxalidaceae) from the Greater Cape Floristic Region

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Abstract

Two new multifoliolate species of *Oxalis* L. (Oxalidaceae) from the Hantam Karoo region of South Africa are described and illustrated: *Oxalis carolina* and *O. filifoliolata*. Both species occur in single populations in the extremely geophyte-rich area on the Bokkeveld Plateau in the Northern Cape Province. Morphological characteristics, phylogenetic position, habitat description and conservation status of the new species are provided, in addition to a diagnostic comparison with other phenotypically similar Cape species. Fifteen multifoliolate *Oxalis* species are currently recognized in South Africa, disregarding multifoliolate varieties of otherwise trifoliolate species. A key for multifoliolate *Oxalis* species known from the Bokkeveld Plateau is presented.

Key words: Cape Floristic Region, genome size, Oxalidaceae, phylogeny, South Africa, taxonomy

Introduction

With ± 200 species and many intraspecific taxa, *Oxalis* L. (Oxalidaceae) is the largest geophytic genus in the Greater Cape Floristic Region of South Africa (Dreyer & Makgaka 2003). Several new species have been described recently, including *O. ericifolia* Oberlander & Dreyer (2009: 242) from the Knersvlakte and *O. saltusbelli* Dreyer & Roets (2009: 113), a multifoliolate species from the Bokkeveld Plateau in the Northern Cape Province. Multifoliolate leaves are restricted to a small, but phylogenetically diverse, group of South African *Oxalis* species (Oberlander *et al.* 2011). In his monograph of the genus in South Africa, Salter (1944) recognized 14 multifoliolate species, 12 of which are still recognized (Dreyer & Makgaka 2003, Dreyer *et al.* 2010), in addition to four multifoliolate varieties of otherwise trifoliolate species. Two unusual and very distinct multifoliolate *Oxalis* taxa were discovered north of Nieuwoudtville in the Northern Cape Province during field work collecting species for cytogenetic analyses. We describe these species as *O. carolina* J. Suda & Sudová and *O. filifoliolata* J. Suda & Krejčíková, and evaluate their systematic position based on DNA sequence data, morphology and karyological evidence. In addition, we provide an updated key to all multifoliolate *Oxalis* species reported from the Bokkeveld Plateau, to facilitate identification of this distinct group in the geophyte-rich area.