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Article

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The genus *Pauridia* (Hypoxidaceae) amplified to include *Hypoxis* sect. *Ianthe*, *Saniella* and *Spiloxene*, with revised nomenclature and typification

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Abstract

Recent phylogenetic analyses show that the species of the southern African genera *Pauridia*, *Saniella* and *Spiloxene* and the Australian, Tasmanian and New Zealand *Hypoxis* sect. *Ianthe* form a highly supported, monophyletic clade. In keeping with earlier suggestions that these taxa doubtfully warrant separate status, and to avoid the recognition of *Hypoxis* and *Spiloxene* as paraphyletic, we expand the circumscription of *Pauridia* to include *Saniella*, *Spiloxene* and *Hypoxis* sect. *Ianthe*. As a result 33 new combinations at specific and infraspecific level are proposed and one epitype, two neotypes and 30 lectotypes are newly designated. Three basionyms, of which Linnaeus, Linnaeus filius and Lamarck are the authors, are also typified (*Amaryllis capensis*, *Hypoxis aquatica*, and *Hypoxis pumila*).

Key words: Hypoxidaceae, *Hypoxis*, new combination, *Pauridia*, *Saniella*, *Spiloxene*, taxonomy, typification

Introduction

For many years the circumscription of the genera included in the Hypoxidaceae R.Br. has posed major challenges to taxonomists studying the family (Nordal 1998, Burtt 2000). Past difficulties have been largely resolved, however, by the recent phylogenetic study of Kocyan *et al*. (2011), particularly with regard to understanding the relationships amongst the temperate southern hemisphere taxa, *Pauridia* Harvey (1838: 341), *Saniella* Hilliard & Burtt (1978: 70), *Spiloxene* Salisbury (1866: 44), and *Hypoxis* Linnaeus (1759: 986) sect. *Ianthe* (Salisbury 1866: 44) Bentham & Hooker (1883: 717).

Based on sequence data from four plastid DNA regions, Kocyan *et al*. (2011) confirmed the paraphyly of *Spiloxene*, as traditionally circumscribed by Nel (1914) and Garside (1936), and showed that *Spiloxene* is monophyletic only with the inclusion of *Pauridia*, *Saniella* and the Australian, Tasmanian and New Zealand species of *Hypoxis* belonging to sect. *Ianthe*, as given by Geerinck (1969) and Henderson (1987) (Fig. 1). Synapomorphies supporting this cladistically robust monophyletic group, referred to as the *Pauridia* clade by Kocyan *et al*. (2011), are the mucilage canals above the vascular bundles of the leaves (Rudall *et al*. 1998, Thompson 1976) and disulcate, micro-echinate pollen grains, with the exception of the secondarily derived trisulcate state in one of the Australian species (Simpson 1983, Rudall *et al*. 1998, Kocyan *et al*. unpubl. data).

According to Nel (1914: as *Ianthe*) and Garside (1936), *Spiloxene* is remarkably uniform, comprising species that differ little from each other, often by a few, subtle features. According to the later, alternative classification of Geerinck (1969), *Spiloxene* was placed under *Hypoxis*, within sect. *Ianthe*, adding to the several species from Australia, Tasmania and New Zealand previously placed here. This change was not favoured by South African botanists, who retained Nel's classification for the African taxa (Garside 1950,

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