

HYACINTHACEAE

NEW COMBINATIONS IN *LEDEBOURIA*

The close relationship among *Drimiopsis* Lindl. & Paxton, *Ledebouria* Roth and *Resnova* Van der Merwe (Hyacinthoideae: Massonieae) that was highlighted by Jessop (1972) has subsequently resulted in their segregation as the subtribe Ledebouriinae within tribe Massonieae (Müller-Doblies & Müller-Doblies 1997). Characters that define the group include the mostly spotted or streaked leaves, commonly multiple inflorescences per annual growth cycle, reduced or obsolete bracts, and paired ovules per locule; often with just a single seed developing in only one or two of the locules. The leathery capsule walls and the complete dehiscence, with the locules reflexing completely, are diagnostic for the group.

The generic status of the three taxa is less clear, however, and *Resnova* has usually been treated as synonymous with either *Drimiopsis* (Jessop 1972) or

Ledebouria [as *Scilla*] (Phillips 1951). More recently, Müller-Doblies & Müller-Doblies (1997) proposed their reinstatement at generic level, a treatment that was followed by Lebatha *et al.* (2006). The development of molecular techniques has prompted a renewed interest in the systematic status of the three genera, but preliminary phylogenetic analyses of plastid sequence data have either failed to provide compelling evidence supporting the recognition of three genera (Manning *et al.* 2004), or have actually demonstrated that *Ledebouria* is paraphyletic unless it includes *Drimiopsis* and *Resnova*, although the latter two are evidently monophyletic (Pfosser & Speta 1999; Pfosser *et al.* 2003; Wetschnig & Pfosser 2003; Lebatha *et al.* 2006; Wetschnig *et al.* 2007). A morphological cladistic analysis of the group provided only weak support (jackknife support value 55) for a monophyletic *Ledebouria*, based on a limited sampling of just eight species in the genus (Lebatha *et al.*

2006). Proposed synapomorphies for *Ledebouria s.str.* were a conical and severally lobed ovary, a style that is longer than the ovary, and punctate-reticulate pollen (Lebatha *et al.* 2006). Of these states, ovary shape and lobing are not consistent across the genus, with both ovoid and turbinate and 3- or 6-lobed ovaries present in the genus (Venter 2008). *Ledebouria s.str.* thus remains very weakly diagnosable.

The lack of convincing molecular evidence supporting the recognition of the three genera as monophyletic lineages led Manning *et al.* (2004) to include both *Drimiopsis* and *Resnova* in a broadly circumscribed *Ledebouria*. They suggested that the various floral differences between the three taxa that are generally used to justify their separation at generic level probably represent linked pollination syndromes, and are thus not independent. In any event, there is no doubt that the three taxa are closely allied, and their taxonomic status at this stage is primarily a matter of choice, although molecular data favours their treatment as a single genus.

The broader circumscription of *Ledebouria* proposed by Manning *et al.* (2004) has been implemented in the latest checklist of southern African plants (Manning & Goldblatt 2006), but a new species of *Drimiopsis* described since then (Hankey *et al.* 2008) lacks a nomenclatural combination in *Ledebouria*. We provide this combination here to facilitate its integration into checklists and floras that adopt the broader generic circumscription. A combination is also provided for *Resnova transvaalensis* Van der Merwe, which was treated by Manning *et al.* (2004) as conspecific with *Resnova humifusa* Van der Merwe, following Müller-Doblies & Müller-Doblies (1997), but which we now consider to be distinct.

We also take this opportunity to formalize the status of *Drimiopsis* and *Resnova* at sectional level within *Ledebouria*. Current morphological and molecular analyses suggest that these two groups are monophyletic and it is useful to have a formal way of referring to them as infrageneric clusters within *Ledebouria* (Lebatha *et al.* 2006). It is likely that additional sections will be required in order to render sect. *Ledebouria* monophyletic, but this will require a more complete analysis of the group.

***Ledebouria* Roth, *Novae plantarum species praesertim Indiae orientalis*: 194 (1821). Type: *Ledebouria hyacinthina* Roth**

Section *Drimiopsis* (Lindl. & Paxton) J.C.Manning & Goldblatt, stat. nov.

Drimiopsis Lindl. & Paxton: 73 (1851). Type: *Drimiopsis maculata* Lindl. = *Ledebouria petiolata* J.C.Manning & Goldblatt

***Ledebouria linioseta* (A.J.Hankey & P.D.Lebatha) J.C.Manning & Goldblatt, comb. nov. *Drimiopsis linioseta* A.J.Hankey & P.D.Lebatha, in Hankey *et al.*: 72 (2008). Type: South Africa, Mpumalanga, between Roossenekal and Lydenburg, 25 Nov. 1999, Hankey & Turner 900 (PRE, holo.; K, iso.).**

Section *Resnova* (Van der Merwe) J.C.Manning & Goldblatt, stat. nov.

Resnova Van der Merwe: 46 (1946). Type: *Resnova humifusa* (Baker) U.Müll.-Doblies & D.Müll.-Doblies, designated by Müller-Doblies & Müller-Doblies (1997: 59).

***Ledebouria transvaalensis* (Van der Merwe) J.C.Manning & Goldblatt, comb. nov. *Resnova transvaalensis* Van der Merwe: 46 (1946). Type: South Africa, [Mpumalanga], Piet Retief Distr., Amsterdam, Van der Merwe s.n. PRE26432 (PRE, holo.).**

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