



## Upping their number, addressing their risk. *Viola singularis* (Violaceae) revisited, and an evaluation of sect. *Andinium*, its higher taxonomic group

JOHN M. WATSON & ANA R. FLORES

Casilla 161, Los Andes, Chile. E-mail: john.anita.watson@gmail.com

### Abstract

An important amendment is made to the type locality given for *Viola singularis*. We analyse the precarious rarity of many *Viola* sect *Andinium* taxa, including this particular species. It is only known as a solitary specimen from a single site. The combined effect of rarity and geographical remoteness on the numerical content of the section is also discussed.

**Key words:** Argentina, conservation, field documentation, highly adapted, narrow endemic, taxonomic inflation, undescribed species

### Background

At the time *Viola singularis* J.M. Watson & A.R. Flores (2009: 20) was published by ourselves, the field label of the type specimen at Mendoza, Argentina (MERL) lacked much information usually provided for recent gatherings, including some basic, required data. No mention was made of country of origin, main political administrative zone, any readily recognizable geographic name, site elevation, identities of collectors or collector, or specimen reference number. Nevertheless, an obscure name of a river, said to be the Río del Nacimiento, was given as the type site, and it appeared to connect the collection to a locality in the Andes of the Province of Mendoza itself. This clue was strengthened by the overwhelming and unsurprising predominance of specimens from the Province at MERL. We therefore inserted our geographical deduction with some confidence.

Later, Dr Roberto Kiesling, by then living in Mendoza and researching at MERL, informed us he had come across a field note book there. It included *V. singularis*, and supplied some of the important missing information. The collector's name was Luis Del Vitto. His rosulate violet had in reality been collected from the district of Belén in the Province of Catamarca, NW Argentina. Recently, Méndez & Azpillaga (2013) have published an inventory of type specimens at MERL, including *V. singularis*, where this subsequent field documentation for it is incorporated. Our attempts to communicate with Del Vitto himself, in the hope of obtaining further information, proved fruitless.

Accurate geographical details for any gathering have importance for a number of reasons, of course. Over and above that, as will be explained below they are absolutely imperative for evaluation of certain taxa of sect. *Andinium* of *Viola*, as exemplified by this particular species. We therefore provide the following correct and most complete type field data available.

### Results

*Viola singularis* J.M. Watson & A.R. Flores

Type: ARGENTINA. Provincia de Catamarca, Belén, Río de los Nacimientos, entre rocas, en la orilla del río, mimética, 21-I-1992, Luis A. Del Vitto *s.n.* (MERL 55055).

**Location:**—The true position in Catamarca is sited 600 km to the north and slightly east of the speculative version provided in the protologue (Watson & Flores 2009).

and stimulated by rekindled scientific interest in the section following six to seven decades of almost total neglect, explains why such a quantity of undescribed sect. *Andinium* species is ‘suddenly’ coming to light.

As well as accounting for the striking incidence of recent and intended publication of valid new taxa, these factors underline dramatically the paramount need to assess this group of plants for their formal conservation status. That last mentioned requirement is particularly urgent in the face of pressure from large-scale mineral exploitation as well as ever increasing stock grazing throughout the section’s range, where adequately protected areas are all too few and far between. But not even the status of legally designated sanctuary is any guarantee. Serious damage by the introduced European hare, *Lepus europaeus* Pallas, to half the individuals of the small population of one species has been noted at its only known site in a national park (Watson & Flores pers. obs.), indicating it ought to be categorized as Critically Endangered (CR). Many of these highly adapted sect. *Andinium* violets (Watson & Flores 2007, 2012a, 2013a, 2013c) are likely to be especially vulnerable to rapid climate change. The section as a whole also continues to resist attempted long-term *ex situ* cultivation down to the last species (Watson & Flores 2012a, 2013c). But only as its members get to be described effectively do evaluation and potential protective measures, which might otherwise be appropriately termed ‘conservation’, become possible even (e.g. Leadlay 2006, Taylor 2007). “Effectively” signifies providing the most precise and accurate data possible, ideally with full coordinates. As *V. singularis* has demonstrated, without such guidance a published taxon’s site may remain either unknown or mistaken, or at best the novelty can only be placed vaguely within an unhelpfully wide area. Missing, inaccurate and imprecise information of any kind may even lead to insufficient or inappropriate decisions by conservation authorities.

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