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The glandulous *Specklinia*: morphological convergence versus phylogenetic divergence

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Abstract

The present paper focuses on the systematics of the *Specklinia glandulosa* species complex. Traditionally, *S. glandulosa* has been considered a widely distributed and variable species, ranging from Mexico to the Guiana Shield. Here it is treated as one of at least six different, albeit closely related, species. Of these species, *S. pertenuis* and *S. vittariifolia*, are recognized as distinct species and removed from the synonymy of *S. glandulosa*, and *S. alajuelensis* and *S. gersonii* are described and illustrated as new to science. *Specklinia chontalensis* is described and illustrated from living, Costa Rican material. *Specklinia alajuelensis* is compared with *S. glandulosa* and *S. vittariifolia*, from which it differs in its broader leaves, multi-flowered, lax inflorescence that surpasses the leaves, and smaller petals and sepals. *Specklinia gersonii* is compared with *S. glandulosa*, from which it differs in the smaller leaves, and the smaller, orange flowers.

Key words: Orchidaceae, Pleurothallidinae, *Specklinia, S. alajuelensis*, *S. chontalensis*, *S. gersonii*, *S. glandulosa*, *S. vittariifolia*

Introduction

Frequently, when a few outstanding morphological features are shared by a number of similar specimens authors tend to accept them as variations of a single species. In such cases the similarities amongst the group of specimens appear much larger than their individual differences. However, this can be misleading and such variations may not always represent the variation of a single taxon. A larger sampling of the alleged variable species might show that those supposedly unique morphological features are actually diagnostic to a whole lineage of well established species. Long, flattened inflorescences bearing large, bright reddish-orange flowers, led authors to believe that *Specklinia endotrachys* (Reichenbach 1876: 95) Pridgeon & Chase (2001: 257), *S. pfavii* (Reichenbach 1886: 555) Pupulin & Karremans in Pupulin *et al.* (2012: 8–10), *S. remotiflora* Pupulin & Karremans in Pupulin *et al.* (2012: 11–15) and *S. spectabilis* (Ames & Schweinfurth 1925: 34–35) Pupulin & Karremans in Pupulin *et al.* (2012: 15–18), were all a single variable species despite their obvious morphological differences and completely different ecological preferences (Pupulin *et al.* 2012). The *Specklinia condylata* complex was another such example (Bogarín *et al.* 2014). Similarly a high morphological variation has been traditionally accepted in *Specklinia glandulosa* (Ames 1923: 60–61) Pridgeon & Chase (2001: 257), a name used for classifying any *Specklinia* specimen with orange flowers and fully glandular, single-flowered inflorescences (Luer 2006). However, when considering additional evidence it becomes evident that *S. glandulosa* is actually a species complex in need of disentanglement.

August Endrés was the first to collect and illustrate a member of the glandulous *Specklinia* species around 1867. The origin of his material was Costa Rica without any precise locality, but the illustrations and descriptions are still kept at Reichenbach's herbarium in Vienna. Nevertheless, the first name applicable to this group of species appeared much later. *Pleurothallis glandulosa* was described by Oakes Ames from a plant collected by Powell in central Panama in 1923. The fully glandular pedicel, rachis, peduncle, ovary and external surface of sepals, which prompted its name,

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