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A reconsideration of the empusellous species of *Specklinia* (Orchidaceae: Pleurothallidinae) in Costa Rica

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Abstract

This paper focuses on the systematics of the *Specklinia endotrachys* species complex in Costa Rica. Traditionally considered a variable species, *S. endotrachys* is here treated as one of at least four, albeit closely related, taxa. Of these species, *S. endotrachys*, *S. pfavii*, and *S. spectabilis* are described and illustrated from living material, and *S. remotiflora* is described and illustrated as new to science. *Specklinia remotiflora* is compared with *S. endotrachys* and S. *spectabilis*, from which it differs in the repent habit, lax inflorescence and campanulate flowers provided with convergent sepals and non-apiculate petals. New combinations are proposed for *Pleurothallis pfavii* and *P. spectabilis*. A lectotype is selected for *Pleurothallis endotrachys*. Observations on the pollination of *S. remotiflora* and *S. spectabilis* in cultivation are given.

Key words: Neotropical orchids, pollination, *Specklinia endotrachys* complex, *Specklinia remotiflora*

Introduction

Recircumscription of the generic limits of the mammoth genus *Pleurothallis* Brown (1813: 211) (Orchidaceae: Pleurothallidinae) as a result of molecular studies (Pridgeon *et al.* 2001, Pridgeon & Chase 2001) and the consequent creation of several more segregate genera (Pridgeon & Chase 2001, 2002, Luer 2004, 2005, 2006, 2007, 2010, 2011) has made the taxonomy of some concepts fluid. In particular, the paper by Pridgeon and Chase (2001) presented new evidence to re-establish *Specklinia* Lindley (1830: pl. 8), recognizing 86 species, most of which were transferred by the authors. Both in the bootstrap consensus trees of the *matK/trnL-F* dataset and the most parsimonious tree from the combined *matK*/*trnL-F*/ITS nrDNA dataset their "clade F" unites a morphologically highly heterogeneous set of taxa, including *Dryadella simula* (Rchb.f.) Luer (1978: 209), *Pleurothallis costaricensis* Rolfe (1917: 80), *P. lentiginosa* Lehmann & Kränzlin (in Kränzlin 1899: 446), *P. endotrachys* Reichenbach (1876: 95), *Acostaea costaricensis* Schlechter (1923a: 284), and species of the genera *Platystele* Schlechter (1910: 565) and *Scaphosepalum* Pfitzer (1889: 139). In one of the most parsimonious trees of the complete ITS nrDNA matrix, based on a larger sampling, clade F also includes other species of *Pleurothallis*, among which *P. lanceola* (Sw.) Sprengel (1826: 731)—the type species of the genus *Specklinia*—together with *P. endotrachys*, *P. fulgens* Reichenbach (1875b: 516), *P. lateritia* Endrés ex Reichenbach (1872: 731), *P. lentiginosa*, and *P. tribuloides* (Sw.) Lindley (1830: 6), form a distinct subclade treated by the authors as the "core" *Specklinia*. Even with the removal of the basal *Dryadella* Luer (1978: 207) and the derived *Platystele* and *Scaphosepalum* from clade F, the resulting circumscription of *Specklinia* is variable both in terms of vegetative and floral morphology.

Specklinia sensu Pridgeon & Chase (2001) is difficult to characterize on the basis of a particular set of distinguishing morphological features, which has promoted the creation of several new genera, expressly

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