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BOOK REVIEW

Luer, C.A. 2007. **Icones Pleurothallidinarum XXIX. A third century of *Stelis* of Ecuador. Systematics of *Apoda-Prorepentia*. Systematics of miscellaneous small genera. Addenda: new genera, species, and combinations**. Monogr. Syst. Bot. Missouri Bot. Gard. 112: 1-130.

With this recent delivery of a third century of new species of *Stelis* Sw. from Ecuador (pp. 1--82), Carlyle A. Luer raised to three hundreds the number of *Stelis* species he and his co-workers (notably Alex Hirtz and Lorena Endara) revealed to science in the last five years (Luer 2002, 2004). Taking in account a forthcoming lot of 130 previously known and new species (announced in the Introduction), plus some 50 names among those recorded by Schlechter (1921), the total number of accepted species known from Ecuador is close to 500, or over the half of the number of species presently known in the genus. However, according to Luer's estimate, Ecuadorean leadership in *Stelis* diversity is destined to fade as soon as a similar amount of time and effort in studying this genus will be expanded to the neighboring regions of Colombia and Peru, both of which are more than four times larger in geographic area. This let us easily envision a genus *Stelis* in the strict sense (as it is treated by Luer in his series) encompassing more than 1500 valid species, which will convert it into the largest Neotropical orchid genus and perhaps into the largest natural genus of the Orchidaceae as a whole.

As it is usual in Luer's "green books" series, each species is fully described, and paragraphs are provided on etymology and a short discussion for each taxon. With the exceptions of *S. lynniana* and *S. paulula*, which are known only from cultivated specimens without exact provenience, locality data are provided for all the species. All the new species are illustrated in composite ink plates by the well-trained hands by Luer himself and Stig Dalström, and it is unfortunate that, for editorial reasons, the 101 plates had to be strongly reduced in size from the original full-page format, someway impeding a clearer view of the often-intricate floral details of *Stelis*.

Unlike the two previous parts of the treatment of *Stelis* of Ecuador (Luer 2002, 2004), section *Labiatae* is combined here with sect. *Stelis*, the diagnostic character of sect. *Labiatae* (the degree of connation of lateral sepals) proving to be inconsistent. The species of the new century are accordingly arranged into three Sections, namely *Nexipous* (8 species), *Humboldtia* (8 species) and *Stelis* (87 species), the latter including sect. *Labiatae*. Because of the comparatively stable flower morphology and the mostly stereotyped vegetative architecture of *Stelis*, which makes difficult to manage such a large group for identification purposes, a key to the Ecuadorian species will be a welcome addition to part four of the series, where a systematic treatment is promised.

Following the third century of new *Stelis* from Ecuador, the fascicle includes, systematic monographs of *Apoda-Prorepentia* (Luer) Luer, and other miscellaneous pleurothallid genera not previously treated in the "green" series.

Apoda-Prorepentia, based on *Pleurothallis* sect. *Apoda-Prorepentes* Lindl. and elevated at generic rank by Luer (2004), includes in the present treatment 8 species, mostly characterized by the repent and often pendent habit, but with highly diverse floral morphology. According to the author, the genus ranges from Mexico to Brazil, Ecuador, and the West Indies, with a main center in northwestern Andes. A key to the species, full descriptions and notes, and a composite plate for each species are provided in the acclaimed style of previous *Icones Pleurothallidinarum* systematic treatments.

Six monotypic genera [namely *Cucumeria* Luer, *Empusella* (Luer) Luer, *Mirandopsis* Szlach. & Marg., *Mixis* Luer, *Mystacorchis* Szlach. & Marg., and *Psedoctomeria* Kraenzl.] are monographed; references are given to the species illustrations that appeared in previous volumes, with the exception of *Mixis incongrua* Luer, which is depicted at page 104 of the present volume. Also monographed are *Physosiphon* Lindl. (2 species from Mexico to Peru, both illustrated,

P. emarginatum in two different morphs), and *Physothallis* Garay (2 species endemic to Ecuador, illustrated on page 105).

In the Addenda section (pp. 106-130), devoted to miscellaneous new genera, species, and combinations, Luer describes *Effusiella*, a genus based on *Pleurothallis* subgen. *Effusia* Luer, and *Niphantha*, with 2 species segregated from the same subgenus (all treated a *Stelis sensu lato* by Pridgeon & Chase, 2001). The first new genus is admittedly polymorphic and scarcely distinct from *Pabstiella* Brieger & Senghas, at the point that generic assignments should rely "on interpretation of subtle floral characters and distribution". Although noting that *Effusiella* and *Pabstiella* might constitute a single genus, 40 new combinations are published here under *Effusiella* (pp. 106-107, plus *E. vellozoana* amid Pabstiellas on p. 121), while 67 species are formally transferred to *Pabstiella* (pp. 119-121). Two new species of *Effusiella* are described and illustrated from Peru and Ecuador. *Nyphantha* is mainly distinguished from *Effusiella* by a comparative large spathe and the lateral sepals free nearly to the base, and allegedly supported by an unpublished DNA analysis.

Additionally, new species are described and illustrated in the genera *Alaticaulia* (a recent segregate from *Masdevallia*, of which the author describes 3 new species from Ecuador and Peru) *Lepanthes* (4 species from Colombia and Ecuador), *Pleurothallis* (*P. davisii* from Ecuador), *Restrepia* (the Colombian *R. fritillina*), *Spilotantha* (another genus split from Masdevallia, of which a new species is described from Ecuador), *Stelis* (*S. maduroi* from Panama), *Trichosalpinx* (*T. sipapoensis* from Venezuela), and *Trisetella* (the Ecuadorean *T. klingeri*). Among nomenclatural changes, the volume offers 4 new combinations in *Acianthera*, 8 in *Alaticaulia*, 12 in *Anathallis*, 2 in *Echinosepala* [but *E. vittata* (Pupulin & M.A. Blanco) Luer is a superfluous name predated by *E. vittata* (Pupulin & M.A. Blanco) C.O. Murales & N. Villal. 2004), 1 each in *Reichantha*, *Specklinia*, and *Tigivesta* (replacing name for *Vestigium* Luer, predated by a fungal genus), and 4 in *Teagueia*.

The plates of the four new species referable to genera allied to *Masdevallia* (*Alaticaulia inamoena, A. neukermansii, A. rojohnii* and *Spilotantha nigricans,* pp. 122-130) are numbered according to the format of *Systematics of Masdevallia*, bringing the total of numbered illustrations to 695.

Franco Pupulin
Lankester Botanical Garden