

## Three new combinations and a new synonym in the subtribe Maxillariinae (Orchidaceae)

Joelcio Freitas<sup>1,\*</sup> & Elton John de Lório<sup>2</sup>

<sup>1)</sup> Laboratório de Sistemática e Genética Vegetal, Departamento de Ciências Agrárias e Biológicas, Centro Universitário Norte do Espírito Santo, Universidade Federal do Espírito Santo, Rodovia BR 101 Norte, Km. 60, Bairro Litorâneo, São Mateus, ES, CEP 29932-540, Brasil (\*corresponding author's e-mail: email: joelciofr@gmail.com)

<sup>2)</sup> Escola Nacional de Botânica Tropical, Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rua Pacheco Leão, 2040, Solar da Imperatriz, Horto, Rio de Janeiro, RJ, CEP 22460-030, Brasil

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Based on previously published morphological and molecular analyses, a new classification for subtribe Maxillariinae (Orchidaceae) was proposed, and various genera were newly segregated. Among the combinations for species in those genera, three were not in accordance with the ICN. Here we propose three new combinations and a new synonym.

Maxillariinae is a monophyletic subtribe in Orchidaceae, supported by morphological and molecular synapomorphies (Whitten *et al.* 2007, Blanco *et al.* 2007, Szlachetko & Sitko 2007, Szlachetko *et al.* 2012). In the classification proposed by Szlachetko *et al.* (2012), several new genera were described and new combinations proposed. Among the combinations, three were not in accordance with the *International Code of Nomenclature for Algae, Fungi and Plants* (McNeill *et al.* 2012).

*Adamanthus* comprises about 32 species, segregated from *Camaridium s. lato* by Szlachetko *et al.* (2007, 2012). Szlachetko *et al.* (2012) combined some species of Maxillariinae in *Adamanthus*, however, among those combinations, *A. parvilabia* (Ames & C. Schweinf.) Szlach. & Sitko is invalid (McNeill *et al.* 2012: Art. 52.1), because its basionym *Maxillaria parvilabia* Ames & C. Schweinf. (Schweinfurth 1945: 62–64) is illegitimate, being a later homonym of

*M. parvilabia* Rolfe (Rolfe 1918: 232). A replacing name is *Camaridium standleyi* M.A. Blanco (Blanco 2007: 521), whose epithet should thus be used.

### ***Adamanthus standleyi* (M.A. Blanco) J. Freitas & Lório, *comb. nova***

*Camaridium standleyi* M.A. Blanco, Lankesteriana 7(3): 521. 2007. — TYPE (not seen by us): Costa Rica. San José: La Palma, 1600 m, 3 Feb. 1924 P.C. Standley 32939 (holotype AMES; isotype US).

*Maxillaria parvilabia* Ames & C. Schweinf., Schedulae Orchidianae 8: 62–64. 1925, *nom. illeg.*, non *M. parvilabia* Rolfe, Orchid Review 26: 232. 1918. — *Adamanthus parvilabia* (Ames & C. Schweinf.) Szlach. & Sitko, Biodiv. Res. Conserv. 25: 21. 2012, *nom. inval.*

*Calawayia* comprises 15 species as proposed by Szlachetko *et al.* (2012). Among the combinations proposed in this genus, *C. exaltata* (Kraenzl.) Szlach. & Sitko, is invalid because

*Maxillaria exaltata* (Kraenzl.) C. Schweinf. (Schweinfurth 1945: 272) was cited as the basionym, however the correct basionym is *Camaridium exaltatum* Kraenzl. (Kraenzlin 1906: 386). According to Articles 11.4 and 41.1 of McNeill *et al.* 2012 the combination is illegitimate.

***Calawaya exaltata* (Kraenzl.) J. Freitas & Lirio, *comb. nova***

*Camaridium exaltatum* Kraenzl., Bot. Jahrb. Syst. 37 (Heft 4): 386. 1906. — TYPE: Peru. Dept. Loreto. Berge östlich von Moyobamba, Lockeres Savannengehölz, 1100 m, *Weberbauer 4620* (holotype B, destroyed; photo F!). — *Calawaya exaltata* (Kraenzl.) Szlach. & Sitko, Biodiv. Res. Conserv. 25: 24. 2012, *nom. inval.*

*Chelyella* comprises about 14 species as proposed by Szlachetko *et al.* (2012). Among the combinations proposed in the genus, *C. serrulata* (Ames & Correll) Szlach. & Sitko was based on *Maxillaria serrulata* Ames & Correll (Ames & Correll 1943: 16), a new name proposed for the basionym *Camaridium amparoanum* Schltr. (Schlechter 1923: 56) [*non Maxillaria amparoana* Schltr. (Schlechter 1923: 54)] when transferred to *Maxillaria*, since the epithet was occupied. In the combination proposed by Szlachetko *et al.* (2012) the epithet *amparoanum* should have been used, since it was available for the genus *Chelyella* (McNeill *et al.* 2012: Art. 11.4).

***Chelyella amparoana* (Schltr.) J. Freitas & Lirio, *comb. nova***

*Camaridium amparoanum* Schltr., Repert. Spec. Nov. Regni Veg., Beih. 19: 56. 1923. — TYPE (not seen by us): Costa Rica. San Jerónimo, 1400 m, July 1921 *C. Wercklé 122* (holotype W).

*Chelyella serrulata* (Schltr.) Szlach. & Sitko, Biodiv. Res. Conserv. 25: 26. 2012, *syn. nov.*

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## References

- Ames O. & Correll D.S. 1943: Notes on American Orchids. — *Botanical Museum Leaflets* 11(1): 1–28.
- Ames O. & Schweinfurth C. 1925: New or noteworthy species of orchids from the American Tropics. — *Schulduae Orchidinae* 8: 455–556.
- Blanco M.A., Carnevali G., Whitten W.M., Singer R., Koehler S., Williams N.H., Ojeda I., Neubig K. & Endara L. 2007: Generic realignments in Maxillariinae (Orchidaceae). — *Lankesteriana* 7: 515–537.
- Kraenzlin F. 1906: Orchidaceae andinae imprimis peruvianaee Weberbauerianae III. — *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37 (Heft 4): 382–398.
- McNeill J., Barrie F.R., Buck W.R., Demoulin V., Greuter W., Hawksworth D.L., Herendeen P.S., Knapp S., Marhold K., Prado J., Prud'homme van Reine W.F., Smith G.F., Wiersema J.H. & Turland N.J. 2012: International Code of Nomenclature for algae, fungi, and plants (Melbourne Code) adopted by the Eighteenth International Botanical Congress, Melbourne. — *Regnum Vegetabile* 154: 1–208.
- Rolfe R.A. 1918: Our note book. — *Orchid Review* 26: 225–262.
- Schlechter R. 1923: Beiträge zur Orchideenkunde von Zentralamerika. — *Repertorium Specierum Novarum Regni Vegetabilis*, Beihefte 19: 1–307.
- Schweinfurth C. 1945: Some Peruvian Maxillarias. — *Botanical Museum Leaflets* 11(10): 261–295.
- Szlachetko D.L. & Sitko M. 2007: Nouveaux genres dans le complexe *Maxillaria* (Orchidaceae). — *Richardiana* 7: 26–32.
- Szlachetko D.L., Sitko M., Tukallo P. & Mytnik-Ejmsmont J. 2012: Taxonomy of the subtribe Maxillariinae (Orchidaceae, Vandoideae) revised. — *Biodiversity: Research & Conservation* 25: 13–38.
- Whitten W.M., Blanco M.A., Williams N.H., Koehler S., Carnevali G., Singer R.B., Endara L. & Neubig K.M. 2007: Molecular phylogenetics of *Maxillaria* and related genera (Orchidaceae: Cymbidieae) based on combined molecular data sets. — *American Journal of Botany* 94: 1860–1889.