NEW COMBINATIONS AND SYNONYMS IN BRAZILIAN ONCIDIINAE (ORCHIDACEAE)

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Abstract. Three new combinations and two new synonyms of *Gomesa* and *Trichocentrum* from Brazil are proposed. The nothogenus × *Ornithocidium* is synonimized under *Gomesa*, and its natural hybrid are also combined.

Keywords: Neotropic, nomenclature, taxonomy, orchid, flora

Oncidiinae Benth. (Orchidaceae) is a subtribe with 70 genera, and about 1,600 species mainly distributed in the Neotropics (Chase et al., 2009a). The generic boundaries within this subtribe have a long and complex history, but based on recent molecular phylogenetic studies, the relationships among its taxa have been clarified, and many genera were recircumscribed (Neubig et al., 2012).

Oncidium Sw. s.l. is not monophyletic (Williams et al., 2001; Chase et al., 2009b; Neubig et al., 2012). Williams et al. (2001) broadened the circumscription of *Trichocentrum* Poepp. & Endl. to include several species from *Oncidium* s.l., mainly characterized by thick, coriaceous and terete or plain leaves, and flowers with or without a spur. The group forms a well-supported and nested basal clade in Oncidiinae, which is unrelated with clade *Oncidium* s.s. (Neubig et al., 2012). Chase et al. (2009b) expanded the concept of *Gomesa* R.Br. to include an important group of mainly Brazilian taxa that also belonged to *Oncidium* s.l. and some of its related genera (e.g. *Baptistonia* Barb.Rodr. and *Ornithophora* Barb.Rodr.). Even prior to molecular analysis, those Brazilian taxa were suspected to be a distinct group because the presence of a synsepal, and the inability to hybridize with members of *Oncidium* s.s. (Chase et al. 2009a, 2009b; Neubig et al. 2012). More than one hundred combinations from *Oncidium* and segregated genera to *Gomesa* and *Trichocentrum* were proposed by Williams et al. (2001) and Chase et al. (2009b).

Whether generic rearrangements should be made in a narrow or broader sense is a subject of controversy in the taxonomic literature (Carnevali et al., 2010, Carstens et al. 2013). When considering Oncidiinae, Docha Neto *et al*. (2006) professed that narrowly circumscribed genera make taxonomy easier to use. However, Chase *et al*. (2009a, 2009b) argued that if in all clades of Oncidiinae were to be finely split, we would need more than 150 genera versus the 70 they accepted. Narrowly circumscribed genera of Oncidiinae often have many more similarities than differences between them, and there are species that have many characters in common with two or more genera: deciding the generic placement of some species can be a difficult task. Also, phylogenetic information can be lost when closely related groups are excessively split. Such problems are usually solved when broadly circumscribed genera are adopted. Thus, I accept *Gomesa* and *Trichocentrum* as broadly defined genera instead of many more narrowly defined ones.

During a taxonomic and nomenclature survey of Brazilian Oncidiinae, and following the generic boudaries proposed by Chase et al. (2009a) I detected one species, two forms, and a nothospecies in need of combination. The synonimization of two species under a new form and a nothogenus is proposed.

Gomesa R.Br., Bot. Reg. 42: t. 1815.

Synonym: × *Ornithocidium* Leinig, Orquídea (Rio de Janeiro) 29: 181. 1967, ***syn. nov.***

Hybrid formulae: *Ornithophora* Barb.Rodr., Gen. Sp. Orchid. 2: 225. 1882 × *Oncidium* Sw., Kongl. Vetensk. Acad. Nya Handl. 21: 239. 1800, *nom. cons*.

Gomesa × roczonii (Leinig ex Leinig) Meneguzzo, ***comb. nov.***

Basionym: × *Ornithocidium roczonii* Leinig ex Leinig, Bradea 2: 62. 1976. TYPE: BRAZIL. Paraná: Curitiba, Umbará, pottery in Parolin neighbourhood, road BR-116, km 15, 1964, *E. Roczon sub M. Leinig 362* (Holotype: HB [41078]!).

Synonym: × *Ornithocidium roczonii* Leinig, Orquídea (Rio de Janeiro) 29: 181. 1967, *nom. illeg*.

Hybrid formulae: *Gomesa riograndensis* (Cogn.) M.W.Chase & N.H.Williams, Ann. Bot. (Oxford) 104: 398. 2009 × *Gomesa radicans* (Rchb.f.) M.W.Chase & N.H. Williams, Ann. Bot. (Oxford) 104: 398. 2009 [*Oncidium riograndensis* Cogn., Fl. Bras. (Martius) 3 (6): 446. 1906 × *Ornithophora radicans* (Rchb.f.) Garay & Pabst, Orquídea (Rio de Janeiro) 13: 50. 1951].

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The nothogenus × *Ornithocidium* and a new nothospecies were described by Leinig (1967). The new hybrid genus was validly published, because it is only necessary to indicate the genera which compose the hybrid formulae (McNeil et al., 2012: art. H.9.1). However, Latin diagnosis was neglected for the nothospecies, rendering it invalid (McNeil et al., 2012: art. H.10.1), although it was lately validated by Leinig (1976). Once *Ornithophora* and *Oncidium riograndensis* were transferred to *Gomesa* (Chase *et al*. 2009b), it becomes necessary to synonymize × *Ornithocidium* under *Gomesa* and combine its nothospecies.

It is worth noting that *Gomesa riograndensis* is a questionable hybrid parent because the species is restricted to Serra Geral, in Rio Grande do Sul state (Chiron, 2009). Leinig was not used to preparing herbarium species of all plants he studied, but some of them were sent to G.F.J. Pabst and deposited at herbarium HB. Unfortunately no related collections to hybrid parents were found there. At this moment it is not possible to infer with precision which is the correct hybrid parent for *Gomesa riograndensis*, because there are two related species for the region (Chiron, 2009): *Gomesa albinoi* (Schltr.) M.W.Chase & N.H.Williams and *G. cornigera* (Lindl.) M.W.Chase & N.H.Williams. Further field investigations may solve this problem.

Gomesa ranifera f. **albescens** (Pabst) Meneguzzo, ***comb. nov.***

Basionym: *Oncidium hookeri* var. *albescens* Pabst, Bradea 2: 64. 1976. TYPE: BRAZIL. Santa Catarina: Serra de São Bento, 16 January 1976, *E. Eipper s.n*. (Holotype: HB [63478]!).

Homotypic synonyms: *Oncidium hookeri* f. *albescens* (Pabst) F.Barros & J.A.N.Bat., Orquidologia Sul-Amer.: 103. 2004. *Coppensia hookeri* f. *albescens* (Pabst) F.Barros & L.R.S.Guim., Neodiversity 5: 31. 2010.

Heterotypic synonyms: *Menezesiella paranaënsis* Chiron & V.P.Castro, Richardiana 8: 51. 2008. *Gomesa neoparanaënsis* M.W.Chase & N.H.Williams, Ann. Bot. (Oxford) 104: 398. 2009. *Gomesa paranana* M.W.Chase & N.H.Williams, Phytotaxa 1: 58. 2009, *nom. illeg*. *Coppensia paranana* (M.W.Chase & N.H.Williams) F.Barros & V.T.Rodrigues, Bol. CAOB 77–78: 13. 2010, *nom. illeg*., ***syn. nov.*** TYPE: BRAZIL. Paraná: Serra dos Mulatos, collected January 2007, flowered in cultivation September 2007, *G. R. Chiron 7097* (Holotype: SP [426577]!; Isotype: LY [not seen]).

Menezesiella salesopolitana V.P.Castro & Chiron, Richardiana 6: 200. 2006, *Gomesa salesopolitana* (V.P.Castro & Chiron) M.W.Chase & N.H.Williams, Ann. Bot. (Oxford) 104: 398. 2009, ***syn. nov.*** TYPE: BRAZIL. São Paulo: Salesópolis, 1000–1200m, flowered in cultivation February 2006, *V. P. Castro Neto 93* (Holotype: SP [426565]!).

Baptista et al. (2011) referred *Gomesa hookeri* (Rolfe) M.W.Chase & N.H.Williams, *G. calimaniana* (Guiard) M.W. Chase & N.H.Williams, *G. loefgrenii* (Cogn.) M.W.Chase & N.H.Williams, *G. neoparanaënsis*, *G. salesopolitana*, *Menezesiella calimaniorum* V.P.Castro & G.F.Carr, and *M. regentii* V.P.Castro to the synonymy of *G. ranifera* (Lindl.) M.W.Chase & N.H.Williams. I agree with this single-species taxonomic position because slight differences in lip shape, as well as lip callus processes' size and shape (used by Castro Neto et al., 2008) are continuous and unreliable characters, making accurate and precise species segregation impossible. In this manner it is necessary to combine *Oncidium hookeri* var. *albescens*, a white tepal and light yellow callus form, under the appropriate specific epithet (*Gomesa ranifera*). Also to keep taxonomic consistency, two names with the same color pattern (*G. salesopolitana* and *G. neoparanaënsis*) must be removed from the synonymy of *G. ranifera* and synonymized under the new form.

Trichocentrum Poepp. & Endl., Nov. Gen. Sp. Pl. 2: 11. 1836.

Trichocentrum cepula f. **purum** (L.C.Menezes) Meneguzzo, ***comb. nov.***

Basionym: *Oncidium cebolleta* var. *purum* L.C.Menezes, Schlechteriana 2(4): 132. 1991. TYPES: BRAZIL. Minas Gerais: Ainos, March 1991 *C. Garcia sub L. C. Menezes UB–14* (Holotype: UB [2032]!); picture on upper right corner on Menezes (1991: 131) (Epitype: designated by Barros & Batista, 2004!).

Synonym: *Oncidium cebolleta* f. *purum* (L.C.Menezes) F.Barros & J.A.N.Bat., Orquidologia Sul-Amer.: 103. 2004.

Cetzal Ix et al. (2012) assigned *Cohniella cepula* (Hoffmann.) Carnevali & G.A.Romero as the name to be used for plants from Brazilian Central Plateau, previously misidentified as *Cohniella cebolleta* (Jacq.) Christenson. Since the type of *Oncidium cebolleta* var. *purum* is from central Brazil and its morphology agrees with *Cohniella cepula*, a combination of this infraspecific taxon is proposed, but here accepted in *Trichocentrum*.

Trichocentrum schwambachiae (V.P.Castro & Toscano) Meneguzzo, ***comb. nov.***

Basionym: *Oncidium schwambachiae* V.P.Castro & Toscano, Bradea 3: 353. 1983. Type: BRAZIL. Espírito Santo: Domingos Martins, ca. 500–600 m, in moist forest, 22 December 1981, *R. A. Kautsky s.n*. (Holotype: HB [71550]!).

Synonym: *Lophiaris schwambachiae* (V.P.Castro & Toscano) Senghas, Orchideen (Schlechter), ed. 3, I/C(33–36): 2128. 1997.

The combination is proposed for this mule-ear orchid related to *Trichocentrum morenoi* (Dodson & Luer) M.W.Chase & N.H.Williams and *T. pumilum* (Lindl.) M.W.Chase & N.H.Williams, from east Brazil, which is frequently misidentified by the latter name in herbarium specimens and by orchidists.

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