

NEW COMBINATIONS IN THE GENUS *CATTLEYA* (ORCHIDACEAE). II. CORRECTIONS AND COMBINATIONS FOR HYBRID TAXA

C. VAN DEN BERG¹

¹Universidade Estadual de Feira de Santana, Departamento de Ciências Biológicas, Av. Transnordestina, s.n., 44036-900, Feira de Santana, Bahia, Brazil. e-mail: vcassio@gmail.com

ABSTRACT

In the present article two new combinations for species and 43 combinations for nothospecies in *Cattleya* are proposed, based on molecular phylogenetic analyses which support the inclusion of *Sophronitis* in *Cattleya*.

A recent article (van den Berg, 2008) explained the need of merging *Sophronitis* with *Cattleya*, due to recent molecular phylogenetic analyses (van den Berg, 2009; van den Berg et al., 2009). This would be preferable than splitting *Cattleya* into smaller units, which would produce many naturally occurring hybrid genera and many thousands of them to classify commercial hybrids. As a result, new combinations for species previously placed in *Sophronitis*, *Hoffmannseggella* and other genera of Chiron & V.P.Castro (2002) were proposed in *Cattleya* (van den Berg, 2008). The new circumscription was adopted in 2009 by the American Orchid Society and Royal Horticultural Society for the registration of artificial hybrids, and incorporated into the World Checklist of Selected Plant Families (Govaerts et al., 2010). In the current article we propose new combinations missing combinations of species and for most naturally occurring hybrids within *Cattleya* and between *Cattleya* and other genera, which are required due to the new taxonomic circumscription.

NEW COMBINATIONS FOR SPECIES

A combination for *Hoffmannseggella kleberi* F.E.L.Miranda was overlooked by

van den Berg (2008). The combination proposed for *Sophronitis cernua* (Lindl.) W.J.Hook was invalid because the basionym used by van den Berg (2008) was itself a combination, and therefore we propose here the new combination again, this time with the correct basionym to validate this name.

***Cattleya cernua* (Lindl.) Van den Berg, comb. nov.**

Basionym: *Sophronia cernua* Lindl., Bot. Reg. 13: t. 1129. 1828

***Cattleya kleberi* (F.E.L.Miranda) Van den Berg, comb. nov.**

Basionym: *Hoffmannseggella kleberi* F.E.L. Miranda, Orchids 74(6): 458. 2005.

NEW COMBINATIONS FOR NATURALLY OCCURRING HYBRIDS

Among the binomials for nothospecies of *Laelia*, ×*Encyloaelia* and ×*Schombocattleya*, the following list of combinations is proposed, based on putative naturally occurring taxa. Natural occurrence was based on Pabst & Dungs (1975, 1977), van den Berg & Chase (2000) and field and herbarium work. The *nomen novum* for *Schombocattleya* ×*felix* honors Lou C.

Menezes for her contribution to the knowledge of natural hybrids in *Cattleya*.

Cattleya ×adrienne (Rolfe) Van den Berg, **comb. nov.**

Basionym: *Laelia ×adrienne* Rolfe, Orchid. Rev. 16: 31.1908.

Parentage: *Cattleya pumila* × *Cattleya jongheana*

Cattleya ×albanensis (Rolfe) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya ×albanensis* Rolfe, Gard. Chron., ser. 3, 14: 584. 1893.

Cattleya silvana Pabst, Bradea 2(12): 68. 1976.

Parentage: *Cattleya grandis* × *Cattleya warneri*

Cattleya ×amanda (Rchb.f.) Van den Berg, **comb. nov.**

Basionym: *Laelia ×amanda* Rchb.f., Gard. Chron., n.s., 18: 776. 1882.

Parentage: *Cattleya lobata* × *Cattleya intermedia*

Cattleya ×binotii (Cogn.) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya binotii* Cogn., Gard. Chron., ser. 3, 28: 370. 1900.

Parentage: *Cattleya pumila* × *Cattleya bicolor*

Cattleya ×britoi (K.G.Lacerda & V.P. Castro) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella ×britoi* K.G. Lacerda & V.P.Castro, Richardiana 5(1): 20. 2005.

Parentage: *Cattleya rupestris* × *Cattleya mirandae*

Cattleya ×caetensis (Pabst) Van den Berg, **comb. nov.**

Basionym: *Laelia ×caetensis* Pabst, Bradea 2: 50. 1975.

Parentage: *Cattleya crispata* × *Cattleya rupestris*

Cattleya ×carassana (Pabst) Van den Berg, **comb. nov.**

Basionym: *Laelia ×carassana* Pabst, Bradea 2: 22. 1975.

Parentage: *Cattleya caulescens* × *Cattleya longipes*

Cattleya ×cattleyioides (A.Rich) Van den Berg, **comb. nov.**

Basionym: *Laelia ×cattleyioides* A. Rich., Hort. Universel 5: 206. 1843.

Parentage: *Cattleya loddigesii* × *Cattleya lundii*

Cattleya ×cipoensis (Pabst) Van den Berg, **comb. nov.**

Basionym: *Laelia ×cipoensis* Pabst, Bradea 2: 14. 1975.

Parentage: *Cattleya ghillanyi* × *Cattleya rupestris*

Cattleya ×cristinae (F.E.L.Miranda & K.G.Lacerda) Van den berg, **comb. nov.**

Basionym: *Hoffmannseggella ×cristinae* F.E.L.Miranda & K.G.Lacerda, Orchids 72: 853. 2003.

Parentage: *Cattleya briergeri* × *Cattleya rupestris*

Cattleya ×cypheri (Rolfe) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya ×cypheri* Rolfe, Orchid Rev. 5: 313. 1897.

Parentage: *Cattleya purpurata* × *Cattleya forbesii*

Cattleya ×ericoi (V.P.Castro) Van den Berg, **comb. nov.**

Basionym: *×Hadrocattleya ×ericoi* V.P. Castro, Richardiana 9(1): 31. 2008.

Parentage: *Cattleya warneri* × *Cattleya praestans*

Cattleya ×feldmanniana (F.E.L.Miranda & K.G.Lacerda) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella ×feldmaniana*

F.E.L.Miranda & K.G.Lacerda, Orchids 72: 854. 2003.

Parentage: *Cattleya pabstii* × *Cattleya endsfeldzii*

Cattleya × **gehrard-santosii** (Pabst) Van den Berg, **comb. nov.**

Basionym: *Laelia* × *gehrard-santosii* Pabst, Bradea 2: 16. 1975.

Parentage: *Cattleya harpophylla* × *Cattleya neokautskyi*

Cattleya × **gottoiana** (Rolfe) Van den Berg, **comb. nov.**

Basionym: ×*Laeliocattleya gottoiana* Rolfe, Gard. Chron., ser. 3, 18: 467. 1895.

Parentage: *Cattleya tenebrosa* × *Cattleya warneri*

Cattleya × **heitoriana** (Campacci) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella* × *heitoriana* Campacci, Colet. Orquid. Bras. 5: 162. 2007.

Parentage: *Cattleya itambana* × *Cattleya ghillanyi*

Cattleya × **itabiritensis** (K.G.Lacerda) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella* × *itabiritensis* K.G.Lacerda, Richardiana 6(2): 63. 2006.

Parentage: *Cattleyaournieri* × *Cattleya caulescens*

Cattleya × **jetibaensis** (V.P.Castro & G.F. Carr) Van den Berg, **comb. nov.**

Basionym: ×*Hadrodungsia* × *jetibaensis* V.P.Castro & G.F.Carr, Richardiana 8(4): 194. 2008.

Parentage: *Cattleya harpophylla* × *Cattleya wittigiana*

Cattleya × **lambari** (Pabst) Van den Berg, **comb. nov.**

Basionym: ×*Laeliocattleya lambari* Pabst, Bradea 2(4): 14. 1975.

Parentage: *Cattleya crispata* × *Cattleya loddigesii*

Cattleya × **lilacina** (F.A.Philbrick ex H.J. Veitch) Van den Berg, **comb. nov.**

Basionym: *Laelia* × *lilacina* Philbrick ex H.J.Veitch, Man. Orch. Pl. 2: 89. 1887

Parentage: *Cattleya crispa* × *Cattleya perrini*

Cattleya × **mucugensis** (F.E.L.Miranda) Van den Berg, **comb. nov.**

Basionym: *Laelia* × *mucugensis* F.E.L. Miranda, Bradea 6: 159. 1993.

Parentage: *Cattleya luetzelburgii* × *Cattleya pfisteri*

Cattleya × **neocalimaniana** Van den Berg, **nom. nov.**

Basionym: ×*Hadrocattleya calimaniana* V.P. Castro & K.G.Lacerda, Richardiana 5(2): 98. 2005.

Parentage: *Cattleya grandis* × *Cattleya amethystoglossa*

Cattleya × **neocalimaniorum** Van den Berg, **nom. nov.**

Basionym: *Hadrolaelia calimaniorum* K.G. Lacerda & V.P.Castro, Richardiana 5(4): 198. 2005.

Parentage: *Cattleya praestans* × *Cattleya xanthina*

Cattleya × **neoreginae** Van den Berg, **nom. nov.**

Basionym: ×*Laeliocattleya reginae* Pabst, Bradea 2: 280. 1978.

Parentage: *Cattleya sincorana* × *Cattleya elongata*

Cattleya × **neoschilleriana** Van den Berg, **nom. nov.**

Basionym: *Laelia schilleriana* Rehb.f., Allg. Gartenz. 23: 323. 1855.

Parentage: *Cattleya purpurata* × *Cattleya intermedia*

Cattleya × **occhioniana** (Brade) Van den Berg, **comb. nov.**

Basionym: ×*Laeliocattleya occhioniana*

Brade, Orquídea 6: 133. 1944.

Parentage: *Cattleya perrinii* × *Cattleya harrisoniana*

Cattleya ×porphyritis (Rchb.f.) Van den Berg, **comb. nov.**

Basionym: *Laelia ×porphyritis* Rchb.f., Gard. Chron., n.s., 25: 72. 1886.

Parentage: *Cattleya pumila* × *Cattleya dorminiana*

Cattleya ×raganii (F.E.L.Miranda & K.G.Lacerda) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella ×raganii* F.E.L. Miranda & K.G.Lacerda, Orchids 72(11): 856. 2003.

Parentage: *Cattleya rupestris* × *Cattleya bradei*

Cattleya ×rigbyana (Pabst) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya ×rigbyana* Pabst, Orchid. Rev. 83: 212. 1975.

Parentage: *Cattleya pumila* × *Cattleya schilleriana*

Cattleya ×sgarbii (Ruschi) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya ×sgarbii* Ruschi, Orquídea(Brasil) 12: 48. 1950.

Parentage: *Cattleya pumila* × *Cattleya warneri*

Cattleya ×verelii (Rolfe) Van den Berg, **comb. nov.**

Basionym: *×Laeliocattleya ×verelii* Rolfe, Orchid Rev. 7: 340. 1899.

Parentage: *Cattleya lobata* × *Cattleya forbesii*

Cattleya ×wyattiana (Rchb.f.) Van den Berg, **comb. nov.**

Basionym: *Laelia ×wyattiana* Rchb.f., Gard. Chron., n.s., 20: 426. 1883.

Parentage: *Cattleya lobata* × *Cattleya crispa*

Cattleya ×zaslawskiana (Chiron & V.P. Castro) Van den Berg, **comb. nov.**

Basionym: *Hoffmannseggella ×zaslawskiana* Chiron & V.P.Castro, Richardiana 5(2): 63. 2005.

Parentage: *Cattleya briegei* × *Cattleya rupestris*

Cattleya ×zaslawskii (L.C.Men.) Van den Berg, **comb. nov.**

Basionym: *Laelia ×zaslawskii* L.C.Men., Orchidee (Hamburg) 47: 259. 1996.

Parentage: *Cattleya praestans* × *Cattleya harpophylla*

×Catyelia×intermedia (F.E.L.Miranda) Van den Berg, **comb. nov.**

Basionym: *×Encyaelia ×intermedia* F.E.L. Miranda, Albertoa 3: 94. 1991.

Parentage: *Encyelia seidelii* × *Cattleya rupestris*

×Laeliocattleya ×calimaniana (L.C.Menezes) Van den Berg, **comb. nov.**

Basionym: *×Schombocattleya ×calimaniana* L.C.Men., Orquidário 16: 60. 2002.

Parentage: *Laelia gloriosa* × *Cattleya guttata*

×Laeliocattleya ×menezesiana Van den Berg, **comb. nov.**

Basionym: *×Schombocattleya ×felix* L.C. Menezes, Bol. CAOB 34: 128. 1998.

Parentage: *Laelia gloriosa* × *Cattleya walkeriana*

×Laeliocattleya ×micheliniana (Campacci) Van den Berg, **comb. nov.**

Basionym: *×Schombocattleya ×micheliniana* Campacci, Bol. CAOB 55: 92. 2004.

Parentage: *Laelia fimbriata* × *Cattleya amethystoglossa*

ACKNOWLEDGEMENTS

The author is grateful to Julian M.H. Shaw for useful comments to the original manuscript.

LITERATURE CITED

- Chiron, G.R. & Castro, V.P. 2002. Révision des espèces brésiliennes du genre *Laelia* Lindley. *Richardiana* 2: 4–28.
- Govaerts, R.; Pfahl, J.; Campacci, M.A.; Baptista, D.H.; Tigges, H.; Shaw, J.; Cribb, P.J.; George, A.; Kreuz, K.; Wood, J. 2010. *World checklist of Orchidaceae*. The Board of Trustees of the Royal Botanic Gardens, Kew. Published on the Internet (<http://www.kew.org/wcsp/> accessed 4th August 2010, 12:04 GMT).
- Pabst, G.F.J. & Dungs, F. 1975. *Orchidaceae Brasilienses Band I*. Brücke-Verlag Kurt Schmersow, Hildesheim, Germany.
- Pabst, G.F.J. & Dungs, F. 1977. *Orchidaceae Brasilienses Band II*. Brücke-Verlag Kurt Schmersow, Hildesheim, Germany.
- van den Berg, C. 2008. New combinations in the genus *Cattleya* Lindl. (Orchidaceae). *Neodiversity* 3: 3–12.
- van den Berg, C. 2009. Phylogeny and systematics of *Cattleya* and *Sophranitis*. Pages 319–323 In: R.P. Sauleda; L.A. Sandow. (Org.). *The 19th World Orchid Conference*. Miami: American Printing Arts.
- van den Berg, C. & Chase, M.W. 2000. Nomenclatural notes in Laeliinae. I. *Lindleyana* 96: 115–119.
- van den Berg, C.; Higgings, W.E.; Dressler, R.L.; Whitten, W.M.; Soto-Arenas, M.A.; Chase, M.W. 2009. A phylogenetic study of Laeliinae (Orchidaceae) based on combined nuclear and plastid DNA sequences. *Annals of Botany* 104: 417–430.

ISSN 1809-5348