

(2036) Proposal to conserve the name *Brasiliorchis* against *Bolbidium* (Orchidaceae)

Rodrigo B. Singer,¹ Mario Blanco,² Germán Carnevali³ & Samantha Koehler⁴

1 Depto. Botânica, Instituto de Biociências, Universidade Federal do Rio Grande do Sul. Av. Bento Gonçalves 9500, Bloco IV, Prédio 43432, Sala 207, Bairro Agronomia, CEP 91501-970, Porto Alegre, Rio Grande do Sul, Brazil

2 Herbarium, Florida Museum of Natural History, Dickinson Hall, University of Florida, Gainesville, Florida 32611-7800, U.S.A., and Department of Biology, Bartram Hall, University of Florida, Gainesville, Florida 32611-8525, U.S.A.

3 Herbarium CICY, Centro de Investigación Científica de Yucatán A.C. Calle 43, no. 130, Col. Chuburná de Hidalgo, 97200 Mérida, Yucatán, México

4 Depto. Ciências, Biológicas, Universidade Federal de São Paulo. Rua Prof. Artur Riedel 275, Diadema, São Paulo, CEP 09972-270, Brazil

Author for correspondence: Rodrigo B. Singer, rbsinger1@yahoo.com

- (2036) *Brasiliorchis* R. Singer & al. in Novon 17: 94. 23 Apr 2007 [*Monocot.: Orchid.*], nom. cons. prop.
 Typus: *B. picta* (Hook.) R. Singer & al. (*Maxillaria picta* Hook.)
- (=) *Bolbidium* (Lindl.) Lindl., Veg. Kingd.: 181. Jan-Mai 1846 (*Cymbidium* sect. *Bolbidium* Lindl. in Edwards's Bot. Reg. 18: t. 1530. 1 Oct 1832). nom. rej. prop.
 Typus: *Cymbidium marginatum* Lindl.

Brasiliorchis was proposed to accommodate all the species formerly placed in the informal “*Maxillaria picta* Hook.,” “*M. gracilis* Lodd.” and “*M. marginata* (Lindl.) Fenzl” alliances (sensu Pabst & Dungs, *Orchidaceae Brasil*. 2: 184. 1977). So defined, the genus is easily diagnosed by a number of floral and vegetative features and can be identified even in the absence of flowers (Singer & al. in Novon 17: 91–99. 2007). In addition, phylogenetic analyses have shown that *Brasiliorchis* is a well-supported, monophyletic group more closely related to primarily Andean *Maxillariinae* genera such as *Cryptocentrum* Benth. and *Inti* M.A. Blanco, and unrelated to *Maxillaria* sensu stricto (Whitten & al. in Amer. J. Bot. 94: 1860–1889. 2007). Several synonymizations have been proposed, and in its current circumscription, the genus embraces ca. 13 species (Singer & al., l.c.).

Species within this complex have hitherto been referred to *Maxillaria* sect. *Aggregatae* Pfitzer and *M.* sect. *Repentes* Pfitzer (Pfitzer in Engler & Prantl, *Nat. Pflanzenfam.* 2(6): 187. 1889; Christenson, Proc. 16th World Orchid Conf.: 285. 2002, in *Richardiana* 2: 54–55. 2002). Christenson (in *Richardiana* 11: 78. 2011) recently placed *M.* sect. *Repentes* and *Brasiliorchis* under the synonymy of his newly proposed *M.* sect. *Bolbidium* (Lindl.) Christenson (basonym: *Cymbidium* sect. *Bolbidium* Lindl.), and indicated *Cymbidium marginatum* Lindl. (= *Brasiliorchis marginata* (Lindl.) R. Singer & al.) as the type. In addition, Christenson argued that the combination *Bolbidium* (Lindl.) Lindl. should be regarded as the legitimate name for the complex if it is to be considered a separate genus.

Cymbidium sect. *Bolbidium* was first mentioned by Lindley in 1832, when he described *C. marginatum* (in Edwards's Bot. Reg. 18: t. 1530. 1832). In this occasion, Lindley mentioned the section in connection with his forthcoming work (*Gen. Sp. Orchid. Pl.*: 3. 1833) and presented a short Latin diagnosis (“Sect. 4. *Rhizoma repens, pseudo-bolbos 1–3-phyllous* *gerens*. (Bolbidium.) –Lindl. *gen. et sp. Orch. part 3. ined.*”). Later, Lindley (l.c. 1833: 169) presented a different diagnosis (“*Rhizoma repens, pseudobolbos 1–2-phyllous*

gerens (Bolbidium). –An hujus loci *Maxillaria picta* aliaeque?”). It is important to stress that even if this new diagnosis already suggests proximity with the *Maxillaria picta* alliance, Lindley did not include previously described species of this complex (*Maxillaria picta*, *Maxillaria gracilis* [= *Brasiliorchis gracilis* (Lodd.) R. Singer & al.] in his section. As circumscribed by Lindley in 1833, *Cymbidium* sect. *Bolbidium* included two American orchid species unrelated to *Brasiliorchis* (*C. diurnum* (Jacq.) Sw. [= *Encyclia diurna* (Jacq.) Schltr.] and *C. trinerve* Meyer [= *Cyrtopodium andersonii* (Lamb. ex Andrews) R. Br.]), *Cymbidium marginatum* Lindl., and two true Asiatic *Cymbidium* species (*C. javanicum* Blume and *C. cuspidatum* Blume, both of them synonyms of *C. lancifolium* Hook.).

Later, Lindley (l.c. 1846) listed *Bolbidium* as a genus in his treatment for *Orchidaceae*, but he neither made any new combinations nor rearrangements (i.e., exclusion or inclusion of species) under this genus. In fact, Lindley never made any combinations under *Bolbidium*, and this name (and the preceding works on *Cymbidium* sect. *Bolbidium*) remained largely ignored. Later, Lindley (Paxton's Fl. Gard. 1: 133–136. 1851) proposed *Dendrobium* sect. *Bolbodium* for a different group of species, which produced considerable further confusion. Brieger (in Schlechter, *Orchideen*, ed. 3, 1: 721. 1981) overlooked Lindley's genus *Bolbidium* and proposed the apparent homonym *Bolbodium* (Lindl.) Brieger (“*Bolbidium*”), based on *Dendrobium* sect. *Bolbodium*. Brieger used “*Bolbidium*” for both the generic name and Lindley's epithet and it is unclear whether he misspelled *Bolbodium*, or, for some unstated reason, tried to correct the name to *Bolbidium*. As “*Bolbodium*” cannot be considered an orthographic error, Brieger's spelling must be corrected to that used by Lindley. Under Art. 33.8 of the *Vienna Code* (McNeill & al. in *Regnum Veg.* 146. 2006), Brieger's generic name, a new generic name with a basonym but lacking a full basonym reference, would not have been validly published. However, the repeal of Art. 33.8 at the XVIII International Botanical Congress in Melbourne in July 2011 (McNeill & al. in *Taxon* 60: 1507–1520. 2011) and the fact that Brieger provided a Latin description results in its valid publication as the name of a new taxon. It would seem that even corrected to *Bolbodium* it must be treated as an illegitimate later homonym of *Bolbidium* Lindl. under Art. 53.3. Brieger (l.c.) made two combinations: *B. quadrangulare* (Rchb. f.) Brieger (= *D. quadrangulare* Rchb. f.) and *B. pumilum* (Sw.) Brieger (= *D. pumilum* Sw.). Later, Rauschert (in Feddes *Repert.* 94: 443. 1983) made six additional combinations under this genus, all usually referable currently to *Dendrobium*. Rauschert (l.c.) also used the spelling “*Bolbidium*” for these combinations.

Although recently described, *Brasiliorchis* has been widely accepted, and at the moment of submitting this proposal, the name was already used in at least 22 works of taxonomic (e.g., Singer & al. in Pridgeon & al., *Gen. Orchid.* 5: 129–131. 2009; Van den Berg & al. in *Pl. Rar. Brasil.* 301–302. 2009; Barros & al. in *Cat. Pl. Fung. Brasil* 2: 1356. 2010), floristic (e.g., Pansarin & Pansarin in *Rodriguesia* 54: 99–111. 2008), and ecological nature (e.g., Silva & al. in *Trop. Ecol.* 26: 127–137. 2010; Resende & al. in *Neotrop. Entomol.* 37: 609–611. 2008). The application of the principle of priority would likely promote a confusing situation, since the generic name *Bolbidium* has a tortuous history and has already been applied, albeit wrongly spelled, to a wide array of unrelated *Orchidaceae* (only one species of which belongs to *Brasiliorchis*). At the time of submitting this proposal, no validly published combinations were available under *Bolbidium* (Lindl.) Lindl. for any species currently classified in *Brasiliorchis*, while there were eight published combinations under *Bolbidium* (Lindl.) Brieger (as “*Bolbidium*”). Soon afterwards (in June 2011) Shaw (in *Quart. Suppl. Int. Reg. Orch. Hybrids*: 38. 2011) published new combinations for 13 currently recognized species of *Bolbidium* (Lindl.) Lindl.

In our opinion, the synonymization of *Brasiliorchis* into *Bolbidium* (Lindl.) Lindl. will promote considerable and undesirable taxonomic and nomenclatural confusion. A search of the word “*Bolbidium*” at the Biodiversity Heritage Library database (accessed on 15 Mar 2011) recovered a total of 39 records representing 26 taxonomic works, most of them relating the name to the genera *Cymbidium* or *Dendrobium* as they are currently circumscribed. Conserving *Brasiliorchis* against *Bolbidium* (Lindl.) Lindl. (as proposed here, under Art. 14.1–2) presents the following advantages: (1) it would maintain a name that, although recent, has already been widely used and unequivocally applied to an easily diagnosable, monophyletic group; (2) it would avoid the use of a generic epithet that has been infrequently used and inconsistently applied to two unrelated orchid taxa; and (3) it would prevent further nomenclatural confusion.

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(2037) Proposal to conserve the name *Gymnadenia rubra* (*Nigritella rubra*) against *Orchis miniata* (*Orchidaceae*)

Helmut Baumann¹ & Richard Lorenz²

¹ Beethovenstraße 45, 71032 Böblingen, Germany

² Leibnizstraße 1, 69469 Weinheim, Germany

Author for correspondence: Richard Lorenz, lorenz@orchids.de

- (2037) *Gymnadenia rubra* Wettst. in *Ber. Deutsch. Bot. Ges.* 7: 312. 1889 [*Monocot.: Orchid.*], nom. cons. prop.
Lectotypus (hic designatus): “*Nigritella rubra*”, [Austria] Niederösterreich, Schneeberg, 5 Jul 1884, *Wettstein* (WU No. 0060140)
- (=) *Orchis miniata* Crantz, *Stirp. Austr. Fasc.*, ed. 2: 487. Jan–Jun 1769, nom. rej. prop.
Lectotypus (hic designatus): [icon] “25. *Orchis palmata angustifolia alpina, nigro flore*” in Séguier, *Pl. Veron.* 2: t. 15, fig. 17. 1745. Epitypus (hic designatus): [icon] “Rotes Kohlröschen (*Nigritella rubra*)” in *Stapfia* 65: fig. 33. 1999

The apomictic polyploid red-coloured vanilla orchid, *Gymnadenia rubra* Wettst. (in *Ber. Deutsch. Bot. Ges.* 7: 312. 1889) (= *Nigritella rubra* (Wettst.) K. Richt., *Pl. Eur.* 1: 278. 1890), occupies mountainous to alpine environments of central to south-eastern Europe (Baumann & Künkele, *Wildwachs. Orch. Eur.*: 182. 1982). Despite ongoing controversies about the monophyly of the genus *Nigritella* Rich. and its relation to *Gymnadenia* R. Br. (Bateman & al. in *Bot. J. Linn. Soc.* 142: 1–40. 2003; Hedrén & al. in *Phyton* (Horn) 40: 239–275. 2000; Bateman in *J. Eur. Orch.* 41: 256–257. 2009), there is still debate about the correct name of the first-recognized and most widespread red-coloured *Nigritella* taxon, i.e., *N. miniata* (Crantz) Janch. (in *Phyton* (Horn) 8: 232. 1959) (= *G. miniata* (Crantz) Hayek) or *N. rubra*.

Among the orchid species described by Crantz (*Stirp. Austr. Fasc.*, ed. 2: 487–488. 1769), *Orchis miniata* was the only one of the current genus *Nigritella*. The epithet *miniata* (saturn-red,

flame-scarlet) emphasizes the brick-red colour of its flowers, but Crantz’s references indicate a broader circumscription leading back to black *N. nigra* (L.) Rchb. f. (= *Gymnadenia nigra* (L.) Rchb. f., based on *Satyrium nigrum* L., *Sp. Pl.*: 944. 1753). Crantz included plants with bright purple as well as deeply purple flowers, respectively corresponding to the current *Nigritella rubra* s.l. and *N. nigra* s.l. (Crantz, l.c.: “Flos in his speciminibus, numerosa enim vidi, vivide, in aliis saturate purpureus, ... plurimis etiam purpurascensibus ...”), both occurring in the area given by Crantz “ubique in alpibus, in albula-Schneberg, in eius diversis iugis, in alpe Breynina, & aliis quatuor adjacentibus” (Vöth in *Linzer Biol. Beitr.* 36 (1): 511–512, Karte 7, 9. 2004). Jacquin (*Fl. Austriac.* 4: 35–36, t. 368. 1776) treated *Orchis miniata* Crantz as a synonym of *S. nigrum* L. and included red-flowering plants and colour variants in *S. nigrum* as part of its natural variability. Janchen (l.c. 1959), when later transferring it to *Nigritella* and applying it exclusively to red-flowering plants, gave more importance to Crantz’s epithet *miniata* than to his cited references (l.c. 1959: “omnino vel pro parte majore”; see also Janchen, *Cat. Fl. Austr.* 4: 866. 1960).

Wettstein (l.c.) described *Gymnadenia rubra* for the first time as a separate species from *G. nigra* and considered *O. miniata* Crantz pro parte (“pr. p.”) as a synonym of both *G. nigra* and of *G. rubra*. Some of the localities of Wettstein’s cited specimens (syntypes) however include places where other currently recognized red *Nigritella* taxa occur. Due to the existence of these syntypes, a former supposed icono-lectotypification by Baumann & al. (in *J. Eur. Orch.* 34: 176. 2002) was ineffective, being contrary to Art. 9.10 of the *Code*