

GENERA ET SPECIES ORCHIDALIUM. 15. MAXILLARIEAE

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Abstract. A new genus of the subfamily Vandoideae (Orchidaceae) – *Christensonella* Szlach., Mytnik, Górniak & Śmiszek, *gen. nov.* – is described. Its taxonomic position is briefly discussed and 16 new combinations are made.

Key words: Orchidaceae, Vandoideae, Maxillarieae, *Christensonella*, neotropics

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Maxillarieae Pfitz. is an exclusively neotropical tribe characterized by the presence of a short and wide rostellum, which transforms itself almost completely into a narrow viscidium and relatively broad tegula. The rostellum is usually deeply incised after the removal of the pollinarium. The column foot is usually well-developed. Most species possess 4 pollinia (occasionally 2). Maxillarieae includes 3 subtribes: Biffenariinae Dressl., Eriopsidinae Szlach., Maxillariinae Lindl.

Maxillariinae (Cymbidioid phylad of the advanced Epidendroideae *sensu* Dressler 1993) is a very rich and diversified group containing tropical and subtropical orchids. Precise number of species classified in Maxillariinae is not yet known because it depends on the adopted classification system. Dressler estimates 460–500 species, but Atwood and Mora de Retana (1997) from Costa Rica demonstrated that the subtribe contains more than 600.

The generic delimitations in Maxillariinae are not strictly defined either. Some authors proposed a broad concept of particular genera (Christenson 2002), for example *Maxillaria* Ruiz. & Pavón includes *Anthosiphon* Schltr., *Ornithidium* Salisb., *Pseudomaxillaria* Hoehne and *Sepalosaccus* Schltr. Other authors proposed narrow generic concepts (Schlechter 1914; Senghas 2002). Szlachetko (1995) divided Maxillariinae into ten genera: *Antrosiphon*, *Chrysocynis* Linden & Rehb.f., *Cryptocentrum* Benth. in Benth. & Hook.f., *Cyrid-*

iorchis Rausch., *Mersupiaria* Hoehne, *Maxillaria*, *Mormolyca* Fenzl, *Pityphyllum* Schltr., *Scuticaria* Lindl. and *Trigonidium* Lindl.

Within the subtribe there occurs a relative unification of the flower structure on one hand; on the other hand, a very large variability of vegetative characters (such as size and plant types, growth patterns, number of leaves, and inflorescence types) can be observed. The adaptation to local habitats could be a basis of such wide morphological variability. However the general morphological similarity of the flower structure may be caused by convergence, this being an expression of the adaptation to particular groups of pollinators. This could probably explain the polyphyletic extraction of the subtribe.

By using consistent criteria for separating the genera in Maxillariinae, at least *Maxillaria* Ruiz & Pavón sect. *Urceolatae* Christ. should be segregated into a new genus. This is what we propose below.

Christensonella Szlach., Mytnik, Górniak & Śmiszek, *gen. nov.*

Maxillaria Ruiz & Pavón sect. *Urceolatae* Christ. Type species: *Maxillaria nardoides* Kraenzl.

Genus hoc a Maxillaria Ruiz & Pavón *pseudobulbis squamis scariis dense obtectis, 1–2 foliis crassis, succosis, inflorescentia uniflora, brevipedunculata, axe et pedunculo squamis scariis dense obtectis recedit.*

GENERIC TYPE: *Christensonella paulistana* (Hoehne) Szlach., Mytnik, Górniak & Śmiszek (= *Maxillaria paulistana* Hoehne).

Pseudobulbs fusiform or cylindrical to ellipsoid, densely arranged along the rhizome, covered by scarios or subscarios and semitransparent or brownish scales. Leaves 1 or 2, filiform or oblong to linear, terete or subterete, cylindrical, usually thick and stiff. Inflorescence single-flowered, with a very short peduncle, covered by scarios or subscarios sheaths. Flowers small to medium-sized, campanulate. Floral bracts similar to the sheaths. Tepals subsimilar, equal or subequal to the lip. Lip hanging on the column foot, obscurely 3-lobed, with a prominent, oblong central callus. Gynostemium similar to that of *Maxillaria*. Column foot short, but prominent, mentum short.

ETYMOLOGY. Dedicated to Eric A. Christenson who contributed to our knowledge of various orchids of the world, including *Maxillaria*.

NOTE. The newly proposed genus differs clearly from *Maxillaria* by series of features. The most characteristic is the presence of a single or two succulent leaves, which are usually narrow, elongate, and often filiform. Pseudobulbs are usually fusiform, covered by some scarios or subscarios scales at the base with transparent, papery margins. The inflorescence is very short, single-flowered. The floral bracts are scarios or subscarios with transparent, papery margins, these completely conceal the inflorescence axis. The column foot is rather short and massive. Our preliminary studies of ITS sequence support the step we take here (Śmiszek *et al.*, in prep.).

The new genus embraces about 20 species known from Mexico to Brazil and Peru. Sixteen new combinations are herein made.

Christensonella acicularis (Herb. ex Lindl.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria acicularis* Herb. ex Lindl., Bot. Reg. 23: sub t. 1986. 1837.

Christensonella cogniauxiana (Hoehne) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria cogniauxiana* Hoehne, Bol. Agric. (Sao Paulo) 34: 632. 1934.

Christensonella echinophyta (Barb. Rodr.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria echinophyta* Barb. Rodr., Gen. Sp. Orch. 1: 122. 1877.

Christensonella ferdinandiana (Barb. Rodr.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria ferdinandiana* Barb. Rodr., Gen. Sp. Orchid. 2: 204. 1881.

Christensonella juergensii (Schltr.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria juergensii* Schltr., Repert. Sp. Nov. Regni Veg. 35: 88. 1925.

Christensonella madida (Lindl.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria madida* Lindl., Bot. Reg. 24: Misc. 44. 1838.

Christensonella minuta (Cogn.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria minuta* Cogn. in Martius, Fl. Bras., Orchid. 3(6): 68. 1904.

Christensonella nardoides (Krzl.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria nardoides* Krzl., Repert. Sp. Nov. Regni Veg. 1: 90. 1905

Christensonella pachyphylla (Schltr. ex Hoehne) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria pachyphylla* Schltr. ex Hoehne, Bol. Mus. Nac. Rio de Janeiro 12(2): 36. 1936.

Christensonella paulistana (Hoehne) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria paulistana* Hoehne, Arq. Bot. Estado Sao Paulo 2: 135. 1952.

Christensonella pumila (Hook.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria pumila* Hook., Bot. Mag. **64**: 3613. 1837.

Christensonella seidelii (Pabst) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria seidelii* Pabst, Orquidea (Rio de Janeiro) **22**: 52.1960

Christensonella subulata (Lindl.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria subulata* Lindl., Gen. Sp. Orchid. Pl.: 147. 1832.

Christensonella uncatata (Lindl.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria uncatata* Lindl., Bot. Reg. **23**: 1986. 1837.

Christensonella vernicosa (Barb. Rodr.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria vernicosa* Barb. Rodr., Gen. Sp. Orchid **1**: 121. 1877.

Christensonella vitelliniflora (Barb. Rodr.) Szlach., Mytnik, Górniak & Śmiszek, *comb. nov.*

Basionym: *Maxillaria vitelliniflora* Barb. Rodr., Gen. Sp. Orchid. **1**: 121. 1877.

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