

GENERA ET SPECIES ORCHIDALIUM. 8. ZYGOPETALEAE

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Abstract. A new genus of the subfamily Vandoideae (Orchidaceae) – *Andinorchis* Szlach., Mytnik & Górniak, *gen. nov.* – is described. Its taxonomic position is briefly discussed. Two new combinations at the species level are validated.

Key words: Orchidaceae, Vandoideae, Zygopetaleae, *Andinorchis*, neotropics

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While examining liquid preserved and living materials for the 4th volume of *Gynostemia Orchidaliium*, we had the opportunity to exam materials of the tribes belonging to the subfamily Vandoideae *sensu* Szlachetko (1995). We came to the conclusion that some genera are highly heterogeneous and could be easily split into smaller, well-defined taxa at the generic level. Published results of molecular analyses (Chase *et al.* 2005) as well as our own studies (Górniak *et al.*, in prep.) supported our conclusions in many cases. In the series of papers we will publish the results of our work, will propose new genera and will make new combinations at the species level.

We did research on the gynostemium structure on specimens preserved in liquid and stored material deposited at the Heidelberg Botanical Gardens (HEID) and/or the Royal Botanic Gardens in Kew (K). Some materials have been collected in the field (French Guyana, Peru, Ecuador), but others were collected in orchid nursery Ecuagenera. The usefulness of herbarium specimens in such research is remarkably small. All gynostemia were studied and their parts have been depicted and/or photographed, measured and described. Their detailed descriptions will appear in the 4th volume of *Gynostemia Orchidaliium*, soon to be published.

Tribe ZYGOPETALEAE Pfitz.

Entw. Nat. Anord. Orchid.: 103. 1887.

Subtribe HUNTLEYINAE Schltr.

Orchideen: 425. 1915.

Taxa belonging to this subtribe used to be classified in the subtribe Zygopetalinae in the *Chondrorhyncha*-alliance (Dressler 1993). Recently, Dressler (2000) published a contribution leading to a revision of the *Chondrorhynchas*-complex. Dressler's ideas (2000) seem to agree with our concept of the Huntleyinae. The Huntleyinae differs from other subtribes in a few characteristics: lack of pseudobulbs, or presence of small ones, conduplicate leaves and uni-floral inflorescence.

Based on our morphological studies we herein propose a new genus in this subtribe:

Andinorchis Szlach., Mytnik & Górniak, *gen. nov.*

Genus hoc generi Chaubardiae Rchb.f. *simile sed structura gynostemii callique differt. Andinorchis genus peculiare est, gynostemio elongato, plus minusve dimidio alato, infra stigmam piloso, viscidio tegulae aequilato et callo cupulato marginibus erectis fissisque bene distinguitur.*

Small epiphytes. Pseudobulbs lacking. Leaves conduplicate on lanceolate to oblong-obovate. Inflorescence single-flowered. Flowers small to medium-sized. Sepals and petals subsimilar, narrow. Lip oblong to oblong-elliptic in general outline with prominent, large, cup-like callus consisting of

several narrow segments. Gynostemium elongate, erect, or arched gently in the upper part, rather slender. Column part about 5 times longer than anther, slightly dorsiventrally flattened and widened near the stigma, pubescent on the ventral surface, with two prominent, more or less triangular, wings on both sides near the middle. Column foot short, narrowing towards the apex. Anther ventral, incumbent, operculate, oblong ellipsoid, dorsiventrally compressed, quite flat, 2-chambered. Connective narrow, thick. Pollinia 4, in two pairs, superposed, very unequal in size, dorsiventrally compressed, almost flat, oblong, ellipsoid to ovoid, rather hard. Caudiculae sticky, amorphous. Apical clinandrium rather obscure or forms a narrow collar-like structure surrounding base of the anther. Rostellum elongate in the middle, ligulate-triangular to narrowly triangular, acute to subacute. Viscidium single, elliptic-ovate with narrowly triangular apex, thin, lamellar. Tegula single, elliptic-ovate with triangular, acute apex, thin, lamellar. Rostellum remnant 3-lobed; the middle lobe ligulate-lanceolate, acute, rigid; both lateral lobes much shorter, with triangular, subacute apex.

GENERIC TYPE: *Andinorchis klugii* (C. Schweinf.) Szlach., Mytnik & Górnjak (= *Zygopetalum klugii* C. Schweinf.).

ETYMOLOGY. The generic name refers to the principal distribution area of both known species of the genus, the Andean region.

NOTES. The genus appears to be closely related to *Chaubardia* Rchb.f., but they differ on the gynostemium structure and lip callus morphology. In *Andinorchis* the gynostemium is elongate, winged near the middle, pubescent below stigma, the viscidium is as wide as the tegula and lip callus is cup-like, with filiform or fusiform segments. In *Chaubardia* the gynostemium is short, robust, winged near the stigma, glandular at the base, the viscidium is only half as wide as the tegula. The

lip callus consists of several, slightly elevated keels running towards the lip centre.

The genus includes only two species known mostly from the Andes. The two new combinations are made herein.

Andinorchis heteroclita (Poepp. & Endl.) Szlach., Mytnik & Górnjak, *comb. nov.*

Basionym: *Maxillaria heteroclita* Poepp. & Endl., Nov. Gen. Sp. Pl. 1: 37. 1936.

Andinorchis klugii (C. Schweinf.) Szlach., Mytnik & Górnjak, *comb. nov.*

Basionym: *Zygopetalum klugii* C. Schweinf., Bot. Mus. Leaflet., Harvard Univ. 15: 159. 1952.

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