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Siederella Szlach. & al. and *Irenea* Szlach. & al. – new genera of the tribe Oncidieae (Orchidaceae)

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Abstract: Two new Neotropical orchid genera – *Siederella* Szlach., Mytnik, Górniak & Romowicz, *gen. nov*. and *Irenea* Szlach., Mytnik, Górniak & Romowicz, *gen. nov*. – of the tribe Oncidieae (Vandoideae, Orchidaceae) are described. Taxonomic affinities of the newly proposed taxa are briefly discussed. New nomenclatorial combinations are proposed.

Key words: Orchidaceae, Vandoideae, Oncidieae, *Siederella, Trigonochilum*, Neotropics

1. Introduction

The tribe Oncidieae is the most numerous taxon of this rank among Neotropical orchids. There are more than 1500 species classified in approximately 70 genera (Chase 2002), but new taxa within the tribe are described continually. In almost all classification systems following Schlechter (1915), the species forming the *Oncidium* alliance were included into one subtribe Oncidieae. However, Pfitzer (1887) and Dressler (1983) accorded this group the tribal rank.

The tribe Oncidieae is highly varied in respect of morphology of flowers and vegetative organs, number of chromosomes, and life history characteristics (Chase 1986, 1987; Chase & Olmstead 1988). Generative parts also display a great variety except the viscidium and apical part of rostellum (Szlachetko 1995). The column part is usually winged near the large, elliptic stigma; the rostellum is rather short, usually conical-digitate. The tegula is oblong, lamellate, the viscidium is relatively small, thick and fleshy. Its inner part is built of densely packed cells, and the outer surface is covered by partially macerated cells, which make it sticky. There are always 2 pollinia, globose to ellipsoid, more or less cleft at the apex. The species of the *Oncidium* alliance are adapted to various pollinators and habitats, which results in their high diversification. Most of them appear to be deceit-pollinated by hymenopterans (bees, wasps, etc.), but some of them by butterflies and hummingbirds, too.

2. Material and methods

We examined gynostemium structure in specimens preserved in liquid and stored in the Botanical Garden of the University of Heidelberg (HEID) and/or the Royal Botanic Gardens in Kew (K). Moreover, we studied some specimens collected in the field (French Guyana, Peru, Ecuador) or in orchid nurseries (Ecuagenera) because the usefulness of herbarium specimens in such research is remarkably smaller. All gynostemia and their parts have been depicted and/or photographed, measured and described. Their detailed descriptions will appear soon in the 4th volume of *Gynostemia Orchidalium* (Szlachetko *et al*. 2007).

3. Results

Subtribe **Oncidiinae** Benth.
J. Linn. Soc., Bot. **18**: 288. 1881.

Siederella Szlach., Mytnik, Górniak & Romowicz, *gen. nov*. (Fig. 1).

A genere affini Trigonochilum structura labelli et gynostemii recedit: labellum ad uncem cum callo e duobus lamellis parallelis constructum et gynostemium cum duobus digitatis appendicibus ad latera stigmae et tabulae infrastigmaticae nullae.

GENERITYPE: *Siederella aurea* (Lindl.) Mytnik, Górniak & Romowicz (= *Oncidium aureum* Lindl.).

ETYMOLOGY: Dedicated to the Curator of the Living Orchid Collection in the Botanical Garden of Vienna University, Mr. Anton Sieder, who supported us by supplying material for our studies.

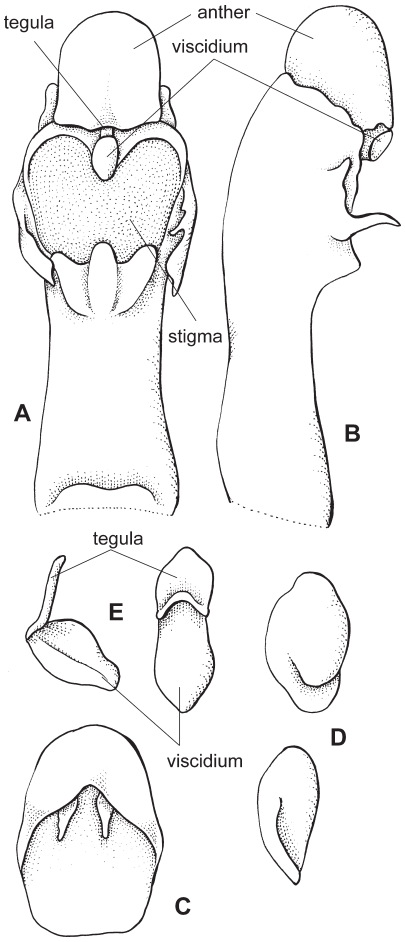

Fig. 1. *Siederella aureum* (Lindl.) Mytnik, Gorn. & A. Rom: (A) gynostemium, bottom view; (B) gynostemium, side view; (C) anther; (D) pollinia, various views; (E) tegula and viscidium, various views (Heidelberg BG O-11837, HEID)

NOTE. This genus differs from the closely related *Trigonochilum* Königer & Schildhauer by having a clavate lip and also in gynostemium morphology. The lip claw has 2 parallel erect calli. The gynostemium is terete below stigma, with no *tabula infrastigmatica*, but with small, finger-like projections near the stigma.

A monotypic genus known from the Andes (Ecuador, Peru and Bolivia).

Siederella aurea (Lindl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Oncidium aureum* Lindl., Sert. Orchid.: t. 25. 1838

Irenea Szlach., Mytnik, Górniak & Romowicz, *gen. nov.* (Fig. 2).

A genere Trigonochilum gynostemio brevi solidoque, recurvo cum labello coalito et alato differt. Alae callus labelli bilaminalis cinctae.

GENERITYPE: *Irenea myantha* (Lindl.) Mytnik, Górniak & Romowicz (= *Odontoglossum myanthum* Lindl.).

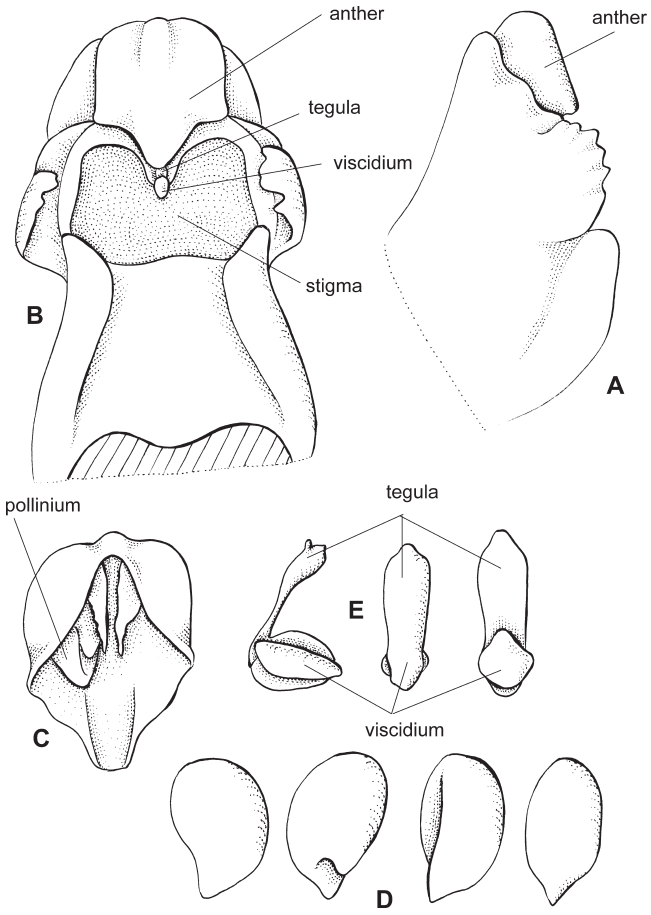

Fig. 2. *Irenea flavescens* (Lindl.) Mytnik, Gorn. & A. Rom: (A) gynostemium, side view; (B) gynostemium, bottom view; (C) anther; (D) pollinia, various views; (E) tegula and viscidium, various views (Heidelberg BG O-19268, HEID)

ETYMOLOGY. Dedicated to Mrs. Irene Bock, the Editor of the German journal *Die Orchidee*.

NOTE. This genus is related to *Trigonochilum,* but it is easily distinguishable from the latter by gynostemium structure. In the new genus the gynostemium is relatively short and robust, parallel to the lip base and basally connate with the lip; it has 2 firm wings, which surround the lip callus. Lip callus is simple and consists of 2 parallel ridges. In *Trigonochilum* the gynostemium is elongate, slender, gently sigmoid at the base, square to the lip, with prominent *tabula infrastigmatica*, and small wings near the stigma. Lip callus is complex, irregular.

The genus includes about 11 species known from the Andes, from Peru to Colombia.

Irenea flavescens (Lindl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Cyrtochilum flavescens* Lindl., Bot. Reg. **27**: t. 1627. 1841.

Irenea fracta (Rchb.f.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum fractum* Rchb.f., Linnaea **41**: 26. 1877.

Irenea funis (F.Lehm. & Krzl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Oncidium funis* F. Lehm. & Krzl., Bot. Jahrb. Syst. **26**: 497. 1889.

Irenea gracile (Lindl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum gracile* Lindl. *in* Bentham, Pl. Hartw.: 151. 1844.

Irenea melantha (Rchb.f. & Warsc.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum melanthes* Rchb.f. & Warsc., Bonplandia (Han.) **2**: 100. 1854.

Irenea myantha (Lindl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum myanthum* Lindl. *in* Bentham, Pl. Hartw.: 152. 1844.

Irenea myriantha (Rchb.f.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum myrianthum* Rchb.f., Xenia Orchid. **1**: 189. 1856 & Bonplandia **4**: 212. 1856.

Irenea ornata (Koniger) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Buesella ornata* Koniger, Arcula **9**: 250. 1999.

Irenea retusa (Lindl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum retusum* Lindl. *in* Bentham, Pl. Hartw.: 152. 1844.

Irenea scabiosa (Rchb.f. *ex* Krzl.) Mytnik, Górniak, Romowicz & Szlach., *comb. nov.*

Basionym: *Odontoglossum scabiosum* Rchb.f. *ex* Krzl., Notizbl. Bot. Gart. Berlin-Dahlem **7**: 100. 1917.

Irenea tricostata (Krzl.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Oncidium tricostatum* (Krzl.) Garay, Taxon **19**: 447. 1970.

Irenea viminale (Rchb.f.) Szlach., Mytnik, Górniak & Romowicz, *comb. nov.*

Basionym: *Odontoglossum viminale* Rchb.f., Gard. Chron. **23**: 108. 1885.

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