

## *Ochyrella ortiziana* (Orchidaceae, Spiranthoideae), a new species from Colombia

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*Ochyrella ortiziana* Szlach., Lamczyk & Baranow *sp. nova* (Orchidaceae, Spiranthoideae) is described and illustrated from Colombia, implying the first record of the genus for the country. Notes concerning the morphologically closest siblings of *O. ortiziana* are provided. A key for determination of all species in the genus is presented.

Colombia is among the world's biologically most diverse countries (*see* <http://www.conserva-tion.org/documentaries/Pages/megadiversity.aspx>). With nearly 50 000 species of vascular plants, it holds the second place in terms of floristic diversity (*see* <http://rainforests.mongabay.com/03plants.htm>), and the percentage of endemism in the country is very high. It is estimated that orchids make up 10% of all Colombian vascular plant species (Kress 1986).

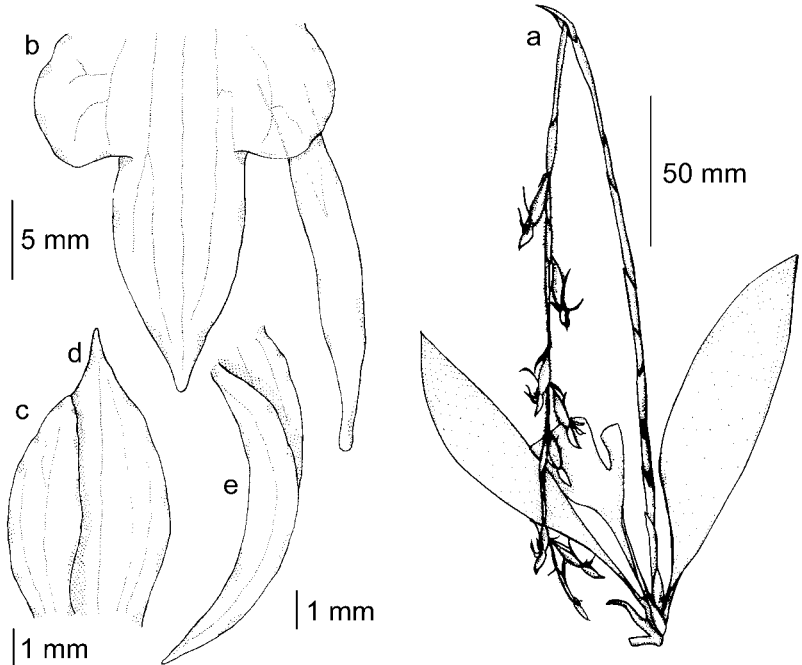
Located in northwestern South America, Colombia is at an intersection of four so-called 'biodiversity hot spots': Caribbean Islands to the north, Mesoamerica to the northwest, Tumbes–Choco–Magdalena region on the Pacific coast, and northern part of the Tropical Andes (*see* [http://www.conserva-tion.org/where/prior-ity\\_areas/hotspots/Documents/CI\\_Biodiversity-Hotspots\\_2011\\_Map.pdf](http://www.conserva-tion.org/where/prior-ity_areas/hotspots/Documents/CI_Biodiversity-Hotspots_2011_Map.pdf)).

The main factors behind the species richness and evolution in this region are the diverse topography and climate, resulting in a tremendous variety of available habitats. The presence of a high and complex mountain range crossing the whole country, very complex hydrology and

the influence of both Pacific and Atlantic Oceans divides Colombia into five distinct natural regions: Andean, Caribbean, Pacific, Orinoquia, and Amazon (Ospina 1996). The variability in temperature, insolation and precipitation principally comes from differences in elevation. Thus, the highest richness of habitats and species, especially endemics, is found in the Andes with their altitudinal vegetation belts (Richter 2008).

Orchids in Colombia occur in practically every available habitat from the sea level up to the Andean tundra and permanent snow-line, above the height of 4500 m a.s.l. They prefer humid habitats of the tropical, sub-Andean and Andean levels, where both terrestrial and epiphytic species appear. Between 1000 and 3000 m a.s.l., with decreasing precipitation and humidity, the proportion of terrestrial taxa increases. Eventually, from 3000 to about 4500 m a.s.l., at the altitudinal belt of the Páramos, only the terrestrial species thrive. It should be noted that in terms of epiphytic orchids the so-called mountain cloud forests are probably the species-rich habitats in Colombia. The occurrence of these forests depends on cloud formation, which

**Fig. 1.** *Ochyrella ortiziana* (drawn from the holotype by M. Lamczyk & P. Baranow). — **A:** Habit. — **B:** Lip and spur. — **C:** Petal. — **D:** Dorsal sepal. — **E:** Lateral sepal.



in turn depends on the variable local altitude (Ospina 1996).

*Ochyrella* embraces terrestrial, erect orchids, similar to *Eltroplectris*. The roots are tuberoid, fleshy and clustered, and the leaves form a basal rosette, which is sometimes absent during flowering. The flowers are small, inconspicuous and shortly pedicellate (Szlachetko & Tomayo 1996).

*Ochyrella* can be distinguished from *Eltroplectris s. stricto* by the gynostemium, lateral sepals and spur morphology. In *Ochyrella* the column part below the stigma and column foot are very short, the rostellum is short, and the rostellum remnant is subulate, fleshy, acute, about four times shorter than the stigma. The greatly reduced staminodes are adnate to the style below the stigma base, resulting in the lack of a clinandrium. No caudicles are present. Finally, the spur in *Ochyrella* is shorter than the basal part of the column foot and it is formed by the basal parts of the lateral sepals, fused only on their basal part (Szlachetko & Gonzalez Tomayo 1996).

*Ochyrella* and *Eltroplectris* are easily separated by the vegetative parts as well. The leaves in *Ochyrella* are short-petiolate, the petioles are soft, and the blades are ground-hugging, widely spread. The leaves of *Eltroplectris* are long-

petiolate, the petioles are stiff and erect, and the blades are lifted above ground.

*Ochyrella* has eight species growing exclusively in South America, including Argentina, Bolivia, Brazil, Ecuador and Peru (Szlachetko & Tomayo 1996, Szlachetko & Rutkowski 2008). The present report adds Colombia to the area of distribution.

The present work is based on literature studies and examination of herbarium material. The examined specimens are deposited at COAH (Herbario Amazónico Colombiano, Instituto Amazónico de Investigaciones Científicas SINCHI). The morphological analysis was done using a stereomicroscope. The flowers were dehydrated prior to examination and making the drawings. The vegetative structures were measured, described and photographed. The analyzed specimens were compared with relevant type material and literature.

***Ochyrella ortiziana* Szlach., Lamczyk & Baranow, *sp. nova* (Fig. 1)**

TYPE: Colombia. Amazonas, Rio Cahuinari, Colinas del Terciario, terrestre, 250 m a.s.l., 17 Sep. 1988 G. Galeano & A. Mirana 1823 (COAH!).

ETYMOLOGY: Dedicated to Pedro Ortiz Valdivieso (1926–2012), an eminent Colombian orchidologist.

Plants terrestrial, 40 cm tall, erect, delicate, glandular, with 7 cauline sheaths. Leaves 3, basal, petiolate; petiole to 4 cm long, narrow; blade to 11 cm long and 3 cm wide, obliquely oblong-elliptic, acute. Inflorescence 15 cm long, laxly 10–12-flowered. Flowers greenish-white, with light reddish ovary. Floral bracts to 11 mm long, obliquely ovate-lanceolate, acute, glabrous. Pedicel 2 mm long. Ovary 10 mm long, glandular. Dorsal sepal 8 mm long, 3.5 mm wide, ovate to oblong-ovate, acute, concave in the centre, 5-nerved. Petals 6.5 mm long, 2 mm wide, obliquely oblong-lanceolate, obtuse, 2-nerved, adnate to dorsal sepal. Lateral sepals 9 mm long, 2 mm wide, linear-lanceolate, falcate, acute, more or less canaliculate. Lip 20 mm long in total; hypochile 15–16 mm long, 4.2 mm wide at apex, oblong-triangular, truncate at apex, lateral lobes rounded; epichile 4 mm long, 2 mm wide, ligulate-lanceolate, acute. Spur 15 mm long in total, free part 9 mm long, narrowly cylindrical, glandular, mamillate at apex. Gynostemium 4.6 mm long.

*Ochyrella ortiziana* resembles the Brazilian *O. cogniauxiana*, but the latter can be distinguished by the obliquely ovate lateral lobes of hypochile and glandular spur. Besides, *O. cogniauxiana* is leafless during the flowering time, while *O. ortiziana* produces flowers on leafy stems.

### Key to the species of *Ochyrella*

1. Lip entire or almost entire, oblong to rhombic ..... 2
1. Lip divided into hypochile and epichile ..... 4
2. Lip rhombic-deltoid ..... *O. lurida* (Argentina, Peru)
2. Lip oblong-ligulate ..... 3
3. Spur longer than pedicel and ovary, free part 8–11 mm long ..... *O. pauciflora* (Bolivia, Brazil, Peru)
3. Spur shorter than pedicel and ovary, free part 1–2 mm long ..... *O. misera* (Argentina, Bolivia, Brazil)

4. Hypochile twice longer than epichile ..... *O. rossii* (Ecuador)
4. Hypochile as long as or shorter than epichile ..... 5
5. Hypochile elliptic ..... 6
5. Hypochile oblong-triangular ..... 7
6. Hypochile rounded at apex .. *O. brachycentron* (Bolivia)
6. Hypochile truncate at apex with an obscure, triangular, shortly apiculate epichile ..... *O. dalessandroi* (Ecuador)
7. Inflorescence (1–)2(–3)-flowered, flowers horizontal or almost so, spur much longer than pedicel and ovary ..... *O. longicornu* (Brazil)
7. Inflorescence 5–12-flowered, flowers vertical, spur as long as or shorter than pedicel and ovary ..... 8
8. Plant leafless at flowering, lateral lobes of hypochile triangular, spur glabrous ..... *O. cogniauxiana* (Brazil)
8. Plant leafy at flowering, lateral lobes of hypochile obliquely ovate, spur glandular ..... *O. ortiziana* (Colombia)

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