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COMPARETTIA SOTOANA (ORCHIDACEAE: ONCIDIINAE), A NEW ECUADORIAN SPECIES

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ABSTRACT. A new species of *Comparettia*, *C. sotoana*, is described and illustrated from the province of Morona-Santiago, in southeastern Ecuador. *Comparettia sotoana* is compared with *Comparettia langkastii*, from which it mainly differs by the laterally flattened leaves, the subumbellate (vs. distichous), several-flowered (vs. 2-flowered) inflorescence, the short, straight sepaline spur (vs. long, curved), and the ovate-subpandurate lip with a cuspidate midlobe (vs. pandurate with a deeply retuse, apiculate midlobe) provided with digitate-conical basal processes, uncinate at apex and expanded into rounded knobs (vs. straight, acuminate), and lacking apical calli (present in *C. langkastii*).

RESUMEN. Se describe e ilustra una nueva especie de *Comparettia*, *C. sotoana*, de la provincia de Morona-Santiago en la región suroriental de Ecuador. *Comparettia sotoana* se compara con *Comparettia langkastii*, de la cual difiere particularmente por las hojas lateralmente aplanadas, la inflorescencia umbelada (vs. dística) de varias flores (vs. biflora), el espolón sepalino corto y recto (vs. largo e curvo) y el labelo ovado-subpandurado con un lóbulo mediano cuspidado (vs. pandurado con lóbulo mediano profundamente retuso y apiculado), provisto de procesos basales digitado-cónicos, apicalmente en forma de garfio y ensanchados en terminaciones globosas (vs. rectos, agudos) y carente de callos apicales (presentes en *C. langkastii*).

KEY WORDS: Orchidaceae, Oncidiinae, *Comparettia*, *C. sotoana*, new species, Ecuador

Some of the genera of the subtribe Oncidiinae, belonging to the so-called *Rodriguezia* clade, variously treated as the Subtribes Comparettiinae Schltr. (i.e., Szlachetko, 1995) and Ionopsidinae Pfitzer (i.e., Senghas, 1995), had a complex taxonomic history, with many species moving forth and back to alternative genera. This has been particularly true for the genera close to *Scelochilus* Schltr., including *Neokoheleria* Schltr., *Scelochiloides* Dodson & M.W. Chase, and *Scelochilopsis* Dodson & M.W. Chase, which have been traditionally difficult to characterize in terms of morphological features. A first attempt to reflect natural relationships through nomenclature was done by Dodson and Chase (*in* Brako & Zarucchi, 1993), who reduced *Neokoheleria* under *Scelochilus*. The generic circumscription of *Scelochiloides* has been also subjected to different interpretations, with species of this genus assigned to both *Neokoheleria* (Senghas 2001), and *Scelochilus* (Königer 2008).

Vegetative architecture is amply variable among members of the highly derived *Rodriguezia*-clade. Many of the genera as traditionally circumscribed include a vast array of modifications in plant organization, often with retention of paedomorphic traits in the adult psygmoid habit and reduction of pseudobulb size, and leaf shape. Within the clade, the genera *Ionopsis* Kunth, *Neokoehleria*, *Rodriguezia* Ruiz & Pav., and *Scelochilus*, include species with conduplicate, subterete, and/or laterally flattened leaves. On the other side, subtle variations in floral features have been emphasized to circumscribe genera in the group. *Neokoehleria* was basically distinguished from *Scelochilus* by the shape of the sepaline spur (club-shaped vs. conical), and *Scelochiloides* was defined by the presence of a single nectariferous horn at the base of the lip (vs. 2 in *Scelochilus*), while *Scelochilopsis* was characterized by the lack of spur at the base of the lip (Dodson 1998). Eventually, the molecular

studies carried out by Chase, Williams and co-workers (Williams *et al.* 2001a, 2001b, Sosa *et al*. 2001, Chase 2009), aimed to reconstruct a phylogenetic scheme of relationships within the Oncidiinae, revealed that the genera centered around *Comparettia* are all embedded within *Scelochilus*. Morphologically, taxa in this group only differ in subtle details of their nectar horns and the relative length of the spur that embrace them. In order to accord nomenclature with the molecular findings, Chase *et al.* (2008) combined all the species of this group provided with short spur, previously treated as the genera *Chaenanthe* Lindl., *Diadenium* Poepp. & Endl., *Neokoehleria*, *Pfitzeria* Senghas, *Scelochilopsis, Scelochilus*, and *Stigmatorthos* Dodson & M. W. Chase, into the single genus *Comparettia*.

During the ongoing work aimed to the documentation of orchid species in the collection of Ecuagenera, to be accessed to the living collection and ancillary collections of the Andean Orchid Research Center (CIOA by its acronym in Spanish), University Alfredo Pérez Guerrero, we discovered a new species of *Comparettia* that we describe here as new to science:

Comparettia sotoana Pupulin & G.Merino, *sp. nov.*

TYPE: Ecuador. Morona Santiago: Tumbez, 1200 m, collected by G. Merino, 15 February 1993, cultivated by Ecuagenera at Gualaceo, accession No. CIOA-00527, flowered 19 March 2008, *F. Pupulin 7063* (holotype, QCA-Spirit). Fig. 1.

Species *Comparettiae langkastii* (Senghas) M.W. Chase & N.H. Williams similis, inflorescentiae multiflorae subumbellata, calcari sepalino brevis recto, labello ovato-subpandurato lobo medio cuspidato, processibus basalibus digitato-conicis apicaliter uncinatis globosis instructo, callibus apicalibus destituto recedit.

Epiphytic, erect, caespitose *herb*. *Roots* slender, flexuous, *ca*. 1 mm in diameter, produced from the rhizome under the pseudobulb. *Pseudobulbs* small, 4 mm in diameter 5 mm long elliptic, complanate, monophyllous at apex (or with a second, apical, small, lanceolate leaflet), partially concealed at the base by the bases of 2—3 foliaceous sheaths, the sheaths 6—10 mm long, articulated with the leaf. *Leaves* laterally flattened (equitant), lanceolate, slightly asymmetrical, acute, minutely mucronate, thick-coriaceous, green suffused with purple, 3.5—7.0 x 0.4—0.8 cm, the larger ones provided with a subcylindric petiole to 5 mm long. *Inflorescence* lateral, arising from the axil of a sheath, a few-flowered (to 5), congested, subumbellate raceme to 3 cm long; peduncle erect, terete, to 2 cm long, with 1—2 strongly conduplicate, laterally flattened, lanceolate bracts, 6 x 3 mm; floral bracts lanceolate, glumaceous, 4.0—6.0 x 1.5 mm. *Ovary* terete, to 8 mm long including the pedicel. *Flowers* not completely spreading, campanulate, the sepals pale yellow, the petals greenish white suffused with orange, the lip white spotted orange, the column pale yellow, the anther white. *Dorsal sepal* elliptic-oblanceolate, obtuse, concave, reclined over the column, 4.6 x 2.5 mm. *Lateral sepals* connate for about 3 mm into an elliptic, concave synsepal, 5.8 x 3.0 mm, the free apexes obtuse to subacute, extending at the base into a sepaline, saccate spur *ca.* 2 mm long. *Petals* elliptic, asymmetrical, rounded, apiculate, slightly concave, 5 x 3 mm. *Lip* 3-lobed, ovate-subpandurate, canaliculated, the lateral lobes elliptic, rounded, suberect; the midlobe cuspidate, slightly conduplicate; the base of the lip protruding toward the rear into two digitate-conical processes, uncinate at apex and expanded into rounded knobs, 2 mm long; disc with 2 low, subquadrate, diverging calli. Column straight, ascending, subterete, thicker toward the apex, 3.7 mm long, provided with broad elliptical wings; stigma rounded. *Anther cap* cucullate, subquadrate, 2-celled. *Pollinia* 2, elliptic-obovate, complanate, on a spathulate-subflabellate, hyaline stipe, viscidium and an ovate viscidium. *Fruit* not seen.

Eponymy: dedicated to Miguel Angel Soto Arenas, for his outstanding contributions to Neotropical orchidology.

Distribution and ecology: Know exclusively from Ecuador. Populations of *C. sotoana* grow epiphytically in open shade in wet forests in the province of Morona Santiago at approximately 1200 meters of elevation, where they are apparently restricted to the terminal branchlets of secondary vegetation. Plants have been found in flower from February to March.

Dodson (2004) first published a photograph of *C. sotoana*, as an unnamed species of *Scelochilus*,

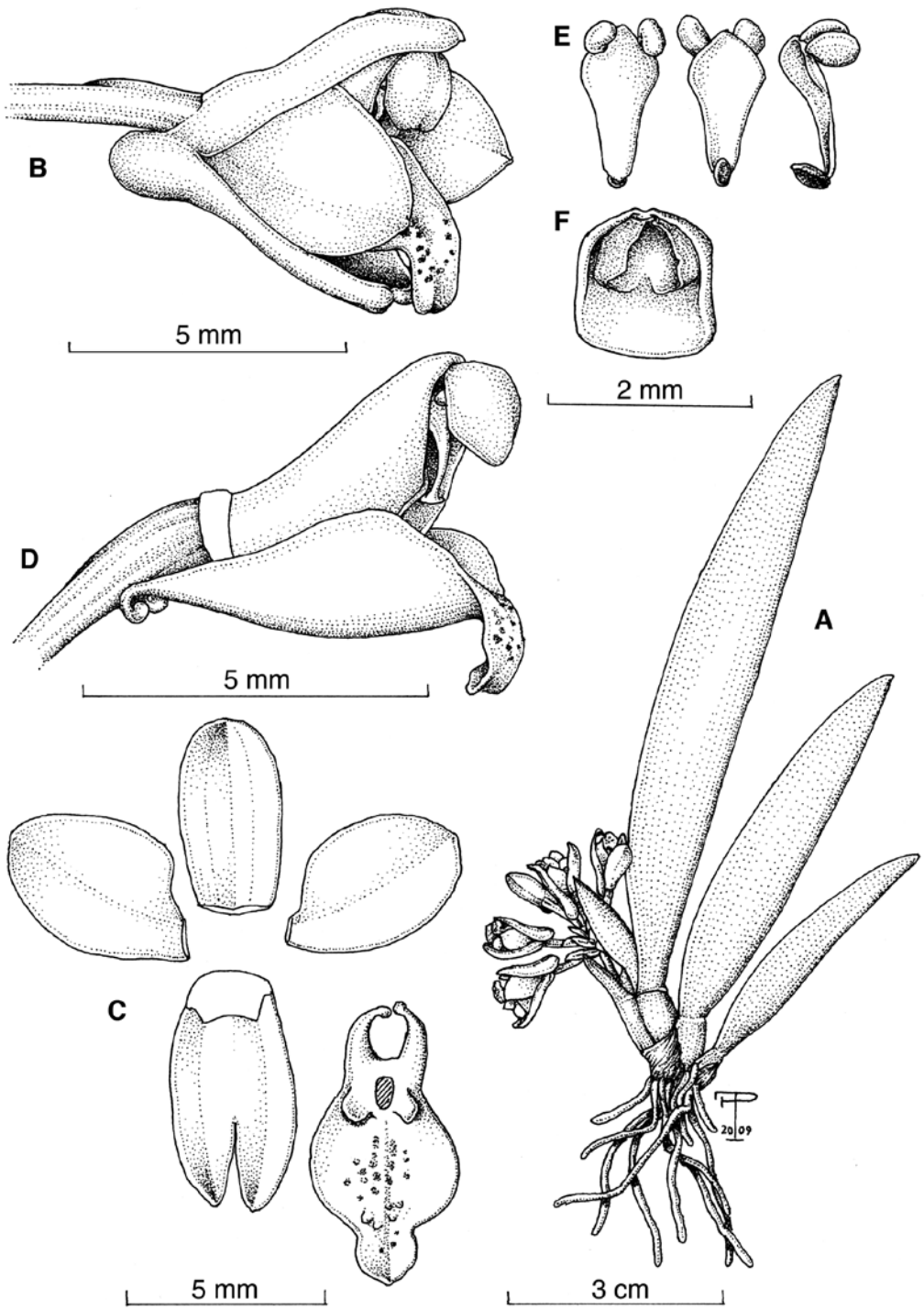

FIGURE 1. *Comparettia sotoana* Pupulin & G.Merino. A — Habit. B — Flower. C — Dissected perianth. D — Ovary, column and lip, lateral view. E — Pollinarium, three views. F — Anther cap, ventral view. Drawn by F. Pupulin from the holotype.

on the basis of an Ecuadorian collection by A. Hirtz (*8134*, probably at RPSC, now at MO). *Comparettia sotoana* belongs to a small group of species, mostly previously included in *Neokoehleria*, known from the Amazonian basin and the eastern slopes of the Andes from Colombia to Peru and Bolivia. Among them, *C. sotoana* is most similar to *C. langkastii* (Senghas) M.W. Chase & N. H. Williams, also endemic to Ecuador. It differs from *C. langkastii* in several characters, including the shape of pseudobulb (elliptical-subcylindrical vs. rounded-complanate) and the leaves (laterally flattened vs. strongly conduplicate-triquetrous), the subumbellate (vs. distichous), several-flowered (vs. 2-flowered) inflorescence, the short (<3 mm vs. >5 mm long), straight (vs. curved) sepaline spur, and the ovate-subpandurate lip with a cuspidate midlobe (vs. pandurate with a deeply retuse, apiculate midlobe) lacking apical calli (present in *C. langkastii*). Furthermore, the nectariferous horns at the base of the lip of *C. sotoana* are digitate-conical, uncinate at apex and expanded into rounded knobs, while in *C. langkastii* they are straight and apically acuminate.

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