SPECIES

ORCHIDACEARUM 4

Icones Colombianae 4

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Monographic works, be it of species groups delimited by relatedness or restricted to a certain geographical distribution, have traditionally been the basis for the study and understanding of local orchid floras. Nevertheless, in large countries, especially if they are also highly diverse and relatively poorly explored, it may be quite challenging to assess how many and which species should be included in such a systematically structured study a priori. In a similar fashion, country level floras are normally not published unless they represent either a complete set of related species of a particular group or a [relatively] complete set of all the species present. The limitation that arises from this completeness factor results in a lot of good and valuable data not being published because of its partiality.

A viable alternative to this was the creation of the Icones Plantarum Tropicarum (IPT) and Icones Orchidacearum (IO) series in which orchids have been monographed by depicting and discussing individual species rather than complete monographs of species’ sets. These series opened the door to the publication of detailed knowledge on particular species, which would be far too partial to include in a monographic work, as was well pointed out by Eric Hágsater when proposing the IO. These series set the basis for the study of orchids in many regions, where it was previously impossible, by depicting an individual to which each name has been applied to in different countries. About the IPT, Calaway H. Dodson stressed that many floras of Tropical countries had much more text than illustrations, that much confusion in botanical taxonomy resulted from inaccurate impressions due to confusing terminology, and that a picture is worth a thousand words. Species Orchidacearum (SO) proposed here, builds on those principles and includes a few additional dimensions:

1. *Infra-specific variation*. When showing an illustration of a species we are actually showing a single individual of that species, in a particular timeframe and under particular ecological conditions. It is difficult to assess if what we have illustrated is an average individual that is representative for the species. There is always a risk of depicting an unusual or aberrant form of it. This is addressed in Species Orchidacearum by allowing for the publication of an unlimited number of plates and descriptions of the same species. In this manner it will be possible to assess morphological variation of species more easily, and diverse forms of a single species may be documented.

2. *What you see is what you get*. Students are frequently challenged with the question of what is included in the published descriptions of individual species. When preparing a protologue it is commonplace to use one or a few known specimens, making it fairly easy to address what material was in the author’s mind when preparing the description. But when preparing monographs lots of material is normally cited, usually from diverse origins, dates and herbaria. Did the author include the features of all the cited specimens or only of those at hand? Is the description based on the original protologue or an amendment that includes additional material? Is the author’s concept of this particular species very inclusive or very exclusive, is it similar to my own? In Species Orchidacearum descriptions are restricted to the morphological variation found in the specimen that has been illustrated, nothing more and nothing less. This may mean that less variation is described in each plate, it may also mean that it does not overlap well with the original protologue. However, whatever is described is exactly what was found in that particular individual and students are free to combine the descriptions of all individuals of the same species included in the series for their own concept of the species.

3. *Lankester Composite Dissection Plates*. The LCDP’s, as they will be referred to from here on, are another key features of the Species Orchidacearum. A combination of more accurate, detailed and less expensive photography, with the lower costs of color printing, and the generalization of digital publication, allows for the possibility of substituting the traditional black and white ink illustrations used in botanical literature for the composite dissection plates in full color published digitally. The LCDP illustration has a few advantages over the drawings. In the first place, shapes, sizes, borders and ornaments are more accurately shown; it includes a very rich color palette, conveying more information; it makes the understanding of depth easier; and finally, it is much more objective and far less hand-dependent.
4. **Systematic order.** A major challenge in non-monographic treatments is the loss of systematic order. In such large and diverse groups as Orchidaceae, not knowing where to look for a particular species’ closest relatives can make determination hazardous. Publishing groups of unrelated species belonging to any genus in each volume creates the issue of requiring the user to flip through all the indexes to find all of the species belonging to a particular genus, and then having to go to each of those publications separately, rather than to be able to find all species of a single genus together. This is addressed in Species Orchidacearum by allowing users to access published material either by volume and issue, or alphabetically by genus or individual species.

5. **Accessibility.** One of the biggest limiting factors for students of Tropical countries to study their own flora is the availability of relevant literature. Type specimens, original descriptions and important monographic works on Tropical plants are mostly deposited or published in North American or European institutes. Inexplicably, and probably unethically, the countries of origin and their students are still restricted access to many of these resources. SO is initially intended to be published electronically, lowering the costs of production dramatically. Therefore, and considering that it is to be used by the students of the orchid-rich countries to be able to study their floras, Species Orchidacearum will be completely available online, widely accessible, and free of charge.

For the name of this series I am indebted to Franco Pupulin. With him, and Diego Bogarin, we spent many a long night talking about conceiving a series that would contain a so called last word on each species of orchid in the world. It would have “everything”, including a fine taxonomical discussion, showing the extant type elements, broad specimen citation, a detailed description, be richly illustrated to show variation along its distribution, include existing DNA data, have a complete set of references, and a modern discussion of the recognition and status of the species. Overtime, realizing the difficulties behind such a task, we desisted, but many of those elements have gone into the creation of Epidendra (www.epidendra.org).

What is proposed here under that name is conceptually quite different. The main goal being to make available the illustrations of as many individuals of diverse species as possible to students of the Tropical orchid floras. Species Orchidacearum follows Icones Orchidacearum in that each icon has its own authors and can be cited individually so that the individual efforts are recognized. However, it falls closer to the idea of Icones Plantarum Tropicarum in that it sticks to a two page format for each icon, giving more relevance to the illustrations, with less emphasis made in a very detailed description and citation of vouchers of multiple specimens of the same species. Contrary to controversy that may arise about the adequate name of a specimen, of any faithful illustration, of a field collected individual, you may always say…

“crece ahí, se ve así, y algo es”

Adam Philip Karremans
The necessity for a serial publication illustrating the diversity of Colombian orchids, perhaps the richest orchid flora in the world, emerged from an informal meeting during the VIII Congreso Nacional de Botánica in Manizales, Colombia in 2015. A large part of the current editorial team of *Icones Colombianae* was present during that meeting. After the successful publication of the first three volumes of the series in 2017, 2018 and 2019, attention towards the orchid flora of Colombia has grown.

The volumes, published as part of the broader *Species Orchidacearum* serial, have proven to be a useful tool not only for students and researchers, but also for more general audiences, including local communities and decision makers. Careful taxonomic work, enriched by detailed photographic documentation on the local orchid floras, slowly but surely set the basis for a multitude of biodiversity related studies and may be crucial to tackle large and highly diverse countries such as Colombia.

*Icones Colombianae* aims to promote broad and unrestricted public access to the scientific knowledge on biodiversity. Through this initiative, the work of different local researchers and orchid enthusiasts is made freely available and easily accessible online to the whole community. The interest that people from the communities where the orchids grow have shown in these publications speaks of the important role that such initiatives play in biodiversity education and conservation efforts.

An additional twelve Colombian orchid species are fully illustrated in the form of Lankester Composite Dissection Plates (LCDPs) in the current volume. Two new species are described for the first time: *Andinia auriculipetala* S.Vieira-Uribe & N.Gutiérrez, a species from La Belleza Municipality in Santander, distinguished by the ear-like petals, and *Epidendrum scrotiforme* Est. Domínguez, S.Mesa, E.Santiago & Hágsater, a species from Antioquia, that can be recognized by the prominent nectary forming a vesicle.

The publication of the first photographs of these previously undescribed species, as well as of other rare orchids in *Icones Colombianae* highlight the relevance of these efforts. The reduction of the habitats where these species grow is a constant reminder of the pressures they are under; properly documenting them and making this information easily accessible to anyone interested, is of help in stressing the importance of conservation efforts in these and other areas.

*The editors*
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Andinia auriculipetala
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Andinia auriculipetala is most similar to *A. cordilabia* and *A. werneri* but can be distinguished by the acute lateral sepals (vs. apiculate), the reniform, hirsute petals proportionally larger (comparable in size to the lip) with the lobes unequal and the sub-cordate lip ciliate toward the round apex, with the basal lobes oblong and touching above the column.

Plant epiphytic, pendent, long repent, up to 38 cm long. Stem occasionally branching, 5.0–6.0 mm long between ramicauls, each segment enclosed by two infundibular, imbricating, membranaceous sheaths, ciliate along the ribs, with ciliate dilated ostia.

Roots slender, ca. 0.6 mm in diameter. Ramicauls ca. 1 mm long, enclosed by a single, infundibular, membranaceous sheath, ciliate along the ribs with ciliate dilated ostia.

Leaves green, suffused with purple along the veins, broadly elliptic, thickly coriaceous, rounded, emarginate with a short abaxial central mucro, 5.8–9.0 × 4.1–7.0 mm, the base narrowing into a petiole less than 0.2 mm long.

Inflorescence a congested, successive raceme of 3–4 flowers, occasionally up to 7 flowers, placed almost opposite to the leaf by a slender peduncle ca. 1 mm long; ovary glabrous, costate, less than 1 mm long. Sepals amber, suffused with burgundy along the veins and at the base. Dorsal sepal ovate, convex, hirsute, obtuse, 3-veined, 1.8 × 1.9 mm, connate to the lateral sepals for about 0.7 mm. Lateral sepals triangular, diverging, oblique, recurved above the middle, acute, 2-veined, 2.5 × 2.1 mm, connate for about 1.1 mm. Petals burgundy with amber external margins, reniform, transversally bilobed with unequal lobes, hirsute, 0.6 × 1.2 mm, the upper lobe widely ovate to triangular, obtuse, 0.5 mm long, the lower lobe ovate to triangular, slightly falcate, obtuse, 0.9 mm long. Lip amber with the lateral lobes burgundy, sub-cordate when expanded, cuneate at the base, ciliate toward the broadly rounded apex, the basal lobes oblong, touching above the column, 3-veined, adnate to the base of the column, 1.0 × 1.3 mm when expanded. Column rose, apically suffused with amber, terete, the anther and stigma apical, ca. 1.6 mm long including the antrorse, conspicuous rostellum. Pollinia two, yellow, obovoid, brought together by a drop-like viscidium. Anther cap maize, ciliate.

Etymology: From the Latin *auriculatus*, "with an ear-like appendage" and *petalum*, "petal", referring to the shape of the petals.

Andinia auriculipetala has only been found at the type locality, where it grows together with several other species of subgenus *Brachycladium* (Luer) Karremans & S. Vieira-Uribe such as *A. catella* (Luer & R. Escobar) Karremans & S. Vieira-Uribe, *A. ciliaris* (Luer & Hirtz) Karremans & S. Vieira-Uribe and *A. irrasa* (Luer & R. Escobar) Karremans & S. Vieira-Uribe. It resembles the Ecuadorean *A. cordilabia* (Luer) S. Vieira-Uribe & Karremans and *A. werneri* (Luer) S. Vieira-Uribe & Karremans in having an elliptical-ovate, hirsute dorsal sepal; diverging ovate to triangular lateral sepals and an inflorescence positioned almost opposite to the leaves, but can be distinguished by the proportionally larger reniform, hirsute petals with the lobes unequal and by the sub-cordate lip ciliate toward the round apex, with the basal lobes oblong and touching above the column.

References:
**Caucaea sanguinolenta**
**(Lindl.) N.H.Williams & M.W.Chase**

*Lindleyana* 16: 284. 2001

**Synonyms:** Leochilus sanguinolentus Lind., Edwards’s Bot Reg. 30(Misc.): 91. 1844.

Oncidium cucullatum var. sanguinolentum (Lindl.) Lindl., Bot. Orchid. 6: 7. 1855.

Oncidium olivaceum var. sanguinolentum (Lindl.) Sander, Sander’s Orch. Guide: 188. 1901.


**Type:** [Venezuela]. “La Guayra”, cultivated by a Mr. Barker (holotype: K-L?).

**Illustrated specimen:** Colombia. Antioquia: Municipality of San José de la Montaña, vereda La Mariela, near the road to El Congo, 2800 m. 11 December 2019. S. Vieira 050 (LCDP voucher).

**Epiphytic herb, 12–16 cm tall.** Roots 1 mm wide. *Pseudobulbs* caespitose, ancipitous, ovoid 18–20 × 15 mm, surrounded basally by few articulate foliaceous sheaths. **Leaves** subpetiolate, conduplicate, elliptic, obtuse, 80–120 × 15–18 mm. Inflorescence axillary from the base of the uppermost sheath, erect, to 18–20 cm long, with a dense few-flowered cluster of flowers near the apex. **Bracts** appressed, scale-like, 3–4 mm long. **Pedicel** and **ovary** 20–25 mm long. **Flowers** showy and long-lasting. **Dorsal sepal** dark chocolate brown with a yellow margin, subsessile, broadly ovate to elliptic, obtuse, apiculate, 8–10 × 4–5 mm. **Lateral sepals** similar in color, subsessile, forming a synsepal up to near the apex, broadly elliptic, obliquely obtuse and apiculate, ca. 10 × 6 mm. **Petals** similar in color, subsessile, broadly ovate to broadly elliptic, acute, 9–10 × 8 mm. **Lip** brightly light magenta with many dark purple spots and markings of various sizes, rigidly attached to the base of the column, triiled with the lateral lobes spreading, trapezoid, slightly undulate and incurved, ca. 15 mm across when flattened, then with a distinct isthmus below the broadly bilobed, spreading, slightly undulate front lamina, 20–22 mm across. **Callus** at the base of the lip with a dense tuft of purple and white hairs, then dark yellow, of a fleshy, erect and cubic shaped structure, 3–4 mm long and equally broad, with five to seven distinct dorsal knobs and/or short keels. **Column** basally white, gradually darkening magenta-purple, short and stout and shallowly concave below the stigmatic surface, basally parallel to the ovary and then curved away from the lip and with the apex down-curved, with a broad, serrate hood, 6–7 mm long. **Anther cap** white and purple, broadly campanulate, obtuse, lobulate. **Pollinarium** 2, pyriform pollinia on a ca. 0.8 mm long strap-like stipe, on a minute viscidium.

**Etymology:** From the Latin *sanguinolentus*, “of blood”, in reference to the blood-red spots of the lip.

*Caucaea sanguinolenta* is a widely distributed high elevation growing species occurring in the Andean cloud forests. The species is notoriously plastic in cultivation, with various floral parts being highly variable when the growing conditions change. This has led to the proposal of multiple segregate taxa (Stacy 1975). Lindley himself had his doubts about this species, reducing it to a variety (Lindley 1855). *Caucaea sanguinolenta* was originally described as having green sepals and petals with a few crimson streaks, and the lateral lobes wider than the front lobes (Lindley 1844).

**References:**


**Dichaea hystricina**

**Rchb. f.**  
**Flora 48: 279. 1865**

**Type:** Cuba [Oriental] prope villam Monte Verdi dicta, Aug. 13, 1859, C. Wright 1478 (holotype: W-17196; isotype: AMES-61211).

**Illustrated specimens:** Colombia. Valle del Cauca: Municipality of Río Bravo, 1600 m. 6 September 2018. J.S. Moreno 521 (CAUP; LCDP voucher).

Plant epiphytic, caespitose, up to 15 cm long. Roots pale brown produced along the stem, glabrous, flexuous, about 0.2 mm thin. Stems flattened, suberect to pendent, 5 cm long, freely branch- ing, conduplicate sheaths. Leaves not articulate, closely spaced along stem, spreading, subcoriaceous, narrowly ovate, mucronate apex, 3–5 × 2 mm, entire margins densely and equally ciliate. Inflorescence solitary, 1-flowered, emerging below foliage, the peduncle straight, provided at the base with a triangular, acute bract. Ovary pedicellate and cylindric, densely muricate, about 1.25 mm long. Flower pale yellow, sepals yellowish cream widely spotted with purple, the lip white variegated with purple spots. Dorsal sepal lanceolate, apiculate, 6–7 × 2 mm, abaxially provided with sparse warts. Lateral sepals lanceolate elliptic, apiculate, concave, 7–8 × 2.5 mm, abaxially warty. Petals oblanceolate, acuminate 7 × 2 mm. Lip 3-lobed, from a fleshy claw, 6–7 × 5 mm, the hypochile sagittate, acute, the lateral lobes filiform, acute, retrorse, 2.5 mm long. Column 5 mm long, yellowish with purple around edge of stigma and laterally, provided with two purple slightly ciliate wings. The ligule is entire and purple, ciliated mostly at the apex.

**Etymology:** From the Latin *hystricinus*, “porcupine-like”, in reference to the “spiny” fruits of the species.

The species is easily recognized by its small size, the linear-ligulate leaves provided with trichomes that cover the entire leaf margins, the mucrate ovary, and the clawed lip, with small lobules at the base (Pupulin 2005; 2007). In Colombia, *Dichaea hystricina* is a widely distributed species in the understory of moist forests from 800-2100 m of elevation.

**References:**


Elleanthus maculatus

(Lindl.) Rchb.f.

Ann. Bot. Syst. 6: 482. 1863

Elleanthus maculatus can be distinguished by its pendulous inflorescence with long furfuraceous bracts and several purple flowers. It is a common herb found in the three cordilleras of Colombia, in Andean montane forests and paramos. It is distributed from Costa Rica to Perú, Bolivia and Venezuela.


Illustrated specimen: Colombia. Cundinamarca: Municipality of Guasca, 3200 m. 11 April 2019. J. S. Moreno & P. Harding 525 (LCDP voucher).

Epiphytic or terrestrial, caespitose herb, 150 cm tall. Stems terete, partially covered by the leaf sheaths. Leaves leathery, plicate, elliptic, acute; sheath tubular, 4.5–7.0 cm; blade 15–20 × 1.5–5.5 cm. Inflorescence terminal, pendulous, in a conic to cylindrical raceme, 5–12 cm long; rachis terete, straight, furfuraceous; basal bracts 2–3, furfuraceous, the firsts differentiated in a globose sheath and a lanceolate blade, the distal one cymbiform, floral bracts subcoriaceous, ovate, long acuminate, longer than the flowers, 25–65 mm long, furfuraceous. Ovary furfuraceous, terete, 7.5–10 mm. Flowers 20–40, spiraled, purple, developing simultaneously. Sepals 14–18 × 4–7 mm, furfuraceous; dorsal sepal oblong and acute, lateral sepals ovate–cymbiform, acuminate and keeled. Petals oblong, asymmetrical, curving inwards the dorsal sepal, 14–18 × 2–3 mm, margin irregularly dentate. Lip basally saccate, narrow and thick in the middle and broad and membranous in the distal portion, 15 × 8 mm, sack with two globose, nectariferous calli, distal portion with acute apex and fimbriated margin. Column slender, 10–17 mm long, white, with two short, rounded purple wings (staminodes). Anther cap apical, subtriangular, purple. Pollinia 8, dark purple to blue, obovate with short hyaline caudicles. Stigma ventral, semicircular; rostellum ventral, oblate to reniform.

Etymology: From the Latin maculatus, “stained, spotted”, in reference to the spotted floral bracts and ovary of the flowers.

Costa Rica to Perú, Bolivia and Venezuela.

References:

Epidendrum scrotiforme

Est. Domínguez, S. Mesa, E. Santiago & Hágaster, sp. nov.


**Paratype:** Colombia. Antioquia: Municipality of San Rafael, Vereda Quetradona, Rio Churimo, 1050 m. October 2019. J. P. Tobón 3089 (paratype: JAUM).

**Epidendrum scrotiforme** is most similar to *E. latisegmentum* C.Schweinf., but can be distinguished by the prominent nectary forming a vesicle protruding from the pedicellate ovary (vs. no prominent vesicle in the pedicellate ovary).

**Plant** epiphytic, to 50 cm. **Roots** thick, 5 mm in diameter. **Stems** rigid, 16.5–21 × 0.25–0.5 cm. **Leaves** 3 to 5, elliptic, thin, undulated, on a same plane, lustrous; distributed along the apical half of the stems, unequal, progressively larger, blade 4–12 × 2–4 cm. **Sheaths** turning brown as they dry, cylindrical, tubular, rugose, compressed against the stem, 2–5 × 0.25–0.5. **Floral bracts** triangular, lustrous, apex attenuated, profoundly cleft, embracing, 4–5 × 1.4 mm. **Flowers** successive, fleshy, on the distal part of the inflorescence.

**Dorsal sepal** green turning ochre, free, lanceolate, 5–veined, fleshy, 20–21 × 7–8 mm, apex rounded, margin slightly revolute, lustrous. **Lateral sepals** green turning ochre, obliquely united to the column, 8–veined, fleshy, obliquely oblong–elliptic, 21–22 × 11.4 mm, apex rounded, fleshy, lustrous, margin slightly revolute. **Petals** translucent green to yellow, 3–veined, spatulate, 18–20 × 5–6 mm, margin slightly revolute, central vein dorsally carinate. **Lip** light green to ochre, united to the column, transversely elliptical, base widely cuneate, 25–25 × 25–24 mm, apex rounded, indumentum papillose, papillae translucent, sparse. **Callosity** bicalloused, calli laminar, short, disk with three intercalary ribs, thin and extending to the middle of the labellum, two calli with three elongated carinae, being the middle one longer and wider. **Column** green and turning white distally, short, straight, obliquely triangular when seen from the side, nectariferous cavity tubular and deep, 9.8–10.5 × 4.5–5 mm, papillose, lateral stigmatic lobes very small. **Rostellum** apical and depressed. **Anther cap** white, elliptical, slit transversal, papillose, 1.5 × 2.4 mm. **Pollinia** pale yellow, 4, in two pairs, 2 mm. Nectarium penetrating the ovary almost entirely, wide, forming a prominent scrotiform vesicle, laterally flattened, lustrous, 13.1–13.3 × 9.4–9.8 mm. Ovary terete, narrow at the base, striated, 17–19 × 2 mm. Capsule not seen.

**Etymology:** From the Latin *scrotum*, the pouch that supports the testicles, in prominent reference to the shape of the vesicle of the nectary.

**Epidendrum scrotiforme** belongs to the Scrotiformis complex of the Incomptum group. The lip is reminiscent of *E. megalopentadactylum* Hágaster & Huayta but the habit of that species is longer with stems complanate and ancipitose. The transversely elliptic lip is reminiscent of *E. latisegmentum* C.Schweinf., but that species clearly has 2 prominent calli on the reniform lip and no prominent vesicle in the pedicellate ovary, and the 3 ribs of the lip are low and wide.

**References**


Ida fimbriata  
(Poepp. & Endl.) A. Ryan & Oakeley  


**Type:** Colombia. Terrestrisch bei Pasto, 2400 m, W. Hopp 20 (holotype: B†).

**Illustrated specimen:** Colombia. Valle del Cauca: Municipality of Calima, Darién, La Cristalina, 1800 m. 7 August 2015. J.S. Moreno & A. Erazo 522 (CAUP; LCDP voucher).

**Etymology:** From the Latin *fimbriatus*, “fibrous, fringed”, in reference to the fimbriate margins of the lip.

Ida fimbriata is most similar to *I. ciliata* (Ruiz & Pav.) A. Ryan & Oakeley, but it can be easily distinguished from the latter by having the three lobes of the lip ovate (vs. lateral lobes triangular

and an oval mid-lobe). We follow Populun & Karremans (2017) in considering *Sudamerlycaste* an illegitimate synonym of *Ida*. Even though the year 2002 appears on the cover of Revista Guatemalen-sis, the effective publication date is after 2007.

**References:**
**Lepanthes felis**

**Luer & R. Escobar**


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**Type:** Colombia. Antioquia: Frontino, Alto de Cuevas, alt. 2050 m., 14 May 1983. R. Escobar & E. Valencia 2605 (Holotype: SEL).


Epiphytic, caespitose plant, up to 9 cm long including the inflorescence. Roots slender. Ramicauls suberect, slender, 3–5 cm long, enclosed by 7–9 minutely ciliate along the ribs lepanthiform sheaths with ciliate, acuminate dilated ostia. Leaves suberect to spreading, coriaceous, elliptical, acute, 2.8–3 x 1.5–1.8 mm, the base cuneate into a petiole 2–3 mm long. Inflorescence a congested, successively several-flowered, raceme up to 5 mm long, borne by a filiform peduncle 15–18 mm long on top of the leaf; pedicels 2 mm long, persisting. Ovary muricate-crested, shallowly winged, ciliate, 4.5 mm long. Sepals red, suffused with orange-yellow at the base, margins ciliate–aciculate. Dorsal sepal broadly ovate, concave, 5-veined, connate to the lateral sepals for ca. 5 mm, to form a deep sepaline cup, the apex caudate, 16 x 10 mm. Lateral sepals ovate, oblique, caudate, 2-veined, connate basally and concave below a transverse fold between the middle and basal thirds, deflexed above the fold, 14 x 6 mm. Petals emerald green, transversely bilobed, the upper lobe erect, thick, narrowly oblong, triangular in cross-section, acute, the lower lobe as a minute tooth at the base, 1.25 x 4 mm. Lip dull green, transversely bilobed, 1.5 x 2 mm expanded, the lobes triangular, acute, embracing the column, the apex transversely rounded, cleft, the cuneate base connate to the column above the base. Column 1.5 mm long, the anther and stigma apical. Anther cap lanceolate-ovate, decidualis, 2–celled, 1 mm long. Pollinia 2, clavate-pyriform.

**Etymology:** From the Latin felis, “cat”, in reference to the fancied illusion of the flower.

*Lepanthes felis* is an endemic species from the Western and Central Andes of Colombia. It belongs to subgenus *Marsipanthes* Luer, section *Felinae* Luer, and is distinguished by large, variably red flowers borne far beyond the tip of the leaf, concave sepals that are connate into a deep sepaline cup, a bilobed lip with triangular, obtuse lobes surrounding the column and its distinctive green petals, with an erect, thick and fleshy upper lobe and a vestigial lower lobe. It is because of the resemblance of the shiny green vertical petals inside the cup-like flower with the eyes of a cat, that this species gets its name.

**References:**

**Masdevallia caudata**

**Lindl.**


Type: Colombia. Cundinamarca: “Hab. in subfrigidis regni Neogranatensis, prope S. Fortunato, florens Junio; Gudot. (Hab. s. sp.)” (holotype, K-L; tracing of type, W)


Plant epiphytic, caespitose; up to 10 cm tall, roots coarse. Ramicauls erect, 1–3 cm long. Leaves erect, coriaceous, elliptical, subacute to obtuse, 5–10 × 1–2 cm, cuneate below into a petiole. Inflorescence a solitary, showy flower, 8–12 cm tall; peduncle erect, 6–8 cm long, with a bract above the base, pedicel 10–12 mm long. Ovary pale white, with black dots, 8 mm long. Sepals contracted into erect, slender, yellow tails 6.5–7 cm long. Dorsal sepal yellow, purple veined, dotted with purple-brown, obovate, concave, with denticulate margins, 27–30 × 17–20 mm, connate to the lateral sepals for 8–10 mm to form a shallow, gaping, sepaline cup, the apex rounded. Lateral sepals white, dotted with purple, ovate, oblique, 18–20 × 16–19 mm, connate 5–8 mm to form a deep, conical mentum below the column-foot, the apices subacute. Petals white, suboblong, 5–5.5 × 2.5–2.7 mm, the apex truncate, tridentate. Lip white, dotted with purple, elliptical-oblong, reflexed above the middle, 5.5 × 2.8 mm, the apex broadly rounded, the disc with a close pair of low, longitudinal calli and a single, central callus distant from the apical margin, the base subcordate, hinged foot equally long including the slender, incurved extension. Column white, with purple dots in the margins, semiterete, 5.5 mm long. Anther cap reddish, cucullate, 1.5 × 1 mm. Pollinia two, yellow, ovoid, 1 mm long.

Etymology: From the Latin caudata, “with tails”, in reference to the long-caudate sepals.

Masdevallia caudata Lindl. is one of the most striking and commercialized species of the genus. This species is seriously threatened and it has been classified by Calderón et al. (2006) as an endangered species (EN) following IUCN criteria. **Masdevallia** caudata is recognized by the rounded, yellowish dorsal sepal, concave and striped with seven to nine purple-brown lines, the lateral sepals dotted with purple and the long, and slender, yellow tails. The petals are tridentate with a callus well-developed as a thin wing above the middle and a large, thick, retrorse process above the base. The column, petals, and lip stand erect and exposed in the center of the flower.

References:
**Masdevallia coriacea**

**LINDL.**

**ANN. MAG. NAT. HIST. 15: 257. 1845**


**Type:** Colombia. Cundinamarca: “on rocks, near Bogotá, at an elevation of 8,000 ft.”, 1842. Th. Hartweg s.n. (holotype, K-L).


**Plant** Lithophytic, rarely epiphytic, caespitose, up to 20 cm tall, roots fleshy coarse. Ramicauls erect, 4–5 cm long, enclosed by 2–3 loose, tubular sheaths. Leaf erect, thickly coriaceous, narrowly oblong, elliptic, 10–15 × 1.5–2.5 cm long. Inflorescence a solitary flower, sub erect to erect peduncle 14–24 cm long, spotted with purple; floral bract white, 1.5–2 cm long; pedicel spotted with purple too, 3–5.5 cm long. Ovary green, 9–10 mm long. Sepals rigidly fleshy, pubescent adaxially, cream-colored and dotted with purple along the veins, the blade of the dorsal sepal ovate, 20 × 14 mm, connate 10 mm to the lateral sepals to form a broad, cylindrical, sepaline tube, acute apex, contracted into a thick, yellowish tail, 13 mm long, the lateral sepals ovate, with acute apices, connate 10 mm into a bifid lamina, synsepalous 30 × 24 mm, including the thick tails 7 mm long. Petals white with a purple midvein, oblong, subacute to obtuse, 12 × 5 mm. Lip yellowish spotted with purple at the base, apex yellow, oblong-obovate, thick, 14 × 6 mm, shallowly channeled centrally between low, longitudinal calli, the apex obtuse to rounded, verrucose, the base subcordate, hinged beneath. Column white with purple margins, semi-erecte, 10 × 3 mm, the foot 8 mm long, with an incurved extension. Anther cap white, 2 × 8 mm. Pollinarium made of two yellow pollinia, and a pair of caudicles, giving it the characteristic whale tail shape, 1.7 mm long.

**Etymology:** From the Latin coriaceus, “leathery,” in reference to the thickly coriaceous leaves.

**Masdevallia coriacea** Lindl. can be found on the hills surrounding Bogotá, especially in Usaquen, Guadalupe, Monserrate, Cota, Subachoque, Facatativá and Boyacá, at elevation from 2200 to 3700 m, mostly it is growing terrestrially or lithophytically. This species is recognized by the thick texture of its coriaceous, leather-like leaves. The lip’s verrucose apex is another identifying morphological feature, also characteristic is the broad sepaline tube, with a chin that is usually upwards at an angle of 45 degrees. **Masdevallia coriacea** has a very strong unpleasant fragrance, decomposed like a sewer, and has been seen to attract flies of the families Calliphoridae and Sarcophagidae.

**References:**


Masdevallia xanthina

Rchb.f.

Gard. Chron. 13(1): 681. 1880

Synonyms: Masdevallia estradae Rchb.f. var. xanthina (Rchb.f.) Veitch, Man. Orch. Pl. 5: 42. 1889.

Type: Colombia, without collection data, cultivated Apr. 1880 by Veitch 166 (holotype: W).

Illustrated specimen: Colombia. Tolima: Municipality of Villahermosa, vereda Samaria, 3020 m, pluvial mountain forest. 23 July 2019. M. A. Sierra-Ariza & A. Albino-Bohórquez 176 (TOL; LCDP voucher).

Plant epiphytic, caespitose, 6-10 cm tall. Roots white, slender. Ramicauls blackish, erect, slender, enclosed by 2-3 loose, fibrous, tubular sheaths. Leaf erect, coriaceous, oblong to elliptical, rounded at the apex, minutely tridentate, blade 5–9 × 2–2.5 cm, base cuneate into a slender, channelled petiole. Inflorescence a solitary flower borne from the base of the ramicaul, on an erect, slender, terete peduncle 6–7 cm long, with a blackish bract on the base. Subtending floral bract tubular, acute, whitish. Pedical terete. Ovary smooth, terete, ribbed, 5 mm long. Flowers resupinate. Dorsal sepal pale yellow, erect, obovate, concave, 5-veined, 19 × 12 mm, slightly connate to the lateral sepals, rounded at the apex, contracted into a yellow, erect, slender tail 4–5 cm long. Lateral sepals white, pale yellow at base, with two small dark purple dots, elliptic, oblique, 15 × 10 mm, 3-veined, connate at base, the obtuse apices contracted into tails similar to that of the dorsal sepal, 5–6 cm long. Petals white, asymmetric, smooth, cartilaginous, 6 × 3 mm, the apex tridenticate, the labellar margin thickened, forming a winglike callus basally incurved. Lip erect, oblong, white, suffused with light purple, smooth, membranous, the apex obtuse, with a dark purple apical lobule, with a pair of low longitudinal calli, the base rounded, hinged to the column foot. Column white, marked with purple, 5 × 3 mm, longitudinally winged, apically denticate, column foot stout, with an incurved extension. Pollinia not seen.

Etymology: From the Greek xanthós, “yellow”, in reference to the color of the flower.

Masdevallia xanthina belongs to a group of morphologically similar taxa belonging to Masdevallia Ruiz & Pav. subsect. Caudatae H.J. Vetch. Members of the species complex are distributed across the northern Andes and are characterized by the blackish ramicauls, large flowers, elongate, slender, yellow tails, white petals with a marginal callus curved basally and simple, erect lip with a dark apical callus. Individuals of Masdevallia xanthina and M. klauchochorum Rchb.f. from different populations show variation in the shape and proportion of the floral parts; differing essentially in the flower color and presence or absence of “eye-spots” at the base of the lateral sepals.

References:


Species Orchidacearum 4 - Icones Colombianae 4

Ornithocephalus escobarianus
(GARAY) TOSCANO & DRESSLER


Epiphytic herb, pendent, 10 cm long. Leaves fan-shaped, conduplicate leaf-sheaths, imbricating below, linear-elliptic, coriaceous, truncate base, amplexicaul, acuminate, 2–5 × 0.5 cm. Inflorescence 15–18 flowers, racemose, suberect, produced from the axils of the upper leaves, up to 3 cm long; peduncle pubescent, 5 cm long. Floral bracts lanceolate, acute, longer than the ovary, 3–4 mm long. Ovary, slightly curved, suberect, 5 mm long. Sepals yellow, pubescent and carinate towards the adaxial face, obtuse apex, margin microscopically dentate; dorsal sepal oblong-obovate, truncate base, obtuse apex, 5 × 2 mm; lateral sepals oblong, oblique, cuneate base, 3.8–4 × 2 mm. Petals yellow, 1–nerved, obovate, cuneate base, rounded apex, 5 × 3 mm. Lip greenish-yellow, the apical lobe yellow, with a rounded, excavate base and thick, triangular apical lobe, 5 × 2.5 mm. Column yellow, sub-erect, short, lobulate, apical lobes rounded, 2.5 × 1.5 mm. Anther yellow, apical, ovate, 2 mm long. Pollinarium 4, yellow, stipe elongate, 1 mm long.

Epnyonym: Named in honor of Gilberto Escobar R. from Medellín, Colombia, collector of the species.

Ornithocephalus escobarianus (Garay) Toscano & Dressler is endemic to the Central Andes of Colombia. It is similar to Ornithocephalus hoppii (Schltr.) Toscano & Dressler but differs in the rounded lip with an excavate base and a thick, triangular, apical lobe lip.

References:


Synonyms:


**Prosthechea gilbertoi**

(GARAY) W.E.HIGGINS


**Type:** Colombia. Caldas: Anserma, 2.000 m. G. Escobar 586 (holotype: AMES!).

**Illustrated specimen:** Colombia. Antioquia: Municipality of Jardín. road to Cueva del Espíndor, secondary forest, 2200 m. September 2015. J.S. Moreno & A. Elizondo 526 (LCDP voucher).

Epiphytic, creeping, erect herb, 60 cm tall including the inflorescence. Roots fibrous. Rhizome separating growths up to 15 cm. Foliar sheath 1, deciduous or persistent. Leaves 2, elliptic, 15 × 3 cm. Floral spathe 4 cm long, brown. Inflorescence 15–18 cm long, terminal. Ovary 5 mm, three sided, three low wings laterally. Flowers numerous 6–10, long lasting, non-resupinate, patent; sepals and petals dark red maroon, yellow at tips; lip white with dark red maroon veins becoming solid apical to callus; callus white basally, yellow apically; column green with maroon striations dorsally. Sepals 15 × 7.5 mm, elliptic, acute. Petals 13 × 7 mm, spatulate, acute. Lip entire to obscurely three lobed, 1.5 × 1 cm, coelate, suborbicular, margins crenulate; callus pulvinate, three lobed at apex, extending to mid lip. Column short 0.6–0.7 cm long, fused to lip base minimally 2 mm, base hollowed out, apex with broad apical teeth equal, dorsal tooth with ligule; stigma, semicircular, bilobed, apical, rostellum bi-toothed ventrally. Anther cap 4–celled. Pollinia 4, obovoid, equal, stipe 1 mm, viscidium small.

**Eponymy:** Named in honor of Gilberto Escobar R. of Medellín, Colombia, collector of the species.

*Prosthechea gilbertoi* was originally compared to *P. lambda* (Lin- den & Rchb.f.) W.E. Higgins, but the pseudobulbs of *P. gilbertoi* never become as wide and stout as *P. radiata*, and the column and callus are notably different. The color of *Prosthechea gilbertoi* can be orange to deep and shiny red to red maroon.

**References:**  
AUTHOR INSTRUCTIONS

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Lankester Composite Digital Plate (LCDP)

Size: Letter, 8.5 × 11 inches (215.9 × 279.4 mm)
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