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Checklist of Orchidaceae from Caquetá, Colombia

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Checklist of Orchidaceae from Caquetá, Colombia

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Abstract

A checklist of Orchidaceae from Caquetá Colombia is presented here. We recorded 96 genera and 414 species, exceeding a previous inventory by 272 species. The checklist is conservative in the number of genera and species by including only taxa that were fully and reliably identified and that are either linked to a corresponding herbarium voucher, a living collection specimen, or a photo taken in the field and published at iNaturalist by one of the authors. The documented species diversity in the region could dramatically increase in the next few years with additional collecting efforts in the eastern slope of the Andes nested in Caquetá. About 9 % (414/4600) of all Orchidaceae species recorded for Colombia are reported for this area, showing the important role of Andean-Amazonian foothills and all other ecosystems of this region.

Keywords

Alpha diversity, Amazon, Andes, floristic studies, orchids, Piedmont

Introduction

Orchidaceae are one of the most diverse and widely distributed flowering plant families including 25,000 - 27,000 species and 880 genera (Chase et al. 2015). Colombia has the largest diversity of orchid species in the American tropics (Pérez-Escobar et al. 2022a), hosting ~4,600 species that represent ~18% of the known species diversity in the family. The highest level of species richness arises in the Northern Andes region of the country (Pérez-Escobar et al. 2022a), where a large number of endemic species occur, accounting for 36.8% of the total species reported for Colombia. With new orchid novelties published annually (Ortíz et al. 2009; Hágsater et al. 2013; Viera-Urbe and Moreno, 2022; Pérez-Escobar et al. 2021, 2022b), Colombia is a hotspot for biodiversity conservation (Betancur et al. 2015).

Caquetá, one of Colombia's 32 departments, is a largely unexplored region with extraordinary ecosystem diversity, geographically presenting a variety of landscapes, topographic forms, and different types of associated vegetation and water sources, including the Amazon plain, valleys, hills, foothills, and mountain ranges (Fig. 1). The department contains four national natural parks and covers part of the Chiribiquete World Heritage Park and 16 recognized civil society reserves (RUNAP 2022, webpage checked May 2022). Caquetá is placed in the eastern slopes of the Andean foothills a confluence zone of mountainous and lowland Amazonian landscapes with different communities' composition. The Andean foothills of Caquetá range between 200 and 1000 meters above sea level.

The Colombian eastern Andean Mountain range transitions along an environmental gradient from foothills to either the Guyana Shield (Meta and Caquetá), the Amazon basin (Caquetá, Putumayo, and Amazonas), or the Orinoco Basin (Arauca, Casanare, and Meta) (Hoorn et al. 2010). These ecotones are hyperdiverse because of the evolutionary, biogeographical, and ecological processes that operate in a rich array of landscapes (Ruiz et al. 2007; IGAC 2010). It is perhaps in the confluence of lowland and mountainous landscapes where the greatest wealth of plant species diversity and endemism occurs in the country (Ruiz et al. 2007; Pérez-Escobar et al. 2022a) but the limited existing orchid inventories underestimate the region's species diversity.

Although Orchidaceae are diverse within Caquetá, few checklists and taxonomic studies focusing on this group are available. For example, the *Catalogue of Plants and Lichens of Colombia* (Bernal et al. 2016), reported a total of 104 orchid species, whereas "The National Orchid Conservation Plan" presented a count of 142 species (Betancur et al. 2015). Currently, Caquetá is severely affected by deforestation driven by anthropic transformations of the natural ecosystems (Jaramillo-Castelblanco 2016; IDEAM 2020). Biological diversity inventories of the Andean-Amazonian region are thus crucial to inform habitat conservation strategies in the region.

In this study, we generated a detailed species list of Orchidaceae for the department of Caquetá, one of the most unexplored areas in Colombia, due to, among other factors, difficulties such as security risks and lack of easy access routes to some of its regions and municipalities. This is a collective work developed by more than twelve Colombian botanists during 2019 - 2023, under the umbrella project "Orquídeas para la Paz" (Orchids for peace). This program aims to explore, reproduce, and support orchid species recovery, while developing sustainable

strategies for business based on horticulture for vulnerable communities around Colombia. Data obtained here comes from living collections, photographs taken from field, and an extensive review of herbarium collections around the world.

Methods

Study Area

Caquetá is located in Southwestern Colombia, between latitudes 0.7° S - 2.9° N and longitudes 71° - 76° W. It comprises 16 municipalities including Florencia, Belén de los Andaquíes, El Paujil, Doncello, and La Montañita among others (Table 1). This region contains a variety of landscapes and ecosystems ranging from the Eastern Cordillera of the Andes to the Amazonian plains, with elevations ranging from 0 – 3200 meters above sea level (masl). The mean annual rainfall is about 2179 mm. The mean annual temperature ranges from 27 - 29°C (IGAC 2010) (Fig. 1).

Field expeditions

To expand the checklist of Orchidaceae that occur in Caquetá we carried out a total of 10 field expeditions between 2019 and 2022 for the project “Orquídeas para la Paz.” Two expeditions explored part of the Alto Fragua Indi Wasi National Natural Park in collaboration with the park, and nine expeditions explored premontane forests and low land Amazonian Forest of the department. Fertile specimens were collected and prepared for herbaria according to techniques used for orchid collections, that includes the preservation of flowers in spirit collections, photographs, and tissue collections for future DNA analysis. The specimens were deposited at either the Universidad de la Amazonía (HUAZ) or the Universidad del Valle (CUCV) herbaria. Duplicate collections were made for other herbaria when possible. Live specimens, collected when flowers were not found, were taken to local nurseries at El Caraño, Florencia, located at 950 masl for cold weather orchids, or El Manantial, Florencia, located at 300 masl for warm weather orchids. Once they flowered, they were photographed, identified, and herbarium specimens were made. All collections were deposited under the collection permit of the Universidad de la Amazonia (permit number 01691 October 2020; Indi Wasi National Park memorandum No. 20182200004943), by Alexis Calderón, Marco Correa and Edwin Trujillo. Some living collections were added to the list as “tentative” when they were accurately identified but lack an herbarium voucher.

Resources used

Databases and herbaria were used to find herbarium specimens that were examined to backup observations without vouchers. Available literature, as well as local, regional, and national catalogs were used to find herbarium specimens collected in the region. Only records with an herbarium specimen were considered for this checklist; living specimens and iNaturalist records with a specialist identification were considered in the list but only as “tentative” until the herbarium collection is available. To carry out online consultations in herbaria, search criteria were considered using the keywords: Caquetá, Orchidaceae, tropical humid forest, botanical

expeditions, Amazon region, and Caquetá River. The "advanced search" option was used for most of the herbaria consulted, since it allows for a more direct search for information. International herbaria consulted, either in person or online included: New York Botanical Garden (NY), Naturalis Biodiversity Center (NL) - Botany (Herbarium Utrecht), the Herbarium Museum Paris of the Museum National D'Histoire Naturelle (P), W-Reichenbach (Vienna), B (Berlin), Oak Ames Herbarium, Harvard University (AMES), Royal Botanic Gardens Kew Herbarium (KEW), Marie Selby Botanical Gardens (SEL), TROPICOS database of the Missouri Botanical Garden (MO), the University of Wisconsin Herbarium (WIS), the Real Jardín Botánico de Madrid (MA), Herbario del Instituto Chinoín (AMO), Gdansk University (UGDA), University of Florida Herbarium (USF), and University of California, Los Angeles Herbarium (LA).

Colombian herbaria included: Herbario Nacional Colombiano (COL), Herbario Forestal de la Universidad Distrital Francisco José de Caldas (UDBC), Herbario de la Universidad de Antioquia (HUA), Herbario de la Universidad de Caldas (FAUC), Herbario de la Pontificia Universidad Javeriana (HPUJ), Instituto Amazónico de Investigaciones Científicas – SINCHI (COAH), Herbario Federico Medem-Bogotá (FMB), Herbario Enrique Forero (HUAZ) de la Universidad de la Amazonia, Jardín Botánico José Celestino Mutis de Bogotá (JBB), Universidad de los Llanos (LLANOS), Universidad de Nariño (PSO), Universidad Surcolombiana (SURCO), Herbario de la Universidad del Valle (CUCV), Herbario de la Universidad del Cauca (CAUP), and Universidad Pedagógica y Tecnológica de Colombia (UPTC). Other checked databases included GBIF (Global Biodiversity Information Facility), iDigBio (Integrated Digitized Biocollections) and BRAHMS at Marie Selby Botanical Gardens (Software for Natural History management).

Name validation and data curation

Correct scientific names of species were assigned based on the World Flora Online (2022), except for the genus *Tubella* (Luer) Archila, which was accepted as valid following Bogarín et al. (2018). All names were supported by herbarium specimens, photographs uploaded on iNaturalist (www.inaturalist.com) or living collections in one of the local nurseries that supported their presence in Caquetá with reliable taxonomic determination.

All records obtained from herbaria, databases, and literature were carefully curated regarding their scientific name, locality, collector, and collection number. For localities, names of municipalities were verified and updated. To assign a name to duplicates with different identification, provenance of each assigned name was investigated, paying particular attention to plants identified by experts, curators, and recognized taxonomists, besides using the date of determination and its citation in a publication. Lastly, using photographs and a list of taxonomic groups within orchids we reached out to as many specialists as possible for their species expertise (see *Acknowledgements*). This final dataset was used for analyses.

Data Analysis

Collection records were georeferenced as precisely as the information allowed it, since in many records the location is not clearly specified, a frequent situation in orchids, old collections, and

those made by amateurs. Due to the lack of standardized geographical coordinates, here only the number of species in municipalities is reported. Georeferenced records, and species distribution maps were constructed for the 18 municipalities and are available upon request.

Results

In “Orquídeas para la Paz” expeditions, 77 species representing 23 genera were collected. Living individuals found at El Manantial (300 masl) and El Caraño (950 masl), Florencia, were brought sterile for their subsequent identification once they produce reproductive structures for inclusion in herbaria collections. A total of 55 individuals identified to species are available at El Manantial and 60 at El Caraño.

We report 414 species belonging to 96 genera. At least, twenty-eight species are new reports for Caquetá since they have not been vouchered until this study (Table 1, collections exclusively made by *Arias, T.*). The most species-rich genera were *Epidendrum* L. (70 spp.), *Maxillaria* Ruiz & Pav. (60 spp.), *Pleurothallis* R.Br. (15 spp.), *Sobralia* Ruiz & Pav. (15 spp.), *Elleanthus* C.Presl (13 spp.), *Dichaea* Lindl. (11 spp.), and *Scaphyglottis* Poepp. & Endl. (11 spp.) (Table 1; Figs. 2-5). Most genera found in Caquetá (73) have one to three species (Fig. 5). We found two introduced species around urban areas of Florencia, *Arundina graminiflora* (D.Don) Hochr. and *Dendrobium nobile* Lindl.; these were not included in the species list.

Seventy-eight species are included as “tentative” because they have been accurately identified but lack an herbarium voucher. Fifty were included as potentially distributed in the Caquetá because records produced by the authors and collaborators in the field through photographs were not documented with herbarium voucher. Such photographic records were submitted to iNaturalist (see <https://www.inaturalist.org/projects/orquideas-del-caqueta>). Twenty-seven species, fifteen species in El Manantial and twelve in El Caraño, are part of our living collections but have not been photographed or documented with herbarium voucher to date.

For the municipality of Florencia, 186 species were recorded, follow by Solano with 109, and Belen de los Andaquies with 77 (Fig. 4). Five municipalities including Albania, Morelia, Valparaiso, Milán, and La Montañita have three or less records and there are no orchid botanical collections for Curillo and Solita (Table 1). Nineteen species are endemic to Colombia and two of them are endemic to the Caquetá Department (*Dichaea caquetana* Schltr. and *Elleanthus emberanus* (Szlach. & Kolan.) J.M.H.Shaw). Of the 96 genera present in Caquetá, only eight have an evaluation of the threatened level of their species. Additionally, three species were included in the Red List of Colombian orchid species (Calderon 2007) as vulnerable and endangered, *Masdevallia virgo-cuencae* Luer & Andreetta (VU), *Miltoniopsis phalaenopsis* (Linden & Rchb. f.) Garay & Dunst. (VU), and *Oncidium alexandrae* (Bateman) M.W. Chase & N.H. Williams (EN).

Most collections made in Caquetá have been deposited at the Colombian Amazonian Herbarium (COAH) of the Amazonian Institute of Scientific Research (SINCHI), which currently holds 119 orchid specimens, while the Enrique Forero (HUAZ) holds 109 orchid

specimens, and the Universidad del Valle Herbarium (CUVC) has 76 orchid specimens. Eleven international herbaria had between 1-12 collections from Caquetá (Table 1).

Discussion

A total of 272 new species records of Orchidaceae were added to previous orchid reports for species distributed in Caquetá (Betancur et al. 2015), which cited a total of 142 species. The great diversity of Orchidaceae species in Caquetá might be explained by spatial heterogeneity and phytophysiognomies in this region (Etter et al. 2006). The significant diversity of *Epidendrum* (70/1000) and *Maxillaria* (60/570) was expected because these are some of the largest Neotropical Orchidaceae genera with regards species number (Fig. 5, Supp. Table 1). The four most species-rich genera account for 38.6% of the total species, but they represent 23.2% of the total genera. Forty genera included only one species for the region, which corresponds to 9.7% of the total species and 41.7% of the total genera. Species in genera such *Encyclia* and *Stelis* were challenging to identify, and additional taxonomic work is required.

During the construction of this list, we left out collections made by Werner Hopp (Schlechter 1924) since they were collected in Putumayo between 1921-1922 when Putumayo was part of the Caquetá intendency. In 1991, Putumayo was politically recognized as a department and, as such, orchid collections made by Hopp in this area are not part of Caquetá. Additionally, some species collected by Hopp were deposited in the Berlin Herbarium (B) and destroyed during second world war (Supp. Table 2). Some species collected by Hopp have a specific epithet that refers to Caquetá, but they also had exclusively been collected in the Putumayo department to date: *Epidendrum caquetanum* Schltr. (W. Hopp 181); *Maxillaria caquetana* Schltr. (W. Hopp 53); *Maxillaria deuteropastensis* (Schltr.) P. Ortiz (= *Camaridium caquetanum* Schltr. (W. Hopp 75)); *Oncidium caquetanum* (Schltr.) M.W. Chase & N.H. Williams (= *Sigmatostalix caquetana* Schltr. W. (Hopp 81, 162)); and *Polystachya concreta* (Jacq.) Garay & H.R. Sweet (= *Polystachya caquetana* Schltr. (W. Hopp 160)).

Most of the orchid species that are documented in Caquetá are found in the Florencia Municipality (186 spp.). This could be explained by the convenience of collecting around cities and the wide altitudinal gradient in this municipality. We present species richness by department because conservation strategies might differ between political boundaries in Colombia and entities responsible for the formulation of such strategies might benefit more from having such information presented following departmental divisions. As a result of this study the number of orchid collections deposited at the local herbarium Enrique Forero from Universidad de la Amazonia in Florencia (HUAZ) has substantially increased positioning HUAZ as the second herbarium in Colombia with more orchid collections from Caquetá (109), and after Instituto Amazónico de Investigaciones Científicas – SINCHI (COAH) (119) (Fig. 6, Supp. Table 1).

Five of the municipalities of Caquetá, representing ~20% of the total geographical area of the department, had none to three herbarium collections or species reported (Fig. 4). The areas in the northeastern part of the eastern Andean Mountain range still need extensive exploration. These areas include the National Natural Park Cordillera de Los Picachos, where landmines were planted by rebel groups during the armed conflict and have not been removed to date. Orchid

diversity could significantly increase with the development of intensive exploration in these mountainous ecosystems and a thorough exploration of the Amazonian Forest canopy. For instance, departments like Antioquia, Huila, Putumayo have been cataloged as having the largest orchid diversity (Betancur et al. 2015), however, these areas of Colombia have been extensively explored for decades.

During our expeditions, two species, *Cattleya violacea* and *Trichocentrum lanceanum*, have been found only in La Laguna del Chaira in the Cartagena del Chaira municipality. We doubt these species have a natural distribution there. Rather, we suspect they were introduced during a massive effort to bring orchids to La Laguna del Chaira during the 1980s, during which “uninformed” reintroductions of non-native species could have taken place.

This checklist places Caquetá as the eighth department in Colombia in terms of genera diversity (96 genera) from its original position in the National Plan of Orchid Conservation (15th place, 62 genera). As for the ranking in the number of species for Colombia, Caquetá goes from position 17th (142 spp.) to position 9th (414 spp.) (Betancur et al. 2015). Caquetá has many orchid genera (96/258 in Colombia) with few species each, 76% of genera have around 1-3 species. Each of these genera include a unique clade distributed in a relatively small area of Colombia. This could be of particular interest in conservation, prioritizing evolutionary history over species diversity (Arponen 2012). Caquetá would be one of the regions of Colombia where there are more different genera and evolutionary clades. This work supplies valuable evidence to promote conservation efforts and politics for habitat preservation of the Colombia Andean Piedmont.

Caquetá has lost approximately 30% of its original area due to human impacts such as cattle ranching. National parks in Caquetá make up 65% of the protected remnants. In the last 50 years, expansion of the agricultural frontier for the establishment of grazing lands, wood extraction, and illegal coca crops have destroyed many ecosystems, greatly impacting all national parks. Florencia, for example, is currently undergoing consistent expansion of farming lands ultimately leading to the decimation of natural ecosystems (IDEAM 2020).

Conclusion

Our floristic study is a needed contribution towards a better understanding of the diversity of Colombian orchids. The checklist provides a set of freely available data on orchid diversity in Caquetá. Furthermore, our study is a baseline panorama of orchid species diversity in the department, identifying groups of interest for further taxonomic work, especially those which have not been monographed. Lastly, the information provided could enhance local conservation strategies for endangered floristic elements in the department by adding to a more complete overview of the high orchid diversity in the region.

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Tables

Table 1. Checklist of the Orchidaceae of Caquetá, Colombia. FLO: Florencia, SOL: Solano, BEL: Belen de los Andaquies, PRC: Puerto Rico, SVC: San Vicente del Caguán, CAR: Cartagena el Chaira, SJF: San Jose del Fragua, MIL: Milan, ALB: Albania, MOR: Morelia, STA: Solita, VAL: Valparaiso, CUR: Curillo, PAU: Paujil, DON: Doncello.

Species name	Accessions reviewed	Area
<i>Acacallis cyanea</i> Lindl.	Arevalo R. 406 (COAH), Vasco A. 389, 396, 360, 420 (HUA), Trujillo E. 1043 (HUAZ)	BEL, SOL
<i>Acacallis fimbriata</i> (Rchb. f.) Schltr.	Torres M.M. 1084 (COAH), Mesa N. & Trujillo E. 24 (HUAZ)	FLO, SOL
<i>Acianthera casapensis</i> (Lindl.) Pridgeon & M.W. Chase	iNaturalist	BEL
<i>Acianthera ciliata</i> (Knowles & Westc.) F. Barros & L.R.S. Guim.	Pabon M. 320 (COAH), Arias T. 851, 852, 914 (HUAZ)	SOL, VAL
<i>Acianthera discophylla</i> (Luer & Carnevali) Luer	Living collection (El Manantial, Florencia)	SOL
<i>Acianthera erinacea</i> (Rchb.f.) A.Doucette	Arias T. 951, Chaux-Varela J. 61 (HUAZ)	FLO, PAU, SVC
<i>Acianthera sicaria</i> (Lindl.) Pridgeon & M.W.Chase	Arias T. 917 (HUAZ)	FLO
<i>Anathallis acuminata</i> (Kunth) Pridgeon & M.W.Chase	Benavides A. 506 (HUA), Arias T. 969 (HUAZ)	DON, SOL
<i>Anathallis brevipes</i> (H.Focke) Pridgeon & M.W.Chase	Arias T. 906 (HUAZ)	CAR
<i>Anathallis spiculifera</i> (Lindl.) Luer	Sanchez M. 1834, 1835 (COAH)	SOL
<i>Anathallis sclerophylla</i> (Lindl.) Pridgeon & M.W.Chase	iNaturalist	SVC
<i>Aspidogyne clavijera</i> (Rchb. f.) Meneguzzo	Cardenas D. 45472 (COAH)	MOR
<i>Aspidogyne confusa</i> (C. Schweinf.) Garay	Castro F. 9890 (COAH)	SOL
<i>Aspidogyne foliosa</i> (Poepp. & Endl.) Garay	Trujillo E. 7026, 7109 (CUVC)	ALB
<i>Aspidogyne jamesonii</i> (Garay) Meneguzzo	Romero 4050 (COL)	CAR
<i>Batemannia colleyi</i> Lindl.	Arevalo R. 43 (COL), Vasco A. 158 (HUA)	FLO, SOL
<i>Beloglottis costaricensis</i> Schltr.	iNaturalist	FLO
<i>Bifrenaria clavijera</i> Rchb.f.	Trujillo E. 1043 (COAH)	BEL
<i>Bifrenaria longicornis</i> Lindl.	Arbelaez E. 907 (COAH), Arevalo R. 417 (COL), Vasco A. 264 (HUA)	SOL

<i>Braemia vittata</i> (Lindl.) Jenny	<i>Duivenvoorden J.</i> 2362, <i>Torres M.</i> 1128 (COAH), <i>Benavides A.</i> 634 (HUA)	SOL
<i>Brachionidium lehmannii</i> Luer	<i>Arias T.</i> 952 (HUAZ)	PAU
<i>Brassia caudata</i> (L.) Lindl.	<i>Ortiz-Valdivieso M.</i> 596 (HPUJ), <i>Arias T.</i> 857 (HUAZ)	BEL
<i>Bulbophyllum lehmannianum</i> Kraenzl.	<i>Arevalo R.</i> 363 (COL)	FLO
<i>Campylocentrum kuntzei</i> Cogn. ex Kuntze	<i>Correa M.</i> 7136 (COAH, HUAZ)	FLO
<i>Campylocentrum micranthum</i> (Lindl.) Maury	iNaturalist	SVC
<i>Catasetum discolor</i> (Lindl.) Lindl.	<i>Arbelaez E.</i> 238 (HUA), <i>Idobro J.M.</i> 9001 (COL), <i>Arevalo R.</i> 311 (COL), <i>Sastre R.D.</i> 5173 (P)	SOL
<i>Catasetum ochraceum</i> Lindl.	<i>Gonzalez M.F.</i> 2680, 2710 (COL)	SOL
<i>Catasetum roseo-album</i> (Hook.) Lindl.	<i>Barbosa C.</i> 7716 (FMB)	SOL
<i>Catasetum tabulare</i> Lindl.	<i>Perdomo O.</i> 430 (CUVC)	FLO
<i>Catasetum tuberculatum</i> Dodson C.	<i>Aguilar M.</i> 253 (COAH), <i>Arias T.</i> 858 (HUAZ)	FLO
<i>Catasetum villegasii</i> G.F. Carr	<i>Carr G. F.</i> (COAH, USF)	STA
<i>Cattleya crispa</i> Beer	Living collection (El Manantial, Florencia)	CAR, SJF
<i>Cattleya violacea</i> (Kunth) Rolfe	<i>Trujillo E.</i> 808, <i>Calderon A. A.</i> 263 (HUAZ)	CAR
<i>Chondrorhyncha rosea</i> Lindl.	<i>Schmidt-Mumm K. s.n.</i> (LA)	FLO
<i>Cleistes abdita</i> G.A. Romero & Carnevali	<i>Palacios P.</i> 582, <i>Castaño N.</i> 3184 (COAH)	FLO, SOL
<i>Cleistes rosea</i> Lindl.	<i>Jaimes M. S.</i> 1269 (COAH), <i>Sanin D.</i> 6454 (COL), <i>Perdomo O.</i> 256 (CUVC), <i>Cumaco L. S. & Trujillo E.</i> 42, <i>Arias T.</i> 990, <i>Chaux-Varela J.</i> 96 (HUAZ)	FLO, PAU
<i>Cleistes tenuis</i> (Griseb.) Schltr.	<i>Aguilar M.</i> 253 (COAH), <i>Arias T.</i> 858 (HUAZ)	SOL
<i>Coryanthes leucocorys</i> Rolfe	iNaturalist	BEL, FLO
<i>Cranichis polyantha</i> Schltr.	<i>Madero</i> 22 (AMES)	N/A
<i>Cryptarrhena lunata</i> R. Br.	iNaturalist	FLO
<i>Cycnoches egertonianum</i> Bateman	<i>Perdomo O.</i> 387 (CUVC)	FLO
<i>Cycnoches haagii</i> Barb.Rodr.	<i>Dodson C.</i> 3249 (COAH)	DON
<i>Cyrtochilum caquetanum</i> P. Ortiz-Valdivieso M, L.E. Álvarez & A.J. Carrillo	<i>Ortiz-Valdivieso M.</i> 1393 (HPUJ)	N/A
<i>Cyrtochilum divaricatum</i> (Lindl.) Dalström	iNaturalist	SVC
<i>Cyrtochilum flexuosum</i> Kunth	<i>Ramirez J. G.</i> 5282 (JAUM), <i>Gentry A. et al.</i> 9046 (MO)	FLO
<i>Cyrtochilum meirax</i> (Rchb. f.) Dalström	<i>Perdomo O.</i> 416, 404 (CUVC), <i>Arias T.</i> 925, 954, <i>Chaux-Varela J.</i> 58, 60, 92 (HUAZ)	FLO, PAU, PRC
<i>Cyrtochilum midas</i> Dalström	<i>Perdomo O.</i> 0195 (CUVC)	FLO
<i>Cyrtochilum orgyale</i> Kraenzl.	iNaturalist	SVC

<i>Cyrtochilum porrigens</i> (Rchb. f.) Kraenzl.	Perdomo O. 394, 400 (CUVC), Calderon A. 250, 251 (HUAZ)	PRC, FLO
<i>Cyrtochilum ramossisimum</i> (Lindl.) Dalström	Trujillo E. 7587 (CUVC)	PRC
<i>Cyrtochilum scabiosum</i> Rchb.f. ex Kraenzl.	Cuatrecasas J. 8466 (COL)	FLO
<i>Cyrtochilum trifurcatum</i> (Lindl.) Kraenzl.	Perdomo O. 412 (CUVC)	PRC
<i>Cyrtochilum undulatum</i> Kunth	iNaturalist	FLO
<i>Cyrtochilum ventrilabrum</i> (Rchb. f. & Warsz.) Kraenzl.	Perdomo O. 393 (CUVC)	PRC
<i>Cyrtopodium cristatum</i> Lindl.	Betancur J. 1548 (HUA)	SVC
<i>Cyrtopodium palmifrons</i> Rchb. f. & Warm.	Living collection (El Caraño, Florencia)	FLO
<i>Dichaea ancoraelabia</i> C. Scheinf.	Perdomo O. 267 (CUVC), Ortiz-Valdivieso M 531 (HPUJ), Mesa N. & Trujillo E. 03 Arias T. 877 (HUAZ)	BEL, FLO, SOL
<i>Dichaea caquetana</i> Schltr. *	Fernández-Pérez A.7240 (COL)	FLO
<i>Dichaea hystericina</i> Rchb.f.	Castaño N. 8705 (COAH)	BEL, FLO
<i>Dichaea panamensis</i> Lindl.	Dueñas H. 3060 (COL), Vasco A. 387 (HUA)	SOL
<i>Dichaea pendula</i> (Aubl.) Cogn.	Castaño N. 8678 (COAH), Betancur J. 1916 (COL, HUA)	BEL, SVC
<i>Dichaea picta</i> Rchb.f.	Jimenez E. 11 (COAH)	FLO
<i>Dichaea rendlei</i> Gleason	Franco-Rosselli P. 3825 (COL), Vasco A. 220, 267, 304 (HUA), Betancur J. 13560 (COAH)	SOL
<i>Dichaea sodiroi</i> Schltr.	Ortiz-Valdivieso M 553 (HPUJ)	FLO
<i>Dichaea splitgerberi</i> Rchb.f.	Trujillo E. 956 (COAH, FMB), Castaño N. 1761, Cardenas D. 40460, 44494, 48527 (COAH)	BEL, PRC, SVC, VAL
<i>Dichaea trinitensis</i> Gleason	Arias T. 885 (HUAZ)	SOL
<i>Dichaea trulla</i> Rchb.f.	Cardenas D. 42199 (COAH), Betancur J. 20668, Arevalo R.98, 306 (COL), Vasco A. 305 (HUA), Perez 663 (FMB)	BEL, FLO, SOL
<i>Dimerandra emarginata</i> (G. Mey.) Hoehne	Arias T. 859 (HUAZ)	FLO
<i>Dracula alcithoe</i> Luer & R.Escobar	iNaturalist	BEL
<i>Duckeella adolphii</i> Porto & Brade	Pabon M. 461, 462, Echeverry R. 3297, Palacios P. 691, 537, 1218, Duivenvoorden J. 263 (COAH), Arbelaez E. 64 (HUA)	SOL
<i>Duckeella caquetana</i> Szlach. & Kolan.	Arbelaez M. V. 64 (COAH, UGDA)	SOL
<i>Duckeella fernandezii</i> Szlach., Kolan. & Baranow	Fernandez 20065 (COL, UGDA)	SOL
<i>Elleanthus amethystinoides</i> Garay	Cardenas D. 20257 (COAH)	BEL

<i>Elleanthus aurantiacus</i> (Lindl.) Rchb.f.	<i>Castaño N. 7442, 8608, Cardenas D. 46146</i> (COAH), <i>Mason H. L. 13954, Gentry A. 9036</i> (COL)	BEL, FLO. SOL
<i>Elleanthus blatteus</i> Garay	<i>Arias T. 980</i> (HUAZ)	DON, FLO
<i>Elleanthus columnaris</i> (Lindl.) Rchb.f.	<i>Fonnegra R. 5465</i> (HUA, MO)	FLO
<i>Elleanthus conifer</i> (Rchb.f. & Warcz.) Rchb.f.	<i>Jimenez E. 26</i> (COAH)	FLO
<i>Elleanthus emberanus</i> (Szlach. & Kolan.) J.M.H.Shaw *	<i>Trujillo W. et al. 968</i> (COAH)	BEL
<i>Elleanthus fractiflexus</i> Schltr.	<i>Castaño N. 8720, Betancur J. 20388, 20544</i> (COAH)	BEL
<i>Elleanthus graminifolius</i> (Barb.Rodr.) Lojtnant	<i>Cardenas D. 20682, Perdomo O. 318,</i> <i>Betancur J. 20682</i> (COAH) <i>Perdomo O. 318</i> (CUVC)	BEL, FLO
<i>Elleanthus kermesinus</i> (Lindl.) Rchb.f.	<i>Cuatrecasas J. 8766</i> (COL)	FLO
<i>Elleanthus lancifolius</i> C. Presl.	<i>Ortiz-Valdivieso M. 459</i> (HPUJ), <i>Araujo E. &</i> <i>Trujillo E. 28</i> (HUAZ)	BEL, FLO
<i>Elleanthus oliganthus</i> (Poepp. & Endl.) Rchb.f.	<i>Cardenas D. 42099</i> (FMB), <i>Vargas V. A. 99</i> (COAH), <i>Cumaco L. S. & Trujillo E. 34,</i> <i>Santofimio L. M. & E. Trujillo E. 04</i> (HUAZ)	BEL, FLO
<i>Elleanthus robustus</i> (Rchb. f.) Rchb. f.	iNaturalist	FLO
<i>Elleanthus tillandsioides</i> Barringer	<i>Trujillo W. 968</i> (FMB), <i>Cardenas D. 41786,</i> <i>41817</i> (COAH)	BEL
<i>Encyclia alata</i> (Bateman) Schltr.	<i>Cumaco L. S. & Trujillo E. 31</i> (HUAZ)	FLO
<i>Encyclia aspera</i> (Lindl.) Schltr.	<i>Arevalo R.210</i> (COL), <i>211</i> (COAH)	SOL
<i>Encyclia chloroleuca</i> (Hook.) Neumann	Living collection (El Caraño, Florencia)	FLO
<i>Encyclia conchaechila</i> (Barb.Rodr.) Porto & Brade	<i>Arbelaez E. 1126</i> (HUA), <i>Gentry A. & Sanchez</i> <i>M. 65289</i> (MO)	SOL
<i>Encyclia leucantha</i> Schltr.	<i>Pabon M. 927, Arbelaez E. 787</i> (COAH)	SOL
<i>Encyclia pilosa</i> (C. Schweinf.) Carnevali & I. Ramírez	<i>Arbelaez E. 389</i> (COAH)	SOL
<i>Epidendrum acuminatum</i> Ruiz & Pav.	<i>Ortiz-Valdivieso M. 4171</i> (HPUJ)	FLO
<i>Epidendrum acutilobum</i> Hágsater E. & Uribe Veléz	<i>Kapuler & Hascall 168</i> (COL)	FLO
<i>Epidendrum amazonicoriifolium</i> Hágsater E.	<i>Cardenas D. 40246</i> (COAH)	FLO
<i>Epidendrum angulatum</i> Hágsater E. & J. Duarte	<i>Moreno s.n.</i> (AMO)	FLO
<i>Epidendrum angustatum</i> (T. Hashim.) Dodson C.	<i>Ortiz-Valdivieso M. 461</i> (HPUJ)	FLO
<i>Epidendrum arachnoglossum</i> Rchb. f. ex André	<i>Arbelaez E. 53</i> (HUA)	SOL
<i>Epidendrum arevaloi</i> (Schltr.) Hágsater E.	<i>Ortiz-Valdivieso M. 473</i> (HPUJ), <i>Hágsater E.</i> <i>s.n.</i> (AMO)	FLO
<i>Epidendrum armeniacum</i> Lindl.	<i>Perdomo O. 302</i> (CUVC)	FLO

<i>Epidendrum aura-usecheae</i> Hágsater, Rinc.-Useche & O.Pérez	<i>Arias T. 1014</i> (HUAZ)	SVC
<i>Epidendrum barbeyanum</i> Kraenzl.	<i>Ortiz-Valdivieso M. 462</i> (HPUJ)	FLO
<i>Epidendrum borealistachyum</i> Hágsater E., E. Santiago & C. Fernandez	<i>Sanin D. 6361</i> (COAH), <i>6100</i> (COL), <i>6558, 6632</i> (HUA), <i>Correa M & Aldana J. 7196, Mesa N. & Trujillo E. 16</i> (HUAZ)	FLO
<i>Epidendrum brachyrepens</i> Hágsater E.	<i>Betancur J. 2225</i> (HUA)	SVC
<i>Epidendrum caesaris</i> Hágsater E. & E. Santiago	<i>Estrada J. 668</i> (COL)	SOL
<i>Epidendrum calanthum</i> Rchb.f. Warsz.	<i>Barbosa C. 8140</i> (COL)	SOL
<i>Epidendrum calyptrandium</i> Hágsater E., H. Medina & Huamantupa	<i>Cardenas D. 41772</i> (COAH, FMB)	BEL
<i>Epidendrum cleistocoleum</i> Hágsater E. & E. Santiago	iNaturalist	SVC
<i>Epidendrum cochlidium</i> Lindl.	<i>Jimenez E. 1</i> (HUA)	FLO
<i>Epidendrum compressibulum</i> D.E.Benn. & Christenson	<i>Arias, T. 926</i> (HUAZ)	FLO
<i>Epidendrum compressum</i> Griseb.	<i>Cuatrecasas J. 27127</i> (COL), <i>Trujillo W. 816</i> (HUA), <i>Mesa N. & Trujillo E. 18</i> (HUAZ)	CAR, FLO
<i>Epidendrum x communis</i> Hágsater Ined	<i>Arias T. 997 998</i> (HUAZ)	SVC
<i>Epidendrum coronatum</i> Ruiz & Pav	<i>Arias T. 863</i> (HUAZ)	CAR, SJF
<i>Epidendrum cuneatum</i> Schltr.	<i>Arias T. 960</i> (HUAZ)	DON
<i>Epidendrum cupreum</i> F. Lehm. & Kraenzl.	<i>Ortiz-Valdivieso M. 573</i> (HPUJ)	FLO
<i>Epidendrum elongatum</i> Jacq.	<i>Barbosa C. et al. s.n.</i> (MA)	SOL
<i>Epidendrum erosum</i> Ames & C.Schweinf.	<i>Hoyos s.n.</i> (AMO)	FLO
<i>Epidendrum excisum</i> Lindl.	iNaturalist	SVC
<i>Epidendrum flexuosum</i> G.Mey.	iNaturalist	SVC
<i>Epidendrum filamentosum</i> Kraenzl.	<i>Perdomo O. 272, 413</i> (CUVC) <i>Chaux-Varela J. 34, Arias T. 988, Chaux-Varela J. 98</i> (HUAZ)	FLO, DON
<i>Epidendrum fimbriatum</i> Kunth	<i>Calderon A. 256</i> (HUAZ)	FLO
<i>Epidendrum geminiflorum</i> Kunth	iNaturalist	SVC
<i>Epidendrum huebneri</i> Schltr.	<i>Cardenas D. 45063, 48634, Sanin D. 6642</i> (COAH), <i>Davidse G. 5612, Hermann F. J. 11257, Manson H. L. 13949</i> (COL), <i>Croat T. et al. 100480, Araujo D. & Trujillo E. 17</i> (HUAZ)	FLO
<i>Epidendrum ibaguense</i> Kunth	<i>Cardiel J. M. 59</i> (COL), <i>Arias T. 993</i> (HUAZ)	DON, FLO, SOL
<i>Epidendrum lacustre</i> Lindl.	<i>Forero E. 9816, Palacios P. 859, 1192, 1201, 1226, Arbelaez E. 53, 731, Duivenvoorden J. 607, Sanin D. 6362</i> (COAH), <i>Restrepo D. 344</i> (HUA)	FLO, SOL
<i>Epidendrum longicolle</i> Lindl.	<i>Cumaco L. S. & E. Trujillo E. 16</i> (HUAZ)	FLO

<i>Epidendrum macrocarpum</i> Rich.	Marin C. 2896 (COAH, COL)	FLO, MOR
<i>Epidendrum macrostachyum</i> Lindl.	Perdomo O. 235 (CUVC)	FLO
<i>Epidendrum macrum</i> Dressler	Ortiz-Valdivieso M 528 (HPUJ, AMO)	FLO
<i>Epidendrum magnicallosum</i> C. Schweinf.	Arevalo R. 46, 91, 165 (COL)	SOL
<i>Epidendrum mamapachae</i> Hágsater E., F.O. Espinosa & E. Santiago	iNaturalist	SVC
<i>Epidendrum melinanthum</i> Schltr.	Plazas L. L. et al. 42 (HUAZ)	FLO
<i>Epidendrum microcapitellatum</i> Hágsater, H. Medina & E. Santiago	iNaturalist	FLO
<i>Epidendrum micronoctrurnum</i> Carnevali & G.A. Romero	Arevalo R. 40 (COL)	SOL
<i>Epidendrum microphyllum</i> Lindl.	Arevalo R. 201 (COL)	SOL
<i>Epidendrum mora-retanae</i> Hágsater E.	Living collection (El Caraño, Florencia)	FLO
<i>Epidendrum myrmecophorum</i> Barb. Rodr.	Perdomo O. 275, 284 (CUVC), Arbelaez E. 256, 379 (HUA)	CAR, FLO, MOR, SOL
<i>Epidendrum nocturnum</i> Jacq.	Cardenas D. et al. 42156 (FMB), Sanchez M. 1943, 1942, 1941, Arbelaez E. 888, Franco-Rosselli P. 3730 (COAH), Trujillo E. 815, Arias T. 874-876, 959 (HUAZ)	BEL, CAR, DON, FLO, SJF, SOL
<i>Epidendrum orbiculatum</i> C. Schweinf.	Ortiz-Valdivieso M. 573 (HPUJ)	SVC
<i>Epidendrum orchidiflorum</i> Salzm. ex Lindl.	Arbelaez E. 379 (HUA), Arbelaez E. 730, 815, 776 (COAH), Arias T. 865 (HUAZ)	SOL, CAR
<i>Epidendrum porphyreonoctrurnum</i> Hágsater E. & R. Jimenez E.	Perdomo O. 179 (CAUP)	FLO
<i>Epidendrum portokalinum</i> Hágsater E. & Dodson C.	Cuatrecasas J. 9002 (COL)	FLO
<i>Epidendrum putumayoense</i> Hágsater E. & L. Sánchez	Valencia E. & Hágsater E. 11640 (AMO)	N/A
<i>Epidendrum radicans</i> Pav. ex Lindl.	Polania O. L. & Trujillo E. 5 (HUAZ)	FLO
<i>Epidendrum rhodochilum</i> (Schltr.) Hágsater E. & Dodson C.	Trujillo W. s. n. (AMO)	BEL
<i>Epidendrum rhombochilum</i> L.O. Williams	Betancur J. et al. 20224 (COAH)	BEL
<i>Epidendrum rigidum</i> Jacq.	Ortiz-Valdivieso M 471 (HPUJ), Polania O. L. & Trujillo E. 1, Cumaco L. S. & Trujillo E. 15 (HUAZ), Groenendijk J. s.n. (MA)	FLO, SOL
<i>Epidendrum rugulosum</i> Schltr.	Sanin D. 6640 (HUA)	FLO
<i>Epidendrum sanctae-rosae</i> Hágsater E., Sauleda, Uribe Vélez & E. Santiago	Perdomo O. 322, 424 (CUVC)	FLO
<i>Epidendrum saxatile</i> Lindl.	Trujillo E. et al. 1038 (COAH), Arias T. 967 (HUAZ)	BEL, DON
<i>Epidendrum schomburgkii</i> Lindl.	Velayos M. 6455 (COL)	SOL
<i>Epidendrum sculptum</i> Rchb.f.	Cardenas D. 41772 (COAH, FMB)	BEL

<i>Epidendrum secundum</i> Jacq.	<i>Betancur J. 20457</i> (COAH), <i>Correa M. et al. 4605</i> (HUAZ)	BEL, FLO, PRC
<i>Epidendrum spilotum</i> Garay & Dunst.	<i>Escobar R. 5270</i> (AMO)	N/A
<i>Epidendrum stenobractistachyum</i> Hágsater E. & E. Santiago	<i>Cuatrecasas J. 8426</i> (COL)	FLO
<i>Epidendrum strobiliferum</i> Rchb.f.	<i>Cardenas D. 46422</i> (COAH)	SOL
<i>Epidendrum teuscherianum</i> A.D.Hawkes	<i>Chaux-Varela J. 102, 103, 108</i> (HUAZ)	DON
<i>Epidendrum tridens</i> Poepp. & Endl.	<i>Franco-Rosselli P. et al. 3730</i> (COL)	SOL
<i>Epidendrum tumuc-humaciense</i> (Veyret) Carnevali & G.A. Romero	<i>Barbosa C. et al. 8154, Arbelaez E. & Castro F. 888, Castro F.viejo et al. 335, Franco-Rosselli P. et al. 3636</i> (COL)	SOL
<i>Epidendrum uleinanodes</i> Hágsater E.	<i>Groenendijk 33</i> (COAH)	SOL
<i>Epidendrum vinosum</i> Schltr.	iNaturalist	PAU
<i>Epidendrum whittenii</i> Hágsater E. & Dodson C.	<i>Coca et al. 9207b</i> (FAUC)	SJF
<i>Epistephium hernandii</i> Garay	<i>Arbelaez E. 276</i> (COAH)	SOL
<i>Epistephium parviflorum</i> Lindl.	<i>Palacios P. 864, Castro F. 10974</i> (COAH)	SOL
<i>Epistephium subrepens</i> Hoehne	<i>Palacios P. 581, 760, 2437, Ospina H. 1141, Gentry A. 65171, Restrepo D. 9, Duivenvoorden J. 215</i> (COAH)	SOL
<i>Eriopsis biloba</i> Lindl.	<i>Arbelaez E. 172</i> (COAH), <i>Palacios P. 2415</i> (COL), <i>Barbosa C. 7631</i> (FMB)	SOL
<i>Eriopsis sceptrum</i> Rchb.f. & Warsz.	<i>Cardenas D. 46424</i> (COAH)	SOL
<i>Erycina glossomystax</i> (Rchb.f.) N.H.Williams & M.W.Chase	<i>Arias T. 961</i> (HUAZ)	DON
<i>Erycina pumilio</i> (Rchb. f.) N.H. Williams & M.W. Chase	<i>Atwood J. T. & Mora D. s.n.</i>	N/A
<i>Erycina pusilla</i> (L.) N.H. Williams & M.W. Chase	<i>von Sneidern K. 1075</i> (COL), <i>Castroviejo S. 322, Perez-Arvelaez E. 370</i> (COL), <i>Betancur J. 2349</i> (HUA)	BEL, FLO, SVC
<i>Eulophia alta</i> (L.) Fawc. & Rendle	<i>Perdomo O. 342</i> (CUVC), <i>Betancur J. 2214</i> (HUA)	BEL, SVC
<i>Galeandra macroplectra</i> G.A. Romero & Warford	<i>Galeano G. 2249</i> (COL)	SOL
<i>Galeandra stangeana</i> Rchb. f.	<i>Franco-Rosselli P. 3860</i> (COL)	SOL
<i>Galeottia negrensis</i> Schltr.	<i>Mendoza H. 10283, Cardenas D. 48408</i> (COAH)	SOL, SVC
<i>Gongora atropurpurea</i> Hook.	iNaturalist	SVC
<i>Gongora portentosa</i> Lindl. & Rchb.f.	Living collection (El Caraño, Florencia)	FLO
<i>Habenaria mesodactyla</i> Griseb.	<i>Franco-Rosselli P. 2410</i> (COL)	SOL
<i>Habenaria monorrhiza</i> (Sw.) Rchb. f.	<i>Orozco C. I. 2768</i> (COL), <i>Goudot J. s.n.</i> (P), <i>Arias T. 756, 992, 1011, Chaux-Varela J. 107</i> (HUAZ)	FLO, DON, PAU, PRC, SOL, SVC
<i>Habenaria pratensis</i> Rchb.f.	iNaturalist	CAR

<i>Houlletia lowiana</i> Rchb.f.	Cardenas D. 46013 (COAH)	BEL
<i>Houlletia sanderi</i> Rolfe	Perdomo O. 307 (CUVC)	FLO
<i>Hylaeorchis petiolaris</i> (Schltr.) Carnevali & G.A. Romer	iNaturalist	BEL
<i>Ionopsis satyrioides</i> (Sw.) Rchb.f.	Perdomo O. 345 (CUVC)	ALB, BEL
<i>Ionopsis utricularioides</i> (Sw.) Lindl.	Trujillo E. 846 (COAH), Idobro J. M. 8590 (COL)	CAR
<i>Jacquiiniella globosa</i> (Jacq.) Schltr.	Living collection (El Caraño, Florencia)	FLO
<i>Jacquiiniella teretifolia</i> (Sw.) Britton & P. Wilson	Betancur J. 20543, 20658 (COAH)	BEL, FLO
<i>Laelia rosea</i> (Lindl.) C.Schweinf.	Calderon A. 260, 261, Chaux-Varela J. 43 (HUAZ)	CAR, FLO
<i>Lepanthes agglutinata</i> Luer	Cardenas D. 41969 (FMB, MO, COAH, NYCB), Trujillo E. 7691, 7705, 7949 (CUVC)	BEL, FLO, PRC
<i>Lepanthes auriculata</i> Luer	Trujillo E. 7693 (CUVC)	PRC
<i>Lepanthes florenciana</i> Moreno & Hoyos	D. Hoyos, O. López & A. Fonseca 945 (COAH, HUAZ)	FLO
<i>Lepanthes forceps</i> Luer & R. Escobar	Living collection (El Caraño, Florencia)	FLO
<i>Lepanthes hirtzii</i> Luer	Trujillo E. 7687 (CUVC)	PRC
<i>Lepanthes nontecta</i> Luer	iNaturalist	SVC
<i>Lepanthes wagneri</i> Rchb. f.	Trujillo E. 7689 (CUVC)	PRC
<i>Lockhartia acuta</i> Rchb.f.	iNaturalist	CAR
<i>Lockhartia micrantha</i> Rchb.f.	Betancur J. 2226 (COL, HUA), Arias, T. 989 (HUAZ)	DON
<i>Lycaste fuscina</i> Oakeley	iNaturalist	SVC
<i>Lycaste macrobulbon</i> Lindl.	iNaturalist	SVC
<i>Lycomormium fiskei</i> H.R. Sweet	Ortiz-Valdivieso M 1365 (HPUJ)	N/A
<i>Lycomormium schmidtii</i> Á. Fernández	Fernandez 7248 (COAH)	FLO
<i>Macradenia purpureorostrata</i> G. Gerlach	Romero 4082 (COL)	PRC
<i>Macroclinium manabinum</i> (Dodson C.) Dodson C.	iNaturalist	FLO
<i>Malaxis histionantha</i> (Link, Klotzsch & Otto) Garay & Dunst.	iNaturalist	SVC
<i>Masdevallia amanda</i> Rchb.f. & Warsz.	Perdomo O. 395 (CUVC), Ortiz-Valdivieso M. 4185 (HPUJ)	FLO, PRC
<i>Masdevallia constricta</i> Poepp. & Endl.	iNaturalist	FLO
<i>Masdevallia ensata</i> Rchb. f.	Trujillo E. 7698 (CUVC)	FLO
<i>Masdevallia tubulosa</i> Lindl.	Polania & Trujillo E. 10 (HUAZ), Trujillo E. 7696 (CUVC)	FLO, PRC
<i>Masdevallia virgo-cuencae</i> Luer & Andreetta	Perdomo O. 423 (CUVC)	FLO
<i>Maxillaria acuminata</i> Lindl.	Perdomo O. 199 (CUVC)	FLO
<i>Maxillaria aequiloba</i> Schltr.	Trujillo E. 7561, Perdomo O. 399 (CUVC)	FLO, PRC

<i>Maxillaria alba</i> Lindl.	Ortiz-Valdivieso M. 467 (HPUJ)	BEL
<i>Maxillaria anceschiana</i> Molinari	Correa M & Trujillo E. 5344 (HUAZ)	FLO
<i>Maxillaria aureoglobula</i> Christenson	Perdomo O. 292, 349 (CUVC), Chaux-Varela J. 36 (HUAZ)	BEL, FLO
<i>Maxillaria aurea</i> (Poepp. & Endl.) L.O.Williams	Cardenas D. 48633 (COAH) , Sanin D. 6569 (COL), Perdomo O. 411 (CUVC), Diaz et al. 38, Santofimio L. M. & Trujillo E. 12, Molina A. 31 (HUAZ)	FLO, PRC
<i>Maxillaria auyantepuiensis</i> Foldats	Trujillo W. 1041 (COAH), Ortiz-Valdivieso M. 556 (HPUJ)	BEL, FLO
<i>Maxillaria bicallosa</i> (Rchb. f.) M.A. Blanco	Betancur J. 20637 (COAH), Perdomo O. 370, 384 (CUVC), Chaux-Varela J. 35 (HUAZ)	BEL, FLO
<i>Maxillaria bolivarensis</i> C.Schweinf.	Trujillo E. 957 (COAH), Perdomo O. 346, 382 (CUVC)	BEL, FLO
<i>Maxillaria brachybulbon</i> Schltr.	Perdomo O. 285 (CUVC)	FLO
<i>Maxillaria buchtienii</i> Schltr.	Perdomo O. 316 (CUVC)	FLO
<i>Maxillaria camaridii</i> Rchb. f.	Trujillo E. 812 (HUAZ), Cardenas D. 41996, 44563 (COAH)	BEL, CAR, FLO
<i>Maxillaria carinulata</i> Rchb.f.	Santofimio L. M. & Trujillo E. 6 (HUAZ)	FLO
<i>Maxillaria cassapensis</i> Rchb. f.	Trujillo E. 7700, Perdomo O. 401 (CUVC)	PRC
<i>Maxillaria crassifolia</i> (Lindl.) Rchb.f.	Franco-Rosselli P. 4153, Arevalo R. 68, 157 (COL), Perdomo O. 370 (CUVC)	BEL, SOL, PRC
<i>Maxillaria cruentata</i> (Arévalo & Bergq.) Molinari & Mayta	Arevalo R. 1080 (COL, WIS)	SOL, STA
<i>Maxillaria cryptobulbon</i> Carnevali & J.T. Atwood	Londoño 871 (UDBC)	PRC
<i>Maxillaria cuzcoensis</i> C. Schweinf.	Dodson C. 3255 (SEL)	FLO
<i>Maxillaria discolor</i> (G. Lodd. ex Lindl.) Rchb. f.	Pabon M. 544, Arevalo R.218, Betancur J. 20650 (COAH), Vasco A. 342 (HUA), Trujillo E. 806, Arias T. 848, 849, 853, 867, Chaux-Varela J. 38 (HUAZ)	BEL, SOL, CAR, PRC
<i>Maxillaria dunstervillei</i> Carnevali & I.Ramirez J. G.	Castaño N. 8572 (COAH)	BEL, PRC
<i>Maxillaria ecuadorensis</i> Schltr.	Perdomo O. 274 (CUVC), Santofimio L. M. & Trujillo E. 10 (HUAZ)	FLO
<i>Maxillaria egertoniana</i> (Bateman) Molinari	Living collection (El Manantial, Florencia)	SJF
<i>Maxillaria embreei</i> Dodson C.	Araujo D. & Trujillo E. 3 (HUAZ), Castaño N. 8843 (COAH), Perdomo O. 321 (CUVC)	BEL, FLO, SOL
<i>Maxillaria equitans</i> (Schltr.) Garay	iNaturalist	CAR
<i>Maxillaria erikae</i> Molinari	Perdomo O. 0167 (CUVC)	FLO
<i>Maxillaria exaltata</i> (Kraenzl.) C. Schweinf.	Ortiz-Valdivieso M. 4172 (HPUJ), Araujo D. & Trujillo E. 32 (HUAZ)	FLO
<i>Maxillaria fractiflexa</i> Rchb. f.	Perdomo O. 391 (CUVC)	PRC

<i>Maxillaria imbricata</i> Barb. Rodr.	Arias, T. 957, 958, 970, 1016 (HUAZ)	DON, FLO, PAU, SVC
<i>Maxillaria inaequisepala</i> (C. Schweinf.) Molinari	Prado et al. 614 (FMB)	SOL
<i>Maxillaria kegelii</i> Rchb.f.	Arevalo R. 276 (COAH), Correa M. 9932 (HUAZ)	SOL
<i>Maxillaria lepidota</i> Lindl.	iNaturalist	FLO
<i>Maxillaria longipetala</i> Ruiz & Pav.	iNaturalist	SVC
<i>Maxillaria longipetiolata</i> Ames & C. Schweinf.	Perdomo O. 262 (CUVC), Trujillo E. 1041 (HUAZ)	BEL, FLO
<i>Maxillaria longissima</i> Lindl.	Araujo D. & Trujillo E. 4 (HUAZ), Perdomo O. 233 (CUVC)	FLO
<i>Maxillaria mapiriensis</i> (Kraenzl.) L.O. Williams	Perdomo O. 323 (CUVC), Arias T. 965 (HUAZ)	FLO, DON
<i>Maxillaria meridensis</i> Lindl.	Cuatrecasas J. 9121 (COL), Araujo D. & Trujillo E. 4, Cumaco L. S. & Trujillo E. 32, Pinilla J. et al. 32, Plazas L. L. et al. 37, Chaux-Varela J. 90 (HUAZ)	FLO
<i>Maxillaria nasuta</i> Rchb. f.	Living collection (El Manantial, Florencia)	SOL
<i>Maxillaria notylioglossa</i> Rchb. f.	Perdomo O. 179 (CUVC)	FLO
<i>Maxillaria novoae</i> Molinari	Perdomo O. 0173 (CUVC)	FLO
<i>Maxillaria nubigena</i> (Rchb. f.) C. Schweinf.	Santofimio L. M. & Trujillo E. 16, Correa M & Trujillo E. 4903 (HUAZ)	FLO
<i>Maxillaria obtusa</i> (Lindl.) Molinari	Barbosa C. 7543 (COAH), Franco-Rosselli P. et al. 3814 (COL, MO)	SOL
<i>Maxillaria parkeri</i> Hook.	Gentry A. 65290 (COAH, MO) Arevalo R. 154, 267, 325 (COL), Prado L. F. 526, 542 (COAH, MO, COL)	SOL
<i>Maxillaria parviflora</i> (Poepp. & Endl.) Garay	Gentry A. 65290 (COAH, MO) Arevalo R.154, 267, 325 (COL) Arias T. 1001, Chaux-Varela J. 104 (HUAZ)	BEL, DON, FLO, SVC
<i>Maxillaria pendens</i> Pabst	Living collection (El Caraño, Florencia)	FLO
<i>Maxillaria pergracilis</i> (Schltr.) Schuit. & M.W. Chase	Perdomo O. 372 (CUVC)	BEL, FLO
<i>Maxillaria porrecta</i> Lindl.	Perdomo O. 273, 340 (CUVC), Polania D. & Trujillo E. 6, Arias T. 928, 963 (HUAZ)	BEL, DON, FLO
<i>Maxillaria proboscidea</i> Rchb. f.	Arias T. 850, TAG 868 (HUAZ)	SOL
<i>Maxillaria pterocarpa</i> Barb. Rodr.	Dodson C. 3247 (SEL)	FLO
<i>Maxillaria ringens</i> Rchb. f.	Ortiz-Valdivieso M 529 (HPUJ)	FLO
<i>Maxillaria sanantonioensis</i> Christenson	Living collection (El Caraño, Florencia)	FLO
<i>Maxillaria setigera</i> Lindl.	Cardenas D. 48631 (COAH)	FLO
<i>Maxillaria sibundoyensis</i> Szlach., Kolan., Lipińska & Ram. Medina	Perdomo O. 232 (CUVC)	FLO
<i>Maxillaria soulangeana</i> Molinari	Living collection (El Caraño, Florencia)	BEL
<i>Maxillaria splendens</i> Poepp. & Endl.	Ortiz-Valdivieso M. 554, 4241(HPUJ)	FLO

<i>Maxillaria striata</i> Rolfe	Trujillo E. s.n. (CUVC)	FLO
<i>Maxillaria subrepens</i> (Rolfe) Schuit. & M.W. Chase	Arevalo R. 87 (COL)	SOL
<i>Maxillaria tenuis</i> C.Schweinf.	Arevalo R. 85, 362 (COAH, COL)	BEL, SOL
<i>Maxillaria uncatata</i> Lindl.	Arevalo R. 213 (COAH), Arias, T. 915 (HUAZ)	SOL
<i>Maxillaria villosa</i> (Barb. Rodr.) Cogn.	Prado 508, Restrepo 866 (COAH)	SOL
<i>Maxillaria violaceopunctata</i> Rchb. f.	Sastre R. D. 5061 (P)	SOL
<i>Miltoniopsis phalaenopsis</i> (Linden & Rchb. f.) Garay & Dunst.	Cabezas 1752 (JBB)	SVC
<i>Muscarella cryptophyta</i> (Barb.Rodr.) Bogarín & Karremans	Arias T. 918 (HUAZ)	FLO
<i>Muscarella samacensis</i> (Ames) Luer	Ortiz-Valdivieso M 474 (HPUJ), Chaux-Varela J. 53 (HUAZ)	FLO
<i>Myoxanthus affinis</i> (Lindl.) Luer link.alt	Living collection (El Manantial, Florencia)	SJF
<i>Myoxanthus cimex</i> (Luer & R. Escobar) Luer	Perdomo O. 266, 415 (CUVC)	FLO
<i>Myoxanthus merae</i> (Luer) Luer	Arias, T. 1020 (HUAZ)	SVC
<i>Myoxanthus reymondii</i> (H.Karst.) Luer	Arias, T. 974, Chaux-Varela J. 86 (HUAZ)	DON
<i>Myoxanthus xiphion</i> Luer	Perdomo O. 180, 414 (CUVC)	FLO
<i>Notylia barkeri</i> Lindl.	Arias T. 846, 847 (HUAZ)	SOL
<i>Notylia platyglossa</i> Schltr.	Perdomo O. 271 (CUVC)	VAL
<i>Notylia sagittifera</i> (Kunth) Link, Klotzsch & Otto	iNaturalist	MIL
<i>Octomeria colombiana</i> Schltr.	Trujillo E. 1039 (COAH, HUAZ), Arias T.973, Chaux-Varela J. 87 (HUAZ)	DON, BEL
<i>Octomeria erosilabia</i> C.Schweinf.	Arevalo R 84 (COL), Arevalo R. 242, van der Wal 231 M. (COAH), Vasco A. 242, 255 (HUA)	SOL
<i>Octomeria exigua</i> C.Schweinf.	Arevalo R. 356 (COL), Gonzalez M. F. 2693 (COAH, COL)	FLO, SOL
<i>Octomeria grandiflora</i> Lindl.	Arevalo R. 367 (COL), Mesa N. & Trujillo E. 07 (HUAZ)	FLO, SOL
<i>Octomeria minor</i> C. Schweinf.	Vasco A. 188, 203 (COL)	SOL
<i>Octomeria scirpoidea</i> (Poepp. Endl.) Rchb.f.	Cardenas D. 6854 (COAH), Arevalo R. 273 (COL), Vasco A. 202 (HUA)	SOL
<i>Octomeria surinamensis</i> H. Focke	Arevalo R. 90, 152, 246, 266, 348 (COL)	SOL
<i>Octomeria taracuana</i> Schltr.	Velayos 6421 (MA), Franco-Rosselli P. 4148 (COL)	SOL
<i>Octomeria tridentata</i> Lindl.	Dodson C. 3245 (SEL)	FLO
<i>Odontoglossum paniculatum</i> Dalström & Deburghgr.	iNaturalist	SVC
<i>Oliveriana brevilabia</i> (C. Schweinf.) Dressler & N.H. Williams	iNaturalist	SVC

<i>Oncidium abortivum</i> Rchb. f.	<i>Betancur J.</i> 2197 (HUA)	SVC
<i>Oncidium alexandrae</i> (Bateman) M.W. Chase & N.H. Williams	<i>Gentry A. et al.</i> 9183 (MO), <i>Luteyn J. L. et al.</i> 4958 (COL), <i>Sanin D.</i> 6395 (COL), <i>Calderon A.</i> 248 (HUAZ)	FLO, PRC
<i>Oncidium baueri</i> Lindl.	<i>Trujillo E.</i> 549 (COAH, HUAZ), <i>Calderon A.</i> 249 <i>Arias T.</i> 995 (HUAZ)	DON, FLO, SOL
<i>Oncidium citrinum</i> Lindl.	<i>Ortiz-Valdivieso M</i> 550 (HPUJ)	FLO
<i>Oncidium eliae</i> (Rolfe) M.W.Chase & N.H.Williams	<i>Perdomo O.</i> 409 (CUVC)	FLO, PRC
<i>Oncidium ensatum</i> Lindl.	iNaturalist	SVC
<i>Oncidium fuscatum</i> Rchb. f.	<i>Correa M. et al.</i> 5113 (HUAZ)	FLO
<i>Oncidium gramineum</i> (Poepp. & Endl.) M.W.Chase & N.H.Williams	<i>Perdomo O.</i> 362, 3623 (CUVC), <i>Arias T.</i> 920, <i>Chaux-Varela J.</i> 52 (HUAZ)	BEL, FLO
<i>Oncidium orthotis</i> Rchb. f.	<i>Perdomo O.</i> 348, 405 (CUVC)	BEL, PRC
<i>Oncidium poikilostalix</i> (Kraenzl.) M.W.Chase & N.H.Williams	iNaturalist	SVC
<i>Oncidium sphacelatum</i> Lindl.	<i>Betancur J.</i> 1666 (HUA)	SVC
<i>Ornithocephalus bryostachys</i> Schltr.	<i>Hoyos F. s.n.</i> (HUAZ)	FLO
<i>Otoglossum globuliferum</i> (Kunth) N.H.Williams & M.W.Chase	<i>Cardenas D.</i> 48646 (COAH)	FLO
<i>Otoglossum serpens</i> (Lindl.) N.H.Williams & M.W.Chase	<i>Ramirez J. G.</i> 5204 (COAH), <i>Perdomo O.</i> 249, <i>Trujillo E.</i> 7623 (CUVC)	FLO
<i>Palmorchis guianensis</i> (Schltr.) C. Schweinf. & Correll	<i>Duivenvoorden J.</i> 949 (MO, COAH)	SOL
<i>Palmorchis puber</i> (Cogn.) Garay	<i>Cardenas D.</i> 48406, <i>Castro F.</i> 11280 (COAH)	SOL, SVC
<i>Paphinia cristata</i> (Lindl.) Lindl.	<i>Trujillo E.</i> 3858 (HUAZ)	SOL
<i>Paphinia lindeniana</i> Rchb.f.	<i>Bernal R.</i> 533 (COL)	SJF
<i>Peristeria guttata</i> Knowles & Westc.	<i>Sanchez M.</i> 28 (HUAZ)	CAR
<i>Platystele alucitae</i> Luer	<i>Sanin D.</i> 6490 (COAH)	FLO
<i>Pleurothallis bivalvis</i> Lindl.	<i>Arias, T.</i> 972 (HUAZ)	DON, FLO
<i>Pleurothallis chloroleuca</i> Lindl.	iNaturalist	SVC
<i>Pleurothallis cordata</i> (Ruiz & Pav.) Lindl.	<i>Perdomo O.</i> 422, 398 (CUVC)	FLO, PRC
<i>Pleurothallis discoidea</i> Lindl.	<i>Arias, T.</i> 953 (HUAZ)	PAU
<i>Pleurothallis languida</i> Luer	iNaturalist	SVC
<i>Pleurothallis manicosa</i> Luer & R. Escobar	iNaturalist	BEL
<i>Pleurothallis matudana</i> C. Schweinf.	Living collection (El Manantial, Florencia)	SJF
<i>Pleurothallis microcardia</i> Rchb.f.	<i>Betancur J.</i> 20415 (COAH)	BEL, SVC
<i>Pleurothallis octavioi</i> Luer & R. Escobar	iNaturalist	SVC
<i>Pleurothallis phalangifera</i> (C. Presl) Rchb. f.	<i>Trujillo E.</i> 7946 (CUVC)	FLO
<i>Pleurothallis pruinosa</i> Lindl	iNaturalist	BEL

<i>Pleurothallis ruberrima</i> Lindl.	Jimenez E. 33 (COAH)	FLO
<i>Pleurothallis ruscifolia</i> (Jacq.) R.Br.	Castañó N. 9230 (COAH)	BEL, FLO
<i>Pleurothallis sandemanii</i> Luer	Living collection (El Caraño, Florencia)	FLO
<i>Pleurothallis sphaerantha</i> Luer	Living collection (El Manantial, Florencia)	FLO
<i>Polycynis barbata</i> (Lindl.) Rchb. f.	Perdomo O. 354, 378 (CUVC)	BEL, FLO
<i>Polyotidium huebneri</i> (Mansf.) Garay	Benavides A. 1292 (HUA)	SOL
<i>Polystachya foliosa</i> (Hook.) Rchb.f.	Rodriguez W. D. 6973, Cardenas D. 24841, Sanin D. 6465 (COAH), Trujillo E. & Marin 183, Cumaco L. S. & Trujillo E. 23, Trujillo E. et al. 1512, Arias T. 855, 877, 1002 (HUAZ)	CAR, FLO, SOL, SVC
<i>Polystachya stenophylla</i> Schltr.	Trujillo E. et al. 824, Mesa N. & Trujillo E. 8 (HUAZ)	CAR, MON
<i>Ponthieva fertilis</i> (F. Lehm. & Kraenzl.) Salazar	iNaturalist	SVC
<i>Prescottia cordifolia</i> Rchb.f.	Diaz J. 369 (COAH)	PRC
<i>Prescottia stachyodes</i> (Sw.) Lindl.	Cuatrecasas J. 9070 (COL)	FLO
<i>Prosthechea aemula</i> (Lindl.) W.E.Higgins	Romero R. 4136 (MO, COL)	CAR
<i>Prosthechea cochleata</i> (L.) W.E.Higgins	iNaturalist	SVC
<i>Prosthechea crassilabia</i> (Poepp. & Endl.) Carnevali & I.Ramírez	Stevenson P. 961 (COAH), Arias T. 994 (HUAZ)	FL, PAU
<i>Prosthechea fragans</i> (Sw.) W.E. Higgins	Mendoza H. 497 (FMB)	SOL
<i>Prosthechea grammatoglossa</i> (Rchb.f.) W.E.Higgins	Arias, T. 1018 (HUAZ)	SVC
<i>Prosthechea pygmaea</i> (Hook.) W.E.Higgins	iNaturalist	SVC
<i>Prosthechea tigrina</i> (Linden ex Lindl.) W.E. Higgins	Living collection (El Caraño, Florencia)	FLO
<i>Prosthechea venezuelana</i> (Schltr.) W.E. Higgins	Living collection (El Manantial, Florencia)	N/A
<i>Prosthechea vespa</i> (Vell.) W.E. Higgins	Perdomo O. 253, 367 (CUVC), Santofimio L. M. & Trujillo E. 8, 15 (HUAZ), Arevalo R. 198, Castañó N. 8544, Cardenas D. 48640 (COAH)	BEL, FLO, SOL
<i>Psilochilus macrophyllus</i> (Lindl.) Ames	Castañó N. 7500, 8785, Betancur J. 20322 (COAH)	BEL
<i>Psychopsis sanderae</i> (Rolfe) Lückel & Braem	Living collection (El Manantial, Florencia)	NA
<i>Pterostemma escobarii</i> (Dodson C.) M.W. Chase & N.H. Williams	iNaturalist	SVC
<i>Rodriguezia bracteata</i> (Vell.) Hoehne	Living collection (El Manantial, Florencia)	ALB, BEL, FLO, SJF
<i>Rodriguezia claudiae</i> Chiron	iNaturalist	SJF
<i>Rodriguezia chasei</i> Dodson & D.E.Benn.	iNaturalist	SVC
<i>Rodriguezia lanceolata</i> Ruiz & Pav.	Diaz et al. 101 (UDBC)	FLO, SOL

<i>Rudolphiella floribunda</i> (Schltr.) Hoehne	<i>Ortiz-Valdivieso M 999</i> (HPUJ)	PRC
<i>Rudolphiella picta</i> (Schltr.) Hoehne	<i>Perdomo O. 280, 343</i> (CUVC)	BEL, FLO
<i>Sacoila lanceolata</i> (Aubl.) Garay	<i>Castro F. 67608</i> (COAH)	PRC
<i>Sarcoglottis neillii</i> Salazar & Tobar	<i>Calderon A. 264</i> (HUAZ)	FLO
<i>Scaphosepalum cymex</i> Luer & Hirtz	Living collection (El Caraño, Florencia)	FLO
<i>Scaphyglottis aurea</i> (Rchb.f.) Foldats	<i>Velayos 6870</i> (COL)	SOL
<i>Scaphyglottis bidentata</i> (Lindl.) Dressler	<i>Giraldo 3311</i> (COAH), <i>Estrada 666, Velayos 6514</i> (COL)	BEL, SJF
<i>Scaphyglottis boliviensis</i> (Rolfe) B.R.Adams	<i>Perdomo O. 428</i> (CUVC), <i>Arias T. 871, 903</i> (HUAZ)	BEL, FLO, CAR
<i>Scaphyglottis caquetana</i> Szlach. & Kolan.	<i>Cardenas D. et al. 6899</i> (COAH)	SJF
<i>Scaphyglottis graminifolia</i> (Ruiz & Pav.) Poepp. & Endl.	<i>Perdomo O. 418</i> (CUVC), <i>Chaux-Varela J. 37, Arias T. 905</i> (HUAZ)	FLO, SJF, SOL
<i>Scaphyglottis imbricata</i> (Lindl.) Dressler	Living collection (El Manantial, Florencia)	SJF
<i>Scaphyglottis longicaulis</i> S. Watson	<i>Cumaco L. S. & Trujillo E. 7, Mesa N. & Trujillo E. 2, Santofimio & Trujillo E. 11</i> (HUAZ)	BEL, SJF
<i>Scaphyglottis obtusisepala</i> Szlach. & Kolan.	<i>Trujillo E. 1042</i> (COAH)	BEL
<i>Scaphyglottis prolifera</i> (Sw.) Cogn.	<i>Aguilar M. 251</i> (COAH)	FLO
<i>Scaphyglottis punctulata</i> (Rchb. f.) C. Schweinf.	<i>Trujillo E. 7664, 7863</i> (CUVC), <i>Arias T. 966</i> (HUAZ)	DON, FLO, PRC
<i>Scaphyglottis stellata</i> Lodd. ex Lindl.	<i>Rodriguez M. 3641, Cardenas D. 48550, 6932, Gonzalez M. F. 2617, Stevenson P. 1399, Velayos M. 6412</i> (COAH), <i>Cardenas D. 6932</i> (MO), <i>Trujillo E. 885</i> (HUA), <i>Arevalo R. 88</i> (COL), <i>Arias T. 869, 905, 962, Chaux-Varela J. 42</i> (HUAZ)	CAR, DON, FLO, SJF, SOL, SVC
<i>Sertifera purpurea</i> Lindl. & Rchb.f.	<i>Sanin D. 6098</i> (COAH)	FLO
<i>Sobralia biflora</i> Ruiz & Pav.	<i>Trujillo E. 887</i> (HUAZ)	SJF
<i>Sobralia crocea</i> (Poepp. & Endl.) Rchb.f.	<i>Cardenas D. 42426</i> (FBM, COAH), <i>Betancur J. 20496</i> (COAH), <i>Trujillo E. 7985</i> (CUVC)	BEL, FLO
<i>Sobralia decora</i> Bateman	<i>Arevalo R. 346</i> (COAH)	SOL
<i>Sobralia fimbriata</i> Poepp. & Endl.	<i>Perdomo O. 337</i> (CUVC)	BEL
<i>Sobralia flava</i> Baranow & Szlach.	<i>Arias T. 1013</i> (HUAZ)	SVC
<i>Sobralia fragans</i> Lindl.	<i>Castaño N. 7582, Cardenas D. 46381, Betancur J. 20594</i> (FMB), <i>Palacios P. 2578</i> (COL)	BEL, SOL
<i>Sobralia granitica</i> G.A.Romero-Gonzalez MF & Carnevali	<i>Castro F. 10841</i> (COAH), <i>Arias T. 1015</i> (HUAZ)	SOL, SVC
<i>Sobralia klotzscheana</i> Rchb.f.	<i>Betancur J. 20458</i> (COAH), <i>Romero R. 4053</i> (COL), <i>Arias T. 991, 1015</i> (HUAZ)	BEL, PAU
<i>Sobralia leucoxantha</i> Rchb. f.	<i>Polania D. & Trujillo E. 4</i> (HUAZ)	FLO

<i>Sobralia liliastrum</i> Lindl.	<i>Pabon M. 971, Franco-Rosselli P. 3237, 2417, 3718 (COL), Palacios P. 1164, Arbelaez E. 326, Cardenas D. 4135 (COAH), Cumaco L. S. & Trujillo E. 33 (HUAZ), Cardiel J. M. 1010 (MA)</i>	FLO, SOL
<i>Sobralia macrophylla</i> Rchb.f	<i>Mesa N. & Trujillo E. 06, 22 (HUAZ), Cuatrecasas J. 9119, Fernandez A. 20079 (COL), Vasco A. 306 (HUA)</i>	FLO, SOL
<i>Sobralia roezlii</i> Rchb. f.	iNaturalist	FLO
<i>Sobralia sessilis</i> Lindl.	Living collection (El Manantial, Florencia)	BEL
<i>Sobralia violacea</i> Lindl.	<i>Barbosa C. 8109, Gonzalez M. F. 2270, Palacios P. 2932, 2880 (COL)</i>	SOL
<i>Sobralia virginalis</i> F.Peeters & Cogh.	iNaturalist	FLO, SVC
<i>Specklinia grobyi</i> (Lindl.) F.Barros	<i>Escobar R. 5051 (MO)</i>	STA
<i>Specklinia picta</i> (Lindl.) Pridgeon & M.W.Chase	<i>Cardenas D. et al. 48247 (COAH), Arevalo R.217 (COL)</i>	SOL, SVC
<i>Stanhopea candida</i> Barb. Rodr.	<i>Arias T. 854 (HUAZ)</i>	SOL
<i>Stelis aviceps</i> Lindl.	<i>Cardenas D. et al. 41680 (COAH), 41773 (FMB)</i>	BEL
<i>Stelis kefersteiniana</i> (Rchb.f.) Pridgeon & M.W.Chase	iNaturalist	SOL
<i>Stelis lindenii</i> Lindl.	<i>Ortiz-Valdivieso M. 536 (HPUJ)</i>	BEL
<i>Stelis oblonga</i> (Ruiz & Pav.) Willd.	<i>Sanin D. 6492 (COAH, HUA)</i>	FLO
<i>Stelis purpurea</i> (Ruiz & Pav.) Willd.	<i>Perdomo O. 268, 315 (CUVC)</i>	FLO, SVC
<i>Stelis superbiens</i> Lindl.	<i>Perdomo O. 368 (CUVC)</i>	BEL
<i>Stenia pallida</i> Lindl.	<i>Arias, T. 913, 987 (HUAZ)</i>	SJF, DON
<i>Telipogon pogonostalix</i> Rchb.f.	<i>Arias, T. 981 (HUAZ)</i>	DON
<i>Telipogon polymerus</i> Rchb. f.	<i>Trujillo E. 7636, Perdomo O. 403 (CUVC)</i>	FLO, PRC
<i>Telipogon selbyanus</i> N.H. Williams & Dressler	<i>Perdomo O. 419 (CUVC)</i>	FLO
<i>Trichocentrum cebolleta</i> (Jacq.) M.W.Chase & N.H.Williams	<i>Arias T. 909, 1000, 1010, Chaux-Varela J. 40 (HUAZ)</i>	DON, FLO, SVC
<i>Trichocentrum helicanthum</i> (Kraenzl.) J.M.H.Shaw	Living collection (El Manantial, Florencia)	N/A
<i>Trichocentrum nanum</i> (Lindl.) M.W. Chase & N.H. William	Living collection (El Manantial, Florencia)	SVC
<i>Trichocentrum nudum</i> (Bateman ex Lindl.) M.W.Chase & N.H.Williams	Living collection (El Manantial, Florencia)	FLO
<i>Trichocentrum pulchrum</i> Poepp. & Endl.	<i>Perdomo O. 276 (CUVC)</i>	FLO
<i>Trichosalpinx orbicularis</i> (Lindl.) Luer	<i>Franco-Rosselli P. 4179, Palacios P. 2450, Arevalo R. 341 (COL), Cardenas D. 42195 (FMB)</i>	BEL, PRC, SOL
<i>Tubella multicuspidata</i> (Rchb.f.) Archila	<i>Cardenas D. et al. 41704 (COAH)</i>	BEL

<i>Tubella pusilla</i> (Kunth) Archila	Arias T. 870 (HUAZ), Perdomo O. 397 (CUVC)	CAR, PRC
<i>Vanilla bicolor</i> Lindl.	Idobro J. M. 11423 (COAH)	SOL
<i>Vanilla guianensis</i> Splitg.	Barona A. 4863 5192 (COAH)	CAR, SOL
<i>Vanilla odorata</i> C.Presl.	Barona A. 4864 (COAH)	SOL
<i>Vanilla palmarum</i> (Salzm. ex Lindl.) Lindl.	Cardenas D. et al. 48604, Barona 4620 (COAH)	BEL, SVC
<i>Vanilla penicillata</i> Garay & Dunst.	Franco-Rosselli P. 4258 (COL)	SOL
<i>Vanilla pompona</i> Schiede	Cardiel J. M. 1089 (COL)	SOL
<i>Vanilla sprucei</i> Rolfe	Barona A. 3124, Duivenvoorden J. 719, Restrepo D. 441 (COAH)	SOL
<i>Vanilla trigonocarpa</i> Hoehne	Barona A. 3125, 4611, 4612, 4613, 4615, 4616, 4617, 4618, 4619 (COAH)	BEL
<i>Warczewiczella amazonica</i> Rchb.f. & Warsc.	Alzate F. 980 (FAUC)	MIL
<i>Wulfschlaegelia calcarata</i> Bentham	Cardenas D. et al. 48513 (COAH), Blanco M. et al. 233 (COAH, HUAZ)	FLO
<i>Xerorchis amazonica</i> Schltr.	Barona A. 1483 (COAH)	SOL
<i>Xerorchis trichorhiza</i> (Kraenzl.) Garay	Franco-Rosselli P. 4240 (COL)	SOL
<i>Xylobium foveatum</i> (Lindl.) G. Nicholson	Perdomo O. 324 (CUVC)	FLO
<i>Xylobium leontoglossum</i> (Rchb. f.) Rolfe	Trujillo E. et al. 7867 (CUVC)	FLO

Figure legends

Figure 1. Representative landscapes from Caquetá, Colombia. **A.** general view of the Andean Piedmont in the municipality of Florencia. **B.** Hills and rivers coming down from the eastern slopes of the Andes and flowing into Amazonian Forest in the municipality of Belen de los Andaquíes, the Pescado River. **C.** Hilly slopes from the Andean piedmont transitioning to the Amazon Forest in the municipality of Belen de los Andaquíes. **D.** General view of Amazonia Forest from a hilly slope of the eastern Andes, in the municipality of Paujíl. **E, F.** Amazonian waterlogged Forest at La Laguna de Peregrinos, Municipality of Solano.



Figure 2. Representative Orchidaceae species from Caquetá, Colombia. A. *Acianthera casapensis* **B.** *Acianthera ciliata*. **C.** *Laelia rosea*. **D.** *Catasetum tuberculatum*. **E.** *Cattleya violacea*. **F.** *Trichocentrum nudum*. **G.** *Cyrtochilum porrigens*. **H.** *Dimerandra emarginata*. **I.** *Epidendrum coronatum*. **J.** *Epidendrum difforme*. **K.** *Epidendrum fimbriatum*.

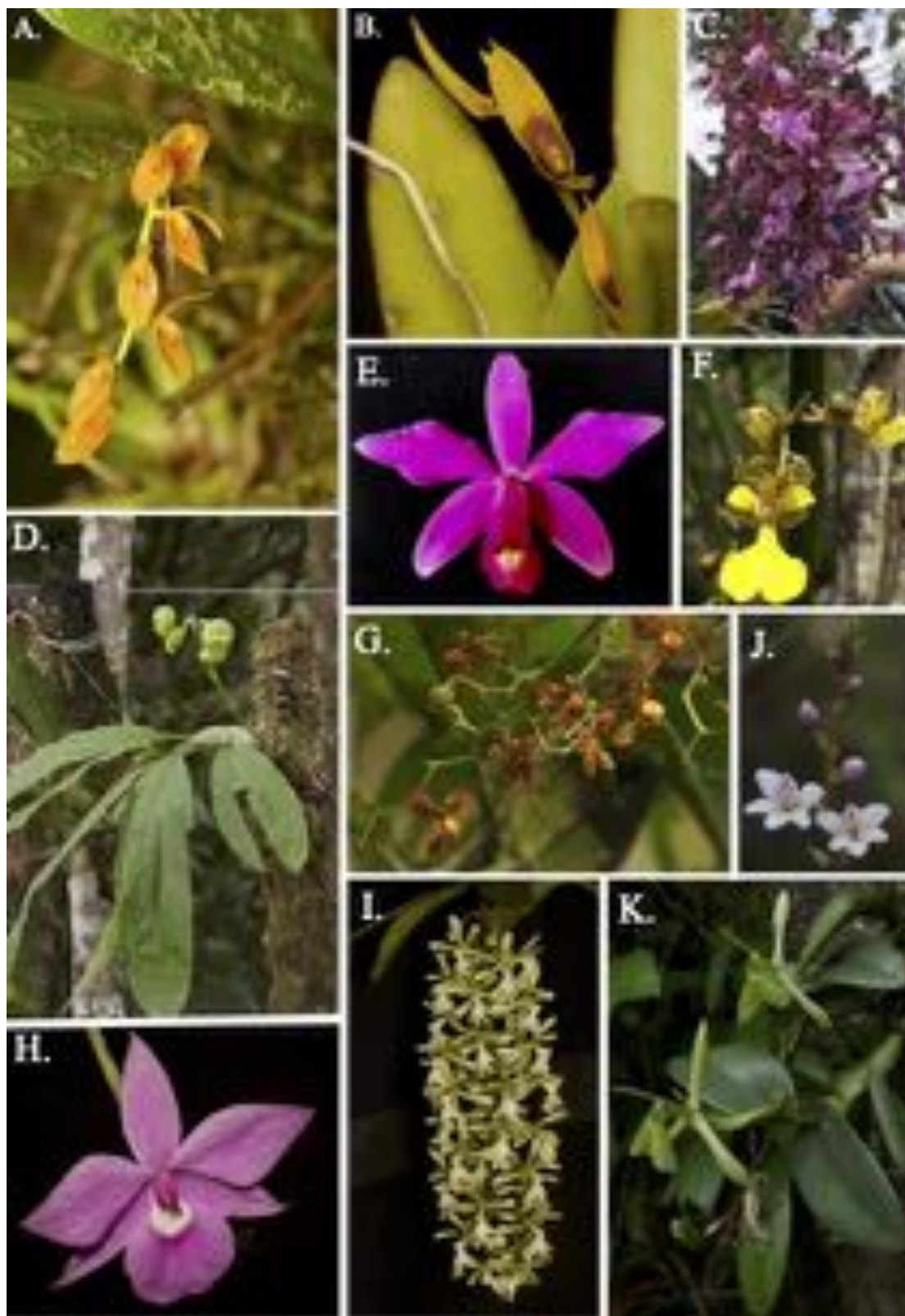


Figure 3. Representative Orchidaceae species from Caquetá, Colombia. A. *Galeandra macroplecta*. **B.** *Maxillaria aureoglobula*. **C.** *Maxillaria egertoniana*. **D.** *Maxillaria equitans*. **E.**

Maxillaria parkeri. **F.** *Maxillaria parviflora*. **G.** *Notylia barkeri*. **H.** *Oncidium alexandrae* **I.** *Octomeria grandiflora*. **J.** *Prostechea fragans*. **K.** *Stanhopea candida*. **L.** *Sobralia macrophylla*.



Figure 4. Distribution of orchid species number in Caquetá municipalities. **A.** Orchid species distribution by municipality, and a heatmap of species richness found in each of the municipalities. **B.** Number of orchid species found in each municipality and their geographic position (Andean Piedmont or Amazonian basin).

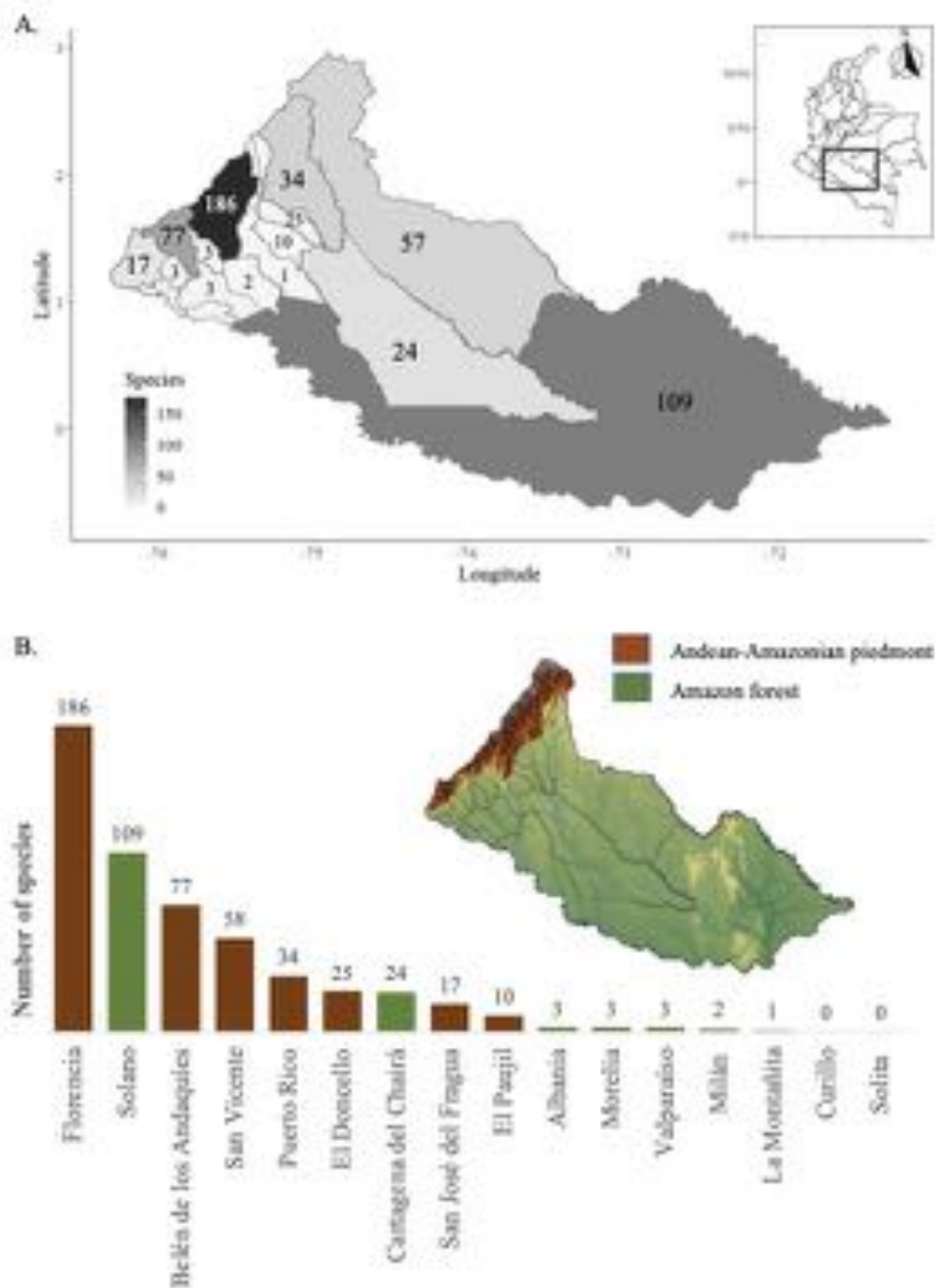


Figure 5. Number of orchid species in most abundant genera of Caquetá, Colombia. A. Number of species in the most species rich genera of Caquetá. **B.** Pie chart showing the proportion of species in genera with 9 to 70 species.

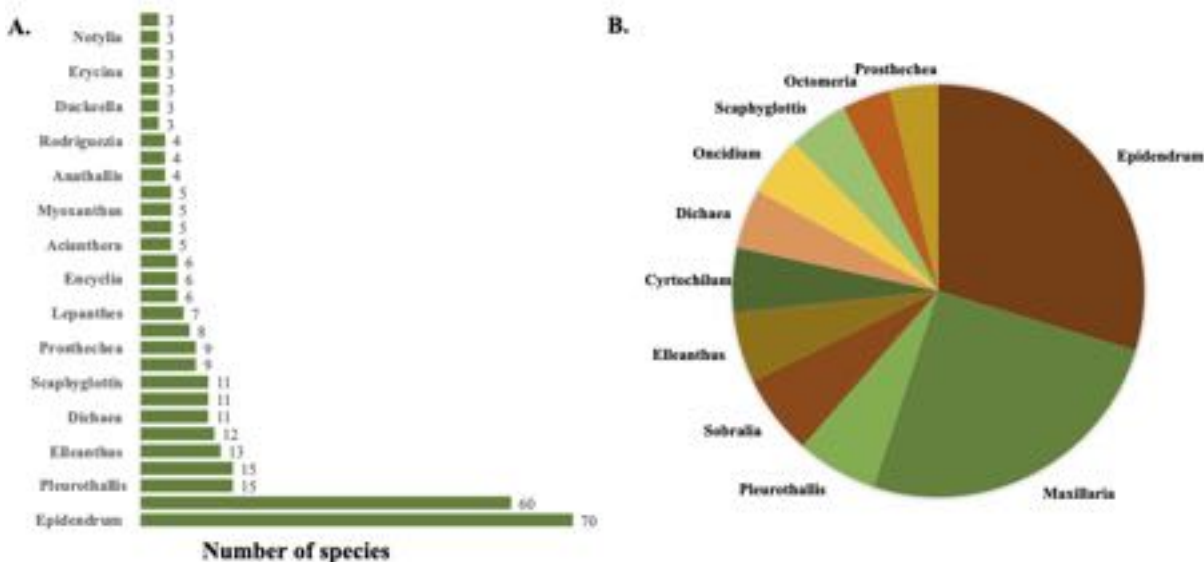


Figure 6. Number of orchid species in the Colombian national herbaria and international herbaria. Instituto Amazónico de Investigaciones Científicas – SINCHI (COAH), Herbario Enrique Forero (HUAZ) de la Universidad de la Amazonia, Herbario de la Universidad del Valle (CUCV), Herbario Nacional Colombiano (COL), Herbario de la Universidad de Antioquía (HUA), Herbario de la Pontificia Universidad Javeriana (HPUJ), Herbario Federico Medem-Bogotá (FMB), Herbario Forestal de la Universidad Distrital Francisco José de Caldas (UDBC), Herbario de la Universidad de Caldas (FAUC), Herbario de la Universidad del Cauca (CAUP), Herbario del Jardín Botánico de Medellín (JAUM), Jardín Botánico José Celestino Mutis de Bogotá (JBB), Missouri Botanical Garden Herbarium (MO), Herbario del Instituto Chinoín (AMO), Herbario del Real Jardín Botánico de Madrid (MA), Marie Selby Botanical Gardens (SEL), the Herbarium Museum Paris of the Museum National D’Histoire Naturelle (P), Gdansk University (UGDA), University of Florida Herbarium (USF), University of California, Los Angeles Herbarium (LA), Oak Ames Herbarium, Harvard University (AMES), International New York Botanical Garden Herbarium (NY), University of Wisconsin Herbarium (WIS).

