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Diversity of Orchids in Cundinamarca

An opportunity for sustainable use

Carolina Castellanos-Castro*, Cristian Castro*, Yissel Rivera*, Martha Vallejo*, Diana López*, and Diana Lara*

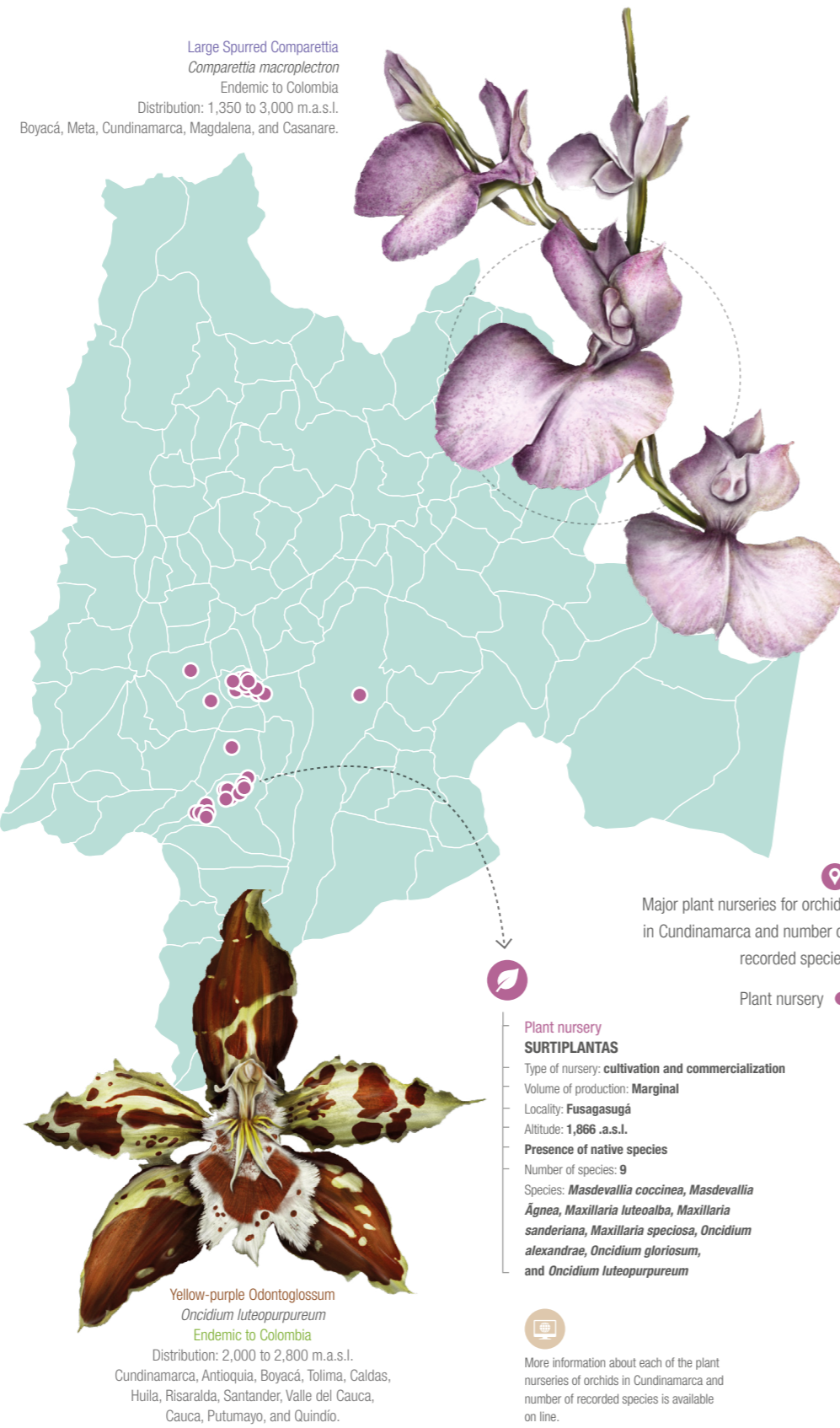
THE HIGH SPECIES RICHNESS OF ORCHIDS IN THE STATE OF CUNDINAMARCA AND THEIR HISTORICAL USE AS DECORATIVE PLANTS REPRESENTS AN OPPORTUNITY TO CREATE ALLIANCES OF PRESERVATION, RESEARCH, AND SUSTAINABLE USE.

Species of orchids have been recorded in all the municipalities and altitudinal ranges of the country. Most species correspond to specimens found between 2,500 and 3,500 m.a.s.l..

Due to the beauty and variety of shapes, sizes, and colors of their flowers, orchids are one of the most charismatic group of plants. Therefore, they have historically been used for decoration.

The greatest diversity of orchids in the world can be found in the tropical mountains of the Andes. In Colombia, Antioquia is the state with greatest species richness, followed by Cundinamarca, which has 940 different species recorded for its territory (100 endemic species)¹. However, the uncontrolled extraction of orchids for commercialization, combined with the destruction of forests and the replacement of natural areas for productive land covers, has made natural populations become scarcer. Until now, the conservation status of only 73 native species in Cundinamarca has been evaluated. 51 % (37 species) of these are under some threat category². This situation evidences that there is an imminent need for both *in situ* and *ex situ* conservation actions that must be developed by the academia, NGOs, environmental authorities, and society at large.

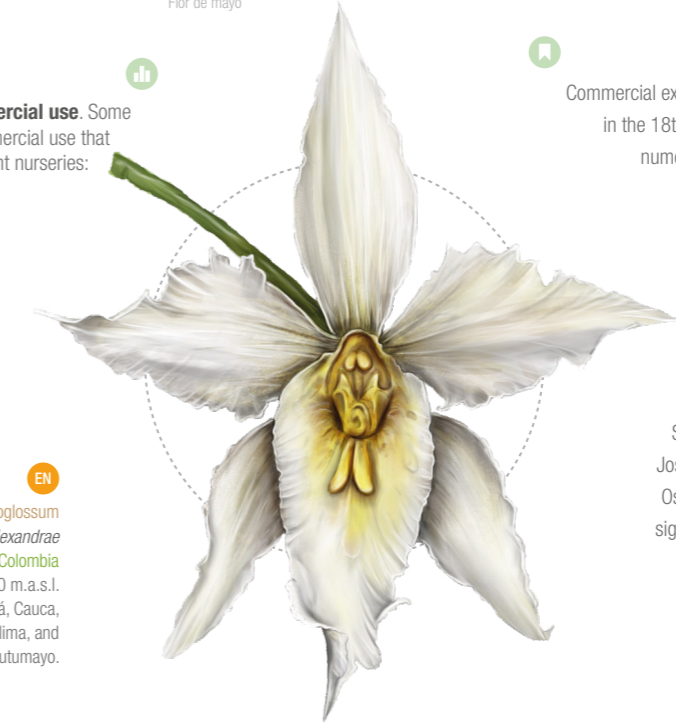
In this sense, plant nurseries play an important role in holding and propagating those species that are under some threat category. Currently, the production



- 5^{reg} *Oncidium alexandrae* Aguadja blanca
- 7^{reg} *Miltoniopsis phalaenopsis* Josefita
- 4^{reg} *Oncidium luteopurpureum* Flor de Bogotá
- 5^{reg} *Maxillaria luteoalba* Cangreja o Maxillaria
- 13^{reg} *Miltoniopsis vexillaria* Josefita rosada
- 7^{reg} *Phragmipedium longifolium* Josefita
- 4^{reg} *Oncidium hastilabium* Hastilabium
- 5^{reg} *Phragmipedium warscewiczianum* Zapaticos
- 7^{reg} *Cattleya trianae* Flor de mayo

Native species with potential for commercial use. Some species of native orchids with potential for commercial use that were not recorded in the plant nurseries:

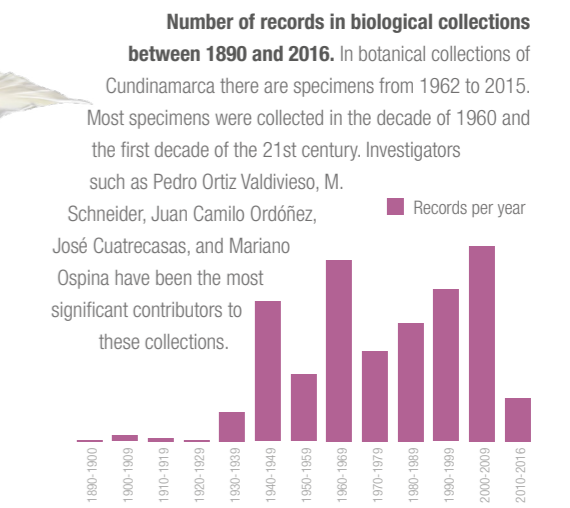
- + *Comparettia falcata*
- + *Cyrtorchilum revolutum*
- + *Cyrtorchilum densiflorum*
- + *Oncidium ornithorhynchum*



Most frequent native species in plant nurseries. Among the most common species, four belong to the genus *Cattleya*, three to *Oncidium*, three to *Phragmipedium*, and one to *Miltoniopsis*.

Most plant nurseries that produce and commercialize orchids do so as a complementary activity. They handle a broad variety of decorative species, fruit trees, and forest trees.

Commercial exploitation of orchids originates in the 18th century, and there are records of numerous extractions directed to Europe.



NATIONAL SCENARIO FOR ORCHIDS

In Colombia, there are 4,270 native species of orchids¹, of which 1,572 are endemic and 207 are categorized under some threat category² mainly due to habitat destruction and followed by extraction of wild populations for commercial motives. Orchids may be found in all of the territory, yet 77 % of species are found in the Andean region¹ and are associated to Andean forests and paramos. Colombia currently has a National Plan³ that includes goals and guidelines to generate and expand knowledge, conserve, use sustainably, educate, and strengthen laws related to this group of plants by highlighting exploitation as a countrywide opportunity. Implementing the plan implies promoting the integration of local and regional initiatives so that activities currently being developed in Colombia may contribute to other initiatives in the country.

scientific knowledge in this topic. The project is financed by the *Sistema General de Regalías* (General System of Royalties) through the *Secretaría de Ciencia, Tecnología e Innovación de la Gobernación de Cundinamarca* (Secretariat of Science, Technology and Innovation of the Government of Cundinamarca).

Preliminary results show that in the municipalities of San Antonio del Tequendama, Fusagasugá, La Mesa,

Species with most records in Cundinamarca. Herbarium records that are assumed to be of wild individuals, although some may correspond to cultivated individuals.

- 55^{reg} *Elleanthus aurantiacus*
- 48^{reg} *Epidendrum erosum*
- 42^{reg} *Stenorhynchos vaginatum*
- 42^{reg} *Epidendrum oxyspalum*
- 54^{reg} *Pleurothallis phalangifera*
- 44^{reg} *Epidendrum frutex*
- 42^{reg} *Stelis pulchella*
- 275^{reg} *Epidendrum chioneum*
- 149^{reg} *Epidendrum elongatum*
- 51^{reg} *Oncidium ornithorhynchum*
- 43^{reg} *Epidendrum cylindraceum*
- 47^{reg} *Epidendrum excisum*
- 40^{reg} *Epidendrum scytocladium*
- 51^{reg} *Telipogon nervosus*
- 41^{reg} *Epidendrum megalospathum*

Mesitas del Colegio, Cachipay, Supatá, Tena, and Bogotá there are 57 plant nurseries that produce and commercialize 86 different species of orchids, of which 63 are naturally distributed in the state of Cundinamarca and 23 in other regions of Colombia.

This represents a great opportunity to encourage the sustainable use of native orchids as an alternative

to the current commercialization of **exotic** species. It is also a chance to improve cultivation methods of native species, decrease periods of growth and flowering, reduce productions costs, strengthen capacities of workers, and receive support from authorities that may promote such activity in the region.