

## Introduction

Understanding the diversity and distribution of species on Earth is crucial in the face of contemporary threats to biodiversity, such as climate change and unsustainable economic practices. Unfortunately, the process of documenting and describing biodiversity often cannot keep pace with habitat loss and species extinction, especially in tropical regions where the number of undescribed and poorly known species is highest, and where biodiversity is most severely threatened. If this diversity is not documented, it will mean a loss of valuable understanding of the natural world and a failure to recognize species whose societal values remain undiscovered or underappreciated. This research will assess the extinction risk of selected fern species to understand their conservation status. The focus lies on understanding the classification, distribution, and conservation status of a group of species within the fern genus *Elaphoglossum*, the *Elaphoglossum dendricola* Clade, consisting of around 12 species distributed in the Tropical Andes, mostly at high altitudes (over 2400 m). This assessment aims to serve as a baseline for future conservation studies of this neotropical group of ferns.

## Methods

### 1 Species selection

Species of *Elaphoglossum dendricola* Clade



### 2 Occurrence records compilation

Online databases  
Herbarium specimens



Species	Latitude	Longitude
<i>Elaphoglossum dendricola</i>	2.2	-76.35
<i>Elaphoglossum dendricola</i>	5.898333333333333	-75.5225
<i>Elaphoglossum dendricola</i>	4.966666666666667	-75.38333333333333
<i>Elaphoglossum dendricola</i>	2.2	-76.35
<i>Elaphoglossum dendricola</i>	6.347222222222222	-72.82055555555556
<i>Elaphoglossum dendricola</i>	4.966666666666667	-75.38333333333333
<i>Elaphoglossum dendricola</i>	-0.06666666666666667	-77.81666666666667
<i>Elaphoglossum dendricola</i>	-3.183333333333333	-78.75
<i>Elaphoglossum dendricola</i>	-0.25	-78.73333333333333
<i>Elaphoglossum dendricola</i>	-1	-78.35



### 3 Data quality assessment

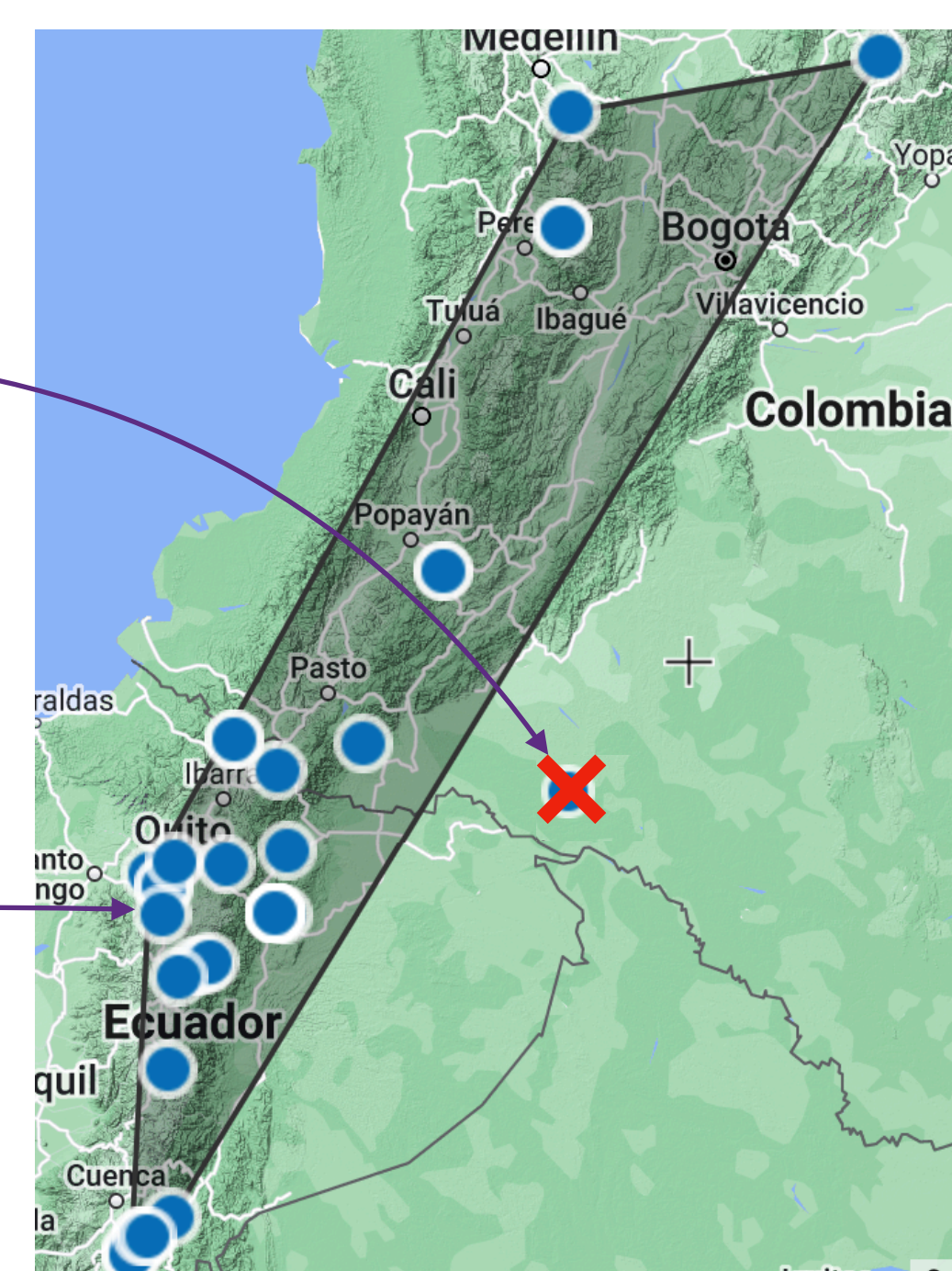
Correct species identities  
Georeference unspecified records

### 4 Uncertain occurrence points identification

**GeoCat** (Geospatial conservation assessment tool)  
Avoid unlikely distributions  
based on taxonomic knowledge

### 5 Status assessment - GeoCat

Of each species based on distribution range (B criterion)  
- EOO: Extent of occurrence  
Minimum convex polygon  
- AOO: area of occupancy  
Cell width of 2 km



### 6 Validation and adjustment

	Critically Endangered	Endangered	Vulnerable
B1. Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>

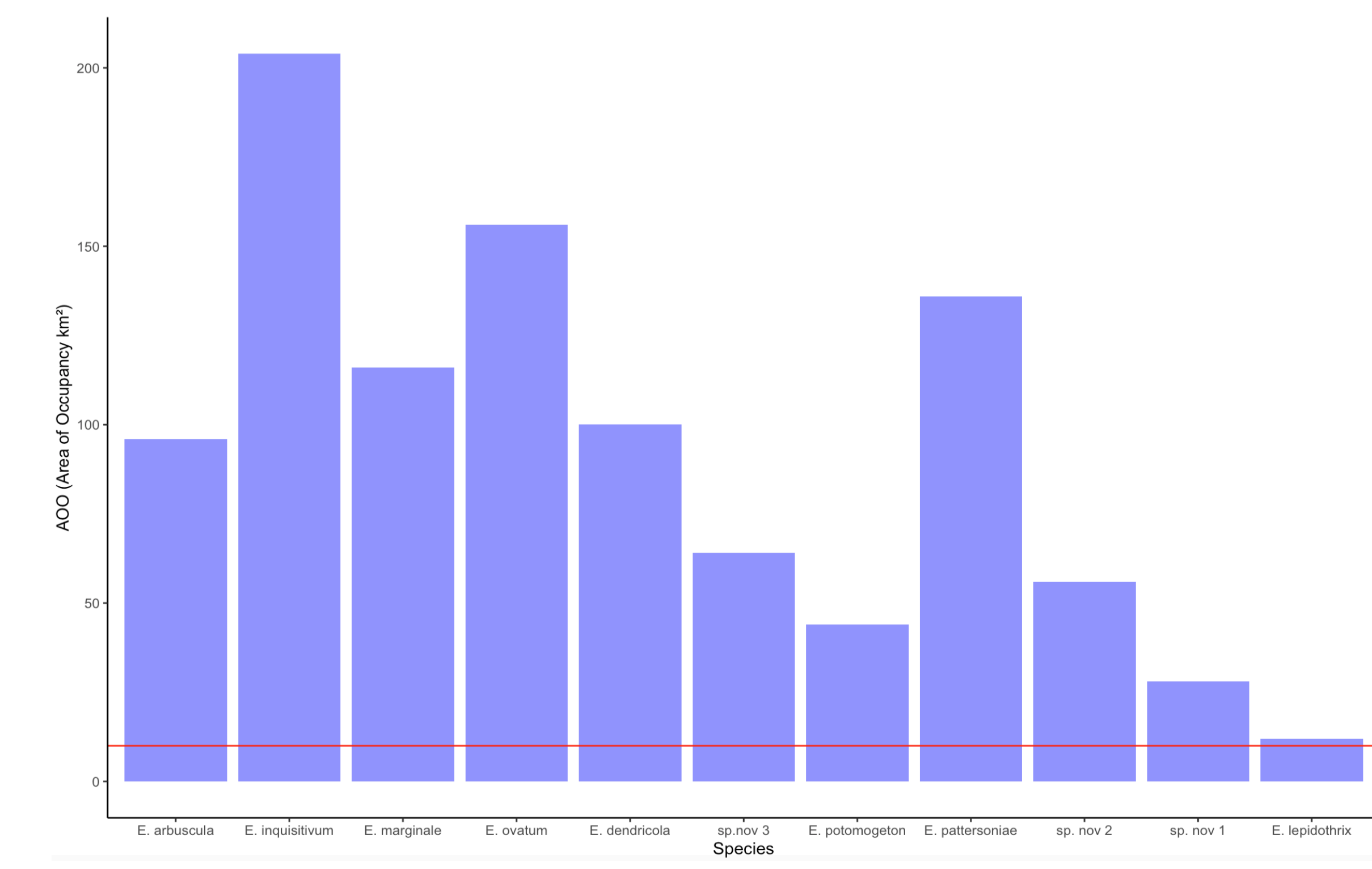
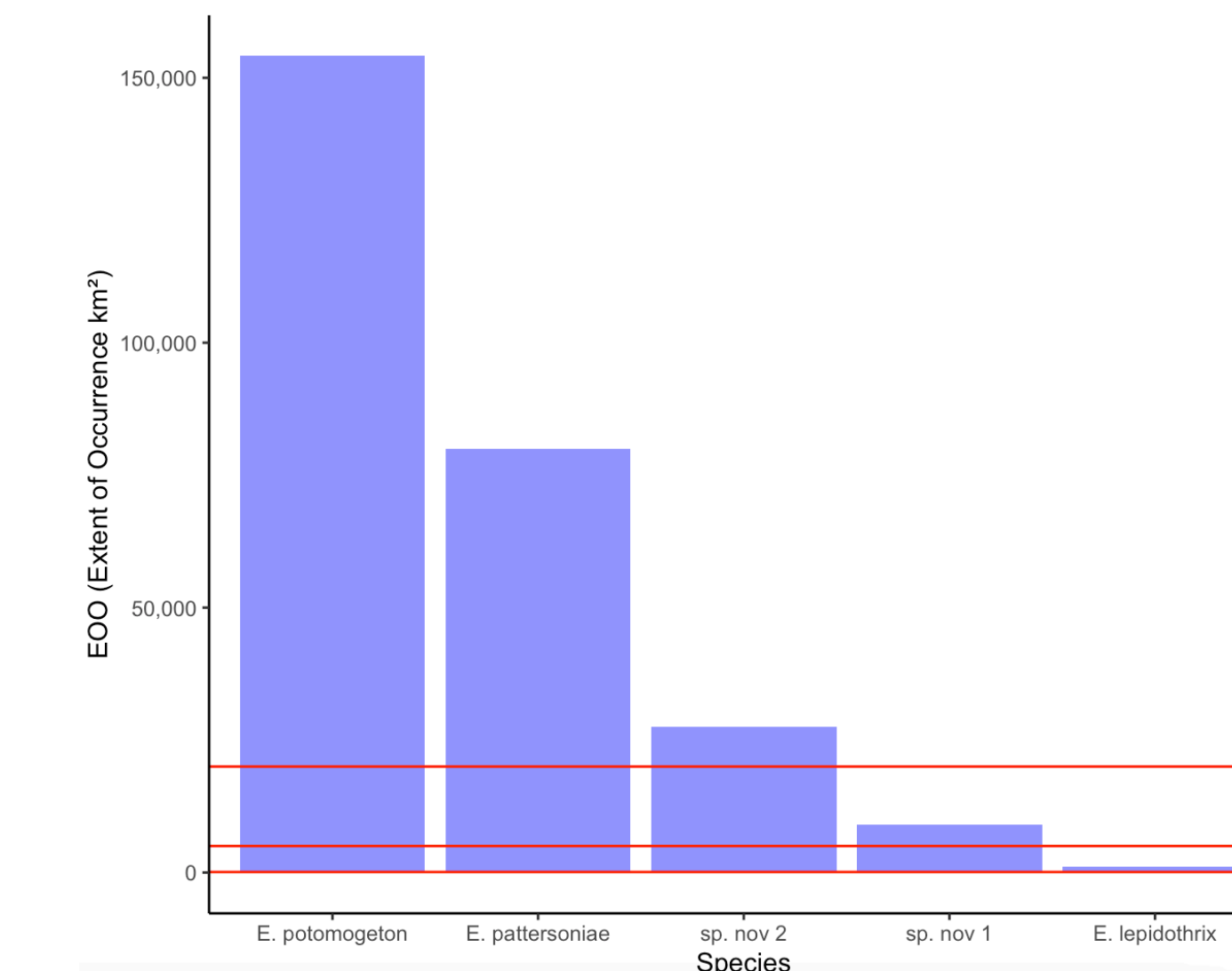
## Results

### Red List: Categories of the IUCN

(EX)	Extinct
(EW)	Extinct in the Wild
(CR)	Critically endangered
(EN)	Endangered
(VU)	Vulnerable
(NT)	Near Threatened
(LC)	Least Concern
(DD)	Data Deficient
(NE)	Not Evaluated

threatened

rise of extinction



## Discussion