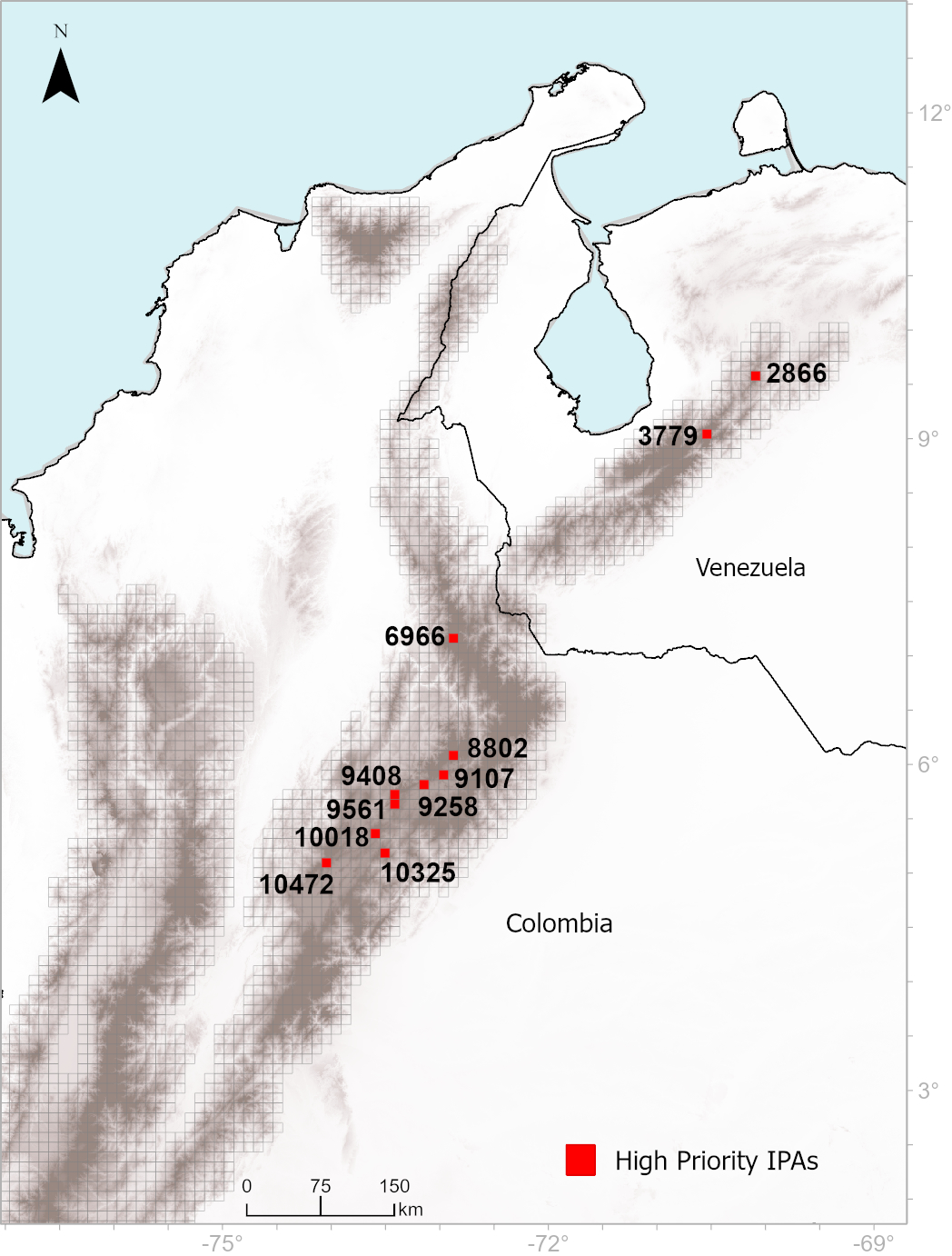
**SUPPLEMENTARY MATERIAL 1**

Location of all High-priority Important Plant Areas of frailejones (Espeletiinae, Asteraceae) in the Northern Andes.



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| Basemap Esri – World Imagery. Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS. | **UA High Priority – 2866**  **Technical description**  **Area Páramos in IPAs**: 21,58 km2  **Country**: Venezuela. Sierra Nevada.  **Administrative region**:   * Municipio Morán, Parroquia Humocaro Alto, Estado Lara. * Municipio Carache, Parroquia Carache, Estado Trujillo   **Closet urban area**: Carache  **Ecological unit:** Andean Páramo | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Carramboa trujillensis | Yes |  |  |  | Yes |
| Espeletia ulotricha |  |  | Yes | Yes | Yes |
| Libanothamnus arboreus | Yes |  |  |  | Yes |
| Libanothamnus liscanoanus | Yes |  |  |  | Yes |
| Libanothamnus parvulus |  |  | Yes | Yes | Yes |
| Ruilopezia emmanuelis |  |  | Yes | Yes | Yes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS. | **UA High Priority – 3779**  **Technical description**  **Area Páramos in IPAs**: 58,31 km2  **Country**: Venezuela. Sierra Nevada.  **Administrative region**:   * Municipio Boconó, Parroquia General Rivas, Estado Trujillo. * Municipio Urdaneta, Parroquia Tuñame, Estado Trujillo. * Municipio Cardenal Quintero, Parroquia Las Piedras, Estado Mérida.   **Closet urban area**: La Puerta, Jajó, Tuñame, Pueblo Llano  **Ecological unit:** Andean Páramo  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia marthae |  |  | Yes | Yes | Yes |
| Espeletia schultzii |  |  |  |  | Yes |
| Espeletia tenorae |  |  | Yes | Yes | Yes |
| Espeletia weddellii |  |  |  |  | Yes |
| Libanothamnus arboreus | Yes |  |  |  | Yes |
| Libanothamnus banksiifolius |  |  | Yes | Yes | Yes |
| Ruilopezia bracteosa |  |  |  |  | Yes |
| Ruilopezia floccosa |  |  |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 6966**  **Technical description**  **Area Páramos in IPAs**: 99,13 km2  **Country**: Colombia. Eastern Cordillera.  **Administrative region**:   * Departamento Santander. Veredas Saladito, Ucatá, Tembladal y Cuesta Boba. * Departamento Norte de Santander. Veredas Antala y Leuta.   **Closet urban area**: Berlín  **Ecological unit:** Complex: Santurbán y Berlín  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia brassicoidea | Yes |  |  |  | Yes |
| Espeletia conglomerata | Yes |  |  |  | Yes |
| Espeletia estanislana | Yes |  |  |  | Yes |
| Espeletia rositae | Yes | Yes |  |  | Yes |
| Espeletia standleyana | Yes | Yes |  |  | Yes |
| Espeletiopsis caldasii | Yes | Yes |  |  | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis funckii | Yes |  |  |  | Yes |
| Espeletiopsis santanderensis |  |  |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 8802**  **Technical description**  **Area Páramos in IPAs**: 89,39 km2  **Country**: Colombia. Eastern Cordillera.  **Administrative region**:   * Departamento Santander. Municipio Coromoro. Vereda Ture. * Departamento Boyacá. Veredas Páramo, Llano del Carmen, Tobal, Carrizal, Peña Negra, Cartavita y Pargua.   **Closet urban area**: Tutazá  **Ecological unit:** Complex: Guantiva - La Rusia  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia arbelaezii | Yes |  |  |  | Yes |
| Espeletia argentea |  |  |  |  | Yes |
| Espeletia azucarina | Yes | Yes | Yes | Yes | Yes |
| Espeletia brachyaxiantha | Yes |  |  |  | Yes |
| Espeletia congestiflora |  |  |  |  | Yes |
| Espeletia discoidea | Yes | Yes | Yes | Yes | Yes |
| Espeletia rositae | Yes | Yes |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 9107**  **Technical description**  **Area Páramos in IPAs**: 38,6 km2  **Country**: Colombia. Eastern Cordillera.  **Administrative region**:   * Departamento de Boyacá. Some Veredas: Quebrada arriba, El Olivo, Siraquita, Egipto, Portachuelo.   **Closet urban area**: Duitama  **Ecological unit:** Complex: Guantiva - La Rusia  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia arbelaezii | Yes |  |  |  | Yes |
| Espeletia boyacensis |  |  |  |  | Yes |
| Espeletia brachyaxiantha | Yes | Yes |  |  | Yes |
| Espeletia congestiflora |  |  |  |  | Yes |
| Espeletia incana | Yes |  |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletia nemekenei | Yes |  |  |  | Yes |
| Espeletia tunjana | Yes |  |  |  | Yes |
| Espeletiopsis guacharaca |  |  |  |  | Yes |
| Espeletiopsis muiska |  |  |  |  | Yes |
| Paramiflos glandulosus | Yes |  |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 9258**  **Technical description**  **Area Páramos in IPAs**: 54,08 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Boyacá. Some Veredas: Carrizal Alto, Carrizal, La Bolsa, Marcura, Medios.   **Closet urban area**: Paipa  **Ecological unit:** Complex: Guantiva - La Rusia  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia arbelaezii | Yes |  |  |  | Yes |
| Espeletia boyacensis |  |  |  |  | Yes |
| Espeletia cachaluensis | Yes | Yes |  |  | Yes |
| Espeletia congestiflora |  |  |  |  | Yes |
| Espeletia incana | Yes | Yes |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletia nemekenei | Yes | Yes |  |  | Yes |
| Espeletia paipana | Yes | Yes | Yes | Yes | Yes |
| Espeletia tunjana | Yes |  |  |  | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis guacharaca |  |  |  |  | Yes |
| Espeletiopsis jimenez-quesadae | Yes |  |  |  | Yes |
| Espeletiopsis muiska |  |  |  |  | Yes |
| Espeletiopsis pleiochasia |  |  |  |  | Yes |
| Paramiflos glandulosus | Yes |  |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 9408**  **Technical description**  **Area Páramos in IPAs**: 63,60 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Santander. Municipio de Gámbita, Vereda de Guausa. * Departamento de Boyacá. Some Veredas: Centro, Rupavita, El Cerro, Quirbaquirá, Santa Barbara.   **Closet urban area**: Arcabuco  **Ecological unit:** Complex: Iguaque - Merchán  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia arbelaezii | Yes | Yes |  |  | Yes |
| Espeletia barclayana |  |  |  |  | Yes |
| Espeletia boyacensis |  |  |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletia nemekenei | Yes | Yes |  |  | Yes |
| Espeletia tunjana | Yes | Yes |  |  | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis garciae | Yes |  |  |  | Yes |
| Espeletiopsis muiska |  |  |  |  | Yes |
| Paramiflos glandulosus | Yes | Yes |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 9561**  **Technical description**  **Area Páramos in IPAs**: 23,03 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Boyacá. Some Veredas: Sote, Carrizal, Corregidor, Llano Grande, Patiecitos, Turmal.   **Closet urban area**: San Pedro De Iguaque  **Ecological unit:** Complex: Iguaque - Merchán  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia barclayana |  |  |  |  | Yes |
| Espeletia boyacensis |  |  |  |  | Yes |
| Espeletia cayetana | Yes | Yes |  |  | Yes |
| Espeletia grandiflora |  |  |  |  | Yes |
| Espeletia incana | Yes |  |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletiopsis garciae | Yes |  |  |  | Yes |
| Espeletiopsis guacharaca |  |  |  |  | Yes |
| Espeletiopsis jimenez-quesadae | Yes |  |  |  | Yes |
| Espeletiopsis pleiochasia |  |  |  |  | Yes |
| Paramiflos glandulosus | Yes |  |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 10018**  **Technical description**  **Area Páramos in IPAs**: 63,51 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Cundinamarca. Some Veredas: San Antonio, Peñas, Tabita El Carmen, Gachaneca. * Departamento de Boyacá. Some Veredas: Boqueron, Parroquia Vieja, Estancia Grande.   **Closet urban area**: Guachetá, Ventaquemada, Turmeque  **Ecological unit:** Complex: Iguaque - Merchán  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia argentea |  |  |  |  | Yes |
| Espeletia barclayana |  |  |  |  | Yes |
| Espeletia boyacensis |  |  |  |  | Yes |
| Espeletia congestiflora |  |  |  |  | Yes |
| Espeletia killipii |  |  |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletia raquirensis | Yes | Yes | Yes | Yes | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis guacharaca |  |  |  |  | Yes |
| Espeletiopsis pleiochasia |  |  |  |  | Yes |
| Espeletiopsis rabanalensis | Yes | Yes |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 10325**  **Technical description**  **Area Páramos in IPAs**: 34,57 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Cundinamarca. Some Veredas: Soatama, Chasquez, La Merced. * Departamento de Boyacá. Some Veredas: Loma Gorda, Jupal, Bosque, Rosal.   **Closet urban area**: Úmbita  **Ecological unit:** Complex: Rabanal y Río Bogotá  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia arbelaezii | Yes |  |  |  | Yes |
| Espeletia argentea |  |  |  |  | Yes |
| Espeletia barclayana |  |  |  |  | Yes |
| Espeletia chocontana | Yes | Yes |  |  | Yes |
| Espeletia murilloi |  |  |  |  | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis rabanalensis | Yes | Yes |  |  | Yes |

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| Grupo Ingeolan C.A., Esri, HERE, Garmin, FAO, NOAA, USGS; Earthstar Geographics; Esri, USGS | **UA High Priority – 10472**  **Technical description**  **Area Páramos in IPAs**: 69,01 km2  **Country**: Colombia. Eastern Cordillera  **Administrative region**:   * Departamento de Cundinamarca. Some Veredas: Páramo de Guerrero, Ventalarga, El Empaladizo, Rodamontal, Páramo Alto.   **Closet urban area**: Zipaquirá  **Ecological unit:** Complex: Guerrero  **Ecosystem**: Cool Temperate Moist Grassland on Mountains | | | | |
| **Accepted species that met the threshold of each criterion** | [**cA1**](https://www.sciencedirect.com/science/article/pii/S0006320723002884?via%3Dihub#tf0005) | **cA3** | **cA4** | **cA5** | **cB** |
| Espeletia argentea |  |  |  |  | Yes |
| Espeletia barclayana |  |  |  |  | Yes |
| Espeletia cayetana | Yes |  |  |  | Yes |
| Espeletia chocontana | Yes |  |  |  | Yes |
| Espeletia grandiflora |  |  |  |  | Yes |
| Espeletiopsis corymbosa |  |  |  |  | Yes |
| Espeletiopsis garciae | Yes |  |  |  | Yes |