



## Introduction

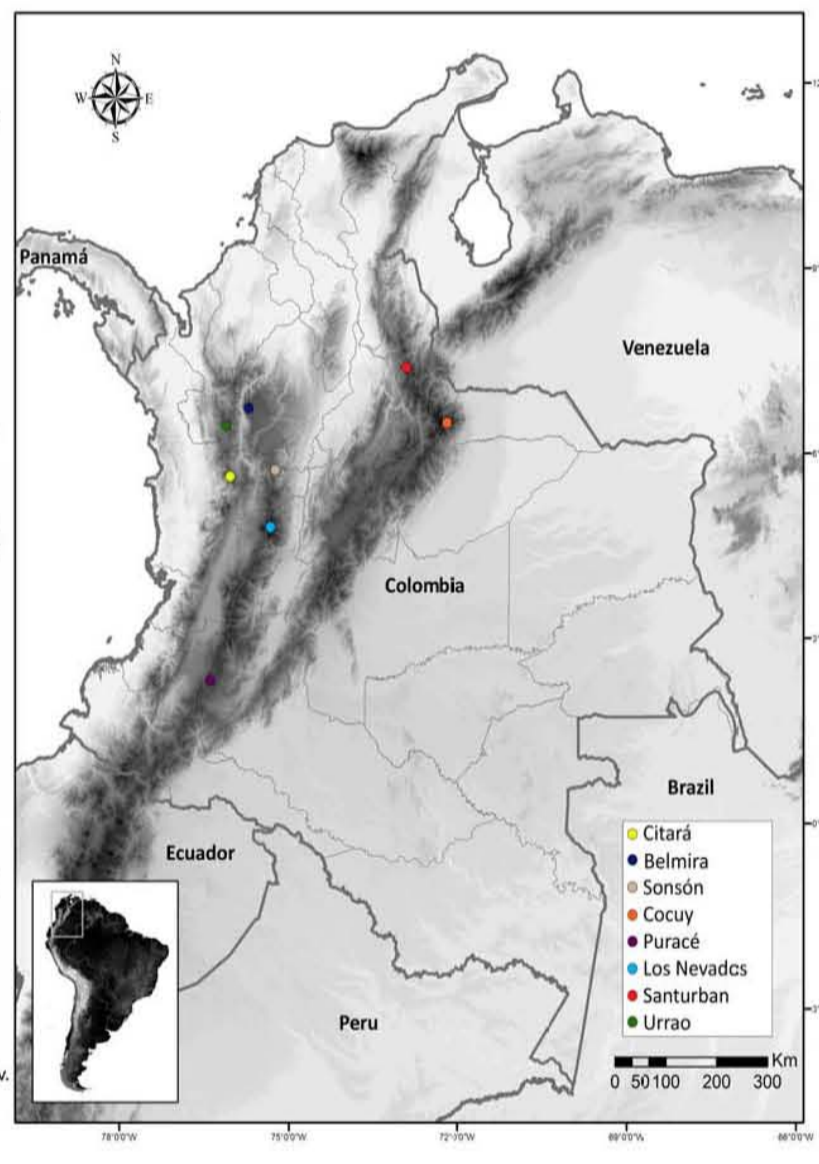
The Páramos are unique ecosystems located principally in the tropical high Andes, usually found above 3000 meters (Vasquez & Buitrago 2011), are relatively new ecosystems originated during the Pliocene (Van der Hammen et al. 1973; Gregory-Wodzicki 2000). The Páramo environmental conditions are extreme, with intense solar radiation, strong winds, high cloudiness and strong climatic fluctuations between day and night (Parsons 1982, Rangel-Ch. 2000, and 2005). This has created the scenario for the evolution of a very particular biota. The biotic composition of the Páramos varies depending principally on three variables, viz. geological history, antropogenic perturbations, and annual precipitations (Rangel-Ch 2000). At Colombia, Vasquez & Buitrago (2011) grouped the Páramo systems according to their geographical location and floral affinities in 34 complexes, covering 19330 Km<sup>2</sup> (1,69% of Colombia area).

The taxonomical or ecological studies in most of the inhabiting páramo taxa, excepting for plants and vertebrates are scarce or none (Rangel-Ch. 2000, and 2006). Odonata are not the exception, however, some works has been made, Venezuela is the country with the best known Odonatofauna in this ecosystems, mainly due to the efforts of professor Jürg de Marmels (1988, 1997, 2000, 2001, 2001a). Also in Colombia, *Ischnura chingaza* was described from the Oriental Cordillera (Realpe 2010), and studies with aquatic macroinvertebrates recorded larvae from the families Aeshnidae and Libellulidae (Castellanos & Serrato 2008, Posada-García et al. 2008). In addition some papers mentioned the presence of dragonflies as a common faunistic element in páramos (e.g. Mena-Vásconez 2005, Morales-Rozo & De La Serda 2004, Alzate 2010).

## Collecting trips and Results

Since May 2008, twenty non systematic field trips were done by CAB to thirteen different páramo localities in the northern part of the Colombian Central and Occidental Cordilleras (Map). The field trips were done on different times of the year and the capture efforts in the páramos varies.

Eight species were found, grouped on the genera: *Ischnura*, *Mesamphiagrion*, and *Oxyallagma* (Coenagrionidae), *Rhionaeschna* (Aeshnidae), *Erythrodiplax*, and *Sympetrum* (Libellulidae). Among these are three undescribed species *Ischnura* sp. nov., *Oxyallagma* sp. nov., and *Rhionaeschna* sp. nov., also *Rhionaeschna peralta* (Ris, 1918) is recorded for the first time in Colombia.



| Locality             | Altitude (masl) | Water bodies | Capturing effort | Páramo Complex | Weather  | Odonata records |
|----------------------|-----------------|--------------|------------------|----------------|----------|-----------------|
| Páramo del Sol       | 3600-4080       |              | 8                | Urrao          | C & R    |                 |
| Páramo de Santa Rita | 3500-3650       |              | 12               | Citará         | C, R & S |                 |
| Cerro de San Nicolas | 3500-4000       |              | 2                | Citará         | S        |                 |
| El Morro             | 3100-3330       |              | 35               | Belmira        | C, R & S |                 |
| Sabanas              | 3150-3240       |              | 6                | Belmira        | C, R & S |                 |
| Malvaza              | 3200            |              | 2                | Belmira        | C, R & S |                 |
| El Congo             | 3200            |              | 8                | Belmira        | C, R & S |                 |
| Nevado del Ruiz      | 3550-4000       |              | 2                | Nevados        | C & S    |                 |
| Laguna del Otún      | 3750-4700       |              | 10               | Nevados        | C, R & S |                 |
| Alto de la Paloma    | 3100-3230       |              | 1                | Sonsón         | S        |                 |
| Puracé               | 3500-4000       |              | 2                | Puracé         | C & R    |                 |
| Sierra del Cocuy     | 3900-4500       |              | 5                | Cocuy          | C, R & S |                 |
| Laguna de Paez       | 3700-3850       |              | 5                | Santurbán      | C & S    |                 |



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