

Pristimantis cristinae and *P. ruthveni*
LYNCH & RUIZ-CARRANZA, 1985 –
increase of altitudinal distribution
and páramo habitat use in the Sierra
Nevada de Santa Marta, Colombia

The Sierra Nevada de Santa Marta is a mountain range located in the Caribbean lowlands of the Department of Magdalena, Colombia, South America. Predominant ecosystems in the Caribbean lowlands of Colombia are tropical dry forests, while in the Sierra Nevada are wet ecosystems such as cloud forest and páramo (ESPINAL & MONTENEGRO 1963). This difference in natural ecosystems implies that many species in the Sierra Nevada are ecologically isolated, which is reflected in high endemism, especially of animals with low dispersal capacity such as amphibians. Previous studies in the Sierra Nevada de Santa Marta have found up to 50 amphibian species, of which 17 are endemic (RUIZ-CARRANZA et

al. 1996; LYNCH et al. 1997). In the Sierra Nevada, frogs of the genus *Pristimantis* have been found the most diverse in the area with nine species, particularly in cloud forest (LYNCH & RUIZ-CARRANZA 1985; FROST 2009). Here we increase the altitudinal range distribution of two species of *Pristimantis*: *P. cristinae* LYNCH & RUIZ-CARRANZA 1985 and *P. ruthveni* LYNCH & RUIZ-CARRANZA 1985 (Family Strabomantidae) in the Sierra Nevada and register for the first time their presence in the páramo habitat.

From September 13 to 22, 2008 a field expedition was conducted to the locality Lagunas de Sevilla ($10^{\circ}54'03''$ N, $73^{\circ}55'04.23''$ W), Serranía de Cebolleta, east of the municipality of San Pedro, western slope of the Sierra Nevada of Santa Marta, Colombia. This locality is at about 3500 m elevation and exhibits rocks and shrubby vegetation characteristic of the páramo habitat (Fig. 1). Extensive diurnal hikes were made in an area of approximately 4.5 km^2 looking for amphibians in diverse microhabitats



Fig. 1: General aspect of the páramo habitat in Lagunas de Sevilla, Serranía de Cebolleta, Sierra Nevada de Santa Marta, Colombia.



A



B

Fig. 2: *Pristimantis cristinae* LYNCH & RUIZ-CARRANZA, 1985 (A) and *Pristimantis ruthveni*

LYNCH & RUIZ-CARRANZA, 1985 (B) observed for the first time at about 3500 m elevation
in the páramo of Lagunas de Sevilla, Serranía de Cebolleta, Sierra Nevada of Santa Marta, Colombia.

(e.g. rocks, shrub, ground) both in places close and away from bodies of water (lakes, streams). During hikes alongside streams, we observed an individual of *P. cristinae* (Fig. 2a) calling from shrubby vegetation. Calls of this type were heard, especially on cloudy days, both during the day and night periods, leading to estimates of 10-20 individuals per day. Also, during the diurnal hikes frogs of the species *P. ruthveni* (Fig. 2b) were observed jumping and hiding around rocks in a stream. The identification of these species was based on descriptions, illustrations, the determination key published by LYNCH & RUIZ-CARRANZA (1985) and confirmed by J. D. LYNCH (pers. comm.).

Our records at about 3500 m elevation increase the known altitudinal distribution of *P. cristinae* (1530-2600 m) and *P. ruthveni* (1880-2600 m) by 900 m (ACOSTA-GALVIS 2000; FROST 2009), which is important in order to establish conservation strategies for endemic endangered species like *P. cristinae* (RAMIREZ-PINILLA et al. 2004). In addition, our records document the presence of *P. cristinae* and *P. ruthveni* in páramo, a habitat where these species have not been previously recorded (LYNCH & RUIZ-CARRANZA 1985; FROST 2009).

ACKNOWLEDGMENTS: We are grateful to the Unidad Administrativa Especial de Parques Nacionales Naturales of Colombia (UAESSPN), to Conservation International-Colombia, and to the Conservation Leadership Programme for financial and logistic support necessary for field work. Thanks to the indigenous community of Sierra Nevada of Santa Marta for allowing us to conduct research in their territories. Also thanks to the community of the locality of San Pedro de La Sierra for their friendship and guidance in the study area. Biologists Giovanni CHÁVEZ, León PÉREZ CARMONA, León Andrés PÉREZ, Jeiner CASTELLANOS, Neis MARTÍNEZ and Rosana LONDÓN helped in fieldtrips. Thanks to J. D. LYNCH for confirming the identification of the species.

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KEY WORDS: Amphibia, Anura, Strabomantidae, *Pristimantis cristinae*, *Pristimantis ruthveni*, Sierra Nevada de Santa Marta, Páramo, endangered species, high altitude record

SUBMITTED: March 11, 2010

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Herpetozoa](#)

Jahr/Year: 2010

Band/Volume: [23_1_2](#)

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Artikel/Article: [Pristimantis cristinae and P. ruthveni LYNCH & RUIZ-CARRANZA, 1985 - increase of altitudinal distribution and páramo habitat use in the Sierra Nevada de Santa Marta, Colombia 88-90](#)