

Andrea Paz Vélez

PhD Student

Education

- 2015-Present **PhD Student Biology.** –*City University of New York; New York, USA.*
- 2010-2012 **M.S Biological Sciences** (GPA 4.7/5)-*Universidad de los Andes; Bogotá, Colombia.*
Thesis: Testing the role of ecology and life history in structuring genetic variation across a landscape: a study of Panamanian frog communities
- 2006-2010 **B.S. Biology** (GPA 4.3/5)-*Universidad de los Andes; Bogotá, Colombia.*
Thesis: Geographical and environmental determinants of population structure in the red-eyed tree frog, *Agalychnis callidryas*

Teaching Experience

- Teaching Assistant: Sustainable Development.** MBA. Universidad de los Andes. May-June 2015
- Professor: Biogeography;** Pontificia Universidad Javeriana. July 2014- June 2015
- Teaching Assistant: Biostatistics.** Universidad de los Andes. January-May 2012 and August 2010- May 2011
In charge of the laboratory section, teaching students how to use R for statistical analyses.
- Teaching Assistant: Evolutionary Genetics.** Universidad de los Andes. August-December 2011
In charge of the laboratory section, teaching students how to use R, Arlequin, DNAsp and several other population genetics software.
- Undergraduate teaching assistant: Biostatistics;** Universidad de los Andes. January-May 2010
- Undergraduate teaching assistant: Evolution;** Universidad de los Andes. January-May 2010
- Undergraduate teaching assistant: Animal Physiology;** Universidad de los Andes. August-December 2009
- Undergraduate teaching assistant: Mathematics 3;** Universidad de los Andes. August-December 2009

Professional Experience

- August 2015-Present **Graduate assistant:** Graduate Center, City University of New York.
- February 2015-August 2015 **Research assistant:** School of management, Universidad de los Andes.
- March 2013-September 2014 **Researcher at the Conservation Genetics Lab.** Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. In charge of generating the phylogenetic diversity maps for plants, birds and amphibians. Also supporting the iBolColombia network and other lab projects as soil metagenomics and population genetics of frogs victim of illegal traffic.
- September 2012-March 2013 **Researcher at the Conservation Biology Program.** Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. Working for a project in Environmental planning for Conservation in operative areas of Colombia's Oil Company Ecopetrol.
- August-December 2011 **Project assistant:** *The effect of environmental variation on amphibian diversification and prevalence of their mortal pathogen: A transect among wetlands from the*

Magdalena Medio to the Orinoquia; Universidad de los Andes. Conducting and organizing field trips, DNA barcode data analyses and niche modeling.

Publications

- Paz A**, Ibáñez R, Lips KR, Crawford AJ. (2015). Testing the role of ecology and life history in structuring genetic variation across a landscape: A comparative ecophylogeographic approach. *Molecular Ecology*. 24(14): 3723-3737
- Guarnizo CE , **Paz A**, Muñoz-Ortiz A, Flechas SV, Mendez-Narvaez J, Crawford AJ. (2015) DNA barcoding survey of anurans across the Eastern Cordillera of Colombia and the impact of the Andes on cryptic diversity. *PLOS one*. 10(5): e0127312.
- González C, **Paz A**, Ferro C (2014) Predicted altitudinal shifts and reduced spatial distribution of *Leishmania infantum* vector species under climate change scenarios in Colombia. *Acta Tropica*. 129:83-90
- Paz A**, Crawford AJ (2012) Molecular-based rapid inventories of sympatric diversity: A comparison of DNA barcode clustering methods applied to geography-based vs. clade-based sampling of amphibians. *Journal of biosciences*. 37(5):887-896
- Paz A**, Gonzalez M, Crawford AJ (2011) Códigos de barras de la vida: Introducción y perspectiva. *Acta Biológica Colombiana*. 16(3):161-176.

Outreach

- Gonzalez MA, Paz A (2013) iBOL Colombia advances: Barcoding life in a megadiverse country. *Barcode Bulletin*. 4(2): 6

Invited Presentations

- Paz A**, Ibáñez R, Lips KR, Crawford AJ. 2012. Testing the role of ecology and life history in structuring genetic variation across a landscape: A comparative ecophylogeographic approach. Symposium *DNA Barcodes and Beyond: Developing and Utilizing Community-Wide DNA Sequence Data to Understand Ecology and Evolution of Tropical Biodiversity*. **49th Annual Meeting of the Association for Tropical Biology & Conservation**. Bonito, Brazil.

Oral presentations

- Flechas SV, **Paz A***, Crawford AJ, Acevedo A, Arboleda A, Bolívar W, Castro F, Franco R, Mojica C, Muñoz A, Quintero MP, Sarmiento C, Amézquita A. 2014. Environmental variables predict the distribution of the pathogenic fungus *Batrachochytrium dendrobatidis* in Colombia. X Latin American Congress of Herpetology. Cartagena, Colombia.
- Paz A**, Salgado-Negret B, Cortes Gomez AM, Lopez JP, Pinto A, Bello JC, Gonzalez MA. 2014. Explorando los patrones de diversidad taxonómica, filogenética y funcional de las aves de páramo en Colombia. **IV Congreso Colombiano de Zoología**. Cartagena, Colombia.
- Gonzalez MA, **Paz A**, Madriñan S, Restrepo S. 2013. iBOL Colombia advances and perspectives. **Fifth International Barcode of Life Conference**. Kunming, China.
- González MF, Barriga J, Corzo L, Corzo G, Díaz A, García H, Hernández OL, Longo M, Mesa L, **Paz A**, Portocarrero M. 2013. Planeación Ambiental para la Conservación de la Biodiversidad en las Áreas Operativas de Ecopetrol-Componente Flora. **VII Congreso Colombiano de Botánica**. Ibagué, Colombia.

Paz A,* Ibáñez R, Lips KR, Crawford AJ. 2012. Testing the role of ecology and life history in structuring genetic variation across a landscape: A comparative ecophylogeographic approach. **World Congress of Herpetology**. Vancouver, Canada.

Crawford AJ, Ibáñez R, Lips KR, **Paz A**, Driskell A. 2012. Cryptic diversity and diversification in the amphibian fauna of Panama. **World Congress of Herpetology**. Vancouver, Canada.

Poster presentations

Crawford AJ, Muñoz AG, Guarnizo C, **Paz A**, Flechas SV. 2012. DNA barcoding survey of amphibians across the Eastern Cordillera of Colombia. **World Congress of Herpetology**. Vancouver, Canada.

Paz A*, Moreno S, Quiroga V. 2010. Conservación de las ranas venenosas (Anura: Dendrobatidae) en Colombia: Una perspectiva filogenética. **III Congreso Colombiano de Zoología**. Medellín, Colombia.

Awards and Scholarships

August 2015 CUNY Science Scholarship. Stipend and tuition to pursue PhD studies at CUNY.

December 2014 Travel award to attend the IV Congreso Colombiano de Zoología. Cartagena, Colombia. Asociación Colombiana de Zoología.

August 2014 Fulbright - Colciencias scholarship to pursue PhD studies in the USA starting fall 2015

May 2012 Travel Award to attend the 49th Annual Meeting of the Association for Tropical Biology & Conservation. Bonito, Brazil. Facultad de Ciencias, Universidad de los Andes.

2010-2012 Master studies Scholarship for Teaching and Research assistants. Facultad de Ciencias, Universidad de los Andes.

Additional Training

On GIS and niche modeling

13-17 May 2013 **Advanced course on species distribution modeling**. Organized by the Laboratory of applied biogeography and bioacoustics of the Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. Villa de Leyva, Colombia.

6-8 February 2013 **Workshop: GIS and environment** during the CEGeolC 2013 meeting. Bogotá, Colombia.

18-22 June 2012 **Workshop: Applying landscape ecology for Biodiversity conservation** during the 49th annual meeting of the Association for tropical biology and conservation. Bonito, Brazil.

On genetics and evolution

10-12 October 2013 **“CEBA Thematic school. Advanced methods in Neotropical Biogeography: focus on the Guiana Shield”**. Organized by the Laboratoire d'excellence: Centre d'études de la biodiversité amazonienne. Kourou, French Guiana. **(Invited to participate)**

20-24 May 2013 **“Extending and Enhancing DNA Barcoding Research in Argentina and Neighboring Countries: Fifth Leading Labs Training Workshop”**. Organized by Museo Argentino de Ciencias Naturales “Bernadino Rivadavia”, the Canadian Centre for DNA Barcoding and the International Barcode of Life Project. Buenos Aires, Argentina.

19-31 August 2012 **Sao Paulo School of advanced Science- Evolution**. Sao Paulo, Brazil. **(Invited to participate)**

Others

7-14 September 2012 **Graduate Course: “Colombian Herpetology an integrative vision”** organized by Universidad de Antioquia and Asociación Colombiana de Herpetología. Vichada, Colombia.

Event organization

December 2014. Organizing committee. First latin american symposium on systematics and biogeography of amphibians and reptiles. X Latin American Congress of Herpetology. Cartagena, Colombia

December 2014. Organizing committee. Third colombian symposium on biodiversity informatics. IV Congreso Colombiano de Zoología. Cartagena, Colombia

Editorial reviewer

Molecular Ecology Ressources (1)

Memberships

2010- Present Member, Asociación Colombiana de Herpetología

2015-Present Member, Society for the study of Evolution (SSE)

Languages

Spanish (native), English (Fluent, TOEFL iBT 111/120), French (Fluent, Baccalauréat scientifique Mention Bien), Portuguese (Beginner)