

**CURRICULUM VITAE**  
**CRISTINA LOPEZ-GALLEGO**

PROFFESOR - INSTITUTO DE BIOLOGIA, UNIVERSIDAD DE ANTIOQUIA, COLOMBIA  
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**Education**

- 2010 Diploma. Foundations for University Pedagogy & Didactics.  
Department of Education, Universidad de Antioquia (Colombia).
- 2001-2007 Ph.D. Conservation Biology.  
Department of Biological Sciences, University of New Orleans (USA).  
Dissertation: *Effects of habitat degradation on the evolutionary dynamics of populations of a rainforest cycad (Gymnospermae)*. Main advisors: Dr. P. O'Neil & Dr. S. Johnson, University of New Orleans.
- 1992-1999 B.Sc. Biology.  
Department of Biology, Universidad de Antioquia (Colombia).  
Research project: *Population structure and habitat conditions of Zamia melanorrhachis populations in forest fragments*. Main Advisor: Dr. Alicia Uribe, Universidad de Antioquia.

**Other academic training** (graduate-level courses and short courses)

- 2013 Building conservation leadership capacity training course (International, 4 days).  
Conservation Leadership Programme & Nature Serve. Lima, Peru.
- 2010-2011 Training on the Open standards for the practice of conservation (International, 6 days).  
Alianza Andes Tropicales. Medellín, Colombia & Quito, Ecuador.
- 2010 Course: Integration of technologies for teaching (Colombia, 80 hours).  
Universidad de Antioquia. Medellín, Colombia.
- 2009 Conservation Leadership Programme: Basic training modules (International, 72 hours).  
Conservation Leadership Programme. Beijing, China.
- 2009 Teaching for teachers: Conservation in the Tropical Andes (International, 80 hours).  
Organization for Tropical Studies. Medellín, Colombia.
- 2002 Summer Institute in statistical genetics (International, 9 days).  
North Carolina State University. Raleigh, USA.
- 1999 Course: Molecular genetic techniques for biodiversity studies (International, 80 hours).  
CIAT & Institute Alexander von Humboldt. Palmira, Colombia.
- 1999 Course: Tropical ecology and conservation 99-2 (International, 8 weeks).  
Organization for Tropical Studies. Costa Rica
- 1997 Course: Experimental design for conservation biology (Colombia, 168 hours).  
Institute Alexander von Humboldt. Villa-de-Leyva, Colombia.

**Research & Teaching interests**

I am interested in exploring the variation in life-history and other ecologically-relevant traits in populations responding to environmental changes, particularly anthropogenic habitat changes. I use tools from population biology and evolutionary ecology to explore processes underlying patterns of variation in life history of populations. For my research I focus on plant species of conservation interest, like threatened and invasive species, and I have a special interest for Neotropical Cycads. For this research and its applications in conservation, I collaborate with researchers at Institutions like the IUCN Cycad Specialist Group, Montgomery Botanical Center (USA) and the National Biodiversity Institute in Colombia. I am also interested in developing academic courses in evolutionary ecology and conservation biology. I teach semester-long basic courses in ecology and conservation at the undergraduate and graduate level at Instituto de Biología (Universidad de Antioquia, Colombia). I also participate regularly in field-based intensive courses (mostly with OTS & Alianza Andes Tropicales) in conservation biology for academics and non-academics (i.e. people working on conservation management).

## **Research grants** (as principal investigator)

- 2014-2015 *Agreement for the Conservation action plan for Zamia of Colombia*  
Grant & Inter-Institutional Collaboration with Ministry of Environment (Colombia). US\$20000.
- 2012-2015 *Management strategies to guarantee the persistence of critically endangered Cycads in Colombia.*  
Grant from IUCN – SOS program (International). US\$49000.
- 2011-2012 *Establishing a monitoring program for threatened plant species (Plant Conservation National Strategy).*  
Grant & Inter-Institutional Collaboration with Instituto Alexander von Humboldt (Colombia). US\$20000.
- 2010-2012 *Recruitment in populations of native and degraded habitats & Recommendations for threatened cycads.*  
Grant from CODI - Universidad de Antioquia (Colombia). US\$7000.
- 2009-2011 *Conservation assessment and action plan for a threatened Colombian cycad.*  
Grant from Conservation Leadership Programme (International). US\$12400.
- 2009-2011 *Recruitment dynamics of Zamia obliqua populations and implications for management and conservation.*  
Grant from The Cycad Society & The Montgomery Botanical Center (USA). US\$4900.
- 2005-2006 *Genetic variation in traits under selection in populations of Zamia fairchildiana in Costa Rica.*  
Grant from Montgomery Botanical Center (USA). US\$6000.
- 2003-2004 *The effects of habitat degradation on the life-history of Zamia fairchildiana populations.*  
Grant from The Cycad Society & University of New Orleans (USA). US\$2500.
- 2002-2003 *Phenotypic variability in native and disturbed-habitat populations of Zamia fairchildiana in Costa Rica.*  
Pilot Project Grant from Organization for Tropical Studies (Costa Rica). US\$1500.
- 1998-1999 *Population ecology of Zamia melanorrhachis populations from different forest-fragments.*  
Grant from Wildlife Conservation Society & Instituto Alexander von Humboldt (Colombia). US\$1500.
- 1997-1998 *Diagnosis of conservation status of Zamia species in the Antioquia Province, Colombia.*  
Grant from Universidad de Antioquia (Colombia). US\$300.

## **Peer-reviewed journal publications**

- 2015 López-Gallego, C. 2015. *Understanding life history of Zamia species using data from field studies and botanical collections.* The Botanical Review (in press)
- 2015 Calonje, M., Morales, G., López-Gallego, C. & Roldan F.J. 2015. *A taxonomic revision of Zamia Montana and Zamia oligodonta, with notes on their conservation status.* Phytotaxa 192:279-289
- 2014 Gómez-Lopera, N. & López-Gallego, C. 2014. *Estimation of heritability and genetic correlations for morphological and physiological traits in a cycad population.* Actualidades Biológicas 36:137-148
- 2014 López-Gallego, C. & O'Neil, P. 2014. *Genetic variation and the potential response to selection on leaf traits after habitat degradation in a long-lived cycad.* Evolutionary Ecology 28:775-791
- 2013 López-Gallego, C. 2013. *Genotype by environment interactions for seedling establishment across native and degraded-forest habitats in a long-lived cycad.* Botanical Review 79:542-558
- 2010 López-Gallego, C. & O'Neil, P. 2010. *Life-history variation following habitat degradation associated with differing fine-scale spatial genetic structure in a rainforest cycad.* Population Ecology 52:191-201
- 2009 Wilczek, A. M. et al. et al. (López-Gallego, C. 5th out of 18 authors). 2009. *Effects of genetic perturbation on seasonal life history plasticity.* Science 323: 930-934
- 2008 López-Gallego, C. 2008. *Demographic variation in cycad populations inhabiting contrasting forest fragments.* Biodiversity & Conservation 17:1213-1225
- 2001 López-Gallego, C. & Idarraga, A. 2001. *Diagnóstico del estado de conservación de las especies de Zamiaceae del Departamento de Antioquia (Colombia).* Actualidades Biológicas 23: 23-31

## Other publications

- 2015 López-Gallego, C. 2015. Plan de acción de conservación para las Zamias de Colombia. BOOK, published by Ministerio de ambiente y desarrollo sostenible, Colombia.
- 2015 Idárraga, A., Calonje, M., López-Gallego, C. 2015. *Zamiaceae*. In: Bernal, R., Gradstein, S.R., Celis, M. (eds). *Catálogo de plantas y líquenes de Colombia*. ICN, Universidad Nacional de Colombia, Colombia.
- 2015 López-Gallego, C. 2015. *Monitoreo de poblaciones de plantas para conservación: Recomendaciones para implementar planes de monitoreo para especies de plantas de interés en conservación*. BOOK, published by Instituto Alexander von Humboldt, Colombia.
- 2013 López-Gallego, C. 2013. *Establishment of a base line for monitoring plant species of interest for biodiversity conservation*. Data publication, elaborated in collaboration with Instituto Alexander von Humboldt, Colombia (<http://www.gbif.org/dataset/fd6c18af-ea6c-4b85-90ca-26dbe0cadec2>).
- 2013 López-Gallego, C. 2013. *Estrategia de conservación de especie para Zamia manicata en Colombia*. Technical report, elaborated for the Conservation action plan for Zamia of Colombia.
- 2011 López-Gallego, C., M. Calonje & A. Idarraga. 2011. *Conservation action plan for Zamia encephalartoides in Colombia*. Technical report, elaborated for the Conservation action plan for Zamia of Colombia.
- 2007 López-Gallego, C., Lopez-Álvarez, N. 2007. *A rescue, propagation, and reintroduction program for one of the most endangered lineage of cycads, Chigua in Northwestern Colombia*. Outreach article, Cycad Newsletter 30(4):34-35
- 2007 López-Gallego, C. 2007. *Interested in contributing to cycad conservation? Guidelines for establishing your own population monitoring program*. Outreach article, Cycad Newsletter 30(4):36-37
- 2006 López-Gallego, C. 2006. *Can cycads persist in disturbed habitats? A study of local adaptation of Zamia fairchildiana populations in disturbed forests in Costa Rica*. Outreach article, Cycad Newsletter 29(1):8-9

## Presentations in scientific meetings (selected)

- 2015 *Cycads of Colombia: status and conservation actions*.  
10th International Conference on Cycad Biology. Medellín, Colombia.
- 2014 *Conservation action plan for Zamia in Colombia*.  
11th Latinamerican Botany Congress. Salvador, Brasil.
- 2013 *Life history variation in Cycad species from contrasting tropical forests*.  
VII Colombian Botany Meeting. Ibagué, Colombia.
- 2013 *The AAT conceptual framework for the assessment of impacts of capacity building in conservation*.  
50th Meeting of the Association for Tropical Biology. San Jose, Costa Rica.
- 2012 *Life-history variation in long-lived cycad species from contrasting tropical forests*.  
49th Meeting of the Association for Tropical Biology. Bonito, Brasil.
- 2011 *Understanding life history of Zamia species using data from field studies and botanical collections*.  
9th International Conference on Cycad Biology. Shenzhen, China.
- 2011 *Monitoring of populations with conservation interest using tools from ecology and genetics*.  
VI Colombian Botany Meeting. Cali, Colombia.
- 2010 *Adaptive divergence in response to habitat degradation in populations of a rainforest cycad*.  
10th Latinamerican Botany Congress. La Serena, Chile.
- 2008 *Effects of habitat degradation on the within and between population genetic structure of a rainforest Zamia*.  
8th International Conference on Cycad Biology. Panama, Panama.
- 2007 *Adaptive divergence in response to anthropogenic habitat disturbance in a long-lived rainforest cycad*.  
2007 International Congress for Conservation Biology. Port Elizabeth, South Africa.
- 2005 *Life-history divergence between populations of a tropical cycad from native and disturbed habitats*.  
9th International Congress of Ecology. Montreal, Canada.
- 2005 *Natural selection in Zamia fairchildiana populations from native and disturbed habitats*.  
7th International Conference on Cycad Biology. Xalapa, Mexico.
- 2000 *Population density and population structure in fragmented populations of a tropical cycad*.  
2nd Ecological Society of America & British Ecological Society joint meeting. Orlando, USA.

## **Professional & Teaching experience**

- 2009-present Professor & Researcher. Area: Ecology & Conservation Biology.  
Instituto de Biología, Universidad de Antioquia (Colombia).
- 2009-present Academic coordinator. Capacity-building and coaching activities for biodiversity conservation.  
Alianza Andes Tropicales (Bolivia, Colombia, Ecuador, Perú, Venezuela).
- 2006-present Research associate. Collaboration for projects on Cycad ecology and conservation.  
Montgomery Botanical Center (USA).
- 2005-present Deputy chair. Activities related to Cycads conservation.  
IUCN -International Union for the Conservation of Nature- Cycad Specialist Group (International).
- 2008-2009 Researcher. Projects on biodiversity conservation for plant species.  
Biodiversity Research group, CIB -Corporación de Investigaciones Biológicas- (Colombia).
- 2007-2009 Instructor. Courses in Plant ecology for undergraduate level.  
Instituto de Biología, Universidad de Antioquia (Colombia).
- 2006-2007 Research Assistant. Project '*Molecular evolutionary ecology of developmental signaling pathways in complex environments*' (USA-NSF FIBR grant to Dr. Johanna Schmitt).  
Brown University (USA), in collaboration with U. Oulu (Finland) & U. Politecnica Valencia (España).
- 2002-2005 Research Assistant. Project '*Estimating the evolutionary change in growth trajectories in the perennial plant Lythrum salicaria*' (USA-NSF grant to Dr. Pamela O'Neil).  
University of New Orleans (USA), in collaboration with Darling Marine Center U. of Maine (USA).
- 2001-2006 Teaching assistant. Courses in Introductory Biology for undergraduate level.  
Department of Biological Sciences, University of New Orleans (USA).
- 2000-2001 Researcher. Research training program in conservation biology.  
Fundación EcoAndina and Wildlife Conservation Society (Colombia).

## **Professional associations and services**

- 2015 Organizer X International Conference on Cycad Biology. Medellín, Colombia.
- 2011 Organizer III Simposio ColEvol. Medellín, Colombia.
- 2006-present CoFounder & Member COLEVOL -Red Colombiana de Biología Evolutiva-  
National network of researchers on Evolutionary biology (Colombia).
- 1993-1999 Member ANECB -Asociación Nacional de Estudiantes de Ciencias Biológicas-  
National network of students from undergraduate Biology programs (Colombia).

## **Personal references**

- Dr. Johanna Schmitt. Professor, University of California, Davis (USA)  
email: jschmitt@ucdavis.edu
- Dr. Pamela O'Neil. Administrator, NSF - National Science Foundation (USA)  
email: poneil@nsf.gov
- Dr. Carolina Murcia. Researcher, OTS - Organization for Tropical Studies (Costa Rica)  
email: carolina.murcia@ots.ac.cr
- Dr. Ricardo Callejas. Professor, Universidad de Antioquia (Colombia)  
email: callejas@matematicas.udea.edu.co