

Curriculum Vitae



Name: Darko Davor Cotoras Viedma

Date of Birth: 03.16.1986

Place of Birth: Santiago, Chile

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1.- Researcher positions

- September-November, 2014: Junior Specialist. NSF Hawai'i Dimensions of Biodiversity project. UC Berkeley
- January-August, 2014: Graduate Student Researcher. NSF Hawai'i Dimensions of Biodiversity project. UC Berkeley

2.- Education

- 2009 – expected December 2014: PhD Integrative Biology. University of California, Berkeley
Advisors: David Lindberg - Rosemary Gillespie
- 2008-2009: Master in Biological Sciences with mention in Ecology & Evolutionary Biology, Universidad de Chile (*Highest distinction*)
Advisors: Miguel Allende – Verónica Cambiazo
- 2004-2007: Bachelor in Sciences with mention in Biology, Universidad de Chile. (*Highest distinction*. Class rank: 1st. Final grade: 6,5 (been 7,0 the maximum))
- 1991-2003: San Ignacio School

3.- Research interests:

Evolution & Biodiversity, Phylogenetics, Island Biogeography, Population Genetics, Evolutionary Developmental Biology (EvoDevo).

4.- Grants, fellowships and awards

- 2014: Hagey fund, California Academy of Sciences (Co-PIs: Charles Griswold and Brian Simison; US\$36,028)
- 2014: Short Term fellowship. Smithsonian Tropical Research Institute (bench fees waiver)
- 2014 and 2012: Summer Research Grant. Graduate Division UC Berkeley (US\$3,500)
- 2014-2011 (each year): Reshetko Family Scholarship Fund. UC Berkeley (US\$1,700-3,000)
- 2014-2010 (each year): Walker Grant. Essig Museum of Entomology. UC Berkeley (US\$1,000)
- 2013: Pilot research grant. Organization for Tropical Studies (US\$2,200)
- 2012: Sigma Xi Research Grant (US\$750)
- 2012: Best poster presentation. 36th Annual meeting American Arachnological Society.
- 2012: Tinker Grant. Center of Latinamerican Studies. UC Berkeley (US\$2,196)
- 2012-2010 (each year): Research fellowship. UC Entomological Student Association. UC Berkeley (US\$500)
- 2011: National Tropical Botanical Garden (NTBG) fellowship, McBryde Garden (US\$1,250)
- 2011: Honorable Mention Border Crossing Essay Contest 2011. International House UC Berkeley
- 2010: 2nd Place Border Crossing Essay Contest 2010. International House UC Berkeley
- 2009: Fulbright/CONICYT Scholarship (4 years of full funding)
- 2008: Best Student Promotion 2008 Bachelor in Sciences with mention in Biology. Facultad de Ciencias. Universidad de Chile.
- 2008: Beca Líder, Fundación Carolina, España.
- 2007 and 2006: Academic Excellence Fellowship, Facultad de Ciencias, Universidad de Chile.
- 2004: Best entry score Bachelor in Sciences with mention in Biology. Facultad de Ciencias

Universidad de Chile

5.- Assistantships and teaching experience

- Fall 2014: Biogeography. Invited lecturer (Universidad de Costa Rica)
- Spring 2011: Biology 1B: Plant Diversity, Ecology and Evolution (UC Berkeley)
- Fall 2010: Evolution (UC Berkeley)
- Spring 2008: Developmental Biology (Universidad de Chile)
- Spring 2008: Evolution & Development. Invited lecturer (Universidad de Chile)
- Fall 2008 and 2009: General Zoology (Universidad de Chile)
- Fall 2007-2009: Comparative anatomy of vertebrates (Universidad de Chile)

6.- Undergraduate research experience

- Spring 2007: Research rotation: "Searching for common genes in vertebrate development of limb and tail" Developmental Biology Lab (PI: Miguel Allende)
- Spring 2006: Research rotation: "Comparison in the gene expression between tail and fin in zebra fish: Evolutionary implications" Developmental Biology Lab (PI: Miguel Allende)
- Spring 2005: Final work in Zoology II course. "Dietary differentiation between island-mainland in *Liolemus pictus* (Duméril & Bibron, 1873)", Evolutionary Ecology Lab (PI: Rodrigo Medel)
- Fall-Spring 2004: Extracurricular activity in the Cellular Biology course. Developmental Biology Lab (PI: Miguel Allende)

7.- Field experience

- November/December 2014: Collecting spiders in Costa Rica and Panamá (6 weeks).
- June 2013: Collecting spiders in Kaua'i, Maui, Lana'i and Big Island (4 weeks).
- August 2012: Collecting terrestrial invertebrates in Rapa Nui (Isla de Pascua/Easter Island) (3 weeks).
- June 2012: Collecting spiders in Big Island, Molaka'i, and Maui (4 weeks).
- January 2012: Collecting spiders in Big Island of Hawai'i (3 weeks).
- August 2011: Collecting terrestrial invertebrates in Robinson Crusoe Island. Juan Fernández archipelago, Chile. (2 weeks).
- June 2011: Collecting spiders in Big Island of Hawai'i (4 weeks)
- August 2010: Collecting spiders in Big Island of Hawai'i (2 weeks).
- January 2010: Collecting spiders in Maui and Big Island of Hawai'i (2 weeks).
- January 2006: Field assistant in pollination studies in the Andes close to Santiago, Chile (day trips).

8.- Publications

- Rominger A., Roesch Goodman K., Lim J., Valdovinos F., Armstrong E., Becking L., Bennett G., Brewer M. Cotoras D., Ewing C., Harte J., Martinez N., O'Grady P., Percy D., Price D., Roderick G., Shaw K., Gruner D., Gillespie Community assembly on isolated islands: Macroecology meets evolution. *Global Ecology and Biogeography* (*submitted*)
- Brewer M.S. Cotoras D.D., Croucher P.J.P., Gillespie R.G. 2014. New sequencing technologies, the development of genomics tools, and their applications in evolutionary Arachnology. *Journal of Arachnology*. 42:1-15
- Razeto-Barry P., Díaz J., Cotoras D. and Vásquez R. 2011. Molecular evolution, mutation size and gene pleiotropy: a geometric reexamination. *Genetics* 187: 877-885
- Glavic A., Molnar C., Cotoras D. and de Celis J.F. 2009. *Drosophila Axud1* is involved in the control of proliferation and displays pro-apoptotic activity. *Mech Dev*. 126: 184-97

9.- Participation in Congress

- Cotoras D. and Gillespie R.G. (*submitted presentation*) The role of National Parks and other protected areas on preserving adaptive radiations: The case of the Hawaiian *Tetragnatha* spiders. Science for parks, Parks for Science: The next Century. May 25th-27th, 2015. Berkeley, CA. USA
- Cotoras D. and Gillespie R.G. (Oral presentation) Preliminary identification of protected areas with high diversity of *Tetragnatha* spiders on Big Island and Maui Nui. 22st Hawai'i Conservation Conference. July 15th-17th, 2014. Honolulu, HI. USA
- Cotoras D. and Gillespie R.G. (Oral presentation) Understanding the initiation of adaptive radiation using comparative phylogeography of spiders. Island Biology Conference. July 7th-11th, 2014. Honolulu, HI. USA
- Cotoras D. and Gillespie R.G. (Poster) Revealing unknown levels of diversity: Discovery of color change during life history of the endemic spider *Tetragnatha kamakou*. 21st Hawai'i Conservation Conference. July 16th-18th, 2013. Honolulu, HI. USA
- Gillespie R.G., Ewing C.P., Gruner D.S., Roesch Goodman K., Harte J., Magnacca K.N., Martinez N.D., Nielsen R., O'Grady P.M., Percy D., Price D.K., Rabosky D., Shaw K.L., Rominger A.. and Cotoras D. (Poster) Assembly of Arthropod Communities in Hawaii: Can we predict the outcome given a modified dynamic? 21st Hawai'i Conservation Conference. July 16th-18th, 2013. Honolulu, HI. USA
- Cotoras D., Lindberg D. and Gillespie R. (Oral presentation) Phylogeography of the spider *Tetragnatha brevignatha* in the context of an adaptive radiation. Hawai'i Ecosystems Meeting. July 7th and 8th 2013. Hilo, HI. USA
- Cotoras D., Brewer M, Lindberg D. and Gillespie R. (Poster) Another event of independent evolution in color polymorphism on Theridiidae spiders in the Pacific Ocean? 36th Annual meeting American Arachnological Society meeting. July 20th-24th, 2012. Green Bay, WI. USA (*Best poster presentation*)
- Cotoras D., Lindberg D. and Gillespie R. (Oral presentation) Hypothesis about speciation processes on Hawaiian *Tetragnatha* spiders. Hawai'i Ecosystems Meeting. July 2nd and 3rd, 2012. Hilo, HI. USA
- Cotoras D., Lindberg D. and Gillespie R. (Oral presentation) Early stages of the *Tetragnatha* adaptive radiation in the Hawaiian archipelago. Hawai'i Ecosystems Meeting. June 30 – July 1st, 2011. Hilo, HI. USA
- Cotoras D., Casquet J. and Gillespie R. (Poster) Diversification patterns of *Tetragnatha* spiders in remote archipelagos on the Pacific Ocean. Evolution of Life on Pacific Islands and Reefs: Past, present, and future. May 26-30, 2011. Honolulu, HI. USA
- Cotoras D., Cambiazo V., Allende M. (Oral Presentation) Conserved gene networks as a tool to predict gene expression: An example from Animal appendages. Genetics, Development, and Molecular Evolution Supergroup Symposium. May 18. UC Berkeley.
- Cotoras D., Cambiazo V., Allende M. (Poster) Theoretical and experimental comparisons of gene network involved appendage development in arthropods (*Drosophila melanogaster*) and vertebrates (*Danio rerio*). 1st meeting of Chilean Scientists in USA: NEXOS Chile-USA 2010. October 29. 2010. Washington D.C., USA
- Razeto-Barry P., Díaz J., Cotoras D., Vásquez R. (Poster) Molecular evolution, mutation size and gene pleiotropy in fluctuating environments: a geometrical model. IV Binational Meeting in Ecology. August 08-13, 2010. Buenos Aires, Argentina.
- Croucher P., Lam A., Cotoras D., Mody N. y Gillespie R.. (Poster) Phylogeography, diversity and colonization history of the Hawaiian happy-face spider. Annual symposium American Genetic Association: "Conservation Genomics". July 26-28, 2010. Hilo, HI. USA.
- Cotoras D., Cambiazo V., Allende M. (Poster) In the footsteps of *Urbilateria*. LI Annual meeting Chilean Society for Biology. November 26-29, 2008. Pucón, Chile
- Cotoras D., Cambiazo V., Allende M. (Poster) Evolution of the gene network involved in appendages development in arthropods (*D. melanogaster*) and vertebrates (*D. rerio*). XXII Annual meeting Chilean Society for Cell Biology. October 5-9, 2008. Pucón, Chile

10.- Thesis (Master's degree)

"In the footsteps of *Urbilateria*, or Evolution of the gene network involved in appendage development in arthropods (*Drosophila melanogaster*) and vertebrates (*Danio rerio*)"

11.- Invited Presentations

- La Selva Biological Station. Organization for Tropical Studies. November, 2014
- California Academy of Sciences. June, 2014
- "Chile Seminars". University of California, Berkeley. May, 2014
- Paleogenomics lab. University of California, Santa Cruz. April, 2014
- University and Japson Herbaria of the University of California, Berkeley. September, 2013
- "Chalk Talk" Integrative Biology dept. University of California, Berkeley. April, 2013
- Parque Nacional Rapa Nui. August, 2012
- Instituto de Entomología - Universidad Metropolitana de Ciencias de la Educación. July, 2012
- Pacific Coast Entomology Society. February, 2012
- Arachnology Dept. California Academy of Science. September, 2011
- Laboratorio de Ecología Evolutiva. Universidad de Chile. August, 2011
- Instituto de Entomología. Universidad Metropolitana de Ciencias de la Educación. August, 2011
- Instituto de Filosofía y Ciencias de la Complejidad. July, 2010

12.- Professional development and Certifications

- B3 Combination Helicopter/Airplane Safety. Interagency aviation training. (May 26th, 2013)
- SSI Specialty Course: Enriched Air NITROX. Bamboo Reef School. San Francisco, CA (February 22, 2012)
- SSI Specialty Course: Diver Stress & Rescue. Bamboo Reef School. Monterey, CA (May 08, 2011)
- SSI Specialty Course: Dry Suit Diving. Bamboo Reef School. Monterey, CA (May 08, 2011)
- Wilderness First Aid. Foster Calm–First Aid and Leadership Trainings. Nevada City, CA. (April 02. 2011)
- Cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) for the Community and Workplace. American Safety & Health Institute. Foster Calm–First Aid and Leadership Trainings. Nevada City, CA. (April 02. 2011)
- PADI Advance SCUBA Diver. Seattle SCUBA School. Seattle, WA. (October 03, 2010)
- Webinar Short Course on Modeling Patterns and Dynamics of Species Occurrence. US Geological Survey and Proteus Wildlife Research Consultants. (August 23-27, 2010)
- NAUI Open water Diver. Cal Dive and Travel. Berkeley, CA (June 1st, 2010)
- Exploring genomes with ENSEMBL. Center for Genomics of the Cell (CGC). Santiago, Chile. (January 13-14, 2009)
- Workshop on Modeling of Genetic Regulatory and Metabolic Networks. Instituto de Sistemas Complejos de Valparaíso (ISCV). Valparaíso, Chile. (March 27-28, 2008)
- VI Complex Systems Summer School. Instituto de Sistemas Complejos de Valparaíso (ISCV). Valparaíso, Chile. (January 07-11, 2008)

13.- Outreach

- Earth Update planetarium show at Night Life. California Academy of Sciences (July 3rd, 2014)
- "What is a biologist? / Was ist ein biologe?" Arachno-Blog, Senckenberg Museum (April 11th, 2014)
- "Historias de diversificación y extinción en Tepito O Te Henua" Chile Indómito magazine. December 2013. 8: 81-86.
- "Field work after a mass extinction" California Academy of Sciences Blog (June 14th, 2013)
- "Humedal Rano Kau. Manavai de Biodiversidad" Interviewee in documentary from Parque Nacional Rapa Nui

- "Field work during a mass extinction" UCMP Blog (March 26th, 2012)
- "The eternal value of Natural History and the dazzling molecular promise" UCMP Blog. (November 23th, 2011)
- "El eterno valor de la historia natural y la encandilante promesa molecular" RedCiencia.cl (August 4th.2011)
- "Ciencia Básica VS Ciencia Aplicada: Una ilusión basada en la no comprensión" RedCiencia.cl (May 26th.2011)
- "Dinner with a Scientist" Oakland Zoo, CA. (June 3nd, 2010; May 4th, 2011)
- "¿Calentamiento global o cambio global? Conexioniberoamerica.wordpress.com (Feb 26th.2010)

14.- Professional Societies

- British Ecological Society
- European Society for Evolutionary Biology
- American Arachnological Society
- Phi Beta Kappa Academic Honor Society
- Sigma Xi, The Scientific Research Society

15.- Other interests

Skateboarding, Bodyboarding, Snowboarding, Mountain bike, Hiking, Mythology and Tropical ornamental fish



UPDATED: November 2014