CURRICULUM VITAE
ANA V. LONGO

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EDUCATION

2015 Ph.D. Ecology and Evolutionary Biology, Cornell University, Ithaca, NY.
2008 M.S. Biology, University of Puerto Rico, Río Piedras, PR.
2005 B.S. Biology, University of Puerto Rico, Río Piedras, PR.

APPOINTMENTS

August 2018- Assistant Professor, Department of Biology, University of Florida
2015-2018 National Science Foundation Minority Postdoctoral Research Fellow, University of Maryland and Smithsonian Conservation Biology Institute Center for Conservation Genomics
2012-2015 Pre-doctoral Fellow, Ford Foundation, The National Academies of Sciences
2009-2015 SUNY Minority Diversity Fellow, Department of Ecology and Evolutionary Biology, Cornell University
2011 Teaching Assistant, BioEE 1610 - Ecology and the Environment, Department of Ecology and Evolutionary Biology, Cornell University
2008-2009 Research Associate, Proyecto Coquí
2008 Summer Research Assistant, Museum of Vertebrate Zoology, University of California-Berkeley
2007-2008 Teaching Assistant, BIOL3102 – Introductory Biology II, Department of Biology, University of Puerto Rico-Río Piedras
2005-2007 Bridges to the Doctorate Fellow, Louis Stokes Alliance for Minority Participation, University of Puerto Rico-Río Piedras

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PUBLICATIONS (39)

Published and peer-reviewed (32)

1. **Longo, A. V.**, R. C. Fleischer, and K. R. Lips. Double trouble: co-infections with two amphibian-killing chytrid fungi are more lethal than one. 2019. ***Biological Invasions.*** DOI: 10.1007/s10530-019-01973-3
2. Scheele, B., F. Pasmans, L. F. Skerratt, L. Berger, A. Martel, W. Beukema, A. A. Acevedo, P. A. Burrowes, T. Caravalho, A. Catenazzi, I. De la Riva, M. C. Fisher, S. V. Flechas, C. N. Foster, P. Frías-Álvarez, T.W.J. Garner, B. Gratwicke, J. M. Guayasamin, M. Hirschfeld, J. E. Kolby, T. A. Kosch, E. La Marca, D. B. Lindenmayer, K. R. Lips, **A. V. Longo**, R. Maneyro, C. A. McDonald, J. Mendelson III, P. Palacios-Rodriguez, G. Parra-Olea, C. L. Richards-Zawacki, M.O. Rödel, S. M. Rovito, C. Soto-Azat, L. F. Toledo, J. Voyles, C. Weldon, S. M. Whitfield, M. Wilkinson, K. R. Zamudio, and S. Canessa. 2019. Amphibian fungal panzootic causes catastrophic and ongoing loss of biodiversity. ***Science*** 363: 1459-1463. DOI: 10.1126/science.aav0379
3. Kueneman, J., M. Bletz, V. McKenzie, C. G. Becker, M. Joseph, J. Abarca, H. Archer, A. L. Arellano, A. Bataille, M. Becker, L. Belden, A. Crottini, R. Geffers, C. F. B. Haddad, R. N. Harris, W. M. Holden, M. Hughey, M. Jarek, P. J. Kearns, J. L. Kerby, J. Kielgast, A. Kurabayashi, **A. V. Longo**, A. Loudon, D. Medina, J. J. Nuñez, R. G. Bina Perl, A. Pinto-Tomás, F. C.E. Rabemananjara, E. A. Rebollar, A. Rodríguez, L. Rollins-Smith, R. Stevenson, C. C. Tebbe, G. Vargas Asensio, B. Waldman, J.B. Walke, S. M. Whitfield, K. R. Zamudio, I. Zúñiga Chaves, D. C. Woodhams, and M. Vences. 2019. Community richness of amphibian skin bacteria correlates with bioclimate at the global scale. 2019. ***Nature Ecology and Evolution*** 3: 381-389. DOI: 10.1038/s41559-019-0798-1
4. DiRenzo, G. V., E. Zipkin, E. C. Grant, J. Royle, **A. V. Longo**, K. R. Zamudio, and K. R. Lips. 2018. Eco-evolutionary rescue promotes host-pathogen coexistence. ***Ecological Applications*** 8: 1948-1962. DOI: 10.1002/eap.1792
5. DiRenzo, G.V., T.S. Tunstall, R. Ibáñez, M.S. DeVries, **A. V. Longo**, K. R. Zamudio, and K. R. Lips. 2018. External Reinfection of a fungal pathogen does not contribute to pathogen growth. ***EcoHealth*** 4: 815-826. DOI: 10.1007/s10393-018-1358-x
6. DiRenzo, G.V., E. C. Grant, **A. V. Longo**, K. R. Zamudio, and K. R. Lips. 2018. Imperfect pathogen detection from non-invasive skin swabs biases inferences of disease dynamics. ***Methods in Ecology and Evolution*** 9(2): 380-389.
7. Becker, C. G., **A. V. Longo**, C. Haddad, and K. R. Zamudio. 2017. Land cover and forest connectivity alter the interactions among the host, pathogen, and skin microbiome. ***Proceedings of the Royal Society B*** 284: 20170582.
8. Hydeman, M., **A. V. Longo**, G. Velo-Antón, D. Rodriguez, K. R. Zamudio, and R. C. Bell. 2017. Prevalence and genetic diversity of *Batrachochytrium dendrobatidis* in Central African island and continental amphibian communities. ***Ecology and Evolution*** 2017: 1-10. DOI: 10.1002/ece3.3309
9. **Longo, A. V.** and K. R. Zamudio. 2017. Temperature variation, bacterial diversity, and fungal infection dynamics in the amphibian skin. ***Molecular Ecology*** 26: 4787-4797. DOI: 10.1111/mec.14220
10. Burrowes, P. A., M. Martes, M. Torres-Ríos, and **A. V. Longo**. 2017. Arboreality predicts *Batrachochytrium dendrobatidis* infection level in tropical direct-developing frogs. ***Journal of Natural History*** 51(11-12): 643-656.

11. **Longo, A. V.** and K. R. Zamudio. 2017. Environmental fluctuations and host skin bacteria shift survival advantage between frogs and their fungal pathogen. ***The ISME Journal*** 11: 349-361.
12. Mendoza-Almeralla, C., A. López-Velázquez, **A. V. Longo**, and G. Parra-Olea. 2016. Temperature treatments boost subclinical infections of *Batrachochytrium dendrobatidis* in a Mexican salamander (*Pseudoeurycea leprosa*). ***Revista Mexicana de Biodiversidad*** 87(1): 171-179.
13. Bovo R., D. Andrade, L. Toledo, **A. V. Longo**, D. Rodriguez, C. Haddad, K. R. Zamudio, and C. G. Becker. 2016. Physiological responses of Brazilian amphibians to an enzootic infection of the chytrid fungus *Batrachochytrium dendrobatidis*. ***Diseases of Aquatic Organisms*** 117(3): 245-252.
14. Becker C. G., D. Rodriguez, **A. V. Longo**, L. F. Toledo, C. Lambertini, D. S. Leite, C. F. B. Haddad, and K. R. Zamudio. 2016. Deforestation, host community structure, and amphibian disease risk. ***Basic and Applied Ecology*** 17(1):72-80.
15. James T. Y., L. F. Toledo, D. Rodder, D. Silva Leite, A. M. Belasen, C. M. Betancourt, T. S. Jenkinson, C. Soto-Azat, C. Lambertini, **A. V. Longo**, J. Ruggeri, J. P. Collins, P. A. Burrowes, K. R. Lips, K. R. Zamudio, and J. E. Longcore. 2015. Disentangling host, pathogen, and environmental determinants of a recently emerged wildlife disease: Lessons from the first 15 years of amphibian chytridiomycosis research. ***Ecology and Evolution*** 5(18): 4079-4097.
16. Ruggeri-Gomes J., **A. V. Longo**, M. Gaiarsa, L. Alencar, C. Lambertini, D. Silva Leite, S. Caravalho-e-Silva, K. R. Zamudio, L. F. Toledo, M. Martins. 2015. Seasonal variation in population abundance and chytrid infection in stream-dwelling frogs of the Brazilian Atlantic Forest. ***PLoS ONE*** 10(7): e0130554.
17. **Longo, A. V.**, A. E. Savage, I. Hewson, and K. R. Zamudio. 2015. Seasonal and ontogenetic variation of skin microbial communities and relationships to natural disease dynamics in declining amphibians. ***Royal Society Open Science*** 2: 140377.
18. Yuan, M. L., S. H. Dean, **A. V. Longo**, B. B. Rothermel, T. D. Tuberville, and K. R. Zamudio. 2015. Kinship, inbreeding and fine-scale spatial structure influence gut microbiota in a hindgut-fermenting tortoise. ***Molecular Ecology*** 24(10): 2521-2536.
19. Becker, C. G., D. Rodriguez, L. F. Toledo, **A. V. Longo**, C. Lambertini, D. T. Corrêa, D. Silva Leite, C. F. B. Haddad, and K. R. Zamudio. 2014. Partitioning the net effect of host diversity on an emerging amphibian pathogen. ***Proceedings of the Royal Society B*** 281(1796).
20. Guayasamín, J. M., A. M. Mendoza, **A. V. Longo**, K. R. Zamudio, and E. Bonaccorso. 2014. High prevalence of *Batrachochytrium dendrobatidis* in an Andean frog community (Reserva Las Gralarias, Ecuador). ***Amphibian & Reptile Conservation*** 8(1): 33-44.
21. **Longo, A. V.**, P. A. Burrowes, and K. R. Zamudio. 2014. Genomic studies of disease outcome in host-pathogen dynamics. ***Integrative and Comparative Biology*** 54: 427-438.
22. **Longo, A. V.**, D. Rodriguez, D. Silva Leite, L. F. Toledo, C. Mendoza-Almeralla, P. A. Burrowes and K. R. Zamudio. 2013. ITS1 copy number varies among *Batrachochytrium*

dendrobatidis strains: Implications for qPCR zoospore estimation of field-collected amphibian skin swabs. ***PLoS ONE*** 8: e59499.

23. **Longo, A. V.**, R. J. Ossiboff, K. R. Zamudio, and P. A. Burrowes. 2013. Lability in host defenses: terrestrial frogs die from chytridiomycosis under enzootic conditions. ***Journal of Wildlife Diseases*** 49: 197-199.
24. Becker, C. G., D. Rodriguez, **A. V. Longo**, A. L. Talaba, and K. R. Zamudio. 2012. Disease risk in temperate amphibian populations is higher at closed-canopy sites. ***PLoS ONE*** 7: e48205.
25. Rodriguez, D., **A. V. Longo**, and K. R. Zamudio. 2012. Magnetic capture–hybridization and whole genome amplification of *Batrachochytrium dendrobatidis* genomic DNA. ***Journal of Microbiological Methods*** 90: 156-159.
26. López-Torres, A. L., H. J. Claudio-Hernández, C. A. Rodríguez, **A. V. Longo**, and R. L. Joglar. 2012. Green Iguanas (*Iguana iguana*) in Puerto Rico: Is it time for management? ***Biological Invasions*** 14:35-45.
27. Burrowes, P. A., A. Alicea, **A. V. Longo**, and R. L. Joglar. 2011. Toe vs Swabs? Evaluation of best tissue source for detection of *Batrachochytrium dendrobatidis* in field-caught amphibians. ***Herpetological Review*** 42 (3): 359-362.
28. **Longo, A. V.** and P. A. Burrowes. 2010. Persistence with chytridiomycosis does not assure survival of direct-developing frogs. ***Ecohealth*** 7:185-195.
29. **Longo, A. V.**, P. A. Burrowes, and R. L. Joglar. 2010. Seasonal patterns of *Batrachochytrium dendrobatidis* infection in direct-developing frogs. ***Diseases of Aquatic Organisms*** 92:253-260.
30. Burrowes, P. A., **A. V. Longo**, and C. A. Rodríguez. 2008. Fitness cost of *Batrachochytrium dendrobatidis* infection in *Eleutherodactylus coqui,* and comments on habitat-related risk of infection. ***Herpetotropicos*** 4:51-57.
31. Burrowes, P. A., **A. V. Longo**, R. L. Joglar, and A. A. Cunningham. 2008. Geographic distribution of *Batrachochytrium dendrobatidis* in Puerto Rico. ***Herpetological Review*** 39(3):321-324.
32. Joglar, R. L., A. O. Álvarez, T. M. Aide, D. Barber, P. A. Burrowes, M. A. García, A. León-Cardona, **A. V. Longo**, N. Pérez-Buitrago, A. Puente, N. Ríos-López, and P.J. Tolson. 2007. Efforts towards conservation of Puerto Rican herpetofauna. ***Applied Herpetology*** 4: 327-345.

Natural History Notes and Book Reviews (5)

Longo, A. V. and A. L. López-Torres. 2017. *Eleutherodactylus coqui* (Common Coqui) Ectoparasites. ***Herpetological Review*** 48(1): 160.

Zamudio, K. R., R. C. Bell, and **A. V. Longo**. 2014. A life for Reptiles and Amphibians. Volume 1: A Collection of 55 Interviews on "How to become a Herpetologist". ***Copeia*** 3: 604-605.

Longo, A. V., A. L. López-Torres, C. A. Rodríguez-Gómez, and J. P. Zegarra. 2013. *Eleutherodactylus cooki* (Coquí Guajón) Nesting Site. ***Herpetological Review*** 44 (2): 293.

López-Torres, A. L. and **A. V. Longo**. 2013. Implementing recovery actions for the threatened Coquí Guajón (*Eleutherodactylus cooki*): where to start? ***FrogLog Newsletter of the Amphibian Specialist Group*** 106: 41-42.

Joglar, R. L., P. A. Burrowes, D. Dávila, C. A. Rodríguez, A. L. López, **A. V. Longo** and P. Medina. 2005. *Eleutherodactylus wightmanae* Reproduction. ***Herpetological Review*** 36(4):433-434.

Edited Book (1)

Joglar, R. L. and **A. V. Longo** (eds). 2011. Guía de Biodiversidad Urbana. Editorial Proyecto Coquí. San Juan, Puerto Rico.

Other publications (1)

Longo, A. V. 2018. Introducción in López-Velázquez A., Basanta M.D., Ochoa Ochoa L.M. (eds). ***Quitridiomicosis en México*** Sociedad Herpetológica Mexicana. Publicación No. 5. México, DF. ISSN 0168-6835.

Submitted or under review

DiRenzo, G. V., **A. V. Longo**, C. R. Muletz-Wolz, A. P. Pessier, J. Goodheart, and K. R. Lips. *Submitted*. Most Plethodontid salamanders sustain *Batrachochytrium salamandrivorans* infections.

FELLOWSHIP AWARDS AND RESEARCH GRANTS ($381,495)

Adirondack Kiekhofer Grant – $2,000
Andrew W. Mellon Student Research Grant – $2,000 ($1,000 twice)
Atkinson's Center Sustainable Biodiversity Fund – $5,500
Cornell University's Graduate School Travel Fund for Conference and Research– $2,815
Cornell University Ecology and Evolutionary Biology Research Funds – $680
Ford Foundation Pre-Doctoral Fellowship – $60,000
NSF Doctoral Dissertation Research Grant – $20,833
"Genetic and environmental mechanisms mediating disease resistance and tolerance in amphibians"
NSF Postdoctoral Research Fellowship in Biology – $207,000 (3 years 2015-2018)
"Ecological and evolutionary drivers of host specificity in amphibian-killing fungi"
Sponsors: Dr. Karen Lips (University of Maryland) and Dr. Robert Fleischer (Smithsonian Conservation Biology Institute)
SUNY Minority Diversity Fellowship – supplement to Ford Fellowship including stipend, tuition and health insurance – 2 years
Tinker Travel Fund – $1,500
U.S. Fish and Wildlife Service Cooperative Agreement – $34,167
BAND Foundation – $45,000

RECENT PRESENTATIONS

Longo, A. V. "Co-infections enhance invasive success of the salamander-killing fungus in widely distributed newts". January 6, 2019. Society of Integrative and Comparative Biologists Meeting. Tampa, FL.

Longo, A. V. "Amphibian Defenses Against Chytridiomycosis". April 14, 2018. Invited Presentation. 2018 Local DC Comparative Immunology Meeting, George Washington University, Washington, DC.

Longo, A. V. "Multi-host fungal pathogens: Challenges and opportunities in conserving global amphibian biodiversity". January 30, 2018. Invited seminar. Harvard University. Cambridge, MA.

Longo, A. V. "Multi-host fungal pathogens: Challenges and opportunities in conserving global amphibian biodiversity". January 25, 2018. Invited seminar. University of Florida. Gainesville, FL.

Longo, A. V. "More than scratching the surface: Skin microbial interactions modulate fungal disease outcome in amphibians". January 16, 2018. Invited seminar. University of Tennessee. Knoxville, TN.

Longo, A. V. "Multi-host fungal pathogens: Challenges and opportunities in conserving global amphibian biodiversity". January 11, 2018. Invited seminar. Ohio State University. Columbus, OH.

Longo, A. V. "Community ecology in the amphibian skin". December 4, 2017. Invited seminar. University of Texas. Arlington, TX.

Longo, A. V. " More than scratching the surface: Species interactions on the amphibian skin". November 27, 2017. Invited seminar. Queens College. Queens, NY.

Longo, A. V. "Fungal interactions on the amphibian skin". August 30, 2017. Invited seminar. University of Missouri. Columbia, MO.

Longo, A. V. "Interactions between amphibian fungi may cause mass mortality events of newts in USA". August 11, 2017. Smithsonian Emerging Scientists Symposium. National Zoo, Washington, D.C.

Longo, A. V. "Community ecology on the amphibian skin landscape". June 21, 2017. Invited seminar. Universidad Autónoma de México. Distrito Federal, MEX.

Longo, A. V. "Community ecology on the amphibian skin landscape". February 27, 2017. Invited seminar. Duke University. Durham, NC.

Longo, A. V. "Environmental fluctuations and host skin bacteria shift survival advantage between frogs and their fungal pathogen". January 7, 2017. Society of Integrative and Comparative Biologists Meeting. New Orleans, LA.

SELECTED SYNERGISTIC ACTIVITIES

1. Broadening the participation of underrepresented groups

- Alumna of Puerto Rico Louis Stokes Alliance for Minority Participation (Bridges to the Doctorate).
- Trained more than 17 undergraduates, graduate, and postdoctoral students, of which >80% are members of underrepresented groups (*i.e.*, women, Puerto Ricans, Hispanics).

2. Educational outreach
   - Presentations about amphibian declines and conservation to science students of all ages.
   - Development of an amphibian workshop for 'Expanding your Horizons', a program to stimulate the interest of girls in STEM fields by providing them with a female scientist role model to foster awareness about careers in math and science.
   - Development of education material for non-scientific audiences (e.g., Guía de Biodiversidad Urbana) in Spanish for species identification. Also developed an outreach program to promote species awareness and to improve habitat quality of *Eleutherodactylus cooki*, a threatened endemic frog in Puerto Rico.
3. Media Coverage of Research
   - Coverage by Mongabay, Fusion Network, Science News, CalAcad, Associated Press, and NatGeo News Watch, among others.
4. Professional Service
   - Peer reviewer: Biodiversity and Conservation, Diseases of Aquatic Organisms, Diversity and Distributions, Ecohealth, Endangered Species Research, Journal of Wildlife Diseases, Frontiers in Microbiology, ISME Journal, Nature Communications, National Science Foundation, Microbial Ecology, Microbiology, Molecular Ecology, PeerJ, PLoS ONE, Proceedings of the Royal Society B, Revista Mexicana de Biodiversidad, Scientific Reports, among others.
   - Society membership: Society for the Study of Amphibians and Reptiles, Ecological Society of America, Wildlife Disease Association, Society for Integrative and Comparative Biology, American Society of Naturalists, and SACNAS.