

Jesse Delia
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PROFESSIONAL APPOINTMENTS

Postdoctoral Fellow. Gerstner Scholar, American Museum of Natural History.

2021-present. Supervisor: Christopher Raxworthy.

Visiting Scholar. Department of Biological Engineering, Duke University, Durham NC.

2020-2021. Supervisor: Junjie Yao.

Postdoctoral Research Associate. Department of Biology, Stanford University, Stanford CA,

2018–2020. Supervisor: Lauren O’Connell.

EDUCATION

PhD. Biology. Department of Biology, Boston University, Boston MA.

Graduated 2018. Advisor: Karen Warkentin.

MSc. Biology. Department of Biology, East Carolina University, Greenville NC.

Graduated 2011. Advisor: Kyle Summers.

BA. Environmental Studies. Department of Environmental Studies, Prescott

College, Prescott, AZ. Graduated 2005. Advisor: Carl Tomoff.

LANGUAGES

English, Spanish

PEER-REVIEWED PUBLICATIONS

Delia J, Bravo-Valencia L, & Warkentin KM. 2020. The evolution of extended parental care in glassfrogs: do egg-clutch phenotypes mediate coevolution between the sexes? *Ecological Monographs*. 90(3): e01411

Twomey E, **Delia J**, Fashe M, Venegas P, & Schulte LM. 2020. A new distribution record and updated conservation status of the endangered Marañón poison frog, *Excidobates mysteriosus*. *Salamandra*. 56(1): 71–74.

Delia J, Rivera-Ordóñez JM, Salazar Nicholls MJ, & Warkentin KM. 2019. Hatching plasticity and the adaptive benefits of extended embryonic development in glassfrogs. *Evolutionary Ecology*. 33(1): 37–53.

Delia J, Bravo-Valencia L, & Warkentin K. 2017. Patterns of parental care in Neotropical glassfrogs: fieldwork alters hypotheses of sex-role evolution. *Journal of Evolutionary Biology*. 30(5): 898–914.

Hughey M, **Delia J**, & Belden, L. 2017. Diversity and stability of egg bacterial assemblages: the role of paternal care in the glassfrog *Hyalinobatrachium colymbiphylum*. *Biotropica*. 49(6): 792–802.

Delia J, Bravo-Valencia L, & McDiarmid R. 2017. Notes on paternal behavior in *Hyalinobatrachium* glassfrogs (Centrolenidae). *Phyllomedusa*. 16(1): 101–107.

Bravo Valencia L & **Delia J**. 2016. Maternal care in a glassfrog: care function and commitment to offspring in *Ikakogi tayrona*. *Behavioral Ecology and Sociobiology*. 70: 41–48

Delia JRJ, Bautista A, & Summers K. 2014. Glassfrog embryos hatch early after parental desertion. *Proceedings of the Royal Society of London, B*. 281: 1471–2954.

- Twomey E, **Delia J**, & Castroviejo-Fisher S. 2014. A review of Northern Peruvian glassfrogs (Centrolenidae), with the description of four new remarkable species. *Zootaxa*. 3851: 1–87
- Delia JRJ**, Bautista A, & Summers K. 2013. Parents adjust care in response to weather conditions and egg dehydration in a Neotropical glassfrog (Centrolenidae). *Behavioral Ecology and Sociobiology*. 67:557–569.
- Delia J**, Whitney J, & Burkhardt T. 2013. Rediscovery of ‘lost’ treefrogs from the Oaxacan highlands of Mexico. *Biodiversity and Conservation*. 22: 1405–1414
- Delia J**, Cisneros-Heredia DF, Whitney J, & Murrieta-Galindo R. 2010. Observations on the reproductive behavior of a Neotropical glassfrog, *Hyalinobatrachium fleischmanni* (Anura: Centrolenidae). *South American Journal of Herpetology*, 5: 1–12.
- Cisneros-Heredia DF, **Delia J**, Yanez-Munoz MH, & Ortega-Andrade HM. 2009. Endemic Ecuadorian glassfrog *Cochranella mache* is critically endangered because of habitat loss. *Oryx*, 44: 114–117.
- Delia J**. 2009. Another Crotaline prey item of the Neotropical snake *Clelia clelia* (Daudin 1803). *Herpetology Notes*, 2: 21–22.
- Cisneros-Heredia DF, **Delia J**, Yanez-Munoz MH, & Ortega-Andrade HM. 2008. Natural history and intraspecific variation of the Ecuadorian Blue Glassfrog *Cochranella mache* (Guayasamin & Bonaccorso 2004). *Herpetozoa*. 21: 57–66.
- Delia J**, Whitney J, & Parra-Olea G. 2008. Amphibia, Plethodontidae, *Pseudoeurycea maxima*: Distribution extension. *Check List*. 4: 65–68.

FUNDED RESEARCH PROPOSALS

- 2020**. “Biological transparency in leaf-dwelling frogs across continents.” (\$30,000.) National Geographic Society Research Grant
- 2015**. “Parent–embryo interactions in Glassfrogs; Female mating strategies, paternal effort, and adaptive plasticity in hatching.” National Science Foundation, Doctoral Dissertation Improvement Grant.
- 2015**. “Father–embryo co-evolution in a Neotropical glassfrog.” American Society of Naturalists, Student Research Award
- 2014**. “Social dynamics of female choice, communal nests, and embryo strategies in a Panamanian glassfrog with male care.” American Philosophical Society, Lewis & Clark fund
- 2013**. “Social dynamics of paternal care and embryo strategies in glassfrogs.” Smithsonian Institution, 10-week graduate fellowship.
- 2013**. “Social dynamics of paternal care and embryo strategies in glassfrogs.” Society for the Study of Evolution, Rosemary Grant Award.
- 2013**. “Social dynamics of paternal care, hatching plasticity, and mate choice in two glassfrogs.” Animal Behavior Society, student research grant.
- 2012**. “Social dynamics of paternal care and hatching plasticity in two glassfrogs.” Smithsonian Tropical Research Institute, short-term fellowship.
- 2012**. “Ecology and evolution of parent-embryo interactions in Neotropical glassfrogs.” Society for the Study of Amphibians and Reptiles, travel award.
- 2012**. Student travel award (for SICB 2012), Smithsonian Tropical Research Institute.
- 2009**. “Anti-bat-predator behavior and resulting reproductive strategies of *Hyalinobatrachium fleischmanni*.” American Society of Ichthyologists and Herpetologists.
- 2009**. “Anti-bat-predator behavior and resulting reproductive strategies of *Hyalinobatrachium fleischmanni*.” Sigma Xi

2006. “Disappearing amphibians of southern Mexico: The current presence and ecology of declining Montane anurans.” Declining Amphibian Population Task Force.
2005. “Ecological observations of riverine anurans: Community structure and resource use at two sites in the Choco-Andean region of Ecuador.” Student Union Fund, Prescott College.

SCHOLARSHIPS, FELLOWSHIPS, & HONORS

2020. Gerstner Scholar Postdoctoral Research Fellowship, American Museum of Natural History
2019. Belamarich Award for Outstanding Doctoral Dissertation.
2016. Graduate Research Abroad Fellowship. Boston University
2016. The Thomas H. Kunz Award. Boston University.
2015. The Thomas H. Kunz Award. Boston University.
- 2012-13. Fulbright Fellowship, held at Universidad de Los Andes, Colombia.
2010. Next-Step Scholarship Research Award, East Carolina University.

FIELD RESEARCH EXPERIENCE

2016. Peru, 1 month. Comparative observations of parental behavior in glassfrogs.
2016. Panama, 5 months. Social dynamics of glassfrog families.
2015. Panama, 6 months. Costs and benefits analyses of father-embryo interactions in the field.
2015. Ecuador, 3 weeks. Comparative studies of parental behavior in glassfrogs.
2014. Panama, 5 mo. Studies of father-embryo conflict, mating success & female mating tactics.
2014. Ecuador, 4 mo. Comparative studies of parent-embryo interactions in glassfrogs.
2014. Colombia, 2 mo. Maternal care studies in glassfrogs.
2013. Panama, 4 mo. Field experiments manipulating mating success in *H. colymbiphylum*, comparative parental care study on Rio Frijoles.
- 2012-2013. Colombia. 5 mo. Comparative studies of parent-embryo interactions in glassfrogs.
2012. Panama, 3 mo. Comparative studies of parent-embryo interactions in glassfrogs.
2011. Peru, 2 mo. Diversity, taxonomy, and behavior of glassfrogs.
2011. Panama, 2 mo. Comparative study of parental care function in two glassfrogs.
- 2009-10. Mexico, 6 mo. MSc research, ECU, Parental care in *Hyalinobatrachium fleischmanni*.
2007. Ecuador, 1 mo. Research assistant, Biogeography and ecology of glassfrogs.
- 2006-07. Mexico, 4 mo. Diversity, geography, conservation, and ecology of select amphibians.
2005. Ecuador, 2 mo. Senior thesis research, Prescott College. Amphibian ecology.
2003. Ecuador, 3 mo. Primary Investigator. Herp. inventory, Bella Vista Cloud Forest Reserve.

PRESENTATIONS AT SCIENTIFIC MEETINGS

2018. Delia J. “Family dynamics & parent-embryo coevolution in glassfrogs.” **Invited speaker** at the workshop: Interplay between parental care and sexual selection. Fiskebäckskil, Sweden.
2017. **Delia J.** “Father-embryo coevolution in Neotropical glassfrogs.” Evolution, Portland, OR. Oral presentation
2017. **Delia J** & Warkentin K. “The evolution of parent-embryo interactions in glassfrogs.” Society for Integrative and Comparative Biology Meeting, New Orleans, LA. Oral presentation.
2017. Rivera-Ordóñez JM, Salazar-Nicholls MJ, Warkentin KM, & **Delia J.** “The adaptive value of delayed hatching in glassfrogs (Centrolenidae).” Society for Integrative and Comparative Biology Meeting, New Orleans, LA. Poster presentation.

- 2016.** Bravo-Valencia L & **Delia J.** “Evolución del cuidado parental en ranas de cristal (Centrolenidae).” Congreso Colombiano de Herpetología, Medellín. Oral presentation
- 2014.** **Delia J.**, Bravo-Valencia L, & Warkentin K. “Evolución de las interacciones entre los padres y embriones en ranas de cristal.” **Invited talk** at *Cuidado Parental en Anuros* symposium, Congreso Latinoamericano de Herpetología X, Cartagena, Colombia.
- 2014.** Bravo-Valencia L, **Delia J.**, Warkentin K, & Amezcua A. “Cuidado materno en ranas de cristal.” **Invited talk** at *Cuidado Parental en Anuros* symposium, Congreso Latinoamericano de Herpetología X, Cartagena, Colombia.
- 2012.** **Delia J.** & Summers K. “The interaction of parental care and hatching plasticity in a glassfrog.” 7th World Congress of Herpetology, Vancouver, BC, Canada. Poster.
- 2012.** **Delia J.** & Warkentin K. “Parental care and hatching plasticity in two glassfrogs (Centrolenidae): interspecific and geographic comparisons.” 7th World Congress of Herpetology, Vancouver, BC, Canada. Poster.
- 2012.** **Delia J.** & Warkentin K. “Hatching plasticity and the function of parental care in two glassfrogs (Anura: Centrolenidae).” Society for Integrative and Comparative Biology Meeting, Charleston, SC. Oral presentation.
- 2011.** **Delia J.** “The role of parental care in mediating a plastic life-history switch point: an example from a Neotropical glassfrog.” Society for Integrative and Comparative Biology Annual Meeting, Salt Lake City UT. Oral presentation.
- 2011.** **Delia J.** & Summers K. “Parental care and hatching plasticity in a Neotropical glassfrog.” SE Population Ecology and Evolutionary Genetics Meeting, Reidsville, NC. Poster.
- 2008.** **Delia J.** “Ecological correlates of parental care in a Neotropical glassfrog, *Hyalinobatrachium fleischmanni*.” NC Herpetological Society, annual meeting.

INVITED SEMINARS

- 2017.** Delia J. “Parent–embryo coevolution in glassfrogs.” Research Seminar, Vassar College, Poughkeepsie NY.
- 2017.** Delia J. “The evolution of parental sex-roles: fieldwork reveals unexpected patterns in glassfrogs.” Hazel Dick Leonard Symposium on sexuality, gender, and race. Simmons College, Boston MA.
- 2014.** Delia J. “Parent-embryo interactions in Neotropical glassfrogs.” STRI Behavior Talk, Smithsonian Tropical Research Institute, Panama City, Panama
- 2014.** Delia J. “Behavioral plasticity across life stages: interactions among glassfrog parents and their embryos.” Gamboa Frog Talk, Smithsonian Tropical Research Institute, Gamboa, PA.
- 2013.** Delia J. “Parent-embryo interactions in glassfrogs.” Visiting scholar presentation, Universidad de los Andes, Bogota, Colombia.
- 2013.** Delia J. “Parent-embryo interactions in glassfrogs” Gamboa Frog Talk, Smithsonian Tropical Research Institute, Gamboa, Panama.
- 2011.** Delia J. “Parental care and hatching plasticity in a Neotropical glassfrog” Gamboa Frog Talk, Smithsonian Tropical Research Institute, Gamboa, Panama
- 2010.** Delia J. “Interacciones ecológicas del comportamiento de cuidado parental de la rana de cristal *Hyalinobatrachium fleischmanni*.” Seminar, Benemérita Universidad Autónoma, Puebla, Mexico.
- 2008.** Delia J. “Variation in the reproductive behavior of a Neotropical glassfrog: bat-predator interactions.” Research in Progress Seminar, East Carolina University.

2006. Delia J. “Ecological observations of Neotropical riverine frogs.” Invited Baccalaureate Presentation, Prescott College.

2005. Delia J. “Reptiles and amphibians of Andean Cloud forests.” Prescott College.

MENTORSHIP

Research projects and internships

Marta Trez, Italy. Undergraduate senior thesis 2012. “Parental effects on embryonic development in the glassfrog *Hyalinobatrachium fleischmanni*.”

Laura Bravo-Valencia, Colombia. MSc thesis 2012-2015. “Maternal care in glassfrogs.” Laura is a collaborator; we have conducted comparative field research for 4 years.

Juana Maria Rivera-Ordóñez, Colombia. Senior thesis 2016-2017. “The adaptive value of delayed hatching in five species of glassfrogs.”

Maria Jose Salazar-Nicholls, Ecuador. Internship at STRI 2016. “Spider interactions and defensive embryo behavior in *Hyalinobatrachium colymbiphellum*.”

Marco Miguel Odicio-Iglesias, Peru. Internship & field assistant at STRI 2014.

Thesis co-advisor and/or committee member

Ana María Ospina-L. Senior thesis at Universidad del Quindío, Quindío, Colombia. 2015-2016.

“Machos grandes incrementan la sobrevivencia de sus crías en la rana de cristal *Centrolene savagei*?” Advisor: Fernando Vargas-Salinas. Co-advisor: J. Delia

Julián Alberto R. Senior thesis at Universidad del Quindío, Quindío, Colombia. 2015-2016.

“Machos grandes incrementan la sobrevivencia de sus crías en la rana de cristal *Centrolene savagei*?” Advisor: Fernando Vargas-Salinas. Co-advisor: J. Delia

Victor Moraes Zucchetti. 2018-2020. MSc Thesis at Pontifícia Universidade Católica do Rio Grande do sul, Porto Alegre, Brazil. Project title: Reproductive biology and phylogenetic relationships of *Vitreorana baliomma* (Anura: Centrolenidae). Advisor: Santiago Castroviejo-Fisher. Committee member.

Geraldine E. Bello-Guio. 2020-current. MSc Thesis at Pedagógica y Tecnológica de Colombia, Bogotá. Project title: Selección y uso de sitios de oviposición en *Espadarana andina* (Anura: Centrolenidae): ¿Existe un significado adaptativo? Advisor: Juan E. Carvajal Cogollo. Co-advisor: J. Delia

TEACHING

Teaching Fellow, Boston University

Animal Behavior	Summer/Fall 2017
Herpetology	Spring 2016
Vertebrate Zoology	Spring 2012, 2015, 2017
Introduction to Biology	Fall 2011
Teaching Assistant, East Carolina University	
Biology for Non-Majors	Fall 2008
Introduction to Biology	Fall/Spring 2009–2010
Environmental Biology	Spring 2011
Invited Lecturer and/or Instructor for field component of course, Prescott College	
Herpetology	Spring 2006
Natural History and Ecology of the Southwest	Spring 2004, 2005
Animal Behavior	Fall 2006
Assistant Instructor, Skyview Elementary School, Prescott AZ	
Natural History course for 4 th , 5 th , & 6 th grade	Spring 2005

PROFESSIONAL SERVICES

Reviewer for: *Evolution, BMC Evolutionary Biology, Animal Behavior, Behavioral Ecology & Sociobiology, Ethology, Biotropica, Zootaxa, Zookeys, Journal of Natural History, South American Journal of Herpetology, Phyllomedusa, Amphibian & Reptile Conservation, Herpetological Review, Anis da Academia Brasileira de Ciencias, Checklists.*

Grant panel: Smithsonian Tropical Research Institute, Travel Grant