

Publications from the Donnelly Lab: 2004-05 TO 2008-09:

PEER REVIEWED JOURNAL PUBLICATIONS/BOOK CHAPTERS:

1. von May, R. and **M.A. Donnelly**. 2009. Do trails affect relative abundance estimates of rainforest frogs and lizards? *Austral Ecology in press*.
2. von May, R., K. Siu-Ting, J.M. Jacobs, M. Medina-Müller, G. Gagliardi, L.O. Rodríguez, and **M.A. Donnelly**. 2009. Species diversity and conservation status of amphibians in Madre de Dios, southern Peru. *Herpetological Conservation and Biology* 4(1): *in press*.
3. Saporito, R.A., T.F. Spande, H.M. Garraffo, and **M.A. Donnelly**. 2009. Arthropod alkaloids in poison frogs: A review of the 'dietary hypothesis.' *Heterocycles* 79:277-297.
4. von May, R., M. Medina-Müller, **M.A. Donnelly**, and K. Summers. 2008. The tadpole of the bamboo-breeding poison frog *Ranitomeya biolat* (Anura: Dendrobatidae). *Zootaxa* 1857:66-68.
5. Watling, J.I. and **M.A. Donnelly**. 2008. Species richness and composition of amphibians and reptiles in a fragmented forest landscape in northeastern Bolivia. *Basic and Applied Ecology* 9:523-532.
6. Schmid, J.L., D.S. Addison, M.A. Donnelly, M.A. Shirley, and T. Wibbels. 2008. The effect of Australian Pine (*Casuarina equisetifolia*) removal on Loggerhead Sea Turtle (*Caretta caretta*) incubation temperatures on Keewaydin Island, Florida. *Journal of Coastal Research* 55:214-220.
7. Catenazzi, A. and **M.A. Donnelly**. 2008. Sea lions (*Otaria flavescens*) as hosts of the common vampire bat (*Desmodus rotundus*). *Marine Ecology Progress Series*, 360: 285-289.
8. Myers, C.W. and **M.A. Donnelly**. 2008. The summit herpetofauna of Auyantepui, Venezuela: Report from the Robert G. Goelet American Museum-Terramar Expedition. *Bulletin of the American Museum of Natural History* 308:1-147.
9. Kizirian, D., S. Bayefsky-Anand, A. Eriksson, M. Le, and **M.A. Donnelly**. 2008. A new *Petracola* and redescription of *P. ventrimaculatus* (Squamata: Gymnophthalmidae). *Zootaxa* 1700:53-62.
10. Saporito, R.A., R. Zuercher, M. Roberts, K.G. Gerow, and **M.A. Donnelly**. 2007. Experimental evidence for aposematism in the dendrobatid poison-frog *Oophaga pumilio*. *Copeia* 2007:1006-1011.
11. Catenazzi, A. and **M.A. Donnelly**. 2007. Role of supratidal invertebrates in the decomposition of beach-cast green algae (*Ulva* sp.). *Marine Ecology Progress Series*, 349:33-42.
12. Saporito, R.A., **M.A. Donnelly**, P. Jain, H.M. Garraffo, T.F. Spande, and J.W. Daly. 2007. Spatial and Temporal Patterns of Alkaloid Variation in the Poison Frog *Oophaga pumilio* in Costa Rica and Panama Over 30 Years. *Toxicon* 50:757-778..
13. Catenazzi A. and **M.A. Donnelly**. 2007. Distribution of geckos in northern Peru: Long-term effect of strong ENSO events? *Journal of Arid Environments* 71:327-332.
14. Watling, J.I. and **M.A. Donnelly**. 2007. Multivariate correlates to extinction proneness of amphibians and reptiles in northeastern Bolivia. *Diversity and Distributions* 13:372-378.
15. Ugarte, C.A., K.G. Rice, and **M.A. Donnelly**. 2007. Diet, reproductive phenology, and growth of the Pig Frog (*Rana grylio*) from harvested and protected areas of the Florida Everglades. *Copeia* 2007:436-448.
16. Saporito R.A., **M.A. Donnelly**, R.A. Norton. H.M. Garraffo, T.F. Spande, and J.W. Daly. 2007. Oribatid mites as a major dietary source for alkaloids in poison frogs. *Proceedings of National Academy of Sciences* 104:8885-8890. (Table 1 correction published 2008:105:17586).

17. Whitfield S.M., K.E. Bell, T. Philippi, M. Sasa, F. Bolaños, G. Chaves, J.M. Savage, and **M.A. Donnelly**. 2007. Amphibian and reptile declines over 35 years at La Selva, Costa Rica. *Proceedings of the National Academy of Sciences* 104:8352-8356.
18. Catenazzi, A. and **M.A. Donnelly**. 2007. The *Ulva* connection: marine algae subsidize terrestrial predators in coastal Peru. *Oikos* 116:75-86.
19. Bell, K.E. and **M.A. Donnelly**. 2006. Influence of forest on community structure of frogs and lizards in northeastern Costa Rica. *Conservation Biology* 20:1750-1760.
20. **Donnelly, M.A.**, R.D. MacCulloch, C.A. Ugarte, and D. Kizirian. 2006. A New Riparian Gymnophthalmid (Squamata) from Guyana. *Copeia* 2006:396-403.
21. Whitfield, S.M. and **M.A. Donnelly**. 2006. Ontogenetic and seasonal variation in the diets of a Costa Rican leaf-litter herpetofauna. *Journal of Tropical Ecology* 22:409-417.
22. Watling, J.I. and **M.A. Donnelly**. 2006. Fragments as islands: a synthesis of faunal responses to habitat patchiness. *Conservation Biology* 20:1016-1025.
23. Saporito, R.A., **M.A. Donnelly**, H.M. Garraffo, T. Spande, and J.W. Daly. 2006. Geographic and seasonal variation in alkaloid-based chemical defenses of *Dendrobates pumilio* from Bocas del Toro, Panama. *Journal of Chemical Ecology* 32:795-814.
24. Verdon, E. and **M.A. Donnelly**. 2005. Population structure of Florida box turtles (*Terrapene carolina bauri*) at the southernmost limit of their range. *Journal of Herpetology* 39:572-577.
25. Catenazzi, A., J. Carrillo, and **M.A. Donnelly**. 2005. Seasonal and geographic eurythermy in a coastal Peruvian lizard. *Copeia* 2005:713-723.
26. Lips, K.R. and **M.A. Donnelly**. 2005. What the tropics can tell us about declining amphibian populations: Current patterns and future prospects. *In* Status and Conservation of U.S. Amphibians. Volume 1: Conservation Essays. M.J. Lannoo (editor), University of California Press, pp 198-205.
27. Watling, J.I., J.H. Waddle, D.A. Kizirian, and **M.A. Donnelly**. 2005. Reproductive phenology of three lizard species in Costa Rica, with comments on seasonal reproduction in Neotropical lizards. *Journal of Herpetology* 39:341-348.
28. Ugarte, C.A., K.G. Rice, and **M.A. Donnelly**. 2005. Variation of total mercury concentrations in pig frogs (*Rana grylio*) across the Florida Everglades, USA. *Science of the Total Environment* 345:51-59.
29. **Donnelly, M.A.**, M.H. Chen, and G.G. Watkins. 2005. Sampling amphibians and reptiles in the Iwokrama Forest ecosystem. *Proceedings of the Academy of Natural Sciences Philadelphia* 154:55-69.
30. Watkins, G.G. and **M.A. Donnelly**. 2005. Biodiversity research in the Neotropics: From conflict to collaboration. *Proceedings of the Academy of Natural Sciences Philadelphia* 154:127-136.
31. **Donnelly, M.A.**, M.H. Chen, and G.G. Watkins. 2005. The Iwokrama herpetofauna: Exploration of diversity in a Guyanan rainforest. *In* Ecology and Evolution in the Tropics: A Herpetological Perspective. M.A. Donnelly, B.I. Crother, C. Guyer, M.H. Wake, and M.E. White (eds.). University of Chicago Press, pp 428-460.
32. Guyer, C. and **M.A. Donnelly**. 2005. Patterns of co-occurrence of hylid frogs at a temporary wetland in Costa Rica. *In* Ecology and Evolution in the Tropics: A Herpetological Perspective. M.A. Donnelly, B.I. Crother, C. Guyer, M.H. Wake, and M.E. White (eds.). University of Chicago Press, pp. 227-242.
33. McDiarmid, R.W. and **M.A. Donnelly**. 2005. The Guayanan highlands and its herpetofauna: Amphibians and reptiles of the Lost World. *In* Ecology and Evolution in the Tropics: A Herpetological Perspective. M.A. Donnelly, B.I. Crother, C. Guyer, M.H. Wake, and M.E. White (eds.). University of Chicago Press, pp. 461-560.
34. Funk, W.C., **M.A. Donnelly**, and K.R. Lips. 2005. Alternative views of amphibian toe-clipping. *Nature* 433:193.

35. Kizirian, D. and **M.A. Donnelly**. 2004. The criterion of reciprocal monophyly and classification of nested diversity at the species level. *Molecular Phylogenetics and Evolution* 32:1072-1076.
36. Kizirian, D., A. Trager, **M.A. Donnelly**, and J.W. Wright. 2004. Evolution of Galapagos Island lava lizards (Iguania: Tropiduridae: *Microlophus*). *Molecular Phylogenetics and Evolution* 32:761-769.
37. Saporito, R.A., H.M. Garraffo, **M.A. Donnelly**, A.L. Edwards, J.T. Longino, and J.W. Daly. 2004. Formicine ants: An arthropod source for the pumiliotoxin alkaloids of dendrobatid poison frogs. *Proceedings of the National Academy of Science* 101:8045-8050.
38. **Donnelly, M.A.** C. Guyer, J.E. Juterbock, and R.A. Alford. 2004 [2003]. Appendix 2. Techniques for marking amphibians. *In: Measuring and Monitoring Biological Diversity Standard Methods for Amphibians*. W. R. Heyer, M. A. Donnelly, R. W. McDiarmid, L. C. Hayek, and M. S. Foster (eds.). Smithsonian Institution Press, pp. 291-299. IN RUSSIAN
39. **Donnelly, M.A.** and C. Guyer. 2004 [2003]. Estimating population size -- Mark-recapture. *In: Measuring and Monitoring Biological Diversity Standard Methods for Amphibians*. W. R. Heyer, M. A. Donnelly, R. W. McDiarmid, L. C. Hayek, and M. S. Foster (eds.). Smithsonian Institution Press, pp.197-220. IN RUSSIAN
40. McDiarmid, R.W. and **M.A. Donnelly**. 2004 [2003]. Group activities and field trips. *In: Measuring and Monitoring Biological Diversity Standard Methods for Amphibians*. W. R. Heyer, M. A. Donnelly, R. W. McDiarmid, L. C. Hayek, and M. S. Foster (eds.). Smithsonian Institution Press, pp. 189-196. IN RUSSIAN

Books (Peer Reviewed):

- Donnelly, M.A.**, B.I. Crother, C. Guyer, M.H. Wake, and M.E. White (editors). 2005. *Ecology and Evolution in the Tropics: A Herpetological Perspective*. University of Chicago Press,
- Guyer, C. and **M.A. Donnelly**. 2005. *Amphibians and Reptiles of La Selva, Costa Rica, and the Caribbean Slope: A Comprehensive Guide*. University of California Press.
- Heyer, W.R., **M.A. Donnelly**, R.W. McDiarmid, L.C. Hayek, and M.S. Foster (editors). 2004 [2003]. *Measuring and Monitoring Biological Diversity Standard Methods for Amphibians*. Smithsonian Institution Press - IN RUSSIAN

Published Reviews and Reports (Unrefereed):

- Donnelly, M.A. 2008. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS). *Copeia* 2008:956-965.
- Donnelly, M.A. 2008. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS - 2007 meeting). *Copeia* 2008:248-257.
- Donnelly, M.A. 2007. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS). *Copeia* 2007:1074-1084.
- Donnelly, M.A. 2006. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS). *Copeia* 2006:843-850.
- Donnelly, M.A. 2005. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS). *Copeia* 2005:945-955.
- Donnelly, M.A. 2004. SUMMARY OF THE MEETINGS (OF THE AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS). *Copeia* 2004:978-991.

Scientific Presentations (* denotes invited presentation):

- A review of diet and toxicity in a neotropical poison frog. World Congress of Herpetology, Manaus, Brazil. August 2008 (with Ralph A. Saporito & John W. Daly).
- Macroecological patterns at the mesoscale: Distribution, abundance and body size of amphibians and reptiles on forest islands in northeastern Bolivia. Joint Meeting of Ichthyologists and Herpetologists. Montreal, Canada. July 2008 (with James Watling).
- Decline and conservation of amphibians in Central America. Joint Meeting of Ichthyologists and Herpetologists. Montreal, Canada. July 2008 (with Steven Whitfield, Karen Lips, and Harold Heatwole).
- Patterns of amphibian diversity across forest types in four Amazonian sites in southeastern Peru. Association for Tropical Biology and Conservation. Paramaribo, Suriname. June 2008 (with Rudolf von May and Jenny Jacobs).
- *John W. Daly (1933-2008): A tribute to my friend and collaborator. Tribute to John William Daly: A Life Dedicated to Chemistry in Nature. National Institutes of Health, Bethesda, MD. June 2008.
- Biodiversity of Amphibians and Reptiles in Guyana. International Conference on the Status of Biological Sciences in Caribbean and Latin American Societies. Georgetown, Guyana. September 2007 (with Ross MacCulloch, Amy Lathrop, Philippe Kok, Brice Noonan, Raffael Ernest, and D. Bruce Means).
- Amphibian and reptile declines at La Selva, Costa Rica: Patterns and processes in a collapsing tropical herpetofauna. Joint Meeting of Ichthyologists and Herpetologists. St. Louis, MO. July 2007 (with Steven Whitfield).
- Experimental evidence for aposematism in the dendrobatid poison frog *Oophaga pumilio*. Joint Meeting of Ichthyologists and Herpetologists. St. Louis, MO. July 2007 (with Ralph Saporito, Rachel Zuercher, Marcus Roberts, and Kenneth Gerow).
- Amphibian and reptile species composition in two tropical swamps. Joint Meeting of Ichthyologists and Herpetologists. St. Louis, MO. July 2007 (with Vivian Maccachero, Ralph Saporito, and Craig Guyer).
- Landscape effects on the distribution of amphibians and reptiles in the Big Cypress National Preserve. Joint Meeting of Ichthyologists and Herpetologists. St. Louis, MO. July 2007 (with James Watling, Kallia Cooper, and Monica Isola).
- Maritime diet of lizards and geckos in pinniped colonies. Joint Meeting of Ichthyologists and Herpetologists. St. Louis, MO. July 2007 (with Alessandro Catenazzi).
- A pinniped-supported food web in a coastal desert. Coalition for Excellence in Tropical Biology (CETroB). Miami, FL. October, 2006 (with Alessandro Catenazzi).
- Habitat use and reproduction of *Ranitomeya* poison frog in Peru. Coalition for Excellence in Tropical Biology (CETroB). Miami, FL, October, 2006 (with Rudolf von May, Margarita Median-Müeller, and Kyle Summers).
- Can small samples predict relative species richness. Coalition for Excellence in Tropical Biology (CETroB). Miami, FL. October, 2006 (with James I. Watling, Tiffany M. Doan, Wilfredo Arizabal, and Kristen E. Bell).
- Topographic effects on marine subsidies for gecko coastal desert populations. Ecological Society of America. Memphis, TN, August 2006 (with Alessandro Catenazzi).
- Seasonal and geographic eurythermy of *Microlophus peruvianus*, a coastal Peruvian lizard. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA. July 2006 (with A. Catenazzi and J. Carrillo).
- Faunal declines across 35 years at La Selva, Costa Rica: More trouble in paradise? (with Whitfield, S. M. K. E. Bell, F. Bolaños, G. Chaves, M. Sasa, T. Philippi, and J. M. Savage).
- *1. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA. July 2006.
 2. Ecological Society of America. Memphis, TN. August 2006.

3. Coalition for Excellence in Tropical Biology (CETroB). Miami, FL. October, 2006.
- *A re-examination of diversity patterns of South American herpetofaunas using multivariate statistical approaches. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA. July 2006 (with J.I. Watling)
- Species richness and composition of amphibians and reptiles on isolated tabletop mountains of the Guayana Shield (with J.I. Watling).
1. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA. July 2006
 2. Ecological Society of America. Memphis, TN. August 2006.
- *Faunal Declines across 35 years at La Selva, Costa Rica: More trouble in paradise? Future Directions in Tropical Research Organization for Tropical Studies. Washington D.C. June 2006.
- Variación altitudinal y estacional en la proporción de isótopos de carbono en las plantas del desierto costero peruano. IX Congreso Latinoamericano de Botánica. Santo Domingo, República Dominicana. June 2006 (with Alessandro Catenazzi, Asunción Cano, José Roque, and William Anderson).
- *EPA-MAI/GRO funded research in biological sciences at Florida International University. BOSC Meeting, Environmental Protectional Agency. Washington D.C. March 2005 (with Douglas Wartzok).
 - *The effect of the EPA STAR-MAI/GRO programs on graduate education in environmental biology at FIU. BOSC Meeting, Environmental Protectional Agency. Washington D.C. March 2005 (with Douglas Warzok).
- The *Ulva* connection: Marine algae subsidize terrestrial predators in coastal Peru (with Alessandro Catenazzi).
1. Joint Meeting of the Ecological Society of America and INTECOL, Montreal, Canada. August 2005.
 2. Society of Integrative and Comparative Biology Annual Meeting, Orlando January 2006.
 2. Gordon Research Conference on Metabolic Basis of Ecology. Lewiston, ME. July 2006.
- Habitat and pre selection in two species of *Imantodes*. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. July 2005 (with Ryan Adasme, Matthew Williams, and Craig Guyer).
- Influence of forest fragmentation on community structure of frogs and lizards in lowland Costa Rica (with Kristen Bell).
1. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. . July 2005.
 2. Association for Tropical Biology and Conservation, Uberlandia, Brazil. July 2005.
- Population variability of a leaf-litter herpetofauna at La Selva, Costa Rica: Seasonal and long-term trends (with Kristen Bell, Steven Whitfield, and Mahmood Sasa).
1. Joint Meeting of Ichthyologists and Herpetologists Tampa, FL, July 2005.
 2. Association for Tropical Biology and Conservation, Uberlandia, Brazil. July 2005.
- Geographic and temporal variation in alkaloid chemical defense of the dendrobatid frog, *Dendrobates pumilio*. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. July 2005 (with Ralph Saporito).
- A new species of *Gonatodes* from Guyana (Squamata: Gekkonidae). Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. July 2005 (with Matthew Warren and David Kizirian).
- Nested species subsets of amphibians and reptiles on forest islands in Bolivia (with James Watling).
1. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. July 2005,
 2. Association for Tropical Biology and Conservation, Uberlandia, Brazil. July 2005,

- Community structure of a Costa Rican leaf-litter herpetofauna: Prey use and seasonal activity. Joint Meeting of Ichthyologists and Herpetologists, Tampa, FL. July 2005 (with Steven Whitfield).
- Winter thermal ecology of the intertidal lizard *Microlophus peruvianus* in southern Peru. Annual Meeting of the Association for Tropical Biology and Conservation, Miami, FL. July 2004 (with Alessandro Catenazzi and Jorge Carrillo).
- Evolution of Galapagos Island lava lizards. Annual Meeting of the Association for Tropical Biology and Conservation, Miami, FL. July 2004 (with David Kizirian, Adrienne Trager, and John W. Wright).
- The herpetofauna of the “Lost World”: A multivariate statistical approach to study patterns of diversity.
1. Joint Annual Meeting of American Society of Ichthyologists and Herpetologists, the Herpetologists' League, and the Society for the Study of Amphibians and Reptiles, Norman, OK. May-June 2004 (with Roy W. McDiarmid)
 2. Annual Meeting of the Association for Tropical Biology and Conservation, Miami, FL. July 2004 (with Roy W. McDiarmid).
- Formicine ants and siphonotid millipedes: Dietary sources for alkaloids in poison frogs and toads. Joint Annual Meeting of American Society of Ichthyologists and Herpetologists, the Herpetologists' League, and the Society for the Study of Amphibians and Reptiles, Norman, OK. May-June 2004 (with Ralph Saporito, J.W. Daly, H.M. Garraffo, A.L. Edwards, R.W. Hoffman, and J.T. Longino).
- Activity patterns and habitat use of the Florida Box Turtle (*Terrapene carolina bauri*). Joint Annual Meeting of American Society of Ichthyologists and Herpetologists, the Herpetologists' League, and the Society for the Study of Amphibians and Reptiles, Norman, OK. May-June 2004 (with Emilie Verdon).

Invited Seminars:

- Amphibian conservation in the New World tropics: A tragedy in three acts. Southeastern Louisiana University. Hammond, Louisiana. April 2009.
- Territoriality, space use, vocalizations, and toxicity in a neotropical poison frog.
1. University of Central Florida, Orlando, Florida. October, 2007.
 2. San Diego State University, San Diego, California. November 2007.
 3. Auburn University, Auburn, Alabama. January 2008.
 4. University of California Merced, Merced, California. March 2008.
 5. University of Connecticut, Storrs, Connecticut. April 2008.
 6. University of Kansas, Lawrence, Kansas. April 2008.
 7. California State University Northridge, Northridge, CA. November, 2008.
- Biodiversity issues in Rajaji National Park: Gujjars, tigers, elephants, and training programs.
1. Florida International University, Department of Biological Sciences, Miami, Florida. October, 2007.
 2. Centro de Investigación y Capacitación Río Los Amigos (CIRCA), Madre de Dios, Peru. February, 2008.
- Exploring patterns of amphibian and reptile diversity in the “Lost World” of Venezuela.
1. Department of Biological Sciences, University of South Florida, Tampa, Florida. September, 2004.
 2. Department of Biological Sciences, University of Arkansas, Fayetteville, Arkansas. May 2005.
 3. REU Program at the La Selva Biological Station, Organization for Tropical Studies, Puerto Viejo de Sarapiquí, Costa Rica. June, 2005.
 4. Department of Zoology, Oregon State University, Corvallis, Oregon. March,

2008.

Territoriality, Space Use, Sexual Selection, and Toxicity in the poison frog *Dendrobates pumilio*.

1. Nova Southeastern University Oceanographic Center, Dania Beach, Florida. August, 2004.
2. Department of Environmental Studies, Florida International University. October, 2004
3. Institute of Food and Agricultural Sciences, Center for Tropical Agriculture, University of Florida, Homestead, FL. January 2005.
4. Department of Biological Sciences, Southeastern Louisiana University, Hammond, LA. February 2005 (2005 Mardi Gras Seminar).
5. Department of Biological Sciences, University of Arkansas, Fayetteville, Arkansas. May 2005.
6. REU Program at the La Selva Biological Station, Organization for Tropical Studies, Puerto Viejo de Sarapiquí, Costa Rica. June, 2005.
7. REU Program at the La Selva Biological Station, Organization for Tropical Studies, Puerto Viejo de Sarapiquí, Costa Rica. June, 2006.

From the Andes to the Amazon and Back Again: Bioadventures in South America.

1. Southeastern Louisiana University, Department of Biological Sciences, Hammond, Louisiana. February 2007