Frank T. Burbrink, Ph.D.

CONTACT INFORMATION:

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CURRENT APPOINTMENTS:

Assistant Curator
Frank T. Burbrink, Ph.D.
Department of Herpetology
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024-5192

Professor Permanante
Universidade Federal do Rio Grande do Norte
Centro de Biociências - DBEZ
Campus Universitário - Lagoa Nova
59078-900 - Natal, RN - Brasil

EDUCATION:

Postdoc - Biology. Louisiana State University (May 2000)—Advisor: David Pollock
Ph.D. - Zoology Louisiana State University (May 2000) —Advisor: Jim McGuire
MS - Biology University of Illinois (Champaign-Urbana; August 1995) —Advisor: Chris Phillips
BS - University of Illinois (Champaign-Urbana; May 1993)

Research Interests:

1) Molecular systematics and statistical phylogenetics
2) Speciation and population genetics
4) Comparative evolutionary biology
5) Historical Ecology
6) Evolutionary history and ecology of reptiles and amphibians

SCHOLARLY STATISTICS (GOOGLE SCHOLAR 20 OCTOBER 2014):
h-index: 30
i10-index: 49
Number Citations: 2987

PUBLICATIONS:

Burbrink, F. T. and E. A. Myers. 2015. Both traits and phylogenetic history influence community structure in snakes over steep environmental gradients. *Ecography (in press).doi: 10.1111/ecog.01148.*

Ruane, S., Raxworthy, C. J., Lemmon, A. R., Lemmon, E.M., and **F. T. Burbrink.** (accepted ms).Comparing species tree estimation with large anchored phylogenomic and small Sanger-sequenced molecular datasets: An empirical study on Malagasy pseudoxyrhophiine snakes. *BMC Evolutionary Biology* (accepted ms).

Burbrink, F. T. and T. J. Guiher. 2015. Considering gene flow when using coalescent methods to delimit lineages of North American pitvipers of the genus *Agkistrodon. Zoological Journal of the Linnean Society* 173: 505-526.

Ruane, S., Carvajal, O. T., and **F. T. Burbrink**.2015. Independent demographic responses to climate change among temperate and tropical milksnakes (Colubridae: Genus *Lampropeltis*). *PLOS ONE* 10(6): e0128543.

Pyron, R. A., and **F. T. Burbrink**. 2015. Contrasting models of parity-mode evolution in squamate reptiles**.** Journal of Experimental Zoology Part B: *Molecular and Developmental Evolution* 324: 467-472.

Fry, B.G, Sunagar, K., Casewell, N., Kochva, E., Scheib, H., Wuster, W., Vidal, N., Young, B., **Burbrink, F.T.,** Pyron, R.A., Vonk, F.J., Roelants, K., and T.N.W. Jackson. 2014. The origin and evolution of the Toxicofera reptile venom system. Chapter 1 in Venomous Reptiles And Their Toxins: Evolution, Pathophysiology And Biodiscovery (B. G. Fry, ed.) Oxford University Press (in press).

Pyron, R. A., G. C. Costa, M.A. Patton, and **F. T. Burbrink**. 2015. Phylogenetic niche conservatism and the evolutionary basis of ecological speciation. *Biological Reviews (in press):* doi: 10.1111/brv.12154

Chen, X., A. D. McKelvy, L. L. Grismer, M. Matsui, K. Nishikawa, and **F. T. Burbrink.** 2014. The phylogenetic position and taxonomic status of the Rainbow Tree Snake *Gonyophis margaritatus* (Peters, 1871) (Squamata: colubridae). *Zootaxa* 3881(6): 532-548.

Pyron, R. A., C. R. Hendry, V. M Chou, E.M. Lemmon, A. R. Lemmong and **F. T. Burbrink**. Effectiveness of phylogenomic data and coalescent species-tree methods for resolving difficult nodes in the phylogeny of advanced snakes (Serpentes: Caenophidia). *Molecular Phylogenetics and Evolution 81: 221-231.*

Leaché, A. D., P. Wagner, C. W. Linkem, W. Böhme, T. J. Papenfuss, R. A. Chong, B. R. Lavin, A. M. Bauer, S. Nielsen, E. Greenbaum, M-O. Rödel, A. Schmitz, M. LeBreton, I. Ineich, L. Chirio, E. A. Eniang, S. Baha El Din, A. R. Lemmon, and **F. T. Burbrink**. 2014. A hybrid phylogenetic-phylogenomic approach for species tree estimation in African*Agama* lizards with applications to biogeography, character evolution, and diversification. *Molecular Phylogenetics and Evolution* 79:215-230.

Pyron, R. A., R. G. Reynolds, and **F. T. Burbrink.** 2014, A taxonomic revision of boas (Serptentes: Boidae). Zootaxa *3846 (2): 249-260.*

Suárez, M., **F. T. Burbrink**, and E. V. Domínguez. 2014. Phylogeographical structure within Boa constrictor imperator across the lowlands and mountains of Central America and Mexico. *Journal of Biogeography (in press).*

Burbrink, F. T. and E. A. Myers. 2014. Body size distributions at community, regional or taxonomic scales do not predict the direction of trait-driven diversification in snakes in the United States. *Global Ecology and Biogeography* 23:490–503.

Pyron, R.A. and **F.T. Burbrink**. 2014. Early origin of viviparity and multiple reversions to oviparity in squamate reptiles. *Ecology Letters* 17: 13-21.

Pyron, R. A., and **F. T. Burbrink**. 2014. Ecological and evolutionary determinants of species richness and phylogenetic diversity for island snakes. *Global Ecology and Biogeograph*ry 23: 848-856.

Ruane, S., R. W. Bryson, R. A. Pyron, and **F. T. Burbrink**. 2014. Coalescent Species Delimitation in Milksnakes (genus Lampropeltis) and Impacts on Phylogenetic Comparative Analyses. *Systematic Biology* 63:231-250.

Jadin, R. C., **F. T. Burbrink**, G. A. Rivas, L. J. Vitt, C. L. Barrio-Amorós, and R. P. Guralnick. 2013. Finding arboreal snakes in an evolutionary tree: phylogenetic placement and systematic revision of the Neotropical birdsnakes. *Journal of Zoological Systematics and Evolutionary Research* 52: 257-264.*.*

Pyron, R.A. and **F.T. Burbrink. 2013.** Phylogenetic estimates of speciation and extinction rates for testing ecological and evolutionary hypotheses. *Trends in Ecology and Evolution* (in press): 10.1016/j.tree.2013.09.007.

Chen, X., Jiang, K., Guo, P., Huang, S., Rao, D., Ding, L., Takeuchi, H., Che, J., Zhang, Y., Myers, E. A., and **F. T. Burbrink.** 2013.Assessing species boundaries and the phylogenetic position of the rare Szechwan Ratsnake, *Euprepiophis perlaceus* (Serpentes: Colubridae), using coalescent-based methods. *Molecular Phylogenetics and Evolution (in press).*

Near, T.J., Dornburg, A., Eytan, R. I., Keck, B. P., Smith, W. L., Kuhn, K. L, Moore, J. A., Price, S. A., **Burbrink, F. T.,** Friedman, M., and P. C. Wainwright. 2013. Phylogeny and tempo of diversification in the superradiation of spiny-rayed fishes. *Proceedings of the Natural Academy Sciences* 31: 12738-12743.

Myers, E.A., Rodríguez-Robles, J. A., DeNardo, D. F. , Staub, R. E. , Stropoli, A. , Ruane, and **F. T. Burbrink.** 2013. Speciation in the California Mountain Kingsnake (Lampropeltis zonata) at a North American Biodiversity Hotspot. *Molecular Ecology* (in press).

Pyron, R. A., **Burbrink, F. T.,** and J. J Wiens. 2013. A phylogeny and revised classification of Squamata, including 4161 species of lizards and snakes. *BMC Evolutionary Biology* 2013, **13**:93 doi:10.1186/1471-2148-13-93.

Guo,P. Zhang, F. G., Li, Q., Li, C., Jiang, K., Pyron, R. A., and **F. T. Burbrink**. 2013. *Lycodon* and *Dinodon*: One Genus or Two? Evidence from Molecular Phylogenetics an d Morphological Comparisons. *Molecular Phylogenetics and Evolution*. 68:144-149.

Colston, T. J., Grazziotin, F. G., Shepard, Vitt, L. J. , Colli, G. R., Henderson, R. W., Hedges, S. B., Bonatto, S., Zaher, H., Noonan, B. P., and **F. T. Burbrink**. 2013. Molecular Systematics and Historical Biogeography of Tree Boas (*Corallus* spp.). *Molecular Phylogenetics and Evolution* 66:953-9.

Pyron, R. A., Kandambi, D., Hendry, C. R., Pushpamal, V., **Burbrink, F. T**., and R. Somaweera. 2013. Genus-level phylogeny of snakes reveals the origins of species richness in Sri Lanka. *Molecular Phylogenetics and Evolution* 66: 969-978.

Chen, X., Huang, S., Guo, P., Colli, G.R., Montes de Oca, A.N., Vitt, L.J., Pyron, R.A., and **F.T. Burbrink**. 2013. Understanding the formation of ancient intertropical disjunct distributions using Asian and Neotropical hinged-teeth snakes (*Sibynophis* and *Scaphiodontophis*: Serpentes: Colubridae). *Molecular Phylogenetics and Evolution* 66:254-261.

Burbrink, F.T., Chen, X., Myers, E.A., Brandley, M.C., and R.A. Pyron. 2012. Evidence for determinism in species diversification and contingency in phenotypic evolution during adaptive radiation. *Proceedings of the Royal Society of London B, Biological Sciences* 279: 4817-4826.

Burbrink, F. T., Ruane*, S., and R. A. Pyron. 2012. When are adaptive radiations replicated in areas? ecological opportunity and unexceptional diversification in West Indian dipsadine snakes (Colubridae: Alsophiini). *Journal of Biogeography* 39: 465-475.

Fujita, M., Leaché, A., **Burbrink, F.T.,** McGuire, J.A. and C. Moritz. 2012. Coalescent-based species delimitation in an integrative taxonomy. *Trends in Ecology and Evolution* 27:480-488.

Myers, E. A. and **F. T. Burbrink**. 2012. Ecological Opportunity: Trigger of Adaptive Radiation. *Nature Education Knowledge* 3(10):23

Huang, S., Ding, L., **Burbrink, F. T**., Yang, J., Huang, J., Ling, C., Chen, X. and Y. Zhang. 2012. A New Species of the Genus *Elaphe* (Squamata: Colubridae) from Zoige County, Sichuan, China. *Asian Herpetological Research* 3: 38–45.

Guo, P., Liu, Q., Xu, Y., Jiang, K., Hou, M., Ding, L., Pyron, R.A., and **F.T. Burbrink**. Out of Asia: Natricine snakes support the Cenozoic Beringian Dispersal Hypothesis. *Molecular Phylogenetics and Evolution* 63:825-833.

Pyron, R.A., and **F.T. Burbrink**. 2012. Trait-dependent diversification and the impact of paleontological data on evolutionary hypothesis testing in New World ratsnakes (tribe Lampropeltini). *Journal of Evolutionary Biology* DOI: 10.1111/j.1420-9101.2011.02440.x.

Pyron, R. A., and **F. T. Burbrink**. 2012. Extinction, Ecological Opportunity, and the Origins of Global Snake Diversity. *Evolution.* 66: 163-178

Burbrink, F. T., and R. Alexander Pyron. 2012. Erratum: Burbrink and Pyron (2011).*Evolution* DOI: 10.1111/j.1558-5646.2011.01492.x.

Burbrink, F.T., Yao*, H., Ingrasci, M., Bryson, R., Guiher*, T.J., Ruane*, S.. 2011. Speciation at the Mogollon Rim in the Arizona Mountain Kingsnake (*Lampropeltis pyromelana*). *Molecular Phylogenetics and Evolution* 60: 445-454.

Burbrink, F. T., and R. Alexander Pyron. 2011. The impact of gene-tree/species-tree discordance on diversification-rate estimation. *Evolution* 65: 1851-1961.

Burbrink, F.T., and B. I. Crother. 2011. Evolution and taxonomy of snakes In R.D. Aldridge and D. M. Sever (eds), *Reproductive biology and phylogeny of snakes.* Volume 9, Reproductive Biology and Phylogeny series, B. G. M. Jamieson (ed). CRC Press, Boca Raton, Florida.

Shepard, D. B., and **F. T. Burbrink**. 2011. Local-scale environmental variation generates highly divergent lineages associated with stream drainages in a terrestrial salamander, *Plethodon caddoensis. Molecular Phylogenetics and Evolution* 59: 399-411.

Pyron, R. A., **Burbrink**, **F. T.,** Colli, G. R., Montes de Oca, A. N.,Vitt, L. J. , Kuczynski, C. A., and J. J. Wiens. 2011. The Phylogeny of advanced Snakes (Colubroidea), with discovery of a new subfamily and comparison of support methods for likelihood trees. *Molecular Phylogenetics and Evolution* 58:329-342.

Ruane, S.,Pyron, R. A., and **F. T. Burbrink**. 2011. Phylogenetic relationships of the Cretaceous frog *Beelzebufo* from Madagascar and the placement of fossil constraints based on temporal and phylogenetic evidence. *Journal of Evolutionary Biology* 24:274-285.

Burbrink, F. T. 2010. Historical versus contemporary migration in fragmented populations. *Molecular Ecology* 19:5321-5323.

Ling, C., Shaoying, L., Song, H., **Burbrink, F. T**., Guo, P., Zhiyu,z S., and Z .Jie. 2010. Phylogenetic analyses reveal a unique species of Elaphe (serpents, Colubridae) new to science. *Asian Herpetological Research* 1: 90-96.

Burbrink, F. T., and R. A. Pyron. 2010. How does ecological opportunity influence rates of speciation, extinction, and morphological diversification in New World ratsnakes (Tribe Lampropeltini)? *Evolution* 64:934-943.

Brandley, M. C., Guiher, T. J., Pyron, R. A., Winne, C. T., and **F. T. Burbrink**. 2010. Does dispersal across an aquatic geographic barrier obscure phylogeographic structure in the diamond-backed watersnake (*Nerodia rhombifer*)? *Molecular Phylogenetics and Evolution* 57:552-560.

Pyron, R. A., and **F. T. Burbrink.** 2010. Hard and soft allopatry: physically and ecologically mediated modes of geographic speciation. *Journal of Biogeography* 37:2005-2015.

Pyron, R. A., and **F. T. Burbrink.** 2009a. Body size as a primary determinant of ecomorphological diversification and the evolution of mimicry in the lampropeltinine snakes (Serpentes: Colubridae). *Journal of Evolution Biology* 22:2057-2067.

Pyron, R. A., and **F. T. Burbrink**. 2009b. Can the tropical conservatism hypothesis explain temperate species richness patterns? An inverse latitudinal biodiversity gradient in the New World snake tribe Lampropeltini. *Global Ecology Biogeography* 18:406-415.

Pyron, R. A., and **F. T. Burbrink**. 2009c. Lineage diversification in a widespread species: roles for niche divergence and conservatism in the common kingsnake, *Lampropeltis getula. Molecular Ecology* 18:3443-3457.

Pyron, R. A., and **F. T. Burbrink**. 2009d. Neogene diversification and taxonomic stability in the snake tribe Lampropeltini (Serpentes: Colubridae). *Molecular Phylogenetics and Evolution* 52:524-529.

Pyron, R. A., and **F. T. Burbrink.** 2009e. Systematics of the Common Kingsnake (Lampropeltis getula; Serpentes: Colubridae) and the burden of heritage in taxonomy. *Zootaxa*:22-32.

Pyron, R. A., **F. T. Burbrink**, and T. J. Guiher. 2008. Claims of Potential Expansion throughout the U.S. by Invasive Python Species Are Contradicted by Ecological Niche Models. *Plos One* 3 (8): e2931. doi:10.1371/journal.pone.0002931.

Burbrink, F. T., and R. A. Pyron. 2008. The taming of the skew: Estimating proper confidence intervals for divergence dates. *Systematic Biology* 57:317-328.

Fontanella, F. M., Feldman, C.R., Siddall, M.E., and **F. T. Burbrink**. 2008. Phylogeography of *Diadophis punctatus:* Extensive lineage diversity and repeated patterns of historical demography in a trans-continental snake. *Molecular Phylogenetics and Evolution* 46:1049-1070.

Shepard, D. B., and **F. T. Burbrink.** 2009. Phylogeographic and demographic effects of Pleistocene climatic fluctuations in a montane salamander, *Plethodon fourchensis*. *Molecular Ecology*18:2243-2262.

Burbrink, F. T., and T. A. Castoe. 2009. Molecular Snake Phylogeography. Pp. 38-77 *in* S. J. M. a. R. A. Siegel, ed. Snakes: Applied Ecology and Conservation Cornell University Press, Ithaca.

Burbrink, F. T., Fontanella, F., Pyron, R. A., Guiher, T. J. and C. Jimenez. 2008. Phylogeography across a continent: The evolutionary and demographic history of the

North American racer (Serpentes : Colubridae : Coluber constrictor). *Molecular Phylogenetics and Evolution* 47:274-288.

Guiher, T. J., and **F. T. Burbrink**. 2008. Demographic and phylogeographic histories of two venomous North American snakes of the genus *Agkistrodon*. *Molecular Phylogenetics and Evolution* 48:543-553.

Shepard, D. B., and **F. T. Burbrink.** 2008. Lineage diversification and historical demography of a sky island salamander, *Plethodon ouachitae*, from the Interior Highlands. *Molecular Ecology* 17:5315-5335.

Burbrink, F. T., and R. Lawson. 2007. How and when did Old World ratsnakes disperse into the New World? *Molecular Phylogenetics and Evolution* l 43:173-189.

Bryson, R. W., Pastorini, J., **Burbrink**,**F. T**., and M. R. J. Forstner. 2007. A phylogeny of the *Lampropeltis mexicana* complex (Serpentes : Colubridae) based on mitochondrial DNA sequences suggests evidence for species-level polyphyly within Lampropeltis. *Molecular Phylogenetics and Evolution* 43:674-684.

Jiang, Z. J., Castoe, T. A. , Austin, C. C. , **Burbrink, F. T.,** Herron, M. D. , McGuire, J. A., Parkinson, C. L., and D. D. Pollock. 2007. Comparative mitochondrial genomics of snakes: extraordinary substitution rate dynamics and functionality of the duplicate control region. BMC Evol Biol 7:123: doi:10.1186/1471-2148-7-123

Burbrink, F. T. 2005. Inferring the phylogenetic position of *Boa constrictor* among the Boinae. *Molecular Phylogenetics and Evolution* 34:167-180.

Lawson, R., Slowinski, J. B., Crother, B. I., and **F. T. Burbrink.** 2005. Phylogeny of the Colubroidea (Serpentes): New evidence from mitochondrial and nuclear genes. *Molecular Phylogenetics and Evolution* 37:581-601.

Lawson, R., Slowinski, J. B., and **F. T. Burbrink**. 2004. A molecular approach to discerning the phylogenetic placement of the enigmatic snake Xenophidion schaeferi among the Alethinophidia. *Journal of Zoology* 263:285-294.

Burbrink, F. T. 2002. Phylogeographic analysis of the cornsnake (*Elaphe guttata*) complex as inferred from maximum likelihood and Bayesian analyses. *Molecular Phylogenetics and Evolution* 25:465-476.

Burbrink, F. T. 2001. Systematics of the eastern ratsnake complex (*Elaphe obsoleta*). *Herpetological Monographs:* 1-53.

Burbrink, F. T., Lawson, R. and J. B. Slowinski. 2000. Mitochondrial DNA phylogeography of the polytypic North American rat snake (*Elaphe obsoleta*): A critique of the subspecies concept. *Evolution* 54:2107-2118.

Burbrink, F. T., Phillips, C. A. and Heske, E. J. 1998. A riparian zone in southern Illinois as a potential dispersal corridor for reptiles and amphibians. *Biological Conservation* 86:107-115.

GRANTS:

Pending $4,000,000 (2015). *NSF – Major Research Instrumentation Grant for the Acquisition of a Data Storage Systems for Enabling Data Sharing and Preservation.* Next Generation High Performance Computing Center Instrumentation, with PI Paul Muzio (CSI/CUNY), Mike Themis Lazaridis (Institute for Macromolecular Assemblies, CCNY), Mark Arend (NOAA CREST, CCNY), Mike Kress (CSI/CUNY).

Pending $1,100,000. *NERC-NSF*. Testing for alternative modes of speciation: a multi-taxon assessment for Malagasy herpetofauna using novel tests for niche conservatism and genomic data. Co-PIs: Christopher Raxworthy (AMNH) and Richard Pearson (UCL).

$16,226 (2015) NSF-DDIG Awarded to my graduate student Edward Myers. Doctoral Dissertation Research: Testing for Ecological Speciation with Phylogeographic Data.

$10,000 (2014) *CSI/CUNY Provost's Research Scholarship and Dean's Scholarship Award* --- How does speciation occur at biodiversity hotspots.

$6,000 (2013). *PSC-CUNY-Award.* The proximate origins of biodiversity at the North American Western Continental Divide.

$650,000 (2013). *NSF -Systematic Biology*-An inclusive phylogeny for the Pseudoxyrhophiine snakes in Madagascar. Co-PIs: Christopher Raxworthy (AMNH) and Richard Pearson (AMNH).

$150,000 (2012). *CAPES-Science Without Borders: Special Visiting Researcher.*- From Brazil:http://www.cienciasemfronteiras.gov.br/web/csf-eng/opportunities-for-individuals-from-abroad/. Co-PI Adrian Garda (UFRN-Brasil).

$1,311,801 (2011). *NSF -Major Research Instrumentation Grant for the Acquisition of a Data Storage Systems for Enabling Data Sharing and Preservation.* with PI Mike Kress (CSI), Co- Paul Muzio (CSI), Mike Piasecki (CCNY), Mark Arend (CCNY).

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$50,000 (2011-2012). The Species Discovery and Conservation Project! Burbrink Non-profit.

$11,300 (2011). *PSC-CUNY* -Enhanced Grant-The impact of adaptive radiation on ecological and morphological diversification in global ratsnakes.

$4,500 (2010). *PSC-CUNY* -Assessing the utility of Z-linked markers for estimating species trees in the milksnake complex (*Lampropeltis triangulum*).

$60,000 (2009). *CUNY Collaborative Incentive Grant Program* -A North American bodiversity hotspot: How the Mississippi River functions as an engine Of species diversification? Co-PI Mike Hickerson (CCNY).

$3,000 (2008) *PSC-CUNY Research Award* -Estimating species trees and cryptic diversity in two North American venomous snakes of the Genus *Agkistrodon*.

$2500 (2006) *Hyuck Preservation Grant* -Population genetics of garter snakes (*Thamnophis sirtalis).*

$4793 (2006) *PSC CUNY Research Award* -Systematics of the Lampropeltini.

$95,181 (2005) *Arkansas Game and Fish Commission* -Reassessment of species boundaries in the endemic Arkansas salamanders of the *Plethodon ouachitae* complex using molecular phylogeographic techniques.

$150,000 (2005) *Genomics Education Research Fund* from Beckman Coulter.

$50,000 (2005) *CSI/CUNY Match* for the Genomics Education Research Fund from Beckman Coulter (above).

$5,000 (2005) *PSC-CUNY Research Award* -Systematics of the Lampropeltini 2006.

$4,500 (2004) *PSC-CUNY Research Award* -Molecular Phylogeography of the Transcontinental Polymorphic Racer (*Coluber constrictor*). Renewal.

$4,500 (2003) *PSC-CUNY Research Award* -Molecular Phylogeography of the Transcontinental Polymorphic Racer (*Coluber constrictor*).

$2,000.00 *Summer Research Stipend from CSI/CUNY* -Evolution of the Transcontinental Polymorphic Racer (*Coluber constrictor*).

Smaller grants obtained as a graduate student ($1400 each<):

Morphological variation within North American Ratsnakes *(Elaphe obsoleta*). 1998. Theodore Roosevelt Memorial Fund, the America Museum of Natural History.

Morphological variation within North American Ratsnakes *(Elaphe obsoleta*). 1998. *Ernst Mayr Grant*, The Museum of Comparative Zoology at Harvard University.

Morphological variation within North American Ratsnakes *(Elaphe obsoleta*). 1997. *Charles Stearn's Grants-in-Aid*, The California Academy of Sciences.

Morphological variation within North American Ratsnakes *(Elaphe obsoleta*). 1996. *Harold Dundee Herpetology Research Fund* - The Louisiana State Unviersity Museum of Natural Science.

Cache River Reptile and Amphibian Corridor. 1994. *Illinois Department of Conservation Division of Natural Science Grant.*

NONPROFIT:

The Species Discovery and Conservation Project!
http://www.species-discovery.org/

In 2011, I started a nonprofit with my wife that focuses on discovering new species across the globe. The non-profit brings my expertise using genomic, morphological and ecological data to examine species boundaries. Ultimately, in collaboration with teams of international researchers and students, we identify new species and investigate processes of diversification to identify biodiversity hotspots.

RESEARCH GROUP

In 2007, I collaborated with Dr. Mike Hickerson to found the NYC Molecular Evolution Group, which meets semi-monthly with the goal of disseminating new techniques for studying of molecular evolution, phylogenetics, population genetics, and biogeography. The group unites the talents of professors and graduate students in the NYC area to tackle all aspects to better understand molecular evolution.

AWARDS:

A new snake species *Herpetoreas burbrinki*, was named in my honor, Guo et al. 2014. A taxonomic revision of the Asian keelback snakes, genus *Amphiesma* (Serpentes: Colubridae: Natricinae), with description of a new speciesZootaxa 3873: 425-440.

Named top reviewer for the journal *Molecular Ecology* 2012.

Nominated for president of the Society for the Study of Amphibians and Reptiles. 2010.

Recipient of the Slowinksi award for excellence in snake systematics for the paper "How and when did Old World ratnsakes invade the New World" by Burbrink and Lawson (2007). 2008.

Nominated by the Dean of Science at the College of Staten Island for the 2004

NYC Mayor's Awards for Excellence in Science and Technology. 2004.

Graduate Student of the Year - Louisiana State University Museum of Natural Science. 2000.
Graduate Student Organization Award, Louisiana State University. 1996.

PRESENTATIONS AND ABSTRACTS:

Burbrink, F. T. 2014. Integrating phylogenetic and trait data to understand how snake communities form over steep environmental gradients in the Nearctic. Evolution (Raleigh, NC).

McKelvy*[§], A. D. and F. T. Burbrink. 2014. Ecological divergence across two North American biodiversity hotspots in the Yellow-Bellied Kingsnake (*Lampropeltis calligaster*). Evolution (Raleigh, NC).

Chen*[§], X., A. Lemmon, E. Lemmon and F. T. Burbrink Exploring the origins and diversification of ratsnakes using anchored hybrid enrichment to generate 100s of loci for species tree estimation. Evolution (Raleigh, NC).

Burbrink§, F.T., Brandley,M., Myers, E*., and A. Pyron. 2012. Are processes of diversification in New World squamates deterministic? The 7th World Congress of Herpetology (Vancouver, Canada).

Chen§*, X., and F. T. Burbrink. 2012. How does ecological niche change through time in serially diversifying globally distributed ratsnakes? The 7th World Congress of Herpetology (Vancouver, Canada).

McKelvy§*, A. and F. T. Burbrink. Phylogeography of *Lampropeltis calligaster*. The 7th World Congress of Herpetology (Vancouver, Canada).

Myers§*, E. and F. T. Burbrink. 2012. Comparative Phylogeography Across the Cochise Filter Barrier. The 7th World Congress of Herpetology (Vancouver, Canada).

Ruane, §* S. Bryson, R. J., Pyron, R. A. and F. T. Burbrink. 2012. Speciation in the Milksnake (Lampropeltis triangulum). The 7th World Congress of Herpetology (Vancouver, Canada).

Burbrink§, F. T., S. Ruane*, R. A. Pyron. 2011. The impact of gene-tree/species-tree discordance on estimates of diversification. Annual Meeting of the Society of Evolutionary Biologists and Society of Systematic Biologists (Norman, OK).

Ruane§*, S., R. Bryson, R. A. Pyron and F. T.Burbrink. 2011. Gene-tree/species-tree discordance in *Lampropeltis.* Annual Meeting of the Society of Evolutionary Biologists and Society of Systematic Biologists (Norman, OK).

Chen§*, Xin and F. T. Burbrink. 2011. Rates and patterns of morphological evolution in rapidly diversifying ratsnakes across the globe. Annual Meeting of the Society of Evolutionary Biologists and Society of Systematic Biologists (Norman, OK).

Myers§*, R., R. A. Pyron, and F. T. 2011. Burbrink
Are morphological and ecological patterns of diversification linked in New World Natricine snakes? Annual Meeting of the Society of Evolutionary Biologists and Society of Systematic Biologists (Norman, OK).

Burbrink§, F. T. and R. A. Pyron. 2010. How Does Ecological Opportunity Influence Rates of Speciation and Morphological Diversification in New World Ratsnakes (Tribe Lampropeltini)? The Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.

Burbrink§, F. T. and R. A. Pyron. 2010. Dating Methodology: Dating ecological opportunity and adaptive radiation in the New World ratsnakes (tribe Lampropeltini). Northeastern Symposium on Divergence Dating (Rutgers University).

Ruane*§, S.R., R.A. Pyron and F. T. Burbrink. 2010. Fossil applications: Quantifying global and local effects of calibration-induced error in molecular divergence time estimation. Northeastern Symposium on Divergence Dating (Rutgers University).

Pyron§, R. A. and F. T. Burbrink. 2010. Niche Evolution and Systematics of the Common Kingsnake (Lampropeltis getula). The Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.

Chen*§,, X and F. T. Burbrink. 2010. Patterns of Diversification in Old World Ratsnakes. The Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.

Ruane*[§], S. R., W. Bryson Jr and F. T. Burbrink. 2010. Gene-tree/species-tree discordance within *Lampropeltis.* The Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.---WINNER OF BEST STUDENT PRESENTATION.

Ruane*[§], S.R., R.A. Pyron and F. T. Burbrink. 2009. Quantifying global and local effects of calibration-induced error in molecular divergence time estimation. Society for the Study of Evolution Annual Meetings, Portland, Oregon.

Ruane*[§], S. R., W. Bryson Jr and F. T. Burbrink. 2008. Phylogeographic and demographic history of the milksnake, *Lampropeltis triangulum:* the impact of glacial cycles on a pan-tropical vertebrate. Joint Meeting of Ichthyologists and Herpetologists, Montréal, Quebec, Canada.

Pyron*[§] , R. A.and Frank T. Burbrink. 2008. Ancestral character state reconstruction and divergence time estimation using multi-locus datasets. Joint Annual Meeting of the American Society of Naturalists, Society of the Study of Evolution, and the Society of Systematic Biologists. Minneapolis, Minnesota, USA.

Shepard[§], D. , K. Irwin, F. T. Burbrink. 2008. Reassessment of species boundaries in salamanders of the *Plethodon ouachitae* complex. Arkansas Wildlife Action Plan Conference, Mt. Magazine State Park, Arkansas, USA.

Shepard[§], D. and F. T. Burbrink. 2008. Lineage diversification and historical demography in a sky island salamander. Joint Annual Meeting of the American Society of Naturalists, Society of the Study of Evolution, and the Society of Systematic Biologists. Minneapolis, Minnesota, USA.

Guiher*[§], T. J. and F. T. Burbrink. 2008. Evolution and Biogeography of the genus *Agkistrodon*. Joint Meeting of Ichthyologists and Herpetologists, Montréal, Quebec, Canada.

Burbrink[§] F. T., K. Irwin. and D. Shepard. 2007. Sky Island Demographics: Evolutionary History of *Plethodon ouachitae.* Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO.

Shepard[§], D., K. I. Irwin, and F. T. Burbrink. 2007. A new perspective on the morphological and genetic variation among *Plethodon ouachitae* from different mountains in the Ouachita range. Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO.

Guiher*[§], T. J. and F. T. Burbrink. 2007. Dissimilar phylogeographic histories in the co-distributed sister taxa *A. contortrix* and *P. piscivorus.* Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO.

Pyron*[§], R. A. and F.T. Burbrink. 2007. Phylogeography at a continental scale: historical biogeography of the common kingsnake (*Lampropeltis getula*). Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO.

Burbrink[§], F.T., D. Shepard, and K. Irwin. Sky Island Demographics: Evolutionary of *Plethodon ouachitae*. 2007 Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO.

Burbrink[§], F. T. , F. Fontanella*, R. A. Pyron*, T. J. Guiher* and C. J. Jimenez*. 2006. The evolution of niche in the lineages of the North American racers (*Coluber constrictor*). Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana.

Pyron*[§], R. A. and F. T. Burbrink. 2006. How old are the Colubroidea? Estimating the timing and rates of divergence within the advanced snakes. Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana.

Guiher*[§], T. J. and F. T. Burbrink. 2006. Preliminary phylogeography of two *Agksitrodon* species, *Agkistrodon contortrix* and *Agkistrodon piscivorus*. Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana.

Fontanella*[§], F., F. T. Burbrink, and M. Siddall. 2006. Phylogeography, niche modeling, and microsatellite variation in California Ringnecks(*Diadophis punctatus*). Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana.

Burbrink[§], F. T., Lawson, and J. Rodriguez. 2005. Ancestral area and divergence date estimation for ratsnakes." Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in Tampa, Florida.

Fontanella[§], F., C. Feldman, and F. Burbrink. 2005. Preliminary phylogeography of the ringneck snake (*Diadophis punctatus*). Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in Tampa, Florida.

Jimenez*[§], C. G., F. T. Burbrink, and R. Lawson. 2005. Genetic variation in Northeastern United States populations of *Thamnophis sirtalis.* Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in Tampa, Florida.

Saker* [§], S. and F. T. Burbrink. 2005. Lampropeltinine snakes part I: the search for phylogenetically useful genes. Poster presented at the Louis Stokes Alliance for Minority Participation in Hoboken, New Jersey.

Burbrink[§], F. T., D. Carpenter and R. Lawson. 2004 "Phylogenetics of the Old and New World Rat Snakes (*Elaphe* auct.) as Inferred from Mixed Model Analyses of Nuclear and Mitochondrial Genes." Published in the book of abstracts at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in Norman, Oklahoma.

Burbrink[§], Frank T., J. Faith, O.O. Pollock. 2002 "Genomic Biodiversity in Squamate Mitochondrial DNA Genomes." Annual Meeting of the Society of Evolutionary Biologists and Society of Systematic Biologists Meetings in Champaign, IL.

§ = presenter
*=CSI Grad Students

INVITED LECTURES:

Accessing processes that drive diversification and community assemblage. Instituto de Ecología A.C. (INECOL) IX Student Colloquium on Phylogeography and Biogeography. 3 October. 2014

The processes that drive diversification and community assemblage. Organismic and Evolutionary Biology, Harvard University. 26 February 2014.

The processes that drive diversification and community assemblage. Department of Biological Sciences-University of Idaho. 22 October 2013.

Are processes of diversification deterministic given ecological opportunity? 28th Annual Meeting of the Society of Population Ecology in Chibin, Japan October 2012.

Being an evolutionary biologist. Toho University. October 2012.

Are processes of diversification deterministic given ecological opportunity? Yale University. September 2012.

Are processes of diversification deterministic given ecological opportunity? The George Washington University September 2012.

Are processes of diversification deterministic given ecological opportunity? The American Museum of Natural History/RGGS seminar series. March 2012.

Ecological opportunity and the explosion of diversification in ratsnakes. Department of Ecology, Evolution and Natural Sciences, Rutgers University. October 2010.

Ecological opportunity influence rates of speciation, extinction and morphological diversification in New World ratsnakes (tribe Lampropeltini)? Academy of Natural Sciences (Philadelphia). May 2010.

Ecological opportunity and the explosion of diversification in ratsnakes. Portland State University. April 2009.

Phylogeography of North American Reptiles and Amphibians. Herpetology Course at Columbia in April 2009.

A combined coalescent and niche modeling approach to detecting barriers to dispersal: an example form the diamond back watersnake. Ecology and Evolutionary Biology Group at CSI/CUNY. 2008.

A Phylogenetic approach to examining Batesian Mimicry in Lampropeltinine Snakes. Department of Biology at Queens College. 2007.

A Phylogenetic approach to examining Batesian mimicry in Lampropeltinine Snakes. Department of Biology at Hofstra University. 2006.

A Phylogenetic approach to examining Batesian mimicry in Lampropeltinine Snakes Ecology and Evolutionary Biology Group at CSI/CUNY. 2006.

The evolution of niche in the lineages of the North American racers (*Coluber constrictor*). Invited speaker for the Slowinksi Symposium at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana. 2006.

Ancestral areas, ancient morphologies and molecular systematics of Lampropeltine snakes. Department of Biology at Stony Brook University. 2005.

Ancestral areas, ancient morphologies and molecular systematics of Lampropeltine snakes. Department of Biology at the City College of New York. 2005.

The review process for a PSC-CUNY Research Award. Presented at the PSC-CUNY Research Award Application Workshop. 2005.

Phylogeographic trends among North American snake taxa as inferred from molecular and morphological Data. Biological Sciences Seminar Series at Queens College/CUNY. 2004.

Comparative phylogeography of North American snake taxa as inferred from molecular and morphological Data. Biological Sciences Seminar Series at Long Island University-Brooklyn. 2003.

Comparative snake phylogeography in North America. Keynote Speaker at the Annual Kansas Herpetological Society at the University of Kansas in Lawrence, Kansas. 2002.

Systematics of the ratsnake (*Elaphe obsoleta*) complex and the cornsnak (*Elaphe guttata*) complexes: A Bayesian Approach. Biological Sciences seminar series at the University of Louisiana in Hammond. 2001.

The Evolution of snakes. Bluebonnet Nature Center in Baton Rouge, Louisiana as part of Louisiana Snake Festival. 1999.

Snakes Alive. The Zachary Public Library in Zachary, Louisiana. 1998

Snakes of Louisiana. Goodwood Public Library , Baton Rouge, Louisiana. 1997.

Snakes of Louisiana. Louisiana State University Museum of Natural Science. 1997.

Systematics of the North American rat snake (*Elaphe obsolete)*. Louisiana Herpetological Research Group meeting in Cocodrie, Louisiana. 1997.

Snakes of Louisiana. Kennelworth Middle School, Baton Rouge, Louisiana. 1997.

Factors determining richness of reptile and amphibian species in a riparian wildlife dispersal corridor. The first Illinois Renewable Natural Resources Conference in Springfield, Illinois. 1995.

POPULAR PRESS COVERAGE:

NYTime. 23 December 2013. "The old snake-and-egg question." Science Times report on Pyron and Burbrink 2014.

ScienceDaily. 8 May 2013. "Biologist maps the family tree of all known snake and lizard groups."

ScienceDaily. 17 July 2013. "Family tree of fish yields surprises. "

SciTechDaily. 16 July 2013. "Scientists detail the evolutionary Success of Spiny-Rayed Fishes)"

Bioscience ---Article on phylogeography (Spring 2009).

FOXNews Biologists: Deadly Pythons May Not Get Out of Florida (13 August 2008).

US News & World Report Will Deadly Pythons Spread Beyond Florida? (13 August, 2008).

CSI Newsmakers CSI Professor Receives Prestigious Award for Research in Snake Systematics(6 October 2008).

AAAS EurekAlert! Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests (12 August 2008).

ScienceDaily Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests (12 August 2008).

Eureka! Science News Burmese Pythons Will Find Little Suitable Habitat Outside South Florida. (13 August, 2008).

Center for North American Herpetology coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." (13 August 2008).

RedOrbit Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests (12 August 2008).

Science News Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests" (13 August 2008).

United Press International Study: Pythons unlikely to spread far (13 August 2008).

LiveScience Will Deadly Pythons Spread Beyond Florida? (13 August 2008).

Yahoo! News Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, StudySuggests (13 August 2008).

AMA Tech Tel (13 August 2008)---Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." 13 August 2008).

FirstScience News Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests (13 August 2008).

Science Centric Burmese Pythons Will Find Little Suitable Habitat Outside South Florida, Study Suggests (13 August 2008).

Science Codex--- Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." 13 August 2008).

PhysOrg New research suggests Burmese pythons will find little suitable habitat outside South Florida (13 August 2008).

LabSpaces New research suggests Burmese pythons will find little suitable habitat outside South Florida (13 August 2008).

Official Wire--- Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." (13 August 2008).

Nat Geo News Watch---Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." 13 August 2008).

The Irish Times Everglades snake struggles to gain ground (14 August 2008).

The Money Times India ---Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." (14 August 2008).

USA Today "Burmese pythons may not be such a climate change threat" (18 August, 2008).

ScienceFair---Coverage of our paper "Pyron*, R. A., F. T. Burbrink, and T. J. Guiher*. 2008. Claims of potential expansion throughout the US by invasive python species are contradicted by ecological niche models. *PLoS ONE* 3(8):e2931." (14 August 2008).

The Snake Charmer Published by Hyperion Books. Burbrink and his research are mentioned in this book (2008).

NY Times (Science Times) "Memorial to Snake Lover Carved Into Herpetology Lexicon." by Anahad O'Connor (31December 2002).

Science Magazine "Epitaph for a snake lover" Constance Holden (10 January 2002).

Staten Island Advance "CSI Professor Discovers New Species of Snake" Robert Gavin (26 November 2002).

Times Picayune (New Orleans) "Researcher has scaly legacy: Corn snake named for ex-LSU teacher" by Mark Schleifstein (6 January 2003).

Environmental News Service New Corn Snake Discovered (2 December 2002).

National Geographic Television. Television Excerpt on my discovery of a new species of snake (2002).

BBC Wild Discoveries Magazine Article on my discovery of a new species of snake (2002).

Outside Magazine "New Species of snake named in mentor's honor" (2002).

Photos in print:

Published Photographs in "Reptiles and Amphibians of New York State: Identification, Natural History and Conservation" by Gibbs, J, A. Breisch, P. K. Ducey, G. Johnson, J. Behler and R. Bothner (2007).

Curiculum development:

Revised Master's Degree Program in Biology at CSI/CUNY with Dr. William L'Amoreaux 2011.

Bioinformatics at the College of Staten Island. 2003.

Teaching record:

2015, Biology 70603: Principles of Systemtics (Doctoral course)

2014, Biology 322: Evolution

2014 "Next generation sequencing for phylogenetics and phylogeography" at the National Evolutionary Synthesis Center (NESCent) with Moriarity-Lemmon, Lemmon, Brown, Ané, Bybee and Weisrock.

2013 (June 8th): "Next generation sequencing for phylogenetics and phylogeography" at the National Evolutionary Synthesis Center (NESCent) with Moriarity-Lemmon, Lemmon, Kubatko, Brown, Ané, Bybee and Weisrock.

2014, Biology 70603: Principles of Systemtics (Doctoral course)

2013, Biology 322: Evolution

2012: One week of "Coalescent methods for phylogeographic analysis" as part of the phylogeography/population genetics course graduate course in at Universidade Federal do Rio Grande do Norte Centro de Biociências in Brazil.

Fall 2012-Spring 2013: Sabbatical from CSI/CUNY

2012, Biology 70603: Principles of Systematics (Doctoral course)

2011, Biology 79011: Seminar in Systematics (Doctoral course)

2010, Biology 79011: Seminar in Systematics (Doctoral course)

2009, Biology 322: Evolution

2009, Biology 79011: Seminar in Systematics (Doctoral course)

2008, Biology 322: Evolution

2008, Biology 79011: Seminar in Systematics (Doctoral course)

2007, Biology 322: Evolution

2007, Biology 79011: Seminar in Systematics (Doctoral course)

2006, Biology 272: Biostatistics

2006, Biology 605: Statistics (Master's Course)

2006, Biology 79011: Seminar in Systematics (Doctoral course)

2005, Biology 181: General Biology II: Laboratory

2005, Biology 79011: Seminar in Systematics (Doctoral course)

2005, Biology 272: Biostatistics

2005, Biology 322: Evolution

2005, Biology 79302: Molecular Systematics and Ecology of Vertebrates (Doctoral course)

2004, Biology 181: General Biology II: Laboratory

2004, Biology 79011: Seminar in Systematics (Doctoral course)

2003, Biology 213: Vertebrate Zoology

2003, Biology 181: General Biology II: Laboratory

2003, Biology 272: Biostatistics

2003, Biology 322: Evolution

2002, Biology 272: Biostatistics

2002, Biology 171: General Biology I: Laboratory

EDITORSHIP:

Associate Editor for the journal *Evolution* June 2013-prsent.

Associate Editor for the peer-reviewed journal *Asian Herpetological Research.* 2010-present.

Associate Editor for the peer-reviewed journal *Herpetologica.* 2004-2009.

Member of the editorial staff for the peer-reviewed journal *Molecular Phylogenetics and Evolution.* 2003-Present.

SERVICE TO THE RESEARCH COMMUNITY:

Board of Directors for the Society for the Study of Reptiles and Amphibians (SSAR) Fall 2012-Present.

Board of Governors of the American Society of Ichthyologists and Herpetologists. 2007-present.

Taxonomic names committee for the Society for the Study of Amphibians and Reptiles. 2006-present.

The Scientific Advisory Board (SAB) of the Reptile Database (http://www.reptile-database.org).

Symposium moderator at the Evolution Meetings. Raleigh, NC 2012.

Symposium moderator at the World Congress of Herpetology. Vancouver, Canada 2012.

Symposium moderator at the Joint meeting of The American Society of Ichthyologists and Herpetologists. Providence, Rhode Island. 2010.

Judging committee for the Storer Awards at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in St. Louis, MO. 2007.

Symposium moderator at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana. 2006.

Banquet MC for the Slowinski dinner at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana. 2006.

Slowinski Symposium organizer (along with Brian Crother and Carol Spencer) at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in New Orleans, Louisiana. 2006.

Resolutions committee for the American Society of Ichthyologists and Herpetologists. 2006-present.

Moderator for Herpetological Systematics Symposium at the Joint meeting of the American Society of Ichthyologists and Herpetologists and Herpetologists' League in Tampa, Florida. 2005.

Chair of judging committee for the Storer Awards at the Joint meeting of The American Society of Ichthyologists and Herpetologists and the Herpetologists' League in Norman, Oklahoma. 2004.

Chair of three-person panel administering the grant *Joseph B Slowinski Award for Excellence in Snake Systematics. 2004*-2006.

Member of three-person panel administering the grant *Joseph B Slowinski Award for Excellence in Snake Systematics.* 2003-2006.

Member of the editorial staff of *Contemporary Herpetology* (a peer reviewed scientific journal. 1998- Present.

Regular reviewer of grants for NSF, National Geographic, and the Lewis and Clark Fund.

Panel Member for NSF DEB regularly since 2009.

Ad hoc manuscript reviewer for *Science, Nature, PNAS, Ecology Letters, Systematic Biology, BMC Evolution, Molecular Ecology, Evolution, Molecular Phylogenetics and Evolution, Journal of the Linnean Society, Herpetologica, Journal of Herpetology, Copeia, Herpetologica, and Herpetological Review* 1998- Present.

SERVICE TO THE COMMUNITY:

Participant in the Graduate School Fair at CSI/CUNY. 2007.

Presented lecture "Biological Research at the College of Staten Island" For NYC High School Advisors at the City College of New York. 2004.

Presented public lectures on snake diversity and evolution for the local Baton Rouge, LA school system and libraries. 1997-1999.

Planned seminar and invited speakers to present papers weekly at the Louisiana State University Museum of Natural Science. 1996.

SERVICE TO THE DOCTORAL PROGRAM (CUNY):

Chair of Ecology, Evolutionary Biology and Behavioral Subprogram. 2010-Present.

Committee for revising the graduate handbook for the Doctoral Program in Biology at the CUNY Graduate Center. 2008.

Graduate Council at the CUNY Graduate Center. 2008-present.

Graduate Studies Committee at CSI/CUNY. 2007-present.

Graduate Deputy Chair at CSI/CUNY for the doctoral Biology program. 2003-2010.

Advisory Committee Subprogram Ecology, Evolutionary Biology and Behavior at the CUNY Graduate School. 2003-Present.

Review Staff for PSC-CUNY Award for Biological Sciences 2003-Present.

Member of the Doctoral Subprogram in Ecology, and Evolutionary Biology Advisory Committee. 2003-present.

Appointed to Biology Graduate Faculty, EEB. 2002-Present.

SERVICE TO THE COLLEGE OF STATEN ISLAND:

Search Committee for Dean of Science 2010-2011.

Coordinator of CSI-CUNY's Master's in Biology Program. 2007-present.

Search committee for the Dean of Research and Graduate Studies at CSI/CUNY. 2008-2009.

Search committee for the Conservation Biologist position in the Biology Department at CSI/CUNY. 2008-2009.

Louis Stokes Alliance for Minority Participation with two students, Cynthia Jimenez and Samy Saker, conducting research in my lab. 2005-2007.

Search committee for Collaborative Computer Science position at CSI/CUNY. 2005.

Search committee for the Bioinformatics in the Biology Department at CSI/CUNY. 2005.

Member of the Bioinformatics Committee, which obtained college support for new computers and supplies. 2004-2005.

Member of Typhon Computer Cluster Committee at CSI/CUNY. 2003.

Hosted new faculty at the New Faculty Orientation at CSI/CUNY. 2003.

Search committee for the Theoretical Ecologist position in the Biology Department at CSI/CUNY. 2003.

Search committee for the Field Ecologist position in the Biology Department at CSI/CUNY. 2003.

Participated in student mentoring for the Office of New Student Orientation and CSI Plus mentoring program. 2003.

POSTDOCS IN MY LAB:

Donald B. Shepard "Species boundaries within members of the *Plethodon ouachitae* complex." 2009.

DOCTORAL STUDENTS IN MY LAB:

CURRENT:

Alex McKelvy. Cophylogoegraphy of snakes across southeastern North America.2010-present.

Edward Myers. Snake Community Divergence at North American Biogeographic Barriers. 2010-present.

Xin Chen. Adaptive radiation in ratsnakes. 2009-present.

Arianna Kuhn. Processes of biodiversity accumulation in Madagascar. 2014-present.

GRADUATED:

Sara Ruane (Ph.D. Student). Species tree relationships within milksnake (*Lampropeltis triangulum*). Finished 2012. Currently a postdoc at the American Museum of Natural History.

Tim Guiher (Ph.D. Student). Comparative molecular phylogeography and demography within New World venomous snakes of the genus *Agkistrodon*. Finished 2011. Currently a postdoc at the American Museum of Natural History.

Alex Pyron (Ph.D. Student). Systematics and historical biogeography of lampropeltinine snakes. Finished 2010. Currently Assistant Professor at the George Washington University.

Frank Fontanella (Ph.D. Student). "Phylogeography of the ringneck snake (*Diadophis punctatus*)." Finished 2009. Lecturer East Kentucky University.

CO-ADVISED BRAZILIAN GRADUATE STUDENTS IN MY LAB:

Diego Santana. Phylogeography of amphibians across the Brazilian Caatinga. Co-advised with Adrian Garda at UFRN, BR.

Eliana Faira. Phylogeography of *Cnemidophorus ocellifer*. Co-advised with Gabriel Costa at UFRN, BR.

Vinícius São Pedro. Phylogeography of *Dermatonotus muelleri* . Co-advised with Adrian Garda at UFRN, BR.

Tais Costa. Processes of lizard community assemblage in the Caatinga of Brazil. Co-advised with Adrian Garda at UFRN, BR.

MASTER'S STUDENTS IN MY LAB:

Jamie Burgoon. 2012-present. Speciation in *Coluber contrictor* at the Florida Peninsula and Continental US Connection.

Anthony Barruso. 2014. Speciation in the Mexican kingsnakes.

UNDERGRADUATES IN MY LAB:

Peter Mikhail --- Researching: Phylogeography and the influence of past environments on the populations of the rare Florida Short-tailed Snake (*Lampropeltis extenuatum*).

Mays Jumah --- Researching: Phylogeography and the influence of past environments on the populations of the rare Florida Short-tailed Snake (*Lampropeltis extenuatum*).

Rosalie Zawadzki---Researching: Phylogeography and the influence of past environments on the populations of Mexican Kingsnakes (*Lampropeltis mexicana*).

Vincent Fragapane --- Researching: Co-historical demography in ectothermic vertebrate communities in eastern North America. 2009-2012.

Sandy Mahamed---Researching: Variation in cancer blocking genes (disintigrins) in copperheads (*Agkistrodon contortrix*). 2008.

Samy Saker---Researching: The use of new nuclear genes to study the phylogenetic history of lampropeltinine snakes. 2005-2006.

Oluremi Ogunsanya. ---Researching: The use of the oncogene, C-mos, to examine relationships among snakes within the tribe Lampropeltini. 2005.

Paulina Kozlowski—Studying: DNA amplification and sequencing for *Coluber constrictor* phylogeography project. 2004.

Xenia Freilich— Studying DNA amplification and sequencing for *Coluber constrictor* phylogeography project. 2004.

Magdalena Petrov--- Studying: DNA amplification and sequencing for *Coluber constrictor* phylogeography project. 2004-2005.

Paul Krakowski--- Studying: DNA amplification and sequencing for *Coluber constrictor* phylogeography project. 2003.

Luisa Otalora--- Studying: DNA amplification and sequencing. 2003-2004.

John Anastasio. Studying: Obtaining DNA from formalin-fixed specimens of rare cornsnakes (*Elaphe guttata*). 2003

Tara Gianoulis. Studying: Her project includes examining evolution of higher-level snakes using data from various mtDNA genes. 2003.

HIGH SCHOOL STUDENTS:

Olga Pinkhas (Staten Island Technical High School Student)---2014---Community formation in anurans in North America.

Alyssa Stropoli (Staten Island Technical High School Student)---2012---Species identification using coalescent models and niche modeling. Runner up for the NYC Science and Engineering Fair 2012.

Helen Yao (Staten Island Technical High School Student)---Species identification using coalescent models and niche modeling. Winner of the NYC Science and Engineering Fair 2011.

VOLUNTEERS IN MY LAB:

Leonard Jones---Evolution of colubroid snakes in Madagascar. 2008.

Jacob Pasterno---Testing Fox's rule using GIS climate data. 2008.

DOCTORAL STUDENT COMMITTEES

Ivan Prates (CUNY: 2013-)

Silvia Pavan (CUNY: 2013-)

Alex Dornburg (Yale: 2012-)

André Luiz Carvalho (RGGS: 2012-)

Lauren Oliver (RGGS: 2013-)

Edward Stanley (RGGS: 2011-)

Terry Demos (CUNY: 2009-)

Vinson Doyle (CUNY: 2007-2008).

Jace Robinson (Northern Illinois University: 2007-2009).

Julie Feinstein (CUNY: 2007-).

Lauren Espisito. (CUNY: 2007-2012).

Edmundo Gonzales. (CUNY: 2007-2012).

Sara Ruane (CUNY: 2007-2012).

Lionel Monad (CUNY: 2007-2011).

Peter Novick. (CUNY: 2007-2010).

Diane Balinger. (CUNY: 2006-2007)

Linda Gormanzano (CUNY: 2006-2007).

R. Alexander Pyron (CUNY: 2005-2010).

Timmothy Guiher (CUNYL 2005-2011)

Eric Steiner (CUNY: 2005- 2007).

Elizabeth Borda (CUNY: 2004-2007).

Frank Fontanella (CUNY: 2003-2009).

Andy Bernick (CUNY 2003-2007).

SOFTWARE DEVELOPED BY BURBRINK

Available here http://scholar.library.csi.cuny.edu/~fburbrink/Software.html

1) MISFITS: Compares 19 models of diversification across a posterior probability distribution of trees. (See Burbrink et al. 2012).

2) MINOR THREAT: Examines models of morphological change (BM, OU, EB, LB, and WN) across a posterior probability distribution of trees. (See Burbrink et al. 2012).

3) BAD BRAINS: Assesses morphological disparity through time across a posterior probability distribution of trees. (See Burbrink et al. 2012).

4) BIG BLACK: Generates null trees from diversity dependence and yule2 models of diversification and tests them against your "real" trees. (see Near et al. 2013).

5) BLACK FLAG: A wrapper for assessing diversification changes through time used in TreePar. (see Near et al. 2013).

6) CHROME: Performs various ecological-evolutionary modeling functions, such as a) linking taxa, traits, and phylogeny to community or regional assemblages, b) assessing evenness in the spread of morphological characters among communities, c) testing for trends in the shape of morphological distributions given trait-derived speciation rates, d) simulating communities and traits under various models of trait-driven speciation rates, e) examining real vs. null distribution models for phylogenetic turnover among source and sink communities, and f) assessing the impact of individual species on phylogenetic diversity in communities or regions (See Burbrink and Myers 2014, 2015).