

NICHOLAS G. CRAWFORD  
Phone: 617-460-3680  
Email: [ngcrawfo@bu.edu](mailto:ngcrawfo@bu.edu)  
Website: [www.ngcrawford.com](http://www.ngcrawford.com)

## EDUCATION

2007 to present – PhD student, Boston University, Advisor: Christopher Schneider  
Thesis: Anolis Lizard Genomics and Phylogenetics  
Additional Project: Mammal Phylogenomics and Species Tree analyses with Travis Glenn.

2004/07 – M.S. student, San Diego State University, Advisor: Tod Reeder  
Thesis: Population structure within the Plateau Striped Whiptail (*Aspidoscelis velox* complex) a parthenogenetic lizard  
Additional Project: Phylogenetic relationships among Australian skinks of the genus *Glaphyromorphus*

1997/01 – B.S. Biology, Union College, Advisor: Barbara Pytel  
Graduated Cum Laude with Academic and Departmental Honors

## AREAS OF SPECIALIZATION

Speciation, bioinformatics, molecular systematics, population genetics, evolutionary biology, and herpetology

## SKILLS AND TECHNIQUES

Laboratory: RNA-seq library construction, Primer Design, DNA purification, PCR, qPCR (taqman assays), Sanger Sequencing (both ABI3130 and ABI377 genetic analyzers), Microsatellite Genotyping, and making cDNA libraries

Programming Languages/Frameworks: Python, MySQL/sqlite3, Linux, LSF and Grid Engine Computer Clusters, Hadoop/MapReduce, Django, also some Perl, R, Html, and CSS

Software: Cufflinks, Bowtie, BWA, Blast/NCBI, MrBayes, McClade, Sequencher, Oligo (primer design), Genemapper, GenAlEx, Arlequin

### Miscellaneous Skills

Protein Purification (FPLC), Mammalian Tissue Culture, Ordering and Stocking, Maintaining Laboratory Compliance with Safety Regulations, Training Students and Techs, and Catching lizards

## GRANTS AND SCHOLARSHIPS

2010 – Amazon Education Research Grant ([aws.amazon.com](http://aws.amazon.com)), Computational Resources (\$7,500)

- co-authored with Brant Faircloth and submitted by Travis Glenn

2010 – Doctoral Dissertation Improvement Grant (NSF), labwork (\$15,000)

- 2009 – Theodore Roosevelt Memorial Fund (American Museum of Natural History), labwork/fieldwork (\$1,500)
- 2008 – Theodore Roosevelt Memorial Fund (American Museum of Natural History), labwork/fieldwork
- 2005 – Theodore Roosevelt Memorial Fund (American Museum of Natural History), labwork/fieldwork (\$1,960)
- 2005 – Harry E. Hamber Memorial Scholarship, tuition (\$1,400)
- 2000 – IEF Grant, thesis research (\$100)
- 2000 – NYSEP Grant, summer stipend (\$1,700)
- 1999 – Booth - Ferris Grant, summer stipend (\$1,700)

## PUBLICATIONS

- Nicholas G. Crawford. 2010. SMOGD: Software for the Measurement of Genetic Diversity. *Molecular Ecology Resources*, 10: 556-557.  
- Associated website: <http://www.ngcrawford.com/django/jost>
- Rebecca Tarvin, Nicholas G. Crawford, Christopher J. Schneider. 2009/2010. Seventy-six polymorphic microsatellite loci from the Leopard Anole, *Anolis marmoratus* (Polychrotidae: Squamata). *Molecular Ecology Resources*. In Preparation.
- Nicholas G. Crawford, Jaime Zaldívar-Rae, Cris Hagen, Amanda Schable, Erica Bree Rosenblum, Jeff A. Graves, Tod W. Reeder, Michael G. Ritchie, Travis C. Glenn. 2007. Thirteen polymorphic microsatellite DNA loci from whiptails of the genus *Aspidoscelis* (Teiidae: Squamata) and related cnemidophorine lizards. *Molecular Ecology Resources*. 8: 219-223
- Nicholas G. Crawford, Cris Hagen, Heather F. Sahli, Elizabeth A. Stacy, Travis C. Glenn. 2007. Fifteen polymorphic microsatellite loci from Hawaii's *Metrosideros polymorpha* (Myrtaceae: Myrtales), a model species for ecology and evolution. *Molecular Ecology Resources*, 8, 308-310.
- Caleb R. Hickman, Maureen B. Peters, Nicholas G. Crawford, Cris Hagen, Travis C. Glenn, Christopher M. Sommers. 2008. Development and characterization of microsatellite loci in the American white pelican (*Pelecanus erythrorhynchos*). *Molecular Ecology Resources*, 8, 1439-1441.
- Nicholas G. Crawford, Maureen B. Peters, Cris Hagen, Travis C. Glenn, Stephen K. Davis, Christopher M. Somers. 2007. Twelve polymorphic microsatellite loci from Sprague's pipit, *Anthus spragueii* (Motacillidae: Passeriformes), a threatened grassland endemic songbird. *Molecular Ecology Resources*, 9, 315-317.
- Nicholas G. Crawford. 2007. Microsatellites in cnemidophorine lizards: their utility in investigating the landscape genetics of the plateau striped whiptail (*Aspidoscelis velox* Complex). Masters Thesis: San Diego State University.
- Olga V. Tsyusko, Tracey D. Tuberville, Maureen B. Peters, Nicholas Crawford, Cris Hagen, Steve Weller, Ann Sakai, and Travis C. Glenn. 2007. Microsatellite markers isolated from polyploid woodsorrell (*Oxalis alpina*). *Molecular Ecology Notes*, 7, 1284-1286.

I frequently contribute to the blog: <http://molecularecologist.com>

## COURSES TAUGHT:

- Evolutionary Biology Discussion – 1 term at BU
- Animal Behavior Laboratory – 1 term at BU
- Vertebrate Zoology Laboratory – 1 term at BU
- Introductory Genetics Discussion – 1 term at BU
- Introductory Biology Labs – 4 terms at BU, include Ecology, Evolution, and Animal Behavior
- Introductory Biology Lab – 1 term at SDSU, included concepts from molecular biology, ecology, cellular biology, etc.
- Introductory Zoology Lab – 2 terms at SDSU, included all phyla
- Introductory Biology Lab – 1 term at BU, included concepts from ecology, evolution, plant physiology

## PROFESSIONAL EXPERIENCE

- 2007-2011 – Teaching Fellow, Boston University: Introductory Biology, Genetics, Evolution, Animal Behavior
- 2007 – South Carolina, Summer, 6 months, Research Technician, supervised by Travis Glenn
- 2006 – South Carolina, Summer, 6 weeks, Microsatellite loci preparation at the Savannah River Ecology Laboratory, supervised by Travis Glenn
- 2004/2005 – Graduate Teaching Assistant, SDSU, Introductory Biology and Introductory Zoology
- 2004 – Research Assistant, SDSU, Advisor: Tod Reeder
- 2002/03 – Research Associate, Boston Biochem
- 2001 – Research Associate, Pfizer Pharmaceuticals
- 2001 – Research Associate, Harvard Medical School

## FIELD EXPERIENCE

- 2009 – Guadeloupe, French West Indies, Summer, 5 days, collecting lizards (anoles)
- 2007 – New Mexico, Summer, 1 week, collecting lizards
- 2005 – New Mexico, Summer, 1 week, collecting lizards
- 2005 – Arizona, Summer, 2 weeks, collecting lizards
- 2004 – Arizona, Summer, 2 weeks, collecting lizards
- 2001 – New York, Summer, 1 week, collecting treefrogs
- 1999 – New York, Summer, 1 week, collecting treefrogs

## CONFRENCES AND MEETINGS

2010 – The Genetics and Evolution of Animal Coloration

2009 – Anole Symposium – Harvard University

Presentation Title: *Anolis carolinensis*: Pigmentation Genetics

Poster Title: Genome scan identifies two loci associated with color polymorphism in *Anolis marmoratus*

2009 - Gordon Conference: Evolutionary & Ecological Functional Genomics - Tilton, New Hampshire.

Poster Title: Genetics of Colorful Pigmentation in Anolis Lizards

2009 – Society for Integrative and Comparative Biology Annual Meeting, Boston Massachusetts.

Presentation Title: Evolution of Dewlap Pigmentation in Anoline lizards.

2008 – Union College Seminar Series: Invited Speaker - Union College

Presentation Title: Population Structure of the Plateau Striped Whiptail a Parthenogenetic Species of Lizard

2007 - Island Biogeography Symposium, Harvard University, Cambridge Massachusetts

2005 – American Society of Ichthyologists and Herpetologists 85th Annual Meeting, Tampa, Florida

Presentation Title: Phylogenetic relationships among Australian skinks of the genus *Glaphyromorphus*

2004 – American Society of Ichthyologists and Herpetologists 84th Annual Meeting, Norman, Oklahoma

2004 – Evolution Conference, Fort Collins, Colorado

2001 – National Conferences on Undergraduate Research, Lexington, Kentucky

## SOCIETY AFFILIATIONS

American Society of Ichthyologists and Herpetologists (not presently affiliated)

Society for Comparative and Integrative Biology (not presently affiliated)