

Robert Graham Reynolds

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Current Address

Department of Ecology and Evolutionary Biology
The University of Tennessee
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EDUCATION

University of Tennessee, Knoxville, TN 2006-Present GPA: 4.0
PhD, Ecology and Evolutionary Biology (in progress) Advisor: Dr. Ben Fitzpatrick

Duke University, Durham, NC
Bachelor of Arts, Biology May, 2004 Advisor: Dr. Susan Alberts

Duke University/Organization for Tropical Studies, Costa Rica Semester Abroad- Fall 2002
Tropical Biology, Environmental Science and Policy, Tropical Field Research, Intensive
Spanish Language and Latin American Culture Advisor: Dr. Erika Deinert

PUBLICATIONS

Miller, B.T., M.L. Niemiller, and **R. Graham Reynolds**. (In Press). Observations on egg-laying behavior and interactions among attending female Red Salamanders (*Pseudotriton ruber*) with comments on the use of caves by this species. *Herpetological Conservation and Biology*

Reynolds, R.G. (In Press). Conspecific necrophagy. *Leiocephalus psammodromus*. (Turks and Caicos Curly-Tailed Lizard). *Herpetological Review*.

Niemiller, M.L., B.T. Miller, **R.G. Reynolds**, and J.G. Reynolds. (In Press). Subterranean nest. *Gyrinophilus porphyriticus porphyriticus* (Northern Spring Salamander). *Herpetological Review*.

Reynolds, R. Graham and B. M. Fitzpatrick. 2007. Assortative mating in poison-dart frogs based on an ecologically important trait. *Evolution* 61: 2253-2259.

ADDITIONAL MANUSCRIPTS

Reynolds, R. G. *Dendrobates pumilio* (Strawberry Poison Dart Frog). Intra-island variation. *Herpetological Review* (In Review).

Fitzpatrick, B.M., T.E. Lawlor, and **R. Graham Reynolds**. A wrinkle in the species-area curve. (In Process).

Reynolds, R.G. *Typhlops platycephalus*. (Puerto Rican Blindsnake). Distribution. (In Process).

POPULAR ARTICLES

Reynolds, R. G. 2008. The Snakes of the Turks and Caicos Islands. Brochure for the National Environmental Centre on Providenciales, Turks and Caicos Islands.

HONORS, GRANTS, AND FELLOWSHIPS

- American Museum of Natural History , Theodore Roosevelt Memorial Fund Grant in Support of Research, 2008. “*Testing for historical extinction and recolonization dynamics in an archipelagic species*” (\$1095)
- Sigma Xi, The Scientific Research Society, Grant-in-Aid of Research, 2008. “*Testing for historical extinction and recolonization dynamics in an archipelagic species using modern genetic data*” (\$500)
- W. K. McClure Scholarship for the Study of World Affairs, 2008. “*Mediating the Interests of Development and the Local Community: The Value of Education in Biodiversity Conservation.*” (\$2,900)
- University of Tennessee, Ecology and Evolutionary Biology Summer Research Grant, 2008. “*Testing for the importance of extinction and recolonization dynamics in an archipelagic species*” (\$1500)
- University of Tennessee, Ecology and Evolutionary Biology Summer Research Grant, 2007. “*The genetics of insular populations and the effects of island geography*” (\$1375)
- Duke University – Deans’ List with Distinction, 2004
- Duke University - Howard Hughes Fellowship in Biology, 2003-2004 (\$500)
- Duke University - Mellon Foundation Latin American Travel Grant, 2003 (\$800)
- Duke University – Deans’ Summer Fellowship, 2003 (\$1352)

CONFERENCE PRESENTATIONS / SYMPOSIA

- Reynolds, R. Graham** and B.M. Fitzpatrick. 2008. Assortative Mating in Poison Dart Frogs based on an Ecologically Important Trait. Society for the Study of Evolution, Minneapolis, MN. June 20-24 (Oral 15 min.)
- Reynolds, R. Graham** and B.M. Fitzpatrick. 2007. Assortative Mating in Poison Dart Frogs based on an Ecologically Important Trait. Seventh Annual Sigma Xi Student Research Conference. Orlando, FL. Nov. 2-3 (Oral 18 min.)
- Reynolds, R. Graham** and B.M. Fitzpatrick. 2007. Assortative Mating in Poison Dart Frogs based on an Ecologically Important Trait. Southeastern Population Ecology and Evolutionary Genetics Conference, Great Smoky Mountains Institute at Tremont, TN. September 21-23 (Poster)
- Reynolds, R. Graham** and B.M. Fitzpatrick. 2007. Assortative Mating in Poison Dart Frogs Based on an Ecologically Important Trait. Society for the Study of Evolution, Christchurch, NZ. June 16-20. (Poster).
- Reynolds, R. Graham** and B.M. Fitzpatrick. 2006. Ecologically Important Assortative Mating in a Panamanian Poison Frog. Southeastern Population Ecology and Evolutionary Genetics Conference, Greensboro, NC. September 22-24 (Oral 15 min.)
- Reynolds, R. Graham.** 2004. Color Pattern Recognition in Female Dendrobatid Frogs. Visible Thinking Symposium, Durham, NC. April (Poster)
- Reynolds, R. Graham.** 2003. Color Pattern Recognition in Female Dendrobatid Frogs. Triangle Undergraduate Research Symposium, Durham, NC. November (Oral 15 min.)

REVIEWER FOR:

- Journal of Ethology
- Herpetological Conservation and Biology

PROFESSIONAL MEMBERSHIP

- American Association for the Advancement of Science
- Sigma Xi, The Scientific Research Society
- Society for the Study of Evolution
- Herpetologist’s League
- American Society of Ichthyologists and Herpetologists
- Society for the Study of Amphibians and Reptiles

SERVICE

- Vice President, UTK Graduate Researchers in Ecology, Behavior, and Evolution: 2008-2009
- Executive Assistant, UTK Graduate Researchers in Ecology, Behavior, and Evolution: 2007-2008
- Treasurer- Tennessee Darwin Day Committee: 2007-2008
- UTK Department of Ecology and Evolutionary Biology Seminar Series Committee: 2006-07

TEACHING EXPERIENCE

- EEB 306- Biology of Human Affairs, for Tennessee Governor's School for the Sciences, Co-Instructor, Summer 2008.
- Biology 102- Intro for Non-Majors- Graduate Lecture Assistant, Spring 2008
- Biology 130- Intro for Majors- Graduate Teaching Assistant Fall 2007
- Biology 102- Intro for Non-Majors- Graduate Teaching Assistant, Spring 2007, Spring 2008
- Biology 101- Intro for Non-Majors- Graduate Teaching Assistant, Fall 2006
- UTK Kids University Instructor- *Snakes Alive!* Course: Knoxville, TN. July 2007, 2008
Week-long educational programs involving live animals (ages 9-12)
- Invited Lecturer for Reptile Biology and Conservation Series at Camp Wesley Woods, Walland, TN 2007-2008, 2hr. Educational Programs involving live animals (ages 8-16)
- Invited Lecturer for K-12 science courses including genetics, general biology and evolution. 2003-Present
Carolina Day School, Asheville, NC
Hangar Hall School for Girls, Asheville, NC
Montessori School of Oak Ridge, Oak Ridge, TN

RESEARCH EXPERIENCE

Graduate Research: Department of Ecology and Evolutionary Biology, University of Tennessee. Advisor: Dr. Ben Fitzpatrick Field work: March 2007- Present. Turks and Caicos, British West Indies
Principal investigator on a project investigating the genetics of insular populations of the Turks and Caicos Curly-Tailed Lizard (*Leiocephalus psammmodromus*) and the effects of island geography on population genetic structuring. Study will be important in investigating population genetic processes operating on tropical and subtropical island groups.

Principle Investigator: Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville. Field Work: December 2007- Present. "Conservation and natural history of the Southern Bahamas Boa (*Epicrates chrysogaster*) in the face of significant anthropogenic disturbance."
Principal investigator for project investigating natural history of and determining anthropogenic threats to populations of the Southern Bahamas Boa in the Turks and Caicos Islands, British West Indies.

Investigator: Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville. 2006- Present. "*Plethodon dorsalis* in Tennessee." Investigating geographic genetic variation within *P. dorsalis* using Amplified Fragment Length Polymorphisms.

Field Assistant: Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville. 2006- Present "Phylogeography of the Southern Cavefish, *Typhlitchthys subterraneus*, and the Tennessee Cave Salamander, *Gyrinophilus palleucus*."

Investigator: Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville. Fieldwork: October 2006. "Egg Laying Behavior and Interactions Among Attending Female Red Salamanders (*Pseudotriton ruber*)."

Principle Investigator: Department of Biology, Duke University, N.C.

Advisor: Dr. Susan Alberts Field work: May-July 2003 Bocas del Toro, Panama
Designed and completed a project researching sexual selection behavior of female poison dart frogs (*Dendrobates pumilio*). Project investigated the role of female preference for male color patterns in the maintenance of population coloration characteristics. Field component included locating, trapping, collecting, handling, transporting and releasing research specimens. Laboratory component included methodology design, housing and caring for captive specimens and behavioral manipulation experiments.

Undergraduate Field Research: Organization for Tropical Studies, Costa Rica
August-December 2003 Advisor: Dr. Erika Deinert

Component for Tropical Research Methods Course. Completed two independently designed research projects entitled: "The influence of ambient noise on male calling behavior in a neotropical anuran, *Physalaemus pustulosus*, with implications for reproductive success," and "Relationships among morphology, palatability and flight behavior in a neotropical lepidopteran community." Collaborated on a research project entitled "Relationships between wing morphology and flight patterns of bats in the family *Phyllostomidae*." Projects involved independent research design and completion of field work, scientific papers and metadata sheets

Laboratory Assistant: Department of Biology, Duke University, N.C.
June-August 2002 Reference: Dr. Susan Alberts

Designed and created a matrilineal chart cataloguing relatedness within a population of savannah baboons. Performed general laboratory duties including organization of biological samples and processing of field notes.

Research Assistant: Estación de Biología, Chamela, Jalisco, Mexico
May 1999, March 2000, May 2001 Reference: Dr. Mircea Hidalgo (IBUNAM)

Assisted scientists in the field studying large carnivore populations. Assisted in trapping, tagging, radio collaring, tracking, observing signs/habitats, collecting and dissecting scats, dissecting and preserving road kill specimens, setting up/maintaining/analyzing infrared camera traps, radio telemetry, GPS marking and mapping of study sites, interviewing locals on sightings/possible habitats, collecting prey specimens and determining prey density/availability, sedating captured specimens, collecting DNA specimens from sedated animals and data entry.

OTHER PROFESSIONAL EXPERIENCE

- **Organization for Tropical Studies**, Specialty Workshop Course- Conservation and Biodiversity Genetics, May 2008 Palo Verde, Costa Rica
- **Conference Organizer:** Southeastern Population Ecology and Evolutionary Genetics Conference. Sept, 21-23, 2007. Great Smoky Mountains Institute at Tremont, Great Smoky Mountains National Park, TN. One of four members (2 graduate students, 2 faculty) of the organizational and planning committee for the conference. Assisted in planning, website design, registration, logistics and hosting of conference.

RESEARCH INTERESTS

- Population dynamics and conservation of reptiles and amphibians
- Biogeography, Phylogeography of insular organisms
- Geographical variation within species
- Mate choice behavior and its influence on the maintenance and/or diversification of population characteristics
- Sexual selection, reproduction and behavioral variation within and among populations

TEACHING INTERESTS

- Undergraduate biology courses including general biology, evolution, herpetology and field courses.

TECHNICAL SKILLS

- Experienced with common genetic data analysis programs including PAUP, ClustalX, Mr. Bayes, and Arlequin.
- Experienced with statistical programs including SAS, JMP, and R.
- Experienced in many field methods including radio telemetry, sedation, collection and dissection.
- Experienced in laboratory preparations/methods including polymerase chain reaction (PCR), AFLPs, DNA extraction, gel electrophoresis, etc.
- Bilingual in English and Spanish, with moderate training in French
- Experienced with HTML and website design
- PADI Advanced Open Water Diver (75 logged dives), PADI Medic-First Aid, Red Cross trained Professional Rescuer.

References

UTK

- Dr. Ben Fitzpatrick benfitz@utk.edu (865) 974-9734
- Dr. James Fordyce jfordyce@utk.edu
- Dr. Chris Boake cboake@utk.edu
- Dr. Daniel Simberloff tebo@utk.edu

Duke

- Dr. Susan Alberts alberts@duke.edu (919) 660-7272
- Dr. Erika Deinert deinert@cro.ots.ac.cr
- Dr. Louise Roth vlroth@duke.edu (919) 660-7352