

*Curriculum vitae*

SCOTT MICHAEL BOBACK

**CURRENT APPOINTMENT AND ADDRESS**

Assistant Professor  
Department of Biology  
Dickinson College  
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**EDUCATION**

2005	Ph.D. Biological Sciences	Auburn University	Auburn, AL
	Dissertation: <b>Body and head size evolution in island snakes</b>		
1995	M.A. Biological Sciences	University of Northern Colorado	Greeley, CO
	Thesis: <b>A phylogenetic analysis of the Red Panda (<i>Ailurus fulgens</i>), Black Bear (<i>Ursus americanus</i>), Brown Bear (<i>Ursus arctos</i>) and the Raccoon (<i>Procyon lotor</i>) using the nssrRNA gene</b>		
1992	Non-Degree Student	Northern Illinois University	DeKalb, IL
1991	B.A. Biology	Ripon College	Ripon, WI
	Senior Thesis: <b>The functionality of the evolutionary loss of teeth in birds</b>		

**POSITIONS**

2007-	Assistant Professor	Department of Biology, Dickinson College, Carlisle, PA.
2005-07	Postdoctoral Researcher	University of Alabama. Tuscaloosa, AL. Project: Proximate mechanisms regulating intestinal performance for the python. Supervisor: Stephen Secor ( <a href="mailto:ssecor@biology.as.ua.edu">ssecor@biology.as.ua.edu</a> )
1998-05	Assistant Curator	Auburn University Natural History Learning Center, Auburn, AL Supervisor: Craig Guyer ( <a href="mailto:guyercr@auburn.edu">guyercr@auburn.edu</a> )
1997-8	Criminalist	California Department of Justice Forensic DNA Laboratory Berkeley, CA. Supervisor: Ken Konzak ( <a href="mailto:ken.konzak@doj.ca.gov">ken.konzak@doj.ca.gov</a> ) Maintained DNA computer database of convicted felons
1996-7	Laboratory Technician	California Department of Justice Forensic DNA Laboratory Berkeley, CA. Supervisor: Ken Konzak ( <a href="mailto:ken.konzak@doj.ca.gov">ken.konzak@doj.ca.gov</a> ) Developed computer database for tracking felon DNA profiles
1996	Herpetologist	Colorado Division of Wildlife/University of Northern Colorado Greeley CO Supervisor: Steve Mackessy ( <a href="mailto:Stephen.Mackessy@unco.edu">Stephen.Mackessy@unco.edu</a> ) Documented amphibian and reptile species in Comanche NG

1992 Assistant Ranger McHenry County Conservation District. McHenry, IL  
Assisted with maintenance and bioinventorying of Nature Areas

### TEACHING POSITIONS

#### *Instructorships*

2008	Biogeography	Dickinson College	Carlisle, PA
2008	Population Genetics and Evolution	Dickinson College	Carlisle, PA
2007	Ecology 314	Dickinson College	Carlisle, PA
2007	Evolutionary Ecology 695	University of Alabama	Tuscaloosa, AL
2006	Evolutionary Mechanisms 695	University of Alabama	Tuscaloosa, AL
1997	DNA Academy	California DOJ DNA Laboratory	Berkeley, CA
1994-5	DNA Workshop	University of Northern Colorado	Greeley, CO

#### *Guest Lectures*

2008	Evolution of body size in vertebrates	History of Life	Dickinson College
2005	Endocrine system	Functional Morphology	University of Alabama
2004	Macroecology of Reptiles	Herpetology	Auburn University
2003	Macroecology	Community Ecology	Auburn University
2001	Evolution of Crocrodilia and Rhynchocephalia	Herpetology	Auburn University
2001	Evolution of Squamata	Herpetology	Auburn University
2001	Heat, air and water exchange	Herpetology	Auburn University
1999	Meiosis and Mitosis	Genetics 300	Auburn University
1999	DNA in Forensic Science	Genetics 300	Auburn University
1999	Using DNA to Solve Crimes	Genetics 300	Auburn University

#### *Graduate Teaching Assistantships*

2003-05	Organismal Biology 1030	Auburn University	Auburn, AL
2004	Ecology 3060	Auburn University	Auburn, AL
2001, 03	General Biology 1020	Auburn University	Auburn, AL
2000-04	Herpetology 574	Auburn University	Auburn, AL
1998-00	Genetics 300	Auburn University	Auburn, AL
1994	Human Physiology 350	University of Northern Colorado	Greeley, CO
1993, 95	Principles of Biology 110	University of Northern Colorado	Greeley, CO
1992	Organismal Biology 111	University of Northern Colorado	Greeley, CO

### GRANTS, FELLOWSHIPS, AND AWARDS

Submitted	CITES (\$5,100), Education, awareness, and protection of Natural Resources, East End, Cayos Cochinos, Bay Islands Province, Honduras.
2006	Disney Wildlife Conservation Fund (\$19,450), Ecology and Conservation of <i>Boa constrictor</i> in the Cayos Cochinos, Honduras. Walt Disney World Company.
2002	Dean's Research Award (\$500), College of Science and Math, Auburn University
2002-2003	Merriwether Fellowship (\$4000), An experimental study of body size and head shape in island <i>Boa constrictor</i> . Auburn Graduate School. Auburn Graduate School
2002-2003	Graduate Research Award (\$2000), Auburn Graduate School, matching funds from College of Science and Mathematics and Department of Biological Sciences
2002	Outstanding Graduate Teaching Assistant Award, Department of Biological Sciences, AU
2000	Presidential Fellowship (tuition for 4 years), Auburn University Graduate School
2000-2001	Graduate Research Award (\$1500), Auburn Graduate School, matching funds from College of Science and Math
2000	Outstanding Graduate Teaching Assistant Award, Department of Biological Sciences, AU

- 2000 Oral Presentation 1<sup>st</sup> Place, Auburn Graduate Student Forum  
 2000 OTS – Peace Frogs Herpetological Research Fellowship (\$500)  
 1995 Albert M. Winchester Graduate Fellowship, University of Northern Colorado  
 1994 Publication Honoraria: FMC Bioproducts (\$500)  
 1993 Outstanding Graduate Teaching Assistant Award, Department of Biological Sciences, UNC  
 1993 Outstanding Scholastic Achievement – Graduate Student, Department of Biological Sciences, University of Northern Colorado

#### REFEREED CHAPTERS IN BOOKS

- 2007 **Boback, S.M.** and D.M. Carpenter. Body size and head shape of island *Boa constrictor* in Belize: Environmental versus genetic contributions. *Biology of the Boas and Pythons*. Henderson, R.W. and R. Powell eds. Eagle Mountain Publishing. Eagle Mountain, UT.
- 2007 Reed, R.N., **Boback, S.M.**, Montgomery, C.E., Green, S., Stephens, Z., and D. Watson. Ecology and conservation of an exploited insular population of *Boa constrictor* (Squamata: Boidae) in the Cayos Cochinos, Honduras. *Biology of the Boas and Pythons*. Henderson, R.W. and R. Powell eds. Eagle Mountain Publishing. Eagle Mountain, UT.
- 2006 Lenaghan, S., **Boback, S.**, Sundermann, C., Crim, A., Hester, L.C., Hill, B., and Tedin, K. Comparison of Parasitic Infections of *Boa constrictor* from Mainland Belize and the Surrounding Islands. Proceedings of the 11th International Congress of Parasitology, ICOPA XI. 471-474.

#### PAPERS IN REFEREED JOURNALS

- 2008 **Boback, S.M.** and C. Guyer. A test of reproductive power in snakes. *Ecology* 89(5):1428-1435.
- 2007 **Boback, S.M.**, C.L. Cox, B.D. Ott, R. Carmody, W.R. Wrangham, and Secor, S.M. Testing the selective advantage of cooking in human evolution. *Comparative Biochemistry and Physiology, Part A* 148:651-656.
- 2007 Montgomery, C.E., Reed, R.N. Shaw, H.J., **Boback, S.M.**, and Walker, J.M. Distribution, habitat utilized, size, and color pattern of *Cnemidophorus lemniscatus* on Cayo Menor, Honduras. *Southwestern Naturalist* 52(1):38-45.
- 2006 Mead, L.S. and **S.M. Boback**. Diet and microhabitat utilization of two sympatric Neotropical salamanders: *Bolitoglossa pesrubra* and *B. cerroensis*. *Herpetological Natural History*, 9(2):135-140.
- 2006 **Boback, S.M.** A morphometric comparison of island and mainland boas (*Boa constrictor*) in Belize. *Copeia*. 2006(2):261-267.
- 2005 **Boback, S.M.** Natural history and conservation of island boas (*Boa constrictor*) in Belize. *Copeia*. 2005(4):880-885.
- 2003 **Boback, S.M.** and C. Guyer. Empirical evidence for an optimal body size in snakes. *Evolution*. 57(2): 345-351.
- 2003 **Boback, S.M.** Body size evolution in snakes: evidence from island populations. *Copeia*. 2003(1): 81-94.

- 2002 Reed, R.N. and **S.M. Boback**. Does body size predict dates of species description among North American and Australian reptiles and amphibians? *Global Ecology and Biogeography*. 11(1): 41-48.

#### NOTES AND BOOK REVIEWS

- 2007 Frazier, J.A., Montgomery, C.E., **Boback, S.M.**, and R.N. Reed. Natural History: Diet: *Coniophanes imperialis*. *Herpetological Review*. 38(1):86.
- 2006 **Boback, S.M.**, Montgomery, C.E., Reed, R.N., and S. Green. Geographic Distribution: *Kinosternon leucostomum*. *Herpetological Review*. 37(2):239
- 2006 **Boback, S.M.**, Montgomery, C.E. Reed, R.N., and S. Green. Geographic Distribution: *Oxybelis aeneus*. *Herpetological Review*. 37(2):242
- 2006 Reed, R.N., Green, S., **Boback, S.M.**, and C.E. Montgomery. Natural History: Attempted Predation: *Ctenosaura melanosterna*. *Herpetological Review*. 37(1):84.
- 2006 Sorrell, G.G., Birkhead, R.D., and **S.M. Boback**. Natural History: Frugivory; Seed dispersal: *Eumeces laticeps*. *Herpetological Review*. 37(1):84-85.
- 2004 Birkhead, R.D., Johnson, V.M., **Boback, S.M.**, and M.L. Boback. Geographic Distribution: *Amphiuma tridactylum*. *Herpetological Review*. 35(3):279.
- 2004 Williams, M.I., Birkhead, R.D., Moosman, P.R., and **S.M. Boback**. Natural History, Diet: *Agkistrodon piscivorus piscivorus*. *Herpetological Review*. 35(3):271-272.
- 2004 **Boback, S.M.** Neotropical Treeboas: Natural History of the *Corallus hortulanus* Complex. Book Review. *Quarterly Review of Biology*. 79(1):86.
- 2004 **Boback, S.M.** Natural History, Diet: *Boa constrictor*. *Herpetological Review*. 35(2):175.
- 2004 Birkhead, R.D., Williams, M.I., **Boback, S. M.**, and M.P. Greene. The cottonmouth condo: a novel venomous snake transport device. *Herpetological Review*. 35(2):153-154.
- 2003 Greene, M.P. and **S.M. Boback**. Natural History, Diet: *Thamnophis sauritus*. *Herpetological Review*. 34(2):159.
- 2003 Greene, M.P., **Boback, S.M.**, and C. Guyer. Natural History, Diet: *Boa constrictor*. *Herpetological Review*. 34(2):146.
- 2000 **Boback, S.M.**, Burroughs, E., Ugarte, C., and J. Watling. Natural History, Diet: *Boa constrictor*. *Herpetological Review*. 31(4): 244-245.
- 1997 **Boback, S.M.**, and others. Geographic Distribution. *Gastrophryne olivacea*, *Chrysemys picta bellii*, *Lampropeltis triangulum gentilis*, *Rhinocheilus lecontei tessellatus*, *Sistrurus catenatus edwardsii*, *Tropidoclonion lineatum lineatum*. *Herpetological Review*. 28(1).
- 1996 **Boback, S.M.**, and others. Geographic Distribution. *Pseudacris triseriata maculata*, *Rana catesbeiana*, *Chrysemys picta bellii*, *Lampropeltis getula*, *Thamnophis cyrtopsis*

*cyrtopsis*. *Herpetological Review*. 27(4).

#### MANUSCRIPTS IN REVIEW OR IN PREPARATION

Guyer, C., **Boback, S.M.**, and R.N. Reed. Are body size distributions of tetrapods consistently right-skewed? In review at *Herpetologica*.

Koons, D.N., Birkhead, **S.M. Boback** R.D., Williams, and M.I., Greene, M.P. Survival and detection probability of Cottonmouths (*Agkistrodon piscivorus*) in an Alabama swamp: the effect of body size. In review at *Herpetological Conservation and Biology*.

**Boback, S.M.** and L. Siefferman. Color variation and physiological color change in island and mainland boas (*Boa constrictor*) from Belize. In revision for *Journal of Herpetology*.

**Boback, S.M.**, Greene, M.P. Birkhead, R.D., and M.I. Williams. Body size and reproductive biology in a population of Cottonmouths (*Agkistrodon piscivorus*) in southeastern Alabama. In preparation for *Copeia*.

#### PUBLICATIONS IN NON-REFEREED SOURCES

1994 **Boback, S.M.** and S.B. Lee. Enhanced Resolution of *Phytophthora* Spp. Multiplex PCR Products Utilizing Metaphor Agarose. FMC Bioproducts Newsletter: Resolutions. 10(2) 4.

1995 **Boback, S.M.** A Phylogenetic Analysis of the Red Panda (*Ailurus fulgens*), Black Bear (*Ursus americanus*), Brown Bear (*Ursus arctos*) and the Raccoon (*Procyon lotor*) Using the nssrRNA Gene. Unpublished Masters Thesis.

#### CONFERENCE PRESENTATIONS

2008 Joint meeting of American Society of Ichthyologists and Herpetologists (ASIH) and Society for the Study of Amphibians and Reptiles (SSAR), Montreal, Quebec, Canada – **Life-history of a population of Cottonmouths (*Agkistrodon piscivorus*) in east-central Alabama.** S.M. Boback, Greene, M.P., Birkhead, R.D., Williams, M.I., and D.N., Koons.

2007 Society for Integrative and Comparative Biology (SICB), Phoenix, AZ – **Testing the selective advantage of cooking in human evolution.** S.M. Boback, Cox, C.L., Ott, B.D., Carmody, R., Wrangham, R.W., and Secor, S.M.

2007 Society for Integrative and Comparative Biology (SICB), Phoenix, AZ – **Causal association between organ masses and aerobic metabolism in the diamondback water snake.** S.M. Boback and Secor, S.M.

2007 Society for Integrative and Comparative Biology (SICB), Phoenix, AZ – **Spatial and temporal variation in pH of the gastrointestinal tract of the Burmese python.** S.M. Secor, Boback, S.M., and Lignot, J.H.

2006 American Society for Ichthyologists and Herpetologists (ASIH), New Orleans, LA – **Macroecology of body size in island herpetofaunal assemblages.** S.M. Boback, Guyer, C. and Reed, R.N.

- 2006 11th International Congress of Parasitology (ICOPA), Glasgow, Scotland – **Comparison of parasitic infections of *Boa constrictor* from mainland Belize and the surrounding islands.** Lenaghan, S., Boback, S.M., Sunderman, C., Crim, A., Hester, L., Hill, B., and K. Tedin.
- 2006 Southeastern Ecology and Evolution Conference (SEEC), Tuscaloosa, AL – **The reptiles and amphibian of Cayos Cochinos Pequeño, Honduras.** Montgomery, C.E., H. Shaw, S.M. Boback, and R.N. Reed.
- 2006 Society for Integrative and Comparative Biology (SICB), Orlando, FL – **A test of reproductive power in snakes.** S.M. Boback and C. Guyer.
- 2005 Society for the Study of Amphibians and Reptiles (SSAR) Symposium: Biology of the boas, pythons, and related taxa, Tampa, FL – **Body size and head shape of island *Boa constrictor* in Belize: environmental versus genetic contributions.** S.M. Boback and D.M. Carpenter.
- 2003 American Society of Ichthyologists and Herpetologists (ASIH/SSAR joint meeting), Manaus, Brazil – **Natural history of island boa constrictors in Belize.** S.M. Boback.
- 2003 Auburn University Graduate Student Forum, Auburn, AL – **Evidence of capital breeding in a neotropical hylid assemblage.** S.M. Boback and S. Fitzgerald.
- 2002 British Ecological Society (BES) Annual Symposium: Macroecology: reconciling divergent perspectives on large scale ecological patterns, Birmingham, UK – **Empirical evidence for an optimal size in snakes.** S.M. Boback and C. Guyer.
- 2001 Society for the Study of Amphibians and Reptiles (SSAR) Annual Meeting, Indianapolis, IN – **Empirical evidence for an optimal size in snakes.** S.M. Boback and C. Guyer.
- 2000 Joint meeting of American Society of Ichthyologists and Herpetologists (ASIH) and Society for the Study of Amphibians and Reptiles (SSAR), Annual Meeting, La Paz, Mexico – **Phylogenetic constraints on insular snake body size.** S.M. Boback.
- 2000 Auburn University Graduate Student Forum, Auburn, AL – **Can giants make munchkins: Phylogeny's influence on insular body size in snakes.** S.M. Boback.
- 1994 Colorado/Wyoming Academy of Sciences (CWAS), Greeley, CO – **Gene Regulation During Hibernation.** S.M. Boback.
- 1994 UNC Research Day Abstract, Greeley, CO – **Gene Regulation During Hibernation.** S.M. Boback.

#### OTHER PRESENTATIONS

- 2008 Invited Seminar: Department of Biological Sciences, University of Texas, Arlington, TX – **Evolution of body size in snakes: patterns and tests.**
- 2006 Invited Seminar: Department of Biological Sciences, Florida International University, Miami, FL – **Body size evolution in snakes: patterns, processes, and tests.**

- 2002 Auburn University College of Science and Mathematics, Deans Advisory Council, Auburn, AL – **The boas of Belize: Island-mainland morphometrics and body size.**
- 2000 Auburn Biological Sciences Biolunch Seminar, Auburn, AL – **Using Advertisement Call Structure in Phylogenetic Relationships of *Pseudacris* (Hylidae).**
- 1999 Auburn Biological Sciences Biolunch Seminar, Auburn, AL – **Herpetological Research in Costa Rica: Tropical Inspiration.**

## OUTREACH

Newspaper interviews: Opelika-Auburn News (February 2003, cover photo), Auburn University Faculty Newsletter (February 2003)

Radio interviews: WANI Auburn, A Healthy Nature (September 2002)

Television shows: National Geographic Television, **The Boas of Belize** (Feb 2003): Thirty minute documentary highlighting my research on morphological variation between island and mainland populations of *Boa constrictor*. National Geographic Explorer: **Python vs Gator** (August 2006): 60 minute documentary on the problem of the invasive Burmese python (*Python molurus*) in south Florida.

Public Presentations (via Auburn Herpetological Society):

Beauregard High School (2001)

Alabama 4-H (2002)

West Georgia Christian Academy (2003, 2004)

## SERVICE

1998-05 Assistant Curator of Herpetology, Auburn University Museum	Auburn, AL
2001-02 Vice President, Biology Graduate Students Organization	Auburn, AL
2000-01 President, Auburn Graduate Student Council	Auburn, AL
2000-01 President, Auburn Herpetological Society	Auburn, AL
1999-00 Vice President, Auburn Herpetological Society	Auburn, AL
1999 Co-Founder, Auburn Herpetological Society	Auburn, AL
1999 Founder, Departmental Brown Bag Seminar Series (Biolunch)	Auburn, AL
1999 Chair, Tuition Fellowship Action Group, Auburn Graduate Student Council.	Auburn, AL
1999 Member, Student Welfare Committee, Auburn Graduate Student Council.	Auburn, AL
1999 Biological Sciences Senator, Auburn Graduate Student Council.	Auburn, AL
1994-5 President, Biology Students Association. University of Northern Colorado	Greeley, CO

## MEMBERSHIP

American Society of Ichthyologists and Herpetologists (ASIH)

Society for the Study of Amphibians and Reptiles (SSAR)

Herpetologists League (HL)

Society for Integrative and Comparative Biology (SICB)

Pi Lambda Theta – National Honor & Professional Association in Education

**REVIEWER FOR**

*Copeia*  
*Herpetological Review*  
*Evolution*  
*Ecography*  
*American Naturalist*  
*Biological Invasions*

**REFERENCES**

Dr. Craig Guyer, Professor (PhD Advisor), Department of Biological Sciences, Auburn University, Auburn, AL 36849-5414, phone: (334) 844-9234, email: [guyercr@auburn.edu](mailto:guyercr@auburn.edu)

Dr. F. Stephen Dobson, Professor, Department of Biological Sciences, Auburn University, Auburn, AL 36849-5414, phone: (334) 844-1699, email: [fsdobson@msn.com](mailto:fsdobson@msn.com)

Dr. W. Douglas Robinson, Assistant Professor, Department of Fisheries and Wildlife, 104 Nash Hall And Oak Creek Lab of Biology, Oregon State University, Corvallis, OR 97331, phone: (541) 737-2478, email: [douglas.robinson@oregonstate.edu](mailto:douglas.robinson@oregonstate.edu)

Dr. D. Mark Carpenter, Associate Professor, Department of Mathematics and Statistics, 364A Parker Hall, Auburn University, Auburn, AL 36849-5414, phone: (334) 844-3620, email: [carpedm@auburn.edu](mailto:carpedm@auburn.edu)

Dr. Stephen Secor, Assistant Professor (Postdoc Advisor), Department of Biological Sciences, 420 Biology Building, Box 870344, University of Alabama, Tuscaloosa, AL, phone (205)348-1809, email: [ssecor@biology.as.ua.edu](mailto:ssecor@biology.as.ua.edu)