

# CURRICULUM VITAE

## Scott L. Parker

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### PROFESSIONAL EXPERIENCE:

**2010-2015** *Assistant Professor Biology*-Department of Biology  
Coastal Carolina University  
PO Box 261954  
Conway, SC 29528

**2015-present** *Associate Professor Biology*-Department of Biology  
Coastal Carolina University

**2006-2009** *Postdoctoral fellow*-School of Biological Sciences,  
University of Sydney,  
Sydney, NSW, 2006  
Australia

### EDUCATION:

**2006** *Ph.D.* – Biological Sciences,  
Virginia Polytechnic Institute and State University  
Blacksburg, VA, 24060-0406

**2001** *Master of Science* - Biological Sciences,  
California State University San Bernardino  
San Bernardino, CA, 92407

**1998** *Bachelor of Science* - Biological Sciences  
University of California Santa Barbara  
Santa Barbara, CA, 93106

## GRANTS AND AWARDS:

\* indicates student co-author

- 2013** MK Pentecost Ecological Fund: \$2000.00 \* S. Buzuleciu, and **S.L. Parker**, Depredation of Diamondback Terrapin Nests in North Inlet, SC.
- 2012** MK Pentecost Ecological Fund: \$1,200.00 \*.W.B. Hills, and **S.L. Parker**, Mapping critical habitat of diamondback terrapin (*Malaclemys terrapin*): a spatial analysis of habitat use, thermal ecology, and nest substrate characteristics in a South Carolina salt marsh
- 2012** Faculty Research Enhancement Grant: \$6,000.00 **SL. Parker** and F. Lin, Histology and gene expression during tail regeneration in Anole lizards.
- 2011** Faculty Research Enhancement Grant: \$6,000.00 **SL. Parker**, Spatial and thermal ecology of diamondback terrapins in South Carolina.
- 2011** Bell W. Baruch Foundation: \$5,000.00 **SL. Parker** and K. Godwin, Nesting ecology of the diamondback terrapin in the North Inlet of Winyah Bay.
- 2008** Company of Biologists Ltd.: \$10,000, MB Thompson and **SL Parker**; travel support for World Congress of Herpetology symposium delegates.
- 2007** Australian Research Council Discovery Grant: \$360,000 MB Thompson (PI), CR Murphy (co-PI), and **SL Parker** (coauthor).
- 2004** Small Research Grant, Virginia Academy of Sciences: \$1015.00, for Ph.D. dissertation research.
- 2003** Graduate Research and Development Program, Virginia Tech: \$500.00 for Ph.D. dissertation research.
- 2002** Sigma Xi Grant-in-Aid of Research: \$300.00 for Ph.D. dissertation research.
- 2000** Associated Students Incorporated Travel Funds, California State University San Bernardino, State San Bernardino, CA: \$400.00.
- 1999** Associated Students Incorporated, California State University San Bernardino, San Bernardino, CA: \$540.00 for MSc thesis research.
- 1998** Associated Students Incorporated, California State University San Bernardino, San Bernardino, CA: \$500.00 for MSc thesis research.

## PUBLICATIONS:

1. Buzuleciu SA\*, ME Spencer, and SL Parker. 2015. Predator exclusion cage for turtle nests: a novel design. *Chelonian Conservation and Biology (In press)*.
2. Flewelling S\*. and **SL Parker**. 2015. Effects of temperature and oxygen on growth and differentiation of embryos of the ground skink, *Scincella lateralis*. *Journal of Experimental Zoology Part A: Ecological Genetics and Physiology* 323: 445–455.
3. **Parker SL**. 2014. Physiological ecology of the ground skink, *Scincella lateralis* in South Carolina: thermal biology, metabolism, water Loss, and seasonal patterns. *Herpetological Conservation and Biology* 9: 309-321.

4. Biazik, JM, **SL Parker**, CR Murphy, and MB Thompson. 2012. Uterine Epithelial Morphology and Progesterone Receptors in a Mifepristone-treated Viviparous Lizard *Pseudemoia entrecasteauxii* (Squamata: Scincidae) During Gestation. *Journal of Experimental Zoology B: Molecular and Developmental Evolution* 318: 148-158.
5. Ramírez-Pinilla, MP, **SL Parker**, CR Murphy, and MB Thompson. 2011. Variation in the uterine and chorioallantoic angiogenesis and epithelial luminal surfaces during gestation in the viviparous lizard *Niveoscincus coventryi* (Squamata: Scincidae) *Journal of Morphology* 273: 8-23.
6. Murphy, BF, **SL Parker**, CR Murphy, and MB Thompson. 2011. Placentation in the eastern water skink (*Eulamprus quoyii*) and a new model for the evolution of viviparity in lizards. *Journal of Anatomy* 218: 678-689.
7. Murphy, BF, **SL Parker**, CR Murphy, and MB Thompson. 2010. Uterine angiogenesis in the eastern water skink *Eulamprus quoyii*. *Journal of Experimental Biology* 213: 3340-3347.
8. Stewart JR, AN Mathieson, TW Ecaj, JF Herbert, **SL Parker**, and MB Thompson. 2010. Uterine and Eggshell Structure and Histochemistry in a Lizard with Prolonged Uterine Egg Retention (Lacertilia, Scincidae, *Saiphos*). *Journal of Morphology* 271:1342-1351.
9. **Parker SL**, CR Murphy, and MB Thompson. 2010. Uterine angiogenesis in squamate reptiles: implications for the evolution of viviparity. *Herpetological Conservation and Biology* 5 (2):325-329.
10. MB Thompson, DG Blackburn, and **SL Parker**. 2010. Reproduction in reptiles from genes to ecology: a retrospective and prospective vision. *Herpetological Conservation and Biology* 5 (2):252-256.
11. **Parker SL**, F Manconi, CR Murphy, and MB Thompson. 2010. Uterine and placental angiogenesis in the Australian skinks *Ctenotus taeniolatus* and *Saiphos equalis*. *The Anatomical Record* 293: 829-838.
12. Linville BJ, JR Stewart, TW Ecaj, JF Herbert, **SL Parker**, and MB Thompson. 2010. Placental calcium provision in a lizard with prolonged oviductal egg retention. *Journal of Comparative Physiology* 180:221-227.
13. Wu Q\*, **SL Parker**, and MB Thompson 2009. Selected body temperature, metabolic rate and activity pattern of the Australian fossorial skink, *Saiphos equalis*. *The Herpetological Journal* 19(3): 127-133.
14. **Parker SL**, LA Lindsay, JF Herbert, CR Murphy, and MB Thompson. 2008. Expression and localization of Ca<sup>2+</sup>-ATPase in the uterus during the reproductive cycle of king quail (*Coturnix chinensis*) and zebra finch (*Poephila guttata*). *Comparative Biochemistry and Physiology A* 149(1): 30-35.

15. **Parker SL**, and RM Andrews. 2007. Incubation temperature and phenotypic traits of *Sceloporus undulatus*: implications for the northern limits of distribution. *Oecologia* 151 (2): 218-231.
16. **Parker SL**, and RM Andrews. 2006. Evolution of viviparity in sceloporine lizards: *in utero* PO<sub>2</sub> as a developmental constraint during egg retention. *Physiological and Biochemical Zoology* 79: 581-592.
17. **Parker SL**, RM Andrews, and T Mathies. 2004. Embryonic responses to variation in oviductal oxygen concentration in the lizard *Sceloporus undulatus* from New Jersey and South Carolina, U.S.A. *Biological Journal of the Linnean Society* 83 (3): 289-299.

#### MANUSCRIPTS IN REVIEW:

Buzuleciu, SA and **SL Parker**. 2014. Disinterred Soil as an Olfactory Cue Used by Raccoons to Locate Nests of Diamondback Terrapin (*Malaclemys terrapin*). (Accepted pending final revisions).

#### AWARDS:

**2001 Outstanding Graduate Student Award**, College of Natural Sciences, California State University, San Bernardino, San Bernardino, CA.

#### TEACHING EXPERIENCE:

- 1/10-present** *Assistant professor*-Courses: Comparative Animal Physiology lecture/lab (BIOL 343/343L), Principles of Ecology lecture (BIOL 370), Physiological Ecology lecture/lab (BIOL 322/322L), Introductory Biology (BIOL 122), Graduate Seminar II, III (CMWS 698, 699), Special Topics: Comparative Vertebrate Reproductive Physiology lecture (BIOL 397), Department of Biology, Coastal Carolina University, Conway, SC.
- 6/11-8/11** *Instructor*-Horry County Public Schools Science Education Initiative, Horry County Schools/Coastal Carolina University, Conway, SC.
- 3/06-4/06** *Guest lecturer*-Course: Animal Physiology Laboratory, School of Biological Sciences, The University of Sydney, Australia.
- 7/05-8/05** *Instructor*- Course: Principles of Biology (Biol 1106), Department of Biological Sciences, Virginia Tech, Blacksburg, VA.
- 1/05-6/05** *Instructor*- Course: Introductory Animal Physiology (Biol 3404), Department of Biological Sciences, Virginia Tech, Blacksburg, VA.
- 1/04 –6/04** *Co-Instructor*-Course: Environmental Animal Physiology (Biol 4524), Virginia Tech Department of Biological Sciences, Blacksburg, VA.
- 8/02-12/04** *Head teaching assistant*- Course: Mammalogy Laboratory (Biol 4434), Department of Biological Sciences, Virginia Tech, Blacksburg, VA.
- 8/01-06/03** *Teaching assistant*- Courses: Human Anatomy and Physiology Laboratory (Biol 2414), General Biology Laboratory (Biol 1015L), Principles of Biology

Laboratory(1016L), Department of Biological Sciences, Virginia Tech, Blacksburg, VA.

**9/98-5/01** *Teaching assistant-* Courses: Field Ecology Laboratory, Cell Biology Laboratory, Organismal Biology Laboratory, Population Biology Laboratory, Introductory Biology Laboratory, Department of Biology, California State University San Bernardino, San Bernardino, CA.

#### **NON-ACADEMIC EMPLOYMENT:**

**6/98-8/01** *Field biologist-* Jones and Stokes Associates Inc., Sacramento, CA;  
-conducted surveys for threatened and endangered fish, amphibians, reptiles, and mammals in accordance with U.S. Fish and Wildlife Service and California Department of Fish and Game protocols  
-monitored work activities in the field to minimize impact on endangered species  
-prepared reports characterizing habitat suitability and summarizing results of surveys for endangered species

**10/97-6/98** *Habitat restoration technician-* University of California Natural Reserve System, Coal Oil Point, Santa Barbara, CA;  
-propagation of native plants species and removal of exotic and invasive plants from coastal dune and coastal sage-scrub ecological communities

#### **RESEARCH EXPERIENCE:**

**5/06-12/09** *Post-doctoral research-* Integrative Physiology Research Group, University of Sydney, NSW Australia; Project title: Regulation of uterine angiogenesis during the evolutionary transition from oviparity to viviparity in reptiles.

**9/01-12/05** *Doctoral research-* Virginia Polytechnic Institute and State University, Blacksburg, VA; Dissertation title: “Physiological and ecological constraints on the evolution of viviparity in sceloporine lizards.”

**8/04-3/05** *Research assistant-* Virginia Polytechnic Institute and State University, Blacksburg, VA; Effects of temperature during egg incubation on hatchling morphology, growth, and behavior in the veiled chameleon (*Chameleo calyptratus*).

**5/02–8/02** *Research assistant-* Virginia Polytechnic Institute and State University, Blacksburg, VA; Influence of temperature and moisture on the length of embryonic diapause in the veiled chameleon (*Chameleo calyptratus*).

**9/98-6/01** *Master of science thesis research-* California State University San Bernardino, San Bernardino, CA; Thesis title: “Thermal and reproductive biology of the lizards *Sceloporus occidentalis* and *Sceloporus graciosus* along an environmental and geographical gradient.”

**2/97-7/98** *Undergraduate field and lab assistant-* University of California Santa Barbara, Santa Barbara, CA;  
-field assistant for study on community ecology of estuarine fish species.

**2/97-5/98** *Volunteer field assistant-* U.S. Forest Service, Los Padres National Forest, CA and U.S. Fish and Wildlife Service, Piedras Blancas Research Station, CA;

-participated in pit tagging California Red-legged frogs and conducted nighttime surveys

**9/97-5/98** *Undergraduate research*- University of California Natural Reserve, Coal Oil Point, Santa Barbara, CA; Project title: "Environmental factors influencing the spatial segregation of two species of coastal sand verbenas (*Abronia*) at Coal Oil Point, CA."

#### INVITED SEMINAR PRESENTATIONS:

- 3/12** **Parker SL.** Angiogenesis, placental epithelial cell morphology, and the evolution of viviparity in Australian skinks. Science Colloquium Seminar Series, Francis Marion University, Florence, SC.
- 4/11** **Parker SL.** Changes in uterine surface epithelium and blood vessel development in oviparous and viviparous Australian skinks. Department of Biology Seminar Series, East Tennessee State University, Johnson City, TN.
- 2/09** **Parker SL.** Hot bodies in cold climates: physiological and ecological constraints on the evolution of viviparity in reptiles. Department of Biology Seminar Series, Willamette University, Willamette, OR.
- 7/08** **Parker SL, MB Thompson, and CR Murphy.** Placental angiogenesis during gestation in the three-toed skink, *Saiphos equalis*. International Conference of Comparative Physiology and Biochemistry, Mara, Kenya.
- 6/05** Andrews, RM and **SL Parker.** *pO<sub>2</sub> in utero* and the transition to viviparity in sceloporine lizards. 5<sup>th</sup> World Congress of Herpetology, Stellenbosch, South Africa.

#### SEMINAR PRESENTATIONS:

- 4/14** Cottrell, C,\*\* and **SL Parker.** Effect of atrazine on reproductive physiology of the anole lizard (*Anolis carolinensis*). National Conference of Undergraduate Research, Lexington, KY.
- 7/13** Hills, WB\* and **SL Parker.** Where to dig? Modeling potential diamondback terrapin (*Malaclemys terrapin*) nest sites at North Inlet, SC, using a geographic information system (GIS). Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM.
- 8/12** **Parker, SL.** CR Murphy; MB Thompson. Comparative aspects of oviductal angiogenesis and epithelial cell surface morphology in oviparous and viviparous Australian skinks. 7<sup>th</sup> World Congress of Herpetology, Vancouver, British Columbia, Canada.
- 7/11** **Parker, SL, MP Ramirez-Pinilla, J. Biazik, CR Murphy; MB Thompson.** Influence of the progesterone receptor antagonist mifepristone on uterine blood vessel development and epithelial surface morphology in viviparous Australian skinks. Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN.
- 8/08** **Parker SL, CR Murphy; MB Thompson.** Uterine angiogenesis in squamate reptiles: implications for the evolution of viviparity. 6<sup>th</sup> World Congress of Herpetology, Manaus, Brazil.
- 12/07** **Parker SL, MB Thompson, and CR Murphy.** Uterine vascular ontogeny during the reproductive cycle of the three-toed skink, *Saiphos equalis*. Australian and New Zealand Society for Comparative Physiology and Biochemistry, Albany, Australia.

- 12/06 Parker SL.** Physiological constraints on the evolution of viviparity in sceloporine lizards. Australian and New Zealand Society for Comparative Physiology and Biochemistry, Brisbane, Australia.
- 7/05 Parker,SL** and RM Andrews. Oviductal oxygen availability as a physiological constraint on the evolution of viviparity in sceloporine lizards. Joint meeting of Ichthyologists and Herpetologists, Tampa, FL.
- 5/04 Parker SL** and RM Andrews. Embryonic responses to oviductal oxygen concentration in the lizard *Sceloporus undulatus* from New Jersey and South Carolina. Joint meeting of Ichthyologists and Herpetologists, Norman, OK.
- 7/01 Parker SL.** Contrasts of eggshell thickness between two species of *Sceloporus* lizards using scanning electron microscopy. Microscopy and Microanalysis, Long Beach, CA.

#### **POSTER PRESENTATIONS:**

- 4/14 Flewelling, S.\*\* and SL Parker.** Interactive effects of temperature and oxygen concentration on growth and development of lizard embryos. National Conference of Undergraduate Research, Lexington, KY.
- 4/13 Parker, Z.\*\*, J. Lynn\*\*, W.B. Hills\*, and SL Parker.** Modeling Nesting Ecology of Diamondback Terrapins based on Terrestrial Habitat Features. Big South Undergraduate Research Symposium, High Point, NC.
- 7/13 Parker, Z.\*\*, J. Lynn\*\*, W.B. Hills\*, and SL Parker.** An analysis of vegetation and terrestrial characteristics of *Malaclemys terrapin* nest sites at North Inlet, South Carolina. Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM.
- 7/13 Parker, SL.** Physiological ecology of the ground skink, *Scincella lateralis* in South Carolina: thermal biology, water loss, and metabolism. Joint Meeting of Ichthyologists and Herpetologists, Albuquerque, NM.

#### **SERVICE:**

- 2/05-present** Referee for the following scientific journals: *Biological Journal of the Linnean Society, Comparative Biochemistry and Physiology, Herpetological Monographs, Isotopes and Environmental Health Studies, Journal of Comparative Physiology, Journal of Thermal Biology, The Anatomical Record, Journal of Morphology, Micron, Revista Mexicana de Biodiversidad, Animal Reproduction Science, Cell and Tissue Research*
- 2013-present** Graduate committee member, School of Coastal and Marine Systems Science, Coastal Carolina University, Conway, SC.
- 2013-present** Assessment officer for Department of Biology, Coastal Carolina University, Conway, SC.
- 2011-2013** Medical and Professional School Advisory Committee, Department of Biology, Coastal Carolina University, Conway, SC.
- 7/08-present** Honors student assessment committee member, School of Biological Sciences, The University of Sydney.
- 2/08-present** Coordinator, School of Biological Sciences Graduate Student Seminar Series, The University of Sydney.

- 8/08** Organizer of international symposium “Reproduction in Reptiles: genes to ecology” at the 6<sup>th</sup> World Congress of Herpetology in Manaus, Brazil.
- 6/08-8/08** Referee for graduate student excellence prize competition, School of Biological Sciences, The University of Sydney
- 6/05-12/05** Project Success Facilitator, Virginia Tech, Blacksburg, VA; Instructor and mentor for program designed to help improve academic and organizational skills of college students on academic probation.

**PROFESSIONAL SOCIETIES:**

**1998-present** Society for the Study of Amphibians and Reptiles

**CERTIFICATIONS:**

- 2011** First aid/CPR, Blood-borne pathogens training, Office of Environmental Health and Safety, Coastal Carolina University, Conway, SC.
- 2011** South Carolina boat operator certificate, South Carolina Department of Natural Resources.
- 2005** Preparing the Future Professoriate, Graduate Education and Development Initiative, Virginia Tech, Blacksburg, VA; Certificate of completion.
- 1998** Recreational Diving Program, Santa Barbara City College, Santa Barbara, CA; National Association of Underwater Instructors (NAUI) open water diving instructor.
- 1991** Comprehensive Baking and Pastry Program, Culinary Institute of America, Hyde Park, NY; Certificate of completion.