

C. Gregory Anderson

Curriculum Vitae

Office Address

Department of Biological Sciences
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Education

- Ph.D. Ecology and Evolutionary Biology, 2001. University of Tennessee, Knoxville.
Dissertation title: "Continuous Morphological Data in Phylogenetic Analyses: An Example from the Otters (Carnivora: Lutrinae)." Major Advisor: Dr. John L. Gittleman.
- B.A. Biology, 1990. University of Missouri-Columbia, Columbia, Missouri.

Current Position

2002-
Present **Assistant Professor, Department of Biological Sciences, University of the Pacific, Stockton, California.** Teach biology majors lecture and laboratory courses in: Human Anatomy, Anatomy and Physiology, Ecology, Evolution, Biodiversity and Conservation Biology, and Habitat Restoration; Human Anatomy and Physiology, and Environmental Concepts and Issues for non-majors. Research areas: habitat restoration and river otter (*Lontra canadensis*) biology.

Previous Position

2000-2002 **Assistant Professor, Department of Natural Sciences, Oregon Institute of Technology, Klamath Falls, Oregon.** Taught lecture and laboratory courses in: General Biology for non-majors, Human Anatomy and Physiology, Human Cadaver Dissection, and Ecosystems. Two year, non-renewable contract teaching position.

Research Experience

1991-1993 **Research Assistant, Smithsonian Institution, Department of Vertebrate Zoology, Division of Mammals, National Museum of Natural History, Washington, D.C.** Systematics and taxonomy of squirrels and primates. Functional morphology of sciurid carpal bones and associated musculature. Taxonomy and zoogeography of African squirrels.

Publications

- Anderson, C.G.** (in prep.) Teaching Evolution in America: On the Shoulders of Charles Darwin in the Shadow of John Scopes. The Forum on Public Policy: A Journal of the Oxford Round Table.
- Anderson, C.G.** and G.L. Miller (in press). Ecosystem Restoration: An Ecologist's Field Notes on Law, Policy and Ecology. The Transnational Lawyer, 19(1).
- Gittleman, J.L., H.-K. Luh, **C.G. Anderson**, and S.E. Cates. 2000. Heterochrony, life histories, and brain size: Connections via a multivariate method. Pp.159-179 in The Evolution of Behavioral Ontogeny (S.T. Parker, M.L. McKinney, and J. Langer eds.). SAR Press, Santa Fe.
- Anderson, C.G.** 1999. The Arctic Fox (*Alopex lagopus*). Pp. 146-148 in The Smithsonian Book of North American Mammals (D.E. Wilson, and S. Ruff, eds.). Smithsonian Institution Press.
- Brooks, T.M., **C.G. Anderson**, and R.W. Kays. 1998. An observation of a White-throated sparrow (*Zonotrichia albicollis*) exhibiting partial albinism. The Migrant. 28(9):130-131.
- Gittleman, J.L., **C.G. Anderson**, S.E. Cates, H.-K. Luh, and J.D. Smith. 1998. Detecting ecological pattern in phylogenies. Pp. 51-69 in Biodiversity Dynamics: Turnover of populations, taxa, and communities (M.L. McKinney and J.A. Drake eds.). Columbia University Press.
- Russell, G.J., T.M. Brooks, M.L. McKinney, and **C.G. Anderson**. 1998. Present and future taxonomic selectivity in bird and mammal extinctions. Conservation Biology, 12(5):1365-1376.
- Thorington, R.W., Jr., K. Darrow, and **C.G. Anderson**. 1998. Wing tip anatomy and aerodynamics in flying squirrels. Journal of Mammalogy, 79(1):245-250.
- Thorington, R.W., Jr., A.L. Musante, and **C.G. Anderson**. 1998. Arboreality in tree squirrels (Sciuridae). Pp. 119-130 in Ecology and Evolutionary Biology of Tree Squirrels (M.A. Steele, J.F. Merritt, and D.A. Zegers, eds.). Virginia Museum of Natural History Press, Special Publication Number 6.
- Anderson, C.G.**, J.L. Gittleman, K.-P. Koepfli and R.K. Wayne. 1996. Sea otter (*Enhydra lutris*) systematics and conservation: which are critical subspecies? Endangered Species UPDATE, Special Issue (J.F. Watson, T.L. Root, and E.J. Brennan, eds.). 13(12):6-10.
- Gittleman, J.L., **C.G. Anderson**, M. Kot, and H.-K. Luh. 1996. Phylogenetic lability and rates of evolution: a comparison of behavioral, morphological and life history traits. Pp. 166-205 in Phylogenies and the Comparative Method (E.P. Martins, ed.). Oxford University Press, Oxford.
- Gittleman, J.L., **C.G. Anderson**, M. Kot, and H.-K. Luh. 1996. Comparative tests of evolutionary lability and rates using molecular phylogenies. Pp. 289-307 in New Uses for New Phylogenies (P.H. Harvey, A.J. Leigh Brown, J. Maynard Smith, and S. Nee, eds.). Oxford University Press, Oxford.
- Thorington, R.W., Jr., A.L. Musante, **C.G. Anderson**, and K. Darrow. 1996. Validity of three genera of flying squirrels: *Eoglaucomys*, *Glaucomys*, and *Hylopetes*. Journal of Mammalogy, 77(1):69-83.
- Hoffmann, R.S., **C.G. Anderson**, R.W. Thorington Jr., and L.R. Heaney. 1993. Family Sciuridae. Pp. 419-465 in Mammal Species of the World: a Taxonomic and Geographic Reference (D.E. Wilson and D. Reeder eds.) 2nd ed. Smithsonian Institution Press, Washington, D.C.

Presentations

- Anderson, C.G. 2007. Evolution in America: On the Shoulders of Charles Darwin in the Shadow of John Scopes. The Oxford Round Table, Lincoln College, Oxford England, March 13th, 2007.
- Anderson, C.G. 2005. Ecosystem Restoration: An Ecologist's Field Notes on Law, Policy and Ecology. Transboundary Ecosystem Restoration: The Role of Law, Process and Lawyers. University of the Pacific McGeorge School of Law, February 18, 2005.
- Anderson, C.G. 2004. Aquatopia (Summer Institute) Otter research and aquatic ecology topics, also gave a presentation at Caswell State Park on endangered Riparian rabbit habitat and recovery program, then conducted 2 days of creek side workshops on Five-mile Creek in Stockton, CA. 2004
- Anderson, C.G., and J.L. Gittleman. October 1996. Sea otter (*Enhydra lutris*) systematics and conservation: which are critical subspecies? Endangered Species UPDATE Special Issue Symposium on Sea Otters. Invited Lecturer, Monterey Bay Aquarium, Monterey, California.
- Gittleman, J.L., H.-K. Luh, C.G. Anderson, and S.E. Cates. August 1995. Heterochrony, life histories, and brain size: Connections via a multivariate method. The Evolution of Behavioral Ontogeny, The School of American Research. Santa Fe, New Mexico.
- Gittleman, J.L., H.-K. Luh, C.G. Anderson, and S. Edwards. December 1994. Comparative tests of evolutionary lability and rates using molecular phylogenies. Royal Society of London, London England.
- Gittleman, J.L., H.-K. Luh, C.G. Anderson, and S. Edwards. July 1994. Plasticity and rates of behavioral versus morphological evolution. Animal Behavior Society and American Society of Primatologists Meeting. Seattle, Washington.
- Thorington, R.W., Jr., A.L. Musante, and C.G. Anderson. April 1994. Did arboreality evolve more than once in tree squirrels? International Tree Squirrel Symposium. Carnegie Museum of Natural History, Powder Mill Biological Station, Rector, Pennsylvania.
- Thorington, R.W., Jr., and C.G. Anderson. June 1993. The wrist bones of flying squirrels (Sciuridae). 73rd Annual meeting, American Society of Mammalogists. Bellingham, Washington.
- Thorington, R.W., Jr., and C.G. Anderson. June 1993. The wrist bones of flying squirrels: Form, function, and phylogeny. International Theriological Congress Six. Sydney, Australia.
- Thorington, R.W., Jr., and C.G. Anderson. June 1992. The wrist bones of squirrels (Sciuridae). 72nd Annual meeting, American Society of Mammalogists. Salt Lake City, Utah.

Teaching: Lecture Courses

University of the Pacific (2002-present)

Human Anatomy and Physiology (BIOL 11). Non-majors human anatomy and physiology. Basic lower level anatomy, physiology, and health issues, with lab.

Environment: Concepts and Issues (BIOL 35). Non-majors course in ecology as it relates to global environmental issues. Environmental issues are presented and both sides discussed.

Human Anatomy (BIOL 71). Human anatomy for biology majors and qualified non-majors. Structure and anatomy of the organ systems of humans, with lab.

Teaching: Lecture Courses (continued)

Anatomy and Physiology (BIOL 111). Structure and function of major anatomical and physiological systems in the human body. Geared primarily for the Dental Hygiene program, with lab.

Ecology (BIOL 175). Required core course in ecology for biology majors. Structure and dynamics of biotic systems, communities, and populations, emphasizing the relationship of organisms and their environment.

Evolution (BIOL 179). Required core course in evolution for biology majors. Topics include the history of evolutionary thought, genetic mechanisms in evolution, adaptation, phylogenetics, selection, speciation, extinction, and discussions of evolutionary theory controversies.

Habitat Restoration (BIOL 193). Topics include ecological and permitting aspects of habitat enhancement, rehabilitation, and restoration. In the field component students participate in removing invasive species and restoring native riparian plants and habitat.

Undergraduate Research (BIOL 197). Undergraduate students work in faculty labs assisting in ongoing major research projects or ancillary side projects of their own design. To date (2006) I have had over 45 undergraduates work in my lab for over 130 units of credit, several of whom have presented their findings at regional scientific meetings.

Biodiversity and Conservation (BIOL 293). Graduate level course on evolutionary processes and the importance of ecology in the fields of biodiversity and conservation. In the lab, students used ecological test kits to monitor water and soil quality and visited various local conservation facilities.

Oregon Institute of Technology (2000-2002)

Gross Human Anatomy (BIO 407). Upper level human anatomy lecture and lab course with cadaver dissection for majors and Health Sciences Program students.

Ecosystems (ENV 211). Ecosystem course covering chemical and biological cycles, resource flow, habitat evaluation, descriptive modeling of ecosystems, and field techniques.

General Biology (BIO 102). Organismal biology for non-majors. Introductory course in biology, Taxonomy, evolution, and diversity of organisms.

General Biology (BIO 103). Introductory biology course for non-major undergraduate students: animal anatomy and physiology with an emphasis on humans.

University of Tennessee, Knoxville (1993-1999)

Mammalogy (EEB 476). Co-taught lecture course for upper division undergraduates and graduate students. Mammalian anatomy, physiology, ecology, evolution, behavior, and conservation.

Comparative Vertebrate Biology (EEB 350). Lecturer for class of 50 upper division undergraduates. Origin, evolution, and development of vertebrates and systems.

Teaching: Lecture Courses (continued)

Guest Lectures

Fall 2006	Guest Lecturer, <u>Physical Anthropology (ANTH 112)</u> . University of the Pacific, Stockton. Macroevolution: Processes of Vertebrate and Mammalian Evolution.
Spring 2003	Guest Lecturer, <u>Human Physiology (BIOL 81)</u> . University of the Pacific, Stockton. Nervous system: membrane, action and graded potentials, synapses.
Spring 2000	Guest Lecturer, <u>Human Anatomy and Physiology (BIO 333)</u> . Oregon Institute of Technology, Klamath Falls. Human Reproduction: spermatogenesis and oogenesis.
Fall 1999	Guest Lecturer, <u>Perspectives in Ecology and Evolutionary Biology (EEB 409)</u> . University of Tennessee, Knoxville. Evolutionary theory and approaches to analysis.
Fall 1998-1999	Guest Lecturer, <u>Macroevolution (BIO 401/701)</u> . University of Virginia. Evolution of size; allometric effects; adaptation and evolution of size in vertebrates. <u>Basic Concepts in Organic Evolution (EEB 505)</u> . University of Tennessee, Knoxville.

Laboratory Teaching

University of the Pacific (2002-present)

Biodiversity and Conservation (BIOL 293). Graduate level lab involving habitat quality analysis, captive breeding programs, and survey techniques.

Anatomy and Physiology (BIOL 111). Anatomy and Physiology lab primarily for Dental Hygiene students. This lab covers all major organ systems with special attention to head and neck anatomy and physiological processes and monitoring relevant to the field.

Human Anatomy (BIOL 71). Human anatomy lab. All major organ systems are covered using anatomy models and specimen dissections.

Human Anatomy and Physiology (BIOL 11). Non-majors anatomy and physiology lab, with an emphasis on physiology

Oregon Institute of Technology (2000-2002)

Gross Human Anatomy (BIO 407). Gross human anatomy dissection laboratory. System-based general dissection of human cadavers.

Biology Practicum (BIO 407). Human cadaver dissection lab for upper level majors. Students were guided through a specialized regional dissection of human cadavers.

Ecosystems (ENV 211). Ecosystem lab, field excursions combined with data collection, habitat evaluation techniques, and resource analyses.

Introductory Human Anatomy (BIO 121; 122; and 123). Human anatomy and physiology lab for undergraduates focusing on skeletal and musculature systems; the circulatory, nervous systems, and senses; respiratory, urinary, and digestive systems, and genetics.

Laboratory Teaching (continued)

Oregon Institute of Technology (2000-2002)

General Biology (BIO 102). General Biology laboratory for non-majors. Systematics and organismal biology. Coverage of the major phyla with some dissection work.

General Biology (BIO 103). Human anatomy and physiology lab for non-majors. Model and cadaver based laboratory.

University of Tennessee, Knoxville (1993-1999)

Mammalogy (EEB 476). Lab course dealing with mammal identification based on skin and skull characteristics and field techniques.

Comparative Vertebrate Biology (EEB 350). Lab course involving dissections of various organisms and the evolutionary implications of various systems.

Human Anatomy (EEB 240). Cadaver and model-based human anatomy lab.

Honors Zoology (ZOO 120). Specialized lab for honors students in zoology using advanced techniques and methods such as in vitro fertilization and DNA sequencing.

Outside Reviewer

Journal of Animal Ecology, American Naturalist, Journal of Mammalogy, American Midland Naturalist.

Consulting and Outside Work

Monterey Bay Aquarium, 2006. Acted as the field consultant to exhibit designers and the otter keepers to help produce a realistic and scientifically correct river otter habitat.

Collections Manager (Mammals), University of Tennessee Museum of Zoology. 1994-1999. Time-Life Books. Mammal Consultant.

National Geographic Book Department. Mammal Consultant.

National Wildlife Federation. International & National Wildlife Magazines. Mammal Consultant.

Tennessee Valley Authority. 1995. Tennessee Speleological Society. 1996. Cave surveys for Endangered Gray bats (*Myotis grisescens*).

Summer 2001. Volunteer for Department of Fish and Wildlife and Bureau of Reclamation. Projects included: banding American white pelicans, amphibian surveys, and other duties.

Spring 1998 & 1999. Co-organizer for Annual Earth Day 6K (Run For Your Mother Earth Day 6K) to benefit local conservation agencies and GREBE (Graduate Researchers in Ecology, Behavior, and Evolution). This event raised and donated over \$4000 to these organizations.

Summers 1997-1999. Organized and co-taught Mammalogy classes for 6th-8th Grade students in the "Kid's U" Summer Program at the University of Tennessee, consisting of both laboratory and field work. Proceeds from these classes (\$1800) were donated to the Graduate Student organization GREBE (Graduate Researchers in Ecology, Behavior, and Evolution) to provide travel funds for graduate students in the Dept. of Ecology and Evolutionary Biology.

Consulting and Outside Work (continued)

Spring 1997. Assisted the Graduate Affairs Committee in evaluating graduate student progress.

Gave lecture on human anatomy to High School students using cadaver. Gave lecture at High School on research and opportunities for study at the Smithsonian Institution. Participated in

panel discussion for Honor Students (Threshold Program) interested in Graduate school.

Fall 1996. Selected by senior faculty members to serve as the Graduate Student Representative to the Graduate Affairs Committee to help edit the Graduate Student Handbook for the Department of Ecology and Evolutionary Biology at the University of Tennessee, Knoxville.

Spring 1996. Mentor/Instructor for five Howard Hughes Honor Students. Directed an undergraduate research project on evolution, comparative methods, and phylogenetics. Worked with students to design, and complete a research project during a one semester period.

Awards and Grants

Departmental Merit Award for Excellence in Teaching and Research; 1999 (\$2,500)

Science Alliance Award for Outstanding Scholarly Achievement; 1997 (\$3,000)

Department of Ecology and Evolutionary Biology Travel Grant for presentation of research; 1996

Graduate Researchers in Ecology and Evolutionary Biology Travel Grants; 1995, 1996

Graduate Organization, Department of Zoology Travel Grants; 1993, 1994

Professional Service and Society Membership

Service

National Science Foundation, Project Kaleidoscope Leadership Initiative Member (2004-present)

Ecology Faculty Search Committee Chair (Fall/Spring 2006) University of the Pacific

Student/Faculty Advocate Board (2003-present) University of the Pacific

Academic Facilities Improvement Committee (2003-'06, Chair '05-'06) University of the Pacific

Biological Sciences Departmental Library Liaison (2002-present), University of the Pacific

Experiential Learning Committee (2003), University of the Pacific

Graduate School Admissions Manager Search Committee (Spring 2003), University of the Pacific

Faculty Advisor/Co-Founder: Biology Graduate Student Organization University of the Pacific

Oregon Institute of Technology Multicultural Club Faculty Advisor (2000-2002), OIT

Graduate Affairs Committee, Graduate Student Representative (1996), UTK

Graduate Researchers in Ecology, Behavior, and Evolution (Vice President, 1995-1996), UTK

Graduate Organization Department of Zoology (Treasurer 1994-95), UTK

Society Memberships

American Society of Mammalogists (Checklist Committee, 1992-present)

The Wildlife Society

Society for Conservation Biology

Society for Ecological Restoration

Society for Ecological Restoration International

Ecological Society of Australia

Phi Theta Kappa National Honor Society

References and Teaching Evaluations

Available upon request.