

Curriculum Vitae

Cort L. Anderson, PhD

School of Natural Sciences and Medicine
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Education

Undergraduate: University of Chicago, Chicago, Illinois
BA with Honors in Biology, awarded 1982
Graduate: Yale University, New Haven, Connecticut
PhD in Biology, awarded 1991

Appointments

2020-2023: Project supervisor and PI (one of 4), CaBoL (Caucasus Barcode of Life) project.
2015-present: Full Professor, School of Natural Sciences and Medicine, Ilia State University, Tbilisi, Georgia.
2015-2016: Fulbright Scholar, Ilia State University, Tbilisi, Georgia.
2010-2012: Program Director, Division of Biological Infrastructure, National Science Foundation, Arlington VA.
2001-2014: Director, Laboratory for Ecological and Conservation Genetics (LECG), University of Idaho College of Natural Resources, Moscow ID.
2004-2014: Assistant Research Professor, Dept of Fish and Wildlife, University of Idaho College of Natural Resources, Moscow ID.
2007-2012: Co-director, Center for Research on Invasive Species and Small Populations (CRISSP), University of Idaho College of Natural Resources, Moscow ID.
1998-2001: Research scientist, Department of Organismal Biology and Anatomy, University of Chicago, Chicago IL.
1995-1998: Postdoctoral fellow, Imperial College, University of London, Dept. of Biology, Silwood Park, Ascot, Berkshire UK.
1991-1994: Howard Hughes Medical Institutes Research Fellow, Yale University, New Haven CT.
1982-1983: Visiting Fellow, University of Melbourne, Melbourne, Victoria, Australia.

Relevant managerial skills and experience

Analytics—as a population biologist I am accustomed to working with large data sets, likewise statistical and graphical analysis and presentation of data, trend analysis, and modeling. These skills transfer readily to workplace administration, and are useful not just for biological data, but also for budget analysis and projections, analysis of economic data, marketing, social science data, and demographics, among others.

Budget management and procurement—these are skills I have developed to a high-level, because grant money is hard to come by. I have learned, through much practice, how to maximize productivity of human and physical resources while controlling costs.

Communications skills--as a scientist and teacher, my communications skills are key, required for scientific publications that describe research findings, for presentations at conferences, grant applications, and in the classroom. In the workplace, open and clear communications are likewise essential for a productive and harmonious work environment.

Human resources management—in my job as core research laboratory director, and as a PI on multiple research projects, I have experience in managing multi-cultural staff, possessing variable levels of know-how and education. This experience is mostly in an academic setting, where I have successfully fostered productive, task-oriented, hospitable, and safe work environments.

Languages

English, native speaker; German, proficient in oral and written communications.

Grants and awards, last 5 years

2015-2016. Fulbright Foundation Research and Teaching Fellowship.

2017-2019. *Exploring Biodiversity in the Caucasus Region: Georgian-German joint research and training initiative to establish a Georgian-German Biodiversity Research Center*. BMBF (Bundesministerium für Bildung und Forschung; Federal Ministry for Education and Research)/DLR (Deutsche Zentrum für Luft- und Raumfahrt; German Aerospace Center). Co-PI with B. Misof, D. Tarkhnisvili, and Jonas Astrin. €150,000.

2018-2022. *Salmonids in the Southern Caucasus: Conservation status, taxonomy, and fisheries implications*. Shota Rustaveli National Science Foundation. \$100,000 (GEL 240,000).

2020-2024. *Georgian-Armenian-German initiative to establish a joint Caucasian biodiversity research hub*. BMBF (Bundesministerium für Bildung und Forschung; Federal Ministry for Education and Research)/DLR (Deutsche Zentrum für Luft- und Raumfahrt; German Aerospace Center). Co-PI with B. Misof, D. Tarkhnisvili, and Jonas Astrin. €2,000,000.

2021-2023. *Advanced genomic technology and student training will enable Ilia State University to serve as a biodiversity research hub for the Caucasus region.* Volkswagen Foundation. Co-PI with B. Misof and D. Tarkhnishvili. €200.000.

Service

2017-2019. Expert reviewer for Fulbright Foundation, Fulbright Scholars Program.

2016-2021. Expert reviewer for DAAD (Deutsche Akademische Austauschdienst; German Academic Exchange Service) Research and study fellowships.

2009. Panelist and author (one of five), *Zebra/Quagga Mussel Early Detection and Rapid Response: Blue Ribbon Panel Recommendations for the Colorado Division of Wildlife.*

2008-2014. Committee member, University of Idaho Occupational Health and Safety Committee.

2006-2014. Laboratory Safety Officer, College of Natural Resources, University of Idaho.

2004-2010. Representative, Idaho Invasive Species Council and Idaho Aquatic Nuisance Species Task Force.

Peer-reviewed publications

- Beridze, T., T. Edisherashvili, F. Scheele, and C.L. Anderson. 2020. Ship sturgeon rediscovered in the Rioni River in Georgia. **Oryx**, *in press*.
- Tarkhnishvili, D., A. Yanchukov, M. K. Şahin, M. Gabelaia, M. Murtskhvaladze, K. Candan, E. Galoyan, M. Arakelyan, G. Iankoshvili, Y. Kumlutaş, Ç. Ilgaz, F. Matur, F. Çolak, M. Erdolu, S. Kurdadze, N. Barateli and C. L. Anderson. 2020. Genotypic similarities among the parthenogenetic *Darevskia* rock lizards with different hybrid origins. **BMC Evolutionary Biology** (20), 122 (2020). <https://doi.org/10.1186/s12862-020-01690-9>
- Tarkhnishvili, D., M. Murtskhvaladze, C.L. Anderson and A. Kotorashvili. 2020. Phylogeny of Caucasian rock lizards (*Darevskia*) and other true lizards based on mitogenome analysis: Optimization of the algorithms and gene selection. **PLoS ONE** 15(6): e0233680. <https://doi.org/10.1371/journal.pone.0233680>.
- Terrazas, M., C.L. Anderson, S.J. Jacobs, and K.D. Cain. 2018. Identification of Two Pathogenic *Aeromonas* Species Isolated from Juvenile Burbot during Production-Related Epizootics. **J. Aquat. Anim. Health** 30(3): 201-209.
- Tarkhnishvili, D., M. Murtskhvaladze, C.L. Anderson. 2017. Coincidence of genotypes at two loci in two parthenogenetic rock lizards: how backcrosses might trigger adaptive speciation. **Biol. J. Linnean Soc.** 20: 1-14.
- Ott, T. M., E. Strand, and C.L. Anderson. 2015. Niche divergence of *Abies grandis*-*Abies concolor* hybrids. **Plant Ecology** 216: 479-490.
- Newcombe G, A. Shipunov, S. Eigenbrode, A. Raghavendra, H. Ding, C. Anderson, R. Menjivar, M. Crawford, M. Schwarzländer. 2009. Endophytes influence protection and growth of an invasive plant. **Commun Integr Biol.**; 2(1):29-31.
- Szűcs M., C. L. Anderson, and M. Schwarzländer. 2009. Landscape genetics and climatic associations of flea beetle lineages, and implications for biocontrol of tansy ragwort. In *Proceedings of the XIth International Symposium on the Biological Control of Weeds*. Eds. M. Julian, R. Sforza, M. Bon, H. Evans, P. Hatcher, H. Hinz, and B. Rector. CABI, Wallingford, UK.
- Shipunov, A., G. Newcombe, A.K.H. Raghavendra, and C.L. Anderson. 2008. Hidden diversity of endophyte fungi from invasive spotted knapweed (*Centaurea stoebe* L., Asteraceae). **American Journal of Botany** 95(9): 1096–1108.
- Garton, E. O., D. Musil, K. P. Reese, C. L. Anderson and J. W. Connelly. 2007. Sentinel Leaks: An integrated sampling approach to estimate greater sage-grouse population characteristics. Monitoring Populations of Sage-Grouse, Symposium Proceedings, **Station Bulletin 88**, November 2007, College of Natural Resources Experimental Station, Moscow ID.
- Clark, M. E., B.D. Heath, C.L. Anderson, and T.L. Karr. 2006. Induced paternal effects mimic cytoplasmic incompatibility in *Drosophila*. **Genetics** 173: 727-734.
- Clark, M. E., Anderson, C., Cande, J. and Karr, T. L. 2005. Widespread prevalence of *Wolbachia* in laboratory stocks and the implications for *Drosophila* research. **Genetics** 170: 1667-1675.

- Canning, E.U., S.W. Feist, M. Longshaw, B. Okamura, C.L. Anderson, M.T. Tse, and A. Curry. 2005. *Microgemma vivaresi* n. sp. (Microsporidia, Tetramicridae), infecting liver and skeletal muscle of sea scorpions, *Taurulus bubalis* (Euphrasen 1786) (Osteichthyes, Cottidae), an inshore, littoral fish. **J. Eukaryot. Microbiol.** 52(2): 1-9.
- Nischwitz, C., G. Newcombe, and C.L. Anderson. 2005. Host specialization of the mycoparasite *Eudarlucacaricis* and its evolutionary relationship to *Ampelomyces*. **Mycol. Res.** 109 (4): 421-428.
- Misof B., C.L. Anderson, T.R. Buckley, D. Erpenbeck, A. Rickert, and K. Misof. 2002. An empirical analysis of mt 16S rRNA covarion-like evolution in insects: site-specific rate variation is clustered and frequently detected. **J Mol Evol** 55(4):460-9
- Anderson, C.L., and T.L. Karr. 2001. *Wolbachia*: Evolutionary novelty in a rickettsial bacteria. **BMC Evolutionary Biology** 1 :10.
- Okamura, B., C. L. Anderson, M. Longshaw, S.W. Feist, and E.U. Canning. 2001. Patterns of occurrence and 18S rDNA sequence variation of PKX (*Tetracapsula Bryosalmonae*), the causative agent of salmonid Proliferative Kidney Disease. **J. Parasitology** 87: 379-85.
- Anderson, C.L., E.U. Canning, B. Okamura, S. M. Schäfer, and H. Yokoyama. 2000. Molecular data confirm Aurantiactinomaxon species as the alternate stage of *Thelohanellus hovorkai* Achmerov, 1960 (Myxosporidia: Myxozoa) life cycle. **Bull. Eur. Assoc. Fish Pathol** 20: 111-115.
- Misof, B., and C. L. Anderson. 2000. A phylogeny of the damselfly genus *Calopteryx* (Odonata) using mitochondrial 16s rDNA markers. **Molecular Phylogenetics and Evolution** 15: 5-14.
- Anderson, C.L., E. U. Canning, and B. Okamura. 1999. Molecular data implicate bryozoans as hosts for PKX (Phylum Myxozoa) and identify a clade of bryozoan parasites within the Myxozoa. **Parasitology** 119: 555-561.
- Anderson, C.L., E. U. Canning, and B. Okamura. 1999. 18S rDNA sequences indicate that PKX organism parasitizes bryozoa. **Bull. Eur. Assoc. Fish Pathol.** 19: 94-97.
- Canning, E.U., A. Curry, C.L. Anderson, and B. Okamura. 1999. Ultrastructure of *Myxidium trachinorum* n. sp. nov., from the gall bladder of the lesser weever fish *Echiichthys vipera*. **Parasitology Research** 85: 910-919.
- Anderson, C. L. 1998. Phylogenetic relationships of Myxozoa. In **Evolutionary Relationships among Protozoa**, G. Coombs and A. Warren, eds., Chapman and Hall, London 341-349.
- Anderson, C.L., B. Okamura, and E. U. Canning. 1998. Hox genes confirm that Myxozoa are extremely reduced triploblasts. **Nature** 392: 346-347.
- Hollister, W.S., E.U. Canning, and C.L. Anderson. 1996. Identification of Microsporidia causing human disease. **J. Euk. Microbiol.** 43(5):104-105S.
- Wynn, Richard C., C. Anderson, F. M. Richards and R.O. Fox. 1995. Interactions in nonnative and truncated forms of staphylococcal nuclease as indicated by mutational free energy changes. **Protein Science** 4(9): 1815-1823.
- Anderson, C. L., E. Carew, and J. R. Powell. 1993. Evolution of the ADH locus in *Drosophila willistoni*: The loss of an intron and shift in codon usage. **Mol.**

Biol. and Evol. 10(3): 605-618.

Cunningham, C. W., L. Buss, and C. Anderson. 1991. Molecular and geologic evidence of shared history between hermit crabs and the symbiotic genus *Hydractinia*. **Evolution** 45: 1301-1316.

Submitted or in preparation

Anderson, C., and D. Tarkhnishvili, eds. *Biological History of the Ponto-Caspian Region*. Expected publication date 2021. Springer Verlag.

Beridze, T., E. Boscari, T. Edisherashvili, F. Scheele, L. Congiu, and C. Anderson. 2021. Interspecific hybridization in natural sturgeon populations of the Eastern Black Sea: The consequence of drastic population decline?

Conservation Genetics, in review.

Invited Talks, Workshops and Meetings

Anderson, C.L. 2017. Biotechnology in Georgia, current status. DAAD Alumnae Symposium, Tbilisi State University, Republic of Georgia.

Anderson, C.L., and D. Tarkhnishvili. 2017. Biodiversity research in Georgia. Museum Alexander Koenig, Bonn, Germany.

Anderson, C.L. 2017. Fragile-X genetic testing in Georgia, current status. Methods in Genetic Testing for Human Disease Symposium, Mediclub Georgia, Tbilisi, Republic of Georgia.

_____. 2015. Invasive Species in North America, prevention vs. management. Science Café, Ilia State University, Tbilisi, Republic of Georgia.

_____. 2010. Genetic methods for exploring biodiversity. Long-term Collaborative Research and Education Program on Biodiversity Conservation in the Ecuadorian Andes. Workshop, Universidad Tecnica Particular de Loja, Loja, Ecuador.

_____. 2009. Molecular methods for exploring biodiversity. Symposium on Exploration and Conservation of Relict Biodiversity of the Western Caucasus. Abastumani, Republic of Georgia.

_____. 2009. Scientific cooperation and educational exchange between University of Idaho and Ilia Chavchavadze State University. Symposium on Exploration and Conservation of Relict Biodiversity of the Western Caucasus. Abastumani, Republic of Georgia.

_____. 2009. Aquatic invasives, molecular detection and monitoring methods. Symposium, 36th Natural Areas Conference, Vancouver, WA.

Anderson, C.L., K. Lambert, and T. Prather. 2008. Developing a Real-Time PCR assay to distinguish Northern and Eurasian watermilfoils. Invasive Species in Natural Areas: A Conference on Impacts and Management. Missoula, MT.

Anderson, C. L. 1995. Molecular Taxonomy of *Treponema pallidum*, and the New World Origin Hypothesis. Max Planck Institut für Marine Mikrobiologie.

_____. 1996. Phylogenetic relationships of Myxozoa. Joint Meeting of the British Section of the Society of Protozoologists, and the Linnean Society.

Anderson, C. L., E.U.Canning, and B. Okamura 1997. Phylogenetic implications

of novel homeobox sequences isolated from Myxozoan parasites. 6th Congress of the European Society for Evolutionary Biology.

_____ 1998. Fish or Fowl? Phylogenetic implications of Hox genes in Myxozoan parasites. Field Museum of Natural History, Chicago.

_____ 1998. Hox genes in Myxozoa. Institute of Applied Zoology, University of Bonn.

_____ 1998. Molecular phylogeny of Myxozoa, using 18S rDNA sequences. 1998. Centre for Environmental, Fisheries, and Aquaculture Sciences. Fish Diseases Laboratory, Weymouth, Dorset, UK.

_____ 2001. Bacterial Manipulation of Arthropod Reproduction. University of Munich, Munich, Germany.

_____ 2001. The Role of zipper (nonmuscle myosin) in the expression of *Wolbachia*-induced cytoplasmic incompatibility in *Drosophila*. Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany.