

Charles D. Criscione

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EDUCATION:

2005 **Ph.D.** Molecular and Cellular Biology, Oregon State University, GPA: 4.0
2000 **M.S.** Biology, Southeastern Louisiana University, GPA: 4.0
1995 **B.S.** Zoology, Louisiana State University, GPA: 4.0, Summa Cum Laude

EMPLOYMENT:

2008-Current Assistant Professor – Texas A&M University, Dept. of Biology
2005-2008 Postdoctoral Scientist - Southwest Foundation for Biomedical Research (SFBR), Dept. Genetics
2003-2005 U.S. Environmental Protection Agency STAR Graduate Fellow (OSU)
2002 Research Assistant (OSU) - pedigree analysis of Oregon steelhead salmon
2001-2003 Teaching Assistant (OSU) – details below
2000-2001 CGRB Core Lab Graduate Assistant (OSU) - provided lessons on Genescan/Genotyper software
1997-2000 Teaching Assistant (SLU) – details below
1997-1998 Research Assistant (SLU) - ecological studies of introduced fish parasites in streams of Hawai'i

HONORS AND AWARDS:

2008 Young Investigator Award—Honorable Mention (Am. Soc. Trop. Med. Hyg.)
2007 Texas Genetics Society – Best postdoctoral poster presentation (presented by C. Valentim)
2006 Ashton Cuckler New Investigator Award - American Society of Parasitologists
2005 American Fisheries Society Best Paper Award in *J. Aquat. Anim. Health* - Kent *et al.* 2005
2003 Best Student Presentation—Honorable Mention – Am. Soc. of Parasitologists Halifax meeting
2002 National Science Foundation Graduate Research Fellowship—Honorable Mention
1999 Graduate Teaching Fellow (SLU)
1995 University Medal (LSU) - awarded for highest graduating GPA
1995 Phi Eta Sigma Honors Society's Senior Award (LSU)
1991-1995 Dean's list (LSU)

GRANTS AND FUNDING:

2007-2009 NIH 1 R21 AI072704-01 (Tim Anderson, PI; Charles Criscione, postdoc): A linkage map for *Schistosoma mansoni*. The goal is to develop a linkage map to pave the way for finding drug-resistant and host specificity genes in the human parasite *S. mansoni*
2006 SFBR Forum Grant (Charles Criscione, PI): Characterization of the praziquantel drug-resistant phenotype in the human parasite *Schistosoma mansoni*. (\$25,000) - The major goal is to develop a method to measure the drug-resistant phenotype for a linkage map analysis.
2005 Founder's Council Steves Award (SFBR) - for purchase of stereomicroscope (\$5,692)
2005 Cowles Postdoctoral Fellowship (SFBR)
2003 Environmental Protection Agency STAR Graduate Fellowship (\$108,000) – Comparative population genetics among trematode parasites of salmonids in the Pacific Northwest
2003-2005 American Society of Parasitologists Marc Dresden Student Travel Grants (\$450, \$500, \$500)
2003-2004 P. F. Yerex & Nellie Buck Yerex Graduate Fellowship (OSU) (\$5,000)
2002-2003 Flyfisher's Club of Oregon Graduate Fellowship (OSU) (\$4,750)
2002-2003 Oregon Sports Lottery Scholarship (OSU) (\$3,468)
1999 Academic Enhancement Grant (SLU) (\$400)
1999 Student Government Association Grant (SLU) (\$350)
1994 Louisiana Universities Marine Consortium's Summer Program Grant (\$400)
1991-1995 T. H. Harris Scholarship (LSU)
1991-1995 Honors Scholarship (LSU)

PUBLICATIONS:

- Criscione, C. D., C. L. L. Valentim, H. Hirai, P. T. LoVerde, T. J. C. Anderson.** 2009. Genomic linkage map of the human blood fluke *Schistosoma mansoni*. *Genome Biology* (in press).
- Valentim, C. L. L., P. T. LoVerde, T. J. C. Anderson, **C. D. Criscione.** 2009. Efficient genotyping of *Schistosoma mansoni* miracidia following whole genome amplification. *Molecular and Biochemical Parasitology* 166:81-84.
- Criscione, C. D.** 2008. Parasite co-structure: broad and local scale approaches. *Parasite* 15:439-443 (Invited Review).
- Criscione, C. D., J. D. Anderson, D. Sudimack, W. Peng, B. Jha, S. Williams-Blangero, and T. J. C. Anderson.** 2007. Disentangling hybridization and host colonization in parasitic roundworms of humans and pigs. *Proceedings of the Royal Society B* 274:2669-2677.
- Criscione, C. D., J. D. Anderson, K. Raby, D. Sudimack, J. Subedi, D. R. Rai, R. P. Upadhyay, B. Jha, S. Williams-Blangero, and T. J. C. Anderson.** 2007. Microsatellite markers for the human nematode parasite *Ascaris lumbricoides*: Development and assessment of utility. *Journal of Parasitology* 93:704-708.
- Criscione, C. D., and M. S. Blouin.** 2007. Parasite phylogeographical congruence with salmon host evolutionarily significant units: Implications for salmon conservation. *Molecular Ecology* 16:993-1005.
- Criscione, C. D., and M. S. Blouin.** 2006. Minimal selfing, few clones, and no among-host genetic structure in a hermaphroditic parasite with asexual larval propagation. *Evolution* 60:553-562.
- Criscione, C. D., B. Cooper, and M. S. Blouin.** 2006. Parasite genotypes identify source populations of migratory fish more accurately than fish genotypes. *Ecology* 87:823-828. (subject of articles in *The Oregonian* newspaper, KVAL 13 Eugene, OR and *Practical Fishkeeping* and *FISH Update* magazines)
- Vilas, R., **C. D. Criscione**, E. Paniagua, and M. S. Blouin. 2006. Microsatellite loci from the trematode *Lecithochirium fusiforme*, a parasite of the European conger eel. *Molecular Ecology Notes* 6:1064-1066.
- Criscione, C. D., R. Poulin, and M. S. Blouin.** 2005. Molecular ecology of parasites: Elucidating ecological and microevolutionary processes. *Molecular Ecology* 14:2247-2257 (Invited review).
- Criscione, C. D., and M. S. Blouin.** 2005. Effective sizes of macroparasite populations: A conceptual model. *Trends in Parasitology* 21:212-217.
- Vilas, R., **C. D. Criscione**, and M. S. Blouin. 2005. A comparison between mitochondrial DNA and the ribosomal internal transcribed regions in prospecting for cryptic species of platyhelminth parasites. *Parasitology* 131:839-846.
- Criscione, C. D., and M. S. Blouin.** 2005. Eleven polymorphic microsatellite loci for the salmonid trematode *Plagioporus shawi*. *Molecular Ecology Notes* 5:562-564.
- Criscione, C. D., and M. S. Blouin.** 2004. Life cycles shape parasite evolution: comparative population genetics of salmon trematodes. *Evolution* 58:198-202. (with cover illustration)
- Kent, M.L., V. Watral., C. M. Whipps, M. E. Cunningham, **C. D. Criscione**, J. R. Heidel, D. L. Curtis, J. Spitsbergen, D. Markle. 2004. A digenean metacercaria (*Apophallus* sp.) and a myxozoan (*Myxobolus* sp.) associated with vertebral deformities in cyprinid fishes from the Willamette River, Oregon. *Journal of Aquatic Animal Health* 16:116-129.
- Criscione, C. D., V. Watral, C. M. Whipps, M. S. Blouin, S. R. M. Jones, and M. L. Kent.** 2002. Ribosomal DNA sequences indicate isolated populations of *Ichthyophonus hoferi* in geographic sympatry in the northeastern Pacific Ocean. *Journal of Fish Diseases* 25: 575-582.
- Criscione, C. D., and W. F. Font.** 2001. The guest playing host: Colonization of the introduced Mediterranean gecko, *Hemidactylus turcicus*, by helminth parasites in southeastern Louisiana. *Journal of Parasitology* 87:1273-1278.
- Criscione, C. D., and W. F. Font.** 2001. Development and specificity of *Oochoristica javaensis* (Eucestoda: Cyclophyllidae: Anoplocephalidae: Linstowiinae). *Comparative Parasitology* 68:149-155.
- Criscione, C. D., and W. F. Font.** 2001. Artifactual and natural variation of *Oochoristica javaensis*: Statistical evaluation of in situ fixation. *Comparative Parasitology* 68:156-163.
- Criscione, C. D., N. J. Anderson, T. Campbell, and B. Quinn.** 1998. *Hemidactylus mabouia*. *Herpetological Review* 29:248.

MANUSCRIPTS IN PREPARATION:

- Criscione, C. D.**, J. D. Anderson, K. Raby, D. Sudimack, J. Subedi, D. R. Rai, R. P. Upadhayay, B. Jha, S. Williams-Blangero, and T. J. C. Anderson. (In preparation) Landscape genetics of the human nematode parasite *Ascaris lumbricoides* reveal foci of infection for individual human hosts in Jiri, Nepal.
- Vilas, R., **C. D. Criscione**, E. Paniagua, and M. S. Blouin. (In preparation) Low clone intermixture and cryptic population structure in a marine parasite with a complex life cycle.

TEACHING EXPERIENCE:

- 2001, 2003 Teaching Assistant – Genetics (OSU)
- 2002 Teaching Assistant – Cell Biology Laboratory (OSU)
- 2000 Teaching Assistant – Graduate Advanced Biostatistics Laboratory (SLU)
- 1999, 2000 Teaching Assistant – Undergraduate Applied Biostatistics Laboratory (SLU)
- 1999 Teaching Assistant – Field Zoology (summer course on vertebrate natural history) (SLU)
- 1999 Biology Computer Laboratory monitor and instructor (SLU)
- 1997-1999 Teaching Assistant – Introduction to Zoology Laboratory (SLU)

Guest Lecturer – Parasitology (OSU), Evolution (SLU), Herpetology (SLU)

STUDENT ADVISING:

- 2008-current Zachary W. Culumber (Ph.D. committee member, Texas A&M Univ., Biology Dept.)
- 2009 Johnson Cheng and Shih-Jye Yei (undergraduate research Bio 491 spring)

INVITED SEMINARS:

- 2007 University of Montana (guest seminar for Gordon Luikart's disease ecology/evolution class)
- 2007 University of South Florida, Department of Biology
- 2007 Southern Illinois University-Carbondale, Department of Zoology
- 2007 Louisiana State University, Department of Biological Sciences
- 2007 University of Georgia, Department of Genetics
- 2006 Texas A&M University, Department of Biology
- 2006 University of Central Florida, Department of Biology
- 2000 Louisiana State University, Museum of Natural Science
- 2000 University of California-Davis, Department of Nematology

CONFERENCE PRESENTATIONS:

- Criscione, C. D.**, D. Sudimack, J. D. Anderson, J. Subedi, D. R. Rai, R. P. Upadhayay, B. Jha, K. D. Williams, S. Williams-Blangero, and T. J. C. Anderson. 2008. Landscape genetics reveals focal transmission of *Ascaris lumbricoides*. American Society of Tropical Medicine and Hygiene (New Orleans, LA).
- Criscione, C. D.** 2008. Parasite co-structure: broad and local scale approaches. **Invited Keynote Speaker.** Xth European Multicolloquium of Parasitology (Paris, France)
- Criscione, C. D.**, D. Sudimack, J. D. Anderson, J. Subedi, D. R. Rai, R. P. Upadhayay, B. Jha, S. Williams-Blangero, and T. J. C. Anderson. 2008. Molecular epidemiology and landscape genetics as tools to examine foci of parasite transmission within host populations. Am. Soc. of Parasitologists (Arlington, TX).
- Criscione, C. D.**, C. Valentim, P. T. Loverde, T. J. C. Anderson. 2007. Construction of a linkage map for *Schistosoma mansoni*. American Society of Tropical Medicine and Hygiene (Philadelphia, PA).
- Criscione, C. D.**, J. D. Anderson, D. Sudimack, W. Peng, M. E. Romero-Abal, J. Subedi, D. R. Rai, R. P. Upadhayay, B. Jha, S. Williams-Blangero, and T. J. C. Anderson. 2007. Disentangling host colonization and hybridization patterns in human and pig *Ascaris*: Is it possible? 1st North American Parasitology Congress (Merida, Mexico).
- Valentim, C. L., P. T. LoVerde, T. J. C. Anderson, **C. D. Criscione**. 2007. Evaluating whole genome amplification from small parasites: Typing hundreds of microsatellite markers from single miracidia of *Schistosoma mansoni*. 1st North American Parasitology Congress (Merida, Mexico).

- Valentim, C. L., P. T. LoVerde, T. J. C. Anderson, **C. D. Criscione**. 2007. Linkage map construction in the human blood fluke *Schistosoma mansoni*. Texas Genetics Society (San Antonio, TX).
- Criscione, C. D.**, B. Cooper, and M. S. Blouin. 2006. Parasite genotypes identify source populations of migratory fish more accurately than fish genotypes. 11th Int. Congress of Parasitology (Glasgow, Scotland).
- Criscione, C. D.**, J. D. Anderson, K. Raby, D. Sudimack, J. Subedi, D. R. Rai, R. P. Upadhayay, B. Jha, S. Williams-Blangero, and T. J. C. Anderson. 2006. Landscape genetics of *Ascaris lumbricoides*: fine scale genetic structure among human hosts (poster). 11th Int. Congress of Parasitology (Glasgow, Scotland).
- Criscione, C. D.**, and M. S. Blouin. 2005. Elucidating parasite transmission dynamics and mating systems: an examination of the within population genetic structure of the salmonid trematode *Plagioporus shawi*. Am. Soc. of Parasitologists (Mobile, AL).
- Criscione, C. D.**, and M. S. Blouin. 2004. Parasite population genetics: illustrated uses in the environmental and conservation sciences (poster). EPA Graduate Fellowship Conference (Washington, DC).
- Criscione, C. D.**, and M. S. Blouin. 2004. Effective size of macroparasite populations: a conceptual overview. Am. Soc. of Parasitologists (Philadelphia, PA), Evolution (Fort Collins, CO), EVO_WIBO (Port Townsend, WA).
- Criscione, C. D.**, and M. S. Blouin. 2003. Life cycles shape parasite evolution as shown via comparative population genetics of salmonid trematodes. Am. Soc. of Parasitologists (Halifax, Nova Scotia), Evolution (Chico, CA).
- Criscione, C. D.**, V. Watral, C. M. Whipps, M. S. Blouin, S. R. M. Jones, and M. L. Kent. 2002. Ribosomal DNA sequences indicate isolated populations of *Ichthyophonus hoferi* in the northeastern Pacific Ocean. 10th Int. Congress of Parasitology (Vancouver, Canada).
- Criscione, C. D.**, and W. F. Font. 1999. Helminth parasites from the introduced Mediterranean gecko, *Hemidactylus turcicus*: ecological and conservation implications for reptiles and amphibians. ASIH (Pennsylvania St. Univ, PA), Southeastern Society of Parasitologists (Auburn Univ., AL).

WORKSHOPS ATTENDED

2007 Conservation Genetics Data Analysis Course, Flathead Lake Biological Station, Montana

SERVICE:

Reviewer: Proceedings of the National Academy of Sciences (USA), American Naturalist, Molecular Ecology, Trends in Ecology and Evolution, Trends in Parasitology, American Journal of Tropical Medicine and Hygiene, Journal of Parasitology, International Journal for Parasitology, Comparative Parasitology, Journal of Herpetology, Molecular and Biochemical Parasitology, Microbes and Infection, Parasitology, Journal of the Royal Society Interface, Biological Journal of the Linnean Society, BMC Evolutionary Biology, Molecular Phylogenetics and Evolution, BMC Ecology, Biological Invasions, Veterinarski Arhiv, Journal of Helminthology, Proceedings of the Royal Society B, Marine Biology Progress Series

2009 Operating Budget and Funding Priorities Subcommittee (Dept. of Biology, Texas A&M Univ.)

2008 Organizer of symposium at Am. Soc. of Parasitologists (Arlington, TX, 2008): *Population genetics of parasites: from geography to genes*.

2007-2009 Henry Baldwin Ward Medal Committee (Chair) - American Society of Parasitologists

2005-2009 Membership Committee - American Society of Parasitologists

2003 Invited panel speaker for the Council of Regents (OSU) - special event for university donors

2003 Molecular and Cellular Biology Admissions Committee (OSU)

1998-1999 President Biology Graduate Student Organization (SLU) – raised funds for invited speaker event

1999 Teller's committee - American Society of Parasitologists

PROFESSIONAL SOCIETIES:

Society for the Study of Evolution
American Society of Parasitologists