

Curriculum Vitae

Thomas F. Turner

*Department of Biology and
Museum of Southwestern Biology
MSC 03 - 2020
1 University of New Mexico
Albuquerque, New Mexico 87131 USA*

*email: turnert@unm.edu
phone: +1 (505) 277-7541
FAX: +1 (505) 277-0304*

Education

- Ph. D. Biology, Florida International University, December 1996. Dissertation Title: A Comparative Study of Life History and Gene Flow in Darters. Advisor: Joel C. Trexler
- M.S. Zoology, Ohio University, March 1990. Thesis Title: A Thermal Kinetic Study of Genomic DNAs from Members of the Fish Family Percidae. Advisor: Matthew M. White
- B.S. Zoology (with honors), Ohio University, June 1986.

Professional Experience

2004-present	Associate Professor, University of New Mexico, Biology Department
2004 – 2005	Visiting Research Fellow, School of Animal Biology, Faculty of Natural and Agricultural Sciences University of Western Australia
1998-2004	Assistant Professor, University of New Mexico, Biology Department
1998-present	Curator of Fishes, Museum of Southwestern Biology
1996-1998	Postdoctoral Research Associate, Texas A&M University. Ecological Genetics of Estuarine Fishes. Advisor: John R. Gold
1992-1996	Graduate Research Assistant, Florida International University. Population Genetics, Systematics, and Ecology of Aquatic Organisms.
1990-1991	Graduate Research Assistant, University of Mississippi. Larval Fish Ecology.
1989-1990	Graduate Teaching Assistant, Ohio University
1984-1986	Undergraduate Research Assistant, Ohio University Neurobiology of vertebrate vision, Advisor: Ellengene H. Peterson

Teaching

Courses at University of New Mexico

- Ecology/Evolution Seminar (BIOL 402/502)
- General Vertebrate Zoology (BIOL 386)
- Ichthyology (BIOL 487)
- Ichthyology Laboratory (BIOL 487L)
- Molecular Ecology and Evolution (BIOL 402/502)
- Stable Isotopes in Ecology (BIOL 402/502)

Courses at Texas A&M University

- Workshop: Applications of Genetic Techniques to Fisheries Management. Texas Chapter of the American Fisheries Society.

Courses at Florida International University

- Genetics Recitation / Laboratory
- Comparative Physiology Laboratory

Courses at Ohio University

- General Biology, emphasis on Ecology, Evolution and Behavior, Belmont Campus.
- Introductory Ecology, Continuing Adult Education, Chillicothe Correctional Institute.
- Introductory Zoology for Non-Majors. Athens (main) Campus
- Teaching Assistant: Mammalogy, Field Ecology, Introduction to Biology (Nominated for Outstanding Teaching Assistant)

Student Advising

Post-doctoral Associates Dr. John Wares, Ph.D. Duke University (2000 – 2002; currently Assistant Professor, University of Georgia), Dr. Megan Osborne, Ph. D., LaTrobe University, Victoria, Australia (2002 - present); Dr. Greg Moyer, Ph.D. Southern Illinois University (2002- 2004; currently Post-doctoral associate Oregon State University)

Graduate Students: Dominique Alò (MS awarded 2003), Rob Dudley (PhD awarded 2004 – currently employed as a research biology), Melanie Edwards (Ph.D candidate – currently employed by the US Fish & Wildlife Service), Tom Kennedy (Ph.D. student), Hugo Magaña (Ph.D. candidate – SCEP US Forest Service), Megan McPhee (PhD awarded 2003– post-doctoral associate UC Irvine), Heather Parmeter (M.S. awarded 2004), Allison Pease (M.S. awarded 2004 – currently employed at the World Wildlife Fund, Wash. D.C.), Maureen Peters (M.S. student), and Wade Wilson (Ph.D. candidate).

Undergraduate Students: Dominique Alò (Summer 1999-Honors Thesis), Sonya Bryant (Summer 2000), Polly Campbell (Summer 2000), Justin Martin (REU-2000), Brian Tonihka (REU-2000), Kari Torres (REU-2000), Arielle Frazier (Spring 2001), David Gilroy (Honors co-advisor-2001), Kate Siegfried (REU, UMEB -2001-Honors Thesis), Gilbert Quintana (Fall 2001), Melissa Benavides (2002 - 2004, UMEB- Honors Thesis), Hillary Watts (Fall 2002 – Honors thesis reader), Justine Davis (Summer, Fall 2003 – REU), Christine Cooper (Spring 2004), Melvin Foster, Jr. (Summer and Fall 2004, UMEB), Tamara Max (Summer and Fall 2005, REU)

Graduate Committee Member: Ingrid Asmundsson – PhD 2003 (Duszynski), Nirvana Barker (Loker), Laura Boykin – PhD 2003 (Lowrey), Dolly Crawford (Cook), Randall DeJong – PhD 2003 (Loker), Sergio Flores (Miller), Daniel Garvey (University of Alabama - IGERT student), J. Tomas Giermakowski (Snell), Gabor Racz (Yates), Jerusha Reynolds (Marshall), Jon Rosenfield –

PhD 2001 (Kodric-Brown), Jennifer Hollis (Poe), Allen Hurlbert (Brown), Tom Kennedy (University of Alabama - IGERT student), Cecil Lewis (UNM Anthropology – Stone), Howard Passell – PhD 2004 (Dahm), Kathryn Perez (University of Alabama - IGERT student), Lyman Persico (UNM Geology – Meyer), Joanna Redfern (Lowrey), Horacio Samaniego (Milne), Heather Simpson (Marshall), Daniella Swenton (Kodric-Brown), April Wright (Miller).

Professional Service

- 2004 Panelist, National Science Foundation, Doctoral Dissertation Improvement Grants, Division of Environmental Biology, Population Biology Program
- 2003-present Advisor on Genetics Issues, Rio Grande Fishes Recovery Team
- 2002-present Member, Gila Trout Recovery Team
- 2002-2007 Board of Governors (Elected position), American Society of Ichthyologists and Herpetologists
- 2002-2004 UNM Representative, Interim Steering Committee, Middle Rio Grande Endangered Species Collaborative Workgroup.
- 1997-1998 Editorial Board: *Copeia*
- 1996-present Ad-hoc reviewer: Jeffress Foundation Awards in Biology, National Science Foundation; NOAA/MARFIN, Ohio Sea Grant, US Bureau of Reclamation, AAAS WISC program, *American Naturalist*, *Bioscience*, *BioMed Central – Evolutionary Biology*, *Bulletin of Marine Science*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Conservation Genetics*, *Copeia*, *Evolution*, *Journal of Biogeography*, *Journal of Fish Biology*, *Journal of Heredity*, *Marine Biology*, *Marine Ecology Progress Series*, *Marine and Freshwater Research*, *Molecular Biology and Evolution*, *Molecular Ecology*, *Molecular Phylogenetics and Evolution*, *Oecologia*, *Proceedings of the Royal Society London – Series B*, *Southeastern Naturalist*, *Southwestern Naturalist*, *Transactions of the American Fisheries Society*

University and Departmental Service

- 2005 – 2006 Elected to UNM Faculty Senate, Chair - Arthropod Curator Search Committee
- 2004 – 2005 Sabbatical Leave, University of Western Australia, School of Animal Sciences
- 2003-2004 Graduate Policy Committee, Biology Space Committee, MSB Executive Committee, Ad-hoc Vehicle Committee, MSB Publications Committee, Co-organizer: Roger Conant Memorial Symposium
- 2002-2003 Graduate Policy Committee, Space Committee, Mammalogy Search Committee, MSB Executive Committee, Ad-hoc Vehicle Committee, MSB Publications Committee, Judge – Research Day Oral Presentations 2003.
- 2001-2002 Graduate Admissions Committee, Reader for Senior Honors Theses, MSB Executive Committee, Ad-hoc Vehicle Committee, MSB Publications Committee
- 2000-2001 Graduate Policy Committee, Graduate Admissions Committee, Biology Department Executive Committee, Research Day Committee, Reader for Senior Honors Theses, MSB Executive

Committee

- 1999-2000 Graduate Admissions Committee, Biology Department Executive Committee, Research Day Committee, Reader for Senior Honors Theses, MSB Executive Committee, Phylogenetics Search Committee
- 1998-1999 Research Day Committee, GRAC Review Committee, Faculty Advisor-Undergrad Biology Club

Awards, Grants, and Contracts (last 5 years)

- 2005 - 2008 Middle Rio Grande ESA Collaborative Program: Monitoring genetic changes in the endangered Rio Grande silvery minnow and genetic analysis of alternative captive-breeding designs. T. Turner (PI) and M. Osborne (Co-PI). \$362,514.
- 2005 - 2006 New Mexico Share-with-Wildlife Program: Baseline genetic data for the threatened Pecos bluntnose shiner (*Notropis simus pecosensis*). T. Turner (PI) and M. Osborne (Co-PI). \$5600.
- 2004 - 2007 National Science Foundation: REU Supplement to the CAREER award. T. Turner (PI) \$6,800.
- 2004 Enhancement of natural history and organismally-focused biology courses through digital capture of photographic materials. UNM Teaching Allocations Award. T. Turner (PI), W. Pockman and B. Wolf (Co-PIs). \$2,459.
- 2004 UNM Research Allocations Award: Understanding ecological consequences of human water use in arid-land rivers: a comparative study of the Rio Grande (New Mexico) and the Murray River (Australia). T. Turner (PI). \$7,000.
- 2003 New Mexico Department of Game and Fish: Supplemental genetic monitoring of wild and captive-propagated Rio Grande silvery minnow stocks. T. Turner (PI). \$72,000.
- 2003-2004 National Science Foundation: DISSERTATION RESEARCH: Stable Isotope Analysis of Current and Historical Aquatic Food Webs. T. Turner and M. Edwards. \$8,000.
- 2003-2007 National Science Foundation: REU supplement to CAREER award. T. Turner (PI) \$6,000.
- 2002-2005 US Bureau of Reclamation: Conservation genetics of the Rio Grande silvery minnow. \$344,000. T. Turner (PI).
- 2002-2007 National Science Foundation: CAREER: Museum-based approaches to ecology and evolution of aquatic systems: an integrated research and educational program. \$500,000. T. Turner (PI).
- 2002-2003 UNM Research Allocations Award: Fish use of experimentally flooded sites in the middle Rio Grande, New Mexico. \$3500. T. Turner (PI)
- 2000-2002 New Mexico Dept. Game and Fish: A statewide genetic study of Rio Grande and white suckers: are genetic factors contributing to the decline of the Rio Grande sucker? \$3,500. Co PI with M. McPhee.
- 2000-2003 USDA Forest Service: Conservation Genetics of Gila and Apache Trout. \$100,000.
- 2000-2002 National Science Foundation -- Biological Research Collections: Improvements to the Museum of Southwestern Biology (MSB) Fish Collection, Phase I: Relocation and Reorganization. REU

- Supplement. \$10,000. T. Turner (PI).
- 2000-2002 National Science Foundation-- Biological Research Collections: Improvements to the Museum of Southwestern Biology (MSB) Fish Collection, Phase I: Relocation and Reorganization \$163,000. T. Turner PI/PD, S. Platania, and A. Snyder (Co-PIs).
- 2000 National Geographic Society. Genetic studies of highly migratory fishes of the llanos in Venezuela. \$16,000, K. Winemiller PI/PD, T. Turner (one of five Co-PIs)
- 1999-2003 New Mexico Department of Game and Fish. Temporal genetic variation and the effective population size of the silvery minnow. \$12,000. T. Turner (PI)
- 1999-2004 National Science Foundation-- IGERT: research training grant for graduate education in Ecology, Hydrology, and Geochemistry. \$2,687,181. A. Ward, C. Dahm, PIs, shared with 20 others

Publications

36. *in review* Turner, T. F., T. E. Dowling, and P. C. Marsh. Effective size, census size, and genetic monitoring of the endangered razorback sucker, *Xyrauchen texanus*. *Conservation Genetics*, submitted August 2005.
35. *in review* Turner, T. F., and H. W. Robison. Genetic study of the Caddo madtom, *Noturus taylori*, with comments on factors that promote genetic divergence in Ouachita-endemic stream fishes. *Southwestern Naturalist*, submitted February 2005.
34. *in revision* Wares, J. P., and T. F. Turner. On the number of diagnostic alleles expected among recently diverged ESUs. *Journal of Heredity*.
33. *in review* Pease, A. A., J. J. Davis, M. S. Edwards, and T. F. Turner. Habitat and resource use by larval and juvenile fishes in the Rio Grande, New Mexico. *Freshwater Biology*.
32. *in revision* Turner, T. F., M. J. Osborne, G. R. Moyer, M. A. Benavides and D. Alò. Life history and environmental variation interact to determine the effective population to census size ratio. *Proceedings of the Royal Society Series B*.
31. *in revision* Lee, D.W., T. F. Turner, K. Baskaran, M. Mansor, H. Mohamad, S.K. Yap, and S. Dayandan. Tropical Asian rain forest tree seedlings: light responses and developmental plasticity. *Biotropica*
30. Osborne, M. J., D. Alò, M. Benavides, and T. F. Turner. 2005. Genetic effects of captive rearing and propagation in the Rio Grande silvery minnow, *Hybognathus amarus*. *Fisheries Research*. In press.
29. Alò, D., and T. F. Turner. 2005. Effects of habitat fragmentation on effective population size in the endangered Rio Grande silvery minnow. *Conservation Biology* 19: 1138 – 1148.
28. Osborne, M. J., M. A. Benavides, and T. F. Turner. 2005. Genetic heterogeneity among pelagic egg samples and variance in reproductive success in an endangered freshwater fish, *Hybognathus amarus*. *Environmental Biology of Fishes* 73: 463 – 472.
27. Moyer, G. R., K. O. Winemiller, M. V. McPhee, and T. F. Turner. 2005. Historical demography, selection, and coalescence of mitochondrial and nuclear genes in *Prochilodus* species of northern South America. *Evolution* 59: 599-610.

26. Moyer, G. R., M. J. Osborne, and T. F. Turner. 2005. Genetic and ecological dynamics of species replacement in an arid-land river. *Molecular Ecology* 14: 1263-1273.
25. Wares, J. P., D. Alò, and T. F. Turner. 2004. A genetic perspective on management and recovery of federally endangered trout (*Oncorhynchus gilae*) in the American Southwest. *Can. J. Fish. Aquat. Sci.* 61: 1890-1899.
24. McPhee, M.V., and T. F. Turner. 2004. No genetic evidence for hybridization between Rio Grande sucker, *Catostomous plebeius*, and white sucker, *C. commersoni*, in the upper Rio Grande New Mexico. *Environmental Biology of Fishes* 71: 85-93.
23. E. Saillant, K. Cizdziel, K. G. O'Malley, T. F. Turner, C. L. Pruett and J. R. Gold. 2004. Microsatellite markers for red drum, *Sciaenops ocellatus*. *Gulf of Mexico Science* 22 (1): 101-107.
22. Turner, T. F., T. E. Dowling, R. E. Broughton, and J. R. Gold. 2004. Variable microsatellite markers amplify across divergent lineages of cyprinid fishes. *Conservation Genetics* 5 (2): 279-281.
21. Turner, T. F., M. V. McPhee, P. Campbell, and K. O. Winemiller. 2004. Phylogeography and intraspecific genetic variation of prochilodontid fishes endemic to rivers of northern South America. *J. Fish Biology* 64:186-201.
20. Wares, J.P., and T. F. Turner. 2003. Phylogeography and Diversification in Aquatic Mollusks. In: *Molecular Systematics and Phylogeography of Mollusks*. C. Lydeard and D. Lindberg, eds. Smithsonian Institution Press, Washington, D. C., 328 p.
19. Edwards, M. S., and T. F. Turner. 2003. Stable isotope analysis provides clues about current and past river food webs (New Mexico). *Ecological Restoration* 21:49.
18. Turner, T. F., J.P. Wares, and J.R. Gold. 2002. Genetic effective size is three orders of magnitude lower than adult census size in an abundant, estuarine dependent marine fish (*Sciaenops ocellatus*). *Genetics* 162: 1329-1339.
17. Edwards, M.S., T.F. Turner, and Z.D. Sharp. 2002. Short- and long-term effects of fixation and preservation on stable isotope ratios ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, $\delta^{34}\text{S}$) of fluid-preserved museum specimens *Copeia* 2002(4):1106-1112.
16. Gold, J.R., and T.F. Turner. 2002. Population structure of red drum (*Sciaenops ocellatus*) in the northern Gulf of Mexico, as inferred from variation in nuclear-encoded microsatellites. *Marine Biology* 142:249-265.
15. Gold, J.R., C.P. Burrige, and T.F. Turner. 2001. A modified stepping-stone model of population structure in red drum from the northern Gulf of Mexico. *Genetica* 111:305-317.
14. Turner, T.F., L.A. Salter, J.R. Gold. 2001. Temporal method estimates of N_e from highly polymorphic loci. *Conservation Genetics* 2(4):297-308.
13. Charnov, E.L., T.F. Turner, and K.O. Winemiller. 2001. Reproductive constraints and the evolution of life histories with indeterminate growth. *Proceedings of the National Academy of Sciences USA* 98:9460-9464.
12. Turner, T.F. 2001. Comparative study of larval transport and gene flow in darters. *Copeia* 2001(3): 766-774.
11. Turner T.F., J.C. Trexler, J.L. Harris, and J.L. Haynes. 2000. Nested cladistic analysis indicates population

- fragmentation shapes genetic diversity in a freshwater mussel. *Genetics* 154:777-785.
10. Turner, T.F., L.R. Richardson, and J.R. Gold. 1999. Temporal genetic variation of mtDNA and effective female population size of red drum in the northern Gulf of Mexico. *Molecular Ecology* 8:1223-1230
 9. Gold, J.R., L.R. Richardson, and T.F. Turner. 1999. Temporal stability and spatial divergence of mitochondrial DNA haplotype frequencies in red drum (*Sciaenops ocellatus*) from coastal regions of the western Atlantic Ocean and Gulf of Mexico. *Marine Biology* 133:593-602.
 8. Turner, T.F., L.R. Richardson, and J.R. Gold. 1998. Polymorphic microsatellite DNA markers in red drum (*Sciaenops ocellatus*). *Molecular Ecology* 7: 1771-1773
 7. Turner T.F., and J. C. Trexler. 1998. Ecological and historical associations of gene flow in darters (Teleostei:Percidae). *Evolution* 52: 1781-1801
 6. Turner, T.F., and J.R. Gold. 1998. What kind of genetic information is best for estimating genetic effective population size? A case study of three classes of molecular markers surveyed in red drum (*Sciaenops ocellatus*) from the Gulf of Mexico. *Proc. Gulf Coast Fisheries Institute* 50:1043-1052
 5. Turner, T.F. 1997. Mitochondrial control region sequences and phylogenetic systematics of darters. *Copeia* 1997(2): 319-338.
 4. Turner, T.F., J.C. Trexler, D.N. Kuhn, and H.W. Robison. 1996. Life history variation and comparative phylogeography of darters from the North American central highlands. *Evolution* 50: 2023-2036.
 3. Turner, T.F., J.C. Trexler, G.L. Miller, K. E. Toyer. 1994. Temporal and spatial dynamics of larval and juvenile fishes in a temperate floodplain river. *Copeia* 1994: 174-183.
 2. Turner, T.F., J. E. Ahlquist, M.M. White, and R. Kelsey. 1993. Variation in genome organization and composition of repeated DNAs among three species of fish (Family: Percidae). *J. Hered.* 93: 70-73.
 1. Turner, T.F., J. E. Ahlquist, and M.M. White. 1990. A thermal denaturation study of the genomic DNAs from the North American genera of the fish family Percidae. *J. Fish Biol.* 37: 531-539.

Manuscripts Nearing Completion

McPhee, M. V., and T. F. Turner. Comparative phylogeography of invasive and endemic fishes. Intended for *Heredity*.

Osborne, M. J., M. A. Benavides, and T. F. Turner. Genetic effects of captive propagation and hatchery supplementation in the federally endangered Rio Grande silvery minnow. Intended for *Transactions of the American Fisheries Society*.

Osborne, M. J., and T. F. Turner. Characterization and evolution of MHC class II genes in an endangered cyprinid fish species. Intended for *Immunogenetics*.

Turner, T. F., T. E. Dowling, M. V. McPhee, C. Secor., R. E. Broughton, and J. R. Gold. Polymorphic microsatellite primers for the endangered sucker, *Xyrauchan texanus* (Catostomidae), are useful for hybridization studies of other catostomids. intended for *Molecular Ecology*.

Turner, T. F., D. Alò, and W.J. Matthews. Phylogeography of the orangebelly darter, *Etheostoma radiosum*. Intended for *Copeia*.

Invited Seminars

2005 US Forest Service, Jemez Pueblo, New Mexico, USA
2005 Arthur Rylah Institute for Freshwater Ecology, Melbourne Australia
2005 School of Animal Sciences, University of Western Australia
2005 Center for Water Research, School of Engineering, University of Western Australia
2005 Griffith University, Queensland, Australia
2004 South Australian Museum & University of Adelaide, Australia
2004 School of Animal Sciences, University of Western Australia
2004 Tulane University
2003 Colorado State University
2002 North Dakota State University (*invited by the Graduate Student Association*)
2002 Texas A&M University
2001 Illinois Natural History Survey
2001 University of Oklahoma
2000 Arizona State University
2000 Ohio University
2000 University of Oregon
1998 University of New Mexico
1998 The College of New Jersey
1997 University of Illinois
1997 Auburn University
1997 Texas A&M University
1996 Florida State University
1992 University of Miami
1991 Florida International University
1990 University of Mississippi

Invited Presentations (National and International Meetings)

- 2005 Turner, T. F., M. J. Osborne, G. R. Moyer, and D. Alò. Life-history dependent consequences of river fragmentation revealed by comparative genetic study of Rio Grande fishes Invited Symposium: Ecology and Management of North American Prairie Streams. American Fisheries Society, Anchorage, AK, September 2005.
- 2004 Moyer, G. R., and T. F. Turner. Predictions from life history strategies: can the Rio Grande silvery minnow survive diversion dams and prolonged stream intermittency? Invited symposium Genetic Consequences of Human Impacts on Aquatic Ecosystems: Examples from the Great Lakes and elsewhere. American Fisheries Society, Madison WI, August 2004.
- 2004 Edwards, M.S., and T.F. Turner. Stable isotope analysis of current and historical aquatic food webs. Special Session entitled “New Directions in Food Web Analysis”, North American Benthological Society, Vancouver, B.C., Canada, June 2004.
- 2003 Osborne, M. J., M. A. Benavides, D. Alò, and T. F. Turner. Genetic effects of hatchery propagation in the endangered Rio Grande silvery minnow. New Mexico Governor’s Symposium on the Rio Grande silvery minnow, sponsored by the Office of the Governor and the McCune Foundation, Sante Fe, NM, October 2003.
- 2001 Turner, T.F., and D. Alò. Genetic diversity and the effective population size of the endangered Rio Grande silvery minnow: implications for species recovery. Invited symposium Conservation genetics of fishes of the Southwest. American Fisheries Society, Phoenix AZ, August 2001.
- 2001 Wares, J.P. and T.F. Turner. Conservation genetics of native Gila and Apache trout. Invited symposium Conservation genetics of fishes of the Southwest. American Fisheries Society, Phoenix AZ, August 2001.
- 1997 Broughton, R.E., T.F. Turner, and J.R. Gold. Variability and evolution of microsatellite markers in scombrid fishes. Invited symposium on nuclear DNA in systematics and population biology. American Society of Ichthyologists and Herpetologists

Selected Contributed Papers (National and International Meetings)

- 2005 Osborne, M. J., and T. F. Turner. Characterisation of MHC class II genes in an endangered freshwater cyprinid, the Rio Grande silvery minnow, *Hybognathus amarus*. Society for Molecular Biology and Evolution, Auckland, New Zealand, June 2005.
- 2004 Benavides, M. A., M. J. Osborne, D. Alò, and T. F. Turner. Temporal genetic variability in pelagic eggs supports high variance in reproductive success in the endangered Rio Grande silvery minnow. American Society of Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2004 Moyer, G. R., S. P. Platania, and T. F. Turner. Phylogenetic relations of *Hybognathus* with an emphasis on the competitive exclusion of the Rio Grande silvery minnow from the Pecos River, New Mexico. American Society of Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2004 Parmeter H. L., and T. F. Turner. Environmental correlates to parasitism of Rio Grande cutthroat trout in New Mexico. American Society of Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2004 Pease, A. A., J. J. Davis, M. S. Edwards, and T. F. Turner. Resource use by larval and juvenile fishes in the middle Rio Grande, New Mexico, as determined by stable isotope analysis. American Society of

- Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2004 Turner, T. F., and M. S. Edwards. Natural history museums, stable isotopes, and historical river ecosystems: potentials and pitfalls. American Society of Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2004 Turner, T. F., G. R. Moyer, M. J. Osborne, and D. Alò. Genetic effects of habitat fragmentation in arid-land rivers: a comparative study. Society for the Study of Evolution, Ft. Collins Colorado, June 2004
- 2004 Wilson, W. D., J. P. Wares, D Alò, and T. F. Turner. Evolution of MHC in *Oncorhynchus*. American Society of Ichthyologists and Herpetologists, Norman, Oklahoma, May 2004.
- 2003 Moyer, G. R., D. Alò , M. J. Osborne, and T. F. Turner. A comparison of genetic effective population size between the Rio Grande silvery minnow and the plains minnow. Desert Fishes Council, Death Valley, CA, November 2003.
- 2003 Osborne, M. J., M. A. Benavides, D. Alò, and T. F. Turner. Genetic effects of hatchery propagation in the endangered Rio Grande silvery minnow. Desert Fishes Council, Death Valley, CA, November 2003.
- 2003 Turner, T.F., J.P. Wares, and D. Alò. Evolution of MHC class I and class II loci among three closely related trouts in the American southwest. Desert Fishes Council, Death Valley, CA, November 2003.
- 2003 Benavides, M. A., M. J. Osborne, D. Alò, and T. F. Turner. Temporal genetic variability of pelagic eggs in the endangered Rio Grande silvery minnow. Ecological Society of America, Savannah, Georgia, August 2003.
- 2003 Edwards, M. S., and T. F. Turner. Stable isotope analysis of current and historical of Rio Grande food webs. North American Benthological Society. Athens, Georgia, May 2003.
- 2003 Edwards, M. S. and T. F. Turner. Using Stable Isotope Analysis Techniques to Characterize the Food Web of the Kissimmee River, Florida. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys" Palm Harbor, Florida. April, 2003
- 2003 M. J. Osborne, D. Alò, M. A. Benavides and T. F. Turner. Genetic effects of hatchery propagation in the endangered Rio Grande silvery minnow. Arid Lands Conference, New Mexico State University, April 2003.
- 2003 Turner, T.F., and D. Alò. Phylogeography of the orangebelly darter, *Etheostoma radiosum*. Southwestern Association of Naturalists, Norman, Oklahoma, April 2003
- 2003 Turner, T.F., G.R. Moyer, M. V. McPhee, K. O. Winemiller. Comparison of nuclear and mtDNA genes implicate natural selection and demography as primary determinants of intraspecific genetic variation in prochilodontid fishes of northern SA. American Society of Ichthyologists and Herpetologists, Manaus, Brazil, June 2003.
- 2003 Wares, J. P. and T. F. Turner. Conservation genetics and evolution of quantitative trait markers in Gila trout. Society for the Study of Evolution, Chico, California, July 2003.
- 2002 Turner, T.F., J.P. Wares, and D. Alò. Evolution of MHC class I and class II loci among three closely related trouts in the American southwest. 7th International Workshop on MHC evolution and VIII Complement Genetics Workshop and Conference, Perth, Australia, October 2002.

- 2002 Edwards, M. S., and T. F. Turner. Aiding Rio Grande restoration by using stable isotopes to characterize the past and present condition of the river food web. Ecological Society of America. Tucson, AZ, August 2002.
- 2002 Alò, D. and T. F. Turner. Genetic diversity and the effective population size of the endangered Rio Grande silvery minnow: implications for species recovery. American Society of Ichthyologists and Herpetologists, Kansas City, MO, July 2002.
- 2002 McPhee, M. V., and T. F. Turner. Phylogeography of an Invasion: white and Rio Grande suckers in the Upper Rio Grande, New Mexico. American Society of Ichthyologists and Herpetologists, Kansas City, MO, July 2002.
- 2002 Turner, T. F., M. V. McPhee, and K. O. Winemiller. Comparative Phylogeography of highly migratory and abundant fishes (Prochilodontidae: Characiformes) of three major river drainages in South America. American Society of Ichthyologists and Herpetologists, Kansas City, MO, July 2002.
- 2002 Edwards, M. S., T.F. Turner, Quantifying changes in the Rio Grande food web over time using stable isotope analyses of museum specimens. North American Benthological Society. Pittsburgh, PA, May 2002.
- 2002 Wares, J. P., and T. F. Turner. Genetic drift and draft, and the conservation genetics of native trout. American Genetics Association, Tempe AZ, March 2002.
- 2001 Wares, J.P., and T.F. Turner. QTLs and Conservation: A changing approach to the endangered Gila Trout. Society for the Study of Evolution.
- 2001 Turner, T.F. Genetic effective size is four orders of magnitude smaller than census size in an abundant marine fish species. Society for the Study of Evolution.
- 2001 Edwards, M. S., T.F. Turner, and Z.D. Sharp. Quantifying changes in food webs over time using stable isotope analyses of museum specimens. American Society of Limnologists and Oceanographers, and Ecological Society of America
- 2000 McPhee, M. V., and T. F. Turner. Phylogeography of the Rio Grande sucker, *Catostomus plebeius*, in New Mexico. Desert Fishes Council, Alpine, Texas, November 2000.
- 2000 Turner, T. F., and D. Alo. Temporal patterns of genetic diversity and the genetic effective population size of the Rio Grande silvery minnow. Desert Fishes Council, Alpine, Texas, November 2000.
- 2000 Turner, T. F., J.C. Trexler, and H.W. Robison. Congruent patterns of genetic divergence in sympatric Ouachita-endemic fishes. American Society of Ichthyologists and Herpetologists.
- 1999 Turner, T. F., L. R. Richardson, and J. R. Gold. Genetic effective population size is much lower than census size in red drum from the northern Gulf of Mexico. American Society of Ichthyologists and Herpetologists.
- 1997 Turner, T.F., and J.R. Gold. What kind of genetic information is best for estimating genetic effective population size? Gulf Coast Fisheries Institute, 50th Annual Fisheries Conference.
- 1997 Turner, T.F. Comparative study of larval drift in darters. American Society of Ichthyologists and Herpetologists
- 1997 Richardson, L.R., T.F. Turner, and J.R. Gold. Temporal and spatial genetic variation of red drum using

- microsatellite markers. American Society of Ichthyologists and Herpetologists
- 1996 Turner, T.F. Mitochondrial DNA control region sequences and the phylogeny of darters. American Society of Ichthyologists and Herpetologists
- 1996 Turner, T.F., and J.C. Trexler. Life history and comparative phylogeography of darters from the central highlands of North America. Society for the Study of Evolution
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Public Outreach

- 2005 UNM – Quantum (University's publication on Science and Technology) article on Conservation Genetics of Rio Grande silvery minnow.
- 2003 KUNM's "University Showcase": "The Silvery Minnow: A Canary in the Coalmine," hosted by Jane Blume and produced by Dick Frederiksen, KUNM 89.9 FM, 281-7893. Radio program focused on MSB-based research in the middle Rio Grande
- 2002 Department of Biology, Research Day. Panelist in a public forum to discuss global and state fresh water crisis – hosted by the University of New Mexico continuing education program and the Department of Biology, UNM.
- 2000 KNME's "UNM Connections": The Rio Grande silvery minnow, hosted by Valerie Santillanes, produced by KNME TV, Albuquerque.
- 1999 Articles highlighting MSB Divisions of Fishes and NSF support for moving the collection to a new facility and collection improvement. *Daily Lobo* (UNM Student Newspaper), and the *Albuquerque Journal*

References

Professor John R. Gold
Department of Wildlife and Fisheries Sciences
Texas A&M University
College Station, TX 77843 USA
Ph: (979) 847-8778; E-mail: goldfish@tamu.edu

Professor Joel C. Trexler
Department of Biological Sciences
Florida International University
Miami, FL 33199
Ph: (305) 348-1966; E-mail: trexlerj@fiu.edu

Professor Kirk O. Winemiller
Department of Wildlife and Fisheries Sciences
Texas A&M University
College Station, TX 77843 USA
Ph: (979) 862-4020; E-mail: k-winemiller@tamu.edu