

AMANDA J. FINGER

Postdoctoral Researcher, Genomic Variation Lab
Lead Geneticist, Delta Smelt Refuge Program

University of California, Davis
Department of Animal Science
One Shields Avenue
Davis, CA 95616

ajfinger@ucdavis.edu
(530) 752-6351 (lab)
(831) 246-1106 (cell)

EDUCATION

Postdoctoral Researcher Genomic Variation Lab, University of California, Davis	February 2012-present
Ph.D. Graduate Group in Ecology “Using genetic tools for the conservation of the Paiute cutthroat trout and the Owens pupfish” Genomic Variation Lab, University of California, Davis	February 2012
B.S. Ecology and Evolutionary Biology University of California, Santa Cruz	June 2003

CURRENT RESEARCH

Genetic management of a hatchery population of the Delta smelt (*Hypomesus transpacificus*)

Determining parentage and mating strategies in a natural spawning experiment with Delta smelt (*Hypomesus transpacificus*)

Using next-generation sequencing techniques to inform the reintroduction of the threatened Paiute cutthroat trout (*Oncorhynchus clarkii seleniris*)

Conservation and landscape genetics and sex-determination of white-tailed (*Buteo albicaudatus*) and red-shouldered hawks (*Buteo lineatus*) in North America

Phylogenetics and systematics of Indonesian bats using cytochrome-b sequence data

Current and historical phylogeography of tui chubs (*Gila bicolor*) in the Walker Basin using microsatellites and mitochondrial sequence data

PUBLICATIONS

PUBLISHED

Finger, A. J., Stephens, M. R., Clipperton, N. C. and May B. P. (2009) Characterization of Six Single Nucleotide Polymorphisms Distinguishing Lahontan and Paiute cutthroat trouts. *Molecular Ecology Resources* **9**:759-763.

Finger, A. J., (2010) Fishes of the Tuolumne River, book chapter in *Confluence* v1.0 eds. Jeffrey Mount, Sabra Purdy. University of California press, creative commons licensing. (V. 1.0). <http://watershed.ucdavis.edu/tuolumne/resources/ConfluenceTuolumneV1.pdf>.

Finger, A. J., Anderson, E. A., Stephens, M. R., and May, B. P. (2011) Application of a method for estimating effective population size and admixture using diagnostic SNPs: Implications for conservation of threatened Paiute cutthroat trout in Silver King Creek, California. *Canadian Journal of Fisheries and Aquatic Sciences*, **68**:1369-1386.

Finger, A. J., Parmenter, S. P. and May, B. P. "Microsatellites reveal genetic drift and population bottlenecks in refuge populations of the Owens pupfish (*Cyprinodon radiosus*). (in press, Transactions of the American Fisheries Society)

MANUSCRIPTS IN PROGRESS

Stephens, M. R., **Finger, A. J.**, Clipperton, N. C., and May, B.P. "Conservation genetic status of native Little Kern golden trout using SNP and microsatellite markers."

Finger, A. J. and May, B. P. Conservation genetics and evolutionary relationships of Lahontan tui chubs in the Walker, Carson and Truckee River basins.

Finger, A. J., and May, B. P. "Current and historical phylogeography of tui chubs (*Gila bicolor*) in the Walker Basin using microsatellites and mitochondrial sequence data"

Finger, A. J., Fisch, K. M., and May, B. P. "Genetic analysis of a natural spawning experiment of delta smelt (*Hypomesus transpacificus*)."

TECHNICAL REPORTS

Finger A. J., May, B. P. 2012. Conservation Genetics of the Owens pupfish (*Cyprinodon radiosus*). Report to California Department of Fish and Game 30 pp.

Finger, A. J. 2011 Draft Recovery Plan for the endangered yellow larkspur (*Delphinium luteum*), US Fish and Wildlife Service (*internal review*).

Finger, A. J. 2011 Draft Recovery Plan for the endangered Vine Hill Clarkia (*Clarkia imbricata*), US Fish and Wildlife Service. (*internal review*).

Finger, A. J. 2010 Genetic Characterization of tui chubs in Walker Lake. Report to Nevada Department of Wildlife. 35 pp.

Finger, A. J., May, B. P. 2010. A Genetic management plan for the Owens pupfish. Report to California Department of Fish and Game. (*in preparation*).

Finger, A. J., May, B. P. 2009 Genetic status of Paiute cutthroat trout and hybrid trout in Silver King Creek, California. Final Report to California Department of Fish and Game. 26 pp.

Finger, A. J. 2008. Genetic status of Paiute cutthroat trout and hybrid trout in Silver King Creek, California. Interim Report to California Department of Fish and Game. 21 pp.

ORAL PRESENTATIONS

Finger, A. J., Parmenter, S. P., and May, B. P. 2011 “Conservation genetics of the Owens pupfish” American Fisheries Society Annual Meeting, Seattle, WA.

Finger, A. J., May, B. P. 2010. “Conservation genetics of Walker Lake tui chub” Desert Fishes Council, Moab, UT.

Finger, A. J., May, B. P. 2009. “Microsatellites reveal genetic drift and bottlenecks in the Owens pupfish” Desert Fishes Council, Death Valley, CA.

Finger, A. J., May B. P. 2009. “Genetic characterization of a hybrid trout population after stocking events” Western Division of the American Fisheries Society, Albuquerque, NM.

Finger, A. J., May, B. P. 2009. “Conservation genetics and phylogenetics of tui chubs *Siphateles bicolor*” Bay area Students for Conservation Biology Meeting.

Finger, A. J., May, B. P. 2007. “Population genetics of the Paiute cutthroat trout” Threatened Trout Meeting, Davis, CA.

Finger, A. J., May, B. P. 2007. “Population genetics of the endangered Owens pupfish” Desert Fishes Council, Ventura, CA.

RESEARCH SKILLS

LAB

- DNA extraction and quantification
- PCR and real-time PCR
- ABI 3130 and 3730 capillary microsatellite genotyping
- Mitochondrial and nuclear sequence data collection
- AFLP
- SNP optimization and genotyping
- SNP discovery and *TaqMan* assay development
- RAD-SEQ next-generation sequencing

DATA ANALYSIS

- Population genetics using microsatellites, next-generation sequencing data, and SNP assays
- Parentage analysis and hatchery genetic management
- Phylogenetic analysis using mitochondrial and nuclear sequence data

TEACHING

Adjunct Faculty, American River College

Introduction to Natural Resources

Spring 2012

Introductory course; 23 students

Fisheries Ecology and Management

Fall 2011

Designed new upper division course with lab and lecture; 25 students

Undergraduate mentor in the Genomic Variation Lab

Melanie LaCava

2011-present

Alyssa Benjamin 2012-present

Invited Guest lectures

“Genetic tools to manage inbreeding in captive populations”, AVS 123, UC Davis	2012
“Using genetic tools in the Genomic Variation Lab” Freshman Seminar, UC Davis.	2010
“Using Molecular tools for Conservation Biology” Undergraduate Seminar, UC Davis	2007

OTHER EMPLOYMENT

SCEP (Student Career Experience Program), US Fish and Wildlife Service	2010-2011
Teaching Assistant, Introduction to Molecular Ecology, UC Davis	Winter 2009
Graduate Researcher, Genomic Variation Lab	2006-2012
Lab technician, Genomic Variation Lab, UC Davis	2005- 2006
Seasonal Field Assistant, various projects	2003-2005

AWARDS AND GRANTS

Conservation Genetics of the Arroyo Chub (co-P.I.), \$72,140	2012
California Native Trout Genetics Analysis Research Project Phase 6, (co-P.I.), \$319,812 Using next-gen sequencing techniques for the management and reintroduction of the Paiute cutthroat trout	2012
College of Arts and Sciences Programmatic initiatives grant, “Conservation of extremely small populations, \$5000	2010
Graduate Group in Ecology Block Grant, \$5,400	2010
Owens pupfish conservation genetics (principal author, Bernie May P.I., Steve Parmenter co-P.I.), \$86,034	2009
Travel Award-Western Division of the American Fisheries Society, \$600	2009
Travel Award-Applied Phylogenetics Workshop, \$650	2008
Graduate Group in Ecology Block Grant, \$8,400	2007
Hart, Cole, and Goss fellowship, \$3,000	2007, 2009

MEMBERSHIPS

American Fisheries Society and Cal-Neva chapter	2006-present
Desert Fishes Council	2006-present
Society for Conservation Biology	2006-2009, 2012

PROFESSIONAL SERVICE AND OUTREACH

Native fishes of Nevada – coordinated with NDOW, SNWA and Nevada Natural Heritage Program to sample infrequently visited habitats (Newark, Hot Creek, Railroad, Big Smoky, Fish Creek and Little Fish Lake Valleys)	2010, 2011, 2012
Mammoth Lakes fly fishermen – outreach and sampling of Paiute cutthroat trout	2011
Lab meeting coordinator, Genomic Variation Lab	2010-2011
Admissions Reviewer – Graduate Group in Ecology	2008-2013
Animal Science Seminar Committee	2007-2009
SLEWS (Student and Landowner Education and Watershed Stewardship)	2007-2011
AV volunteer, Western Division of the American Fisheries Society	2009

AV volunteer, American Fisheries Society national meeting	2007
Class coordinator for Desert Ecology seminar, ECL 290	2007

MANUSCRIPT AND PROPOSAL REVIEWS

Journal of Fish Biology manuscript review	2011
Canadian Journal of Fisheries and Aquatic Sciences (CJFAS) manuscript review	2011
Transactions of the American Fisheries Society (TAFS) manuscript review	2009; 2010
Journal of Molecular Evolution	2007
Oiled Wildlife Care Network	2007
NY Sea Grant	2006
AYKSSI (Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative)	2006