

## Thomas L. Turner

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Department of Ecology, Evolution, and Marine Biology  
University of California, Santa Barbara

### Preparation

1998-2002 B.S. in Marine Biology, Texas A&M University, Galveston  
2003-2008 PhD. in Population Biology, University of California, Davis  
2007-2009 Visiting Scholar, Molecular and Computational Biology University of Southern California

### Appointments

2009 Postdoctoral Scholar, Gregor Mendel Institute, Vienna, Austria  
2009-2015 Assistant Professor, Ecology, Evolution, and Marine Biology, University of California, Santa Barbara  
2015- Associate Professor, Ecology, Evolution, and Marine Biology, University of California, Santa Barbara

### Diving Certifications

1996 PADI Open Water Diver (~340 lifetime dives)  
1997 PADI Advanced Open Water Diver  
1998 PADI Master Diver (including Dry Suit, Deep, and other sub-certifications)  
1999 AAUS Scientific Diver (current; ~250 lifetime scientific dives)  
1999 NSS CDS Cavern Diver  
1999 PADI Rescue Diver  
2000 PADI Divemaster (no longer active)  
2002 PADI Enriched Air Diver

### Peer-Reviewed Publications

**TURNER TL** (2021) Four new *Scopalina* from Southern California: the first Scopalinida (Porifera: Demospongiae) from the temperate Eastern Pacific. *Zootaxa* 4970(2): 353-371.  
**TURNER TL** (2020) The order Tethyida (Porifera) in California: taxonomy, systematics, and the first member of the family Hemiasterellidae in the Eastern Pacific. *Zootaxa* 4861(2): 211-231.  
**TURNER TL** (2020) The marine sponge *Hymeniacidon perlevis* is a globally-distributed exotic species. *Aquatic Invasions* 15(4): 542-561.  
**SHAHANDEH M, BROCK C, TURNER TL** (2020) Light dependent courtship behavior in *Drosophila simulans* and *D. melanogaster*. *PeerJ* 8: e9499.  
**SHAHANDEH M, TURNER TL** (2020) The complex genetic architecture of male mate choice evolution between *Drosophila* species. *Heredity* 124(6): 737-750.

- PISCHEDDA A, SHAHANDEH M, **TURNER TL** (2020) The loci of behavioral evolution: *Fas2* and *tilB* underlie differences in pupation site choice behavior between *Drosophila melanogaster* and *D. simulans*. *Molecular Biology and Evolution* 37(3): 864-880.
- SHAHANDEH M, PISCHEDDA A, RODRIGUEZ JM, **TURNER TL** (2020) The genetics of male pheromone preference difference between *Drosophila melanogaster* and *Drosophila simulans*. *G3: Genes, Genomes, Genetics*. 10(1): 401-415.
- CLEUREN YNT, EWE CK, CHIPMAN KC, MEARS ER, WOOD CG, AL-ALAMI CEA, ALCORN MR, **TURNER TL**, JOSHI PM, SNELL RG, ROTHMAN JH (2019) Extensive intraspecies cryptic variation in an ancient embryonic gene regulatory network. *eLife* 8: e48220.
- SHAHANDEH M, PISCHEDDA A, **TURNER TL** (2018) Male mate choice via cuticular hydrocarbon pheromones drives reproductive isolation between *Drosophila* species. *Evolution* 72(1): 123-135.
- SUMETHASORN M, **TURNER TL** (2016) Oviposition preferences for ethanol differ dramatically among closely related *Drosophila* species and can be reversed by distance. *Biology Open* 5(11): 1642-1647.
- NAJARRO MA, SUMETHASORN M, LAMOUREUX A, **TURNER TL** (2015) Choosing mates based on the diet of your ancestors: replication of non-genetic assortative mating in *Drosophila melanogaster*. *PeerJ* 3: e1173.
- TURNER TL** (2014) Fine-mapping natural alleles: quantitative complementation to the rescue. *Molecular Ecology* 23(10) 2377-2382.
- ABDUL-WAJID S, VEEMAN MT, CHIBA S, **TURNER TL**, SMITH WC (2014) Exploiting the extraordinary genetic polymorphism of *Ciona* for developmental genetics with whole genome sequencing. *Genetics*, 197(1): 49-59.
- PISCHEDDA A, SHAHANDEH MP, COCHRANE WG, COCHRANE VA, **TURNER TL** (2014) Natural variation in the strength and direction of male mating preferences for female pheromones in *Drosophila melanogaster*. *Plos One* 9(1) e87509.
- NUZHIDIN SV, **TURNER TL** (2013) Promises and limitations of hitchhiking mapping. *Current Opinion in Genetics and Development* 23(6) 694-699.
- TURNER TL**, MILLER PM, COCHRANE, VA (2013) Combining genome-wide methods to investigate the genetic complexity of courtship song variation in *Drosophila melanogaster*. *Molecular Biology and Evolution*. 30(9) 2113-2120.
- KESSNER D, **TURNER TL**, NOVEMBRE J (2013) Maximum likelihood estimation of frequencies of known haplotypes from pooled sequence data. *Molecular Biology and Evolution* 30(5) 1145-1158.
- LOSOS JB, ARNOLD SJ, BEJERANO G, BRODIE III ED, HIBBETT D, HOEKSTRA HE, MINDELL DP, MONTIERO A, MORITZ C, ORR HA, PETROV DA, RENNER SS, RICKLEFS RE, SOLTIS PA, **TURNER TL** (2013) Evolutionary biology for the 21st century. *PloS Biology* 11 (1), e1001466.
- TURNER TL**, MILLER PM (2012) Investigating natural variation in *Drosophila* courtship song by the evolve and resequence approach. *Genetics* 191 (2), 633-642.
- MILLER PM, SALTZ JB, COCHRANE VA, MARCINKOWSKI CM, MOBIN R, **TURNER TL** (2011) Natural variation in decision-making behavior in *Drosophila melanogaster*. *PLoS One* 6(1): e16436.
- TURNER TL**, STEWART AW, FIELDS AT, RICE WR, TARONE AM (2011) Population-based resequencing of experimentally evolved populations reveals the genetic basis of body size variation in *Drosophila melanogaster*. *PLoS Genetics* 7(3): e1001336.

- TURNER TL**, BOURNE EC, VON WETTBERG EJ, HU TT, NUZH DIN SV (2010) Population resequencing reveals local adaptation of *Arabidopsis lyrata* to serpentine soils. *Nature Genetics* 42: 260-263.
- VRBSKY J, AKIMCHEVA S, WATSON JM, **TURNER TL**, DAXINGER L, VYSKOT B, AUFSATZ W, RIHA K (2010) siRNA-mediated methylation of *Arabidopsis* telomeres. *PLoS Genetics* 6(6): e1000986.
- TURNER TL**, HAHN MW (2010) Genomic islands of speciation or genomic islands and speciation? *Molecular Ecology* 19(5): 848-850.
- YUKILEVICH R, **TURNER TL**, AOKI F, NUZH DIN SV, TRUE J (2010) Patterns and processes of genome-wide divergence between North American and African *Drosophila melanogaster*. *Genetics* 186(1): 219-239.
- TURNER TL**, VON WETTBERG EJ, NUZH DIN SV (2008) Genomic analysis of differentiation between soil types reveals candidate genes for local adaptation in *Arabidopsis lyrata*. *PLoS One* e3183.
- TURNER TL**, LEVINE MT, ECKERT ML, BEGUN DJ (2008) Genomic analysis of adaptive differentiation in *Drosophila melanogaster*. *Genetics* 179: 1-19.
- TURNER TL**, HAHN MW (2007) Locus- and population-specific selection and differentiation between incipient species of *Anopheles gambiae*. *Molecular Biology and Evolution* 24: 2132-2138.
- TURNER TL**, HAHN MW, NUZH DIN SV (2005) Genomic islands of speciation in *Anopheles gambiae*. *PLoS Biology* 3: 3285-3318.

### Invited speaker

- 2017 Oregon State University, Integrated Biology Seminar Series
- 2015 Missouri University, Ecology and Evolution Seminar Series
- 2015 University of California, Riverside Entomology Seminar Series
- 2015 University of Texas at Austin, Ecology and Evolution Seminar Series
- 2014 Santa Barbara City College, Seminars in Biology Series
- 2014 University of California Riverside, Entomology Seminar Series
- 2013 Indiana University, Ecology and Evolution Seminar Series
- 2013 Gordon Conference on Ecological and Evolutionary Genetics, Portland Maine
- 2013 University of Veterinary Medicine, Vienna. Population Genetics Seminar Series
- 2012 University of Arizona Genomics Symposium
- 2012 University of Chicago Ecology and Evolution Seminar Series
- 2011 University of California Irvine Ecology and Evolution Seminar Series.
- 2010 University of California Davis Entomology Seminar Series.
- 2010 Texas A&M University Entomology Seminar Series.
- 2009 Workshop on Genetics and Genomics of Adaptation and Speciation. Institute for Advanced Studies, Berlin
- 2009 University of Veterinary Medicine, Vienna. Population Genetics Seminar Series
- 2006 Genetics of Speciation: American Genetics Association Annual Symposium. Vancouver, B. C.
- 2005 American Society of Tropical Medicine and Hygiene Annual Conference. Washington D. C.

### Teaching

2011-2014, 2019-2020	Invertebrate Zoology, with one other
2016-2020	Population Genetics
2010, 2016-2018	Principles of Evolution
2011-2014	Molecular Evolution
2017-2018	Honors Seminar: Birds of Santa Barbara
2010-2014	Natural Variation Seminar
2010-2021	Evolution Seminar, with two others
2010-2017, 2019	Contributor to EECorps (EEMB Graduate Core Course)
2010,2013	Guest lecturer in Freshman Research Introduction Seminar
2013	Guest lecturer in HHMI funded Research Experience for Undergraduates course
2014	Contributor to "The Selfish Gene -- Thirty Years On" seminar, UCSB College of Creative Studies

### **Graduate Mentoring**

Postdoctoral mentorship	Alison Pischedda	EEMB	2010-2016
PhD committee chair	Michael Shahandeh	EEMB	2013-2019
PhD committee chair	Siena McKim	EEMB	2021-current
Masters committee chair	Michael Najarro	EEMB	2012-2015
Masters committee chair	Matt Sumethasorn	EEMB	2016-2018
Masters committee member	Danielle Black	EEMB	2017-2020
PhD committee member	Jason Johns	EEMB	2021-present
PhD committee member	Juliana Uribe	MCDB	2018-2021
PhD committee member	Geneva Alok	MCDB	2017-2020
PhD committee member	Colin Wright	EEMB	2016-2018
PhD committee member	Sarah Abdul-Wajid	MCDB	2011-2016
PhD committee member	Nathan Derieg	EEMB	2011-2019
PhD committee member	Matthew A. Lalli	BMSE	2012 (orals committee only)
PhD committee member	Desmond Ramirez	EEMB	2012-2017
PhD committee member	Devan Zaratian	EEMB	2013-2017
PhD committee member	Mary Toothman	EEMB	2014-2019
PhD committee member	Kelly Thomasson	EEMB	2014-2016
PhD committee member	Roma Munday	MCDB	2014-2016
PhD committee member	Melissa Alcorn	MCDB	2015-2016
PhD committee member	Nicolai Hensley	EEMB	2015-2016

### **Undergraduate Research**

- Supervised research experience for ~70 UCSB undergraduates 2009-2020
- At least thirteen undergraduate researches later attended graduate school, and at least three attended medical school
- Nine undergraduates have coauthored peer reviewed publications from the lab

### **Outreach and other external activities**

- 2017-current iNaturalist curator; identified 3,500+ sponge observations for others; contributed 437 personal sponge observations from 56 species, with notes on field identification

- 2018 Lead Porifera taxonomist for the LA Urban Bioblitz (run by the Natural History Museum of LA County)
- 2016 Talked science with the local chapter of Gamma Phi Beta at their professor banquet
- 2015 Presented my research to incoming freshman as part of the "Intro to the Life Sciences" lectures
- 2014, 2016 Talked science at the Society of Undergraduate Biologists Professor-Student Luncheon
- 2013-2014 Accepted invitation to join the Faculty of 1000, as a contributor; published 10 literature reviews
- 2012, 2013 Talked science at the UCSB Honors Student-Faculty Picnic
- 2012 Presented *Sleep in insects* at the annual "Moth Party", sponsored by the Santa Barbara Museum of Natural History
- 2012 Presented *In the mind of a fly* at a Dargan's Pub "Science pub night", sponsored by the Santa Barbara Museum of Natural History
- 2012 Talked science with the local chapter of Alpha Chi Sorority at the "Apple pie with Alpha Chi" event