

# ALISON L. GOULD

California Academy of Sciences  
55 Music Concourse Drive • San Francisco, CA • 94118  
agould@calacademy.org • 415.350.5708  
alison Gould40.com

## EDUCATION

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2016 **Ph.D. Ecology and Evolutionary Biology** • University of Michigan • Ann Arbor, MI  
2009 **M.S. Marine Biology** • San Francisco State University • Estuary & Ocean Science Center  
2005 **B.A. Mathematics • Biology** • University of Virginia • Charlottesville, VA

## APPOINTMENTS

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Current **Research Scientist** • California Academy of Sciences (CAS) • Ichthyology • Microbiology  
**Adjunct Research Professor** • San Francisco State University (SFSU)  
**Sandler Faculty Fellow Affiliate** • University of California, San Francisco  
2018 **NSF Postdoctoral Fellow in Biology** • California Academy of Sciences • Ichthyology  
2017 **Postdoctoral Fellow** • University of California, Berkeley • Molecular and Cell Biology  
2015-16 **Rackham Predoctoral Fellow** • University of Michigan (UM)  
2013-14 **Carl and Linda Hubbs' Fellow** • University of Michigan Museum of Zoology (UMMZ)  
2012 **Assistant Curator** • University of Michigan Museum of Zoology • Ichthyology Division  
2009-10 **Research Technician** • Taxon Biosciences, Inc. • Tiburon, California

## PUBLICATIONS

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**Gould, AL**, A Gaisiner and A Fritts-Penniman (*in review*) Museum genomics illuminate the high specificity of a bioluminescent symbiosis across a genus of reef fish. (*bioRxiv* doi:10.1101/2020.10.01.323204)

**Gould, AL** and PV Dunlap (2019) Shedding light on specificity: population genomic structure of a symbiosis between a coral reef fish and luminous bacterium. *Frontiers in Microbiology* 10:2670

**Gould, AL**, V Zhang, B Obadia, A Gavryushkin, L Lamberti, N Beerenwinkel, E Jones, J Carlson and W Ludington (2018) Microbiome interactions shape host fitness. *PNAS* 115(51):E11951–E11960

**Gould, AL** and PV Dunlap (2017) Genomic analysis of a cardinalfish with larval homing potential reveals genetic admixture in the Okinawa Islands. *Molecular Ecology* 26:3870-82

**Gould, AL**, \*K Dougan, \*S Koenigbauer and PV Dunlap (2016) Life history of the symbiotically luminous coral reef fish *Siphamia tubifer* (Perciformes: Apogonidae). *J Fish Biology* 89:1363-1377

**Gould, AL**, S Harii and PV Dunlap (2015) Cues from the reef: olfactory preferences of a symbiotically luminous cardinalfish. *Coral Reefs* 34:673–677

**Gould, AL**, S Harii and PV Dunlap (2014) Homing behavior and site fidelity of the symbiotically luminous cardinalfish, *Siphamia tubifer* (Perciformes: Apogonidae). *Marine Biology* 161:2897-907

Kimmerer, WJ, T Ignoffo, A Slaughter and **AL Gould** (2014) Food-limited reproduction and growth of three copepod species in the low-salinity zone of the San Francisco Estuary. *J Plankton Research* 0:1-14

Dunlap, PV, **AL Gould**, ML Wittenrich and M Nakamura (2012) Symbiosis initiation in the bacterially luminous sea urchin cardinalfish *Siphamia versicolor* (Perciformes: Apogonidae). *J Fish Biol* 81:1340-56

Urbanczyk, H, Y Ogura, TA Hendry, **AL Gould**, N Kiwaki, JT Atkinson, T Hayashi and PV Dunlap (2011) Genome sequence of *Photobacterium mandapamensis* strain svers. 1.1, the bioluminescent symbiont of the cardinal fish *Siphamia versicolor*. *J Bacteriology* 193:3144-45

## PUBLICATIONS (CONTINUED)

Gould, AL and WJ Kimmerer (2010) Development, growth, and reproduction of the cyclopoid copepod *Limnoithona tetraspina* in upper San Francisco Estuary. *Marine Ecology Progress Series* 412:163-77

Kimmerer, WJ and AL Gould (2010) A Bayesian approach to estimating copepod development times from stage frequency data. *Limnol Oceanogr Methods* 8:118-26

\*undergraduate students mentored

## GRANTS AND AWARDS

|         |   |             |
|---------|---|-------------|
| 2018-23 | <b>NIH Director's Early Independence Award (DP5)</b> • NIH-DP5-OD026405-01                  | \$1,250,000 |
|         | "Investigating mechanisms of specificity in a bioluminescent vertebrate-bacteria symbiosis" |             |
| 2017-19 | <b>NSF Postdoctoral Fellowship in Biology</b> • NSF-DBI-1711430                             | \$138,000   |
|         | "Investigating modes of ecological speciation in a symbiotically luminous coral reef fish"  |             |
| 2014    | <b>NSF Doctoral Dissertation Improvement Grant (DDIG)</b> • NSF-DEB-1405286                 | \$17,510    |
|         | "DISSERTATION RESEARCH: The evolutionary ecology of a vertebrate-microbe symbiosis"         |             |
| 2014    | <b>PADI Foundation Grant</b> • PADI-11180   | \$4,550     |
|         | "The use of olfactory cues for homing and settlement by a bioluminescent cardinalfish"      |             |
| 2014    | <b>Graduate Women in Science (GWIS) National Fellowship</b> • Honorable Mention             |             |
| 2014    | <b>Susan Lipschutz Award for women scholars</b> • Rackham Graduate School, UM               | \$6,000     |
| 2013-15 | <b>Ichthyology Graduate Student Awards</b> • UMMZ   | \$6,220     |
| 2013    | <b>Robert and Francis Miller Ichthyology Award</b> • UMMZ                                   | \$1,000     |
| 2013    | <b>Rackham International Travel Grant</b> • UM  | \$1,200     |
| 2012    | <b>Rackham International Research Award</b> • UM  | \$5,000     |
| 2011-13 | <b>Rackham Graduate Student Research Grants</b> • UM  | \$4,500     |
| 2011-12 | <b>Department of Ecology and Evolutionary Biology Block Grants</b> • UM                     | \$3,258     |
| 2008    | <b>Robert W. Maxwell Scholarship</b> • San Francisco State University (SFSU)                | \$4,000     |

## FELLOWSHIPS

|         |   |
|---------|---|
| 2017-19 | <b>NSF Postdoctoral Fellowship in Biology (PRFB)</b> • California Academy of Sciences (CAS) |
| 2015-16 | <b>Rackham Predoctoral Fellowship</b> • Rackham Graduate School, University of Michigan     |
| 2013-14 | <b>Carl and Linda Hubbs' Fellowship</b> • University of Michigan Museum of Zoology          |
| 2011    | <b>NSF East Asia and the Pacific Summer Institute (EAPSI) Fellowship</b> • Okinawa, Japan   |
| 2004    | <b>NSF Research Experience for Undergraduates (REU)</b> • University of Alaska, Southeast   |

## OTHER PUBLICATIONS AND PATENTS

E Jones, L Lamberti, AL Gould, V Zhang, B Obadia, A Gavryushkin, N Beerenwinkel, J Carlson and W Ludington (2019) How do microbes shape fruit fly fitness? *Biomedical Science Journal for Teens*

Ashby, M, L Wood, U Lidström, C Clarke, AL Gould, D Strapoc, AJ Lambo, BJ Huizinga (2015) US Patent 9,206,680 B2. Compositions and methods for identifying and modifying carbonaceous compositions

## TEACHING EXPERIENCE

|         |   |
|---------|---|
| 2014    | <b>Ecology Lab (EEB372)</b> • Graduate Student Instructor • University of Michigan                    |
| 2011-13 | <b>Animal Diversity (BIO288)</b> • Graduate Student Instructor • University of Michigan               |
| 2010    | <b>Intro. Ecology &amp; Evolution (BIO171)</b> • Graduate Student Instructor • University of Michigan |
| 2008    | <b>Biological Oceanography (BIO582)</b> • Teaching Assistant • San Francisco State University         |

## INVITED SEMINARS

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- 2020 Biology Department • San Diego State University • San Diego, CA
- 2019 Biological Sciences Seminar • Washington State University, Vancouver • Vancouver, WA
- 2019 Symposium on Biological Interactions • Carnegie Institution for Science • Baltimore, MD
- 2019 Eco/Evo Lunch Seminar • Biology Department • Stanford University • Palo Alto, CA
- 2019 Department of Organismic and Evolutionary Biology • Harvard University • Cambridge, MA
- 2018 Institute for Biodiversity Science and Sustainability Seminar (CAS) • San Francisco, CA
- 2017 Rosenberg Institute Seminar • Estuary and Ocean Science Center • SFSU • Tiburon, CA
- 2017 Bay Area Postdoc Symposium • Buck Institute for Research on Aging, Novato, CA

## CONTRIBUTED TALKS

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- 2020 Society for Integrative and Comparative Biology • Austin, TX
- 2019 2<sup>nd</sup> International Fish Microbiota Workshop • Eugene, OR
- 2018 7<sup>th</sup> Conference on Beneficial Microbes • Madison, WI
- 2017 7<sup>th</sup> Annual Symbiosis Meeting • Yosemite, CA
- 2016 13<sup>th</sup> International Coral Reefs Symposium • Honolulu, HI
- 2016 Western Society of Naturalists Annual Meeting • Monterey, CA
- 2015 Fish at Night Symposium • Miami, FL
- 2015 Western Society of Naturalists Annual Meeting • Sacramento, CA
- 2015 Benthic Ecology Meeting • Québec City, Québec, Canada
- 2014 Ecological Society of America Annual Meeting • Sacramento, CA
- 2014 Western Society of Naturalists Annual Meeting • Tacoma, WA
- 2013 9<sup>th</sup> Indo-Pacific Fish Conference • Okinawa, Japan
- 2009 Coastal and Estuarine Research Federation Conference • Portland, OR

## SERVICE AND OUTREACH

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Peer Reviewer *eLife*, *Mol Cell Biol*, *Behav Ecol*, *PLoS ONE*, *J Fish Biol*, *Front Microbio*, *FEMS Microbio*, *Front Ecol Evol*, *J Cont Shelf Res*, *Mar Biodiversity*, *FEMS Microbiol*, *Genes*, *J Exp Mar Biol Ecol*

- 2020 NSF Review Panelist • Postdoctoral Research Fellowship in Biology
- 2019-20 Volunteer • Skype a Scientist
- 2019 Panelist • Teen Environmental Education Mentorship (TEEM) Career Panel
- 2018-20 Project Mentor • Careers in Science Internship Program (CAS)
- 2018-19 Volunteer • NightLife events at CAS (guest panelist for Women in Science NightLife)
- 2014-16 Regional Coordinator • Great Lakes Bowl, National Ocean Science Bowl
- 2014-15 Elected Representative • Admissions Committee, EEB Department (UM)
- 2013-14 Volunteer • Females Excelling More in Mathematics, Engineering and the Sciences (FEMMES) capstone event (UM)
- 2012-15 Volunteer • ID Day (UMMZ)
- 2012-13 President • Graduate Researchers in Ecology and Evolutionary Biology (UM)
- 2011-14 Volunteer Judge • Great Lakes Bowl, National Ocean Science Bowl
- 2011-13 Volunteer • 826michigan Writing Workshops
- 2011-12 Elected Representative • Executive Committee, EEB Department (UM)
- 2008-10 Volunteer Judge • Sea Lion Bowl, National Ocean Science Bowl
- 2008-09 Volunteer • Marine Science Institute, Earth Day on the Bay, San Francisco
- 2006-07 Volunteer Docent • Richardson Bay Audubon Center, Bay Shores Studies
- 2006-07 Volunteer • Expanding Your Horizons, Women in Math and Science Fair
- 2002-05 Volunteer • Big Siblings Program, Madison House, University of Virginia

## MENTORSHIP

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2020 Ana Gaisiner • Research Associate • CAS  
Samantha Donohoo • Master's student • SFSU (CAS)

2018-19 Jessica Herbert • high school intern • Careers in Science (CiS) Internship Program (CAS)

2018-19 Noelle Kasly • undergraduate research assistant • SFSU (CAS)

2017 Andrew Wang • high school summer intern • UC Berkeley

2015-16 Karen Hug • undergraduate research assistant • UM

2015-16 Clara Tift • undergraduate research assistant • UM

2014-15 Scott Koenigbauer • Undergraduate Research Opportunities Program (UROP) • UM

2014-15 Maggie Grundler • undergraduate Honors thesis • UM

2012-14 Katherine Dougan • undergraduate research assistant • UM

## REFERENCES

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Dr. Paul Dunlap (Ph.D. advisor)  
Department of Ecology and Evolutionary Biology  
University of Michigan  
Ann Arbor, MI 48109  
(734) 327-9125  
[pvdunlap@umich.edu](mailto:pvdunlap@umich.edu)

William Ludington (Postdoctoral advisor)  
Department of Embryology  
Carnegie Institution for Science  
Baltimore, MD 21218  
(410) 246-3101  
[ludington@carnegiescience.edu](mailto:ludington@carnegiescience.edu)

Wim Kimmerer (Master's advisor)  
Department of Biology  
San Francisco State University  
Estuary and Ocean Science Center  
Tiburon, CA 94920  
(415) 338-3515  
[kimmerer@sfsu.edu](mailto:kimmerer@sfsu.edu)