

# Dr. Casey William Dunn– Curriculum Vitae

## 1 Position and Contact Information

Professor  
Ecology and Evolutionary Biology  
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<http://dunnlab.org/>  
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flickr.com – Casey Dunn

## 2 Education

2005 Ph.D. Yale University, Department of Ecology and Evolutionary Biology (With Distinction)  
2003 M.S. Yale University, Department of Ecology and Evolutionary Biology  
1999 B.S. Stanford University, Biological Sciences (Honors, Phi Beta Kappa)

## 3 Professional Appointments

2017–present Professor, Ecology and Evolutionary Biology, Yale University  
2017–present Curator, Division of Invertebrate Zoology, Peabody Museum, Yale University  
2017–present Adjunct Professor, Ecology and Evolutionary Biology, Brown University  
2014–2017 Associate Professor, Ecology and Evolutionary Biology, Brown University  
2010–2014 Manning Assistant Professor, Ecology and Evolutionary Biology, Brown University  
2008–2010 Assistant Professor, Ecology and Evolutionary Biology, Brown University  
2007–2008 Assistant Professor (Research), Ecology and Evolutionary Biology, Brown University  
2005–2007 Postdoctoral Fellow, Kewalo Marine Lab, University of Hawaii

## 4 Completed Publications

### *a. Books/ monographs*

SHD Haddock and CW Dunn. (2010) Practical Computing for Biologists. 538 pages. Sinauer Associates. Sunderland, MA. <http://practicalcomputing.org>.

### *b. Chapters in books*

Giribet, G, CW Dunn, GD Edgecombe, A Hejnol, MQ Martindale, and GW Rouse (2009) Assembling the spiralian tree of life (p 52-64) In: Animal Evolution. MJ Telford and DTJ Littlewood (eds). Oxford University Press.

Mills, CE, AC Marques, AE Migotto, DR Calder, C Hand, JT Rees, SHD Haddock, CW Dunn, and PR Pugh. (2007) Hydrozoa: Polyps, Hydromedusae, and Siphonophora. In: *The Light & Smith manual: intertidal invertebrates from central California to Oregon*, 4th edition. JT Carlton (ed). University of California Press.

*c. Refereed journal articles*

Munro, C, S Siebert, F Zapata, M Howison, A Damian-Serrano, SH Church, FE Goetz, PR Pugh, SHD Haddock, CW Dunn (2018) Improved phylogenetic resolution within Siphonophora (Cnidaria) with implications for trait evolution. *Molecular Phylogenetics and Evolution*. <http://dx.doi.org/10.1016/j.ympev.2018.06.030>. bioRxiv preprint: <https://doi.org/10.1101/251116>. Git code repository: [https://github.com/caseywdunn/siphonophore\\_phylogeny\\_2017](https://github.com/caseywdunn/siphonophore_phylogeny_2017).

Pugh, PR, CW Dunn, SHD Haddock (2018) Description of *Tottonophyes enigmatica* gen. nov., sp. nov. (Hydrozoa, Siphonophora, Calycophorae), with a reappraisal of the function and homology of nectophoral canals. *Zootaxa* 4415(3):452-472. <https://doi.org/10.11646/zootaxa.4415.3.3>.

Haddock, SHD, Christianson LM, Francis WR, Martini S, Dunn CW, Pugh PR, Mills CE, Osborn KJ, Seibel BA, Choy CA, Schnitzler CE, Matsumoto GI, Messié M, Schultz DT, Winnikoff JR, Powers ML, Gasca R, Browne WE, Johnsen S, Schlining KL, von Thun S, Erwin BE, Ryan JF, Thuesen EV (2018) Insights into the Biodiversity, Behavior, and Bioluminescence of Deep-Sea Organisms Using Molecular and Maritime Technology. *Oceanography* 30:38-47. <https://doi.org/10.5670/oceanog.2017.422>

Dunn, CW, F Zapata, C Munro, S Siebert, A Hejnal (2018) Pairwise comparisons across species are problematic when analyzing functional genomic data. *PNAS*. <http://dx.doi.org/10.1073/pnas.1707515115>. bioRxiv preprint: <https://doi.org/10.1101/107177>. Git code repository: [https://github.com/caseywdunn/comparative\\_expression\\_2017](https://github.com/caseywdunn/comparative_expression_2017).

Helm, RR, CW Dunn (2017) Indoles induce metamorphosis in a broad diversity of jellyfish, but not in a crown jelly (Coronatae). *PLoS One*. <https://doi.org/10.1371/journal.pone.0188601>.

Dunn, CW, C Munro (2016) Comparative genomics and the diversity of life. *Zoologica Scripta* 45:5-13. <http://dx.doi.org/10.1111/zsc.12211>.

Guang, A, F Zapata, M Howison, CE Lawrence, CW Dunn (2016) An Integrated Perspective on Phylogenetic Workflows. *Trends in Ecology and Evolution* 31:116-126. <http://dx.doi.org/10.1016/j.tree.2015.12.007>.

Dunn, CW (2015) Acorn worms in a nutshell. *Nature* 527:448-449. <http://dx.doi.org/10.1038/nature16315>.

Zapata, F, FE Goetz, SA Smith, M Howison, S Siebert, S Church, SM Sanders, CL Ames, CS McFadden, SC France, M Daly, AG Collins, SHD Haddock, CW Dunn, P Cartwright (2015) Phylogenomic analyses support traditional relationships within Cnidaria. *PLoS One* 10(10): e0139068. <http://dx.doi.org/10.1371/journal.pone.0139068>. BioRxiv preprint: <http://dx.doi.org/10.1101/017632>. Git code repository: <https://bitbucket.org/caseywdunn/cnidaria2014>.

Dunn, CW, JT Ryan (2015) The evolution of animal genomes. *Current Opinion in Genetics and Development* 35:25-32. <http://dx.doi.org/10.1016/j.gde.2015.08.006>

Haddock, SH, CW Dunn (2015) Fluorescent proteins function as a prey attractant: experimental evidence from the hydromedusa *Olindias formosus* and other marine organisms. *Biology Open* 4:1094-1104. <http://dx.doi.org/10.1242/bio.012138>.

- Church, SH, JF Ryan, CW Dunn (2015) Automation and Evaluation of the SOWHAT Test of Phylogenetic Topologies with SOWHAT. *Systematic Biology* 64(6):1048-1058. <http://dx.doi.org/10.1093/sysbio/syv055>. BioRxiv preprint: <http://dx.doi.org/10.1101/005264>. Git code repository: <https://github.com/josephryan/sowhat>.
- Laumer, CE, N Bakkouche, A Kerbl, F Goetz, RC Neves, MV Sørensen, RM Kristensen, A Hejnol, CW Dunn, G Giribet, K Worsaae (2015) Spiralian Phylogeny Informs the Evolution of Microscopic Lineages. *Current Biology* 25(15):2000-2006. <http://dx.doi.org/10.1016/j.cub.2015.06.068>.
- Church, SH, S Siebert, P Bhattacharyya, CW Dunn (2015) The Histology of *Nanomia bijuga* (Hydrozoa: Siphonophora). *J. Exp. Zool. (Mol. Dev. Evol.)* 324(5):435-449. <http://dx.doi.org/10.1002/jez.b.22629>. BioRxiv preprint: <http://dx.doi.org/10.1101/010868>.
- Siebert, S, FE Goetz, SH Church, P Bhattacharyya, F Zapata, SHD Haddock, and CW Dunn (2015) Stem Cells in a Colonial Animal with Localized Growth Zones. *EvoDevo* 6:22. <http://dx.doi.org/10.1186/s13227-015-0018-2>. BioRxiv preprint: <http://dx.doi.org/10.1101/001685>. Git code repository: [https://bitbucket.org/caseywdunn/siebert\\_etal](https://bitbucket.org/caseywdunn/siebert_etal).
- Salinas-Saavedra, M, TQ Stephenson, CW Dunn, MQ Martindale (2015) Par system components are asymmetrically localized in ectodermal epithelia, but not during early development in the sea anemone *Nematostella vectensis*. *EvoDevo* 6:20. <http://dx.doi.org/10.1186/s13227-015-0014-6>.
- Helm, RR, S Tiozzo, MKS Lilley, F Lombard, CW Dunn (2015) Comparative muscle development of scyphozoan jellyfish with simple and complex life cycles. *EvoDevo* 6:11. <http://dx.doi.org/10.1186/s13227-015-0005-7>.
- Dunn, CW, SP Leys, SHD Haddock (2015) The hidden biology of sponges and ctenophores. *Trends in Ecology and Evolution* 30:282-291. <http://dx.doi.org/10.1016/j.tree.2015.03.003>.
- Reich, A, CW Dunn, K Akasaka, G Wessel (2015) Phylogenomic Analyses of Echinodermata Support the Sister Groups of Asterozoa and Echinozoa. *PLoS One* 10:e0119627. <http://dx.doi.org/10.1371/journal.pone.0119627>.
- Gonzalez, VL, SCS Andrade, R Bieler, TM Collins, CW Dunn, PM Mikkelsen, JD Taylor, G Giribet (2015) A phylogenetic backbone for Bivalvia: an RNA-seq approach. *Proceedings of the Royal Society B: Biological Sciences* 282:20142332. <http://dx.doi.org/10.1098/rspb.2014.2332>.
- Dunn, CW, G Giribet, GD Edgecombe, A Hejnol (2014) Animal Phylogeny and its Evolutionary Implications. *Annual Review of Ecology, Evolution, and Systematics* 45:371-395. <http://dx.doi.org/10.1146/annurev-ecolsys-120213-091627>.
- Zapata, F, NG Wilson, M Howison, SCS Andrade, KM Jörger, Michael Schrödl, Freya E Goetz, Gonzalo Giribet, Casey W Dunn (2014) Phylogenomic analyses of deep gastropod relationships reject Orthogastropoda. *Proceedings of the Royal Society B: Biological Sciences* 281:1471-2954. <http://dx.doi.org/10.1098/rspb.2014.1739>. BioRxiv preprint: <http://dx.doi.org/10.1101/007039>. Git code repository: <https://bitbucket.org/caseywdunn/gastropoda>.
- Dunn, CW (2014) Reconsidering the phylogenetic utility of miRNA in animals. *PNAS* 111:12576-12577. <http://dx.doi.org/10.1073/pnas.1413545111>.
- Howison, M, F Zapata, EJ Edwards, and CW Dunn (2014) Bayesian genome assembly and assessment by Markov Chain Monte Carlo sampling. *PLoS One* 9:e99497. <http://dx.doi.org/10.1371/journal.pone.0099497>. arXiv preprint: <http://arxiv.org/abs/1308.1388>. Git code repository: <https://bitbucket.org/mhowison/gabi>. Example analysis report: <https://web3.ccv.brown.edu/mhowison/gabi-report/>.

Lopez, J, H Bracken-Grissom, A Collins, T Collins, K Crandall, D Distel, C Dunn, et al. (2014) Global Invertebrate Genomics Alliance (GIGA): Developing Community Resources to Study Diverse Invertebrate Genomes. *Journal of Heredity* 105:1-18. <http://dx.doi.org/10.1093/jhered/est084>

Ryan, JF, K Pang, CE Schnitzler, A Nguyen, RT Moreland, DK Simmons, BJ Koch, WR Francis, P Havlak, NISC Comparative Sequencing Program, SA Smith, NH Putnam, SHD Haddock, CW Dunn, TG Wolfsberg, JC Mullikin, MQ Martindale, AD Baxeavanis (2013) The genome of the ctenophore *Mnemiopsis leidyi* and its implications for cell type evolution. *Science* 432:1242592. <http://dx.doi.org/10.1126/science.1242592>.

CW Dunn, M Howison, and F Zapata (2013) Agalma: an automated phylogenomics workflow. *BMC Bioinformatics* 14:330. <http://dx.doi.org/10.1186/1471-2105-14-330>. arXiv preprint: <http://arxiv.org/abs/1307.6432>. Git code repository: <https://bitbucket.org/caseywdunn/agalma> (software), <https://bitbucket.org/caseywdunn/dunnhowisonzapata2013> (analyses).

Howison, M, F Zapata, CW Dunn (2013) Toward a statistically explicit understanding of *de novo* sequence assembly. *Bioinformatics* 29:2959-2963. <http://dx.doi.org/10.1093/bioinformatics/btt525>.

Siebert, S, PR Pugh, SHD Haddock, CW Dunn (2013) Re-evaluation of characters in Apolemiidae (Siphonophora), with description of two new species from Monterey Bay, California. *Zootaxa* 3702: 201-232. <http://www.mapress.com/zootaxa/2013/f/zt03702p232.pdf>. Accompanying video of new species available at <https://vimeo.com/59928656>.

Dunn, CW, X Luo, Z Wu (2013) Phylogenetic analysis of gene expression. *Integrative and Comparative Biology* 53:847-856. <http://dx.doi.org/10.1093/icb/ict068>. arXiv preprint: <http://arxiv.org/abs/1302.2978>. Git code repository: <https://bitbucket.org/caseywdunn/sicb2013>.

Helm, RR, S Siebert, S Tulin, J Smith, CW Dunn (2013) Characterization of differential transcript abundance through time during *Nematostella vectensis* development. *BMC Genomics* 14:266. <http://dx.doi.org/10.1186/1471-2164-14-266>. Git code repository: [https://bitbucket.org/caseywdunn/helm\\_et\\_al\\_2013](https://bitbucket.org/caseywdunn/helm_et_al_2013).

Howison, M, N Sinnott-Armstrong, CW Dunn (2012) BioLite, a lightweight bioinformatics framework with automated tracking of diagnostics and provenance. 4th USENIX Workshop on the Theory and Practice of Provenance (TaPP12). <https://www.usenix.org/system/files/conference/tapp12/tapp12-final15.pdf> (peer-reviewed conference proceeding).

Smith, SA, NG Wilson, F Goetz, C Feehery, SCS Andrade, GW Rouse, G Giribet, CW Dunn (2011) Resolving the evolutionary relationships of molluscs with phylogenomic tools. *Nature* 480:364-367. <http://dx.doi.org/10.1038/nature10526>.

Siebert, S, MD Robinson, SC Tintori, F Goetz, RR Helm, SA Smith, N Shaner, SHD Haddock, CW Dunn (2011) Differential Gene Expression in the Siphonophore *Nanomia bijuga* (Cnidaria) Assessed with Multiple Next-Generation Sequencing Workflows. *PLoS One* 6(7): e22953. <http://dx.doi.org/10.1371/journal.pone.0022953>.

Edgecombe, GD, G Giribet, CW Dunn, A Hejnol, RM Kristensen, RC Neves, GW Rouse, K Worsaae, and MV Sørensen (2011) Higher-level metazoan relationships: recent progress and remaining questions. *Organisms, Diversity, and Evolution* 11:151-172. <http://dx.doi.org/10.1007/s13127-011-0044-4>.

Hejnol, A, M Obst, A Stamatakis, M Ott, G Rouse, G Edgecombe, P Martinez, J Baguña, X Bailly, U Jondelius, M Wiens, WEG Müller, Elaine Seaver, WC Wheeler, MQ Martindale, G Giribet, and CW Dunn (2009) Assessing the root of bilaterian animals with scalable phylogenomic methods. *Proc. R. Soc. B.* 276:4261-4270. <http://dx.doi.org/10.1098/rspb.2009.0896>. Git repository: [https://bitbucket.org/caseywdunn/hejnol\\_et\\_al\\_2009](https://bitbucket.org/caseywdunn/hejnol_et_al_2009).

Cartwright, P, NM Evans, CW Dunn, AC Marques, MP Miglietta, P Schuchert, and AG Collins (2008) Phylogenetics of Hydroidolina (Hydrozoa: Cnidaria). *Journal of the Marine Biological Association of the United Kingdom* 88:1663-1672. <http://dx.doi.org/10.1017/S0025315408002257>.

Dunn, CW, A Hejnol, DQ Matus, K Pang, WE Browne, SA Smith, E Seaver, GW Rouse, M Obst, GD Edgecombe, MV Sørensen, SHD Haddock, A Schmidt-Rhaesa, A Okusu, RM Kristensen, WC Wheeler, MQ Martindale, and G Giribet (2008) Broad phylogenomic sampling improves resolution of the Animal Tree of Life. *Nature* 452:745-749. <http://dx.doi.org/10.1038/nature06614>. (Cover Article).

Smith, SA and CW Dunn (2008) Phyutility: a phyloinformatics tool for trees, alignments, and molecular data. *Bioinformatics*. 24:715-716. <http://dx.doi.org/10.1093/bioinformatics/btm619>. Code repository: <https://code.google.com/p/phyutility>.

Giribet, G, CW Dunn, GD Edgecombe, and GW Rouse (2007) A modern look at the Animal Tree of Life. *Zootaxa* 1668:61-79.

Oota, H, CW Dunn, WC Speed, AJ Pakstis, MA Palmatier, JR Kidd and KK Kidd (2007) Conservative evolution in duplicated genes of the primate Class I ADH cluster. *Gene* 392:64-76. <http://dx.doi.org/10.1016/j.gene.2006.11.008>.

Dunn, CW and GP Wagner (2006) The evolution of colony-level development in the Siphonophora (Cnidaria:Hydrozoa). *Development, Genes, and Evolution*. 216:743-754. <http://dx.doi.org/10.1007/s00427-006-0101-8> (Cover Article).

Matus, DQ, K Pang, H Marlow, CW Dunn, GH Thomsen, and MQ Martindale (2006) Deep evolutionary roots for bilaterality in the metazoa. *Proceedings of the National Academy of Sciences USA*. 103:11195-11200. <http://dx.doi.org/10.1073/pnas.0601257103>.

Matus, DQ, RR Copley, CW Dunn, A Hejnol, H Eccleston, KM Halanych, MQ Martindale, and MJ Telford (2006) Broad Taxon and Gene Sampling Indicate that Chaetognaths Are Protostomes. *Current Biology*. 16:R575-R576. <http://dx.doi.org/10.1016/j.cub.2006.07.017>.

Dunn, CW, PR Pugh, and SHD Haddock (2005) Molecular phylogenetics of the Siphonophora (Cnidaria), with implications for the evolution of functional specialization. *Systematic Biology* 54:916-935. <http://dx.doi.org/10.1080/10635150500354837> (Cover Article). Git repository: [https://bitbucket.org/caseywdunn/siphonophores\\_2005](https://bitbucket.org/caseywdunn/siphonophores_2005).

Dunn, CW (2005) The complex colony-level organization of the deep-sea siphonophore *Bargmannia elongata* (Cnidaria, Hydrozoa) is directionally asymmetric and arises by the subdivision of pro-buds. *Developmental Dynamics* 234:835-845. <http://dx.doi.org/10.1002/dvdy.20483> (Cover Article).

Haddock, SHD, CW Dunn, PR Pugh and CE Schnitzler (2005) Bioluminescent and red-fluorescent lures in a deep-sea siphonophore. *Science* 309:263. <http://dx.doi.org/10.1126/science.1110441>.

Dunn, CW, PR Pugh, and SHD Haddock (2005) *Marrus claudanielis*, a new species of deep-sea physonect siphonophore (Siphonophora, Physonectae). *Bulletin of Marine Science* 76:699-714.

Haddock, SHD, CW Dunn, and PR Pugh (2005) A reexamination of siphonophore terminology and morphology, applied to the description of two new prayine species with remarkable bio-optical properties. *Journal of the Marine Biological Association of the U.K.* 85:695-707. <http://dx.doi.org/10.1017/S0025315405011616>.

Lynch, VJ, JJ Roth, K Takahashi, CW Dunn, DF Nonaka, G Stopper and GP Wagner (2004) Adaptive evolution of HoxA-11 and HoxA-13 at the origin of the uterus in mammals. *Proceedings of the Royal Society B: Biological Sciences* 271:2201-2207. <http://dx.doi.org/10.1098/rspb.2004.2848>.

*d. Non-refereed journal articles*

Lewis, ZR and CW Dunn. (2018) Genome evolution: We are not so special. eLife. <http://dx.doi.org/10.7554/eLife.38726>. Git code repository: [https://github.com/dunnlab/gene\\_inventory\\_2018](https://github.com/dunnlab/gene_inventory_2018).

Dunn, CW (2017) Ctenophore trees. *Nature Ecology and Evolution*. <http://dx.doi.org/10.1038/s41559-017-0359-4>

Hejnol, A, CW Dunn (2016) Animal Evolution: Are Phyla Real? *Current Biology* 26:R424-R426. <http://dx.doi.org/10.1016/j.cub.2016.03.058>.

Dunn, CW (2014) Keeping Mates Close and Competition Out in an Ocean Sponge, November 13, 2014. <http://www.nytimes.com/2014/11/13/science/keeping-mates-close-and-competition-out-in-an-ocean-sponge.html>

Dunn, CW (2014) Fiery Bodies Under the Waves. *New York Times*, August 14, 2014. <http://www.nytimes.com/2014/08/14/science/a-colonizing-fire-of-giant-plankton.html>

Dunn, CW (2014) A Marine Magician's Vanishing Act. *New York Times*, May 28, 2014. <http://www.nytimes.com/2014/05/28/science/a-marine-magicians-vanishing-act.html>

Dunn, CW (2014) A Cloak of Near Invisibility in an Underwater World. *New York Times*, April 24, 2014. <http://www.nytimes.com/2014/04/24/science/a-cloak-of-near-invisibility-in-an-underwater-world.html>

Dunn, CW (2014) Two Urchins, Similar but Not. *New York Times*, February 26, 2014. <http://www.nytimes.com/2014/02/26/science/two-urchins-similar-but-not.html>

Dunn, CW (2014) Poisonous Prey Turned Into Hunter's Defense. *New York Times*, February 12, 2014. <http://www.nytimes.com/2014/02/13/science/poisonous-prey-turned-into-hunters-defense.html>

Dunn, CW (2014) Moving, Without Feet to Do So. *New York Times*, January 23, 2014. <http://www.nytimes.com/2014/01/23/science/earth/moving-without-feet-to-do-so.html>

Dunn, CW (2013) The Color of Royalty, Bestowed by Science and Snails. *New York Times*, October 9, 2013. <http://www.nytimes.com/2013/10/09/science/the-color-of-royalty-bestowed-by-science-and-snails.html>

Dunn, CW (2013) As 'Normal' as Rabbits' Weights and Dragons' Wings. *New York Times*, September 23, 2013. <http://www.nytimes.com/2013/09/24/science/as-normal-as-rabbits-weights-and-dragons-wings.html>

Dunn, CW (2013) Sex in Spoonworms. *New York Times*, September 16, 2013. <http://www.nytimes.com/2013/09/17/science/creatures-strange-and-complex-in-colorful-detail.html> (the text I wrote accompanies the video).

Dunn, CW (2013) Evolution: Out of the ocean. *Current Biology* 23:R242-R243. <http://dx.doi.org/10.1016/j.cub.2013.01.067>.

Dunn, CW (2009) Siphonophores. *Current Biology* 19:R233-R234. <http://dx.doi.org/10.1016/j.cub.2009.02.009>.

Haddock, SHD and CW Dunn (2005) The complex world of siphonophores. *JMBA Global Marine Environment* 2005(2):24-25.

*f. Abstracts*

Dunn, CW (2013) The comparative biology of gene expression. Invited speaker for the symposium "Understanding First Order Phenotypes: Transcriptomics for Emerging Models" at the 2013 meeting for the Society of Integrative and Comparative Biology. Abstract S4-2.1. <http://www.sicb.org/meetings/2013/SICB%202013%20abstracts.pdf>.

Helm, RR and CW Dunn (2013) The evolution of direct development in Scyphozoa. A poster presented at the 2013 meeting for the Society of Integrative and Comparative Biology. Abstract P1.58. <http://www.sicb.org/meetings/2013/SICB%202013%20abstracts.pdf>.

*g. Invited lectures*

- 2019 Keynote speaker at the Simon Fraser University Day of Omics
- 2018 UC Davis Department of Evolution and Ecology, University of Guelph Department of Integrative Biology
- 2017 Harvard Department of Organismal and Evolutionary Biology graduate student invited speaker, University of Alabama Allele Series speaker, Missouri Botanical Garden Annual Fall Symposium invited speaker, University of Texas
- 2016 Stanford University Abbott Lecture, Ctenopalooza (University of Florida) Keynote Speaker, University of Maryland BISI-BEES seminar student invited speaker, Blavatnik Science Symposium (New York Academy of Sciences), Yale University Department of Ecology and Evolutionary Biology, Boston Evolutionary Genomics Supergroup meeting at Harvard
- 2015 Gordon Research Conference, Friday Harbor Marine Laboratory, Systematics and Biodiversity Symposium at the Norwegian Academy of Sciences and Letters, University of Rhode Island
- 2014 Universidad Austral de Chile (Valdivia, Chile), Bowdoin College (Brunswick, Maine), University of Missouri, Evolution of First Nervous Systems II meeting (Whitney Laboratory for Marine Bioscience, Florida), 13th Annual Genome Symposium (New York University), Kyushu University (Fukuoka, Japan)
- 2013 American Museum of Natural History, Global Invertebrate Genomics Alliance (GIGA) workshop at Nova University (Fort Lauderdale, FL), meeting of the Centre National de Ressources Biologiques Marines, EMBRC (Villefranche, France), Brown Department of Ecology and Evolutionary Biology Seminar, Brown Computer Science Department Industrial Partners Program Symposium, Tree of Life Symposium at the 2013 meeting of the Society of Systematic Biologists (title: "Building trees with transcriptomes and analyzing transcriptomes with trees"), Brown EPSCoR Bioinformatics Workshop
- 2012 World Economic Forum Annual Meeting (Davos, Switzerland), Smithsonian Tropical Research Institute (Panama), Sars International Centre for Marine Molecular Biology (Bergen, Norway), Clark University, University of Miami, Stony Brook University, Applied Math at Brown University, University of Florida
- 2011 National Science Board, (Washington, DC), National Science Foundation (Washington, DC), Marine Biological Laboratory (Woods Hole, MA), Boston University (Boston, MA), Marine Observatory at Villefranche-sur-Mer (France), Smithsonian National Museum of Natural History Department of Invertebrate Zoology (Washington, DC), Smithsonian National Museum of Natural History - Symposium "Next generation Sequencing: Transformative Technology for Biodiversity Science", keynote speaker at the Brown University Communicating Your Science Workshop, Rhode Island College

- 2010 Harvard University, University of Gothenburg (Sweden), Iowa State University, Brown University Wayland Collegium, Helicos BioSciences, National Academy of Science “Kavli Frontiers of Science” meeting, PopTech, University of Texas at Austin
- 2009 Yale University, University at Buffalo, LM University Munich, meeting of the German Research Foundation Priority Program “Deep Metazoan Phylogeny” at Humboldt University Berlin, University of Connecticut, Harvard University course OEB275r: “Phylogenetics in the Era of Genomics”, University of Rhode Island, Barcelona University, Brown MCB, invited speaker at the Society for Systematic Biologists symposium “Advances in Tree Reconstruction from Complex Data Matrices” in Moscow, Idaho
- 2008 University of Rochester, Friday Harbor Marine Laboratory, Woods Hole Oceanographic Institute, New England Biolabs
- 2007 Harvard University, Roger Williams University
- 2005 University of Hawaii

#### *i. Work in review*

This section includes publicly available preprints.

#### *j. Patents and inventions*

- 2016 US Patent number 9,330,295. “Spatial sequencing/gene expression camera”

## 5 Academic Honors

- 2016 Blavatnik Award for Young Scientists Finalist (<http://blavatnikawards.org/honorees/national-finalists/>)
- 2012 Teaching with Technology Award (Brown University)
- 2011 Alan T. Waterman Award (National Science Foundation)
- 2010 Named the Manning Assistant Professor of Ecology and Evolutionary Biology
- 2010 PopTech Science and Public Leadership Fellow
- 2010 Kavli Frontiers of Science Fellow (Sponsored by U.S. National Academy of Sciences)
- 2006 John Spangler Nicholas Prize (Yale University)
- 2000–2003 NSF Graduate Research Fellowship (National Science Foundation)
- 2000–2002 Sterling Fellowship (Yale University)

## 6 Teaching

### *Courses*

- 2018 Fall Invertebrate Zoology Lecture (EEB255, 4 students) and Lab (EEB256L, 3 students)
- 2018 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2017 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2016 Fall Invertebrate Zoology (Biol 0410, 43 students)
- 2016 Spring Phylogenetic Biology (Biol 1425, 13 students)



- 2016 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2015 Fall Topics in Ecology and Evolutionary Biology: interacting with data (Biol 2430, 19 students).  
[https://bitbucket.org/caseywdunn/data\\_interaction](https://bitbucket.org/caseywdunn/data_interaction)
- 2015 Fall Invertebrate Zoology (Biol 0410, 37 students)
- 2015 Summer Practical Computing for Biologists Workshop, Friday Harbor Labs, University of Washington
- 2015 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2014 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2013 Fall Invertebrate Zoology (Biol 0410, 40 students)
- 2013 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2013 Spring Phylogenetic Biology (Biol 1425, 11 students)
- 2012 Fall Invertebrate Zoology (Biol 0410, 37 students)
- 2012 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA); Guest lecture in: Bioinformatics: Biodiscovery By Computer at Summer@Brown (a high school summer course)
- 2012 Spring EEB IGERT Course in Reverse Ecology (3 students); Guest lectures in: Analysis of Development (Biol 1310), Topics in Science Communications: Science Journalism Practicum (Biol 0950B)
- 2011 Fall Invertebrate Zoology (Biol 0410, 34 students)
- 2011 Summer Workshop on Molecular Evolution at the Marine Biological Laboratory (Woods Hole, MA)
- 2011 Spring Practical Computing for Biologists NESCENT Academy at North Carolina State University (co-taught with Steve Haddock)
- 2010 Fall Invertebrate Zoology (Biol 0410, 33 students)
- 2010 Spring Origins of Multicellularity and the Evolution of Germ Line (Biol 1940Y-S01, 14 students), Directed Research/Independent Study (Biol 195, 1 student)
- 2009 Fall Invertebrate Zoology (Biol 0410, 18 students), Directed Research/Independent Study (Biol 195, 2 students)
- 2009 Spring Topics in Ecology and Evolutionary Biology (Biol 0244, 16 students, included field trip to Belize), Directed Research/Independent Study (Biol 195, 1 student)
- 2008 Fall Topics in Ecology and Evolutionary Biology (Biol 0243, 16 students), Directed Research/Independent Study (Biol 195, 2 student)
- 2008 Spring Directed Research/Independent Study (Biol 0195, 2 students)
- 2007 Fall Directed Research/Independent Study (Biol 0195, 1 students)

### *Advising—Postdoctoral researchers*

- 2018–present Yuanning Li
- 2016–present Zachary Lewis
- 2012–2016 Felipe Zapata
- 2010–2011 Stephen Smith
- 2009–2015 Stefan Siebert

*Advising—Graduate students (primary advisor)*

2015–present Alejandro Damian Serrano  
2015–2016 Cat Luria (co-advised with Jeremy Rich)  
2013–present August Guang (Applied Math, co-advised with Chip Lawrence)  
2013–present Catriona Munro  
2008–2015 Rebecca Helm

*Advising—Graduate student thesis committee member*

2016–present Aislinn Rowan (Brown University, MPP)  
2015–present Christy Rhine (Brown University, MCB)  
2015–present Morgan Moeglein (Brown University, EEB)  
2015–present Robert Lamb (Brown University, EEB)  
2015–2015 Kara Pellowe-Wagstaff (Brown University, EEB)  
2013–2014 Warren Francis (University of California at Santa Cruz)  
2012–2017 Tara Fresques (Brown University, MCB)  
2011–2012 Dereck Stefanik (Boston University)  
2011–2012 Anna Ritz (Brown University, CS)  
2011–2015 Ariel Camp (Brown University, EEB)  
2010–2012 Arturo Ruiz Villanueva (Institute of Ecology, Xalapa, Mexico)  
2010–2015 Cat Luria (Brown University, EEB)  
2009–2014 Adrian Reich (Brown University, MCB)  
2009–2014 Ben Ewen-Campen (Harvard University, OEB)  
2009–2011 John Cumbers (Brown University, MCB)  
2009–2015 Steven Swartz (Brown University, MCB)  
2009–2013 Henry Astley (Brown University, EEB)  
2008–2012 Matt Ogburn (Brown University, EEB)  
2007–2009 James Palardy (Brown University, EEB)

*Advising—First-year graduate advisory committees (Brown)*

2013–2014 Priya Nakka, Robert Lamb  
2012–2013 Lillian Hancock  
2011 Molecular and Cellular Biology (general)  
2011–2012 Terry Dial, Chris Graves  
2010–2011 Ariel Camp

*Advising—Rotating graduate students*

2019 Ava Ghezelayagh  
2010 Matthew Booker  
2009 Steven Swartz

*Advising—Undergraduate students*

2013–2013	Rachel Kaplan (UTRA)
2013–2013	Hannah Kerman (EPSCoR Surf)
2012–2015	Sam Church (EPSCoR)
2012–2014	Pathikrit Bhattacharyya (EPSCoR, Royce Fellow)
2012–2014	Jessica Eason (EPSCoR)
2012–2013	Served as a freshman advisor for joint Brown/ RISD students
2012	Robert Sandler (Royce Fellow)
2012	James Weis (Thesis reader)
2011–2012	Natividad Chen (Science Center Fellow, UTRA)
2011–2012	Norian Caporale-Berkowitz (Beckman Fellow)
2011	Cecelia Bahamon (Thesis reader)
2010	Stephanie Spielman (Thesis reader)
2007–2010	Orla O'Brien (Thesis advisor)
2007–2010	Caitlin Feehery (participant on several projects)
2007–2010	Sophia Tintori (Thesis advisor)

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