

DANIEL S. GRUNER

CURRICULUM VITAE

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Professional Appointments

University of Maryland at College Park, Department of Entomology

Associate Professor (2013-present)
Assistant Professor (2007-2013)

National Science Foundation, Directorate for Biological Sciences

Program Director, Division of Environmental Biology, Population and Community Ecology Cluster (2017-2020)
Program Director, Emerging Frontiers & DEB, Macrosystems Biology Program (2017-2020)

Michigan Technological University, School of Forest Resources & Environmental Science

Adjunct Associate Professor (2014-2017)

University of California at Davis, Bodega Marine Lab, CA

Postdoctoral Scholar (2004-2007)

Education

University of Hawai'i at Mānoa, Honolulu, HI (2004)

Ph.D., Zoology (Ecology, Evolution & Conservation Biology)

Organization for Tropical Studies, Costa Rica (1996)

Ecology Fundamentals Course

Hamilton College, Clinton, NY (1993)

A.B. in Biology w/ Honors, *magna cum laude*, Phi Beta Kappa

Publications (**undergraduate author; *graduate student author; †senior author; Web of Science 2021-05-28 no. citations = 7,165, h-index = 30, <https://publons.com/researcher/1636987/daniel-s-gruner/>)

67. Barney, SK, DR Leopold, KS Francisco, DJ Flaspohler, T Fukami, CP Giardina, DS Gruner, JL Knowlton, WC Pitt, and EE Wilson Rankin. (2021). Successful management of invasive rats across a fragmented landscape. ***Environmental Conservation*** *accepted*
66. Jing X, MP Case, ET Borer, NJ Gotelli, DS Gruner, K Kirkman, A MacDougall, R McCulley, SM Prober, EW Seabloom, C Stevens, AT Classen, and NJ Sanders (2021). Unraveling above-belowground β -diversity and turnover in multiple grassland functions relationships at continental scale. ***Ecosphere*** *accepted*
65. Muletz-Wolz CR, EE Wilson Rankin, S McGrath-Blaser, M Venkatraman*, JE Maldonado, DS Gruner†, and RC Fleischer† (2021). Identification of novel bacterial biomarkers to detect bird scavenging by invasive rats. ***Ecology and Evolution*** 11:1814-1828
64. de Andrade RB, K Abell, JJ Duan, PM Shrewsbury, and DS Gruner† (2021). Protective neighboring effect from ash trees treated with systemic insecticide against emerald ash borer. ***Pest Management Science*** 77: 474-481
63. Borer ET, WS Harpole, PB Adler, CA Arnillas, MN Bugalho, MW Cadotte, MC Caldeira, MS Campana, CR Dickman, TL Dickson, I Donohue, A Eskelinen, PA Fay, JL Firn, PB Graff, DS Gruner, RW Heckman, AM Koltz, KJ Komatsu, LS Lannes, AS MacDougall, JP Martina, JL Moore, B Mortensen, R Ochoa-Hueso, H Olde Venterink, SA Power, JN Price, AC Risch, M Sankaran, M Schütz, J Sitters, CJ Stevens, R Virtanen, PA Wilfahrt,

- and EW Seabloom (2020). Nutrients cause grassland biomass to outpace herbivory. **Nature Communications** 11:6036
62. Tielens EK* and DS Gruner† (2020). Intraspecific variation in host plant traits mediates taxonomic and functional composition of local insect herbivore communities. **Ecological Entomology** 45:1382-1395 *Data deposited: doi:10.5061/dryad.tdz08kpxb*
 61. Tielens EK*, M Neel, CP Giardina, DR Leopold, and DS Gruner† (2019). Multiscale analysis of canopy arthropod diversity in a patchy Hawai'i landscape. **Ecosphere** 10:e02653 *Data deposited: doi:10.5061/dryad.0vt4b8gvh*
 60. Thompson BM*, J Bodart**, and DS Gruner† (2019). Community resistance to an invasive forest insect-fungus mutualism. **Ecosphere** 10:e02609
 59. Cleland EE, EM Lind, NM DeCrappeo, E DeLorenze, RA Wilkins, PB Adler, JD Bakker, CS Brown, KF Davies, E Esch, J Firn, S Gressard, DS Gruner, N Hagenah, WS Harpole, Y Hautier, SE Hobbie, KS Hofmockel, K Kirkman, J Knops, CW Kopp, KJ La Pierre, A MacDougall, RL McCulley, BA Melbourne, JL Moore, SM Prober, C Riggs, AC Risch, M Schuetz, C Stevens, PD Wragg, J Wright, ET Borer, and EW Seabloom (2019). Belowground biomass response to nutrient enrichment depends on light limitation across globally distributed grasslands. **Ecosystems** 22:1466-1477
 58. Johnston CA* and DS Gruner† (2018). Marine fauna sort at fine resolution in an ecotone of shifting wetland foundation species. **Ecology** 99:2546-2557
 57. Wilson Rankin EE, JL Knowlton, DS Gruner, DJ Flaspohler, CP Giardina, DR Leopold, A Buckardt, WC Pitt, and T Fukami (2018). Vertical foraging shifts in Hawaiian forest birds in response to invasive rat removal. **PLoS ONE** 13:e0202869 *Data deposited: doi:10.6086/D1X675*
 56. Johnston CA*, EE Wilson Rankin, and DS Gruner† (2018). Foraging connections: patterns of prey use linked to invasive predator diel movement. **PLoS ONE** 13:e0201883
 55. Lafferty KD, JP McLaughlin, DS Gruner, TA Bogar, A Bui, JN Childress, M Espinoza, ES Forbes, CA Johnston*, M Klope, A Miller-ter Kuile, M Lee, KA Plummer, DA Weber, RT Young, and HS Young (2018). Local extinction of the Asian tiger mosquito (*Aedes albopictus*) following rat eradication on Palmyra Atoll. **Biology Letters** 14(2) *doi:10.1098/rsbl.2017.0743*
 54. Graham N*, DS Gruner, JY Lim*, and RG Gillespie (2017). Island ecology and evolution: challenges in the Anthropocene. **Environmental Conservation** 44:323-335
 53. Lind EM, KJ LaPierre, EW Seabloom, J Alberti, O Iribame, J Firn, DS Gruner, AD Kay, J Pascal, JP Wright, L Yang, and ET Borer (2017). Increased grassland arthropod production with grazing and eutrophication: an experimental test of mediation pathways. **Ecology** 98:3022-3033
 52. Gruner DS, MES Bracken, SA Berger, BK Eriksson, L Gamfeldt, B Matthiessen, S Moorthi, U Sommer, and H Hillebrand (2017). Effects of experimental warming on biodiversity depend on ecosystem type and local species composition. **Oikos** 126:8-17 • *Oikos Editor's Choice* *Data deposited: doi:10.5061/dryad.f5r3k*
 51. Knowlton JL, DJ Flaspohler, EH Paxton, T Fukami, CP Giardina, DS Gruner, and EE Wilson Rankin. (2017). Movements of four native Hawaiian birds across a naturally fragmented landscape. **Journal of Avian Biology** 48:921-931 *Data deposited: doi:10.5061/dryad.p9s05*
 50. Patiño J, RJ Whittaker, PAV Borges, JM Fernandez-Palacios, C Ah-Peng, M Araujo, S Avila, E de Boer, P Cardoso, J Cornuault, L de Nascimento, A Gil, A Gonzalez, DS Gruner, AG Santos, R Heleno, J Hortal, JC Illera, C Kaiser-Bunbury, T Matthews, A Papadopoulou, N Pettoirelli, JP Price, M Steinbauer, K Triantis, L Valente, P Vargas, P Weigelt, and BC Emerson (2017). A roadmap for island biology: 50 fundamental questions after 50 years of The Theory of Island Biogeography. **Journal of Biogeography** 44:963-983 • *Featured on cover*
 49. Harpole WS, LL Sullivan, EM Lind, J Firn, PB Adler, ET Borer, J Chase, PA Fay, Y Hautier, H Hillebrand, AS MacDougall, EW Seabloom, R Williams, JD Bakker, MW Cadotte, EJ Chaneton, C Chu, EE Cleland, C D'Antonio, KF Davies, DS Gruner, N Hagenah, K Kirkman, JMH Knops, KJ La Pierre, RL McCulley, JL Moore,

- JW Morgan, SM Prober, AC Risch, M Schuetz, CJ Stevens, and PD Wragg. (2016). Addition of multiple limiting resources reduces grassland diversity. **Nature** 537:93-96 • *ESI Highly Cited Paper*
48. Rominger AJ*, KR Goodman, JY Lim*, EE Armstrong*, LE Becking, GM Bennett, MS Brewer, DD Cotoras, CP Ewing, J Harte, ND Martinez, PM O'Grady, DM Percy, DK Price, GK Roderick, KL Shaw, FS Valdovinos, DS Gruner†, and RG Gillespie† (2016). Community assembly on isolated islands: macroecology meets evolution. **Global Ecology and Biogeography** 25:769-780
47. Lewandowska AM, A Biermann, ET Borer, MA Cebrián-Piqueras, SAJ Declerck, L De Meester, E Van Donk, L Gamfeldt, DS Gruner, N Hagenah, WS Harpole, KP Kirkman, CA Klausmeier, M Kleyer, JMH Knops, P Lemmens, EM Lind, E Litchman, J Mantilla-Contreras, K Martens, S Meier, V Minden, JL Moore, H Olde Venterink, EW Seabloom, U Sommer, M Striebel, A Trenkamp, J Trinogga, J Urabe, W Vyverman, DB Van de Waal, CE Widdicombe, and H Hillebrand (2016). The influence of balanced and imbalanced resource supply on biodiversity–functioning relationship across ecosystems. **Philosophical Transactions of the Royal Society of London B: Biological Sciences** 371:20150283 *Data deposited: doi:10.5061/dryad.h50d9*
46. Tredennick AT, PB Adler, JB Grace, WS Harpole, ET Borer, EW Seabloom, TM Anderson, JD Bakker, LA Biederman, CS Brown, YM Buckley, C Chu, SL Collins, MJ Crawley, PA Fay, J Firn, DS Gruner, N Hagenah, Y Hautier, A Hector, H Hillebrand, K Kirkman, JMH Knops, R Laungani, EM Lind, AS MacDougall, RL McCulley, CE Mitchell, JL Moore, JW Morgan, JL Orrock, PL Peri, SM Prober, AC Risch, M Schütz, KL Speziale, RJ Standish, LL Sullivan, GM Wardle, RJ Williams, and LH Yang (2016). Comment on “Worldwide evidence of a unimodal relationship between productivity and plant species richness”. **Science** 351(6272):457-a
45. Grace JB, TM Anderson, EW Seabloom, ET Borer, PB Adler, WS Harpole, Y Hautier, H Hillebrand, EM Lind, M Pärtel, JD Bakker, YM Buckley, MJ Crawley, EI Damschen, KF Davies, PA Fay, J Firn, DS Gruner, A Hector, JMH Knops, AS MacDougall, BA Melbourne, JW Morgan, JL Orrock, SM Prober, and MD Smith (2016). Integrative modeling reveals mechanisms linking productivity and plant species richness. **Nature** 529:390-393 • *ESI Highly Cited Paper*
44. Seabloom EW, ET Borer, Y Buckley, EE Cleland, K Davies, J Firn, WS Harpole, Y Hautier, A MacDougall, JL Orrock, SM Prober, P Adler, TM Anderson, JD Bakker, LA Biederman, D Blumenthal, CS Brown, LA Brudvig, C Chu, MJ Crawley, EI Damschen, CM D'Antonio, NM DeCrappeo, G Du, PA Fay, P Frater, DS Gruner, N Hagenah, A Hector, H Hillebrand, KS Hofmockel, C Humphries, VL Jin, A Kay, KP Kirkman, JA Klein, JMH Knops, KJ La Pierre, JG Lambrinos, ADB Leakey, Q Li, W Li, R McCulley, BA Melbourne, CE Mitchell, JL Moore, J Morgan, B Mortensen, DA Pyke, AC Risch, M Schuetz, M Smith, C Stevens, LL Sullivan, EM Wolkovich, PD Wragg, J Wright, and L Yang (2015). Plant species' origin predicts dominance and response to nutrient enrichment and herbivores in global grasslands. **Nature Communications** 6:8710
43. Fay PA, SM Prober, WS Harpole, JMH Knops, JD Bakker, ET Borer, EM Lind, AS MacDougall, EW Seabloom, P Wragg, PB Adler, DM Blumenthal, YM Buckley, C Chu, EE Cleland, SL Collins, KF Davies, G Du, X Feng, J Firn, DS Gruner, N Hagenah, Y Hautier, RW Heckman, VL Jin, KP Kirkman, J Klein, LM Ladwig, Q Li, RL McCulley, BA Melbourne, CE Mitchell, JL Moore, JW Morgan, AC Risch, M Schütz, CJ Stevens, DA Wedin, and LH Yang (2015). Beyond nitrogen: multiple nutrients limit grassland productivity. **Nature Plants** 1:15080 • *Nature Plants (News & Views) 1:15098*; • *ESI Highly Cited Paper*
42. Orrock JL, ET Borer, LA Brudvig, J Firn, AS MacDougall, BA Melbourne, LH Yang, DV Baker, A Bar-Massada, MJ Crawley, EI Damschen, KF Davies, DS Gruner, AD Kay, E Lind, RL McCulley, and EW Seabloom (2015). A continent-wide study reveals clear relationships between regional abiotic conditions and post-dispersal seed predation. **Journal of Biogeography** 42:662–670
41. Bracken MES, H Hillebrand, ET Borer, EW Seabloom, J Cebrian, EE Cleland, JJ Elser, DS Gruner, WS Harpole, JT Ngai, and JE Smith (2015). Signatures of nutrient limitation and co-limitation: responses of autotroph internal nutrient concentrations to nitrogen and phosphorus additions. **Oikos** 124:113-121 • *Oikos Editor's Choice*
40. Borer ET, E Seabloom, DS Gruner, WS Harpole, H Hillebrand, E Lind, PB Adler, J Alberti, TM Anderson, JD Bakker, L Biederman, D Blumenthal, CS Brown, LA Brudvig, M Cadotte, C Chu, EE Cleland, M Crawley, P

- Daleo, EI Damschen, K Davies, NM DeCrappeo, G Du, J Firn, Y Hautier, RW Heckman, A Hector, J HilleRisLambers, O Iribarne, JHM Knops, KJ La Pierre, W Li, A MacDougall, RL McCulley, B Melbourne, CE Mitchell, JL Moore, B Mortensen, LR O'Halloran, J Orrock, J Pascual, SM Prober, DA Pyke, AC Risch, M Schuetz, MD Smith, C Stevens, L Sullivan, RJ Williams, PD Wragg, JP Wright, and L Yang (2014). Herbivores and nutrients control grassland plant diversity via light limitation. *Nature* 508:517-520 • *ESI Highly Cited Paper*
39. Hautier Y, E Seabloom, ET Borer, P Adler, WS Harpole, H Hillebrand, E Lind, A MacDougall, C Stevens, JD Bakker, Y Buckley, C Chu, SL Collins, P Daleo, EI Damschen, K Davies, PA Fay, J Firn, DS Gruner, VL Jin, JA Klein, JMH Knops, KJ La Pierre, W Li, R McCulley, B Melbourne, JL Moore, LR O'Halloran, SM Prober, AC Risch, M Sankaran, M Schuetz, and A Hector (2014). Eutrophication weakens stabilizing effects of diversity in natural grasslands. *Nature* 508:521-525 • *ESI Highly Cited Paper*
38. Thompson BM*, J Bodart**, C McEwen*, and DS Gruner† (2014). Adaptations for symbiont-mediated external digestion in *Sirex noctilio* Fab. (Hymenoptera: Siricidae). *Annals of the Entomological Society of America* 107:453-460
37. Cavanaugh KC, JR Kellner, AJ Forde*, DS Gruner, JD Parker, W Rodriguez, and IC Feller (2014). Reply to Giri and Long: Freeze-mediated expansion of mangroves does not depend on whether expansion is emergence or reemergence. *Proceedings of the National Academy of Sciences* 111:E1449
36. Heffernan JB, PA Soranno, MJ Angilletta, LB Buckley, DS Gruner, TH Keitt, JR Kellner, JS Kominoski, AV Rocha, J Xiao, TK Harms, SJ Goring, LE Koenig, WH McDowell, H Powell, AD Richardson, CA Stow, R Vargas, and KC Weathers (2014). Macrosystems ecology: understanding ecological patterns and processes at continental scales. *Frontiers in Ecology and the Environment* 12:5-14 • *ESI Highly Cited Paper*
35. Cavanaugh KC, JR Kellner, AJ Forde*, DS Gruner, JD Parker, W Rodriguez, and IC Feller (2014). Poleward expansion of mangroves is a threshold response to decreased frequency of extreme cold events. *Proceedings of the National Academy of Sciences* 111:723-727 • *NY Times, NPR, EurekAlert, NBC, Weather Channel; ESI Highly Cited Paper*
34. Gruner DS and KA Mooney (2013). Green grass and high tides: grazing lawns in terrestrial and aquatic ecosystems. *Oikos* 122:313-316
33. Thompson BM*, RJ Grebenok, ST Behmer, and DS Gruner† (2013). Microbial symbionts shape the sterol profile of the xylem-feeding woodwasp, *Sirex noctilio*. *Journal of Chemical Ecology* 38:129-139
32. Seabloom EW, ET Borer, Y Buckley, EE Cleland, K Davies, J Firn, WS Harpole, Y Hautier, E Lind, A MacDougall, JL Orrock, SM Prober, P Adler, J Alberti, TM Anderson, JD Bakker, LA Biederman, D Blumenthal, CS Brown, LA Brudvig, M Caldeira, C Chu, MJ Crawley, P Daleo, E I Damschen, CM D'Antonio, NM DeCrappeo, CR Dickman, G Du, PA Fay, P Frater, DS Gruner, N Hagenah, A Hector, A Helm, H Hillebrand, KS Hofmockel, HC Humphries, O Iribarne, VL Jin, A Kay, KP Kirkman, JA Klein, JMH Knops, KJ La Pierre, LM Ladwig, JG Lambrinos, ADB Leakey, Q Li, W Li, R McCulley, B Melbourne, CE Mitchell, JL Moore, J Morgan, B Mortensen, LR O'Halloran, M Pärtel, J Pascual, DA Pyke, AC Risch, R Salguero-Gómez, M Sankaran, M Schuetz, A Simonsen, M Smith, C Stevens, L Sullivan, GM Wardle, EM Wolkovich, PD Wragg, J Wright, and L Yang (2013). Predicting invasion in grassland ecosystems: is exotic dominance the real embarrassment of richness? *Global Change Biology* 19:3677-3687
31. Borer ET, MES Bracken, EW Seabloom, JE Smith, J Cebrian, EE Cleland, JJ Elser, WF Fagan, DS Gruner, WS Harpole, H Hillebrand, AJ Kerkhoff, and JT Ngai (2013). Global biogeography of autotroph chemistry: is insolation a driving force? *Oikos* 122:1121-1130 • *Oikos Editor's Choice*
30. Lind E, ET Borer, E Seabloom, PB Adler, JD Bakker, D Blumenthal, MJ Crawley, K Davies, J Firn, DS Gruner, WS Harpole, Y Hautier, H Hillebrand, JMH Knops, BA Melbourne, B Mortensen, AC Risch, M Schuetz, C Stevens, and PD Wragg (2013). Life history constraints in grassland plant species: a growth-defense tradeoff is the norm. *Ecology Letters* 16:513-521
29. Herlihy MV, RG Van Driesche, MR Abney, J Brodeur, AB Bryant, RA Casagrande, DA Delaney, TE Elkner, SJ Fleischer, RL Groves, DS Gruner, JP Harmon, GE Heimpel, K Hamady, TP Kuhar, CM Maund, AM Shelton, AJ

- Seaman, M Skinner, R Weinzierl, KV Yeorgan, and Z Zendrei (2012). Distribution of *Cotesia rubecula* (Hymenoptera: Braconidae) and its displacement of *Cotesia glomerata* in eastern North America. **Florida Entomologist** 95:458-464
28. Grace JB, PB Adler, EW Seabloom, ET Borer, H Hillebrand, Y Hautier, A Hector, WS Harpole, LR O'Halloran, TM Anderson, JD Bakker, CS Brown, YM Buckley, SL Collins, KL Cottingham, MJ Crawley, EI Damschen, KF Davies, NM DeCrappeo, PA Fay, J Firn, DS Gruner, N Hagenah, VL Jin, KP Kirkman, JMH Knops, KJ La Pierre, JG Lambrinos, BA Melbourne, CE Mitchell, JL Moore, JW Morgan, JL Orrock, SM Prober, CJ Stevens, PD Wragg, and LH Yang (2012). Response to comments on "Productivity Is a poor predictor of plant species richness". **Science** 335:1441
 27. Adler PB, EW Seabloom, ET Borer, H Hillebrand, Y Hautier, A Hector, WS Harpole, LR O'Halloran, JB Grace, TM Anderson, JD Bakker, LA Biederman, CS Brown, YM Buckley, LB Calabrese, C-J Chu, EE Cleland, SL Collins, KL Cottingham, MJ Crawley, EI Damschen, KF Davies, NM DeCrappeo, PA Fay, J Firn, P Frater, EI Gasarch, DS Gruner, N Hagenah, J HilleRisLambers, H Humphries, VL Jin, AD Kay, KP Kirkman, JA Klein, JMH Knops, KJ La Pierre, JG Lambrinos, W Li, AS MacDougall, RL McCulley, BA Melbourne, CE Mitchell, JL Moore, JW Morgan, B Mortensen, JL Orrock, SM Prober, DA Pyke, AC Risch, M Schuetz, MD Smith, CJ Stevens, LL Sullivan, G Wang, PD Wragg, JP Wright, and LH Yang (2011). Productivity is a poor predictor of plant species richness. **Science** 333:1750-1753 • *Science, Perspectives* 333:1709-1710; *Nature News* doi:10.1038/news.2011.553 ; *Faculty of 1000 'Exceptional'; ESI Highly Cited Paper*
 26. Harpole WS, JT Ngai, EE Cleland, EW Seabloom, ET Borer, MES Bracken, JJ Elser, DS Gruner, H Hillebrand, JB Shurin, and JE Smith (2011). Nutrient co-limitation of plant communities. **Ecology Letters** 14:852-862 • *Faculty of 1000 'Must Read'; ESI Highly Cited Paper*
 25. Pearson REG*, ST Behmer, DS Gruner, and RF Denno (2011). Effects of diet quality on performance and nutrient regulation in an omnivorous katydid. **Ecological Entomology** 36:471-479
 24. Karban R, A Hodson, DS Gruner, EE Lewis, J Karban, M Joseph, T Mata, and DR Strong (2011). Lack of susceptibility of soil-inhabiting *Platyrepia virginalis* caterpillars, a native arctiid, to entomopathogenic nematodes in nature. **Entomologia Experimentalis et Applicata** 140:28-34
 23. Mooney KA, DS Gruner, NA Barber, SM Philpott, SA Van Bael, and R Greenberg (2010). Interactions among predators and the cascading effects of vertebrate insectivores on arthropod communities and plants. **Proceedings of the National Academy of Sciences** 107:7335-7340
 22. Gruner DS, A Kolekar**, JP McLaughlin**, and DR Strong (2009). Host resistance reverses the outcome of competition between microparasites. **Ecology** 90:1721-1728
 21. Hillebrand H, ET Borer, MES Bracken, BJ Cardinale, J Cebrian, EE Cleland, JJ Elser, DS Gruner, WS Harpole, JT Ngai, S Sandin, EW Seabloom, JB Shurin, JE Smith, and MD Smith (2009). Herbivore metabolism and stoichiometry each constrain herbivory at different organizational scales across ecosystems. **Ecology Letters** 12:516-527 • *Featured on cover*
 20. Gruner DS, JE Smith, EW Seabloom, SA Sandin, JT Ngai, H Hillebrand, WS Harpole, JJ Elser, EE Cleland, MES Bracken, ET Borer, and BM Bolker (2008). A cross-system synthesis of consumer and nutrient resource control on producer biomass. **Ecology Letters** 11:740-755 • *Featured on cover*
Data deposited: doi:10.6084/m9.figshare.879663
 19. Ram K, EL Preisser, DS Gruner, and DR Strong (2008). Metapopulation dynamics override local limits on long-term parasite persistence. **Ecology** 89:3290-3297
 18. Denno RF, DS Gruner, and I Kaplan (2008). Potential for entomopathogenic nematodes in biological control: a meta-analytical synthesis and insights from trophic cascade theory. **Journal of Nematology** 40:61-72
 17. Ram K, DS Gruner, JP McLaughlin**, EL Preisser, and DR Strong (2008). Dynamics of a subterranean trophic cascade in space and time. **Journal of Nematology** 40:85-92
 16. Gruner DS, NJ Gotelli, JP Price, and RH Cowie (2008). Does species diversity drive speciation? A reassessment with the Hawaiian biota. **Ecography** 31:279-285

15. Van Bael SA, SM Philpott, R Greenberg, P Bichier, NA Barber, KA Mooney, and DS Gruner[†] (2008). Birds as predators in tropical agroforestry systems. ***Ecology*** 89:928–934
14. Elser JJ, MES Bracken, EE Cleland, DS Gruner, WS Harpole, H Hillebrand, JT Ngai, EW Seabloom, JB Shurin, and JE Smith (2007). Global analysis of nitrogen and phosphorus limitation of primary producers in freshwater, marine, and terrestrial ecosystems. ***Ecology Letters*** 10:1135-1142 • *Nature (News & Views)* 449:1000-1001; *Faculty of 1000 'Exceptional'*; *Thomson-Reuters ScienceWatch 'Emerging Science Fronts' December 2008*; *ESI Highly Cited Paper*
13. Hillebrand H, DS Gruner, ET Borer, MES Bracken, EE Cleland, JJ Elser, WS Harpole, JT Ngai, EW Seabloom, JB Shurin, and JE Smith (2007). Consumer versus resource control of producer diversity depends on ecosystem type and producer community structure. ***Proceedings of the National Academy of Sciences*** 104:10904-10909 • *Faculty of 1000 'Recommended'*
12. Gruner DS (2007). Geological age, ecosystem development, and resource constraints on arthropod community structure in the Hawaiian Islands. ***Biological Journal of the Linnean Society*** 90:551-570
11. Handler AT, DS Gruner, WP Haines, M Lange, and KY Kaneshiro (2007). Arthropod surveys on Palmyra Atoll, Line Islands, with insights into the decline of the native tree *Pisonia grandis* (Nyctaginaceae). ***Pacific Science*** 61:485-502
10. Gruner DS, K Ram, and DR Strong (2007). Soil mediates the interaction of coexisting entomopathogenic nematodes with an insect host. ***Journal of Invertebrate Pathology*** 94:12-19
9. Gruner DS and AD Taylor (2006). Richness and species composition of arboreal arthropods affected by nutrients and predators: a press experiment. ***Oecologia*** 147:714-724
8. Shurin JB, DS Gruner, and H Hillebrand (2006). All wet or dried up? Real differences between aquatic and terrestrial food webs. ***Proceedings of the Royal Society B: Biological Sciences*** 273:1-9 • *Faculty of 1000 'Must Read'*
7. Gruner DS, AD Taylor, and RE Forkner (2005). The effects of foliar pubescence and nutrient enrichment on arthropod communities of *Metrosideros polymorpha* (Myrtaceae). ***Ecological Entomology*** 30:428-443
6. Gruner DS (2005). Biotic resistance to an invasive spider conferred by generalist insectivorous birds on Hawai'i Island. ***Biological Invasions*** 7:541-546
5. Gruner DS (2004). Attenuation of top-down and bottom-up forces in a complex terrestrial community. ***Ecology*** 85:3010-3022
4. Gruner DS (2004). Arthropods from 'ōhi'a lehua (Myrtaceae: *Metrosideros polymorpha*), with new records for the Hawaiian Islands. ***Bishop Museum Occasional Papers*** 78:33-52
3. Gruner DS (2003). Regressions of length and width to predict arthropod biomass in the Hawaiian Islands. ***Pacific Science*** 57:325-336
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1. Wetterer JK, DS Gruner, and JE Lopez (1998). Foraging and nesting ecology of the leaf-cutting ant, *Acromyrmex octospinosus*, in Costa Rican tropical dry forest. ***Florida Entomologist*** 81:61-67

Book Chapters, Book Reviews, and Technical Reports

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Gruner DS and AJ Forde* (2018). Food chain dynamics: the central theory of ecology once again? (Book review, Hanley C and K J La Pierre, eds. 2015 *Trophic Ecology: Bottom-up and Top-Down Interactions Across Aquatic and Terrestrial Systems*. Cambridge University Press, UK). ***Ecology*** 99:1699-1700

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Gruner DS (2008). *Vespula pensylvanica* (western yellowjacket). Original datasheet in **Invasive Species Compendium**. CAB International, Wallingford, UK. <http://www.cabi.org/isc>

Gruner DS and D. A. Polhemus (2003). Arthropod communities across a long chronosequence in the Hawaiian Islands. Pages 135-145 in Y. Basset, V. Novotný, S. E. Miller, and R. L. Kitching, eds. **Arthropods of Tropical Forests: Spatio-Temporal Dynamics and Resource Use in the Canopy**. Cambridge University Press, London.

Gruner DS and D. Foote (2000). Management strategies for western yellowjackets in Hawaii. **Report to the Hawaii Secretariat for Conservation Biology**. Honolulu, HI. 5pp.

Grants

Extramural Awards and Contracts

- 2021-22 USDA APHIS Plant Pest and Disease Management and Disaster Prevention Program. "Synergies of biological control and systemic insecticides to protect ash from emerald ash borer" (PI; \$173,937)
- 2020-23 USDA Agricultural Research Service, Cooperative Agreement. "Collection, recovery and rearing of emerald ash borer and associated parasitoids from infested ash in Maryland" (PI; \$69,328)
- 2020-21 USDA APHIS Plant Pest and Disease Management and Disaster Prevention Program. "Synergies of biological control and systemic insecticides to protect ash from emerald ash borer" (PI; \$176,104)
- 2019-20 USDA APHIS Plant Pest and Disease Management and Disaster Prevention Program. "Testing biological control-based IPM strategies to protect ash at early and peak stages of emerald ash borer infestation" (PI, with Paula Shrewsbury; \$156,633)
- 2018-19 USDA APHIS Plant Pest and Disease Management and Disaster Prevention Program. "Development of a biological control-based integrated pest management strategy to protect ash trees against post-invasion emerald ash borer populations in urban forests" (cooperator, with Paula Shrewsbury, Kristopher Abell; \$120,694)
- 2013-18 NSF Dimensions of Biodiversity. "A community level approach to understanding speciation in Hawaiian lineages" (collaborative PI, with Rosemary Gillespie, Don Price, Kerry Shaw; \$258,662 of \$1,999,910)
- 2012 NSF Research Experience for Undergraduates Supplement to "Interactive effects of predation and ecosystem size on arthropod food webs in Hawaiian forests fragmented by lava flows" (PI, \$8,000)
- 2011-16 NSF Emerging Frontiers, Macrosystems Biology. "Multi-scale drivers and effects of biotic change in the global mangrove-saltmarsh ecotone" (collaborative PI, with Ilka Feller, John Parker, Richard Osman; \$330,119 of \$1,364,286)
- 2011-15 NASA Research Opportunities in Space and Earth Sciences, Climate and Biological Response. "Sensitivity of coastal ecosystems to climate change" (subaward lead, with PI Ilka Feller, John Parker, Richard Osman; \$302,585 of \$1,232,213)
- 2010-15 NSF Division of Environmental Biology, Population and Community Ecology Cluster. "Interactive effects of predation and ecosystem size on arthropod food webs in Hawaiian forests fragmented by lava flows" (collaborative PI, with Tad Fukami, David Flaspohler, Christian Giardina; \$329,949 of \$1,213,843)
- 2010-12 USDA National Institute of Food and Agriculture, NE Regional Integrated Pest Management. "Sustainable management of the small hive beetle (*Aethina tumida*), an emerging pest of honey bees" (PI, with Cerruti Hooks, Galen Dively; \$56,107)

- 2010-12 Maryland Grain Producers Utilization Board, Research Grants Program. "Evaluation of soil pest control services and nutrient retention in no-till corn production" (PI, \$26,101)
- 2010-11 Maryland Soybean Board, Competitive Grants Program. "Persistence and viability of insect pathogenic nematodes for pest control in soy" (PI, \$10,000)
- 2009-10 USDA Forest Service. "*Sirex noctilio* and native pine borers: community dynamics and resource allocation with implications for pest management" (PI, \$50,000)
- 2009-10 Maryland Soybean Board, Competitive Grants Program. "Assessment of belowground pests of tilled and untilled soybean and potential for biocontrol" (PI, \$14,856)

Intramural Awards

- 2013-14 University of Maryland & Smithsonian Institution, Seed Grant Program. "Impacts of invasive predators on island endemic food web networks" (PI, with Robert Fleischer, Jesus Maldonado; \$22,480 of \$47,580)
- 2010-11 University of Maryland, Maryland Agricultural Experiment Station Competitive Grant Program. "Persistence and viability of insect pathogenic nematodes for conservation biological control in the Chesapeake watershed" (PI, \$26,250)
- 2008-09 University of Maryland, Maryland Agricultural Experiment Station Competitive Grant Program. "Towards sustainable soils: entomopathogenic nematodes and conservation biological control in Maryland" (PI, \$22,220)
- 2008-09 University of Maryland, General Research Board. Research Support Award. "Participation in the Nutrient Network: a globally-replicated, experimental test of the effects of consumers and resources on herbaceous-dominated ecosystems" (PI, \$3,430)

Grants Received as Postdoc or Graduate Student

- 2007-08 National Center for Ecological Analysis & Synthesis, Working Group. "Trophic comparisons across ecosystems: synthesis of scales and mechanisms" (co-PIs: Jonathan Shurin & Helmut Hillebrand; \$45,250)
- 2005-07 National Center for Ecological Analysis & Synthesis, Working Group. "Trophic structure comparisons across systems" (co-PIs: Jonathan Shurin & Helmut Hillebrand; \$61,800)
- 2001-02 Environmental Leadership Program, Activity Fund. "Mania for *Wasmannia*: statewide curriculum and proactive conservation in Hawai'i" (\$7,000)
- 2001-02 NSF, Division of Environmental Biology, Doctoral Dissertation Improvement Grant. "Regional/historical influences and top-down vs. bottom-up processes in arthropod community structure" (PI: Andrew Taylor) (\$9,440)
- 1998-99 University of Hawai'i EECB Graduate Program, Student Research Awards (\$1,932 total).
- 1998 David and Lucille Packard Foundation, Hawai'i Secretariat for Conservation Biology Grants Program. "Ecological impacts and control of *Vespula pensylvanica* in an 'ohi'a lehua arthropod community" (co-PI: Andrew Taylor) (\$6,532)
- 1998 Hawai'i Audubon Society, Research Grant in Hawaiian Natural History (\$500)
- 1997-98 Sigma Xi the Scientific Research Society, Grants-in-Aid of Research (\$1,960 total)

Teaching

Instructor, University of Maryland

BSCI 361 *Principles of Ecology* (Undergraduate, 4 credits, 2010-2013, 2015-2017, 2021)

- ENTM 612 *Insect Ecology* (Graduate, 3 credits, 2009, 2011, 2013, 2015, 2017, 2021)
 ENTM 798V *Introduction to R for Computation and Analysis in Ecology and Evolutionary Biology* (Graduate clinic/seminar, 1 credit, 2008-2014, 2020 with Maile Neel)
 ENTM 798Y *Frontiers in Biodiversity Measurement* (Graduate seminar, 1 credit, 2015)
 ENTM 798E *Classics and Neoclassics in Ecological Literature* (Graduate seminar, 1 credit, 2010 & 2012)

Guest Lectures, University of Maryland

- CBMG 688c *Programming for Biology* (Graduate, 2010-2013, 2015, 2016)
 BEES 608a *Seminar in Behavior, Ecology, Evolution and Systematics* (Graduate seminar, 2010)
 BSCI 337 *Insect Biology* (Undergraduate, 2008)

Formal Mentoring, University of Maryland

- BSCI 389 *Undergraduate research* (Undergraduate research, 2008-)
 CLFS 608 *Masters in Life Sciences* (MS mentor for 2 students, 2008 & 2010)

Instructor, University of California - Davis

- ECL 290 *Path Analysis in Ecology* (Graduate seminar, 1 credit, 2006; with Susan Williams)
 ECL 290 *Ecological Stoichiometry* (Graduate seminar, 1 credit, 2005; with Susan Williams)

Research Presentations

Invited Seminars

- 2019 Rocky Mountain Biological Lab
 2018 Universität Koblenz – Landau (Germany)
 2017 Entomological Society of Washington – National Museum of Natural History; Michigan Tech University; Michigan State University
 2016 NSF – Division of Environmental Biology; University of California Riverside
 2015 Smithsonian Conservation Biology Institute
 2014 Entomological Society of Washington – National Museum of Natural History
 2013 Virginia Commonwealth University; University of Central Florida
 2012 Purdue University; Washington State University; Rutgers University; Smithsonian Conservation Biology Institute
 2011 University of Wisconsin; Northeastern University
 2010 Hamilton College
 2009 University of Virginia Blandy Experimental Farm; Smithsonian Conservation Biology Institute; Georgetown University; Smithsonian Environmental Research Center; Mountain Lake Biological Station
 2008 Dartmouth College; Penn State University
 2007 The George Washington University; US Department of Agriculture; University of Louisville; Point Reyes National Seashore; University of Maryland; Tulane University; Loyola Marymount University
 2006 Tulane University; University of California Davis Bodega Marine Lab; University of California Davis; University of Toledo
 2005 University of California Davis
 2004 University of California Davis Bodega Marine Lab; Bishop Museum (HI); Kilauea Field Station (HI)

2001 University of Hawaii-Hilo; Hawai'i Volcanoes National Park Visitors Center; US Forest Service; State Department of Land & Natural Resources (HI)

Invited Symposia

- 2020 Gruner DS. "Invasion theory and biological control." XVI International Congress of Entomology, Helsinki, Finland. (*postponed COVID-19*)
- 2018 Gruner DS. "Approaches to multi-factor synthesis in ecology." StressNet International Workshop, University of Koblenz-Landau, Germany.
- 2016 Gruner DS. "Islands within islands: arthropod diversity within a volcanically fragmented landscape on Hawaii island." *Island Biology 2016: International Conference on Island Evolution, Ecology, and Conservation*, Azores, Portugal.
- 2015 Gruner DS. "Landscape-level experimental decoupling of competing vertebrate insectivores in Hawaiian forest islands." *52nd Annual Meeting of the Association for Tropical Biology and Conservation*, Honolulu, HI.
- 2014 Gruner DS and BM Thompson*. "Symbionts mediate the nutritional ecology of a global pest of pines, *Sirex noctilio* Fab. (Hymenoptera: Siricidae)." *Annual Meeting of the Entomological Society of America – Eastern Branch*, Williamsburg, VA.
- 2013 Gruner DS. "Landscape-level experimental decoupling of competing vertebrate insectivores in Hawaiian forest islands." *11th INTECOL International Congress of Ecology*, London, UK.
- Gillespie RG, DS Gruner, J Harte, ND Martinez, R Nielsen, PM O'Grady, D Percy, DK Price, D Rabosky, and KL Shaw. "Using an island chronosequence to explore evolutionary community assembly." *11th INTECOL International Congress of Ecology*, London, UK.
- Gruner DS. "Dirty little secret: belowground diversity of entomopathogenic nematodes and conservation biological control." *Annual Meeting of the Entomological Society of America – Eastern Branch*, Lancaster, PA.
- 2012 Gruner DS. "Nutrients and herbivores interact to control plant diversity and productivity in the world's grasslands." *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Gruner DS. "Arthropods of 'ōhi'a lehua: foundational elements of Hawaiian ecosystems." *Hawai'i Conservation Conference*, Honolulu, HI.
- 2011 Gruner DS. "Conservation significance of arthropod biodiversity in Hawaiian forests: view from the treetops." *Annual Meeting of the Entomological Society of America – Pacific Branch*, Waikaloa, HI.
- 2009 Gruner DS and D.R. Strong. "Ecological dynamics of entomopathogenic nematodes in a natural system." *Annual Meeting of the Society for Invertebrate Pathology*, Park City, UT.
- Gruner DS. "Top-down and bottom-up control of primary production across ecosystems." *International Symposium on Effects of Global Change on Carbon Sequestration and Food Web Structure across Ecosystems*, University of Oldenburg, Germany.
- 2008 Gruner DS. "Trophic cascades and their attenuation in terrestrial arthropod food webs." *Annual Meeting of the Entomological Society of America*, Reno, NV.
- Gruner DS and D.R. Strong. "Soil invertebrate - plant feedbacks and community change in a California coastal prairie." *XXIII International Congress of Entomology*, Durban, South Africa.
- 2007 Gruner DS, E. Preisser, K. Ram, J.P. McLaughlin and D.R. Strong. "Lepidopteran root-feeders as agents of change in a California coastal landscape." *Annual Meeting of the Ecological Society of America*, San Jose, CA.
- Gruner DS. "Overview of the evidence for terrestrial trophic cascades: do generalities exist?" *Annual Meeting of the Society for Conservation Biology*, Port Elizabeth, South Africa.

- 2004 Gruner DS. "Evolutionary ecology of Hawaiian canopy invertebrates." *Annual Meeting of the Ecological Society of America*, Portland, OR.

Organized Symposia and Workshops

- 2019 Gruner DS, K Dittmar, P Abbot. "Lunch & Learn: Funding opportunities at the National Science Foundation." *Annual Meeting of the Entomological Society of America*, St. Louis, MO. (Organized and moderated workshop)
- 2018 Gruner DS, M Elekonich, CR Nufio. "Lunch & Learn: Funding opportunities at the National Science Foundation." *Annual Meeting of the Entomological Society of America*, Vancouver, BC. (Organized and moderated workshop)
- 2017 Gruner DS. "Individual, population, and community responses of insects to climate change." *Annual Meeting of the Entomological Society of America, Eastern Branch*, Newport, RI. (Organized and moderated symposium)
- 2013 Feller IC, DS Gruner, JD Parker, R Osman, S Pennings and A Armitage. "Mangrove expansion into salt marsh habitats: causes and consequences." 22nd Biennial Conference of the Coastal and Estuarine Research Federation, San Diego, CA. (Co-organized and moderated topical session)
- 2007 Gruner DS, ET Borer and JB Shurin. "Trophic structure across systems: case studies and synthesis." *Annual Meeting of the Ecological Society of America*, San Jose, CA. (Organized and moderated organized oral session)
- 2001 Gruner DS, E Baumgartner, A Caldwell, W Kuntz, G Bodner, and B Bierwagen. "Workshop: involving K-12 educators and students with conservation research." *Annual Meeting of the Society for Conservation Biology*, Hilo, HI. (organized and facilitated workshop)

Contributed Presentations (**undergraduate student *graduate student author †senior author)

- 2020 Forde AJ* and DS Gruner†. "Intraspecific variation and associational effects determine impacts of resident herbivores on an invading plant." *Joint Eastern & Southeastern Branch Meeting of the Entomological Society of America*, Atlanta, GA. (postponed COVID-19)
- de Andrade RB, KJ Abell, JJ Duan, PM Shrewsbury, DS Gruner†. "Do treated ash trees confer a protective 'silhouette' from emerald ash borer for neighboring trees?" *30th USDA Interagency Research Forum on Invasive Species*, Annapolis, MD. (poster)
- 2019 Johnston CA* and DS Gruner†. "Settlement processes shape fauna community redistribution in response to patchy mangrove expansion." *25th Biennial Conference of the Coastal and Estuarine Research Federation*, Mobile, AL.
- Jayd K**, R MacKenzie, M Apwong and DS Gruner†. "Mangrove herbivory across a salinity gradient." *Annual Meeting of the Entomological Society of America*, St. Louis, MO.
- Tielens EK* and DS Gruner†. "Insect communities across a space for time chronosequence converge over time: analyzing patterns and drivers of β -diversity on Hawai'i." *Annual Meeting of the Ecological Society of America*, Louisville, KY.
- Gruner DS, EEW Rankin, JL Knowlton, DJ Flaspohler, CP Giardina, and T Fukami. "Does forest fragment size mediate the impacts of introduced rodent predators? Foraging behavior of Hawaiian birds and their arthropod resources." *56th Annual Meeting of the Association for Tropical Biology and Conservation*, Antananarivo, Madagascar.
- Abell KJ, RB de Andrade, JJ Duan, DS Gruner, PM Shrewsbury. "Do treated ash trees confer a protective 'silhouette' from emerald ash borer for neighboring trees?" *Joint meeting of IUFRO Working Parties: Population dynamics and integrated management of forest insects*, Quebec City, Canada.

- Jayd K**, DS Gruner, R MacKenzie, and M Apwong. "Patterns of mangrove seedling herbivory across a salinity gradient." *5th Mangrove and Macrobenthos Meeting*, Singapore.
- 2018 Tielens EK*, M Neel, and DS Gruner†. "Local connectivity, and not fragment area, drive species richness in a multiscale analysis of a fragmented Hawaiian landscape." *Annual Meeting of the Ecological Society of America*, New Orleans, LA.
- Durkee L** and DS Gruner†. "Does geese exclusion impact the diversity of the benthic macroinvertebrate community of a restored freshwater marsh?" *Annual Meeting of the Entomological Society of America – Eastern Branch*, Annapolis, MD. (poster)
- Tielens EK*, M Neel, and DS Gruner†. "Patch area and connectivity do not predict arthropod species richness in a naturally fragmented kīpuka landscape." *Annual Meeting of the Entomological Society of America – Eastern Branch*, Annapolis, MD. (poster)
- 2017 Tielens EK* and DS Gruner†. "Generalizing Hemiptera response to host plant polymorphism using insect traits." *Annual Meeting of the Entomological Society of America*, Denver, CO.
- Tielens EK* and DS Gruner†. "Comparing taxonomic and functional diversity in canopy insect communities across a space for time substitution: the role of productivity versus substrate age." *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Tielens EK* and DS Gruner†. "A trait based approach to understanding community structure in Hawaiian canopy arthropods." *Society for Integrative and Comparative Biology Annual Meeting*. New Orleans, LA.
- 2016 Thompson BM*, J Bodart** and DS Gruner†. X "Biotic resistance to an invasive forest insect-fungus mutualism." *XV International Congress of Entomology*, Orlando, FL. (presenter)
- Johnston CA* and DS Gruner†. "Community structure emerges across scales in a dynamic, patchy landscape." *Annual Meeting of the Ecological Society of America*, Ft. Lauderdale, FL.
- Tielens EK* and DS Gruner†. "Using functional traits to examine species turnover and assembly across a space for time chronosequence." *Island Biology 2016: International Conference on Island Evolution, Ecology, and Conservation*, Azores, Portugal.
- Rominger AJ, JY Lim, KR Goodman, J Harte, DS Gruner and RG Gillespie. "Isolated islands untangle universal patterns at the nexus of macroevolution and macroecology." *Island Biology 2016: International Conference on Island Evolution, Ecology, and Conservation*, Azores, Portugal.
- Roderick G, N Davies, S Charlat, CP Ewing, PT Oboyski, J Deck, AJ Rominger, L Cayetano, NR Graham, H Krehenwinkel, T Ramage, DS Gruner and RG Gillespie. "Arthropod diversity across gradients of elevation on Society and Hawaiian islands: environmental and anthropogenic effects." *Island Biology 2016: International Conference on Island Evolution, Ecology, and Conservation*, Azores, Portugal.
- Gruner DS, DR Leopold, T Fukami, DJ Flaspohler, and CP Giardina. "Centennial impacts of forest fragmentation on arthropod biodiversity." *53rd Annual Meeting of the Association for Tropical Biology and Conservation*, Montpellier, France. (poster)
- Forde AJ* and DS Gruner†. "Mangrove seedlings invading salt marshes are negatively impacted by marsh herbivores and alter the structure of marsh arthropod communities." *4th Mangrove and Macrobenthos Meeting*, St. Augustine, FL. (poster & lightning talk)
- Johnston, CA* and DS Gruner†. "Marine community structure emerges across scales in a patchy mangrove-marsh landscape." *4th Mangrove and Macrobenthos Meeting*, St. Augustine, FL. (poster)
- Nathan, M* and DS Gruner†. "Range-edge fecundity of a range-expanding species, the black mangrove (*Avicennia germinans*)." *4th Mangrove and Macrobenthos Meeting*, St. Augustine, FL. (poster)
- Johnston CA* and DS Gruner†. "Community structure emerges across scales in patchy mangrove-marsh landscape." *45th Benthic Ecology Meeting*, Portland, ME.

- 2015 Johnston CA* and DS Gruner†. "Overshooting the frontier: mismatch between expanding mangroves and their inhabitants." *23rd Biennial Conference of the Coastal and Estuarine Research Federation*, Portland, OR.
- Forde AJ* and DS Gruner†. "Differential responses of insect communities to habitat mixing in a dynamic marsh-mangrove ecotone." *Annual Meeting of the Entomological Society of America*, Minneapolis, MN.
- Johnston CA* and DS Gruner†. "Preference and survival shape habitat use along a fluctuating wetland landscape." *Annual Meeting of the Ecological Society of America*, Baltimore, MD.
- Forde AJ* and DS Gruner†. "Differential responses of arthropod communities in a dynamic marsh-mangrove ecotone." *Annual Meeting of the Ecological Society of America*, Baltimore, MD.
- Yu SW**, AJ Forde*, and DS Gruner†. "Nutrient inputs and herbivores interactively influence black mangrove tolerance to damage." *Annual Meeting of the Ecological Society of America*, Baltimore, MD.
- Gruner DS, IC Feller, R Osman, JD Parker, W Rodriguez, E Dangremond, S Cook-Patton, K Cavanaugh, J Kellner, AJ Forde*, CA Johnston*, and M Nathan*. "Drivers and consequences of mangrove expansion into temperate salt marsh." *2015 NASA Carbon Cycle and Ecosystems Joint Science Workshop*, College Park, MD.
- 2014 Johnston CA* and DS Gruner†. "A trajectory of environmental filtering: consequences of initial assembly and subsequent interactions for community structure in a dynamic ecosystem." *Annual Meeting of the Ecological Society of America*, Sacramento, CA.
- Nathan M* and DS Gruner†. "Spatial mismatch with both herbivores and mutualists during range expansion of *Avicennia germinans*, the black mangrove." *Annual Meeting of the Ecological Society of America*, Sacramento, CA. (poster)
- Forde AJ* and DS Gruner†. "Intraspecific variation in herbivory, density-dependence, and growth at the edge of a mangrove's expanding range." *Annual Meeting of the Ecological Society of America*, Sacramento, CA.
- Gruner DS, T Fukami, DJ Flaspohler, CP Giardina, JL Knowlton, DR Leopold*, and EE Wilson Rankin. "Stronger impacts of invasive rats in Hawaiian canopy food webs in small forest fragments." *Island Biology 2014*, Honolulu, HI.
- Forde AJ* and DS Gruner†. "Fine-scale spatial variation in the impacts of mangrove top predators." *Annual Meeting of the Mid-Atlantic Chapter of the Ecological Society of America*, College Park, MD.
- Nathan M* and DS Gruner†. "Escaping enemies – but also mutualists – during range expansion of *Avicennia germinans*." *Annual Meeting of the Mid-Atlantic Chapter of the Ecological Society of America*, College Park, MD.
- Johnston C.A.* and DS Gruner†. "Habitat association trumps geographical context for communities assembling in structurally and spatially shifting wetland habitats." *43rd Annual Benthic Ecology Meeting*, Jacksonville, FL.
- Gruner DS, T Fukami, DJ Flaspohler, CP Giardina, JL Knowlton, DR Leopold*, and EE Wilson. "Landscape-level effects of an introduced predator depend on forest size." *Gordon Conference on Predator-Prey Interactions*, Ventura, CA. (poster)
- Forde AJ* and DS Gruner†. "Biodiversity and species interactions are shaped by top predators and shelter availability in mangrove canopies." *Gordon Conference on Predator-Prey Interactions*, Ventura, CA. (poster)
- 2013 Thompson BM*, G Suen, J Bodart**, B Liu, C Currie, M Pop, and DS Gruner†. "Symbiosis and wood-feeding in the European woodwasp, *Sirex noctilio*." *Annual Meeting of the Entomological Society of America*, Austin, TX.

- Johnston CA* and DS Gruner†. "Using multiple spatial scales to understand community responses to spatially and structurally shifting ecological landscapes." *22nd Biennial Conference of the Coastal and Estuarine Research Federation*, San Diego, CA.
- Nathan M* and DS Gruner†. "Pollinator activity as a biotic control of range expansion in the black mangrove, *Avicennia germinans*." *22nd Biennial Conference of the Coastal and Estuarine Research Federation*, San Diego, CA. (poster)
- Cavanaugh KC, JR Kellner, IC Feller, AJ Forde*, DS Gruner, and J.D. Parker. "Poleward expansion of mangroves along the east coast of Florida corresponds to a decrease in the frequency of extreme cold events." *22nd Biennial Conference of the Coastal and Estuarine Research Federation*, San Diego, CA.
- Fukami T, EE Wilson, JL Knowlton, DS Gruner, DR Leopold*, DJ Flaspohler, and CP Giardina. "Biodiversity in a fragmented landscape: linking forest productivity, introduced predators, and native arthropod and bird communities in lava-fragmented ecosystems in Hawaii." *Botany 2013*, New Orleans, LA.
- Wright JP, PD Wragg, ET Borer, DS Gruner, H Hillebrand, EM Lind, EW Seabloom, and LH Yang. "Predicting patterns of species turnover in response to nutrient addition and herbivory." *Annual Meeting of the Ecological Society of America*, Minneapolis, MN.
- Forde AJ*, IC Feller, JD Parker, DS Gruner†. "Biodiversity in mangrove forests is shaped by the interactive impacts of predators and structural habitat features." *Annual Meeting of the Ecological Society of America*, Minneapolis, MN.
- Johnston CA* and DS Gruner†. "Using multiple spatial scales to understand community responses to spatially and structurally shifting ecological landscapes." *Annual Meeting of the Ecological Society of America*, Minneapolis, MN.
- Gillespie RG, D Cotoras, CP Ewing, DS Gruner, KR Goodman, J Harte, KN Magnacca, ND Martinez, R Nielsen, P O'Grady, D Percy, DK Price, D Rabosky, GK Roderick, AJ Rominger and KL Shaw. "Assembly of arthropod communities in Hawaii: can we predict future response given a modified dynamic?" *Hawai'i Conservation Conference*, Honolulu, HI. (poster)
- 2012 Wilson EE and DS Gruner†. "Effects of omnivorous invaders on arboreal arthropod communities in naturally fragmented Hawaiian forests." *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Rominger AJ*, DS Gruner, J Harte, and RG Gillespie. "Making and breaking a new ecological theory: does maximum information entropy predict community structure in evolving ecosystems?" *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Johnston CA* and DS Gruner†. "Foraging patterns of an invasive predator, *Eleutherodactylus coqui*, indicate potential direct and indirect effects on invertebrate prey food webs." *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Thompson BM* and DS Gruner†. "The role of diversity in *Sirex noctilio* invasion of North American pine ecosystems." *Annual Meeting of the Ecological Society of America*, Portland, OR.
- Forde AJ*, DS Gruner, IC Feller, and JD Parker. "Predation and productivity gradients affect arthropods, herbivory and plant architecture in mangrove forests." *9th INTECOL International Wetlands Conference*, Orlando, FL.
- Thompson BM* and DS Gruner†. "A diverse native insect community and its interaction with *Sirex noctilio*." *23rd USDA Interagency Research Forum on Invasive Species*, Annapolis, MD.
- 2011 Forde AJ*, DS Gruner, IC Feller, and JD Parker. "Top predators and productivity gradients affect herbivory and plant architecture in mangrove forests." *21st Biennial Conference of the Coastal and Estuarine Research Federation*, Daytona Beach, FL. (poster)
- Forde AJ*, IC Feller, JD Parker, and DS Gruner†. "Cascading effects of predatory birds on arthropods and plants of Caribbean mangrove islands." *Annual Meeting of the Ecological Society of America*, Austin, TX.

- Rominger AJ*, DS Gruner, and RG Gillespie. "Making and breaking a new ecological theory: does maximum information entropy predict community structure in newly evolving ecosystems?" *Evolution of Life on Pacific Islands and Reefs: Past, Present, and Future, Honolulu, HI.*
- Thompson BM* and DS Gruner†. "Sirex noctilio and native pine borers: community dynamics and resource allocation with implications for pest management." *Sirex noctilio Research Updates Meeting, USDA Animal Plant and Health Inspection Service and USDA Forest Service, Riverdale, MD.*
- Thompson BM* and DS Gruner†. "Feeding in a full house: can adaptive foraging and diversity tell us about how invasive *Sirex noctilio* populations will behave in North America?" *Annual Meeting of the Entomological Society of America - Eastern Branch, Harrisburg, PA.*
- Forde AJ*, IC Feller, JD Parker, and DS Gruner†. "Effects of insectivorous birds on arthropod communities, primary productivity, and plant architecture in mangrove forests." *Annual Meeting of the Entomological Society of America - Eastern Branch, Harrisburg, PA.*
- 2010 Gruner DS and RR Lewis. "Diversity of arthropods and entomopathogenic nematodes in conventional and conservation till in Maryland cropping systems." *Annual Meeting of the Entomological Society of America, San Diego, CA.*
- Thompson BM*, B Liu, RJ Grebenok, SM Adams, G Suen, E Haapala**, C Currie, and DS Gruner†. "Utilization of a nutritionally refractive food source by the European woodwasp, *Sirex noctilio*, and its microbial symbiont community." *Annual Meeting of the Entomological Society of America, San Diego, CA.*
- Gruner DS, JP McLaughlin and DR Strong. "Spatiotemporal variation in soil arthropod communities, responses to aboveground plant community composition, and the prevalence of entomopathogenic nematodes." *Annual Meeting of the Ecological Society of America, Pittsburgh, PA.*
- Leopold D, T Fukami, C Giardina, DS Gruner, and D Flaspohler. "Forest kīpuka on Mauna Loa: a model system for studying interactive effects of habitat size and introduced rodents on arthropod food webs." *Hawaii Conservation Conference, Honolulu, HI. (poster)*
- 2009 Mooney KA, DS Gruner, NA Barber*, SM Philpott, SA Van Bael, and R Greenberg. "Cascading effects of birds, bats and lizards: a meta-analysis of terrestrial insectivore exclusion studies." *Annual Meeting of the Ecological Society of America, Albuquerque, NM.*
- 2008 Ram K.*, EL Preisser, DS Gruner, and DR Strong. "Metapopulation dynamics override local abiotic limits on long-term persistence of a subterranean microparasite." *Annual Meeting of the Ecological Society of America, Milwaukee, WI.*
- 2007 Philpott SM, SA Van Bael, R Greenberg, P Bichier, N Barber*, KA Mooney, and DS Gruner†. "Birds as predators in tropical agroforestry systems." *Annual Meeting of the Ecological Society of America, San Jose, CA.*
- Byrnes JE*, CM Bowles*, MES Bracken, MC Ferner, DS Gruner, CG Hays, KJ Nickols*, K Ram*, CJB Sorte*, SL Williams, D Kushner and JB Grace. "Combining long-term surveys with structural equation modeling to examine kelp forest food webs." *Annual Meeting of the Ecological Society of America, San Jose, CA.*
- McLaughlin JP, DS Gruner, K Ram* and DR Strong. "The role of soil moisture and lipid reserves in the movement and infectivity of an entomopathogenic nematode." *Annual meeting of the Ecological Society of America, San Jose, CA. (poster)*
- 2006 Gruner DS, B Dennis, C Dugaw, A Hastings, K Ram*, and D Strong. "Microparasite colonization, persistence, and extinction: spatial and temporal dynamics of an underground trophic cascade." *Annual Meeting of the Ecological Society of America, Memphis, TN. (poster)*
- 2005 Gruner DS and DR Strong. "Movement, colonization, and persistence of the entomopathogenic nematode *Heterorhabditis marelatus* in a California coastal grassland." *Annual Meeting of the Society for Invertebrate Pathology, Anchorage, AK.*

- 2003 Gruner DS. "Influences of resources and bird predation on species richness and diversity of Hawaiian arboreal arthropods." *Annual Meeting of the Ecological Society of America*, Savannah, GA.
Gruner DS. "The arthropods of 'ōhi'a lehua: foundational resources in Hawaiian ecosystems." *Hawai'i Conservation Conference*, Honolulu, HI.
- 2002 Gruner DS. "Canopy arthropods in Hawai'i: pattern and process." *International Forest Canopy Conference*, Cairns, Australia.
Gruner DS. "Mania for *Wasmannia*: involving K-12 educators and students in conservation research." *Hawai'i Conservation Conference*, Honolulu, HI.
Gruner DS. "Top-down and bottom-up influences in a Hawaiian arboreal arthropod food web." *Annual Meeting of the Ecological Society of America*, Tucson, AZ.
Gruner DS. "Mania for *Wasmannia*: fire ants as a fire drill for K-12 alien species awareness." *Annual International Conference of the National Association for Research in Science Teaching*, New Orleans, LA.
- 2001 Gruner DS. "Top-down and bottom-up processes in *Metrosideros* arthropod communities." *Big Island Science Conference*, University of Hawai'i at Hilo.
Gruner DS. "Mania for *Wasmannia*: fire ants as a fire drill for K-12 alien species awareness." *Big Island Science Conference*, University of Hawai'i at Hilo.
Gruner DS. "Bottom-up influences in a Hawaiian arthropod community." *Annual Meeting of the Ecological Society of America*, Madison, WI.
- 2000 Gruner DS. "Arboreal arthropod community structure across four million years of ecosystem development in Hawai'i." *XXI International Congress of Entomology*, Iguassu Falls, Brazil. (*poster*)
- 1999 Gruner DS. "Patterns of abundance and diversity of arthropods on the dominant tree *Metrosideros polymorpha* (Myrtaceae) in the Hawaiian Islands." *Annual Meeting of the Ecological Society of America*, Spokane, WA.
- 1998 Gruner DS. "Herbivory and arthropod abundance across a long age gradient in Hawai'i." *International Forest Canopy Conference*, Sarasota, FL

Awards and Fellowships

- 2018 *Highly Cited Researcher*, Clarivate Analytics
- 2003 *RCUH Excellence in Student Research* (honorable mention), University of Hawai'i (\$500)
- 2001-03 *Environmental Leadership Program Fellowship* (\$2,000)
- 2002 *ARCS Foundation Scholarship* in Conservation Ecology (\$5,000)
- 2000-02 *National Science Foundation GK-12 Teaching Fellowship*, EECB Graduate Program, University of Hawai'i; developed *AntWatch Hawai'i*: collaborated with >500 intermediate and high school students to research the biology and distribution of introduced ants <<http://www.hawaii.edu/ant>> (\$60,000)
- 2000 *ARCS Foundation Scholarship* in Zoology (\$5,000)
- 1999 *Watson T. Yoshimoto Prize for Animal Wildlife Conservation*, EECB Graduate Program, University of Hawai'i (\$2,500)
- 1998-02 *EECB Graduate Program Travel Awards*, University of Hawai'i (\$9,000 total)
- 1997-99 *Environmental Protection Agency STAR Graduate Fellowship* (\$75,000)
- 1995-96 *National Science Foundation IGERT Graduate Fellowship*, EECB Graduate Program, University of Hawai'i (\$20,000)
- 1994 *Elihu Root Fellowship*, Hamilton College (\$1,000)
- 1993 *Holbrook Prize in Biology*, Hamilton College (\$100)

- 1993 *Sigma Xi Certificate of Recognition for Excellence in Undergraduate Research*, Hamilton College
 1993 *Adam Gordon Campus Service Award*, Hamilton College
 1992 *DS Tarbell Prize in Organic Chemistry*, Hamilton College

Service to Profession

Organizations

- Science Advisory Board, *United States Geological Survey, John Wesley Powell Synthesis Center* (2020)
 Rotating Program Officer (IPA), *National Science Foundation, Division of Environmental Biology* (2017-2020)
- Program Director, Population & Community Ecology Cluster (2017-2020)
 - Program Director, MacroSystems Biology & NEON-Enabled Science (2017-2020)
 - Working Group Member, Graduate Research Fellowship Program (2018-2019)
 - Working Group Member, NEON Utilization Working Group (2018-2020)
 - Working Group Member, Accelerating Research through International Network-to-Network Collaborations (AccelNet, 2019-2020)
 - Working Group Member, Opportunities for Promoting Understanding through Synthesis (OPUS, 2019-2020)
- Program Chair, *Entomological Society of America Eastern Branch* (2017 & 2018 Annual Meetings)
 Delegate to the Assembly of Delegates, *Organization for Tropical Studies* (2008-2017)
 Steering Committee, *Nutrient Network Global Research Cooperative* <<http://nutnet.org>> (2007-)
 Membership: Bodega Marine Science Association; Ecological Society of America; Entomological Society of America; Entomological Society of Washington; Phi Beta Kappa (elected); Sigma Xi, the Scientific Research Society (elected)

Editorial (*Publons* verified editor records, 110+)

- Ecology and Ecological Monographs* (Board of Subject Editors 2014-2017, 2021-2023)
Oikos (Editorial Board, 2009-2012)
Ecology and Ecological Monographs (ad hoc subject editor 2005-2013)

Journal peer review (*Publons* verified reviews, 115+ for 52 journals since 2004; †multiple reviews)

Acta Oecologica, American Naturalist†, *Annals of the Entomological Society of America, Applied Soil Ecology, Austral Ecology, Behavioral Ecology, Biological Conservation*†, *Biological Control*†, *Biological Invasions*†, *Biological Journal of the Linnean Society, Biotropica*†, *BMC Ecology, Canadian Journal of Fisheries & Aquatic Sciences, Climatic Change, Conservation Biology, Diversity & Distributions*†, *Ecography*†, *Ecological Applications*†, *Ecological Entomology, Ecological Monographs*†, *Ecology*†, *Ecology and Evolution, Ecology Letters*†, *Ecosphere*†, *Ecosystems*†, *Environmental Entomology, Evolutionary Biology, Forests, Frontiers in Ecology & Environment, Functional Ecology*†, *Global Change Biology, Insects, Journal of Animal Ecology, Journal of Applied Ecology*†, *Journal of Biogeography*†, *Journal of Ecology, Journal of Nematology, Oecologia*†, *Oikos*†, *Pacific Science*†, *Pedobiologia, PeerJ, Plant & Soil, PLoS ONE*†, *Proceedings of the National Academy of Sciences USA*†, *Proceedings of the Royal Society B: Biological Sciences*†, *Remote Sensing*†, *Restoration Ecology, Science, Scientific Reports, Soil Biology & Biochemistry, Wetlands*

Book or Book Chapter Peer Review

- Barbosa et al. 2012. *Insect Outbreaks Revisited* (Wiley)
 Cain et al. 2011. *Ecology* (Sinauer Associates)

Price et al. 2011. *Insect Ecology* (Cambridge University Press)

Ohgushi et al. 2011. *Ecology and Evolution of Trait-Mediated Indirect Interactions* (Cambridge University Press)

Basset et al. 2003. *Arthropods of Tropical Forests* (Cambridge University Press)

Grant Review Panels (†multiple panels)

National Science Foundation, Division of Biological Infrastructure

National Science Foundation, Population and Community Ecology†

National Science Foundation, Population and Community Ecology (Doctoral Dissertation Improvement Grants)†

National Science Foundation, Graduate Research Fellowship Program†

University of Maryland—Smithsonian Institution Seed Grant Program

University of Maryland, Maryland Agricultural Experiment Station Competitive Grants

US Agency for International Development, Middle East Regional Coop. Program, Washington DC†

University of California – Davis, Mildred E. Mathias Graduate Student Research Grants†

Hawai'i Conservation Alliance, Applied Conservation Research Grants Program

Grant reviews, *ad hoc* (†multiple reviews)

Czech Science Foundation

National Science Foundation: Macrosystems Biology†, Dimensions of Biodiversity, Long-Term Research in Environmental Biology, Population and Community Ecology†, Evolutionary Processes†, Plant Genome Research

Encyclopedia of Life, Rubenstein Fellowships

British Council, Britain-Israel Research and Academic Exchange Partnership

Promotion Review & Evaluation

Washington State University-Vancouver, School of Biological Sciences (2020)

Virginia Commonwealth University, Department of Biology (2016)

University of Hawaii, College of Tropical Agriculture and Human Resources (2010)

Smithsonian National Zoological Park (2009, 2018)

Service to Institution

University of Maryland

Diversity, Equity, and Inclusion Working Group, Department of Entomology (lead, 2020-)

Wylie/Thornton Fellowship Selection Committee (2017)

Faculty Research Council, College of Agriculture and Natural Resources (2016-2017)

Graduate Affairs Committee, Entomology Graduate Program (2007-10, 2012-14, 2016-17)

UMD Representative, NSF Graduate Research Fellowship Program (2008-2017)

Faculty Evaluation Committee, Department of Entomology (2014, 2015 [chair])

Search Committee for Sustainable Agroecosystems Entomologist, Department of Entomology (chair, 2013-14)

Graduate Admissions Committee, Behavior Evolution Ecology and Systematics Concentration, Biological Sciences Graduate Program (chair, 2012-13)

CMNS Hockmeyer Award Committee, Biological Sciences Graduate Program (2012)
 Information-Theoretic Approaches to Empirical Science: organized and convened a 2-day statistical workshop (approximately 25 students and faculty) with Dr. David Anderson (2011)
 Search Committee for Director of External and Administrative Affairs, National SESynC (Socio-Environmental Synthesis Center) (2011)
 Search Committee for Quantitative Ecologist, Department of Biology (2011)
 Seminar Coordinator, BEES Graduate Program (2008-2010)
 Colloquium Coordinator, Department of Entomology (2010, 2013)
 Web Site Committee, Department of Entomology (2008-09; 2012-3)

Advising & Mentoring, Faculty

Junior Faculty Mentor, Dr. Anahi Maria Espindola, Assistant Professor of Biology (2019-)
 Junior Faculty Mentor, Dr. Nathan Kraft, Assistant Professor of Biology (2013-2015)

Advising & Mentoring, Postdoctoral

Dr. Rafael Barreto de Andrade (PhD South Dakota State University; 2019-)
 Dr. Erin E. Wilson Rankin (PhD UC San Diego; 2011-2013) – Associate Professor of Entomology, University of California Riverside

Advising & Mentoring, Graduate Committee Chair (8 completed, 1 current)

- ✓ Madhvi Venkatraman (Biological Sciences, PhD 2021) (co-advised with Dr. Rob Fleischer, Smithsonian) – NSF Postdoctoral Fellow, University of South Florida
- ✓ Mayda Nathan (*Entomology*, PhD 2020)
- ✓ Alexander Forde (*Behavior, Evolution, Ecology & Systematics*, MS 2020)
- ✓ Elske Tielens (*Biological Sciences*, PhD 2019) – Postdoctoral Scholar, University of Oklahoma
- ✓ Cora Ann Johnston (*Biological Sciences*, PhD 2016) – Site Director, Virginia Coast Reserve Long-Term Ecological Research Center
- ✓ Brian Thompson (*Entomology*, PhD 2013)
- ✓ Danny Lewis (*Entomology*, PhD 2009)
- ✓ Rachel Goeriz (*Entomology*, PhD 2009) – Managing Scientist, Exponent Engineering & Scientific Consulting
- Ángela Maria Soto-Sáenz (*Entomology*, MS 2021-)

Advising & Mentoring, Graduate Committees (31 completed, 8 current)

Current: Elizabeth Zhu Dabek (*Entomology*, MS), Chace Holzheuser (*Biological Sciences*, PhD), Zachary Lamas (*Entomology*, PhD), Graham Stewart (*Entomology*, PhD), Madeline Potter (*Entomology*, MS), Alireza Shokoohi (*Entomology*, MS), Damani Eubanks (*Biological Sciences*, PhD)

Completed: Augusta Maccracken (*Entomology*, PhD 2020), Aditi Dubey (*Entomology*, PhD 2020), Rebecca Eckert (*Entomology*, PhD 2020), Edward Hurme (*Biological Sciences*, PhD 2020), Morgan Thompson (*Entomology*, MS 2019), Paul Marban (*Marine, Estuarine, and Environmental Sciences*, MS 2018), Jason Berg (*Biological Sciences*, PhD 2018), Colin Phifer (Michigan Tech University, PhD 2017), Maria Natalia Umaña (*Biological Sciences*, PhD 2017), Demetra Skaltas (*Plant Sciences and Landscape Architecture*, PhD 2017), Grace DiRenzo (*Biological Sciences*, PhD 2016), Eleanor Spadafora (*Biological Sciences*, PhD 2016), Patrice Nielson (*Environmental Science and Technology*, PhD 2016), Ana Jesovnik (*Entomology*, PhD 2016), Mariana Abarca (George Washington University: *Systematics, Evolution, & Ecology*, PhD 2015), Qiongyu Huang (*Geography*, PhD 2015), Mercedes Burns (*Behavior, Evolution, Ecology & Systematics*, PhD 2014), Erik Bergmann (*Entomology*, MSc 2014), Clark Rushing (*Behavior, Evolution, Ecology & Systematics*, PhD 2014), Chris Che-Castaldo (*Behavior*,

Evolution, Ecology & Systematics, PhD 2014), Bridget Delay (*Entomology*, PhD 2013), Abby Kula (*Behavior, Evolution, Ecology & Systematics*, PhD 2012), Romina Gazis (*Plant Sciences and Landscape Architecture*, PhD 2012), Robert Smith (*Entomology*, PhD 2012), MaLinda Henry (*Behavior, Evolution, Ecology & Systematics*, PhD 2011), Nick Caruso (*Biology*, MSc 2011), J. Gwen Schlichta (*Behavior, Evolution, Ecology & Systematics*, PhD 2011), Katie Schneider (*Behavior, Evolution, Ecology & Systematics*, PhD 2009), Laura Moore (*Entomology*, MSc 2010), Scott Creary (*Entomology*, MSc 2008), Colin Studds (*Behavior, Evolution, Ecology & Systematics*, PhD 2008)

Advising & Mentoring, Undergraduates (28 since 2007; **completed Honor's thesis)

Grace Soltis, Madison Jones, Betsy Wang, Kristin Jayd**, Victor Settles, Lily Durkee**, Sze Wing Yu**, Sara Reedy, Sarah Davies, John Deignan, George Bradley Reahl, Jake Bodart, Allison Salas, Irene Xue, Heather Eversole, Danielle Marshall, Christopher Holden, Amy Carpenter, Camilo Vanegas, Emily Ross, Elmer Haapala, Patrick Wise, Jane Joo, Scott Berg, Melissa Di Pietro, Sydney Pickett, Yungchung Chen, Adam Goldring (NSF REU, UC Davis), Arunima Kolekar (UC Davis)

Service to Community

Upper Marlboro Crops Twilight Tour. Crops and tillage presentation (2011)

Montgomery County 4H, Lucky Clovers Club. Insect presentation (2011)

Herbert Hoover Middle School, Potomac, MD. Insect presentation for science students (2011)

Annual Maryland Commodity Classic. Crops and tillage poster demonstration (2010, 2011)

Montgomery-Blair High School, Silver Spring, MD. Mentored senior Xiaoshan Zhang on research project (2010)

Southern Sonoma County Resource Conservation District: led K-12 FARMS field day, Bodega Marine Lab (2004)

University of Hawaii NSF K-12 Program: developed and taught online curriculum on invasive species to over 500 students (grades 7-12) at six schools on Hawai'i and O'ahu <<http://www.hawaii.edu/ant>> (2000-2003); developed curriculum for 6 high school students on invertebrate surveys on Palmyra Atoll (2003-2004)

Hokulani Intermediate, Kapunahala Elementary, Kawanānākoa Middle, Punahou High: volunteer or guest teaching (2001-2003)

JASON, mentored two high school students (2001)

Hawai'i Academy of Science, State of Hawai'i Science Fair: judge and mentor (1996-2003)

Pacific Biodiversity Transect (PABITRA), Fiji & Samoa: capacity building for biodiversity inventory and ecological studies (2002, 2003)

Honolulu Zoo: docent training program (2002-2003)

Institute for Cultural Ecology, Hawai'i Island: ecology of forest arthropods (2001)