

Kailen A. Mooney

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Education

- 2005-2007 Biocomplexity Postdoctoral Fellow, Cornell University (Agrawal Lab), Ithaca NY
1997-2004 Ph.D., University of Colorado, Ecology & Evolutionary Biology
1999 Organization for Tropical Studies (Tropical Biology field course 99-1)
1987-1991 B.S., Wesleyan University, Middletown CT

Academic & Research Appointments

- 2016-pre Faculty Director, UCI Nature
2019-pre Rocky Mountain Biological Laboratory Board of Trustees (Secretary)
2016-2019 Rocky Mountain Biological Laboratory Board of Trustees (President)
2013-2016 Rocky Mountain Biological Laboratory Board of Trustees (Member)
2017-pre Professor, University of California, Irvine CA
2012-2017 Associate Professor, University of California, Irvine CA
2007-2012 Assistant Professor, University of California, Irvine CA
2008-pre Member, Organization for Tropical Studies Assembly of Delegates
2008-pre Research Scientist, Rocky Mountain Biological Laboratory
2000-2003 Graduate Assistant in Entomology, University of Colorado Museum, Boulder CO
1996-1997 Lab Technician, College of Forest Resources, University of Washington, Seattle WA
1995 Instructor, National Outdoor Leadership School, Lander WY
1991-1994 Policy Analyst, Natural Resources Defense Council, San Francisco CA

Honors & Awards

- 2019 Faculty of 1000 Editorial Board
2013 UC-Irvine School of Biological Sciences Golden Apple Award for Teaching Excellence
2012 UC-Irvine School of Biological Sciences Honoree for Excellence in Undergraduate Education
2010 Ehrlich Fellowship, Rocky Mountain Biological Laboratory
2007 NIH Postdoctoral Fellowship, University of Arizona, Tuscon (Award declined)

RESEARCH

Publications

[[†] = Refereed research $\Sigma = 79$; ^{††} = refereed review $\Sigma = 11$; ^{†††} unrefereed $\Sigma = 9$
Supervised co-authors: * = undergraduate, ** = graduate, *** = postdoc]

2021

- 99[†] Carvajal Acosta, N., **Mooney, K.A.** 2021. Effects of geographic variation in host plant resources for a specialist herbivore's contemporary and future distribution. **Ecosphere** 12: e03822 (DOI: 10.1002/ecs2.3822)
98[†] Schlau, B., Huxman, T.E., **Mooney, K.A.**, Pratt, J.D. 2021. Facilitation at early growth stages results in spatial associations and stable coexistence in late growth stages of two long-lived, dominant shrubs. **Oikos** 130: 2182–2190 (DOI: 10.1111/oik.08603)
97^{†††} Croy, J.R. *, Carvajal Acosta, N., **Mooney, K.A.** 2021. Regulating plant herbivore defense pathways in the face of attacker diversity. **New Phytologist** 231: 2110–2112 (DOI: 10.1093/aesa/saaa035)

- 96[†] Nelson, A.S. **, **Mooney, K.A.** 2021. Comparing the Individual and Combined Effects of Ant Attendance and Wing Formation on Aphid Body Size and Reproduction. **Annals of the Entomological Society of America** 114 :70–78 (DOI: 10.1093/aesa/saaa035)
- 95[†] Khalaj, F., Rivas-Ubach, A., Anderton, C.R., China, S., **Mooney, K.A.**, Faiola, C.L. 2021. Acyclic terpenes reduce secondary organic aerosol formation from emissions of a riparian shrub. **ACS Earth and Space Chemistry** 5:1242-1253 (DOI: 10.1021/acsearthspacechem.0c00300)
- 94[†] Jerome, D.K., Petry, W.K., **Mooney, K.A.**, Iiler, A.M. 2021. Snow melt timing acts independently and in conjunction with temperature accumulation to drive subalpine plant phenology. **Global Change Biology** 27:5054–5069 (DOI: 10.1111/gcb.15803)
- 93[†] Croy, J.R. **, Pratt, J.D., Sheng, D. **, **Mooney, K.A.** 2021. Climatic displacement exacerbates the negative impact of drought on plant performance and associated arthropod abundance. **Ecology** 102: e03462 (DOI: 10.1002/ecy.3462)
- 92^{††} Huxman, T.E., Winkler, D.E. **Mooney, K.A.** 2021. A common garden super-experiment: An impossible dream to inspire possible synthesis. **Journal of Ecology** 2021;00:1–8 (DOI: 10.1111/1365-2745.13793)
- 2020
- 91[†] Pearse, I.S., LoPresti, E., Schaeffer, R.N., Wetzel, W.C., **Mooney, K.A.**, Ali, J.G., Ode, P.J., Eubanks, M.D., Bronstein, J.L., Weber, M.J. 2020. Generalizing indirect defense and resistance in plants. **Ecology Letters** 23: 1137-1152 (DOI: 10.1111/ele.13512)
- 90[†] Nelson, A.S.**, Zapata, G.*, Sentner, K.*, **Mooney, K.A.** 2019. Are ants botanists? Ant associative learning of plant chemicals mediates foraging for carbohydrates. **Ecological Entomology** 45: 251-258 (DOI: 10.1111/een.12794)
- 2019
- 89[†] Abdala-Roberts, L. **, Puentes, P., Finke, D.L., Marquis, R.J., Montserrat, M., Poelman, E.H., Rasmann, S., Sentis, A., van Dam, N.M., Wimp, G., **Mooney, K.A.**®, Björkman, C. © 2019. A new synthesis of research on tri-trophic interactions: bridging interactions, communities and ecosystems. **Ecology Letters** 22: 2151-2167 [© Mooney and Bjorkman co-senior authors] (DOI: 10.1111/ele.13392)
- 88[†] Singer, M.S., Clark, R.E., Johnson, E.R., Lichter-Mark, I.H., **Mooney, K.A.**, Whitney, K.D. 2019. Dietary specialization is associated with increased ant predation risk in a temperate forest caterpillar community. **Ecology and Evolution** 9:12099-12112 (DOI: 10.1002/ece3.5662)
- 87[†] Moreira, X. ***, Abdala-Roberts, L. **, Nell, C.S. **, Vázquez-González, C., Pratt, J.D. **, Keefover-Ring, K., **Mooney, K.A.** In 2019. Sexual and genotypic variation in terpene quantitative and qualitative profiles in the dioecious shrub *Baccharis salicifolia*. **Scientific Reports** 9:1-10 (DOI: 10.1038/s41598-019-51291-w)
- 86[†] Nell, C.S. **, **Mooney, K.A.** 2019. Plant structural complexity mediates trade-off in direct and indirect plant defense by birds. **Ecology** 100: e02853 (DOI: 10.1002/ecy.2853)
- 85[†] Nelson, A.S.**, Symanski, C.T.* Hecking, M.J.*, **Mooney, K.A.** 2019. Elevational cline in herbivore abundance driven by a monotonic increase in trophic level sensitivity to aridity. **Journal of Animal Ecology** 88:1406-1416 (DOI: 10.1111/1365-2656.13034)
- 84^{††} Nelson, A.S. **, Acosta, N.C. **, **Mooney, K.A.** 2019. Plant chemical mediation of ant behavior. **Current Opinion in Insect Science** 32 :98–103 (DOI: 10.1016/j.cois.2018.12.003)
- 83[†] Moreira, X., Abdala-Roberts, L., Perez-Ramos, I.G., Knops, J.M.H., Presendorfer, M.B., Koenig, W.D., **Mooney, K.A.** 2019. Weather cues associated with masting behavior dampen the negative autocorrelation between past and current reproduction in oaks. **American Journal of Botany** 106: 51-60 (DOI: 10.1002/ajb2.1210)
- 82[†] Nell, C.S**, Abdala-Roberts, L., Parra-Tabla, V., **Mooney, K.A.** 2021. Tropical tree diversity mediates foraging and predatory effects of insectivorous birds. **Proc. Royal Society B** 285: 20181842 (DOI: 10.1098/rspb.2018.1842)

- 81[†] Nelson, A.S. **, Pratt, R.T. ***, Pratt, J.D. **, Smith, R.A., Symanski, C.T., **Mooney, K.A.** 2019. Progressive sensitivity of trophic levels to warming underlies an elevational gradient in ant–aphid mutualism strength. **Oikos** 128: 540–550 (DOI: 10.1111/oik.05650)
- 80^{†††} Moreira, X. ***, Nell, C.S. **, Meza-Lopez, M.M. ***, Rasmann, S., **Mooney, K.A.** 2018. Specificity of plant–plant communication for *Baccharis salicifolia* sexes but not genotypes. **Bulletin of the Ecological Society of America** 100: e01481 (DOI: 10.1002/bes2.1481)
- 2018
- 79[†] Moreira, X. ***, Nell, C.S. **, Meza-Lopez, M.M. ***, Rasmann, S., **Mooney, K.A.** 2018. Specificity of plant–plant communication for *Baccharis salicifolia* sexes but not genotypes. **Ecology** 99: 2731–2739 (DOI: 10.1002/ecy.2534)
- 78[†] Nell, C.S. **, Meza-Lopez, M.M. ***, Croy, J.R. **, Nelson, A.S. **, Moreira, X. ***, Pratt, J.D. **, **Mooney, K.A.** 2018. Relative effects of genetic variation *sensu lato* and sexual dimorphism on plant traits and associated arthropod communities. **Oecologia** 187: 389–400 (DOI: 10.1007/s00442-018-4065-y)
- 77[†] Meza-Lopez M.M. ***, **Mooney K.A.**, Thompson A.L. *, Ho N.K. *, Pratt J.D. ** 2018. A test for clinal variation in *Artemisia californica* and associated arthropod responses to nitrogen addition. **PLoS ONE** 13(2): e0191997 (DOI: 10.1371/journal.pone.0191997)
- 76[†] Abdala-Roberts, L. **, Covelo, F., Parra-Tabla, V., Mier y Terán, J.C.B., **Mooney, K.A.**, Moreira, X. ** 2018. Intra-Specific latitudinal clines in leaf carbon, nitrogen, and phosphorus and their underlying abiotic correlates in *Ruellia nudiflora*. **Scientific Reports** 8:596 (DOI: 10.1038/s41598-017-18875-w)
- 75[†] Moreira, X. ***, Petry, W.P. **, **Mooney, K.A.**, Rasmann, S., Abdala-Roberts, L. ** 2018. Elevational gradients in plant defences and insect herbivory: recent advances in the field and prospects for future research. **Ecography** 41: 1485–1496 (DOI: 10.1111/ecog.03184)
- 2017
- 74[†] Singer, M.S., Clark, R.A., Lichter-Marcka, I.H., Johnson, E.R., **Mooney, K.A.** 2017. Predatory birds and ants partition caterpillar prey by body size and diet breadth. **Journal of Animal Ecology** 86: 1363–1371
- 73[†] Abdala-Roberts, L. **, Pratt, R. ***, Pratt, J.D., **Mooney, K.A.** 2017. Traits underlying community consequences of plant intra-specific diversity. **PLoS One** 12: e0183493 (DOI: 10.1371/journal.pone.0183493)
- 72[†] Pratt, J.D. **, Datu, A. *, Tran, T. *, Sheng, D.C. **, **Mooney, K.A.** 2017. Genetically based latitudinal clines in *Artemisia californica* arthropod communities. **Ecology** 98: 79–91 (DOI: 10.1002/ecy.1620)
- 71[†] Moreira X. ***, Pérez-Ramos I.M., Abdala-Roberts L. **, **Mooney, K.A.** 2017. Functional responses of contrasting seed predator guilds to masting in two Mediterranean oak species. **Oikos** 126: 1042–1050 (DOI: 10.1111/oik.03722)
- 2016
- 70[†] Moreira, X. ***, Nell, C.S. **, Katsanis, A. ***, Rasmann, S., **Mooney, K.A.** 2016. Herbivore specificity and the chemical basis of plant–plant communication in *Baccharis salicifolia* (Asteraceae). **New Phytologist** 220: 703–713 (DOI: 10.1111/nph.14164)
- 69[†] Moreira, X. ***, Abdala-Roberts, L. **, Zas, R., Merlo, E, Lombardero, M.J., Samp Pedro, L., **Mooney, K.A.** 2016. Masting behaviour in a Mediterranean pine tree alters seed predator selection on reproductive output. **Plant Biology** 18: 973–980.
- 68[†] Petry, W.K. **, Soule, J.D., Iler, A.M., Chicas-Mosier*, A., Inouye, D.W., Miller, T.E.X., **Mooney, K.A.** 2016. Sex-specific responses to climate change in plants alter population sex ratio and performance. **Science** 353:69–71 (DOI: 10.1126/science.aaf2588) (profiled in *Perspectives*: Etterson, J.R., Mazer, S.J. 2016 How climate change affects plants’ sex lives. **Science** 353: 32–33)
- 67[†] Katsanis, A. ***, Rasmann, S., **Mooney, K.A.** 2016. Herbivore diet breadth and host plant defense mediate the tri-trophic effects of plant toxins on multiple coccinellid predators. **PLoS ONE** 11:e.0155716

- 66^{††} Moreira, X.^{***}, Abdala-Roberts, L.^{**}, Rasmann, S., Castagneyrol, B., **Mooney, K.A.** 2016. Plant diversity effects on insect herbivores and their natural enemies: current thinking, recent findings, and future directions. **Current Opinions in Insect Science** 14: 1-7
- 65^{††} Rasmann, S., **Mooney, K.A.** 2016. The Studies of plant-insect interactions: approaches spanning genes to ecosystems. **Current Opinions in Insect Science** 14: v-vii
- 64[†] Abdala-Roberts, L.^{**}, Moreira, X.^{***}, Rasmann, S., Parra-Tabla, V., **Mooney, K.A.** 2016. Test of abiotic and biotic correlates of latitudinal variation in defense in the perennial herb *Ruellia nudiflora*. **Journal of Ecology** 104: 580-590
- 63[†] Abdala-Roberts, L.^{**}, Pratt, J.D.^{**}, Pratt, R.^{**}, Schreck, T.K.^{**}, Hanna, V.^{*}, **Mooney, K.A.** 2016. Multi-trophic consequences of plant genetic variation in sex and growth. **Ecology** 97: 743-753
- 62[†] Mooney, E. H., Phillips, J.S.^{*}, Tillberg, C.V., Sandrow, C., Nelson, A.S.^{**}, **Mooney, K.A.** 2016. Abiotic mediation of a mutualism drives herbivore abundance. **Ecology Letters** 19: 37-44
- 61[†] Abdala-Roberts, L.^{**}, González-Moreno, A., **Mooney, K.A.**, Moreira, X.^{***}, González-Hernández, A., Parra-Tabla, V. 2016. Effects of tree species diversity and genotypic diversity on leafminers and parasitoids in a tropical forest plantation. **Agricultural and Forest Entomology** 18:43-51
- 2015
- 60[†] Moreira, X.^{***}, Abdala-Roberts, L.^{**}, Linhart, Y.B., **Mooney, K.A.** 2015. Effects of climate on reproductive investment in a masting species: assessment of climatic predictors and underlying mechanisms. **Journal of Ecology** 103: 1317-1324
- 59[†] Moreira, X.^{***}, Abdala-Roberts, L.^{**}, Parra-Tabla, V., **Mooney, K.A.** 2015. Latitudinal variation in herbivory: Influences of climatic drivers, herbivore identity, and natural enemies. **Oikos** 124: 1444-1452
- 58[†] Abdala-Roberts, L.^{**}, **Mooney, K. A.**, Quijano-Medina, T., Campos-Navarrete, M. J., González-Moreno, A., Parra-Tabla, V. 2015. Comparison of tree genotypic diversity and species diversity effects on different guilds of insect herbivores. **Oikos** 124: 1527-1535
- 57^{††} Abdala-Roberts, L.^{**}, **Mooney, K.A.** 2015. Plant and herbivore evolution within the trophic sandwich. In: Hanley, T., La Pierre, K. *Trophic Ecology: Bottom-Up and Top-Down Interactions across Aquatic and Terrestrial Systems*. **Cambridge University Press** 340-364
- 2014
- 56[†] Abdala-Roberts, L.^{**}, **Mooney, K.A.** 2014. Ecological and evolutionary consequences of plant genotype diversity in a tri-trophic system. **Ecology** 95:2879-2893
- 55[†] Moreira, X.^{***}, Abdala-Roberts, L.^{**}, Parra-Tabla, V., **Mooney, K.A.** 2014. Positive effects of plant genotypic and species diversity on anti-herbivore defenses in a tropical tree species. **PLoS One** 9:e105438
- 54[†] Abdala-Roberts, L.^{**}, Parra-Tabla, V., Campbell, D.R., **Mooney, K.A.** 2014. Soil fertility and parasitoids shape herbivore selection on plants. **Journal of Ecology** 102: 1120-1128
- 53[†] Singer, M.S., Lichter-Marck, I.H., Farkas, T.E., Aaron, E., Whitney, K.D., **Mooney, K.A.** 2014. Herbivore diet breadth mediates the cascading effects of carnivores in food webs. **PNAS** 111: 9521-9526
- 52[†] Linhart, Y.B., Moreira, X.^{***}, Snyder, M.A., **Mooney, K.A.** 2014. Variability in seed cone production and functional response of seed predators to seed cone availability: Support for the predator satiation hypothesis. **Journal of Ecology** 102: 576-583
- 51[†] Moreira, X.^{***}, **Mooney, K.A.**, Rasmann, S., Petry, W.K.^{**}, Carrillo-Gavilan, A. Zas, R., Sampedro, L. 2014. Trade-offs between constitutive and induced defences drive geographical and climatic clines in pine chemical defences. **Ecology Letters** 17: 537-546
- 50[†] Abdala-Roberts, L.^{**}, Berny-Mier y Terán, J.C., **Mooney, K.A.**, Moguel-Ordóñez, Y.B., Tut-Pech, F. 2014. Plant traits mediate effects of predators across pepper (*Capsicum annuum*) varieties. **Ecological Entomology** 39: 361-370
- 49[†] Moreira, X.^{***}, Abdala-Roberts, L.^{**}, Linhart, Y.B., **Mooney, K.A.** 2014. Masting promotes individual- and population-level reproduction by increasing pollination efficiency. **Ecology** 95:801-807

- 48[†] Pratt, J.D.^{**}, Keefover-Ring, K., Liu, L.Y.^{*}, **Mooney, K.A.** 2014. Genetically based latitudinal variation in *Artemisia californica* secondary chemistry. **Oikos** 123: 953-963 (DOI: 10.1111/oik.01156)
- 47[†] Kimball, S., Lulow, M., **Mooney, K.A.**, Sorenson, Q.^{*} 2014. Establishment of native functional groups in trait-based restoration. **Journal of Applied Ecology** 22:81-88
- 2013
- 46[†] Schreck, T.K.^{**}, David, S.J.^{*}, **Mooney, K.A.** 2013. Effects of *Brassica nigra* and plant-mycorrhizal interactions on the arthropod community of *Deinandra fasciculata*. **Biological Invasions** 15:2443-2454
- 45[†] Petry, W.K.^{**}, Perry, K.I.^{*}, Fremgen, A.^{*}, Rudeen, S.K.^{*}, Lopez, M.^{*}, Dryburgh, J.^{*}, **Mooney, K.A.** 2013. Mechanisms underlying plant sexual dimorphism in multi-trophic arthropod communities. **Ecology** 94:2055-2065
- 44[†] Pratt, J.D.^{**}, **Mooney, K.A.** 2013. Clinal adaptation and adaptive plasticity in *Artemisia californica*: implications for the response of a foundation species to predicted climate change. **Global Change Biology** 19: 2454–2466 (DOI: 10.1111/gcb.12199)
- 43[†] Moreira, X.^{***}, **Mooney, K.A.** 2013. Influence of plant genetic diversity on interactions between higher trophic levels. **Biology Letters** 9: 20130133
- 42[†] Abdala-Roberts, L.^{**}, **Mooney, K.A.** 2013. Environmental and plant genetic effects on tri-trophic interactions. **Oikos** 122:1157-1166
- 41^{††} Gruner, D.S., **Mooney, K.A.** 2013. Green grass and high tides: Grazing lawns in terrestrial and aquatic ecosystems. **Oikos** 122: 313-316
- 2012
- 40^{††} **Mooney, K.A.**, Singer, M.S. 2012. Plant variation in herbivore-enemy interactions in natural systems. In: Ohgushi, T., Schmitz, O., Holt, R.D. *Trait-Mediated Indirect Interactions: Ecological and Evolutionary Perspectives*. **Oxford University Press**: 107-130.
- 39[†] Moreira, X.^{***}, **Mooney, K.A.**, Zas, R. Sampedro, L. 2012. Bottom-up effects of host-plant species diversity and top- down feedbacks interactively increase plant performance. **Proceedings of the Royal Society B** 279: 4464-4472
- 38[†] Abdala-Roberts, L.^{**}, Agrawal, A.A., **Mooney, K.A.** 2012. Ant-aphid interactions on *Asclepias syriaca* are mediated by plant genotype and caterpillar damage. **Oikos** 121: 1905-1913
- 37^{†††} Whiteman, N.K. and **Mooney, K.A.** 2012. Evolutionary biology: Insects converge on resistance. **Nature** 489: 376-377
- 36[†] **Mooney, K.A.**, Fremgen, A.^{*}, Petry, W.K.^{**} 2012. Plant sex and induced responses independently influence herbivore performance, natural enemies and aphid-tending ants. **Arthropod-Plant Interactions** 5: 1-7
- 35[†] **Mooney, K.A.**, Pratt, R.^{***}, Singer, M.S. 2012. The tri-trophic interactions hypothesis: Interactive effects of host plant quality, diet breadth and natural enemies on herbivores. **PLoS ONE** 7: e34403
- 34[†] Daniels, E.V.^{*}, **Mooney, K.A.**, Reed, R.D. 2012. Seasonal wing color plasticity varies dramatically between buckeye butterfly populations in different climatic zones. **Ecological Entomology** 37: 155-159
- 33[†] Petry, W.K.^{**}, Perry, K.I.^{*}, **Mooney, K.A.** 2012. Influence of macronutrient imbalance on native ant foraging and inter-specific interactions in the field. **Ecological Entomology** 37: 175-183
- 32[†] Singer, M.S., Farkas, T.E., Skorik, C.M., **Mooney, K.A.** 2012. Tri-trophic interactions at a community level: Effects of host-plant species quality on bird predation of caterpillars. **American Naturalist** 179: 363-374
- 2011
- 31[†] **Mooney, K.A.**, Linhart, Y.B., Snyder, M.A. 2011. Masting in ponderosa pine: Comparisons of pollen and seed over space and time. **Oecologia** 165: 651-661
- 30[†] **Mooney, K.A.** 2011. Genetically based population variation in aphid association with ants and predators. **Arthropod-Plant Interactions** 5: 1-7
- 2010

- 29[†] **Mooney, K.A.**, Mandal, K.* 2010. Competition hierarchies among ants and predation by birds jointly determine the strength of multi-species ant-aphid mutualisms. **Oikos** 119: 874-882
- 28[†] **Mooney, K.A.**, Halitschke, R., Kessler, A., Agrawal, A.A. 2010. Evolutionary trade-offs in plants mediate the strength of trophic cascades. **Science** 237: 1642-1644 (profiled in *Perspectives: Hamback, P.A.* 2010 A green or a prickly world? **Science** 327: 1583-1584)
- 27[†] **Mooney, K.A.**, Gruner, D.S., Barber, N.A., Van Bael, S.A., Philpott, S.M., Greenberg, R. 2010. Interactions among predators and the cascading effects of vertebrate insectivores on arthropod communities and plants. **PNAS** 107: 7335-7340
- 26^{††} **Mooney, K.A.**, Tillberg, C.V. 2010. Stable isotopes in the study of ant diets. In: Lach, L., Parr, C.L., Abbott, K., eds., *Ant Ecology*, pp. 117-118. **Oxford University Press**
- 25^{††} Ness, J. **Mooney, K.A.**, Lach, L. 2010. Ants as Mutualists. In: Lach, L., Parr, C.L., Abbott, K., eds., *Ant Ecology*, pp. 97-114. **Oxford University Press**
- 2008
- 24[†] Van Bael, S.A., Philpott, S.M., Greenberg, R., Bichier, P., Barber, N.A., **Mooney, K.A.**, Gruner, D.S. 2008. Birds as predators in tropical agroforestry systems. **Ecology** 89: 928-934
- 23[†] Smith, R.A.* , **Mooney, K.A.**, Agrawal, A.A. 2008. Coexistence of three specialist aphids on common milkweed *Asclepias syriaca*. **Ecology** 89: 2187-2196
- 22[†] **Mooney, K.A.**, Jones, P.* , Agrawal, A.A. 2008. Coexisting congeners: Demography, competition, and interactions with cardenolides for two milkweed-feeding aphids. **Oikos** 117: 450-458
- 21[†] **Mooney, K.A.**, Agrawal, A.A. 2008. Plant genotype shapes ant-aphid interactions: implications for community structure and indirect plant defense. **American Naturalist** 171: E195-E205
- 20^{††} **Mooney, K.A.**, Agrawal, A.A. 2008. Phenotypic plasticity in plant-herbivore interactions. In: Tillmon, K., ed., *Evolutionary Biology of Plant and Insect Relationships*. **University of California Press**: 43-59
- 2007
- 19[†] **Mooney, K.A.** 2007. Tritrophic effects of birds and ants on a canopy food web, tree growth and phytochemistry. **Ecology** 88: 2005-2014
- 18^{†††} **Mooney, K.A.** 2007. Book review: *Insect-Plant Biology* by L.M. Schoonhoven, J.A. van Loon, M. Dicke, 2005. **Quarterly Review of Biology** 84: 52
- 17^{†††} Agrawal, A.A., Ackerly, D.D., Adler, F., Arnold, B., Caceres, C., Doak, D.F., Post, E., Hudson, P., Maron, J., **Mooney, K.A.**, Power, M., Schemske, D., Stachowicz, J., Strauss, S., Turner, M.G., Werner, E. 2007. Reply – In support of observational studies. **Frontiers in Ecology and the Environment** 5: 294-295
- 16^{††} Agrawal, A.A., Ackerly, D.D., Adler, F., Arnold, B., Caceres, C., Doak, D.F., Post, E., Hudson, P., Maron, J., **Mooney, K.A.**, Power, M., Schemske, D., Stachowicz, J., Strauss, S., Turner, M.G., Werner, E. 2007. Filling key gaps in population and community ecology. **Frontiers in Ecology and the Environment** 5: 145-152
- 2006
- 15[†] **Mooney, K.A.**, Linhart, Y.B. 2006. Contrasting cascades: Insectivorous birds increase pine but not parasitic mistletoe growth. **Journal of Animal Ecology** 76: 350-357
- 14[†] **Mooney, K.A.**, Geils, B.G., Linhart, Y.B. 2006. Linking parasitic plant-induced host morphology to tri-trophic interactions. **Annals of the Entomological Society of America** 99: 1133-1138
- 13[†] **Mooney, K.A.**, Haloin, J.R.* 2006. Nest site fidelity of *Paraphidippus aurantius* (Araneae, Salticidae) following disturbance. **Journal of Arachnology** 34: 241-243
- 12[†] **Mooney, K.A.**, Haloin, J.R.* 2006. Size and guarding of offspring affect *Paraphidippus aurantius* (Araneae, Salticidae) response to predation threat. **Journal of Arachnology** 34: 98-103
- 11[†] **Mooney, K.A.** 2006. The disruption of an ant-aphid mutualism increases the effects of insectivorous birds on pine herbivores. **Ecology** 87: 1805-1815
- 2005
- 10[†] **Mooney, K.A.**, Tillberg, C.V. 2005. Temporal and spatial variation of ant omnivory in pine forests. **Ecology** 86: 1225-1235

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- 8[†] Linhart, Y.B., Keefover-Ring, K., **Mooney, K.A.**, Breland, B., Thompson, J.D. 2005. A chemical polymorphism in a multi-trophic setting: Thyme monoterpene composition and food web structure. *American Naturalist* 166: 517-529

1992-2004

- 7^{†††} **Mooney, K.A.** 2003. The ecology of energy. In: Limerick, P., Hildner, A., Puska, C., Skovsted, E. (Eds.) *Energy in the West: What Every Westerner Should Know*, p 6. University of Colorado Press
- 6[†] **Mooney, K.A.** 2003. *Promylea lunigerella glendella* Dyar (Pyrilidae) feeds on both conifers and parasitic dwarf mistletoe (*Arceuthobium* spp.): One example of food plant shifting between parasitic plants and their hosts. *Journal of the Lepidopterist Society* 57: 47-53
- 5[†] **Mooney, K.A.** 2002. Quantifying habitat use by birds in woody vegetation using track-plating. *Journal of Field Ornithology* 73: 392-398
- 4[†] Linhart, Y.B., **Mooney, K.A.**, Snyder, M.A., Swoboda-Colberg, N. 2001. Phloem chemistry: Effects of genotype and environment and implications for nutritional ecology. *International Journal of Plant Science* 162: 1009-1016
- 3[†] **Mooney, K.A.** 2001. The Life History of *Dasyphyga alternosquamella* Raganot (Pyrilidae) feeding on the southwestern dwarf mistletoe (*Arceuthobium vaginatum*) in Colorado. *Journal of the Lepidopterist Society* 55: 144-149
- 2^{†††} **Mooney, K.A.** 1992. Swim At Your Own Risk. *The Amicus Journal*. Fall-1993: 39-41
- 1^{†††} **Mooney, K.A.** 1992. *Testing The Waters*. NRDC Press, New York, NY. 67pp.

Research Funding

Grants

- 2020 NSF DEB# 2032435: Plant herbivore defense syndromes mediated by canopy structural complexity (PI **K.A. Mooney**; \$519,457).
- 2020 NSF DEB#1457029: REU Supplement: Population consequences of sexually dimorphic responses in a plant species to ongoing and experimental changes in climate (PI **K.A. Mooney**; \$27,052)
- 2020-2023 NSF IOS#1951244: Collaborative Research: The critical importance of diverse leaf "hairstyles": Integrative quantification of anatomy, function, evolution and ecology of trichomes. (PI L. Sack, Co-PIs **K.A. Mooney**, T.N. Buckley J.M. Beaulieu; \$689,929 [\$78,373 to Mooney]).
- 2017-19 Kay Family Foundation: Applying next generation sequencing techniques to create drought-adapted native plant communities. (PI J. Funk, H. Atamian, **K.A. Mooney**; \$85,850)
- 2017-18 Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory: Plant Stress in a Changing Environment: Using Plant Metabolomics to Improve Predictions of Biogenic Secondary Organic Aerosol Production (PI C. Faiola, Co-PI **K.A. Mooney**; \$18,926 in kind support)
- 2016 UC-Irvine School of Biological Sciences: Funding for organization of international workshop on tri-trophic interactions, Amsterdam, Netherlands (PI **K.A. Mooney**; \$2,000)
- 2016-2019 CONACyT: Evaluation of the ecological role of defensive compounds in trees and insectivorous birds in a mixed forest plantation (PI L. Abdala-Roberts, V. Para-Tabla; Senior Personnel **K.A. Mooney**; ₱1,494,800 = \$80,033)
- 2016-2018 Spanish Ministry of Economy and Competition: Factors determining the existence of defense syndromes in *Quercus* spp. in the Iberian Peninsula: Consequences for the conservation of endangered species (PI Xoaquín Moreira; Senior Personnel **K.A. Mooney**; €42,350 = \$47,706)
- 2015-2018 NSF DEB#1457029: Population consequences of sexually dimorphic responses in a plant species to ongoing and experimental changes in climate (PI **K.A. Mooney**; \$262,764)
- 2014-2017 NSF DEB#1354734: Effects of environmental clines and herbivory for plant functional traits and response to climate change (PI **K.A. Mooney**; \$590,477)
- 2014-2015 NSF FSML#1418825: An ecohydrology monitoring array for water sustainability, biological diversity, and integrated research/education programs at the Steele/Burnand Anza-Borrego Desert

- Research Center (PI T. Huxman, Senior Personnel **K.A. Mooney**, J. Pratt, S. Kimball, J. Famiglietti; \$270,882)
- 2014-2015 NSF DEB #1407318: DISSERTATION RESEARCH: Demographic consequences of sexually dimorphic responses to climate change (PI **K.A. Mooney**; Co-PI W. Petry; \$20,083)
- 2013-2014 UCMEXUS: Integrating predators to current theory of plant anti-herbivore defenses (PIs **K.A. Mooney**, Victor Parra-Tabla; \$25,000)
- 2013 UCMEXUS: Plant genotype diversity effects on anti-herbivore defenses (PI X. Moreira, Co-PI **K.A. Mooney**; \$1,500)
- 2012 UC-Irvine Center for Environmental Biology: Assessing the importance of arthropod abundance, community composition, and habitat structure as determinants of habitat quality for Cactus Wren (*Campylorhynchus brunneicapillus*) (PI **K.A. Mooney**; Co-PIs K. Treseder, J. Burger, K. Preston; \$30,000)
- 2011-2012 UC-Irvine CORCL: Single Investigator Grant (PI **K.A. Mooney**; \$7,000)
- 2011-2014 NSF DEB #1120794: Tri-trophic consequences of herbivore diet breadth and plant resistance (PI **K.A. Mooney**; \$199,999)
- 2010-2013 NSF DBI #096344: Renovation of the greenhouse research facility at the University of California, Irvine (PI B. Gaut; Co-PIs **K.A. Mooney**, D. Campbell, R. Reed, S. Weller; \$1,257,826)
- 2010-2011 Rocky Mountain Biological Laboratory Ehrlich Fellowship (PI **K.A. Mooney**; \$10,000)
- 2009-2011 NSF DEB #0919178: Community consequences of aphid genetic diversity and interactions with ants (PI **K.A. Mooney**; \$134,977)
- 2009-2011 NSF DEB #0910326, DISSERTATION RESEARCH: Effects of genetic diversity on invasive population success (PI **K.A. Mooney**; Co-PI H. McGray; \$14,988)
- 2010 UC-Irvine CORCL: Faculty Research & Travel Grant (PI **K.A. Mooney**; \$1,607)
- 2010 UC-Irvine CORCL: Special research grant (PI **K.A. Mooney**; \$3,695)
- 2007 NIH-PERT Postdoctoral Fellowship, University of Arizona (PI **K.A. Mooney**; 3 years support declined)
- 2005-2007 Biocomplexity Postdoctoral Fellowship, Cornell University (PI **K.A. Mooney**; 2 years support)
- 1999-2004 USDA Forest Service, Rocky Mountain Research Station (PI **K.A. Mooney**; 4 awards, \$25,000)
- 1997-2004 Intra-mural grants and fellowships. University of Colorado (PI **K.A. Mooney**; 13 awards, \$41,000)
- 1997-2004 Extra-mural small grants. Colorado Mountain Club, Sigma Xi, Marr Fund, Sussman Internship, Hughes Foundation, Organization for Tropical Studies (PI **K.A. Mooney**; 10 awards, \$24,000)

Fellowships to Graduate Students

- 2016-2021 Nayeli Carvajal, UCMEXUS-CONACyT Fellowship (5 years support)
- 2016-2019 Jordan Croy, NSF-GRFP (3 years support)
- 2016-2019 Annika Nelson, NSF-GRFP (3 years support)
- 2014-2017 Colleen Nell, NSF-GRFP (3 years support)
- 2010-2014 Luis Abdala-Robert, UCMEXUS-CONACyT Fellowship (5 years support)
- 2011-2014 Will Petry, NSF-GRFP (3 years support)
- 2010-2013 Jessica Pratt, EPA-STAR Fellowship (3 years support)

Invited Seminars

- 2021 Wesleyan University, Department of Biology
- 2018 Texas A&M University, Department of Entomology
- 2017 Gordon Research Conference on Plant-Herbivore Interactions
- 2017 Oregon State University, Department of Forest Ecosystems and Society
- 2017 Swedish University of Agricultural Sciences, Department of Plant Ecology and Evolution
- 2016 Biological Mission of Galicia (CSIC), Department of Forest Ecology (Spain)
- 2015 UC-Irvine, Department of Ecology and Evolutionary Biology
- 2015 Université de Neuchâtel (Switzerland)

- 2015 Doñana Biological Station (Spain)
 2014 Duke University, Department of Biology
 2013 Occidental College, Department of Biology
 2012 Stockholm University, Department of Botany (Sweden)
 2012 Swedish University of Agricultural Sciences, Department of Plant Ecology and Evolution
 2012 Centre for Plant Biology, Uppsala, *Plenary speaker* (Sweden)
 2012 University of Nebraska, Department of Ecology and Evolutionary Biology
 2012 University of Arizona, Department of Ecology and Evolutionary Biology
 2011 Ecological Society of America Workshop: Funding graduate research
 2011 Washington State University, Department of Entomology
 2011 University of Idaho, Department of Entomology
 2011 University of Tennessee, Department of Ecology and Evolutionary Biology
 2010 Northern Arizona University, Department of Forestry
 2010 Northern Arizona University, Genes to Ecosystems IGERT
 2010 San Diego State University, Department of Biology
 2009 US Forest Service, Rocky Mountain Research Station
 2009 UC-Davis, Department of Entomology
 2008 UC-Santa Cruz, Department of Ecology and Evolutionary Biology
 2008 UC-Berkeley, Department of Integrative Biology
 2008 University of Maryland, Department of Entomology
 2008 Rocky Mountain Biological Laboratory
 2008 Spanish Association of Terrestrial Ecology, Mallorca (Spain)
 2008 UC-San Diego, Department of Ecology and Evolutionary Biology
 2007 UC-Riverside, Department of Entomology
 2007 UC-Irvine, Department of Ecology and Evolutionary Biology
 2006 University of British Columbia, Department of Zoology (Canada)
 2006 University of New Mexico, Department of Biology
 2006 Cornell University, Department of Ecology and Evolutionary Biology
 2005 Cornell Lab of Ornithology
 2005 University of Toronto, Department of Ecology and Evolutionary Biology (Canada)
 2005 Humboldt State University, Department of Biology
 2004 University of Colorado Boulder, Department of Ecology and Evolutionary Biology
 2002 Center for Functional Ecology and Evolution, Montpellier (France)

Organized Meetings & Symposia

- 2016 Workshop organizer ("Future directions in tri-trophic interactions), 12 international participants, Amsterdam, Netherlands
 2007 Symposium Organizer, Ecological Society of America ("Yin and Yang: The combined influences of positive and negative interactions in ecological communities")

Graduate Student and Sabbatical Visitors

- 2018 Christer Bjorkman, Professor SLU (Swedish University of Agricultural Sciences), 3 months
 2017 Sara Castro Coba, Graduate student Doñana Biological Station (Spain), 3 months
 2013 Dr. Chad Tillberg, Professor Linfield College (US), 3 months
 2013 Alba Lázaro-González, Graduate student University of Granada (Spain), 4 months

Meeting Abstracts

[supervised co-authors * = undergraduate, ** = graduate, *** = postdoc]

2021

- 79 Carvajal Acosta, N., Gloss, A, **Mooney, K.A.** 2021. Drought effects on plant direct and indirect chemical defenses and its consequences for tri-trophic interactions. Ecological Society of America.

2020

- 78 Jerome, D.K., Petry, W.K., **Mooney, K.A.**, Iiler, A.M. 2020. Snowmelt has a larger effect on phenology of subalpine plants than temperature. Ecological Society of America.
- 77 Carvajal Acosta, N., Agrawal, A.A., **Mooney, K.A.** 2020. Accounting for hostplant availability and quality to predict the distribution of the Western monarch population under climate change. Ecological Society of America.

2019

- 76 Nelson, A.S. **, **Mooney, K.A.** 2019. Effects of mutualist species identity and diversity on herbivore populations across two years. Ecological Society of America
- 75 Croy, J. **, Pratt, J.D., Sheng, D. **, **Mooney, K.A.** 2019. Severe drought and plant maladaptation deplete arthropod densities. Gordon Research Conference on Plant-Herbivore Interactions.
- 74 Nelson, A.S. **, **Mooney, K.A.** 2019. Mechanisms of global change effects on herbivores. Gordon Research Conference on Plant-Herbivore Interactions

2018

- 73 Schlau, B.M. **, Huxman, T.E., **Mooney, K.A.**, Pratt, J.D. 2018. Improved plant community resistance to invasion with a facilitated mutual defense between two native shrubs versus a non-native, annual forb. Ecological Society of America
- 72 Croy, J.R. **, Dwilaksono, J. *, Pratt, J.D., Sheng, D. **, **Mooney, K.A.** 2018. Testing for genetically-based latitudinal clines in tolerance and resistance to vertebrate herbivory in *Artemisia californica*. Ecological Society of America
- 71 Nelson, A.S. **, **Mooney, K.A.** 2018. The effects of ant competition on aphid demography. Ecological Society of America
- 70 Nell, C. **, **Mooney K.A.** 2018. Trade-offs between direct and indirect plant defense underlain by density-dependent bird foraging. Ecological Society of America
- 69 Carvajal Acosta, A.N. **, Agrawal, A.A., **Mooney K.A.** 2018. Indirect effect of drought on insect herbivores mediated by host plant traits. Ecological Society of America

2017

- 68 Croy, J.R. **, Dwilaksono, D. *, Pratt, J.D. **, Sheng, D. **, **Mooney, K.A.** 2017. Genetic clines and drought mediation of plant-herbivore interactions. Ecological Society of America
- 67 Nell, C. **, Meza-Lopez, M. ***, Croy, J. **, Nelson, A. **, Katsanis A. ***, Pratt, J.D. **, **Mooney K.A.** 2017. *Baccharis salicifolia*'s plasticity, genetic, and sexual variation influence on plant traits and associated arthropods. Ecological Society of America
- 66 **Mooney, K.A.**, Pratt, J.D. **, Croy, J. **, Meza-Lopez, M. ***, Sheng, D. ** 2017. Consequences of plant local adaptation to the abiotic environment for multi-trophic arthropod communities. Ecological Society of America
- 65 Nell, C. **, Abdala-Roberts, L. **, **Mooney, K.A.** 2017. Feedbacks between tropical tree diversity and top-down control by insectivorous birds: Assessing the mechanisms of the Enemies Hypothesis. Ecological Society of America
- 64 Nelson, A.S. **, Symanski, C.T. *, Hecking, M.J. *, Mooney, K.A. 2017. Elevational cline in herbivore abundance driven by altered protection mutualism with ants. Ecological Society of America

2016

- 63 Petry, W.K. **, Miller, T.E.X., Soule, J.D., **Mooney, K.A.** 2016. Partitioning the linear and non-linear effects of climate change on two-sex population dynamics. Evolutionary Demography Society Meeting
- 62 Nell, C. **, Abdala-Roberts, L. **, **Mooney, K.A.** 2016. Tree diversity and identity mediates insectivorous bird communities and top-down suppression of herbivores. North American Ornithological Conference

2015

- 61 Abdala-Roberts, L. **, Parra-Tabla, V., **Mooney, K.A.** 2015. Dinámicas ecológicas y evolutivas en sistemas tri-tróficos: efectos del ambiente, complejidad trófica, y diversidad vegetal. Congreso Mexicano de Ecología (México)
- 60 Chicas-Mosier, A. *, Petry, W.K. **, **Mooney, K.A.** 2015. Consequences of pollination neighborhood composition on mating success. Ecological Society of America
- 59 Chicas-Mosier, A. *, Petry, W.K. **, Mooney, K.A. 2015. Effects of pollination neighborhood composition and pollinator communities on the mating success of *Valeriana edulis*. National Council on Undergraduate Research Meeting.
- 58 Nell, C. **, **Mooney, K.A.** 2015. Trade-offs among Mediterranean shrubland plants between direct herbivore defense and indirect defense by birds. Ecological Society of America
- 57 Petry, W.K. **, Miller, T.E.X., Soule, J.D., **Mooney, K.A.** 2015. Intraspecific variation in response to climate drives population patterns and dynamics. Ecological Society of America
- 56 Abdala-Roberts, L. **, Parra-Tabla, V., **Mooney, K.A.** 2014. Ecología evolutiva de interacciones planta-animal. Congreso Mexicano de Ecología (México).
- 2014
- 55 Petry, W.K. **, Miller, T.E.X., Soule, J.D., **Mooney, K.A.** 2014. Sexually dimorphic responses to climate variation: Demographic causes and consequences of climate-skewed sex ratios. Evolutionary Demography Society Meeting.
- 54 Moreira, X., ***, Abdala-Roberts, L. **, **Mooney, K.A.**, and Parra-Tabla, V. 2014. Latitudinal variation in herbivory: Influences of climatic drivers, herbivore identity and natural enemies. International Symposium on Insect-Plant Relationships (Switzerland)
- 53 Nell, C. **, Moreira, X. ***, Rasmann, S., **Mooney, K.A.** 2014. Specificity of plant-plant communication: Self recognition, plant sex and herbivore identity. Ecological Society of America
- 52 Singer, M.S., Clark, R.A., Johnson, E.R., Lichter-Marck, I.H., **Mooney, K.A.** 2014. Predatory birds and ants partition caterpillar prey based on caterpillar diet breadth. Ecological Society of America
- 51 Sheng, D. **, Pratt, J.D. **, **Mooney, K.A.** 2014. Clinal adaptation in *Artemisia californica* to a latitudinal gradient influences arthropod community composition. Ecological Society of America
- 50 Pratt, J.D. **, **Mooney, K.A.** 2014. Variation in the response of *Artemisia californica* populations to nitrogen addition and impacts on associated arthropods. Ecological Society of America
- 49 Mooney, E., Phillips, J. *, Tillberg, C.V., **Mooney, K.A.** 2014. Abiotic and multitrophic determinants of geographic distribution in an herbivorous insect. Ecological Society of America
- 48 Abdala-Roerts, L. **, **Mooney, K.A.**, Quijano-Medina, T., Campos-Navarrete, M.J., Gonzalez-Moreno, A., Parra-Tabla, V. 2014. Herbivory in tropical trees: Relative influence of tree genotype diversity, tree species diversity, and herbivore identity. Ecological Society of America
- 2013
- 47 Petry, W.K. **, Miller, T.E.X., Soule, J.D., **Mooney, K.A.** 2013. Historical demography along a climatic gradient: Generating predictions of population responses to climate change in the montane dioecious herb *Valeriana edulis*. Ecological Society of America
- 46 Pratt, J.D. **, **Mooney, K.A.** 2013. Clinal adaptation and adaptive plasticity in *Artemisia californica*: Implications for the response of a foundation species and its arthropod community to predicted climate change. Ecological Society of America
- 45 Pratt, R. ***, Treseder, K.K., Burger, J.C., Preston, K., **Mooney, K.A.** 2013. Assessing the importance of arthropod abundance, community composition, and habitat structure as determinants of habitat quality for Cactus Wren (*Campylorhynchus brunneicapillus*). Ecological Society of America
- 44 Singer, M.S., Clark, R.E., Johnson, E.R., Lichter-Mark, I.H., **Mooney, K.A.** 2013. Herbivore dietary specialization increases ant predation on temperate forest caterpillars. Ecological Society of America
- 43 Abdala-Roberts, L. **, Parra-Tabla, V., Campbell, D.R., **Mooney, K.A.** 2013. Top-down and bottom-up forces shape herbivore selection on plant traits. Gordon Research Conference on Plant-Herbivore Interactions
- 42 Moreira, X. *** and **Mooney, K.A.** 2013. Influence of plant genetic diversity on interactions between higher trophic levels. Gordon Research Conference on Plant-Herbivore Interactions

- 41 Petry, W.K.** , **Mooney, K.A.** 2013. *Valeriana edulis*, a system for studying the mechanisms of plant genetic effects on arthropod communities in the context of climate change. Gordon Research Conference on Plant-Herbivore Interactions
- 40 Pratt, J.D.** , **Mooney, K.A.** 2013. Clinal adaptation and adaptive plasticity in *Artemisia californica*: Implications for the response of a foundation species and its arthropod communities to predicted climate change. Gordon Research Conference on Plant-Herbivore Interactions
- 39 Singer, M.S., Lichter-Marck, I.H., Farkas, T.E., Whitney, K.D., **Mooney, K.A.** 2013. Herbivore diet breadth mediates predation risk and trophic cascade strength. Gordon Research Conference on Plant-Herbivore Interactions
- 2012
- 38 Petry, W.K.** , McKinney, A.M., Inouye, D.E., Soule, J.D., **Mooney, K.A.** 2012. Warming up to changing trait frequencies: Rapid, climate change-induced shifts in population sex ratios along an elevation gradient. Ecological Society of America
- 37 **Mooney, K.A.**, Petry, W.K.** , Abdala-Roberts, L.** , Moreira, X. 2012***. Plant mediation of ant-aphid interactions: Effects across a genetic hierarchy. Ecological Society of America
- 36 Singer, M.S., Lichter-Marck, I., Farkas, T.E., **Mooney, K.A.** 2012. Consequences of herbivore diet breadth for bird predation and parasitism. Ecological Society of America
- 35 Abdala-Roberts, L.** , **Mooney, K.A.** 2012. Examining the mechanisms by which environmental and plant genetic variation influence tritrophic interactions in a simple food web. Ecological Society of America
- 34 **Mooney, K.A.**, Pratt, J.D., Schreck, T.S. 2012. Research on arthropod communities in Orange County. UC-Irvine Center for Environmental Biology Orange County research workshop
- 2011
- 33 Pratt, J.D.** , **Mooney, K.A.**, Campbell, D.R. 2011. Assessing clinal variation and elevational range limits in *Ipomopsis aggregata*. Ecological Society of America
- 32 Schreck, T.K.** , **Mooney, K.A.** 2011 Mycorrhizal interactions and competition with invasive mustard affect arthropod communities on native *Deinandra fasciculata*. Ecological Society of America
- 31 Singer, M.S., Farkas, T.E., Skorik, C.M., **Mooney, K.A.** 2011. Community-wide plant modification of herbivore suppression by birds. Ecological Society of America
- 30 Petry, W.K.** , **Mooney, K.A.** 2011. Sex-biased and variable herbivory parallel clinal variation in plant sex ratios along an elevational gradient. Ecological Society of America
- 29 **Mooney, K.A.**, Pratt, R.T.** , Hanna, V.* 2011. Plant mediation of tritrophic interactions. Ecological Society of America
- 2010
- 28 Petry, W.K.* , Perry, K.I.* , **Mooney, K.A.** 2010. Ant-aphid interactions are mediated by host plant sex and ant colony nutritional status. Ecological Society of America
- 27 Pratt, J.D.** , **Mooney, K.A.** 2010. Plant adaptation to a resource cline has consequences for plant-herbivore interactions. Ecological Society of America
- 26 Singer, M.S., Farkas, T.E., **Mooney, K.A.** 2010. Trade-off between food quality and enemy-free space in an assemblage of polyphagous forest caterpillars. Ecological Society of America
- 25 **Mooney, K.A.**, Halitschke, R., Kessler, A., Agrawal, A.A. 2010. Evolutionary tradeoffs in plants mediate the strength of trophic cascades. Gordon Research Conference on Plant-Herbivore Interactions
- 24 Schreck, T.K. and **Mooney, K.A.** 2010. Effects of exotic mustard on native insect communities in California grasslands. California Invasive Plant Council Symposium
- 2009
- 23 Singer, M.S., Farkas, T.E., **Mooney, K.A.** 2009. Advantage of specialist over generalist temperate forest caterpillars at avoiding bird predation. Ecological Society of America
- 22 **Mooney, K.A.**, Gruner, D.S., Barber, N.A., Philpott, S.M, Van Bael, S.A., Greenberg, R. 2009. Cascading effects of birds, bats and lizards: A meta-analysis of terrestrial insectivore exclusion studies. Ecological Society of America
- 2008

- 21 **Mooney, K.A.**, Agrawal, A.A., Halitschke, R., Kessler, A. 2008. Predator-aphid interactions on 16 milkweed species: A phylogenetic perspective on indirect defense. Ecological Society of America
- 20 Farkas, T.E., **Mooney, K.A.**, Singer, M.S. 2008. Top-down impacts on insect herbivores: Bird and spider predation on temperate forest caterpillars. Ecological Society of America
- 2007
- 19 Philpott, S.M., Van Bael, S.A., Greenberg, R., Bichier, P., Barber, N., **Mooney, K.A.**, Gruner, D.S. 2007. Birds as predators in tropical agroforestry systems. Ecological Society of America
- 18 **Mooney, K.A. 2007**. Community impacts of context dependence in ant-aphid mutualisms. Ecological Society of America
- 1998-2006
- 17 **Mooney, K.A.**, Agrawal, A.A. 2006. Individual and combined influence of predators and heritable plant traits on arthropod communities of common milkweed (*Asclepias syriaca*). Ecological Society of America
- 16 **Mooney, K.A.**, Agrawal, A.A. 2005. Population dynamics of *Aphis nerii* and *A. asclepiadis* on milkweed (*Asclepias syriaca*): Influences of plant resistance traits, mutualists, and predators. Ecological Society of America
- 15 **Mooney, K.A.** 2004. Indirect emergent properties of bird and ant effects on ponderosa pine growth and phloem chemistry. Ecological Society of America
- 14 **Mooney, K.A.** 2004. Non-additive effects of birds, ants, and phloem chemistry on ponderosa pine canopy arthropods. Gordon Research Conference on Plant-Herbivore Interactions
- 13 **Mooney, K.A.** 2003. Symmetry and strength of bird-ant interactions in ponderosa pine canopies. Ecological Society of America
- 12 **Mooney, K.A.** 2003. Individual and combined effects of birds and ants on spiders in ponderosa pine canopies. Arachnological Society of America (Awarded best student talk)
- 11 **Mooney, K.A.** 2003. Intermediate predators determine whether birds control aphids in ponderosa pine canopies. Entomological Society of America (Awarded best student talk)
- 10 **Mooney, K.A.** 2002. Canopy foraging birds modify ant-aphid mutualism in ponderosa pine forests. Ecological Society of America
- 9 **Mooney, K.A.** 2001. Tri-trophic interactions and multiple predator effects in the canopies of ponderosa pine forests. Ecological Society of America
- 4-8 **Mooney, K.A.** Five presentations at the annual meeting of the Guild of Rocky Mountain Population Biologists, 1998-2002
- 1-3 **Mooney, K.A.** Three presentations to the High Country Lepidopterist Society, 1998-2001

TEACHING & MENTORING

Courses (2007-)

[Graduate level*; Courses at UC-Irvine unless otherwise noted; Rocky Mountain Biological Lab = RMBL]

UC-Irvine, Instructed courses

BioSci 2B: Freshman Seminar
 E107: Seminar in Ecology and Evolution
 E184: Insect Biodiversity
 E166: Field Biology
 E201*: Departmental Seminar
 E221*: Advanced topics in Ecology

Rocky Mountain Biological Laboratory, Instructed courses

Methods in Field Ecology

Organization for Tropical Studies

Faculty instructor, La Selva Biological Station (Spring 2010; no instructor evaluations)

Undergraduate Mentoring

[Honors thesis[†]; obtained independent funding[§]; went to graduate school in ecology^{}; author on publication[†]]*

UC-Irvine

[80 students [\approx 3.3 quarters ea.], 15 theses, 8 independent funding, 7 went to graduate school in ecology, 5 co-authors]

Mario Mariotta^{*§} (2007-2008), Jason Kim (2009), Suleiman Saroia (2009-2010), Amanda Thompson^{†§} (2009-2010), Annie Vo (2009-2010), Brian Wardell^{†*} (2009-2010), Jason Wu (2009-2010), Laura Ashmore (2009-2010), Jason Kim (2009-2010), Trung Nguyen (2009-2010), Michelle Rastegar (2009-2010), Vicky Wiraatmadja^{†§*} (2009-2010), Scott David^{†§**} (2009-2011), Victoria Hanna^{†§**} (2009-2012), Satin Zarkar (2010), Deborah Tsai (2010-2011), Dung Tran (2010-2011), John Powers (2010-2011), John Nyguen^{†§} (2010-2011), Natalie Chau (2010-2011), Nicole Ho (2010-2011), Rose Chang (2010-2011), Thi Tran[†] (2010-2011), Valerie Chavez (2010-2011), Carl Supnet^{†§} (2010-2012), Chi-hui Tan (2010-2012), Heros Amerkhanian (2010-2012), Lawrence Liu^{§†} (2010-2012), Hong Chen (2010-2012), Shaun Hu (2010-2012), Wen-chi Ho (2010-2012), Alain Phan (2011), Alvis Lee (2011), Lauren Simpson (2011), Thao Dao (2011), Andrew Datu[†] (2011-2012), Stephanie Liu (2011-2012), Tricia Lee^{*} (2011-2012), Chelsea Hertler (2011-2013), Kristina Dea[†] (2013-2015), Kaitlyn Schimizu[†] (2013-2015), Jonathan Nguyen (2012), Alan Phan (2012-2013), Thanh Pham (2012-2013), Roman Guerrero (2012-2013), Elizabeth Mack (2012-2013), James Su (2012-2013), Alex Hoang (2013-2014), Gary Laborada (2012-2014), Michelle Lin^{*} (2013-2014), Mohamad Abdel (2014-2015), Elizabeth Guirges (2014-2015), Jasmine Gill (2014-2015), Tessa Shates^{**} (2014-2015), Alvin Wu (2014-2015), Elena Aguilar (2015-2016), Valente Ayala (2015-2016), Amanda Dieu (2015-2016), Jonathan Dwilksono (2015-present), Catherine Le (2015-present), William Nubla (2015-2016), Nicole Tamura (2015-2016), Jonathan Dwilaksono[†] (2015-2017), Catherine Le[†] (2015-2017), Nicole Tamura (2015-2016), Tram Dang (2016-2019), Sue Hong (2016-2017), Jovanny Lopez (2016-2017), Brianne Nguyen (2016-2017), Michelle Sue[†] (2016-2017), Sharon Chen (2017-2019), Kyle Dakota Killian[†] (2017-2019), Tory Clois Jaimez (2018-2019), Ashwini Athreya (2018-2018), Sreyroth Loa (2018-2019), Amy Panes Sofranek (2018-2019), Michelly Claudia Hadisurja (2018-2019), Yinan Fu (2018-2019), Hai-Dang K. Nguyen (2018-2019), Ziwei Wang (2018-2019), Kuangli Xu (2018-2019), Hanh Tran (2018-2019), Haley Cole Heesch (2018-2019)

Rocky Mountain Biological Laboratory

[11 students, 7 went to graduate school in ecology]

Will Petry^{*} (2009), Kayla Perry^{**} (2009), Mitchel Lopez^{**} (2010), Aleshia Fremgen^{**} (2010), John Dryburgh^{**} (2011), Sarah Rudeen[†] (2011), Guadalupe Flores (2013), Joe Phillips^{**} (2013), Annika Nelson^{**} (2014), Alice Theibault (2014), Anna Chicas-Mosier^{**} (2014), Matt Hecking (2015), Jacob Schurkman (2016), Guillermo Zapata (2017), Keegan Sentner (2018), Nanh Nguyen (2019)

Cornell University

[5 students; 1 thesis, 2 went to graduate school in ecology]

Patricia Jones^{**} (2005), R. Alex Smith^{**} (2006-2007), Kelly Goodsell (2006), Laura Kroon (2006), Jessica Goldstein (2007)

University of Colorado

[12 students; 2 theses, 2 independent funding, 4 went to graduate school in ecology]

Mark Gillian (2000), Riley Pratt* (2000), Jennifer Rohrs* (2000), John Haloin*** (2000-2002), Charlie Abernathy (2001), Kim Ballare* (2001), Chris Gocha (2001), Jose Becerril (2002), Colin Gotleib (2002), Kunal Mandal†§+ (2002), Chris Morgan (2002), John Schmid§ (2002)

Graduate, Post-graduate & Postdoctoral Mentoring

Graduate students – committee chair

- 2021- Lydia Dean, PhD. thesis in progress
 2020- Joseph Spaziano, PD. thesis in progress
 2019- Tyler Zarubin, PhD. thesis in progress
 2016-2021 Nayeli Carvajal, Ph.D. Bottom-up and top-down cascading effects of climate change on herbivore–plant interactions
 2015-2021 Jordan Croy, Ph.D. Drivers of plant local adaptation and consequences for multi-trophic interactions
 2015-2019 Annika Nelson, Ph.D. The effects of climate change and biodiversity loss on mutualisms
 2013-2018 Cee Nell, Ph.D. From plant to predator: indirect interactions mediate plant resistance against herbivores
 2013-2015 Daniel Sheng, M.A. Assessing climatic drivers of clinal variation in functional traits and local adaptation of a long-lived shrub (*Artemisia californica*) along a latitudinal gradient
 2010-2016 Will Petry, Ph.D. Population and community consequences of ecological differences between the sexes
 2010-2014 Luis Abdala-Roberts, Ph.D. Ecological and evolutionary consequences of bottom-up and top-down effects in tri-trophic systems
 2008-2013 Jessica D. Pratt, Ph.D. Clinal adaptation and phenotypic plasticity in *Artemisia californica* functional traits: Implications for arthropod community structure and plant adaptation to a changing environment
 2008-2012 Tadj Schreck, M.A. Effects of *Brassica nigra* and plant–fungi interactions on the arthropod community of *Deinandra fasciculata*

UC-Irvine Graduate students – committee membership

Mary Anderson (M.A., 2007-2009), Emily Daniels (Ph.D., 2008-2013), Lorelee Larios (Ph.D., 2007-2009), Mathew Whiteside (Ph.D., 2007-2011), Michele Ontiveros (Ph.D., 2010-2013), Daniela Bruckman, (Ph.D., 2009-2014), Susan Finkebein (Ph.D., 2009-2014), Anne Kelly (Ph.D. Earth System Science, 2009-2014), Kate Gallagher (Ph.D., 2011-2017), Emily Griffoul (M.S., 2013-2016), Kerianne Murphy (Ph.D., 2013-2019), Wilnelia Recart-Gonzalez (Ph.D., 2013-2019), Daniel Winkler (Ph.D., 2013-2017), Laura Elsbery (Ph.D., 2014-2019), Matt Garrabone (Ph.D., 2014-2017), John Martin (Ph.D., 2014-2020), Ben Schlau (Ph.D., 2014-2020), Greg Vose (Ph.D., 2014-2021), John Powers (Ph.D., 2015-2020), Piper Wallingford (Ph.D., 2015-2020), Vanessa Machuca (M.S., 2018-2020), Cindy Li (Ph.D., 2018- present), Alberto Sandoval (Ph.D., 2020- present), Christine Bonadonna (Ph.D., 2020- present), Ryan Beshai (Ph.D., 2020- present)

External Graduate students – committee membership

Moria Robinson (UC-Davis Ph.D., 2014-2018), Micah Freedman (UC-Davis Ph.D., 2016-present)

Graduate students – advancement exam

Rosemary Bryne (2008), Forest Hoffman (2012), Caitin Looby (2014), Sam Mahanes (2020), Nikki Fiore (2019)

Graduate students – thesis opponent

Matt Barbour (Ph.D. University of British Columbia, 2016)
 Kim Moritz (Ph.D. SLU [Swedish Agricultural University], 2016)

Alvaro Gaytan (Ph.D. SLU [Swedish Agricultural University], 2022)

Graduate students – visiting scholars

Alba Lazaro-Gonzalez (University of Granada, Spain, 2014)

Sara Castro-Coba (Donana Biological Station, Spain, 2016)

Science educators

Catherine Prenot (2009, through NSF Research Experience for Teachers)

Postdoctoral Researchers supervised

Riley Pratt (2010, 2012), Xoaquin Moreira (2012-2013), Angelos Katsanis (2013-2017), Maria Meza-Lopez (2016-2018), Carla Vasquez-Gonzalez (2021- present)

SERVICE

Board of Directors

2019-pre Secretary, Rocky Mountain Biological Laboratory

2016-2019 President, Rocky Mountain Biological Laboratory

2014-2016 Member, Rocky Mountain Biological Laboratory

Professional Society Memberships

2008-pre Rocky Mountain Biological Laboratory

2003-pre Entomological Society of America

1999-pre Organization for Tropical Studies

1998-pre Ecological Society of America

Journal Editorial Boards

2018-pre Faculty of 1000

2016 Current Opinions in Insect Science (special issue editor)

2014-pre Functional Ecology

2012-pre Oikos

Ad hoc Review

Journals

Agricultural & Forest Entomology, American Midland Naturalist, American Naturalist, Annals of the Entomological Society of America, Axios, Basic & Applied Ecology, Biological Invasions, Biological Journal of the Linnaean Society, Biotropica, BMC Ecology, Conservation Biology, Current Opinion in insect Science, Ecography, Ecological Entomology, Ecology, Ecology Letters, Ecoscience, Ecosystems, Environmental Entomology, Evolution, Folia Zoologica, Forest Ecology & Management, Functional Ecology, Journal of Animal Ecology, Journal of Ecology, Journal of Field Ornithology, Journal of the Lepidopterist Society, Molecular Ecology, New Phytologist, Oecologia, Oikos, Plant Ecology & Divers, PLoS ONE, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B, Quarterly Review of Biology, Science, Trends in Ecology & Evolution

Academic Presses

Cambridge University Press, Oxford University Press, University of California Press

Funding agencies

National Science Foundation, Israeli Science Foundtaion, German Research Foundation, Netherlands Organization for Scientific Research, Murdoch Charitable Trust, European Commission

Panelist Review

2019 NSF Division of Environmental Biology (panel)
 2015 UCMEXUS (graduate student fellowship panel)
 2014 NSF Division of Environmental Biology (pre-proposal panel)
 2013 NSF Division of Environmental Biology (pre-proposal panel)
 2001-2010 Xerces Society, Joan DeWind Fellowship Panel
 2008 NSF Division of Environmental Biology (DDIG panel)

Academic Committee Service

Rocky Mountain Biological Laboratory

2011-2014 Chair, Douglas Distinguished Lecturer Selection Committee
 2011-2012 Chair, Research Facilities and Renovation Committee

Organization for Tropical Studies

2009-pre Member, Board of delegates

External promotion file review

2011-pre 8 reviews

University of California - System

2011-pre UC Natural Reserve System Advisory Committee

UC-Irvine - Campus

2018-pre UCI Naturescape committee
 2016-pre Faculty Director, UCI-Nature
 2014 Graduate Division, Graduate Opportunity Fellowship Awards Committee
 2013- Ad hoc advancement and promotion committee (outside of home department) (1)
 2009-pre UC-Irvine delegate to Organization for Tropical Studies
 2008-pre Mathias Grant Proposal Review Committee

UC-Irvine - School of Biological Sciences

2013-pre Arboretum Oversight Committee (Chair)
 2013-pre Greenhouse Oversight Committee
 2012-2013 Faculty Research and Travel Awards Committee
 2009-2011 Executive Committee

UC-Irvine - Department of Ecology & Evolutionary Biology

2019-pre Departmental website committee (co-Chair)
 2018-pre Field course classroom renovation committee (Chair)
 2009-pre Undergraduate majors committee
 2007-pre Excellence in Research thesis reviews (14 theses)
 2007-pre Ad hoc advancement and promotion committees (10 committees, 4 as Chair)
 2016-2017 Seminar committee (Co-chair)
 2016-2017 Faculty search, Associate professor in Ecology & Evolutionary Biology
 2012-2013 Faculty search, Assistant professor in Ecology & Evolutionary Biology
 2011-2012 Seminar committee (Chair)

- 2011-2012 Faculty search, Assistant professor in Ecology & Evolutionary Biology
- 2010-2011 Faculty search, Assistant professor in Ecology & Evolutionary Biology
- 2009-2010 Website manager, Ecology & Evolutionary Ecology Group
- 2008-2010 Graduate prescription committee
- 2007-2008 Undergraduate commencement committee
- 2007-2008 Graduate admissions committee

Community Outreach

- 2012- Irvine Unified School District (CA) Career Fair (2 hours weekend meetings describing careers in the environmental sciences, annually)
- 2012- Adult Science Tour, Rocky Mountain Biological Laboratory (4 hour presentation and field trip with public, annually)
- 2011- Kid's Nature Camp, Rocky Mountain Biological Laboratory (1 hour science education activity with K-6 students, annually)
- 2010 Turtle Rock Elementary School, Irvine, CA (1 hour presentation to K-6 students)
- 2010 NSF-funded GK-12 Guest Speaker (1 hour workshop with local science teachers)
- 2010 Irvine Unified School District (CA) Ask a Scientist Night (2 hours assisting students developing science fair projects)
- 2009 RMBL Adult Science Tour (4 hour presentation and field trip with public)
- 2008 Turtle Rock Elementary School, Irvine, CA (1 hour presentation to K-6 students)