RUTH ARABELLE HUFBAUER

Department of Agricultural Biology
Graduate Degree Program in Ecology
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EDUCATION

Ph.D. Entomology, Cornell University, 1999
B.A. Development studies, University of California, Berkeley, 1991

ACADEMIC APPOINTMENTS

2012 Full Professor, Agricultural Biology, Colorado State University
2006 Associate Professor, Agricultural Biology, Colorado State University
2000 Assistant Professor, Agricultural Biology, Colorado State University
2000 Postdoctoral researcher, Ecology and Evolution, Cornell University
1999 Postdoctoral research associate, Entomology, Cornell University
1992 Research technician, Entomology, University of California Berkeley

LEADERSHIP

Director, Graduate Degree Program in Ecology, Colorado State University (2020-)
PI, Faculty Success NSF Advance Grant based out of the Office of the Vice Provost for Faculty Affairs (2021-2025)
Vice Chair, Faculty Council (2020-2021)
Co-Chair, President's Council for Gender Equity on the Faculty (2018-2020)
Co-Founder, EnCircle Faculty mentoring program (2018-)
Chair, Diversity Catalyst Team, College of Agriculture (2018-2019)
Lead, Women in Agriculture Faculty Club (2018-2020)
Lead PI, NSF Research Network Coordinator (2005-2013)
Chair, Education Committee (2015-2016; 2019-2020)
Lead PI on proposal effort, NSF ADVANCE Program (2020)

FELLOWSHIPS, HONORS, AWARDS, PRESS

2026 Come to the Table Inclusive Excellence Award, CSU College of Agricultural Sciences
2023 Interviewed for Big Biology podcast (Dec. 2023 release)
2019 HERS Leadership program fellow – one of 4 women university-wide supported to go to this program in 2019
2018 Colorado State University liaison to The Butterfly Pavilion
2017 Colorado State University Inaugural Diversity Impact Award
2016 Charles N. Shepardson/NACTA Meritorious Teaching Award
Agropolis Foundation Senior Visiting Scientist
LabEX CeMEB Guest scientist
2015 The People behind the Science – interview and podcast, episode 238 (http://www.peoplebehindthescience.com/dr-ruth-hufbauer/)

Interviewed for Science magazine for article on bias in peer review (http://news.sciencemag.org/funding/2015/02/little-bias-peer-review-scores-can-translate-big-money-simulation-finds)

2010 National Institute of Agricultural Research (INRA) guest scientist.
2009 Fulbright Fellowship (Franco-American commission)
2001 USDA NRI New Investigator award
1998 Whittacker Outstanding Presenter Award
1996 NSF Doctoral Dissertation Improvement Award
1993 NSF Graduate Research Fellowship
1988 Phi Beta Kappa, University of California, Berkeley

Awards (major only) to students and postdocs under my direct supervision

2024 NSF Postdoctoral Research Fellowship – Eliza Clark
USDA PreDoctoral Fellowship – Marcel Jardeleza
2021 USDA PreDoctoral Fellowship – Eliza Clark
2020 NSF Graduate Research Fellowship – Lily Durkee
2017 Sustainability Leadership Fellow, School of Global Environmental Sustainability, Colorado State University – Stacy Endriss
2016 Vice President for Research Fellow, Colorado State University – Stacy Endriss
2015 NSF Postdoctoral Research Fellowship – Kathryn Turner
NSF Dissertation Improvement Grant – Stacy Endriss
2014 NSF Graduate Research Fellowship – Michael Koontz
USDA Postdoctoral Fellowship – Ellyn Bitume
CSU Programs for Research and Scholarly Excellence Fellowship – Meagan Vahsen
2011 Swiss NSF Postdoctoral Fellowship – Sabrina Kumschick
2006 EPA STAR Fellowship – Amy Blair

PROFESSIONAL DEVELOPMENT

2026 Using Applied and Authentic Assessments for Student Career Readiness
Mentor well workshops: Fostering Mental Health and Well-being; Addressing Access: Building Connections and Community; Fostering Professional Development
2025 Common Myths of College Teaching
2023 Mentor well workshop: Promoting Independence
2022 Mentor well workshops: Aligning Expectations; Assessing Understanding
2021 Faculty search chair training
2020 Holding an equitable and inclusive space as a facilitator
Equity in Graduate Admissions Virtual Workshop
2019 HERS Institute leadership training – 4-day, off-campus leadership training
Intersectional Takeaways: Employee Campus Climate Survey
How to Get Involved with Advancing Gender Equity - a new model for CSU
Dealing with Difficult People
2018 Culturally Responsive Teaching isn't "just good teaching"
Mindset for Supervisors
2017 Cultivating Inclusion Matters
Inclusive Classroom Workshop
2015 Faculty Institute for Inclusive Excellence

NCORE - National Conference on Race and Ethnicity in Higher Education
2014 FastTrack Leadership Intensive, North Carolina
2010 Doing the Scholarship of Teaching and Assessment as if Learning Matters Most
2008 Semester long graduate seminar on Effective mentoring
2005 The Teacher as Actor

PUBLICATIONS (count is of peer-reviewed papers only) h-index: 45 overall, 29 since 2020 *(accessed on google scholar December 2025)*

*graduate students and postdocs currently or formerly directly under my supervision
¥ undergraduate students, † graduate students in other labs

2026

128. Durkee*, LF, CM Bossu, KC Ruegg, BR Forester, PA Opler, RA **Hufbauer**. Summer rainfall drives adaptation with gene flow in a widespread butterfly. *In Press.* **Molecular Ecology**.

127. Vahsen*, M, J Van Ee, D Gamba, T Maxwell, N Pirtel, S Romero, D Barnett, O Baughman, D Ensing, RA Gill, M Holdrege, RA **Hufbauer**, R Hufft*, C Moffat, J Ott, L Pyle, C Schroeder, E Schupp, R Shriver, M Stemkovski, A Symstad, A Urza, D Blumenthal, C Brown, M Germino, M Hooten, J Lasky, EA Leger, L Porensky, P Adler. *In press.* Eco-evolutionary context modifies a destructive plant invader's response to climate. **New Phytologist**.

126. Van Ee, J, M Vahsen, D Gamba, T Maxwell, B Davidson, B Lazarus, L Porensky, RA **Hufbauer**, M Germino, PB Adler, J Lasky, M Hooten. 2026. Data reconciliation in multi-trait experiments with kinship ordination. **Methods in Ecology and Evolution.** 17:1799-1817 https://doi.org/10.1111/2041-210x.70284

125. Clark*, EI, DW Bean, EV Bitume, AR Stahlke, PA Hohenlohe, RA **Hufbauer**. 2026. Adaptation at the edge: Patterns of local adaptation and genetic variation during a contemporary range expansion. **Evolution**. 80:854-865. https://doi.org/10.1093/evolut/qpag015

124. Olazcuaga*, L, BA Melbourne, SW Nordstrom, RA **Hufbauer**. Density dependence impedes evolutionary rescue. 2026. **Ecology Letters**. 29:e70312 https://doi.org/10.1111/ele.70312

2025

123. Gamba, D, M Vahsen*, ... RA **Hufbauer**, ... (57 authors total), P Adler, J Lasky. 2025. Local adaptation to climate has facilitated the global invasion of cheatgrass. **Nature Communications.** https://doi.org/10.1038/s41467-025-64799-9

122. Billotte*, J, L McCallister, RA **Hufbauer**, RP Reading. Cascading effects of grazing intensity on predatory arthropod and parasitoid densities. **Ecological Entomology**. 50:779-784. https://doi.org/10.1111/een.13444

121. Clark*, EI, DW Bean, EV Bitume*, AR Stahlke, PA Hohenlohe, RA **Hufbauer**. 2025. Heritability of body size matches trait evolution in the range expansion of a biological control agent. **Current Research in Insect Science**. 7: 100102 https://doi.org/10.1016/j.cris.2025.100112

120. Ghosh*, E, M Wallace, RA **Hufbauer**. 2025. 'Disease-smart' outcrossing can enhance individual fitness and increase survival via immune priming against pathogens: New approaches

to strengthen genetic rescue efforts. **Insect Conservation and Diversity**. http://doi.org/10.1111/icad.12842

119. Schulz, AN, NP Havill, TD Marsico, MP Ayres, KJK Gandhi, DA Herms, AM Hoover, RA **Hufbauer**, AM Liebhold, KF Raffa, KA Thomas, PC Tobin, DR Uden, AM Mech. 2025. What is a specialist? Quantifying host breadth enables impact prediction for invasive herbivores. **Ecology Letters**. 28:e70083 https://doi.org/10.1111/ele.70083

2024

118. Benning, JW, EI Clark*, RA **Hufbauer**, C Weiss-Lehman. 2024. Environmental gradients mediate dispersal evolution during biological invasions. **Ecology Letters**. 27: e14472 https://doi.org/10.1111/ele.14472

117. Durkee*, LF, L Olazcuaga*, BA Melbourne, RA **Hufbauer**. 2024. Immigration delays but does not prevent adaptation following environmental change: experimental evidence. **Journal of Evolutionary Biology.** 37: 665–676. https://doi.org/10.1093/jeb/voae031

116. Tittes†, SB, C Weiss-Lehman, NC Kane, RA **Hufbauer**, NC Emery, BA Melbourne. 2024. Evolution is more repeatable in the introduction versus range expansion phase of colonization. **Evolution Letters**. qrad063 https://doi.org/10.1093/evlett/qrad063

Olazcuaga* L, and RA **Hufbauer**. 2024. Commentary: Evolution fails to rescue a population in an increasingly variable environment. **PNAS** 121: e2414877121. https://doi.org/10.1073/pnas.2414877121

2023

115. Nordstrom†, SW, RA **Hufbauer**, L Olazcuaga*, LF Durkee*, BA Melbourne. 2023. How density dependence, genetic erosion, and the extinction vortex impact evolutionary rescue. **Proceedings of the Royal Society of London**. 290*:* https://doi.org/10.1098/rspb.2023.1228

114. Olazcuaga*, L, B Lincke, S Delacey, LF Durkee, BA Melbourne, RA **Hufbauer**. 2023. Population demographic history and evolutionary rescue: influence of a bottleneck event. **Evolutionary Applications.** 16:1483-1495 https://doi.org/10.1111/eva.13581

113. Migeon A, P Auger, O Fossati-Gaschignard, RA **Hufbauer**, M Miranda, G Zriki, M Navajas. 2023. Climate of origin influences how a herbivorous mite responds to drought-stressed host plants. **Peer Community Journal.** https://doi.org/10.24072/pcjournal.272

112. Durkee*, LF, L Olazcuaga*, BA Melbourne, R Szymanski¥, 2023. RA **Hufbauer**. Genetic mixing facilitates adaptation to a novel environment. **Ecological Entomology.** 48:517–522. https://doi.org/10.1111/een.13242

111. Clark*, EI, AR Stahlke†, JF Gaskin, DW Bean, PA Hohenlohe, RA **Hufbauer**, EV Bitume*. 2023. Fitness and host use remain stable in a biological control agent after many years of hybridization. **Biological Control.** 15:2089–2099 https://doi.org/10.1016/j.biocontrol.2022.105102

110. Uden, DR, A Mech, AN Schulz*, DA Herms, AM Hoover, KJK Gandhi, CR Allen, N Havill, M Ayres, RA **Hufbauer**, A Liebhold, T Marsico, K Raffa, K Thomas, P Tobin. 2023. Phylogenetic risk assessment is robust for forecasting the impact of non-native insects on North American trees. **Ecological Applications** e2671 https://doi.org/10.1002/eap.2761

109. Buenrostro*, J, C Cooke, RA **Hufbauer**. 2023. New records of Elm Leaf Beetle (*Xanthogaleruca luteola*) parasitoids in Colorado with notes on predators. **Southwestern Entomologist.** 47:807-820. https://doi.org/10.3958/059.047.0402

2022

108. Olazcuaga*, L, J Foucaud, C Deschamps, A Loiseau, J-L Claret, R Vedovato, R Guilhot, C Sévely, M Gautier, RA **Hufbauer**, NO Rode, A Estoup. 2022. Rapid and transient evolution of local adaptation to seasonal host fruits in an invasive pest fly. **Evolution Letters.** 6:490-505. https://doi.org/10.1002/evl3.304

107. Clark*, EI, EV Bitume*, DW Bean, AR Stahlke†, PA Hohenlohe, RA **Hufbauer**. 2022. Evolution of life history and dispersal traits during the range expansion of a biological control agent. **Evolutionary Applications.** 15:2089–2099 https://DOI: 10.1111/eva.13502

106. Buenrostro*, JH and RA **Hufbauer**. 2022. Urban environments are associated with invasive insect abundance on city trees. **Journal of Urban Ecology. 8**:1-12. https://doi.org/10.1093/jue/juac011

105. Benning†, JW, RA **Hufbauer**, C Weiss-Lehman. 2022. Increasing temporal variance leads to stable species range limits. **Proceedings of the Royal Society of London, B.** https://doi.org/10.1098/rspb.2022.0202

104. Endriss*, SB, C Alba*, RA **Hufbauer**. 2022. Using invasions to improve plant defense theory. **Entomologia Experimentalis et Applicata.** 170:632–645. https://doi.org/10.1111/eea.13195

103. Alred†, B, RA **Hufbauer**, M Szűcs. 2022. Impact and phenology of the biological control agent, *Hypena opulenta* on *Vincetoxicum nigrum* in Michigan. **Biological Control Science and Technology. 32:671-684.** https://doi.org/10.1080/09583157.2022.2040950

102. Stahlke†, AR, EV Bitume*, AZ Ozsoy, DW Bean, A Veillet, MI Clark, EI Clark*, P Moran, RA **Hufbauer**, PA Hohenlohe. 2022. Hybridization and range expansion in tamarisk beetles (Diorhabda spp.) introduced to North America for classical biological control. **Evolutionary Applications.** 15:60-77. https://doi.org/10.1111/eva.13325

101. Jardeleza*, M-K G, JB Koch, IS Pearse, CK Ghalambor, RA **Hufbauer**. 2022. The roles of phenotypic plasticity and adaptation in morphology and performance of an invasive species in a novel environment. **Ecological Entomology**. 47:25-37 https://doi.org/10.1111/een.13087

100. Karimzadeh, J, RA **Hufbauer**, BC Kondratieff, JG Hardin, AP Norton, 2022. A survey of the parasitoid complex of Dalmatian toadflax weevils in Colorado. **Biological Control Science and Technology** 32:663-669 http://doi.org/10.1080/09583157.2021.2013441

2021

99. Olazcuaga†, L, NO Rode, J Foucaud, M Gautier, C Deschamps, A Loiseau, N Leménager, P Audio, B Facon, V Ravigné, RA **Hufbauer**, A Estoup. 2021. Evolution of trade-offs across environments following experimental evolution of the generalist *Drosophila suzukii* to different fruit media. **Journal of Evolutionary Biology**. 34:1225–1240. https://doi.org/10.1111/jeb.13878

98. Schulz AN, AM Mech, MP Ayres, KJK Gandhi, NP Havill, DA Herms, AM Hoover, RA **Hufbauer**, AM Liebhold, TD Marsico, KF Raffa, PC Tobin, DR Uden, KA Thomas. 2021 Predicting non-native insect impact: Focusing on the trees to see the forest. **Biological Invasions.** 23:3921–3936 https://doi.org/10.1007/s10530-021-02621-5

97. Szucs, M, EI Clark, U Schaffner, J Littlefield, C Hoover, RA **Hufbauer**. 2021. The effects of intraspecific hybridization on host specificity of a weed biocontrol agent. **Biological Control.** https://doi.org/10.1016/j.biocontrol.2021.104585

96. Gaskin, JF, SB Endriss, C Fettig, RA **Hufbauer**, AP Norton, R Sforza. 2021. One genotype dominates a facultatively outcrossing plant invasion. **Biological Invasions**. 23:1901–1914. https://doi.org/10.1007/s10530-021-02480-0

95. Foucaud, J, RA **Hufbauer**, V Ravigné, L Olazcuaga†, A Loiseau, A Ausset, S Wang, L-S Zang, N Leménager, A Tayeh, A Wyna, P Gneux, E Bonnet, V Dreuilhe, B Poutout, A Estoup, B Facon. **2021.** How do invasion syndromes evolve? An experimental evolution approach using the ladybird *Harmonia axyridis* **Peer Community Journal.** 1:e33 https://doi.org/10.24072/pcjournal.32 Peer review and recommendation at: 10.24072/pci.evolbiol.100096

2020

94. Schulz*, AN, AM Mech, CR Allen MP Ayres, KJK Gandhi, J Gurevitch, NP Havill, DA Herms, RA **Hufbauer**, AM Liebhold, KF Raffa, MJ Raupp, KA Thomas, PC Tobin, and TD Marsico. **2020** The impact is in the details: evaluating a standardized protocol and scale for determining non-native insect impact **NeoBiota** 55: 61-83. https://doi.org/10.3897/neobiota.55.38981

2019

93. Mech, AM, KA Thomas, TD Marsico, DA Herms, CR Allen, MP Ayres, KJK Gandhi, J Gurevitch, NP Havill, RA **Hufbauer**, AM Liebhold, KF Raffa, AN Schulz†, DR Uden, PC Tobin. **2019.** Evolutionary history predicts high-impact invasions by herbivorous insects. **Ecology and Evolution**. 21: 12216-12230 https://doi.org/10.1002/ece3.5709

92. Williams, JL, RA **Hufbauer** and TEX Miller. **2019**. How evolution modifies the variability of range expansion. **Trends in Ecology and Evolution** DOI: 10.1016/j.tree.2019.05.012

91. Gaskin, JF, SM Bogdanowicz, KR Guilbault, RA **Hufbauer**, JA Andrés, U Schaffner, P Weyl, L Williams III. **2019**. Finding the extremes of genetic diversity in an invasion to assist biological control management. **Invasive Plant Science and Management** DOI: 10.1017/inp.2019.16

90. Szűcs M, E Vercken, EV Bitume, RA **Hufbauer**. **2019**. The implications of rapid eco-evolutionary dynamics for biological control. **Entomologia Experiemntalis et Applicata** DOI: 10.1111/eea.12807

89. Weiss-Lehman†, C, S Tittes†, NC Kane, RA **Hufbauer**, BA Melbourne. **2019**. Experimental evidence for the role of gene surfing in range expansions over short time scales. **Proceedings of the Royal Society of London.** 286: 20190231. DOI: 10.1098/rspb.2019.0231

88. Olazcuaga†*, L, NO Rode, J Foucaud, B Facon, V Ravigné, A Ausset, N Leménager, A Loiseau, M Gautier, A Estoup, RA **Hufbauer**. **2019**. Host use of the spotted-wing drosophila (*Drosophila suzukii*): flesh of fruits matters. **Environmental Entomology.** DOI: 10.1093/ee/nvz062

87. Hopper†*, JV, KF McCue, PD Pratt, P Duchesne, ED Grosholz, RA **Hufbauer**. **2019.** Into the weeds: matching importation history to genetic consequences and pathways in two widely used biological control agents. **Evolutionary Applications.** DOI: 10.1111/eva.12755

86. Endriss*, S, M Vahsen*, E Bitume*, J Monroe, K Turner*, AP Norton, RA **Hufbauer**. **2019**. The importance of growing up: juvenile environment influences dispersal of individuals and their neighbors. **Ecology Letters.** 22:45-55. DOI: 10.1111/ele.13166

85. Szűcs*, M, P Salerno, B. Teller, U. Schaffner, J. Littlefield, RA **Hufbauer**. **2018**. The effects of agent hybridization on the efficacy of biological control of tansy ragwort at high elevations. **Evolutionary Applications.** DOI: 10.1111/eva.12726

2018

84. Endriss*, SB, C Alba*, AP Norton, P Pyšek, RA **Hufbauer**. **2018**. Breakdown of a geographic cline explains high performance of introduced populations of a weedy invader. **Journal of Ecology.** 106:699-713 DOI: 10.1111/1365-2745.12845

83. Koontz*, M, M Oldfather†, BA Melbourne, RA **Hufbauer**. 2018. Parsing propagule pressure: Number, not size, of introductions drives colonization success in a novel environment. **Ecology and Evolution.** 8:8043-8054 DOI: 10.1002/ece3.4226

82. Vahsen*, ML, K Shea, CL Hovis†, BJ Teller, RA **Hufbauer**. 2018. Prior adaptation, diversity, and introduction frequency mediate the positive relationship between propagule pressure and establishment success. **Biological Invasions.** 20:2451–2459 DOI: 10.1007/s10530-018-1713-4

2017

81. Szűcs*, M, M Vahsen*, C Hoover¥, C Weiss-Lehman†, BA Melbourne and RA **Hufbauer**. **2017.** Rapid evolution facilitates the growth and spread of colonizing populations. **PNAS** 114:13501-13506. DOI 10.1073/pnas.1712934114

80. Facon, B, A Estoup, RA **Hufbauer**, J Foucaud, A Tayeh†. **2017**. Mating status influences cold tolerance and subsequent reproduction in the invasive ladybird *Harmonia axyridis.* **Frontiers in Ecology and Evolution.** DOI 10.3389/fevo.2017.00108

79. Bitume*, EV, D Bean, AR Stahlke†, RA **Hufbauer**. **2017**. Hybridization affects life-history traits and host specificity in *Diorhabda* spp. **Biological Control** 111:45-52. DOI: 10.1016/j.biocontrol.2017.05.009

78. Stewart¥, GS, MR Morris¥, AB Genis¥, M Szűcs*, BA Melbourne, SJ Tavener, RA **Hufbauer. 2017.** The power of evolutionary rescue is constrained by genetic load. **Evolutionary Applications**. DOI: 10:731-741 DOI: 10.1111/eva.12489

77. Szűcs*, M, BA Melbourne, T Tuff†, C Weiss-Lehman†, RA **Hufbauer**. **2017**. Genetic and demographic founder effects have long-term fitness consequences for colonizing populations. **Ecology Letters**. 20:436-444 DOI: 10.1111/ele.12743

76. Fraimout, A, V Debat, S Fellous, RA **Hufbauer**, J Foucaud, P Pudlo, M-M Marin, DK Price, J Cattel, X Chen, M Deprá, PF Duyck, C Guedot, G Loeb, M Kenis, MT Kimura, I Martinez-Sañudo, M Pascual, MP Richmond, P Shearer, N Singh, K Tamura, A Xuéreb, J Zhang, A Loiseau, A Estoup. **2017**. Deciphering the routes of invasion of *Drosophila suzukii* by means of ABC random forest. **Molecular Biology and Evolution**. 34:980-996.

75. Weiss-Lehman†, C, RA **Hufbauer**, BA Melbourne. **2017**. Rapid trait evolution drives increased speed and variance in experimental range expansions. **Nature Communications**. 8:14303 | DOI: 10.1038/ncomms14303

74. Fettig*, CE, RA **Hufbauer**. **2017**. Reproductive strategy, performance and population dynamics of the introduced weed black henbane (*Hyoscyamus niger*). **Weed Science**. 65:83-96.

73. Rogalski†, M, C Gowler†, C Shaw, RA **Hufbauer**, M Duffy. **2017**. Human drivers of ecological and evolutionary dynamics in emerging and disappearing infectious disease systems. **Philosophical Transactions of the Royal Society B**. 372: 20160043

72. **Hufbauer**, RA. **2017.** In focus: Admixture is a driver rather than a passenger in experimental invasions. **Journal of Animal Ecology**. doi: 10.1111/1365-2656.12600

2016

71. Estoup, A, V Ravigné, RA **Hufbauer**, R Vitalis, M Gautier, B Facon. **2016**. Is there a genetic paradox of biological invasions? **Annual Review of Ecology, Evolution and Systematics**. 47:51-72.

70. Lucy, FE, H Roy, A Simpson, JT Carlton, JM Hanson, K Magellan, ML Campbell, MJ Costello, S Pagad, CL Hewitt, J McDonald, P Cassey, SM Thomaz, S Katsanevakis, A Zenetos, E Tricarico, A Boggero, QJ Groom, T Adriaens, S Vanderhoeven, ME Torchin, RA **Hufbauer**, P Fuller, *et al.* **2016**. INVASIVESNET towards an International Association for Open Knowledge on Invasive Alien Species. **Management of Biological Invasions** 7:131-139 doi: 10.3391/mbi.2016.7.2.01

2015

69. **Hufbauer**, RA, M Szűcs*, E Kasyon¥, C Youngberg¥, M Koontz*, C Richards, T Tuff†, BA Melbourne. **2015.** Reply to Wootton and Pfister: The search for general context should include synthesis with laboratory model systems. **PNAS** 112: E5904. DOI 10.1073/pnas.151721011

68. Drew, JA, KA Amatangelo, RA **Hufbauer**. **2015.** Quantifying the human impacts on Papua New Guinea reef fish communities across space and time. **PLoS One.** 10(10): e0140682

67. **Hufbauer**, RA, M Szűcs*, E Kasyon¥, C Youngberg¥, M Koontz*, C Richards, T Tuff†, BA Melbourne. **2015.** Three dimensions of rescue can avert extinction in a changing environment. **PNAS** 112: 10557–10562. DOI: 10.1073/pnas.1504732112

66. Tayeh, A, RA **Hufbauer**, A Estoup, V Ravigné, Léa Frachon, B Facon. **2015.** Biological invasion and biological control select for different life histories. **Nature Communications**. 6:7268

65. Barney, JN, DR Tekiel, MN Barrios-Garcia, RD Dimarco, RA **Hufbauer**, P Leipzig-Scott*, MA Nuñez, A Pauchard, P Pyšek, M Vítková, BD Maxwell. **2015**. Global Invader Impact Network (GIIN): towards standardized evaluation of the ecological impacts of invasive plants. **Ecology and Evolution.** 5:2878-2889.

64. Migeon, A, P Auger, R **Hufbauer**, M Navajas. **2015**. Genetic traits leading to invasion: plasticity in cold hardiness explains current distribution of an invasive agricultural pest, *Tetranychus evansi* (Acari: Tetranychidae). **Biological invasions**. DOI 10.1007/s10530-015-0873-8

2014

63. Szűcs* M, B Melbourne, T Tuff†, RA **Hufbauer**. **2014**. The roles of demography and genetics in the early stages of colonization. **Proceedings of the Royal Society B** 281: 20141073. DOI: 10.1098/rspb.2014.1073
62. Turner†, KG, RA **Hufbauer**, LH Rieseberg. **2014**. Rapid evolution of an invasive weed. **New Phytologist** 202:309-321.
61. Alba* C, MD Bowers, D Blumenthal, RA **Hufbauer**. 2014. Chemical and mechanical defenses vary among maternal lines and leaf ages in *Verbascum thapsus* L. (Scrophulariaceae) and reduce palatability to a generalist insect. **PloS One** 9 (8): e104889.
60. Colautti, RI, SJ Franks, RA **Hufbauer**, PM Kotanen, M Torchin, JE Byers, P Pysek, O Bossdorf. 2014. The Global Garlic Mustard Field Survey: challenges and opportunities of a unique, large-scale collaboration for invasion biology. **Neobiota** 21:29-47.
59. Fettig* CE, RA **Hufbauer**. 2014. Introduced N. American black henbane (*Hyoscyamus niger*) populations are biennial. **Invasive Plant Science and Management** DOI: 10.1614/IPSM-D-14-00015.1

2013

58. **Hufbauer**†, RA, A Rutschmann†, B Serrate, H Vermeil de Conchard, B Facon. 2013. Role of propagule pressure in colonization success: disentangling the relative importance of demographic, genetic and habitat effects. **Journal of Evolutionary Biology.** †Authors contributed equally to this work. 26:1691–1699. **F1000 recommended reading**
57. Parker, JD, ME Torchin, RA **Hufbauer**, NP Lemoine†, C Alba†, DM Blumenthal, O Bossdorf, JE Byers, AM Dunn, RW Heckman†, M Hejda†, V Jarošík, AR Kanarek, LB Martin, SE Perkins, P Pyšek, K Schierenbeck, C Schlöder, R van Klinken, KJ Vaughn†, W Williams†, LM Wolfe. 2013. Do invasive species perform better in their new ranges? **Ecology** 94:985-994. **F1000 prime recommended reading**
56. Kumschick* S, RA **Hufbauer** C Alba*, DM Blumenthal. 2013**.** Evolution of fast-growing and more resistant phenotypes in introduced common mullein (*Verbascum thapsus*). **Journal of Ecology** 101:378-387.
55. Wilbur*, HD, C Alba*, AP Norton, RA **Hufbauer**. 2013. The effect of insect herbiory on the growth and fitness of introduced *Verbascum thapsus*. **Neobiota**. 19:21-44.
54. Gaskin, JF, RA **Hufbauer**, SM Bogdanowicz. 2013. Microsatellite markers for Russian olive (*Elaeagnus angustifolia*; Elaeagnaceae). **Applications in Plant Sciences**. 1:1300013. doi: http://dx.doi.org/10.3732/apps.1300013
53. Zelikova TJ, RA **Hufbauer**, SC Reed, T Wertin, C Fettig*, and J Belnap. 2013. Eco-evolutionary responses of *Bromus tectorum* to climate change: Implications for biological invasions. **Ecology and Evolution.** 3:1374-1387.
52. Tayeh†, A, A Estoup, RA **Hufbauer**, V. Ravigne, I Goryacheva, IA Zakharov, E Lombaert, B Facon. 2013. Investigating the genetic load of an emblematic invasive species: The case of the invasive harlequin ladybird *Harmonia axyridis*. **Ecology and Evolution** 3:864-871.

2012 and earlier

51. Dunn, AM, ME Torchin, MJ Hatcher, PM Kotanen, DM Blumenthal, JE Byers, CAC Coon, VM Frankel, RD Holt, RA **Hufbauer**, AR Kanarek, KA Schierenbeck, LM Wolfe, SE Perkins. **2012**. Indirect effects of parasites on invasions. **Functional Ecology.** 26:1262-1274.
50. Alba* C, MD Bowers, RA **Hufbauer**. **2012**. Combining optimal defense theory and the evolutionary dilemma model to refine predictions regarding plant invasion. **Ecology** 93:1912-1921.
49. Alba* C, RA **Hufbauer**. **2012**. A biogeographic comparison of *Verbascum thapsus* ecology reveals differences in performance, herbivory, and surrounding plant community. **Biological Invasions.** 14:2505-2518.
48. Roderick GK, RA **Hufbauer** and M Navajas. **2012**. Evolution and biological control. **Evolutionary Applications.** 5:410-423
47. Fauvergue, X, E Vercken, T. Malausa, RA **Hufbauer**. **2012.** The biology of small introduced populations, with special reference to biological control. **Evolutionary Applications** 5:424-443.
46. Wilbur*, HD, RA **Hufbauer**. **2012**. Timing control efforts to limit seedset of common mullein (*Verbascum thapsus*). **Invasive Plant Science and Management**. 5:390-394
45. Blair* AC and RA **Hufbauer**. **2012**. Hybridization and invasion: An experimental test with diffuse knapweed (*Centaurea diffusa* Lam.). **Evolutionary Applications**. 5:17-28.
44. **Hufbauer**, RA, B Facon, V. Ravigné, J Turgeon, J Foucaud†, CE Lee, O Rey, A Estoup. **2011**. Anthropogenically-induced adaptation to invade (AIAI: Contemporary adaptation to human-altered habitats within the native range can promote invasions. **Evolutionary Applications.** 5:89-101.
43. Kumschick S, C Alba*, RA **Hufbauer**, W Nentwig. **2011**. Weak or strong invaders? A comparison of impact between the native and invaded ranges of mammals and birds alien to Europe. **Diversity and Distributions**. 17:663-672.
42. Facon B, RA **Hufbauer**, A. Tayeh†, A. Loiseau, E. Lombaert, R. Vitalis, T. Guillemaud, JG Lundgren, A. Estoup. **2011**. Inbreeding depression is purged in the invasive insect *Harmonia axyridis*. **Current Biology**. 21:424-427.
41. Gaskin JG, M-C Bon, MJW Cock, M Cristofaro, A De Biase, R De Clerk-Floate, CA Ellison, HL Hinz, RA **Hufbauer**, MH Julien, R Sforza. **2011**. Applying molecular-based approaches to classical biological control of weeds. **Biological Control**. 58:1-21.
40. Kühn I, et al. (editorial board). **2011**. Open minded and open access: introducing NeoBiota, a new peer-reviewed journal of biological invasions. **NeoBiota**. 9:1-12.
39. Alba* C, RA **Hufbauer**, MD Bowers and DM Blumenthal. **2011**. Evolution of growth but not structural or chemical defense in *Verbascum thapsus* (common mullein) following introduction to North America. **Biological Invasions**. 13:2379-2389.
38. Rauth* S, HL Hinz, E Geber, RA **Hufbauer**. **2011**. The benefits of pre-release population genetics: A case study using *Ceutorhynchus scrobicolis*, a candidate agent of garlic mustard, *Alliaria petiolata*. **Biological Control**. 56:65-75.

37. Blair*, AC, and RA **Hufbauer**. **2010**. Hybridization and invasion: one of North America's most devastating invasive plants shows evidence for a history of hybridization. **Evolutionary Applications**. 3:40-51.
36. Bodo Slotta†, TA, ME Foley, S Chao, RA **Hufbauer**, DP Horvath. **2010**. Assessing genetic diversity of Canada thistle (*Circium arvense*) in North America with microsatellites. **Weed Science** 58:387- 394.
35. Rauth* S, and RA **Hufbauer**. **2009**. PCR-RFLP assays for discerning three weevil stem feeders (*Ceutorhynchus* spp.) (Col.: Curculionidae) on garlic mustard (*Alliaria petiolata*). **Biocontrol Science and Technology**. 9:999-1005.
34. Duke SO, FE Dayan, J Bajsa, KM Meepagala, RA **Hufbauer** and AC Blair*. **2009**. The case against (-)-catechin involvement in allelopathy of *Centaurea stoebe* (spotted knapweed). **Plant Signaling and Behavior.** 4:422-424.
33. Blair* AC, and RA **Hufbauer**. **2009**. Geographic patterns of interpecific hybridization between spotted knapweed (*Centaurea stoebe stoebe*) and diffuse knapweed (*C. diffusa*). **Invasive Plant Science and Management**. 2:55-69.
32. Blair* AC, LA Weston, SJ Nissen, GR Brunk, RA **Hufbauer**. **2009**. The importance of analytical techniques in allelopathy, with the reported allelochemical catechin as an example. **Biological Invasions.** 11:325-332.
31. **Hufbauer** RA. **2008**. Biological Invasions: Paradox lost and paradise gained. **Current Biology**. 18:R246-R247.
30. **Hufbauer**, RA and R Sforza. **2008** Multiple introductions of two invasive *Centaurea* taxa into North America. **Diversity and Distributions**. 14:252-261.
29. Marrs* RA, R Sforza, RA **Hufbauer**. **2008**. Evidence for multiple introductions of *Centaurea stoebe micranthos* (spotted knapweed, Asteraceae) to North America. **Molecular Ecology.** 17:4197-4208.
28. Kao* RH, CS Brown, RA **Hufbauer**. **2008**. High phenotypic and molecular variation in downy brome (Bromus tectorum). **Invasive Plant Science and Management**. 1:216-225.
27. Blair* AC, U Schaffner, P Häfliger†, SK Meyer¥, RA **Hufbauer**. **2008**. How do biological control and hybridization affect enemy escape? **Biological Control.** 46:358-370.
26. Marrs* RA, R Sforza, RA **Hufbauer**. **2008.** When invasion increases population genetic structure: A study with *Centaurea diffusa*. **Biological Invasions**. 10:561-572.
25. Steltzer, H, RA **Hufbauer**, JM Welker, M Casalis¥, PF Sullivan and R. Chimner. **2008**. Frequent sexual reproduction and high intraspecific variation in *Salix arctica*: implications for a terrestrial feedback to climate change in the High Arctic. **Journal of Geogphysical Research – Biogeosciences**. 113:G03S10.
24. Lau†, JA, K. Puliafico†, M Schwarzlaender, JA Kopshever, H Steltzer, EP Jarvis¥, SY Strauss, and RA **Hufbauer**. **2008**. Experimental artifacts of activated carbon on plant growth complicate the inference of allelopathic effects. **New Phytologist**. 178:412-423.
23. Blumenthal, D and RA **Hufbauer**. **2007.** Genetic differences in size among 14 invasive plant species. **Ecology**. 88:2758-2765.

22. MacKinnon*, DK, RA **Hufbauer**, AP Norton. **2007** Evaluating host use of an accidentally introduced herbivore on two invasive toadflaxes. **Biological Control**. 41:184-189.
21. Morris, WF, RA **Hufbauer**, AA Agrawal, JD Bever, GS Gilbert, JL Maron, CE Mitchell, IM Parker, AG Power, EW Seabloom, ME Torchin, DP Vázquez. **2007.** Direct and interactive effects of enemies and mutualists on plant performance: a meta-analysis. **Ecology**. 88:1021-1029.
20. Mitchell, CE, AA Agrawal, JD Bever, GS Gilbert, RA **Hufbauer**, JN Klironomos, JL Maron, WF Morris, IM Parker, AG Power, EW Seabloom, ME Torchin, DP Vázquez. **2006**. Biotic interaction and plant invasions. **Ecology Letters.** 9:726-740.
19. Blair* AC, SJ Nissen, GR Brunk, RA **Hufbauer**. **2006**. Lack of evidence for an ecological role of the putative allelochemical (+/-)-catechin in spotted knapweed invasion success. **Journal of Chemical Ecology.** 32:2327-2331.
18. Marrs*, RA, RA **Hufbauer**, SM Bogdanowicz, R Sforza. **2006**. Nine polymorphic microsatellite markers in Centaurea stoebe L. [subspecies C. s. stoebe and C. s. micranthos (S. G. Gmelin ex Gugler) Hayek] and C. diffusa Lam (Asteraceae). **Molecular Ecology Notes.** 6:897-899.
17. Blair*, AC, BG Hanson, GR Brunk, RA Marrs, P Westra, SJ Nissen, RA **Hufbauer**. **2005.** New techniques and findings in the study of a candidate allelochemical implicated in invasion success. **Ecology Letters**. 8: 1039-1047.
16. **Hufbauer,** RA and GK Roderick. **2005**. Microevolution in biological control: mechanisms, patterns and processes. **Biological Control.** 35:227-239.
15. MacKinnon*, DK, RA **Hufbauer**, AP Norton. **2005**. Host-plant preference of an inadvertently introduced biological control agent. For: **Entomologia Experimentalis et Applicata**. 116: 183-189.
14. Lloyd*, CJ, RA **Hufbauer**, AK Jackson, SJ Nissen, and AP Norton. **2005**. Pre- and post-introduction patterns in neutral genetic diversity in the leafy spurge gall midge. **Biological Control** 33:153-164.
13. **Hufbauer,** RA, SM Bogdanowicz, and RG Harrison. **2004**. The population genetics of a biological control introduction: microsatellite and mtDNA variation in native and introduced populations of *Aphidius ervi*, a parasitoid wasp. **Molecular Ecology**. 13:337-348.
12. Lloyd*, CJ, AP Norton, RA **Hufbauer,** SM Bogdanowicz **2004**. Microsatellites isolated from the gall midge *Spurgia capitigena* (Diptera: Cecidomyiidae), a biological control agent of leafy spurge. **Molecular Ecology Notes** 4: 605-607.
11. **Hufbauer**, RA. **2004**. Observations of sagebrush gall morphology and emergence of *Rhopalomyia pomum* (Diptera: Cecidomyiidae) and its parasitoids. **Western North American Naturalist**. 64(3): 324-330.
10. **Hufbauer,** RA **2004.** Population and ecological genetics of invasions: can we link neutral loci to ecology and management? **Weed Technology** 18:1522-1527.
9. Losey, JE, RA **Hufbauer**, RG Hartzler. **2003**. Enumerating lepidopteran species associated with maize as a first step in risk assessment. **Environmental Biosafety Research**. 2:247-263.

8. **Hufbauer**, RA and RB Root. **2002**. Interactive effects of different types of herbivore damage: *Trirhabda* beetle larvae and *Philaenus* spittlebugs on goldenrod (*Solidago altissima*). **American Midlands Naturalist**. 147:204-213.
7. Bais, HP, TS Walker, FR Stermitz, RA **Hufbauer**, and JM Vivanco*. **2002**. Enantiomeric dependent phytotoxic and antimicrobial activity of (±)-catechin; a rhizosecreted racemic mixture from *Centaurea maculosa* (spotted knapweed). **Plant Physiology.** 128:1173-1179. *Corresponding author **RETRACTED.**
6. **Hufbauer,** RA. **2002**. Aphid resistance and parasitoid virulence among host races of the pea aphid: evidence for evolution following a biological control introduction. **Ecological Applications.** 12(1) 66-78.
5. **Hufbauer**, RA. **2001**. Aphid population dynamics: Does resistance to parasitism influence population size? **Ecological Entomology.** 27:25-32
4. **Hufbauer**, RA, SM Bogdanowicz, L Peres[¥] and RG Harrison. **2001**. Isolation and characterization of microsatellites in *Aphidius ervi* (Hymenoptera: Braconidae) and their applicability to related species. **Molecular Ecology Notes.** 1:197-199.
3. Tschenn, J, JE Losey, L Hansen, JJ Obrycki**, R Hufbauer**. **2001**. Effects of corn plants and corn pollen on monarch butterfly oviposition behavior. **Environmental Entomology**. 30: 495-500.
2. **Hufbauer**, RA. **2001**. Pea aphid-parasitoid interactions: Have parasitoids adapted to differential resistance? **Ecology.** 82(3):717-725.
1. **Hufbauer**, RA and S Via. **1999**. Evolution of an aphid-parasitoid association: variation in resistance to parasitism among aphid populations specialized on different plants. **Evolution.** 53:1435-1445.

Invited reviews, Contributed Opinions, Peer Community Recommendations, Databases

Mech AM, Hoover AM, Schulz AN, Barnes, B, Boyd, K, Durden, L., Havill NP, **Hufbauer**, R.A, Liebhold AM, Marsico TD, Raffa, K., Singareddy, C., Teach, E., Tobin, P.C., Wolf, A., and Thomas, KA. **2020** Traits and Factors Catalog (TRAFAC): Hardwood specialists of North America. U.S. **Geological Survey data release**. https://doi.org/10.5066/P9FT7C1O

Hufbauer, RA and I Pearse **2020** Tree diversity is associated with reduced herbivory in urban forest. Peer Community in Ecology, 100061. DOI: 10.24072/pci.ecology.100061

Jedd, T, G Goldman, D Henry-Moss, C Wagner, E Lescak, JL Metcalf, RA **Hufbauer**, S Brander **2020** Scientist mothers face extra challenges in the face of COVID-19. Opinion piece by 500 Women Scientists Scientific American May 7, 2020.

Hufbauer, RA **2020** Q & A with Ruth Hufbauer. **Current Biology**, 30: R1242-R1243

Hufbauer RA **2018**. Book review: Biological invasions and the homogenization of life on Earth. **Current Biology.** 28:R803–R825

Hufbauer RA **2017** A new approach to identifying drivers of local adaptation. *Peer Community in Evolutionary Biology, 100034.* 10.24072/pci.evolbiol.100034

Estoup, A and RA **Hufbauer 2017** A valuable work lying at the crossroad of neuro-ethology, evolution and ecology in the fruit pest *Drosophila suzukii*. *Peer Community in Evolutionary Biology, 100017.* 10.24072/pci.evolbiol.100017

Sappington, S and RA **Hufbauer 2017** Application of kin theory to long-standing problem in nematode production for biocontrol. *Peer Community in Evolutionary Biology, 100010.* 10.24072/pci.evolbiol.100010

Submitted

Estoup A, PE Hulme, K Hodgins, M Gautier, E Lombaert, M Dhami, A McGaughran, RA **Hufbauer**. Habitat modification in the native range promotes invasion. In revision for **Trends in Ecology and Evolution**.

Foster, BM, RA **Hufbauer**, M Szucs. Intraspecific hybridization improves performance of the biological control agent *Hypena opulenta*. In revision for **Evolutionary Applications.**

Billotte* J, RA **Hufbauer**, L McCallister, C. Kreider, RP Reading. Architecture and habitat mediate underground thermal stability. In review at **Journal of Animal Ecology**.

Jardeleza*, MK, IS Pearse, MG Nafus, RA **Hufbauer**. Loss of birds alters butterfly anti-predator behavior. In review at **Journal of Insect Conservation**.

PEER REVIEWED PROCEEDINGS

Kozhar, O, JE Stewart and RA **Hufbauer**. 2025. Population genomics in invasion research: A primer for ecologists. Pp. 13-29 *in* Invasion Genomics (eds D. Bock and M. Ruis). CAB International.

Hufbauer, RA and DK MacKinnon*. **2008**. Population structure of an inadvertently introduced biological control agent of toadflaxes: *Brachypterolus pulicarius* in North America. *In* Proceedings of the XII International Symposium on Biological Control of Weeds (eds Julien, M.H., Sforza, R., Bon, M.C., Evans, H.C., Hatcher, P.E., Hinz, H.L. & Rector, B.G.), pp. 418-421. CAB International Wallingford, UK.

Hufbauer, RA, RA Marrs*, AK Jackson, R Sforza, HP Bais, JM Vivanco and SE Carney. **2004.** Population structure, ploidy levels and allelopathy of spotted and diffuse knapweed Pp. 121-126 *in* North America and Eurasia. Proceedings of the XI International Symposium on Biological Control of Weeds, JM Cullen, DT Briese, DJ Kriticos, WM Lonsdale, L Morin, JK Scott *eds*. CSIRO Entomology, Canberra, Australia.

McClay, AS, MD Crisp, HC Evans, T. Hear**d, RA Hufbauer**, T-K Qin and R. Shaw. **2004**. Centres of origin: do they exist, can we identify them, does it matter? Pp. 619-620 *in* Proceedings of the XI International Symposium on Biological Control of Weeds, JM Cullen, DT Briese, DJ Kriticos, WM Lonsdale, L Morin, JK Scott *eds*. CSIRO Entomology, Canberra, Australia.

REFEREED CHAPTERS IN BOOKS AND ENCYCLOPEDIAS

Hufbauer, RA and ME Torchin. **2007**. Integrating Ecological and Evolutionary Theory of Biological Invasions. Pp. 79-96 *in* Biological Invasions: Ecological Studies, Vol 193. Springer-Verlag Berlin Heidelberg.

Losey, JE, JJ Obrycki, and RA **Hufbauer**. **2004**. Biosafety Considerations For Transgenic Insecticidal Plants: Non-Target Herbivores, Detritivores, and Pollinators. Pp. 153-155 *in* Encyclopedia of Plant & Crop Science. Marcel Dekker, Inc. New York.

Losey, JE, JJ Obrycki and RA **Hufbauer**. **2004**. Biosafety Considerations For Transgenic Insecticidal Plants: Non-Target Predators and Parasitoids. Pp. 156-159 *in* Encyclopedia of Plant & Crop Science. Marcel Dekker, Inc. New York.

Losey, JE, JJ Obrycki, and RA **Hufbauer**. **2001**. Impacts of genetically-engineered crops on non-target herbivores: Bt-corn and monarch butterflies as a case study. *In* D. K. Letourneau and B. E. Burrows eds. Genetically Engineered Organisms: Assessing Environmental and Human Health Effects. Pp. 143-166.

PROFESSIONAL AFFILIATIONS

Entomology Society of America
Society for the Study of Evolution
Ecological Society of America
American Society of Naturalists

RESEARCH GRANTS AWARDED

		Amount
	Total in external funding (as PI unless otherwise stated)	4.81 million
2025	**USDA NIFA Seed Grant.** Disease-smart genetic rescue *(as co-PI with Enakshi Ghosh as PI; amount listed is that coming to CSU)*	$83,004
2021	**NSF ADVANCE.** CSU STEPS for Gender Equity	$999,312
2020	**USGS:** Understanding Food-Web Connections to Support Ecosystem Resilience and Recovery from Brown Tree Snakes (BTS) Invasion	$70,000
2019	**NSF Division of Environmental Biology (DEB):** Collaborative Research: BEE: Understanding Evolutionary Rescue	$609,977
	National Urban and Community Forestry Challenge Cost-Share Grant Program: Forecasting high-impact insect invasions by integrating probability models with i-Tree from urban to continental scales.	$280, 806
	Michigan State Department of Agriculture: Initiating a Classical Biological Control Program against Invasive Black and Pale Swallow-Wort in Michigan. *As Co-PI, Marianna Szucs as PI. Total award $300,000, amount listed is that coming to CSU.)*	$26,853
2018	**USGS**: Direct and indirect effects of an invader on shrubs and birds	$49,617
2017	**USDA NIFA**: The role of eco-evolutionary dynamics in an expanding biological control agent, co-PI Ellyn Bitume	$474,766
2015	**NSF DEB DDIG:** Dissertation Research: Exploiting seasonality and differences in herbivory to create a novel framework for testing optimal defense theory, co-PIs: Andrew Norton, Stacy Endriss	$19,239

2014	**USDA NIFA:** The role of hybridization in biological control of weeds, Co-PI: M Szucs	$500,000
2012	**NSF DEB:** REU Supplement: The roles of demography, genetics and stochasticity in colonization	$7,598
2010	**NSF DEB:** REU Supplement: The roles of demography, genetics and stochasticity in colonization	$7,538
2009	**NSF DEB:** Collaborative Research: The roles of demography, genetics and stochasticity in colonization. Co-PI: B Melbourne	$451,766
2006	**NSF DEB DDIG:** Dissertation Research: The role of interspecific hybridization in biological invasions: an experimental study with *Centaurea maculosa* and *C. diffusa* Co-PI: A Blair	$11,951
	NSF DEB RCN: Integrating the ecology and evolution of invasions: a predictive framework and collaborative approach, CoPI Dr. Mark Torchin (Smithsonian Institute for Tropical Research)	$500,000
2005	**NSF DEB:** Hybridization and invasion: the interaction between novel variation and novel continents - a seed grant. CoPIs Drs. DM Blumenthal (USDA ARS) and U Schaffner (CABI Switzerland).	$75,000
	Center for Invasive Pest Management: The role of hybridization in biological invasions: A study with *Centaurea maculosa* and *C. diffusa*	$4,884
	USDA NRI: Origins, hybridization and allelopathy of diffuse and spotted knapweeds.. PI: RA Hufbauer. Co-PIs: SE Carney, JM Vivanco.	**$**255,000
2001	**USDA NRI:** The genetic and environmental basis for host-plant specificity in a biocontrol agent of toadflaxes.	$160,516
	Invasive Plant Species on Public and Private Land: Colorado Experiment Station. Genetics and hybridization of invasive *Centaurea* species, Co-PI: SE Carney.	$145,000
	USDA ARS Cooperative Agreement: Genetic character of knapweeds in Eurasia. Co-PI: SE Carney.	$66,000
1997	**NSF DEB DDIG:** The evolution of a host-parasitoid association: the importance of habitat, geography and history, co-PIs: RA Hufbauer, S Via, RB Root	$8,400
	Miscellaneous graduate research and travel grants (**Sigma Xi, Andrew Mellon**, etc. between 1994 and 1997).	$4,300

SELECTED PRESENTATIONS *co-authors not listed for brevity. All work is collaborative as reflected in the publication list.*

2025 When can adaptation to challenging environments rescue populations from extinction? Evidence from a model system. **Invited seminar.** University of Georgia

How does density dependence affect evolutionary rescue and how does an evolutionary ecologist shift university culture and climate? A tale of two roles. **Invited seminar.** University of Michigan

How to help species adapt to environmental change. **Invited seminar.** Waikato University, New Zealand

2024 Revealing rapid evolution. **Invited symposium talk**. Entomological Society of America Annual Meeting, Phoenix, Arizona.

Evolution drives faster and bigger invasions. **Keynote.** USDA Interagency Conference on Invasive Species, Annapolis, Maryland.

2023 The evolutionary ecology of range expansions. **Invited seminar**. University of Virginia, Biology Department

The application of evolutionary theory to invasions and biological control. **30th Annual H R MacCarthy Pest Management Lecture.** Joinly sponsored by Simon Frasier University and the University of British Columbia.

2022 Evolution during range expansions: Insights from experimental evolution and the field. **Invited seminar**. University of Florida Evolutionary Applications and Theory Group.

2021 Plant-insect interactions in the context of biological invasions. Symposium on Insect-Plant Interactions, **Keynote Lecture.** Leiden, Netherlands.

2020 Rapid evolution drives extinction, persistence and spread of experimental populations in novel habitats **Invited seminar.** Department of Biology, University of Pittsburg.

2019 The demography and genetics of small populations: *qui vivra verra*. **Plenary Speaker** Entomophagous Insect Conference. Palais des Congrès, Juan les Pins, Antibes, France

Eco-evolutionary dynamics: implications for pest and biological control ecology. **Invited seminar.** Department of Entomology, Michigan State University.

2018 Eco-evolutionary dynamics in biological control: introduction to the symposium. Entomological Society of America Annual Meeting. Vancouver, Canada.

The potential role of rapid eco-evolutionary dynamics in biological control. Contributed presentation. International Symposium on the Biological Control of Weeds. Engelberg, Switzerland.

Is evolution a driver or passenger of range expansions? Insights from experimental evolution. Contributed presentation. Evolution 2018, Montpellier, France.

Eco-evolutionary dynamics of small populations in novel habitats: founding, persistence and spread. **Invited seminar.** University of Kaifeng, China.

The role of adaptive and maladaptive evolution in biological control. Contributed presentation. Evolution and Genetics in Biological Control Symposium at the First International Congress of Biological Control, Beijing, China.

Eco-evolutionary dynamics of small populations in novel habitats: extinction, persistence and spread. **Invited seminar.** McGill University, Montreal, Canada.

2017 Diversity and inclusion in academia. **Invited seminar.** University of Minnesota.

Eco-evolutionary dynamics of small populations in novel habitats: extinction or persistence? **Invited seminar.** University of Minnesota.

Is evolution a driver or passenger of biological invasions and range expansions? **Invited seminar.** Université Libre de Bruxelles.

Small populations in novel habitats: extinction risk, genetic load and adaptation. **Invited seminar.** CIRAD, Reunion Island, France.

Rôle de l'évolution dans la proliferation des espèces. **Invited seminar.** French Academy of Agricultural Sciences. Paris, France.

Is evolution a driver or passenger of biological invasions? **Invited seminar.** Centre pour le biologie et gestion des populations. INRA, France.

2016 Eco-evolutionary dynamics of small populations in novel habitats. Invited Seminar. SEEM CEFE CNRS, Montpellier, France

The Almost Flipped Classroom. Master Teacher Workshop Series, Colorado State University

Small populations in novel habitats: extinction risk, inbreeding depression and adaptation. **Invited Seminar** Colorado State University Vet School, Buffalo re-introduction unit.

The paradox of invasions: how do they do it? **Invited Public Lecture** E. Paul Catts Memorial Lecture hosted by **Washington** State University

Small populations in novel habitats: extinction risk, inbreeding depression, and adaptation **Invited Seminar**. Washington State University

Diversity in academia where we are, why it matters, and some paths forward. **Invited Seminar**, Departmental of Soil and Crop Sciences. **Colorado** State University

Diversifying academia: (white) women and underrepresented minorities. **Invited Seminar**, Departmental of Biology. **Colorado** State University

2015 Small populations in novel habitats: extinction risk, inbreeding depression and adaptation: insights from a model system **Invited Seminar,** INRA, **Sophia-Antibes**, France

Diversifying academia: (white) women and underrepresented minorities. Departmental seminar. Colorado State University

Rescuing populations from extinction using genetics and demographic inputs: insights from a model system. **Invited seminar.** University of **Wyoming**.

2014 Running a grass roots network. **Invited talk**. **Cary Institute of Ecosystem Science**, NY.

Rescuing populations from extinction using genetics and demographic inputs: insights from a model system. **Invited seminar.** University of **Toronto**.

Rescuing populations from extinction using genetics and demographic inputs: insights from a model system. **Invited seminar.** University of **Denver**.

2013 So you want to found a population? A how-to guide. Invited **IGNITE** CSU.

Genetic, demographic and evolutionary rescue. **Invited seminar.** University of **Arkansas**, Fayetteville.

2011 The consequences of inbreeding and propagule size for the founding of populations. RA Hufbauer, M Szucs, B Facon. International Symposium on the Biological Control of Weeds, 2011. Contributed talk.

Inbreeding, outbreeding and biological invasions. RA Hufbauer. **Invited seminar.** University of **California, Davis.**

Inbreeding depression and the purging of deleterious alleles: Consequences for population founding and biological invasions. RA Hufbauer, B Facon, A Estoup, M Szücs. **Invited seminar.** University of **Colorado, Boulder**

2010 My sabbatical year in France: inbreeding, invasions, and incredible wine. **Invited seminar. Colorado** State University

A tale of two knapweeds on two continents: hybridization, invasion and plant-insect interactions. **Invited Seminar**, Bern, **Switzerland**.

Hybridization, invasion and biological control: a tale of two knapweeds. **Invited seminar, Sophia, France**

A tale of two knapweeds: exploring the consequences and causes of biological invasions. **Invited Seminar**, **Montpellier, France**

2009 Invasions as drivers of evolutionary change: the case of *Centaurea stoebe* and *C. diffusa.* Co-Authors RA Hufbauer, AC Blair, RA Marrs, R Sforza, European Society of Evolutionary Biology

2008 Hybridization and invasion: the interaction between novel variation and novel environments. Co-Authors RA Hufbauer and AC Blair. **Invited seminar**, University of **Kentucky**, Lexington.

A tale of two knapweeds: population genetics reveal opposite effect of introduction. Co-authors RA Hufbauer, RA Marrs, and R Sforza. **Invited talk**. Neobiota conference, **Prague**.

Spotted knapweed and the mystery of the missing weapons of mass destruction. Invited talk, organized oral session. Ecological Society of America annual meeting

Hybridization and the invasions of diffuse and spotted knapweed. Co-author A.C. Blair. **Invited talk**. Invasive species in natural areas: A conference on impacts and management. Missoula **Montana**

2007 Population genetics of diffuse and spotted knapweed *Centaurea diffusa* and *C. stoebe*). Contributed talk. XII International Symposium on the Biological Control of Weeds, La Grande Motte, **France**.

Invasive knapweeds: Where are the weapons of mass destruction? **Invited seminar.** University of **Idaho**

Host use by an inadvertently introduced insect herbivore of yellow and Dalmatian toadflax. **Invited seminar.** Universities of **Idaho and Washington** joint seminar

2006 Do knapweeds provide evidence for the novel weapons hypothesis? **Invited seminar.** University of **Maryland**

Do knapweeds provide evidence for the novel weapons hypothesis? **Invited talk**. Western Conference on Biological Control (USDA Committee W1185). **Colorado**

Direct and interactive effects of enemies and mutualists on plant performance: a meta-analysis. **Departmental seminar.** Co-author W. Morris. **Colorado** State University

2005 Trials, tribulations, and techniques for studying a candidate allelochemical of spotted knapweed. Contributed talk. Co-authors AC Blair, SJ Nissen, GR Brunk, BC Hanson, P Westra. Ecology Society of America Annual Meeting, Montreal.

Evolutionary ecology of biological invasions and biological control. **Invited Seminar.** University of **California, Riverside.**

2004 Uncertainties and protocols related to evolution in biological control systems. **Invited symposium talk**, Science and decision making in biological control of weeds. Denver, **Colorado**

The evolutionary ecology of species interactions and invasions. **Invited Seminar.** Department of Environmental Science Policy and Management, University of **California, Berkeley.**

Relationships between native and introduced diffuse and spotted knapweed inferred from cpDNA sequences. Contributed talk. Western Society of Weed Science, Colorado Springs, CO.

Population and ecological genetics of invasions and biological control. **Invited seminar.** **Colorado** State University

2003 Population and ecological genetics of invasions: can we link neutral loci to ecology and management? **Invited symposium talk**, Invasive Plants in Natural and Managed Systems, **Florida**

Population structure, ploidy levels and allelopathy of native and introduced spotted and diffuse knapweed. Contributed talk. XI Int. Symp. on Biological Control of Weeds, Canberra, **Australia**.

Population genetic and molecular approaches to centers of origin. **Invited speaker & panel member.** XI Int. Symp. on Biological Control of Weeds, Canberra, **Australia**.

2002 Evolution in biological control: the basics and a brief review. Symposium opening and talk W1185, Biological Control in Pest Management Systems of Plants, **Colorado**

Population and ecological genetics of biological control: effects of introductions and invasions on insect-parasitoid and plant-insect interactions. **Invited seminar.** Dept. of Entomology, University of **Wisconsin**

Population structure and host use of *Brachypterolus pulicarius*, an inadvertently introduced biological control agent of toadflaxes. International Organization for Biological Control

Conference on The Role of Genetics and Evolution in Biological Control, Montpellier **France**.

Population and ecological genetics of biological control: effects of introductions and invasions on insect-parasitoid and plant-insect interactions. **Invited seminar**. University of **Arizona**, Tucson.

2001 The ecology of an aphid-parasitoid association: evidence for evolution following a biological control introductions. **Invited seminar.** USDA ARS European Biological Control Laboratory, Montpellier **France**.

The ecology of an aphid-parasitoid association: evidence for evolution following a biological control introductions. Invited seminar. USDA ARS European Biological Control Laboratory, Montpellier **France**.

Molecular markers and biological control of invasive plants: the state of the art. **Invited talk**, Rocky Mountain Plant Biotechnology and Molecular Biology Symp. **Colorado**.

The evolution and ecology of an introduced aphid-parasitoid association. **Invited seminar.** Department of Biology, **Colorado** State University.

ADVISING AND MENTORING

Undergraduate:

I have advised three honors thesis projects, mentored over 20 students through independent study projects, and worked with 40 other lab and field assistants.

I focus on providing students with sound career advice and support and pride myself in personalized and meaningful letters of recommendation. Students leave my lab to go to professional schools (e.g. medical, dental, pharmacy), graduate school in the sciences, and natural resource management. Publishing with students is a priority. I have published with six undergraduates. I have mentored diverse students including those identifying as Latinx, African American, Native and white.

Graduate:

Former Masters Students and their current positions:

Asmita Basu, PhD student CSU
Jacqueline Buenrostro, Xerces Society
Erin Borgman, Natural Park Service
Isabelle Busch, Freelance Science Communicator
Michael Koontz, Research scientist, Vibrant Planet
Peter Leipzig-Scott, Science Education, Ithaca Science Center
Cassandra Lloyd, high school science teacher
Daniel MacKinnon Office of Surface Mining Reclamation and Enforcement
Megan Vahsen, Faculty member, University of Georgia Odum School of Ecology
Hannah Wilbur, Open Space Manager for the Town of Ipswich

Former Ph.D. Students and their current positions:

Marcel Jardeleza, USGS Postdoc
Lily Durkee, NSF Post Doctoral Fellow
Eliza Clark, NSF Post Doctoral Fellow

Lee O'Brien, Retired from USGS
Christina Alba, Research Scientist Denver Botanical Gardens
Susan Salafsky, Coyle Outside educator
Stacy Endriss, Faculty member, Virginia Tech University
Christa Fettig, Mom
Amy Blair, Professor and Department Head, Saint Ambrose University
Robin Marrs, K-8 teacher
Steven Rauth, Dad

Current graduate students:
Liana McIsaac (MS)
Jackie Billotte (PhD) (Co-Chaired with Rich Reading, Butterfly Pavilion)
Matt Wallace (MS)

Current graduate committees: 12, with students from my home department, Biology, and Forestry, and Fisheries and Wildlife Biology, and the Graduate Degree Program in Ecology

Postdoctoral Scholars
Former:
Michael Pointer – Postdoc, CU Boulder
Enakshi Ghosh – Assistant Professor, Virginia Tech University
Rebecca Kao – Scientist, Denver Botanical Gardens
Sabrina Kumschick –Staff Scientist, Center for Invasion Biology, South Africa
Marianna Szucs – Associate Professor, Michigan State University, Entomology
Ellyn Bitume – US Forest Service postdoctoral scientist, Hilo, HI
Kathryn Turner – Associate Professor, Idaho State University
Ashley Schulz – Assistant Professor, Mississippi State University
Laure Olazcuaga – Staff Scientist, INRAE (National Research Institute for Agriculture, Food and Environment, France)

TEACHING

Ongoing pedagogical training– please see Professional Development section

Current courses
Insect Ecology (AB 540/ECOL 540; odd springs)
Feeding the World in a Changing Climate (AB 111; fall, starting 2026
IPM (Online sections of AB451/551; spring 2026)

Graduate seminars (ECOL 592, ECOL 693 - annually to biennially)
My seminar topics change frequently and are driven by my own and graduate student interests.
2021, 2022, 2024, 2025 Spring Writing Proposals and Manuscripts
2017 Fall Gender and Ethnicity in Science
2015 Spring Women in Science
Examples of previous topics
On the Origin of Species (taught multiple times)
Plant-insect Interactions

Former courses

Aquatic Entomology (co-taught, spring 2024)

Foundations of Agricultural Biology (fall annually for many years)

I developed this class to help new graduate students hit the ground running with professional development tools to thrive in graduate school, including diversity and inclusion, ethics, time management, managing advisors, curating data, and writing grant and fellowship proposals. Additionally, I introduce them to the main subjects of study and disciplines within the department.

Ecology (140 undergraduate students, annually for 15 years) plus Honors Ecology (an additional 10 students, annually)

Pre-vet, pre-med, and all agriculture and natural resource students learn about ecological processes, including modeling in a step-by-step way rich with examples and active learning. I demonstrate the relevance of the material to human and animal health, agriculture, and natural resources with examples and problems. Despite this being required and math-intensive, course evaluations are excellent. Below are example scores from 2018 (on a scale of 1-5 [poor to excellent]).

How well did class sessions increase your understanding of the subject? Mean 4.73
How well did other course assignments increase your understanding of the subject? Mean 4.53
How do you rate this course? Mean 4.57
How well did the instructor organize the course? Mean 4.58
How effectively did the instructor facilitate student learning? Mean 4.79
How prepared was the instructor for class sessions? Mean 4.80
How well did the instructor an atmosphere that was respectful of student opinions, ideas, and differences? Mean 4.86

How do you rate this instructor? Mean 4.88

Biological Control (graduate level); Invasion Ecology (undergraduate); Graduate seminars (examples of previous topics: On the Origin of Species, Writing Manuscripts and Proposals, Plant-insect Interactions, Programming in R)

Guest lectures in other courses:

Restoration Ecology, Principles of Plant Health, Invasion Ecology, Biology and Control of Weeds, Integrated Pest Management, Biocomplexity, Ecology, Global Change Ecology

UNIVERSITY SERVICE

Departmental:

Current: Promotion and Tenure Committee, Nomination Committee.

I have successfully nominated multiple people for awards, and pending is a nomination of Dr. Paul Ode as ESA Fellow

Previous: Promotion and Tenure Committee Chair; Education Committee Chair; Strategic Vision Committee Chair; Executive Committee; Education Committee; Faculty meeting minutes recorder; Search Committee for Invasive Plant Ecologist and Evolutionary Geneticist positions; Search Committee Chair for Weed Genomics position; Undergraduate Curriculum Committee; Liaison to Butterfly Pavilion

College of Agriculture:

Previous: Committee for Advancing Women in Agricultural Sciences, Diversity Catalyst Team Chair; Diversity Catalyst Team member; Diversity Task Force; Search Committee for the

director of the Agricultural Experiment Station; College of Agricultural Sciences Student Affairs Committee; Non-Tenure Track Faculty Committee

Graduate Degree Program in Ecology:
Current: Program Director
Previous: Executive Committee; Academic Committee; Faculty Advisor to the Front Range Student Ecology Symposium Committee; Academic Committee; Executive Committee

PRIMES (Math, Statistics, Biology training grant):
Previous: Steering Committee; Protected Class Committee; Seminar Committee

Department of Biology:
Previous: Search Committees: Quantitative Evolutionary Ecologist; Plant Evolutionary Biologist

University Wide:
Previous: Founding director of Faculty Success Office; Vice Chair, Faculty Council; Committee for Gender Equity on the Faculty, co-Chair; Committee on Faculty Governance, Faculty Honors Council; Faculty Advisor to the Women's Ultimate Club Sports Team; University Strategic Planning Process Discovery Working Group; Life Sciences Curriculum Committee; Committee on Scholarship; Research and Graduate Education, At-Large Representative; Commission on Women and Gender Equity

PROFESSIONAL SERVICE AND ACTIVITIES

2022 Evolution in Action, Society for the Study of Evolution and American Society of Naturalists, Ohio, USA

2022-2023. Scientific Committee – International Symposium for the Biological Control of Weeds, 2023 Argentina.

2020-2022. Scientific Committee – International Congress of Biological Control 2, 2021 Davos, Switzerland

2019-2022. Symposium organizer. Impacts of eco-evolutionary processes in biological control International Congress of Entomology 2020, Helsinki, Finland (was 2020 now 2022)

2021 Symposium organizer. Insects in a changing world: Urban systems as a model for disturbance. Entomological Society of America Annual Meeting

2018 Symposium organizer. Evolution 2018. Evolutionary Rescue
Symposium organizer. Entomological Society of America annual meeting. Co-organized a symposium on Eco-evolutionary Dynamics in Biological Control.

2017 - 2018. Scientific Committee. First International Congress of Biological Control, Beijing, China, May 2018.
Symposium organizer. First International Congress of Biological Control, Beijing, China, May 2018. Evolution and Genetics in Biological Control

2016 - present. Member of the Managing Board of the Peer Community in Evolutionary Biology. https://evolbiol.peercommunityin.org/about/about

2015 - 2019. Member, Powell Center Working Group – High-Impact Insect Invasions.

2011 - Symposium organizer. Evolution and biological control, Entomological Society of America annual meeting (2011), co-organized with G Roderick (lead, UC Berkeley), M Navajas (INRA, France), M. Szucs (CSU)

2005-2011. Leader, Global Invasion Research Coordination Network.

I was lead PI on this NSF-supported research coordination network. Our program helped a fragmented group of scientists trust each other, thus facilitating excellent research. A sampling of our activities includes:

- Initiation and support of the Global Garlic Mustard field survey, with over 300 scientists, field ecology classes, and citizens contributing data
- Symposium support for: Evolutionary ecology of adaptation during plant invasion. International Botanical Congress lead by Rob Colautti and others
- Symposium support for: Parasites and Invasions, lead by Allison Dunn and Sarah Perkins
- over 50 research exchanges supported, largely supporting graduate students and early-career scientists
- multiple collaborative publications stemmed from the group, including papers in PNAS, Ecology, Ecology Letters

Editorial and review service

2024-present Associate editor for Bulletin of Entomological Research
2009-present Associate editor for NeoBiota
2017-present Recommender (similar to Associate editor) Peer community in Evolution
2022-present Recommender (similar to Associate editor) Peer community in Zoology
2021-2022 Special issue editor, Biological Control
2009-2016 Associate editor for Ecological Applications
2008-2013 Associate editor for Invasive Plant Science and Management
2011-2012 Guest Associate Editor: Special issue of Evolutionary Applications
http://onlinelibrary.wiley.com/doi/10.1111/j.1752-4571.2012.00281.x/full
2008 - 2021 Editorial Board: Biological Control

Manuscript referee - *Journals*: Acta Oecologia, American Naturalist, Annual Review of Entomology, Applied Ecology, Biological Control, Biological Invasions, Biological Reviews, Bulletin of Entomological Research, Current Biology, Diversity and Distributions, Ecology, Ecological Applications, Ecological Entomology, Ecology Letters, Environmental Entomology, Evolution, Evolutionary Applications, Heredity, Journal of Animal Ecology, Journal of Evolutionary Biology, Journal of Ecology, Molecular Ecology, Oecologia, Restoration Ecology, Nature, Nature Ecology and Evolution, Plant Ecology, PLOS One, PNAS, Proceedings of the Royal Society of London, Trends in Ecology and Evolution (TREE); Scientific Reports

Books: Genetics and Evolution in Biological Control (edited book), Invasion Ecology (textbook), Economy of Nature (textbook)

Grant referee for: National Science Foundation, USDA NRICGP, USDA NIFA, Oregon and Idaho Experiment Stations, National Environment Research Council of the UK, Israel Science Foundation.

Panel Member: NSF DEB Ecology, NSF DEB Evolutionary Biology, NSF GRFP, USDA NIFA Biotechnology Risk panel, USDA NIFA Food Security Program, Fulbright, USDA NRICGP Biology of Weedy and Invasive Plants; NSF DEB Dissertation Improvement Grant, NSF GRFP panel, and have had to turn down other invitations from NSF due to schedule conflicts

Panel Leader: USDA ARS Biological Control of Weeds

Evolution Society: Committee member organizing Evolution 2004 in Fort Collins, CO

NCEAS: National Center for Ecological Analysis and Synthesis working group: The roles of natural enemies and mutualists in plant invasions

IOBC-NRS: former Member-at-large.

OUTREACH AND EXTENSION Extension is not part of my position, but I enjoy opportunities to work with the community and speak to the public.

The paradox of invasions: how do they do it? E. Paul Catts Memorial Public Lecture
Boulder County Former GMO Advisory Board: guest expert and speaker
Colorado Weed Management Association: former short courses on the biology of invasive plants
Colorado Department of Agriculture Competitive Grants Panel member
Local schools and daycare centers:
- Math tutoring (1-2 times/week from 2014-2018)
- Biology and entomology presentations, particularly bringing in the "insect zoo" for hands-on lesson about arthropod biology (multiple times), also demonstrating my research
- Science fair judging