CURRICULUM VITAE

JEB PITKIN OWEN

EMPLOYMENT

Associate Professor – Department of Entomology, Washington State University, 2014 – Present
Assistant Professor – Department of Entomology, Washington State University, 2007 – 2013
Affiliate Appointment – School of Biological Sciences, Washington State University, 2011 – Present

EDUCATION

UNIVERSITY OF CALIFORNIA – RIVERSIDE, Riverside, California.
Doctor of Philosophy in Entomology, 2007
Major: Medical & Veterinary Entomology
Minors: Parasitology and Insect Ecology

UNIVERSITY OF CALIFORNIA – RIVERSIDE, Riverside, California.
Master of Science in Entomology, 2002

UNIVERSITY OF COLORADO, Boulder, Colorado
Bachelor of Science in Environmental, Population and Organismal Biology, 1997
Bachelor of Arts in English, 1997

AREAS OF RESEARCH

My research focuses on the ecology of parasitic diseases that affect human and animal health. I am particularly interested in disease ecology from a "systems perspective" and conduct work that connects animal behavior, immunology, and the environment. In the realm of science education, I am interested in creative ways to foster systems thinking in learners and I work in multidisciplinary partnerships to explore teaching and learning in *Science, Technology, Engineering, Art, and Math* (STEAM) disciplines.

UNDERGRADUATE TEACHING

ENTOM 101: Insects & People – Spring 2024
ENTOM 550: Insect Physiology – Spring 2023
ENTOM 343: General Entomology – Spring 2022
ENTOM 103: Discover Insects – Fall 2022
ENTOM 102: Medical Entomology – Spring 2015 – 2021
AFS 101: Introduction to Agricultural and Food Systems – Fall 2016
HON 390: Global Perspectives in Science – Fall 2010 – 2014
*BIOL 565: Ecology and Evolution of Disease
  * Co-taught with A. Storfer (School of Biological Sciences) Spring 2008, Fall 2010, Fall 2011, Fall 2013
ENTOM 448/548: Medical Entomology – Fall 2008 – 2012
ENTOM 593: Graduate Seminar – Fall 2008

GRADUATE PROGRAM ACTIVITIES

Graduate courses taught:
Entomology 550: Insect Physiology – Spring 2023
Biology 565: Ecology and Evolution of Disease – Spring 2008, Fall 2010, Fall 2011, Fall 2013
Entomology 548: Medical and Veterinary Entomology – Fall 2008-2012
Entomology 593: Insects and Society Seminar – Fall 2008

Graduate students supervised:

Daniel Marshall	(Ph.D. Entomology) 2020 – present
Kellen Pautzke	(Ph.D. Entomology) 2023 – present

Graduated

Kendra Chambless	(Ph.D. Entomology) 2020 – 2023
Kellen Pautzke	(M.S. Entomology) 2020 – 2023
Kevin Cornell	(M.S. School of Biological Sciences) 2017 – 2020
Olivia Smith	(Ph.D. School of Biological Sciences) 2016 – 2019
Adam Strong	(Ph.D. Entomology) 2013 – 2015
Cami Jones	(Ph.D. Entomology) 2012 – 2015
Samantha Whiteside	(M.S. Entomology) 2013 – 2015
Kathryn Holden	(M.S. School of Biological Sciences) 2013 – 2015
Ann Van der Vliet	(M.S. Entomology) 2009 – 2012
John McCulloch	(M.S. Entomology) 2008 – 2010
Wade Peterson	(M.S. Entomology) 2007 – 2009

Postdoctoral supervision:

Dr. Amanda Edworthy (Ph.D.) 2016 – 2018
Dr. Marisa King (Ph.D.) 2010 – 2011

Graduate student thesis and dissertation committees:

A. Catherine Grady	(M.S., Washington State University; Advisor – M.P.Fernandez) 2023 – present
Elis Fisk	(Ph.D., DVM, Washington State University; Advisor – D. Shaw) 2022 – present
Matthew Waller	(Ph.D., University of Utah, Biology; Advisor – D. Clayton) 2021 – present
Emily Burton	(Ph.D., School of Biological Sciences; Advisor – J. Brunner) 2020 – present

Graduated (graduation year shown)

Benjamin Lee	(Ph.D., Washington State University, Entomology; Advisor – D. Crowder) 2020
Sabrina McNew	(Ph.D., University of Utah, Biology; Advisor – D. Clayton) 2017
Amanda Hund	(Ph.D., University of Colorado, Biology; Advisor – R. Safran) 2017
Amanda Meadows	(Ph.D., Washington State University, Entomology; Advisor – W. Snyder) 2016
Robert Zinna	(Ph.D., Washington State University, Entomology; Advisor – L. Lavine) 2016
Christina Jenkins	(Ph.D., Washington State University, Biology; Advisor – M. Dybdahl) 2016
Emily Hall	(Ph.D., Washington State University, Biology; Advisor – E. Crespi) 2016
Sarah Knutie	(Ph.D., University of Utah, Biology; Advisor – D. Clayton) 2014
Jessica Waite	(Ph.D., University of Utah, Biology; Advisor – D. Clayton) 2012
Jennifer Koop	(Ph.D., University of Utah, Biology; Advisor – D. Clayton) 2011
Lessando Gontijo	(Ph.D., Washington State University, Entomology; Advisor – E. Beers) 2011
Joyce Parker	(Ph.D., Washington State University, Entomology; Advisor – W. Snyder) 2011
Marisa King	(Ph.D., Washington State University, Biology; Advisor – H. Schwabl) 2010
Natalie Boyle	(M.S., Washington State University, Entomology; Advisor – W. Sheppard) 2011
Matthew Smart	(M.S., Washington State University, Entomology; Advisor – W. Sheppard) 2010

Graduate and post-graduate training:

USDA Field Course “Ectoparasite Road Show” Spring 2024
Alyssa Maine (Ph.D. WSU Global Health; Lab Rotation) Fall 2023
Amanda Hund * (Ph.D. student from Safran lab, University of Colorado) Summer 2012
Jessica Waite * (Ph.D. student from Clayton lab, University of Utah) Summer 2010
Dr. Sarah Huber (post-doctoral researcher from Clayton lab, University of Utah) Summer 2010
* Training visit funded by the NSF Research Coordination Network for Eco-immunology.

AWARDS AND HONORS

(Owen)
2021 WSU LIFT Faculty Fellowship
2020 WSU President's Teaching Academy Member
2011 Early Career Innovation Award – Entomological Society of America, Pacific Branch
2010 Provost's Leadership Development Program, WSU

(Students in Owen Lab)
2012 "Young Career" Award, WSU Undergraduate Research Showcase – Kristen Wedam
Research Project: Avian Immune Effects on the West Nile Virus Vector *Culex pipiens*
2012 Auvil Scholars Fellowship – Emily Martin
Research Project: Host Tolerance Under Co-Infestation Stress
2011 Auvil Scholars Fellowship – Emily Martin
Research Project: Landscape Ecology of West Nile Virus in the Pacific Northwest
2009 Awardee for CAHNRS Undergraduate Research Grant – Julia Pasztor
Research Project: Effects of Pox Virus and Mosquito Exposure on Avian Humoral Immunity
2009 Pass with Distinction Recognition for Honors Thesis – Julia Pasztor

FUNDING

** after PI list indicates Owen played significant role in project development and management.

In-progress research support:

USDA NIFA AFRI predoctoral fellowship, # pending ($180,000) 2024 – 2027
"Incorporating Behavioral Ecology into Risk Models for Contact with Lone Star *Tick Amblyomma americanum*"
(Lead PI – Marshall, D.; Advisor – Owen, J.P.)

USDA-SBIR Phase II # 2021-39412-35662 ($58,000 to WSU; $649,112 total award) 2021 – 2024
"Tick Surveillance and Mass Capture Trap"
(Lead PI – Banfield, M., BanfieldBio Inc.; Collaborator – Owen, J.P.)

NIH-SEPA # R25GM129814 ($1,295,720) 2018 – 2024
"Health Education through Arts-based Learning (HEAL): A Partnership to Investigate Interdisciplinary Science Programs in Rural Communities."
(Lead PI – Kelton, M.; Co-PIs Owen, J.P., Butterfield, P. and Danielson, R.) **

Hy-Line International ($5,000) Open-ended
"Evaluation of Natural Antibody Variation Among Chicken Lines"
(Direct funding to Owen Lab in collaboration with Hy-Line International Company) **

Completed research support:

WSU BIOAg Program ($39,924) 2023
"Comparison of disease resistance among heritage chicken breeds challenged with enteric pathogens"
(Lead PI – Owen, J.P.; Co-PI Konkel, M.) **

DOD-DWFP #W911QY1910012 and #135993001 ($89,396 to WSU; $299,999 total award) 2019 - 2023
"Murine Autodissemination for Long-term, Area-wide Control of Ticks"
(Lead PI – Banfield, M., BanfieldBio Inc.; Collaborator – Owen, J.P.)

USDA-NIFA-ORG **#**2017-51106-27026 ($458,145) 2017 – 2022
“An ecological approach to disease risk management on organic poultry farms.”
(Lead PI – Owen, J.P.; Co-PIs Snyder, W.E. and Crespo, R.) **

USDA-OREI # 2015-51300-24155 ($1,994,690) 2015 – 2019
“Avian Biodiversity: Impacts, Risks and Descriptive Survey (A-BIRDS)”
(Lead PI – Snyder, W.S.; Co-PIs Owen, J.P. and Besser T.) **

USDA NIFA AFRI predoctoral fellowship #2019-67011-29620 ($120,000) 2019
“Is native bird biodiversity the key to suppressing human foodborne pathogens while bolstering natural pest control services?”
(Lead PI – Smith, O.M.; Advisor – Owen, J.P.)

WSU BIOAg Program ($13,000) 2014 – 2016
"Birds and Biosecurity: contact rates and parasite exchange between livestock and songbirds"
(PIs – Owen, J.P., Shah, D. and Schwabl, H.) **

Norm Ehmann Urban Pest Management Award ($10,000) 2011 – 2012
"Insecticide Resistance in Bed Bugs: Physiological Mechanisms & IPM Strategies"
(PIs – Lavine, L.C. and Owen, J.P.)

USDA-AFRI #2009-65104-05737 ($255,952) 2009 – 2012
“Origin and Spread of Northern Fowl Mite: A Landscape Genetics Approach”
(PIs – Owen, J.P. and Busch, J.W.) **

WSU New Faculty Seed Grant #112394 ($16,900) 2009 – 2010
“Testing Effects of Host Variation on Development, Survival, and Fecundity of the Tick *Dermacentor andersoni*”.
(PI – Owen, J.P.) **

USDA-NRI #2005-35302-16341 ($150,000) 2005 – 2008
"Are Ectoparasite Population Dynamics Governed by Host Immunity?"
(PIs – Mullens, B.A. and Cardona, C.; Co-PI Owen, J.P.) **

PUBLICATIONS

Google scholar h-index = 23, i10-index = 34, citations = 1465
Web of Science Researcher ID: DYB-4947-2022

Refereed journal articles

Contribution Detail [(a) provided concepts, (b) provided funds/resources, (c) collected data, (d) analyzed data, (e) wrote manuscript, (f) edited manuscript; student advisee as co-author ∞]; IF = journal impact factor

In Review

Weston, K., Fulton, J.E., **Owen, J.P.** (2024) Different Assays, Different Stories: A Comparison of Natural Antibody Measures. *Frontiers in Immunology*

In Press

50. Maron, M.W., Paprocki, N., **Owen, J.P.**, Conway, C.J. (2024) Differential Effects of Chewing Lice on Body Condition Across Host Age and Sex in Rough-legged Hawks (*Buteo lagopus*) *J. Wildlife Dis.* [a, b, f, ∞] IF = 1.3

Published

49. Arango, J., Wolc, A., **Owen, J.P.**, Weston, K.N., Fulton, J.E. (2024) Genetic background of natural and induced antibody response in layer chickens. *Animals* DOI: 10.3390/ani14111623 [a, b, f, ∞] IF = 3.6

48. Pautzke, K., Felsot, A., Reganold, J., **Owen, J.P.** (2024) Effects of soil on development, survival, and oviposition in Culex quinquefasciatus (Diptera: Culicidae) mosquitoes. *Parasites & Vectors 17:154.* DOI: 10.1186/s13071-024-06202-y [a,b,d,f, ∞] IF = 3.2

47. Laura Vang Rasmussen*[1], Ingo Grass*[2], Zia Mehrabi[3], Olivia M. Smith[4,5], Jennifer Blesh[6], Lucas Alejandro Garibaldi[7,8], Marney E. Isaac[9], Christina Kennedy[10], Rachel Bezner Kerr[11], Hannah Wittman [12], Péter Batáry[13], Rolando Cerda[14], David Crowder[15], Kevin Darras[16], Kathryn DeMaster[17], Karina Garcia[18], David Gonthier[19], Purnama Hidayat[20], Juliana Hipólito[21], Lesli Hoey[22], Dana James[23], Innocensia John[24], Andrew Jones[25], Daniel S. Karp[26], Martyna Kotowska[27], Yodit Kebede[28], Carmen Bezner Kerr[29], Susanna Klassen[30], Holger Kreft[31], Ramiro Llanque[32], Christian Levers[30,33], Diego Lizcano[34], Adrian Lu[35], Rosebelly Nunes Marques[36], Pedro Buss Martins[36], America Melo[34], Sidney Madsen[37], Hanson Nyantakyi-Frimpong[38], Elissa M. Olimpi[39], **Jeb. P. Owen[40]**, Heiber Pantevez[34], Matin Qaim[41], Sarah Redlich[42], Christoph Scherber[43], Amber Sciligo[44], Sieg Snapp[45], William E. Snyder[46], Ingolf Steffan-Dewenter[42], Anne Elise Stratton[33], Joseph M. Taylor[47], Vivian Valencia[48], Cassandra Vogel[42], Claire Kremen[49] (2024) Joint environmental and social benefits from diversified agriculture. *Science* 384 (6691): 87-93. DOI: 10.1126/science.adj1914 [c,f, ∞] IF = 57

46. Blubaugh, C, Jones, C., Josefson, C., Scoles, G., Snyder, W., **Owen, J.P.** (2023) Omnivore diet composition alters parasite resistance and host condition. *J. Animal Ecology* DOI: 10.1111/1365-2656.14004 [a, b, c, e, f, ∞] IF = 4.8

45. Achyut Adhikari, Aiko Dora, Adell Nakashima, Alda Francelina, Andrade Pires, Ana Allende, Angela Ferelli Gruber, Austin R. Spence, Claire Murphy, Daniel S Karp, Daniel Weller, Don Stoeckel, Donna Clements, Elissa Olimpi, Faith Critzer, Gretchen Wall, Hyatt Green, Jasna Kovac, **Jeb P. Owen**, Jeffery McGarvey, Kate Scow, Lisa Gorski, Matthew Jones, Naresh Devarajan, Nicole L. Arnold, Nicole Richard, Nikki W. Shariat, Nora Navarro-Gonzalez, Olivia M. Smith, Patrick Baur, Radomir Schmidt, Sandipan Samaddar, Sarah M. Beno, Sarah I. Murphy, Thao Dang-Hien Tran (2023) Evidence for the efficacy of pre-harvest agricultural practices in mitigating food-safety risks to fresh produce. *Frontiers in Sustainable Food Systems* DOI: *10.3389/fsufs.2023.1101435* [c,f, ∞] IF = 4.7

44. Smith, O.M., Cornell, K.A., Crossley, M.S., Crespo, R., Jones, M.S., Snyder, W.E., **Owen, J.P.** (2023) Wind speed and landscape context mediate *Campylobacter* risk among poultry reared in open environments. *Animals*. DOI: 10.3390/ani13030492 [a, c, f, ∞**]** IF = 3

43. Chambless, K.N., Cornell, K.A., Crespo, R., Snyder, W.E., **Owen, J.P.** (2022) Diversity and Prevalence of Ectoparasites on Poultry from Open Environment Farms in the Western United States of Washington, Idaho, Oregon, and California. *J. Medical Entomology*. DOI: 10.1093/jme/tjac093 [a, b, f, ∞**]** IF = 2.43

42. Danielson, R. W., Grace, E., White, A. J., Kelton, M. K., **Owen, J. P**., Fisher, K., Martinez, A., & Mozo, M. (2022). Facilitating Systems Thinking Through Arts-Based STEM Integration. *Frontiers in Education* 7: 915333. DOI: 10.3389/feduc.2022.915333 [a, b, c, f] IF = 2.32

41. Taylor, J.M., Smith, O.M., Edworthy, M., Kennedy, C.M., Latimer, C.E., **Owen, J.P**., Wilson-Rankin, E.E., Snyder, W.E. (2022) Bird predation and landscape context shape arthropod communities on broccoli. *Ornithological Applications* 124 (2). DOI: 10.1093/ornithapp/duac005 [b,f, ∞] IF = 2.8

40. Smith, O.M., Olimpi, E., Navarro-Gonzalez, N., Cornell, K., Frishkoff, L., Northfield, T., Bowles, T., Edworthy, A., Eilers, J., Fu, Z., Garcia, K., Gonthier, D., Jones, M., Kennedy, C M., Latimer, C., **Owen, J.P.**, Sato, C., Taylor, J., Wilson-Rankin, E., Snyder, W.E., Karp, D. (2021) A trait-based framework for predicting foodborne pathogen spillover from wild birds. *Ecological Applications* DOI: 10.1002/eap.2523 [a, b, f, ∞**]** IF = 4.7

39. Cornell, K.A., Smith, O.M., Crespo, R., Jones, M.S., Snyder, W.E., **Owen, J.P.** (2021) Prevalence patterns for enteric parasites of chickens managed in open environments of the Western United States. *Avian Diseases* DOI: 10.1637/21-00079 [a, b, e, f, ∞] IF = 1.7

38. Smith, O. M., Kennedy, C.M., Echeverri, A., Karp, D., Latimer, C., Taylor, J., Wilson-Rankin, R., **Owen, J.P.**, Snyder, W. (2021) Complex landscapes stabilize farm bird communities and their expected ecosystem services*. J. Applied Ecology* DOI: 10.1111/1365-2664.14104 [b, f, ∞**]** IF = 6.5

37. Smith, O.M., Taylor, J.M., Echeverri, A., Northfield, T., Cornell, K.A., Jones, M.S., Latimer, C.E., **Owen, J.P.**, Snyder, W.E., Kennedy, C.M. (2021). Big wheel keep on turnin': Linking grower attitudes, farm management, and delivery of avian ecosystem services. *Biological Conservation* DOI: 10.1016/j.biocon.2021.108970 [a, b, f, ∞] IF = 6

36. Grace, E., Kelton, M.L., **Owen, J.P**., Diaz Martinez, A., White, A. (2021) Integrating Arts with STEM to Foster Systems Thinking. *Afterschool Matters* 34: 11-19. [a, b, f]

35. Danielson, R.W., Grace, E., White, A.J., Kelton, M.L., Martinez, A-M, Fallon, M., **Owen, J.P.,** Butterfield, P. (2020) Assessing Science Learning and Systems Thinking Through Arts. *Washington Educational Research Association* 13 (1): 36-45. https://www.wera-web.org/the-wera-educational-journal [a, b, f]

34. Smith, O.M., Edworthy, A., Taylor, J.M., Jones, M.S., Tormanen, A., Kennedy, C.M., Fu, Z., Latimer, C.E., Cornell, K.A., Michelotti, L.A., Sato, C., Northfield, T.D., Snyder, W.E., **Owen, J.P.** (2020) Agricultural intensification and landscape simplification increase food safety risks imposed by wild birds on produce farms. *J. Applied Ecology* DOI: 10.1111/1365-2664.13723 [a, b, f, ∞] *Shortlisted for Southwood Prize. IF = 6.5

33. Smith, O.M., Snyder, W.E., **Owen, J.P.** (2020) Are we overestimating risk of enteric pathogen spillover from wild birds to humans? *Biological Reviews* DOI: 10.1111/brv.12581 [a, f, ∞] IF = 12.8

32. Latimer, C., Smith, O., Taylor, J., Edworthy, A., **Owen, J.P.**, Snyder, W.E., Kennedy, C.M. (2020) Landscape context mediates the physiological stress response of birds to farm diversification*. Journal of Applied Ecology* DOI: 10.1111/1365-2664.13583 [a, b, f, ∞] IF = 6.5

31. McCulloch, J.B., **Owen, J.P.**, Hinkle, N.C., Mullens, B.A., Busch, J.W. (2019) Genetic Structure of Northern Fowl Mite (Mesostigmata: Macronyssidae) Populations Among Layer Chicken Flocks and Local House Sparrows (Passeriformes: Passeridae). *J. Medical Entomology* 57: 122–130. DOI: 10.1093/jme/tjz136 [a, b, c, d, e, f, ∞] IF = 1.7

30. Smith, O.M., Kennedy, C.M., **Owen, J.P.,** Northfield, T.D., Latimer, C.E., Snyder, W.E. (2019) Highly diversified crop-livestock farming systems reshape wild bird communities. *Ecological Applications* DOI: 10.1002/eap.2031 [a, b, f, ∞] IF = 4.7

29. Meadows, A., **Owen, J.P.**, Snyder, W.E. (2017) Keystone non-consumptive effects within a diverse predator community. *Ecology and Evolution* 23: 10315-10325. [a, b, f, ∞] IF = 2.9

28. Knutie, S.A., Herman, J.M., **Owen, J.P.**, Clayton, D.H. (2017) Tri-trophic ecology of native parasitic nest flies of birds in Tobago. *Ecosphere* 8: e01670. [a, f, ∞] IF = 3.2

27. Knutie, S.A., **Owen, J.P.,** NcNew, S.M., Bartlow, A.W., Arriero, E., Herman, J.M., DiBlasi, E., Thompson, M., Koop, J.A.H., Clayton, D.H. (2016) Galapagos mockingbirds tolerate introduced parasites that affect Darwin's finches. *Ecology* 97: 940-950. [a, f, ∞] IF = 5.2

26. Murillo, A.C., Chappell, M.A., **Owen, J.P**., Mullens, B.A. (2016) Northern Fowl Mite (*Ornithonyssus sylviarum*) Effects on Metabolism, Body Temperatures, Skin Condition, and Egg Production as a Function of Hen MHC Haplotype. *Poultry Science* 95: 2536-2546. [a, f] IF = 2.7

25. Jones, C.R., Brunner, J.L., Scoles, G.A., **Owen, J.P.** (2015) Factors affecting larval tick feeding success: host, density and time. *Parasites & Vectors* 8: 340-350. DOI: 10.1186/s13071-015-0955-6 [a, b, d, f, ∞**]** IF = 3

24. Rogovskyy, A.S., Casselli, T., Tourand, Y., Jones, C.R., **Owen, J.P.,** Mason, L. K., Scoles, G.A., Bankhead, T. (2015) Evaluation of the Importance of VlsE Antigenic Variation for the Enzootic Cycle of Borrelia burgdorferi. *PLoS One* 10 (4): e0124268. [b, ∞**]** IF = 3.2

23. Knutie, S.A., **Owen, J.P.**, McNew, S.M., Bartlow, A.W., Arriero, E., Herman, J.M., DiBlasi, E., Thompson, M., Koop, J.A.H., Clayton, D.H. (2015) Galápagos mockingbirds are tolerant hosts of introduced parasites that threaten Darwin's finches. *Ecology* 97(4): 940-950. [b,f, ∞] IF = 5.2

22. **Owen, J.P.,** Waite, J., Holden, K.Z., Clayton., D. (2014) Does antibody binding to novel proteins predict future infection? *Parasite Immunology* 36: 571-582. DOI: 10.1111/pim.12141
[a, b, c, d, e, f, ∞] IF = 2.3

21. **Owen, J.P.**, Vander Vliet, A., Scoles, G.A. (2014) Comparative Off-Host Survival of Larval Rocky Mountain Wood Ticks (*Dermacentor andersoni*) Collected from Ecologically Distinct Field Populations. *Medical and Veterinary Entomology* 28: 341-344. [a, b, e, ∞] IF = 2.6

20. Waite, J.L., Henry, A.R., **Owen, J.P.,** Clayton, D.H. (2014) An experimental test of the effects of behavioral and immunological defenses against vectors: Do they interact to protect birds from blood parasites? *Parasites & Vectors* 7: 104. [a, f, ∞] IF = 3

19. Koop, J.A.H., **Owen, J.P**., Knutie, S.A., Aguilar, M.A., Clayton, D.H. (2013) Experimental demonstration of a parasite-induced immune response in wild birds: Darwin's finches and introduced nest flies. *Ecology and Evolution* 3: 2514-2523. [a,f, ∞] IF = 2.9

18. Crowder, D.W., Dykstra, E., Martin, E., Petersen, W., Carrièr, Y., Dutiellel, P., **Owen, J.P.** (2013) West Nile Virus Prevalence Across Landscapes is Mediated by Local Effects of Agriculture on Vector and Host Communities. *PLoS One* 8 (1): e55006. [a, b, e, f, ∞] IF = 3.2

17. McCulloch, J.B. and **Owen, J.P.** (2012) Arrhenotoky and Oedipal Mating in the Northern Fowl Mite. *Parasites & Vectors* 5: 281. DOI: 10.1186/1756-3305-5-281 [a, b, d, e, f, ∞] IF = 3

16. Olds, C., Mwaura, S., Crowder, D., Odongo, D., van Oers, M., **Owen, J.P.**, Daubenberger, C. (2012) Immunization of cattle with Ra86 impedes *Rhipicephalus appendiculatus* nymphal molting. *Ticks and Tick-Borne Diseases* 3 (3): 170-178. [d,f] IF = 3.7

15. King, M.O., **Owen, J.P.,** Schawbl, H. (2011) Injecting the mite into ecological immunology: measuring the antibody response of House Sparrows (*Passer domesticus*) challenged with hematophagous mites. *The Auk* 128 (2): 340-345. [a, b, f, ∞] IF = 2.7

14. Mullens, B.A., **Owen, J.P.**, Chen, B. (2010) Beak condition and cage density determine intensity and spatial distribution of *Menacanthus stramineus* and *Ornithonyssus sylviarum* infestations on caged laying hens. *Poultry Science* 89 (12): 2565-2572. [c, d, f] IF = 2.7

13. **Owen, J.P.**, Nelson, A.C., Clayton, D.H. (2010) Ecological immunology of bird-ectoparasite systems. *Trends in Parasitology* 26 (11): 530-539. [a, e, f] IF = 9

12. King, M.O., **Owen, J.P.**, Schwabl, H.G. (2010) Are Maternal Antibodies Really that Important? The Timing of Humoral Immunological Independence in Nestling House Sparrows (*Passer domesticus). PLoS One* 5 (3): e6939. [f, ∞] IF = 3.2

11. Petersen, W.H., Zack, R.S., Dykstra, E.A., **Owen, J.P.** (2010) New distribution records of mosquitoes in Eastern Washington State. *Journal of the American Mosquito Control Association* 26 (1): 88-90. [b, d, f, ∞] IF = 1

10. Huber, S.K., **Owen, J.P.,** Koop, J.A., King, M.O., Grant, P.R., Grant, R., Clayton, D.H. (2010) Ecoimmunity in Darwin's Finches: Invasive Parasites Trigger Acquired Immunity in the Medium Ground Finch (*Geospiza fortis*). *PLoS One* 5 (1): e8605. [b, d, f, ∞] IF = 3.2

9. **Owen, J.P.**, Delany, M.E., Cardona, C.J., Bickford, A., Mullens, B.A. (2009) Host inflammatory response governs fitness in an avian ectoparasite, the northern fowl mite (*Ornithonyssus sylviarum*). *International Journal for Parasitology* 39 (7): 789-799. [a, b, c, d, e, f] IF = 4

8. Mullens, B.A., **Owen, J.P.**, Kuney, D.R., Szijj, C.E., Klingler, K.A. (2009) Temporal changes in distribution, prevalence, intensity of northern fowl mite (*Ornithonyssus sylviarum*) parasitism in commercial caged laying hens, with a comprehensive economic analysis of parasite impact. *Veterinary Parasitology* 160: 116-133. [c, d, f] IF = 2.7

7. **Owen, J.P.**, Delany, M.E., Cardona, C.J., and Mullens, B.A. (2008) MHC haplotype involvement in avian resistance to an ectoparasite. *Immunogenetics* 60 (10): 621-631. [a, b, c, d, e, f] IF = 2.6

6. **Owen, J.P.** and Clayton, D.H. (2007) Where are the parasites in the PHA response? *Trends in Ecology and Evolution* 22 (5): 228-229. [a, d, f] IF = 17.7

5. Mullens, B.A., Cardona, C.J., McClellan, L., Szijj, C.E., **Owen, J.P.** (2006) *Culicoides bottimeri* as a vector of *Haemoproteus lophortyx* to quail in California, USA. *Veterinary Parasitology* 140 (1-2): 35-43. [c, f] IF = 2.7

4. **Owen, J.P.**, Mullens, B.A., Justus, K.A. and Cardé, R.T. (2005) Northern fowl mite orientation in a thermal gradient and evidence for idiothetic course control. *Physiological Entomology* 30 (3): 293-302. [a, c, d, e, f] IF = 1.7

3. Mullens, B.A., **Owen, J.P**., Heft, D.E. and Sobek, R.V. (2005) *Culicoides* and other biting flies on the Palos Verdes peninsula of Southern California, and their possible relationship to equine dermatitis. *J. American Mosquito Control Association* 21 (1): 90-95. [c, d, e, f] IF = 1

2. **Owen, J.P.** and Mullens, B. A. (2004) Influence of heat and vibration on the movement of the northern fowl mite (Acari: Macronyssidae). *J. Medical Entomology* 41 (5): 865-872. [a, c, d, e, f] IF = 1.7

1. McGlynn, T.P. and **Owen, J.P.** (2002) Food supplementation alters caste allocation in a natural population of *Pheidole flavens*, a dimorphic leaf-litter dwelling ant. *Insectes Sociaux* 49: 8-14. [f] IF = 1.4

Book Chapters

Owen, J.P. and Hawley, D. "Host-Parasite Interactions", **Eco-immunology: evolutive aspects and future perspectives**, 73-92, Malagoli, D. and Ottaviani, E. (2014) Springer Books.

Proceedings and Published Meeting Abstracts

Danielson, R., *Grace, E., Kelton, M. L., White, A., Martinez, A., **Owen, J.P.**, & Butterfield, P. (2020). *Promoting Systems Thinking Through Arts-Based Science Activities.* In Gresalfi, M. and Horn, I. S. (Eds.), The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 2 (pp. 917-918). Nashville, Tennessee: International Society of the Learning Sciences.

Jones, C.R. and **Owen, J.P.** (2014) Diet and the demands of defense: testing resource tradeoffs with deer mice and Rocky Mountain wood ticks. Society of Integrative and Comparative Biology 54: E103.

Koop, J.A.H., Knutie, S.A., **Owen, J.P.**, Clayton, D.H. (2011) Fitness consequences of a parasite specific immune response in Darwin's finches. Integrative and Comparative Biology 51 (s1): E72. [a,d] ∞

Mullens, B.A., **Owen, J.P.**, Kuney, D.R., Mench, J.A. and O'Sullivan, N. (2007) Host-Parasite Relationships, Ectoparasite Control Concerns, and the Changing Animal Welfare Paradigm: Lessons from a Chicken House. Proceedings National Poultry Breeders Roundtable. [f]

TALKS and POSTER PRESENTATIONS (*presenter; ᵒstudent advisee as co-author)

Invited presentations at national/international conferences (refereed)

*Danielson, R. W., Grace, E., Saba Fisher, K., Kelton, M. L., White, A. J., Stacey, E., Young, B., **Owen, J.P.,** & Diaz Martinez, A. (2023). *Full STEAM ahead: Blending photography and biomedical science to facilitate systems thinking.* Annual meeting of the American Educational Research Association, Chicago, IL.

***Owen, J.P.**, ᵒJones, C.R., Brunner, J., Scoles, G. (2023) *Dynamics of tick-borne pathogen transmission in the framework of acquired tick resistance.* Symposium – Pacific Branch Building Transboundary Bridges for International Entomology Research. Pacific Branch Meeting, Entomological Society of America, Seattle, WA.

*ᵒPautzke, K., Felsot, A., Reganold, J. and **Owen, J.P.** (2023). *Relationships between size, diet, and longevity in adult Culex quinquefasciatus (Diptera: Culicidae) mosquitoes*. Pacific Branch Meeting, Entomological Society of America, Seattle, WA.

*ᵒPautzke, K., Felsot, A.S., Reganold, J.P., **Owen, J.P.** (2022) *Effects of soil on larval mosquito development and adult oviposition behavior of Culex pipiens quinquefasciatus (Diptera: Culicidae)*. Annual meeting of the Entomological Society of America, Vancouver, Canada.

Owen, J.P. (2021) *Opportunity, Constraint, or Mishap? Exploring Forces of Selection Acting on Parasitic Arthropods*. National meeting Entomological Society of America, Denver, CO. (Invited symposium co-organizer and presenter).

*ᵒOlivia M. Smith, Elissa M. Olimpi, ᵒKevin A. Cornell, Luke Frishkoff, Nora Navarro-Gonzalez, Tobin Northfield, Tim Bowles, Max Edworthy, ᵒJohnna Eilers, Zhen Fu, Karina Garcia, David J. Gonthier, Matthew S. Jones, Christina M. Kennedy, Christopher E. Latimer, **Jeb P. Owen**, Chika Sato, Joseph M. Taylor, Erin E. Wilson-Rankin, William E. Snyder, and Daniel S. Karp (2021) *A trait-based framework for predicting foodborne pathogen spillover from wild birds.* National Meeting of American Ornithological Society, virtual meeting.

*Grace, E., *Fisher, K. S., Kelton, M. L., White, A., Diaz Martinez, A-M, **Owen, J. P.**, Garcia, D. H., & Danielson, R. W. (2021). *Role remediation in a participatory design community for diverse formal and informal educators.* 2021 Annual Meeting of the American Educational Research Association, virtual meeting.

*Crowder, D., Dykstra, E., **Owen, J.P.** (2014) *Tradeoffs between agricultural intensification and insect-transmitted disease.* Symposium: Agricultural Intensification and Insect Communities: Production Trade-Off Challenges with 9 billion on the Horizon; Entomological Society of America Annual Meeting, Portland, OR.

***Owen, J.P.** (2011) *Will Immunology at the Host-Vector Interface Extend to the Ecological Scale?* Symposium: Recent Advances and Issues with Vectors of Animal Diseases/Zoonoses; Society for Vector Ecology, Annual Meeting, Flagstaff, AZ.

***Owen, J.P.** (2010) *Exploring Ecological Immunology of the Rocky Mountain Wood Tick* Symposium: New Directions in IPM for Structural, Veterinary, and Public Health Pests; Entomological Society of America, Pacific Branch, Annual Meeting, Boise, ID.

***Owen, J.P.** (2008) *Immunogenetics and Immune Defense Against an Avian Ectoparasite* Symposium: Evolutionary Ecology of Ectoparasites; American Society of Parasitologists, Annual Meeting, Arlington, TX.

***Owen, J.P.** and Mullens, B.A. (2006) *Interaction of the Host Immune Response and Population Dynamics of Northern Fowl Mites.* Symposium: Diversity and Ecology of Acari Associated with Vertebrates; XII International Congress of Acarology, Amsterdam, The Netherlands.

***Owen, J.P.** and Mullens, B.A. (2006) *Sensory Modalities of the Northern Fowl Mite: Controlling Action and Orientation.* Symposium: Recognition Systems in Mites and Ticks; XII International Congress of Acarology, Amsterdam,The Netherlands.

Posters and presentations (refereed)

*ᵐPautzke, K. and **Owen, J.P**. (2023) *Soil and Mosquitoes: Not just any dirty water will do!* Annual meeting of Institute for Health in the Human Ecosystem, Moscow, ID. (poster)

*ᵐChambless, K. and **Owen, J.P.** (2023) Effects of poultry Breed on Antibody diversity – exploring strategies for disease management. Annual meeting of Institute for Health in the Human Ecosystem, Moscow, ID. (poster)

*ᵐPautzke, K., Fisher, K.S., Kelton, M.L., Garfield, E., Danielson, R.W., **Owen, J.P.** (2022) *Buzzing for Blood: A Cartographic Exploration of Mosquito Ecology*. Annual meeting of the Entomological Society of America, Vancouver, Canada. (poster)

***Owen, J**., Kelton, M. L., White, A., Saraniero, P., Grace, E., Fisher, K. S., ᵐPautzke, K., Garcia, D., Martinez, A., & Danielson, R. (2022). *Visual arts can support underrepresented learners' understandings of complex disease systems and biomedical career pathways.* National Institutes of Health SciEd Conference, Washington, D.C. (poster)

*ᵐChambless, K., ᵐPautzke, K., Konkel, M., Niel, K., Fulton, J**., Owen, J.P**. (2022) *Natural Antibody Response to Vaccination in Poultry*. Poultry Science Association, annual meeting, San Antonio, TX. (poster)

*Kelton, M. L, Danielson, R., **Owen, J.P.**, White, A., Ord, G., Butterfield, P., Martinez, A., & Grace, E. (2019). *Health Education through Arts-based Learning (HEAL): A Pilot Program on the Art of Insects.* WSU's Academic Showcase, Pullman, WA. (poster)

*Kelton, M. L., Grace, E., **Owen, J**., Danielson, R., Butterfield, P., White, A., and Martinez, A. (2019). *Health education through arts-based learning (HEAL): A partnership to investigate interdisciplinary science programs in rural communities*. Invited poster at NIH SciEd, Washington DC. (poster)

Invited presentations (non-refereed)

Invited seminar: *__Owen, J.P.__, ᵐJones, C.R., Brunner, J., Scoles (2024) *Ticks at the crossroads of ecology and immunology.* Department of Zoology & Entomology, University of Pretoria, South Africa.

*__Owen, J.P.__, Pautzke, K., Danielson, R. W., Grace, E., Saba Fisher, K., White, A. J., Diaz Martinez, A., Kelton, M. L. (2024) *Using art to scaffold systems thinking and biomedical career pathways in young learners.* Forestry and Agricultural Biotechnology Institute, University of Pretoria, South Africa.

*__Owen, J.P.__, ᵐJones, C.R., Brunner, J., Scoles. *Ticks at the crossroads of ecology and immunology* (2024) Department of Biological Sciences, University of Alberta, Canada.

*__Owen, J.P.__, ᵐPautzke, K., Danielson, R. W., Grace, E., Saba Fisher, K., White, A. J., Diaz Martinez, A., Kelton, M. L. (2024) *Using art to scaffold systems thinking and biomedical career pathways in young learners.* School of Education, Thompson Rivers University, Canada.

*__Owen, J.P.__, ᵐJones, C.R., Brunner, J., Scoles. *Ticks at the crossroads of ecology and immunology* (2024) Department of Biological Sciences, Thompson Rivers University, Canada.

*__Owen, J.P.__, ᵐJones, C.R., Brunner, J., Scoles (2023) *Exploring Biotic Drivers of Tick-Borne Pathogen Transmission.* Ecology, Evolution, and Behavior Program, Michigan State University.

*__Owen, J.P.__, ᵐJones, C.R., Brunner, J., Scoles, G., Blubaugh, C. (2022) *Could acquired tick resistance play a role in tick ecology?* Department of Entomology, Penn State University.

***Owen, J.P**., Brunner, J., Scoles, G., ᵐJones, C. (2022) *Exploring biotic controls in tick ecology: Acquired tick resistance and the Rocky Mountain wood tick (Dermacentor andersoni)*, Department of Biological Sciences (CDIB), Louisiana State University.

*__Owen, J.P.,__ Brunner, J., Scoles, G., ᵐJones, C. (2021) *Acquired Tick Resistance: Exploring tick ecology through a biotic lens.* Department of Entomology, Iowa State University.

*__Owen, J.P__. (2019) *Diverse Infections Will Require Diverse Defenses: Poultry Immunogenetics, Antibodies and Inflammation.* Hy-Line International (Poultry Breeding Company), Des Moines, Iowa.

*__Owen, J.P__. (2019 *Unpacking the Infection Risks for Organic and Pastured Poultry.* The Poultry Institute, Annual Meeting, Washington State University.

*__Owen, J.P__. (2018) *Avian Disease Ecology—Bridging Immunology, Behavior and Landscape* Schubot Avian Health Center, Texas A&M University.

*__Owen, J.P__. (2017) *An Ecological Approach to Disease Risk Management on Organic Poultry Farms* The Poultry Institute, Annual Meeting, Washington State University.

*__Owen, J.P__., Scoles, G., ᵐJones, C. (2016) *Ecological Immunology of the Rocky Mountain Wood Tick*. Department of Biology, Eastern Washington University.

*__Owen, J.P__. (2016) *Parasites Past and Future: Anticipating Emerging Disease Risks for the Poultry Industry.* The Poultry Institute, Annual Meeting, Washington State University.

*__Owen, J.P__. (2015) *Immunological Interactions between Vertebrates and Ectoparasitic Arthropods.* Department of Biology, Gonzaga University.

*__Owen, J.P__. (2012) *Once Bitten, Twice Shy: Exploring Eco-Immunology of the Rocky Mountain Wood Tick.* Department of Biology, University of Colorado.

*__Owen, J.P__. (2012) *Cell Signals to Species Diversity: The Continuum of Vector-Borne Disease*
One Health Challenge Lecture, American Veterinary Medical Association, Washington State University.

*__Owen, J.P__. (2010) *Ectoparasites and Ecological Immunology: Defining a Dynamic Host Landscape.*
Department of Entomology, Ohio State University.

*__Owen, J.P__. and Busch, J. (2010) *Population Genetics of the Northern Fowl Mite Among Multiple Avian Hosts: Defying the Paradigm of a Generalist Parasite?* USDA AFRI Meeting, Washington DC.

*__Owen, J.P__. (2010) *Response to an Unpleasant Occupant: Host Immunity and the Northern Fowl Mite.*
Department of Biology, Gonzaga University.

*__Owen, J.P__. (2009) *Inserting a Parasite into Ecological Immunology: Exploration of Avian Immune Defense Against an Ectoparasite.* Department of Biology, University of Cincinnati.

*__Owen, J.P__. (2007) *The Immunogenetic Basis for Defense Against Ectoparasites.* Department of Biology, University of Utah.

*__Owen, J.P__. (2007) *The Northern Fowl Mite: Economics, Behavior and Immunology*
The Poultry Institute, Annual Meeting, Washington State University.

*__Owen, J.P__. and Mullens, B.A. (2005) *Orientation Behavior of the Northern Fowl Mite*
Southern California Entomological Society, Pasadena Arboretum.

Posters and presentations (non-refereed)

Stacey, E., *Young, B., Grace, E., Kelton, M. L., Saba Fisher, K., Danielson, R. W., White, A. J., Diaz Martinez, A., **Owen, J.P.,** ℅Pautzke, K., and Garcia, D. (2022). Health Education through Arts-based Learning (HEAL): Examining Systems Thinking and the Impact of Out of School Contexts within an Afterschool Science Program. REU Summer Research Symposium, Washington State University (poster)

*Kelton, M. L., White, A., Saraniero, P., Grace, E., Fisher, K. S., ℅Pautzke, K., **Owen, J**.P., Garcia, D., Martinez, A., & Danielson, R. (2021). *STEAMM design lab: A professional development program from the Health Education through Arts-based Learning project*. National Institutes of Health SciEd Conference (poster)

Workshop and roundtable presentations (refereed)

*℅Pautzke, K. and **Owen, J.P.** (2022) A Cartographic Arts Approach to Scientific Communication: Creative Exploration of Landscape, Habitat, and Interactions in Entomology. Annual meeting of the Entomological Society of America (workshop)

*Kelton, M. L, Danielson, R., **Owen, J.P.,** White, A., Ord, G., Butterfield, P., Martinez, A., & Grace, E. (2019) *Participatory Approaches to Arts+Science Programming.* Washington Educational Research Association Annual Meeting (roundtable)

*Grace, E., Kelton, M. L., White, A., Danielson, R., **Owen, J.P.**, Butterfield, P., Martinez, A, & Ord, G. (2019) *Health-science education through arts-based learning: A partnership to increase minority and rural STEM representation*. 15th Annual Globalization Diversity and Education Conference (workshop)

*White, A., Danielson, R. W., Fallon, M., Kelton, M., Martinez, A., **Owen, J.**, Grace, E., & Butterfield, P. (2019) *Equity and engagement through art-based assessment.* Annual meeting of the Washington Educational Research Association (WERA) (workshop)

INTERNATIONAL COLLABORATION

University of Pretoria, Forestry and Agricultural Biotechnology Institute

PROFESSIONAL MEMBERSHIPS

Entomological Society of America
Society for Vector Ecology
Society for Integrative and Comparative Biology (eco-immunology section)

SERVICE

External

- Grant panels and reviews

  Natural Sciences and Engineering Research Council of Canada; Accelerate Grant (reviewer) 2023
  NSF – Ecological Processes (reviewer) 2016
  NSF – Integrated Organismal Systems (reviewer) 2016
  USDA – Southern Regional IPM (panel member) 2013
  NSF – Doctoral Dissertation Improvement Grant (panel member) 2011
  NSF – Division of Environmental Biology – Phylogenetic Systematics (reviewer) 2012
  NSF – Physiological and Structural Systems Program (reviewer) 2010
  USDA – AFRI "Rapid Response" Funding Program (panel member) 2009

- Professional academic reviews
  External reviewer for tenure packet of faculty at Penn State University 2023
  External reviewer for tenure packet of faculty at Penn State University 2022

- Research committees and advisory panels
  Food-safety evidence synthesis project, Center for Produce Safety 2022
  Member USDA Hatch Multistate Project NE – 1334, Genetic Bases for Resistance and Immunity to Avian Diseases, 2015 – 2017
  Ent. Society of America (Pacific Branch) awards canvassing committee (chair) 2009 – 2010
  Henry and Sylvia Richardson Research Grant (Ent. Soc. America) committee, 2008 – 2010

- Journal editorial boards
  Associate editor for *Frontiers in Parasitology* 2022 – present
  Subject editor for *Animals* 2020 – present
  Subject editor for *Journal of Economic Entomology* 2018 – present

- Journal reviewer service
  Acarologia; American Naturalist; Animals; Auk; Behavioural Ecology and Sociobiology; Diversity, Emu-Austral Ornithology; Environmental Entomology; Ecology; Evolution; Experimental and Applied Acarology; Frontiers in Immunology; Frontiers in Parasitology; J. Exp. Zool. A.; J. Insect Behavior; J. Medical Entomology; J. American Mosquito Control Assn.; J. Economic Entomology; Molecular Ecology Resources; Naturwissenschaften; Physiological Entomology; PLoS One; Vaccines; Veterinary Immunology and Immunopathology; Virology

University

- Grant review panels
  WSU CAHNRS Emerging Research Issues 2022 – present
  WSU BioAg Program (Center for Sustaining Agriculture and Natural Resources) 2021– present
  WSU New Faculty Seed Grant 2015 – 2023

- Committees

University Common Requirements (UCORE) General Education Committee 2023 – present
Teaching Academy *Teaching Assessment Development* Committee 2021 – 2022
Faculty Senate Steering Committee 2020 – 2023
Research and Arts Committee 2015 – 2023 (co-Chair 2020 – 2023)

College

Avian Health Diagnostic Lab Director Search Committee 2023 – 2024
Integrated Plant Sciences Steering Committee 2022 – 2024
CAHNRS Faculty Research Advisory Committee 2021 – present
Tenure and Promotions Guidelines Revision Committee 2010

Department

Tenure & Promotion Committee, Dr. L. Nottingham, 2022 – present
Horticulture Entomologist Hiring Search Committee 2022
Hyde Seminar Committee Spring 2021
Tenure & Promotion Committee, Dr. E. Murray, 2020 – present
Pullman Campus Space Use 2020 – present
Graduate Student Association, faculty representative 2019 – present
Curriculum Committee 2008 – present
Entomology Department Chair Advisory Committee 2019 – 2021
Diversity, Equity and Inclusion Committee 2020 – 2021
Molecular Plant-Insect Interactions Position, Search Committee, Chair 2013 – 2014
Chair Ph.D. Preliminary Written Examination Committee 2010 – 2012
Graduate Program Assessment Committee, Chair 2009 – 2016
Graduate Student Travel and Research Grant Committee 2009 – 2011
Hyde Seminar Committee Spring 2008

PROFESSIONAL DEVELOPMENT ACTIVITIES

Teacher training workshop, *Health Equity through Arts-based Learning* 2024
Teacher training workshop, *Health Equity through Arts-based Learning* 2020