

Downen Mae I. Jocson

Washington State University
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CURRENT POSITION

May 2023 - **Pre-License Pesticide Safety Educator**
Pesticide Resource and Education Program (PREP)
Washington State University, Pullman, WA

EDUCATION

2018- 2023 **Doctor of Philosophy in Entomology**
Washington State University, Pullman, WA
Dissertation: Use of acoustics as mating disruption in pear psylla
Advisors: Dr. Elizabeth Beers and Dr. David Crowder
GPA: 4.00

2015- 2017 **Master of Science in Biology**
Department of Biology, Saint Louis University, St. Louis, MO
Thesis: Influence of temperature on treehopper vibrational signals and preferences
Advisor: Dr. Kasey Fowler-Finn
GPA: 3.80

2011- 2015 **Bachelor of Science in Biology**
Department of Biology, Saint Louis University, St. Louis, MO
Plant Science Track
GPA: 3.45

RESEARCH AND PREVIOUS POSITIONS

2018-2018 **Substitute Teacher**
Ritenour School District, St. Louis, MO
Special Education classroom

2015- 2017 **Graduate Research Assistant**
Saint Louis University, St. Louis, MO
Influence of temperature on treehopper vibrational signals and preferences
PI: Dr. Kasey Fowler-Finn

2013- 2015 **Undergraduate Research Assistant**
Saint Louis University, St. Louis, MO
Reproductive success of bird's foot violet after controlled burns
PI: Dr. Peter Bernhardt

ACADEMIC ACTIVITIES

TEACHING

- 2022 **Pesticide Educator**
Pre-license training: Insect and Disease Management
Washington State University, Kennewick, WA
- 2022 **Pesticide Educator**
Pre-license training: Insect and Disease Management
Washington State University, Puyallup, WA
- 2018 **Teaching assistant**
Entomology 103: Entomology lab for non-science majors
Washington State University, Pullman, WA
- 2015 **Teaching assistant**
Biology 110: Principles of Biology I Laboratory
Saint Louis University, St. Louis, MO
- 2014 **Teaching assistant**
Biology 303: Principles of Genetics
Saint Louis University, St. Louis, MO

MEDIA CONTACT

- 2023 A new 'Pied Piper' robot protects Oregon's vineyards from pests with some good vibes.
<https://www.opb.org/article/2023/11/01/oregon-wineries-pest-protection-new-pied-piper-robot-vibrations/>
- 2022 Washington State University Department of Entomology October Graduate Student Spotlight. <https://entomology.wsu.edu/directory/students/student-spotlight-dowen-jocson/>
- 2022 Ask Dr. Universe: How do ants communicate?
<https://askdruniverse.wsu.edu/2022/08/15/how-do-ants-communicate-with-each-other/>
- 2021 Capital Press coverage of my PhD research, Western Innovator: Controlling Pest with Good Vibrations - https://www.capitalpress.com/ag_sectors/research/western-innovator-controlling-pests-with-good-vibrations/article_956c34e4-f56b-11eb-96cc-6387bfe80636.html?utm_medium=social&utm_source=twitter&utm_campaign=user-share
- 2020 Featured in a centerfold article called "Psexy Psylla Psongs", Good Fruit Grower magazine
- 2019 "Heat Changes Insect Call But It Still Works". Scientific American.
<https://www.scientificamerican.com/podcast/episode/heat-changes-insect-call-but-it-still-works/>
- 2015 Saint Louis Public Radio coverage of Master's thesis research:
<https://news.stlpublicradio.org/post/good-vibrations-these-bugs-do-their-sexting-plant-stem>

STUDENT ACTIVITIES

UNIVERSITY

- 2022 **Professional Development Officer**
College of Agricultural, Human, and Natural Resource Sciences (CAHNRS) Student Senate
Washington State University

Dowen Mae I. Jocson

- 2022 **Vice President**
Entomology Graduate Student Association
Washington State University
- 2021 **President**
Entomology Graduate Student Association
Washington State University
- 2020 **President**
Entomology Graduate Student Association
Washington State University
- 2020 **Student Lead**
Entomology Journal Club
Washington State University

SOCIETY

- 2023 Participated in Entomology Games at the National Meeting, EntSoc, National Harbor, MD
 - 2023 Participated (and placed 2nd) in Entomology Games. Pacific Branch EntSoc, Seattle, WA
 - 2022 Participated in Student Debates. Joint Annual Meeting for EntSoc, ESC, ESCB. Vancouver, BC
 - 2021 Participated in Student Debates. EntSoc Annual Meeting. Denver, CO
 - 2020 Participated in Entomology Games. Pacific Branch EntSoc. Virtual
 - 2019 Participated in Entomology Games. Pacific Branch EntSoc, San Diego, CA
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PROFESSIONAL ACTIVITIES

PROFESSIONAL SOCIETIES

- 2023 Co-organized symposium for the Pacific Branch Meeting of the Entomological Society of America titled "Understanding Pesticides: Regulations, Misuse, and their Role in IPM". Waikoloa, HI
- 2023 Co-organized symposium for the Entomological Society of America national meeting titled "Biotremology, Education, and Art". National Harbour, MD
- 2023 Co-organized symposium/workshop for the Entomological Society of America Pacific Branch meeting titled "How to write a DEI statement". Seattle, WA
- 2023 Organized symposium for the Entomological Society of America Pacific Branch meeting titled "Insects Impact on our Identities. Seattle, WA
- 2023 Led student activities for the Entomological Society of America Pacific Branch meeting (Elevator talks, Texting competition, Employment fair, and Entomolympics). Seattle, WA
- 2022 Entomological Society of America Science Policy Fellow
- 2022 Organized and moderated Entomolympics in the Joint Annual Meeting of Entomological Society of America PI-E Section Networking Session and Awards Celebration. Vancouver, BC
- 2022 Led student activities for the Entomological Society of America Pacific Branch meeting (Elevator talks, Texting competition, Employment fair, and created Entomolympics). Santa Rosa, CA
- 2022 Co-organized a symposium with Dr. Jacquelyn Serrano (USDA-ARS) for the Entomological Society of America Pacific Branch meeting: "Behavioral Manipulation". Santa Rosa, CA.
- 2020 Co-organized a symposium with Dr. Rachele Nieri (Oregon State University) for the Entomological Society of America Pacific Branch meeting: "Behavioral Manipulation". Spokane, WA (Meeting postponed).

UNIVERSITY

Dowen Mae I. Jocson

- 2023 Ensminger Pavilion Taskforce.
- 2022 Search Committee member for the Entomology Endowed Tree Fruit Chair.
- 2020 Founding member of the Department of Entomology Diversity, Equity, and Inclusion Committee.
- 2020 Faculty Liaison for the Entomology Graduate Student Association.

COMMUNITY

- 2022 Community Garden Fair. Outreach and Education table.
- 2022 Insect Expo: Outreach and Education event.
- 2022 What's buzzing at Koppel? A citizen science pollinator event. Outreach presentation in collaboration with the Palouse Conservation District.
- 2021 Insect Expo: Outreach and Education event.
- 2021 What's buzzing at Koppel? A citizen science pollinator event. Outreach presentation in collaboration with the Palouse Conservation District.
- 2019 Insect Expo: Outreach and Education event.

RESEARCH PUBLICATIONS AND PRESENTATIONS

PUBLICATIONS

- Marshall, D.S., Flandermeyer, L.E., **Jocson, D.M.I.** Managing Mosquitoes in Washington Irrigated Orchards. 2023. Washington State University Extension Publication.
- Jocson, D.I.**, Orpet, R.J., Nottingham, L., Northfield, T., Beers, E., Oeller, L.C., Crowder, D.W. Potential use of vibrational playbacks for pear psylla pest management. (*In review in Entomologia experimentalis et applicata*)
- Jocson, D.I.**, Gonzales, M.T., Horton, D., Nottingham, L., Beers, E., Oeller, L., Crowder, D. Characterizing substrate-borne vibrational mating signals produced by pear psylla. 2023. Journal of Insect Behavior.
- Smith, O.M., **Jocson, D.I.**, Lee, B.W., Orpet, R.J., Davis, A.G., Rieser, C.J., Clarke, A.E., Cohen, A.L., Hayes, A.M., Auth, C.A., Bergeron, P.E., Marshall, A.T., Reganold, J.P., Crowder, D.W., Northfield, T.D. 2022. Identifying farming strategies associated with achieving the UN Sustainable Development Goals. *Frontiers in Sustainable Food Systems*.
- Jocson, D.** 2020. Good Vibrations: A potential IPM strategy for pear psylla (*Cacopsylla pyricola*). WSU Tree Fruit Extension Center Newsletter. <https://tinyurl.com/8e2rys92>
- Leith, N. T., **Jocson, D. I.**, & Fowler-Finn, K. D. 2020. Temperature-related breakdowns in the coordination of mating in *Enchenopa binotata* treehoppers (Hemiptera: Membracidae). *Ethology*, 126(9), 870-882.
- Jocson, D.I.**, Smeester, M., Leith, N.T., Macchiano, A., Fowler-Finn, K.D. 2019. Temperature coupling of mate attraction signals and female mate preferences in four populations of *Enchenopa* treehopper (Hemiptera: Membracidae). *Journal of Evolutionary Biology*.
- Bernhardt, P., Edens-Meier, R., **Jocson, D.**, Zweck, J., Ren, Z., Camilo, G.R., Arduser, M. 2016. Comparative floral ecology of bicolor and concolor morphs of *Viola pedata* (Violaceae) following controlled burning. *Journal of Pollination Ecology*.

PRESENTATIONS

Dowen Mae I. Jocson

- 2023 Invited Symposium Speaker | “Emerging Entomologists in the Pacific Branch: Highlighting Research and Experiences by ECPs”. Entomological Society of America Pacific Branch Meeting. Waikoloa, HI
- 2023 Invited Symposium Speaker | “Careers for the Entomologist With No Interest in Science Policy, but Is Surrounded by It Everyday”. Entomological Society of America National Meeting, National Harbor, MD
- 2023 Invited Symposium Speaker | “Biotremology, Art, and Education”. Entomological Society of America National Meeting, National Harbor, MD
- 2023 Invited Speaker | Certification and Training Rule Changes Webinar. Washington State Department of Agriculture. Zoom
- 2023 Poster Presentation | “Potential Use of Acoustics in Pear Psylla Management”. Ecological Society of America, Portland, OR
- 2023 Invited (Un) Plenary speaker | Entomological Society of America North Central and Southwest joint branch meeting. Oklahoma City, OK
- 2023 Oral Presentation |10-minute Student paper competition. Pacific Branch Entomological Society of America, Seattle, WA
- 2023 Oral Presentation | 10-minute talk. Orchard Pest and Disease Management Conference, Portland, OR
- 2022 Invited Speaker | Pear IPM Intensive Workshop. Wenatchee, WA
- 2022 Oral Presentation |10-minute Student paper competition. Joint Annual Meeting Entomological Society of America, Vancouver, BC, Canada
- 2022 Invited Guest Lecturer | Pesticide Pre-License Training: Insect Control Section. Puyallup, WA.
- 2022 Invited Guest Lecturer | Pest Control Operator Credit: Arthropod Identification Workshop. Puyallup, WA.
- 2022 Invited Speaker | Washington State University S.H.A.P.I.N.G. Conference. Graduate School Workshop. Pullman, WA.
- 2022 Oral Presentation | Applied Biotremology Symposium. 3rd Annual Biotremology Conference, Piran, Slovenia
- 2022 Invited Speaker | Dr. Valerio Mazzoni’s lab seminar. Rome, Italy. *Virtual*
- 2022 Invited Speaker |Behavioral Manipulation Symposium. Pacific Branch Entomological Society of America, Santa Rosa, CA.
- 2022 Oral Presentation |10-minute Student paper competition. Pacific Branch Entomological Society of America, Santa Rosa, CA.
- 2021 Oral Presentation |10-minute Student paper competition. Entomological Society of America, Denver, CO
- 2021 Oral Presentation |10-minute Student paper competition. Pacific Branch Entomological Society of America. *Virtual*
- 2021 Poster | Washington State University Academic Showcase and Graduate and Professional Student Association Research Expo. *Virtual*
- 2020 Invited Speaker | Achievement Rewards for College Scientists (ARCS) Seattle Luncheon. *Virtual*
- 2020 Invited Speaker | North Central Washington Pear Day. Wenatchee, WA
- 2019 Oral Presentation |10-minute Student paper competition. Entomological Society of America, St. Louis, MO
- 2019 Panel | Women in Agriculture panel for Washington legislative staff, Pullman, WA
- 2019 Invited Speaker | Tree Fruit Research Extension Center Sunrise Field Day, Wenatchee, WA
- 2019 Poster Presentation| Pacific Branch Entomological Society of America, San Diego, CA
- 2017 Guest Speaker | Academy of Science St. Louis, St. Louis Public Library, St. Louis, MO

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- 2017 Poster | Animal Behavior Society Conference at the University of Toronto-Scarborough, Toronto, Canada
- 2018 Poster | SLEEC, Principia College, Elsah, IL
- 2016 Oral Presentation | Animal Behavior Society Conference at University of Missouri, Columbia, MO
- 2016 Poster | Graduate Student Association Symposium, Saint Louis University, St. Louis, MO
- 2015 Poster | SLEEC (Saint Louis Ecology, Evolution, and Conservation) Retreat, Saint Louis Zoo, St. Louis, MO

RESEARCH SUPPORT

- 2021 USDA NIFA Predoctoral Fellowship, "Using Vibrational Communication for Mating Disruption and Pest Management" (awarded \$180,000)
- 2020 Washington State Commission on Pesticide Registration 2021 Funding. PI: David Crowder (awarded \$24,768)
- 2019 USDA Innovation fund. PI: David Horton (~\$20,000)
- 2018 Achievement Rewards for College Scientists (ARCS) Foundation Fellowship, Seattle Chapter (awarded \$17,500)
- 2017 National Science Foundation, NSF IOS-1656818: Genetic change and genetic accommodation allow singing insects to adapt to temperature change. PI: Kasey Fowler-Finn; *Data contributor* (awarded ~\$500,000)
- 2017 Reis Research Award for field work at the Reis Biological Station (awarded \$600)

AWARDS AND HONORS

- 2023 Washington State University President's Award for Leadership
- 2023 John Henry Comstock Award for the Pacific Branch of the Entomological Society of America
- 2022 President's Prize 1st Place in the PhD 10-minute Paper competition for PI-E Field Crops, Joint Annual Meeting Entomological Society of America, Vancouver, BC, Canada
- 2022 Overall runner-up team for Student Debates, Joint Annual Meeting Entomological Society of America, Vancouver, BC, Canada
- 2022 Outstanding PhD Student of the Year for the Department of Entomology in Washington State University (awarded \$2000)
- 2022 Finalist of 3-Minute Thesis for the Department of Entomology in Washington State University (awarded \$200)
- 2021 President's Prize 1st Place in the PhD 10-minute Paper competition for PI-E Field Crops, Entomological Society of America, Denver, CO
- 2021 Overall runner-up team for Student Debates, Entomological Society of America, Denver, CO
- 2021 Washington State University Department of Entomology Travel Grant (awarded \$922)
- 2021 Washington State University Entomology Graduate Student Association Mini Grant (awarded \$250)
- 2021 ARCS Dorothy Lewis Simpson Leadership Award (awarded \$5000)
- 2021 1st Place in the PhD 10-minute Paper competition, Pacific Branch Entomological Society of America (awarded \$200)
- 2021 3rd Place in Graduate and Professional Student Association Research Expo (awarded \$300)
- 2021 Honorable Mention in 3-Minute Thesis for the College of Agricultural, Human, and Natural Resource Sciences in Washington State University. (awarded \$100)
- 2021 Finalist of 3-Minute Thesis for the Department of Entomology in Washington State University (awarded \$200)

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- 2020 Winner of 3-Minute Thesis for the College of Agricultural, Human, and Natural Resource Sciences in Washington State University. (awarded \$1000)
 - 2020 Finalist of 3-Minute Thesis for the Department of Entomology in Washington State University (awarded \$200)
 - 2019 Pacific Branch Entomological Society of America Travel Grant (awarded \$200)
 - 2019 Washington State University Department of Entomology Travel Grant (awarded \$150)
 - 2019 Washington State University Entomology Graduate Student Association Mini Grant (awarded \$100)
 - 2017 Graduate Student of the Year for the Department of Biology, Saint Louis University (awarded \$150)
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CONFERENCES AND MEETINGS ATTENDED

- 2024 American Association of Pest Control Officers, Alexandria, VA
- 2024 The Pesticide Stewardship Alliance, St. Louis, MO
- 2023 Pest World – National Pest Management Association, Waikiki, HI
- 2023 Entomological Society of America National Meeting, National Harbor, MD
- 2023 Washington State Department of Agriculture All Staff Meeting Pesticide Management Division, Puyallup, WA
- 2023 Ecological Society of America Annual Meeting, Portland, OR
- 2023 Summer Meeting – Washington State Pest Management Association, Skamania, WA
- 2023 American Association of Pesticide Educators Annual Meeting, Savannah, GA

COURSES TAUGHT

- 2023 Pre-License Training. Washington State University Pesticide Resource and Education Program. Kennewick, WA
- 2023 Pre-License Training. Washington State University Pesticide Resource and Education Program. Lynnwood, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Vancouver, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Tacoma, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Port Orchard, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Bellingham, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Spokane, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Yakima, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Kennewick, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Pullman, WA
- 2024 Pre-License Training. Washington State University Pesticide Resource and Education Program. Renton, WA

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2024 Pest Control Operators (PCO) Pre-License Training. Washington State University Pesticide Resource and Education Program. Puyallup, WA

PROFESSIONAL SOCIETY MEMBERSHIP

2018-present Entomological Society of America
2023-present Ecological Society of America
2023-present American Association of Pesticide Safety Educators
2022-present The Pesticide Stewardship Alliance
2015-2017 Animal Behaviour Society