

Rebecca A. Schmidt-Jeffris, Ph.D.

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EDUCATION

Doctor of Philosophy (Ph.D.) in Entomology

Department of Entomology, Washington State University (WSU), Pullman, WA, 2015
Dissertation: *Phytoseiids as control agents of phytophagous mites in Washington apple orchards*
Research Advisor: Elizabeth Beers

Bachelor of Science (B.S.) in Biology

Department of Biology, Washburn University, Topeka, KS, 2010
Minors: Chemistry and Psychology
Honors: Summa Cum Laude, with Biology Honors

RESEARCH EXPERIENCE

Postdoctoral Research Associate

Cornell University, Geneva, WA, 2015-present
Topic: *Agricultural practices and landscape features influencing populations of European corn borer in vegetable production systems*
Research Advisor: Brian Nault

Graduate Research Assistant

Washington State University, Wenatchee, WA, 2010-2015
Topic: *Phytoseiids as control agents of phytophagous mites in Washington apple orchards*
Research Advisor: Elizabeth Beers

Undergraduate Independent Research

Washburn University, Topeka, KS, 2009-2010
Topic: *Prey size and color preferences in the praying mantis*
Topic: *The role of kin selection in juvenile praying mantis cannibalism events*
Research Advisor: Lee Boyd

PUBLICATIONS

Minteer, C.R., **Schmidt-Jeffris, R.A.**, Coon, K. and Reall, T. 2015. 2013 Debates: Scientific issues that arise from a connected world. *Am. Entomol.* (in press)

Schmidt-Jeffris, R.A., and Beers, E.H. 2015. Comparative biology and pesticide susceptibility of *Amblydromella caudiglans* and *Galendromus occidentalis* as spider mite predators in apple orchards. *Exp. Appl. Acarol.* Online First. DOI: 10.1007/s10493-015-9931-2

Schmidt-Jeffris, R.A., Beers, E.H, and Crowder, D.W. 2015. Phytoseiids in Washington commercial apple orchards: biodiversity and factors affecting abundance. *Exp. Appl. Acarol.* Online First. DOI: 10.1007/s10493-015-9927-y

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Beers, E.H. and **Schmidt-Jeffris, R.A.** 2015. Impacts of orchard pesticides on *Galendromus occidentalis*: repellency and irritancy. J. Econ. Entom. 108: 259-265. DOI: 10.1093/jee/tou047

Schmidt, R.A. 2014. Leaf structures affect predatory mites (Mesostigmata: Phytoseiidae) and biological control: A review. Exp. Appl. Acarol. 62: 1-17. DOI: 10.1007/s10493-013-9730-6

Beers, E.H. and **Schmidt, R.A.** 2014. Impacts of orchard pesticides on *Galendromus occidentalis*: lethal and sublethal effects. Crop Prot. 56: 16-24. DOI:10.1016/j.cropro.2013.10.010

Schmidt, R.A., Beers, E.H., Unruh, T.R., Horton, D.R. 2013. Releases of insectary-reared *Galendromus occidentalis* (Acari: Phytoseiidae) in commercial apple orchards. J. Econ. Entom. 106: 1996-2005. DOI: 10.1603/EC13153

Under Review

Schmidt-Jeffris, R.A. and Beers, E.H. Phenology of phytoseiid populations in an insecticide-free apple orchard. Exp. Appl. Acarol.

Schmidt-Jeffris, R.A. Phytoseiids as models of biological control principles. Biol. Control

In Preparation

Schmidt-Jeffris, R.A. and Beers, E.H. Effects of trichomes on *Galendromus occidentalis* (Acari: Phytoseiidae): Preferences, fecundity, prey consumption, and field populations. Environ. Entomol.

Schmidt-Jeffris, R.A. and Beers, E.H. Assessment of marking techniques for the purpose of monitoring phytoseiid releases. J. Entomol. Soc. B. C.

Reall-Lincoln, T., **Schmidt-Jeffris, R.A.** Del Pozo-Valdivia, A. 2014 Debates: Management strategies: solutions to grand challenges. Am. Entomol.

AWARDS AND HONORS

Grants

Amblydromella caudiglans: a new predatory mite for Washington apple" Co-authored with E. Beers

Tree Fruit Research Commission (\$46,838) 2013-2015

Washington State Commission on Pesticide Registration (\$11,750) 2014-2015

Washington State Commission on Pesticide Registration (\$13,690) 2013-2014

Scholarships & Fellowships

Richard and Constance Albrecht Scholarship (\$1,500) WSU Graduate School, 2015

Mike and Kathy Hambelton Fellowship Scholarship Award (\$2,500) WSU Tree Fruit Research and Extension Center, 2014

Robert and Mary Lou Harwood Student of the Year Award (\$1,000) WSU Entomology Department, 2014

Howard and Hermina Hallgarth Paper of the Year Award (\$250) WSU Entomology Department, 2014

H.S. Telford Memorial Scholarship (\$550) WSU Entomology Department, 2013

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Paper Awards & Academic Competitions

Honorable Mention, Micrograph Contest, for micrograph of *Amblydromella caudiglans* (\$25)
WSU Materials Research Society, 2015

2nd Place Linnaean Games Team, Pacific Branch ESA, 2014-2015

Best Video, Photo Salon, Pacific Branch ESA, 2015

1st Place Ph.D. Paper Competition (\$125) Pacific Branch ESA, 2014

1st Place, Oral Presentation in Agricultural and Natural Sciences (\$500) WSU Wiley Research Expo, 2013

1st Place Micrograph Contest, for micrograph of *Galendromus occidentalis* (\$200) WSU Materials Research Society, 2013

1st Place Text Messaging Competition, Pacific Branch ESA, 2012

Leadership Awards

Student Activity Award (\$5,000) Entomological Society of America (ESA), 2014

Student Leadership Award, Pacific Branch ESA, 2014

President's Award for Leadership, awarded to the Entomology Graduate Student Association (EGSA) during my presidential term and while I was secretary, WSU, 2014

Travel Awards

Travel Award (\$300) Pacific Branch ESA, 2014

WSU Graduate & Professional Student Association (GPSA) Meeting Registration Grants
Fall 2013 (\$100), Spring 2013 (\$40), Fall 2012 (\$100), Spring 2012 (\$40)

WSU GPSA Travel Grant Spring 2012 (\$350)

Undergraduate Awards

Washburn Transformational Experience, awarded for independent research project, 2010

President's Honor Roll, Washburn University, 2008-2010

LEADERSHIP & SERVICE

Entomological Society of America

Positions held:

Chair, Student Affairs Committee (2014-2015)

Program Planning Committee, Student Liaison (2014-2015)

Vice Chair, Student Affairs Committee (2013-2014)

Pacific Branch Representative, Student Affairs Committee (2013-2014)

Symposia Organized:

Synergy in agricultural pest control: Use of interdisciplinary approaches to feed a growing population. 99th Annual Meeting, 15-18 November 2015, Minneapolis, MN.

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Discovering Entomology: Students as Teachers. 99th Annual Meeting – Pacific Branch, 12-15 April 2015, Coeur d’Alene, ID.

Grand Challenge: Effective Science Education with Communication. 98th Annual Meeting, 16-19 November 2015, Portland, OR. 2014.

Changing Landscapes, New Faces in the Pacific: Taxonomy, Biodiversity and Invasive Species. 98th Annual Meeting – Pacific Branch, 6-9 April 2014, Tucson, AZ.

Events Organized/Chaired:

2015 Student Debates. Molecular biology and entomology: partnering for solutions
CV Workshop, Pacific Branch Career Fair (2015)

Student Text Messaging Competition, Pacific Branch Meeting (2013-2015)

2014 Student Debates. Management Strategies: Solutions to Grand Challenges

2013 Student Debates. Scientific Issues that Arise from a Connected World

Other Participation:

Childcare Grant Subcommittee, ESA Program Planning Committee (2015)

Award Panelist, Student Activity Award (2015)

Linnaean Games, Pacific Branch Meeting (2012-2015)

Student Volunteer, Plant-Insect Ecology Networking Business Meeting, National Meeting (2013-2014)

Liaison to new members, National Meeting (2013)

2016 International Congress of Entomology

Positions Held:

Co-chair (Representative for the United States), Student Affairs Committee (2014-2016)

Events Organized:

Student Debates

Linnaean Games (liaison to planning committee)

Washington State University Entomology Graduate Student Association

Positions Held:

Secretary (2014-2015)

President (2012-2014)

Events Organized:

Insect Expo (2013-2014)

Nocturnal Arthropods Exhibit, Animals of the Night Event, Palouse-Clearwater Environmental Institute (2014)

Student Choice Speaker, with guests Robert Kimsey (2014) and Bert Hoelldobler (2012)

Insect Cinema Cult Classic (2011-2014)

Honey Sales (2012)

Children’s Weekly Reading Series (2010-2011)

Other Participation:

Bug Appétit volunteer, Humane Society Fundraiser (2014)

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Live insect displays, Insect Expo (2011-2014)

Student Choice Speaker volunteer (2011-2014)

Live insect displays, Insect Cinema Cult Classic (2011-2013)

Entomology table, College of Agriculture, Human, and Natural Resources Fall Festival (2010-2011)

Food Server, Bug Feed (2011)

Washington State Graduate and Professional Student Association

Positions Held:

Senator (2011-2012)

At large member, Events Committee (2011-2012)

Events Organized:

Ice Cream Social (2012)

"PHD: The Movie" Showing (2011)

Washburn Departmental Clubs

Washburn Women in Science Day, microbiology demonstration (2008-2009)

Washburn Chemistry Day, tour guide (2007-2008)

Washburn Stoffer Science Building Open House, NMR demonstration (2008)

Washburn Math Day, tour guide (2006)

Washburn Family Day, biology and chemistry tables (2006, 2009)

PRESENTATIONS

Schmidt-Jeffris, R.A. and Smith, T.R. [Invited] Extending your teaching: extension work at a land grant university. Discovering Entomology: Students as Teachers. Entomological Society of America 99th Annual Meeting – Pacific Branch, 12-15 April 2015, Coeur d'Alene, ID.

Schmidt-Jeffris, R.A. and Beers, E.H. [Poster] Phenology of phytoseiid populations in an unsprayed apple orchard. Entomological Society of America 99th Annual Meeting – Pacific Branch, 12-15 April 2015, Coeur d'Alene, ID.

Schmidt-Jeffris, R.A., Beers, E.H., Unruh, T.R., and Horton, D.R. Releases of insectary-reared western predatory mite in Washington apple orchards. 89th Annual Orchard Pest and Disease Management Conference, 14-16 January 2015, Portland, OR.

Schmidt-Jeffris, R.A. [Poster] Phytoseiid mites and plant structures: a meta-analysis. Dr. William R. Wiley Research Exposition, 18 February 2015, Pullman, WA.

Schmidt-Jeffris, R.A. and Beers, E.H. [Invited] A tale of two mites: *Amblydromella caudiglans* and *Galendromus occidentalis* in Washington apple. Biological Control in Acarology: Progress and Future Prospects. Entomological Society of America 98th Annual Meeting, 16-19 November 2014, Portland, OR.

Whitener, A., **Schmidt-Jeffris, R.A.**, Zinna, R.A. [Invited, Poster] Meeting the challenge: Entomological education and outreach on the Palouse. Grand Challenge: Effective Science

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Education with Communication. Entomological Society of America 98th Annual Meeting, 16-19 November 2014, Portland, OR.

Schmidt, R.A. and Beers, E.H. Factors affecting communities of beneficial mites in Washington apple orchards. Entomological Society of America 98th Annual Meeting – Pacific Branch, 6-9 April 2014, Tucson, AZ.

Schmidt, R.A. [Poster] Phytoseiid mites and plant structures: a meta-analysis. Entomological Society of America 98th Annual Meeting – Pacific Branch, 6-9 April 2014, Tucson, AZ.

Schmidt, R.A. and Beers, E.H. Factors affecting beneficial mite species in Washington apple orchards. Dr. William R. Wiley Research Exposition, 21 February 2014, Pullman, WA.

Schmidt, R.A. and Beers, E.H. [Poster] *Amblydromella caudiglans*: a new predatory mite for Washington apple. 88th Annual Orchard Pest and Disease Management Conference, 8-10 January 2014, Portland, OR.

Schmidt, R.A. and Beers, E.H. [Poster] Phytoseiids of economic importance. Entomological Society of America 97th Annual Meeting, 10-13 November 2013, Austin, TX.

Schmidt, R.A., Beers, E.H., Unruh, T.R., and Horton, D.R. Releases of insectary-reared *Galendromus occidentalis* in Washington apple orchards. Entomological Society of America 97th Annual Meeting – Pacific Branch, 7-10 April 2013, Lake Tahoe, NV.

Schmidt, R.A. and Beers, E.H. [Invited] Phytoseiids as control agents of phytophagous mites in eastern Washington apple orchards. WSU Tree Fruit Research and Extension Center Graduate Seminar Series, 6 March 2013, Wenatchee, WA.

Schmidt, R.A. and Beers, E.H. *Amblydromella caudiglans*: A newcomer to the biological control of spider mites? Dr. William R. Wiley Research Exposition, 1 February 2013, Pullman, WA.

Schmidt, R.A. and Beers, E.H. *Amblydromella caudiglans*: A newcomer to the biological control of spider mites? Entomological Society of America 96th Annual Meeting, 11-14 November 2012, Austin, TX.

Schmidt, R.A. Trichome density preferences of *Galendromus occidentalis* and implications for biological control. Entomological Society of America 96th Annual Meeting – Pacific Branch, 25-28 March 2012, Portland, OR.

Schmidt, R.A. Trichome density preferences of *Galendromus occidentalis* and implications for biological control. Dr. William R. Wiley Research Exposition, 3 February 2012, Pullman, WA.

Schmidt, R.A. [Poster] Prey selection in the praying mantis. Apeiron, 23 April 2010, Topeka, KS.

Schmidt, R.A. The snail-schistosome system: empirical evidence for host-parasite coevolution. Washburn University Student Seminar Series, 7 April 2009, Topeka, KS.

EXTENSION EXPERIENCE

Publications

Schmidt, R.A. 2014. Life on a leaf (video). *In* E.H. Beers, J.F. Brunner, M.J. Willett, G. Warner (eds.), Orchard Pest Management Online (<http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=255>)

Schmidt, R.A. and Beers, E.H. 2014. Other important orchard phytoseiids. *In* E.H. Beers, J.F. Brunner, M.J. Willett, G. Warner (eds.), Orchard Pest Management Online (<http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=855>)

Schmidt, R.A. and Beers, E.H. 2013. *Amblydromella caudiglans*. *In* E.H. Beers, J.F. Brunner, M.J. Willett, G. Warner (eds.), Orchard Pest Management Online (<http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=835>)

Presentations

Schmidt-Jeffris, R.A. Controlling woolly apple aphid. Chelan Fruit Company Grower Meeting. Okanogan, WA. 2015

Schmidt-Jeffris, R.A. Understanding and controlling your major orchard pests. Northwest Wholesale Grower Meeting. Wenatchee, WA. 2015

Schmidt-Jeffris, R.A. Mites: return of an old nemesis. Northwest Wholesale Grower Meeting. Oroville, WA. 2015

Schmidt-Jeffris, R.A., Beers, E.H. Predatory mites in Washington commercial apple orchards: biodiversity and factors affecting abundance. North Central Washington Horticulture Meetings. Wenatchee, WA. 2015 (<http://tinyurl.com/mpxvzss>)

Other Engagement

Afghan Agriculture Extension Project Tour, 2014

Reviewer for North American Plant Protection Organization diagnostic key of *Tetranychus* mites of quarantine importance on fruits, 2014

Identification of arthropod specimens for community members and orchard consultants, WSU Tree Fruit Research and Extension Center, 2011-present

Horticulture and Soil Science Department Extension Tour, WSU Tree Fruit Research and Extension Center, 2011-2014

PROFESSIONAL DEVELOPMENT

WSU Tidal Leadership Certificate Program, 2013-2014
Washington State Pesticide License, Public Operator, 2010-2015
WSU Graduate Teaching Workshop, 2012
The Ohio State University Acarology Workshop, 2011
WSU Grant Writing Workshop, 2011

TEACHING EXPERIENCE

Volunteer Teaching Assistant, WSU

Pesticides and the Environment (Entom 452/552) 2014
Agricultural Entomology (Entom 340) 2014
Insects, Science, and World Cultures (Entom 150) 2012
Insect Identification Lab (Entom 539) 2012
General Entomology Lab (Entom 343) 2011
Insects and People (Entom 101) 2011

Guest lecture, "Pesticides and Integrated Pest Management". Insects, Science, and World Cultures (Entom 150), WSU, 2013

Assistant instructor, SAS introductory workshop: in-house at WSU Tree Fruit Research and Extension Center, Wenatchee, WA, 2013

Athletic Center Tutor, WSU: one-on-one tutoring of student athletes in statistics and entomology coursework, 2011-2012

Student instructor and tutor, Washburn University, General Zoology (BI 110), 2010

Guest lecture, "The snail-schistosome system: empirical evidence for host-parasite coevolution". Evolution (BI 150), Washburn University, 2009

PROFESSIONAL AFFILIATIONS

Entomological Society of America
Beta Beta Beta, Biology Honors Society
Phi Kappa Phi