

Fatemeh Ganjisaffar

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EDUCATION

- ◇ **Ph.D. in Entomology** 2011 - 2016
University of California, Riverside (UCR), Riverside, California
Dissertation: Biological studies on *Galendromus flumenis* (Acari: Phytoseiidae), a predator of Banks grass mite
Advisor: Dr. Thomas Perring
- ◇ **M.Sc. in Agricultural Entomology** 2006 - 2009
Tarbiat Modares University, Tehran, Iran
Thesis: Temperature-dependent demography of the predatory mite, *Typhlodromus bagdasarjani* (Acari: Phytoseiidae), on two-spotted spider mite
Co-Advisors: Drs. Karim Kamali and Yaghoub Fathipour
- ◇ **B.Sc. in Agricultural Engineering - Plant Protection** 2002 - 2006
University of Tehran, Tehran, Iran
Research Project: Efficacy of the aphid midge, *Aphidoletes aphidimyza* (Diptera: Cecidomyiidae) for aphid control under greenhouse conditions
Co-Advisors: Drs. Aziz Kharazi-Pakdel and Ahmad Ashouri

PROFESSIONAL EXPERIENCE

- ◇ **Postdoctoral Scholar** 2020 - Present
Dr. Frank Zalom's lab
Department of Entomology and Nematology, University of California, Davis
 - Working on insecticide resistance monitoring and management in Spotted Wing Drosophila (SWD)
- ◇ **Postdoctoral Scholar** 2016 - 2020
Dr. Thomas Perring's lab
Department of Entomology, University of California, Riverside
 - Surveyed exotic and resident egg parasitoids of *Bagdara hilaris* using its fresh sentinel eggs in Riverside, CA, and studied life history of *Ooencyrtus lucidus*, a newly described species recovered from the sentinel eggs.
 - Studied the ovipositional preference of *Ooencyrtus mirus* (newly described), a classical biological control candidate from Pakistan, on eggs of *Bagdara hilaris* and two alternate hosts when reared on eggs of these stink bug species for multiple generations.
 - Monitored for the six-spotted thrips, *Scolothrips sexmaculatus*, and other predators of the Banks grass mite in the date gardens of Coachella Valley, CA, using yellow sticky cards.
 - Conducted laboratory bioassays to evaluate the lethal and sub-lethal effects of seven insecticides with different modes of actions on the invasive pink hibiscus mealybug.
 - Surveyed parasitism rate in pink hibiscus mealybug nymphs and adults from different landscape plant samples following releases of *Anagyrus callidus* (thought to be *Anagyrus kamali*) and *Gyranusoidea indica*.
 - Contributed to field research that evaluated glassy-winged sharpshooter, *Homalodisca vitripennis*, susceptibility to imidacloprid in citrus orchards in Bakersfield, CA.
 - Contributed to a field project that studies the relationship among irrigation, bunch thinning treatments, and skin separation (puffy skin) in dates of Coachella Valley, CA.
- ◇ **Graduate Teaching Assistant**, Department of Entomology, UCR Spring 2013 and 2015
 - Natural History of Insects (ENTM 010)
Attended lectures, maintained notes, managed setup and supervision of instructional labs, graded assignments/exams, wrote exam questions, supervised students on field trips, led discussion sessions and held office hours for supplementary student instruction.

- ◇ **Graduate Student Researcher**, Department of Entomology, UCR 2011 - 2016
 - Worked on the biology of the dominant predatory mite in date gardens of California, *G. flumenis*, in an effort to understand its potential for Banks grass mite control.
 - Assessed the foraging behavior of *G. flumenis* through prey-stage preference, functional response, and mutual interference studies.
 - Studied the thermal requirements of *G. flumenis* through degree-day models, and determined its population growth parameters at the optimal temperature.
 - Evaluated the compatibility of the miticide Savey (the only registered material for Banks grass mite control on dates) with different life stages of *G. flumenis*.
- ◇ **Graduate Research Assistant**, Tarbiat Modares University, Tehran, Iran 2008 - 2009
 - Studied the biology of an indigenous predatory mite, *Typhlodromus bagdasarjani* as a potential biological control agent for two-spotted spider mite.
 - Developed life tables and determined the reproduction potential and feeding capacity of *T. bagdasarjani* over a range of temperatures under laboratory conditions.
 - Aided a graduate student project with field collection entitled "A faunistic survey of the manure-inhabiting mesostigmatic mites in Tehran, Iran".
 - Collaborated in a departmental project entitled "Species diversity and population dynamics of spider mites on oilseed crops in Iran".
- ◇ **Internship**, University of Tehran, Tehran, Iran Summer 2006
 - Worked in the Plant Protection Clinic, identifying pests and natural enemies from grower samples and reporting information back to sample submitter.
 - Supported an ongoing research project on evaluating the side-effects of different pesticides on the minute pirate bug, *Orius albidipennis*, by maintaining a colony of the Mediterranean flour moth, *Ephesia kuehniella*, to use the eggs as food for the minute pirate bug, making concentrations of the pesticides for lab bioassays, and spraying the arenas using a Potter Spray Tower.
 - Worked in the Zoology Museum, identifying and sorting out preserved insect specimens.
- ◇ **Undergraduate Research Assistant**, University of Tehran, Tehran, Iran 2004 - 2006
 - Aided plant pathology graduate students by performing single spore isolation of fungi, inoculation of viruses to plants, ELISA, PCR, and general laboratory tasks, such as planting.

PUBLICATIONS

- ◇ **Ganjisaffar F.**, Power N., Perring T.M. Preferential parasitism of *Ooencyrtus mirus* on *Bagrada hilaris* eggs regardless of rearing host (submitted to Annals of the Entomological Society of America).
- ◇ **Ganjisaffar F.**, Talamas E.J., Bon M-C., Perring T.M. 2020. First report and analysis of two native *Trissolcus* species utilizing *Bagrada hilaris* eggs in California. Journal of Hymenoptera Research (in press).
- ◇ Power N., **Ganjisaffar F.**, Perring T.M. 2020. Effects of parasitoid age, host egg age, and host egg freezing on reproductive success of *Ooencyrtus mirus* on *Bagrada hilaris* eggs. Environmental Entomology doi.org/10.1093/ee/nvaa150
- ◇ Power N., **Ganjisaffar F.**, Perring T.M. 2020. Evaluation of the physiological host range for the parasitoid *Ooencyrtus mirus*, a potential biocontrol agent of *Bagrada hilaris*. Insects 11, 432: 1-16.
- ◇ **Ganjisaffar F.**, Perring T.M. 2020. Life history evaluation of *Ooencyrtus lucidus* (Hymenoptera: Encyrtidae), a newly described egg parasitoid of *Bagrada hilaris*. Insects 11, 292: 1-14.
- ◇ Power N., **Ganjisaffar F.**, Perring T.M. 2020. Effect of temperature on the survival and developmental rate of immature *Ooencyrtus mirus* (Hymenoptera: Encyrtidae). Journal of Economic Entomology 113: 1675-1684.
- ◇ Triapitsyn S.V., Andreason S.A., Power N., **Ganjisaffar F.**, Fusu L., Dominguez C., Perring T.M. 2020. Two new species of *Ooencyrtus* (Hymenoptera, Encyrtidae), egg parasitoids of the bagrada bug *Bagrada hilaris* (Hemiptera, Pentatomidae), with taxonomic notes on *Ooencyrtus telenomicida*. Journal of Hymenoptera Research 76: 57-98.

- ◇ **Ganjisaffar F.**, Andreason S.A., Perring T.M. 2019. Lethal and sub-lethal effects of insecticides on the pink hibiscus mealybug, *Maconellicoccus hirsutus* (Hemiptera: Pseudococcidae). *Insects* 10, 31: 1-13.
- ◇ **Ganjisaffar F.**, Talamas E.J., Bon M-C., Gonzalez L., Brown V.B., Perring T.M. 2018. *Trisolcus hyalinipennis* Rajmohana & Narendran (Hymenoptera: Platygasteridae), a parasitoid of *Bagrada hilaris* (Burmeister) (Hemiptera: Pentatomidae), emerges in North America. *Journal of Hymenoptera Research* 65: 111-130.
- ◇ Andreason S.A., Prabhaker N., Castle S.J., **Ganjisaffar F.**, Haviland D.R., Stone-Smith B., Perring T.M. 2018. Reduction in susceptibility of *Homalodisca vitripennis* (Hemiptera: Cicadellidae) to common broad-spectrum insecticides. *Journal of Economic Entomology* 111: 2340-2348.
- ◇ Reed D.A., **Ganjisaffar F.**, Palumbo J.C., Perring T.M. 2017. Effects of constant temperatures on development of the invasive stink bug, *Bagrada hilaris* (Hemiptera: Pentatomidae). *Journal of Economic Entomology* 110: 2497-2503.
- ◇ **Ganjisaffar F.**, Perring T.M. 2017. Mutual interference between adult females of *Galendromus flumenis* (Acari: Phytoseiidae) feeding on eggs of Banks grass mite decreases predation efficiency and increases emigration rate. *Experimental and Applied Acarology* 72: 1-14.
- ◇ **Ganjisaffar F.**, Perring T.M. 2017. A life table analysis to evaluate biological control of Banks grass mite using the predatory mite *Galendromus flumenis* (Acari: Phytoseiidae). *Systematic and Applied Acarology* 22: 7-13.
- ◇ **Ganjisaffar F.**, Perring T.M. 2017. Effects of the miticide hexythiazox on biology of *Galendromus flumenis* (Acari: Phytoseiidae). *International Journal of Acarology* 43: 169-172.
- ◇ **Ganjisaffar F.**, Perring T.M. 2015. Relationship between temperature and development of *Galendromus flumenis* (Acari: Phytoseiidae), a predator of Banks grass mite (Acari: Tetranychidae). *Experimental and Applied Acarology* 67: 535-546.
- ◇ **Ganjisaffar F.**, Perring T.M. 2015. Prey stage preference and functional response of the predatory mite *Galendromus flumenis* to *Oligonychus pratensis*. *Biological Control* 82: 40-45.
- ◇ **Ganjisaffar F.**, Fathipour Y., Kamali K. 2011. Temperature-dependent development and life table parameters of *Typhlodromus bagdasarjani* (Phytoseiidae) fed on two-spotted spider mite. *Experimental and Applied Acarology* 55: 259-272.
- ◇ **Ganjisaffar F.**, Fathipour Y., Kamali K. 2011. Effect of temperature on prey consumption of *Typhlodromus bagdasarjani* (Acari: Phytoseiidae) on *Tetranychus urticae* (Acari: Tetranychidae). *International Journal of Acarology* 37: 556-560.

HONORS AND AWARDS

- ◇ **UCR Graduate Student Travel Award** (\$640), 2016
- ◇ **2nd Place Linnaean Games Team**, Pacific Branch ESA (\$1,000), 2016
- ◇ **Robert and Peggy van den Bosch Memorial Scholarship** (\$20,000), 2015
- ◇ **UCR Graduate Student Travel Award** (\$640), 2015
- ◇ **Davies-Gunther Scholarship** (\$3,000), 2015
- ◇ **2nd Place Poster Presentation**, Departmental Student Seminar Day, UCR, 2015
- ◇ **UCR Graduate Student Travel Award** (\$700), 2013
- ◇ **UCR Deans Distinguished Fellowship**, 2011
- ◇ **9th rank** among 942 applicants, **National M.Sc. Entrance Exam in Agricultural Entomology**, Iran, 2006

PRESENTATIONS

- ◇ First laboratory evaluation of *Ooencyrtus lucidus* (Hymenoptera: Encyrtidae), a native egg parasitoid of *Bagrada hilaris*. **Entomological Society of America (ESA)'s Virtual Annual Meeting**. November 2020 (**Oral presentation**).
- ◇ Preferential parasitism of *Ooencyrtus* sp. (Hymenoptera: Encyrtidae) on *Bagrada hilaris* regardless of rearing host. **67th ESA Annual Meeting**. November 2019, St. Louis, MO (**Poster presentation**).

- ◇ Comparative toxicity and side-effects of insecticides on the invasive pink hibiscus mealybug, *Maconellicoccus hirsutus* (Hemiptera: Pseudococcidae). **103rd Annual Meeting of the Pacific Branch of the Entomological Society of America (PBESA)**. April 2019, San Diego, CA (**Oral presentation**).
 - ◇ Impact of the rearing host on ovipositional preference of the *Bagrada hilaris* egg parasitoid, *Ooencyrtus* sp. near *telenomicida* (Hymenoptera: Encyrtidae). **2018 ESA, Entomological Society of Canada (ESC), and Entomological Society of British Columbia (ESBC) Joint Meeting**. November 2018, Vancouver, BC, Canada (**Oral presentation**).
 - ◇ Density-dependent foraging of *Galendromus flumenis* (Acari: Phytoseiidae) on Banks grass mite. **65th ESA Annual Meeting**. November 2017, Denver, CO (**Oral presentation**).
 - ◇ Intraspecific competition of *Galendromus flumenis* (Acari: Phytoseiidae) on Banks grass mite. **25th International Congress of Entomology (ICE 2016) and ESA Joint Meeting**. September 2016, Orlando, FL (**Oral presentation**).
 - ◇ Population growth and reproduction of *Galendromus flumenis* (Acari: Phytoseiidae) on Banks grass mite eggs. **100th PBESA Annual Meeting**. April 2016, Honolulu, HI (**Oral presentation**).
 - ◇ Temperature-dependent development of *Galendromus flumenis* (Acari: Phytoseiidae), a predator of Banks grass mite (Acari: Tetranychidae). **63rd ESA Annual Meeting**. November 2015, Minneapolis, MN (**Oral presentation**).
 - ◇ Foraging behavior of *Galendromus flumenis* on Banks grass mite, *Oligonychus pratensis*. **61th ESA Annual Meeting**. November 2013, Austin, TX (**Oral presentation**).
 - ◇ Life history of *Typhlodromus bagdasarjani* (Acari: Phytoseiidae) on immature stages of two-spotted spider mite at different temperatures. **9th European Congress of Entomology**. August 2010, Budapest, Hungary (**Oral presentation**).
 - ◇ Effect of temperature on prey consumption of *Typhlodromus bagdasarjani* (Acari: Phytoseiidae) feeding on nymphs of *Tetranychus urticae* (Acari: Tetranychidae). **9th European Congress of Entomology**. August 2010, Budapest, Hungary (**Oral presentation**).
 - ◇ Report of a new species of the family Iolinidae (Prostigmata: Tydeoidea) from Iran. **19th Iranian Plant Protection Congress**. August 2010, Tehran, Iran (**Poster presentation**).
 - ◇ Feeding capacity of *Typhlodromus bagdasarjani* (Acari: Phytoseiidae) on two-spotted spider mite. **18th Iranian Plant Protection Congress**. August 2008, Hamedan, Iran (**Poster presentation**).
 - ◇ Population growth parameters of *Typhlodromus bagdasarjani* (Acari: Phytoseiidae) on two-spotted spider mite under laboratory conditions. **18th Iranian Plant Protection Congress**. August 2008, Hamedan, Iran (**Poster presentation**).
- INVITED TALKS
- ◇ Emergence of *Trissolcus hyalinipennis* (Hymenoptera: Scelionidae), a parasitoid of *Bagrada hilaris* (Hemiptera: Pentatomidae), in North America. **2018 ESA, ESC, and ESBC Joint Meeting**. November 2018, Vancouver, BC, Canada (Symposium: Crossing Borders without Permission: Accidental Introduction of Biological Control Agents).
- EXTENSION AND OUTREACH
- ◇ **Riverside County Master Gardener Training Class 2018-2019**: Taught a session on Introduction to Entomology, prepared presentation slides and performed an interactive class activity with preserved specimens of important insects that had been mentioned in the lecture to facilitate learning and to engage trainees.
 - ◇ **4th Annual Riverside Insect Fair, Riverside**: Co-organized and ran a booth to educate the community about the integrated pest management (IPM) and its role in sustainable agriculture.
 - ◇ **Bourns Inc., Science and Technology Education Partnership (STEP), Riverside**: Provided hands-on experience with insects to educate the general public about the insects and their importance.
 - ◇ **Women in Math and Science (WIMS), UCR**: Introduced entomology careers to young women who are interested to pursue a career in science.
 - ◇ **Discovery Day, College of Agricultural and Natural Sciences, UCR**: Provided hands-on experience with insects to encourage students to join the Entomology program.

- ◇ **Cal Poly Pomona Insect Fair, Pomona:** Ran an interactive booth representing the UCR Entomology program, displaying live and preserved insects and other arthropods.
- ◇ **Earth Day Celebration, La Sierra Library, Riverside:** Provided the community an opportunity to learn about insects and the science of Entomology.
- ◇ **Temecula Valley Charter School, Winchester:** Provided a touch-a-bug activity for 3rd graders to help them learn why insects are important.
- ◇ **Jurupa Mountain Discovery Center, Riverside:** Introduced visitors to the diverse world of insects and other arthropods and taught them about their key role in the web of life.
- ◇ **Riverside Metropolitan Museum, Riverside:** Hosted tables with live and preserved arthropods to engage visitors to hold these amazing creatures and to learn about them.
- ◇ **Alcott Elementary School, Riverside:** Provided students with a fun learning opportunity from holding live insects and other arthropods to playing insect-related games and making crafts.
- ◇ **Arlington Library, Riverside:** Hosted a table with live arthropods and displays of preserved insects to help visitors learn why insects are important, and to develop a respect for nature and the environment.
- ◇ **Visits from the Manuel Band of Mission Indians and Rustic Lane Elementary, UCR:** Hosted on-campus outreach events for students, gave them the opportunity to hold live insects and other arthropods and to learn that almost all insects are beneficial and serve a purpose in our ecosystem.

LEADERSHIP AND SERVICE

- ◇ **Reviewer Board Member** for Insects, 2020
- ◇ **Peer Reviewer**, Journal of Economic Entomology, Environmental Entomology, Experimental and Applied Acarology, Systematic and Applied Acarology, International Journal of Acarology, Insects, Annals of Applied Biology, European Journal of Entomology, and Journal of Thermal Biology.
- ◇ **Search Committee Member** for Lab Assistant II and III hirings
- ◇ **UCR Linnaean Games Participant**, Pacific Branch ESA, 2015 - 2016
- ◇ **President of the UCR Iranian Graduate Student Association**, 2014 - 2015
- ◇ **Social Committee Member of the UCR Entomology Graduate Student Association**, 2011 - 2012

PROFESSIONAL TRAININGS

- ◇ **Cartography**, 2020
- ◇ **Optimize Data Collection: Crop Scouting & Asset Inspection**, 2020
- ◇ **Parasitoids of the Brown Marmorated Stink Bug Workshop**, 2019
- ◇ **Introduction to GIS for Crop Agriculture Workshop**, 2017
- ◇ **GPS, Spatial Data Management, and Consultation Workshop**, 2017
- ◇ **Philosophy and Pedagogy of Teaching Undergraduate Life Sciences Course**, 2015
- ◇ **Grant Writing Course - Development of Hypotheses and Research Design**, 2012

TECHNICAL SKILLS

- ◇ Mentoring (undergraduate and graduate students) and leadership
- ◇ Original research project design and management
- ◇ Lecture design and classroom management
- ◇ Excellent public speaking and presenting skills
- ◇ Statistical analysis (R, SAS, SPSS, Minitab, and Polo Suite)
- ◇ Predictive modeling (degree-days and phenology, functional response, ...)
- ◇ GIS and habitat mapping (ArcGIS)
- ◇ DNA extraction, PCR, and gel electrophoresis
- ◇ Insect and mite (pests and beneficials) colony propagation and maintenance
- ◇ Isolation and culture of microorganisms
- ◇ Preparation and mounting techniques for glass microscope slides and microscopic morphometry

- ◇ Experienced with different pesticide formulations, mixing and application methods
- ◇ Laboratory pesticide bioassays (spray, leaf-dip technique, clip cage)
- ◇ Collecting, sampling and monitoring techniques (sweep and beat nets, sentinel egg cards for parasitoids, baited and non-baited pitfall traps, pan traps, yellow sticky cards, McPhail traps)
- ◇ Expert proficiency with Microsoft Office and L^AT_EX.

PROFESSIONAL
SOCIETIES

- ◇ **International Organization for Biological Control (IOBC)** (2019 - present)
- ◇ **Acarological Society of America (ASA)** (2019 - present)
- ◇ **American Association for the Advancement of Science (AAAS)** (2015 - present)
- ◇ **Partnership for Undergraduate Life Science Education (PULSE)** (2015 - present)
- ◇ **Entomological Society of America (ESA)** (2012 - present)