

Paul Thomas Markley

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EDUCATION

09/2015 – 06/2019 B.S. Plant Biology

Concentration in Plant Pathology, Nematology, and Pest Management

Minor: Applied Statistics

University of California, Riverside

RESEARCH EXPERIENCE

07/2019 – Present Jr. Specialist

Primary Investigator (PI): Elia Scudiero University of California, Riverside; Dept. of Environmental Science

- Survey agricultural plots using electromagnetic-induction and gamma-ray sensors to non-invasively measure soil properties.
- Collect and process leaf samples for mineral analysis and salt content, and soil samples for salt and moisture contents, and texture.
- Geospatial/geostatistical data analysis with geographic information system (ArcMap).

12/2018 – 03/2020 Volunteer

PI: Amy Litt, University of California, Riverside; Dept. of Botany and Plant Science

- Label herbarium specimens with barcode and enter into database the serial number.
- Image preserved plant specimens.
- Create and edit records of plant specimens in herbarium database using FileMakerPro.

11/2017 – 07/2019 Student Assistant

PI: Devinder Sandhu, USDA Agricultural Research Service, U.S. Salinity Laboratory

- Train new volunteers in total RNA extraction and purification procedures.
- Assist in developing and executing greenhouse experiments with different lines of corn, and *Medicago truncatula* under the effects of salinity.
- Maintain laboratory space by replenishing tip boxes and cleaning glassware.

09/2017 – 06/2019 Undergraduate Research Assistant

PI: Lauren Ponisio, University of California, Riverside; Dept. of Entomology

- Collect pollinators and record plant interactions in remote mountain sites in Arizona and New Mexico.
- Set up quadrats at field sites and lay pan traps to characterize pollinator community.
- Utilize dichotomous key to identify unknown plant species in the field.

PUBLICATIONS (TECHNICAL PEER-REVIEWED INTERNATIONAL JOURNALS)

Sandhu, D.S., Pudussery, M.V., Kumar, R, Pallete, A., **Markley, P.T.**, Bridges, W.C., Sekhon, R.S. (2019). Characterization of natural genetic variation identifies multiple genes involved in salt tolerance in maize. *Functional and Integrative Genomics*. Doi:10.1007/s10142-019-00707-x

Scudiero, E., Corwin, D.L., Rounsaville, T., **Markley, P.T.**, Pourreza A., Skaggs, T.H. (*In preparation*). A mobile platform to map and monitor soil properties in micro-irrigated orchards. *Computer and Electronics in Agriculture*

GRANTS

July 2018 – June 2019 UCR Mini-grant, University of California, Riverside Research grant. \$998 Awarded. *The Effect of Hedgerows on Pathogen Loads in Bees*. Primary Investigator.

PRESENTATIONS

Poster Session - Markley, P.T., Ponisio, L.C., Gaiarsa, M.P., Cohen, H. C. (2019). *The Effect of Hedgerows on Pathogen Loads in Bees* University of California, Riverside Undergraduate Symposium. June 5, 2019 Riverside, CA.

Invited Speaker – Markley, P.T. (2018). *Getting Involved in Undergraduate Research* Undergraduate Advising Seminar NASC 093, University of California, Riverside. Oct. 25, 2018 Riverside, CA.

COMPUTATIONAL SKILLS

Statistical Software: SAS v9.4, Minitab v19, and R.

ArcGIS: ArcMap, Spatial Analysis & Modeling and Geostatistical extensions.

Other: Microsoft Office Suite

OTHER PROFESSIONAL EXPERIENCE

02/2020 – Present Academic Researchers Unit Recording Secretary

United Automotive, Aerospace, and Agricultural Workers (UAW) Local 5810 at University of California, Riverside

01/2019 – 06/2019 Rare Plant Technician

Private development project with Teresa B. Salvato and Andrew C. Sanders

02/2016 – 11/2017 Front Desk Student Assistant (Work-Study)

University of California, Riverside; Dept. of Electrical and Computer Engineering

SERVICE AND OUTREACH

06/2020 – Present Vice President of Membership

Toastmasters International Inc. Club 5963 “Phonic Fury”

03/2020 – Present Bridge Funding Committee Member

UAW Local 5180; Riverside, CA

09/2019 – 03/2020 Docent

Bolsa Chica Conservancy; Huntington Beach, CA

06/2016 – 06/2019 Outreach Volunteer

Highlander Day, Discover Day; University of California, Riverside Dept. of Botany and Plant Sciences

09/2016 – 06/2018 Club Secretary

Secret Swords and Sorcery Society; University of California, Riverside

REFERENCES

Elia Scudiero

(951) 369 – 4847

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Assistant Research Agronomist, University of California, Riverside

Devinder Sandhu

(951) 369 - 4832

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Research Geneticist (Plants), USDA-ARS, U.S. Salinity Laboratory

Amy Litt

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Associate Professor & Associate Biologist of Plant Evolution & Development, University of California, Riverside

Lauren Ponisio

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Associate Professor of Entomology, University of California, Riverside