Samantha G. Thomas
Kansas Biological Survey
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EDUCATION

2017 MSc Biology, Western Kentucky University
2015 BSc Biology/Mathematics, Murray State University

PROFESSIONAL EXPERIENCE

2018 – current Data Manager: Kansas Biological Survey.
Responsible for the creation and maintenance of a database and all data generated from a multi-institutional and interdisciplinary EPSCoR project. Assisted in the creation of data analysis pipelines and optimization of data storage and dissemination. The Kansas MAPS project received 20 million dollars from the NSF to document and characterize terrestrial and aquatic microbiomes across the state and investigate their role in plant communities and potential prairie grass restoration success.

2018 Data Analyst: Western Kentucky University.
Responsible for data analysis and report creation for data generated by former students in the Ashley lab, leading to a successful publication. Generalized Linear Regression Models as well as various methods of image analysis were used to compute the accuracy of shorebird identification by unmanned aerial vehicles (UAVs).

2017 – 2018 Graduate Instructor/Research Assistant: Western Kentucky University.
Responsible for the instruction of numerous undergraduate laboratory courses including but not limited to Introductory Cells, Genetics and Metabolism, and Introductory Biodiversity, Ecology and Evolution. Responsible for the creation and completion of a research project in the Johnson lab.

2012 – 2015 Head Student Curator/Database Manager: Murray State University.
Responsible for the management of a herbarium Oracle database, training of new student workers, and accession/maintenance of herbarium specimens.

2012 Field Technician: Murray State University.
Responsible for field collection of tree core data and recording of metadata in the Ouachita River basin in Louisiana.

RESEARCH EXPERIENCE

2018 – current "Microbiomes of Aquatic, Plant, and Soil Systems across Kansas". Project Director: Kristen Bowman-James

2018 "Examining the Effectiveness of Unmanned Aerial Vehicles as a Method for Conducting Shorebird Surveys in Barrow, Alaska". Principal Investigator: Dr. Noah Ashley

2016 – 2017 "Landscape Genetics of California Tiger Salamanders: inferences from multiple methods". Graduate research with Dr. Jarrett Johnson

2018 – current "The Role of Microclimates in the distribution of *Morus rubra*: Implications for Conservation". Undergraduate research with Dr. Dayle Saar.

SOFTWARE PROFICIENCIES AND SKILLS:

- R software environment
- ArcGIS
- SQL (SEQUEL)
- C++, JS, and Python programming languages
- MATLAB
- Various database management clients, including Symbiota, Oracle and pgAdmin4
- Microsoft Office Software
- Various software programs commonly utilized in genetics projects, including STRUCTURE, Cytoscape, Mr. Bayes, GENEPOP and Mendel

RESEARCH SKILLS

- Extensive experience in database management
- Proficient in Bayesian and inferential statistical analyses and implementing them in a machine learning framework
- Image analysis
- Deep learning (computer programming)
- Application development
- Specialized experience in genetic/genomic data generation and analysis
- Proficient in a wide variety of analytic laboratory techniques

GRANTS/FELLOWSHIPS

2017 Marcia Athey and Botany Fund: Kentucky Academy of Sciences [700.00 USD]
2016 WKU Graduate Studies Grant [2000.00 USD]
2013 Murray State University Undergraduate Research Grant and Fellowship [2500.00 USD]