

Benjamin J. Allgire
285 Old Westport Road, North Dartmouth, MA 02747
(402) 650-7866
benallgire@gmail.com

Education

2019 University of Nebraska at Omaha, Omaha, Nebraska

- Bachelor of Science in Biology
- GPA: 3.1
- Academic Honors: Chancellor's List Fall 2014. Dean's List Spring 2015, Spring 2016.

Research Experience

Volunteer Research Assistant

February 2019-Present

Department of Biology, University of Nebraska at Omaha

Omaha, Nebraska

Supervised by Dr. Claudia Rauter

- Participated in several experiments investigating the influence parental care type has on several life history characteristics in four species of carrion beetle: *Ptomascopus morio*, *Nicrophorus marginatus*, *Nicrophorus pustulatus*, *Nicrophorus orbicollis*
- Conducted beetle matings; female, mouse, and larvae weighings at several stages of larval development; egg counting; egg collection and weighing; and preparation for lipid analysis
- Lytic assays: Loaded agar plates with oral and anal secretions from all beetle species
- Photographed plates and later measured the area of bacterial clearing using specialized software
- Currently writing the paper on this experiment and discussing my progress with Dr. Rauter twice weekly

Research Technician

May 2022-October 2022

Smithsonian Institution

Malta, Montana

Supervised by Dr. Ellen Welti

- Worked on the first insect survey in the region as well as an experimental setup to discern the effect of different grazing regimens and prairie dog flea treatments on plant and insect populations across three trophic levels
- Helped with an experiment concerning the effect of rainfall on non-structural carbohydrates in *Bouteloua gracilis*
- Constructed experimental plots across a prairie ecosystem
- Gathered data using grasshopper rings, pasture meters, pitfall traps, and plant clippings
- Built a malaise trap to capture flying insects
- Ground plants in preparation for chemical analysis
- Sorted pitfall trap samples into distinct categories: dung beetles, Carabid beetles, other beetles, wolf spiders, ants, and other

Professional Experience

Analytical Technician Level 1

Midwest Laboratories

September 2020-May 2022

- Worked in the soils, microbiology, and chemistry laboratories
- Analyzed chicken rinse samples and chicken feed samples using PCR machines, fiber and fat extraction instrumentation, a mass spectrometer, and elemental analysis instrumentation
- Performed a weekly supply check

Skills and Abilities

- BAX PCR instrumentation
- Growth plate setup and counting
- Media preparation
- Fiber and fat extraction instrumentation
- Mass spectrometry
- Elemental analysis instrumentation
- Instrument verification
- Autoclave maintenance and operation
- Inventory analysis

Research Interests

Basic

- Symbiotic relationships, particularly mutualistic relationships, between plants and pollinators
- Coevolution of flowering plants and pollinators
- Pollination rates of non-traditional pollinators (bats, beetles, birds, flies, geckos, moths, and wasps)

Applied

- Implications of climate change on pollination services
- Habitat fragmentation's influence on symbiotic interactions and pollination rates