

Tiered Mentoring Program

Do spider egg sacs protect against desiccation?

Dr. Todd Blackledge and Kate Karkosiak



Spiders' egg sacs are woven from multiple types of spider silk and offer protection to developing embryos and spiderlings. There is extreme diversity among egg sacs across species in shape, color, texture, and habitat, and little is currently known about how these variations affect spider development.



Extreme water loss is one threat to developing spiders that can cause them to desiccate, or dry out. I am studying whether spider egg sac materials protect against desiccation of developing spiders by preventing water from escaping the inside of the egg sac. I would also like to explore which characteristics of the egg sac silk formations contribute to lower or higher transmission rates through the material.



Skills you will acquire:

- Knowledge about spider biology and silk
- Experience caring for invertebrate animals
- Knowledge of materials and imaging methods
- Field experience and sample collection
- Research experience
- Scientific reading/writing

[Click here for more information about Dr. Blackledge's research.](#)