**Ground Spider Abundance and Diversity Sampling**

**Summer 2023**

**Learning Objectives and Keywords**

This module will contribute to students understanding of ground spider biodiversity, ecological sampling techniques, and hypothesis testing. Through guided inquiry, data analysis, and visualization students will learn transect sampling methods to evaluate how habitat impacts biodiversity. This will be done by testing group data sets, then the class data set as a whole. Students will learn different ways to measure biological diversity with the Shannon Index, scatter plots and bar graphs. As this module is centered around spider community ecology, it will require outdoor sampling at night and will vary by campus. Students will utilize three 10 m long, 2 m wide transects and collect data on species abundance. Data analysis and visualization will be done through Excel and ArcGIS online.

Keywords include:

Spiders (*Araneae*)

Community Ecology

Shannon Index

Excel

Transect Sampling

Learning objectives include:

* Develop a basic understanding of the biodiversity
* Develop hypothesis relating to organismal biodiversity and habitat
* Identify spiders through use of field guides and iNaturalist
* Record, enter, organize data
* Analyze data in group and class settings
* Compare results within classroom environment
* Gain an understanding of the standardized ecological survey methods