

# Introduction to Southern Appalachian Millipede Biodiversity Highlands Biological Station | Summer 2024

## COURSE INFORMATION:

Instructor: Dr. Bruce A. Snyder  
Affiliation: Georgia College & State University  
Email: [bruce.snyder@gcsu.edu](mailto:bruce.snyder@gcsu.edu)  
Meeting Time: TBD. Course will meet at irregular times to accommodate travel to and study at field sites; this is also weather dependent.  
Credit hours: 2

## Course Description:

Millipedes are one of the most dominant and conspicuous members of the soil fauna in southern Appalachian ecosystems. This course will introduce the biology and ecology of these detritivores through field and lab study. Participants will build an understanding of the biodiversity of millipedes through collection, preservation, and identification of local millipede species.

## Instructional Objectives:

Upon successful completion of this course, participants should be able to:

- describe the biology, ecology, and systematics of the Diplopoda
- identify the 10 orders of millipedes found in the southern Appalachians by sight
- find and interpret the characteristics needed to identify southern Appalachian millipedes to species
- use common sampling techniques for millipedes
- properly preserve and label millipede specimens

## Texts and Other Materials:

REQUIRED: A field notebook for your personal use. Any style is acceptable; I prefer bound composition notebooks. I will not collect this, but it will be extremely helpful for your learning and during data collection and analyses.

## Course Outline:

### Tentative Schedule

Date		Topics and Activities
Mo	June 10	Arrival at HBS
Tu	June 11	Morning (9am): Orientation to HBS (HBS Staff) Course goals Introduction to millipedes Field safety and logistics  Afternoon: Collecting techniques (Hand collection, Pitfall traps, Berlese extraction, Winkler extraction)

		<p>Sample preservation, labelling, and notetaking Field collecting</p> <p>Evening (9-11pm): Field collection (UV flashlights)</p>
We	June 12	<p>Morning: Identification to order (lecture/microscope time)</p> <p>Afternoon: Common families in the southeastern US (lecture/microscope time) Field collecting</p> <p>Evening (9-11pm): Optional: Field collection (UV flashlights)</p>
Th	June 13	<p>Morning: Field collecting Break down extractions</p> <p>Afternoon: Gonopod dissections Identification</p> <p>Evening (9-11pm): Optional: Field collection (UV flashlights)</p>
Fr	June 14	<p>Morning: Field collection (if needed) (Locations TBA) Identification</p> <p>Afternoon: Identification Begin compiling data</p> <p>Evening (9-11pm): Optional: Field collection (UV flashlights)</p>
Sa	June 15	<p>Morning: Final exam</p> <p>Afternoon: Finalize collections, produce species list</p> <p>Evening: Final discussion and debrief</p>
Su	June 16	Depart HBS

**Grading Process and Criteria:**

Grades in this course will be assessed as a percentage of total points possible: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F= below 60%. The following items will contribute to the grade:

<u>Item</u>	<u>Points</u>
Final exam	50
<u>Participation</u>	<u>200</u>
Total	250

**No extra credit or assignments outside of those outlined above will be allowed.**