

Grasses of the Southern Appalachian Mountains

Highlands Biological Station

May 4–8, 2026

Instructor: Paul M. McKenzie, Ph.D.

Retired U.S. Fish and Wildlife Service, Endangered Species Biologist (28 years)

Course Overview

This intensive field and laboratory course is designed to help participants develop a strong working knowledge of grass identification and classification, with a focus on species native to the Southern Appalachian region. Participants will learn to distinguish between grasses, sedges, and rushes; gain a thorough understanding of grass floral morphology; and explore the diversity of grass tribes found in the Southeast.

Through lectures, lab sessions, and field excursions, students will practice using dichotomous keys and apply classroom concepts to real-world specimens collected in the field.

Learning Objectives

By the end of the course, participants will be able to:

- Distinguish between grasses (Poaceae), sedges (Cyperaceae), and rushes (Juncaceae).
 - Identify major grass tribes and understand variations in floral morphology.
 - Confidently use dichotomous keys to identify grass species from the Southern Appalachians and beyond.
 - Apply keying skills to grasses from their home states or regions.
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Instructional Format

- Classroom sessions will include PowerPoint-based lectures, with each participant receiving a printed copy of the presentation at the start of the course.
 - Laboratory sessions will emphasize team-based keying exercises. Participants will work in pairs, with one experienced and one less experienced student per team to encourage peer learning.
 - Field trips to local grass habitats will reinforce concepts discussed in class.
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Course Materials

Required:

1. Hand Lens (10x–16x magnification)
2. Agnes Chase's *First Book of Grasses* (available from Amazon, approx. \$19.95)

Highly Recommended:

- Harris, J.G. & Harris, M.W. (2001). *Plant Identification Terminology: An Illustrated Glossary* (2nd Edition).

This text is invaluable for understanding terms commonly encountered in plant identification keys. At approximately \$22.95 (paperback on Amazon), it is an excellent long-term reference for any botanist or field naturalist.

Course Requirements

- No prerequisites are required. However, prior experience using dichotomous keys (e.g., from a plant identification course) will enhance comprehension and pace.
- Students enrolled for 2 hours of academic credit will complete an open-book exam at the end of the course.
- Due to the limited diversity of live grasses in early May, dried, pressed specimens will be provided for lab and class study. Participants are also encouraged to bring their own dried or fresh specimens from home for identification and discussion.

Instructor Background

Dr. Paul M. McKenzie brings over three decades of experience in field botany and grass taxonomy. His career highlights include:

- Teaching grass identification courses for over 36 years.
- Describing a grass species new to science: *Aristida correlliae* McKenzie, Urbatsch & Proctor.
- Rediscovering *Aristida chaseae* in southwestern Puerto Rico—a species previously believed extinct.
- Discovering grass taxa new to Puerto Rico, North America, Louisiana, and Missouri.
- Authoring 20 peer-reviewed publications on grass systematics and ecology.

Instructor Interests

Beyond grasses, Dr. McKenzie enjoys bird, butterfly, and sedge identification and photography, as well as morel hunting, trout fishing, and the occasional well-crafted pun.