



2020 Eagle Hill Institute
Online Natural History Seminars

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Leaf and Stem Mining Insects

Charley Eiseman September 5th – October 3rd, 2020



Leaf and stem miners are insect larvae that feed within the tissues of plants for at least part of their development, forming externally visible feeding patterns (mines). In North America, they include well over 2000 species of moths, flies, beetles, and sawflies. They tend to be highly host-specific, feeding on one or a few closely related plant genera, and each miner leaves a species-specific pattern as it feeds. It is therefore generally possible to identify these insects by noting the host plant and studying the mine characteristics. This course will introduce students to the identification and biology of leaf and stem miners through five online video classes, which will complement independent work done by participants between meetings. The first session will include a slide show/lecture providing an introduction to leaf and stem mining and other modes of herbivory; an overview of mine classification; and a discussion of methods for photographing, collecting, and rearing miners. In between classes, participants will photograph and/or collect leaf and stem mines and attempt to identify them using the hostplant-based keys in *Leafminers of North America* (available for purchase at <http://charleyeiseman.com/leafminers>). At each subsequent meeting, we will discuss what people have found, working through the keys together for any mines that have caused difficulty. This will ideally be done by sharing digital photographs taken ahead of time, but for some specimens live sharing via webcam may be possible. Shortly after each meeting, the instructor will provide a list of relevant passages in *Leafminers of North America* to read that will reinforce what we have covered together.

Scheduling Details

September 5th through October 3rd

Five consecutive Saturdays

7PM – 9PM

[i.e., September 5, 12, 19, 26, October 3rd]

About the Instructor

Charley Eiseman (ceiseman@gmail.com) is a freelance naturalist based in western Massachusetts. He has been conducting plant and wildlife surveys and natural resource inventories throughout New England for the past twenty years. He holds an MS in Botany (Field Naturalist) from the University of Vermont and a BS in Wildlife and Fisheries Conservation and Management from the University of Massachusetts. Charley is the lead author of *Tracks & Sign of Insects and Other Invertebrates* and has published over forty scientific papers describing new insect species or documenting new natural history information for known species. He also writes an insect-themed blog, “BugTracks,” and is currently self-publishing the second edition of *Leafminers of North America*, a serial e-book of which the first edition was completed in June 2019.