

Permit 2020-004

Name:

William J. Davis

Department or Organization:

ORISE/USDA-ARS

Email Address:

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Are you requesting renewal of a previously approved permit applicaton?

No

Type of activities at The University of Akron Field Station and Bath Nature Preserve
Research

Title of project or class name and course number:

Biodiversity & Phylogenetics of Peronospora

Date/Dates requested:

April 10-May 31

Number of people in group:

1

I am requesting permission to use a Research Area.

Yes

I am requesting permission to use a Sensitive Area.

No

I am requesting permission to use areas outside of the designated Research or Sensitive Areas.

No

I would like to use the Martin Center for Field Studies and Environmental Education for this prop...

No

Will the activity involve destructive sampling/collecting?

Yes

Which Research Areas?

Grandview Alley

South Woods

Please explain how the material will be collected (including equipment), and an estimate of how m...

All above ground parts of infected plants will be collected. Up to 20 plants.

Provide a brief description of (1) your proposed activities, (2) goals, and (3) impacts of your u...

We are working on the taxonomy and evolutionary trends in the downy mildew genus *Peronospora* (Peronosporaceae, Oomycota). We will survey for *Peronospora claytoniae* on *Claytonia virginica* (Spring Beauty) in Grand View Alley and the South Woods. Infected plants will be collected, pressed, and transported to our lab in Beltsville, Maryland. Our project will have minimal ecological impacts to the Bath Nature Preserve as we will only collect above ground material; spring beauty tubers will be left intact below ground so individuals can grow again next year.

We will perform morphological analysis of the collected specimens and extract DNA for molecular phylogenetic analysis. Sequence data will be deposited in GenBank. Microscope slides will be preserved and will be deposited along with the specimens into the U. S. National Fungus Collections Herbarium (BPI). The data obtained will help resolve the evolutionary relationships in *Peronospora* and its relationships to other genera of downy mildews. With improved resolution of these relationships, we can better address questions about evolutionary trends, such as host jumps among plant families, and species boundaries.

By checking this box, I agree to the above terms and state that all of the above information is c...

I agree