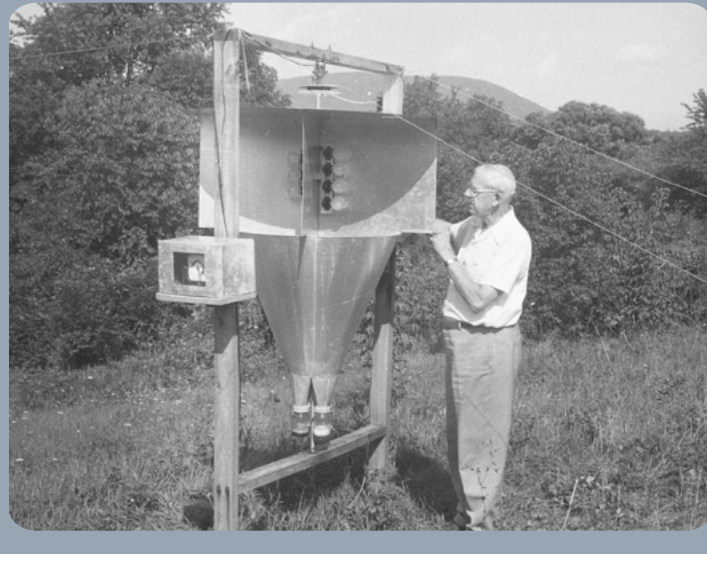


The Light Trap

Newsletter of the
Frost Entomological Museum
Winter 2021



A Quick Note

2020 presented a magnitude of challenges not seen for decades. COVID-19 disrupted research, pushed teaching online, closed the museum, cancelled travel, and complicated everybody's home lives. There were some bright spots, however, some of which would not have happened had we not been in quarantine. We wanted to take this opportunity to express our hopefulness that 2021 will a brighter year, and to **THANK YOU** — whether you donated, participated in our virtual engagements, kept up with our news, or spread the word of our mission and continued efforts, we are deeply grateful for your continued support.

Winter Collecting

The cold weather months usually mean that insects seem few and far between, but that doesn't mean they aren't around! We are currently spending some time collecting winter tolerant insects to compose display boxes exhibiting insects through the seasons. This effort is part of a partnership between the Frost Museum, the [Insect Biodiversity Center](#), and the folks at Shaver's Creek to increase the insect-related content available for visitors to the [Shaver's Creek Environmental Center](#).

Are you itching to get outside and for winter insects? Try flipping logs, looking under loose bark, and sifting through loose leaf litter. You can find a surprising number of overwintering insects! You should also keep your eyes peeled for active arthropods on snow, such as snow scorpionflies (Boreidae), winter craneflies (Trichoceridae), and many kinds of spiders.



Above: Arthropods in the snow. Linyphiid spider (top), winter crane fly (bottom left), snow scorpionfly (bottom right).

Spiders of Pennsylvania



Speaking of spiders, the Frost has recently created a project through iNaturalist called [Spiders of Pennsylvania](#). The project currently includes >20,500 observations of spiders in Pennsylvania, representing 271 species. This project is a means to gather critical distribution and natural history data of our local spider fauna. You can help us to fill the gaps in knowledge of Pennsylvania spiders by downloading the iNaturalist app on your phone and documenting the spiders that you see! Need help figuring out how to use the app? [Contact us](#) and we'll help walk you through it.

A New Course on Spiders

Some of our readers undoubtedly remember the famous spider course taught by the late Bob Snetsinger. One alumna, now a veterinarian, described it as her favorite course at Penn State. [Andy Deans](#), with help from [Dr. Eric Yip](#), is resurrecting and updating this course, which will be offered for the first time next fall. This project has been long in the making and will undoubtedly help catalog and spread enthusiasm for our arachnid friends. We are all very excited to have good reason to delve deeper into the biology of spiders. We'll provide more details in the next newsletter.

ENT 432 Student Collection Highlights

In December, students who were enrolled in ENT 432 Insect Biodiversity and Evolution turned in their student collections. Specimens that have complete data and are in good shape will be accessioned into the museum's collections. This year, students turned in ~2000 specimens! Below are some highlights of the particularly interesting and eye catching specimens from this year.



Rainbow Scarab — *Phanaeus vindex*

This dung beetle is native to most of the eastern United States. Like other dung beetles, the rainbow scarab bury dung in underground burrows to provision their young, and so play an important part of nutrient recycling and reducing waste in pasture systems. This beetle was part of John Sauter's collection. John is an undergrad in John Tooker's lab.

Spicebush swallowtail — *Papilio troilus*
This specimen is a wonderfully intact cocoon of a spicebush swallowtail that had been attacked by a parasite. You can see the wasp-sized exit hole on the side, instead of the usual opening slit towards the top. This was part of [Nia \(Blue\) Riggins](#)'s collection. Blue is a 1st year graduate student in rotation. What an interesting ecological artifact to document in the museum!



Velvet ant — Mutillidae

Velvet ant's aren't terribly common in this area and so are rarely seen in the student collections. This specimen was also part of Blue's collection! Read [this Wasp Wednesday post](#) if you want to learn a little more about the the family Mutillidae.

Arthropod Evolution Gallery - Now Online!

The Arthropod evolution exhibit, featuring photos by Dr. Matthew Bertone, was the first one to be installed in our newly renovated space. It has been part of our public space since 2018. The exhibit documents the beauty and variety of arthropod forms while describing some of the key evolutionary innovations responsible for the success of arthropods. As we begin to make plans for rotating in a new exhibit, we wanted to ensure that this exhibit was saved in some form before it comes down. We've created an [online version of this exhibit](#), which we urge you to check out. Matt's photography is spectacular!



Gall Listserv



Above: Specimen of wasp species *Ampulex compressa*.

For the gall minded folks out there – [Louis Nastasi](#) has recently organized a new Listserv as a way for professional and recreational entomologists to exchange information about the study of plant galls. If interested, you can subscribe to the Listserv by sending an email message to: GAL-L-subscribe-request@lists.psu.edu.

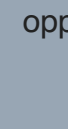
Keep an eye out for the next *The Beat Sheet* in the spring

If you are interested in hearing about specific topics or activities, please let us know!

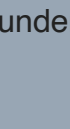
Become a Friend of the Frost

By becoming a Friend, you help equip the museum with the tools needed for *collections care*, provides resources for *student engagement*, and helps fund the *rotation of new exhibits* into the museum. [Visit our website to learn more.](#)

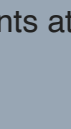
Your support helps us better engage the public, grow and maintain the collection, and provide opportunities to undergraduate students at Penn State



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