Minutes from the 575th Meeting of the Connecticut Entomology Society

February 17th, 2023

Zoom

Total Participants: 29

Guests: 6

Members: 23

Social pre-meeting began at approximately 18:30.

**Business Meeting:**

-Meeting called to order at 19:30 by president Ray Simpson.

**Reports:**

-A few dues have been received via PayPal, but there are still some members that need to pay dues. Members can pay their dues either via PayPal or in-person.

-Expenses have been low due to meetings being held on Zoom.

-Student symposium is next month, during an in-person meeting at UConn.

-Due to spring break, the March symposium was moved to from the 17th to the 24th.

-The talks given during the symposium can be about any subject involving terrestrial arthropods.

-There still will be a survey going out asking for constructive critique and/or suggestions of the CES.

**New Business:**

-Officer elections are this April during the potluck meeting! If you are an incumbent, let people know of your availability.

-April 21st is the potluck meeting at the CT Agricultural Experiment Station, and will feature Harry Zirlin. May outing is TBD due to weather.

-Gloria Miller is wondering if anyone could do a presentation on fireflies in June, and the New England Entomological Society is also looking for presenters at one of their events in March.

-The March and April meetings will be hybrid.

**New Members:**

-Karlo and Peter, two members of the NYC Butterfly Club that have experience with metalmarks, have joined.

-The president of Sherwood Island State Park says there’s that a man from their internship program who’s interested in entomology, and would like to know if there’s any members would be interested in working with him.

**Evening Presentation:**

-Faith Novella discussed the habitat restoration of the Northern Metalmark butterfly. As a wildlife biologist, she’s a habitat restoration specialist who’s been working on this project since 2020, and has been working with insects in general since 2017. The metalmark family, Rhiodinidae, has about 1.5k species across 146 genera, with about 1.2k of them being exclusive to the neotropics. Batesian (and possibly Mullerian) mimicry is common. Haploid chromosome number can range from 9 to 110. Wingspan can range from 12mm to 60mm. Males have reduced forelegs while females have fully-functioning forelegs.

The subfamily Rhodininae, the true metalmarks, has only one species among it that also lives in CT, *Calephenis borealis*. There are only two populations of this butterfly in CT at the moment. Wingspan of this species is 29-33mm, with two metallic bands near the outer margin of the wings and mostly brown when viewed dorsally. Ventrally, they’re mostly orange. Eastern populations only have one brood per year. As adults, they only live two weeks, with eggs laid singly on the underside of leaves. Upon hatching, they overwinter for their 5th or 6th instar, with them emerging around April before going through two to four more instars. Their habitat seems to demonstrate a preference for limestone soils and wetlands. They’re slow and weak flyers, too, so it’s important that their larval host plants and nectar host plants are nearby to each other. The particular habitat these butterflies prefer was formed about 700mya, involving a geological formation known as Cameron’s Line. Larval host plant is *Packera obovata*, which blooms well before the butterfly’s flight period. It also seems to grow like a carpet. But without 60% canopy cover, the nectar sources would struggle, which include a variety of plants such as goldenrod, butterfly weed, and black-eyed Susan.

Throughout their entire range, *C. borealis* is rare, and said range is as west as Oklahoma. In addition to habitat loss due to human development, another factor is deer overpopulation, which leads to them eating nectar sources. The butterflies themselves also have a low dispersal rate, so they’re not really colonizing new habitats. Ways that this decline can be addressed include canopy thinning and the propagation of nectar sources, as well as invasive plant control. Notable invasive plants include Japanese barberry, the common dandelion, and mustard garlic. There’s also a guide to invasive plants that are relevant to the northern metalmark’s habitats, which seems to be very useful in managing the site. As for the deer, there’s the possibility of fencing, but it’s expensive and needs to be maintained. Because the area is secret, it’s hard to get stakeholders onboard. However, this metapopulation is likely to blink out due to inbreeding depression.

In this particular context of the northern metalmark and butterflies in general, they’re not a particularly notable source of food for birds, not notable pollinators, nor are they great bioindicators. However, butterflies are an umbrella species, so protecting a butterfly species indirectly protects other species. Propagating the nectar sources for the metalmarks can help other pollinators, with one such nectar species, the northern blazing star, is a species of special concern in CT.

Meeting adjourned at 20:54.

**Note: corrections and additions to the minutes are welcomed. Please email** **maxengel1@gmail.com****.**