

2021 PROGRESS REPORT

Quarter: (circle one) 2021 1st 2021 2nd 2021 3rd 2021 4th

Grant Program, Number and Title: RCN 2 Project 2 Job1 GSA 00133 Nocturnal moth surveying, specimen identification and data management

Organization: Lloyd Center for the Environment, 430 Potomska Road, Dartmouth, MA 02748

Project Leader: Mark J. Mello, Director Emeritus

Abstract: Please provide a short (1-2 paragraphs) abstract that addresses EACH of the following: the objectives of your project, accomplishments to date, future plans and timelines with an estimate for when the project will be completed.

Were planned goals/objectives achieved last quarter? Yes

Twelve field trips were planned for July – September, three at each of the four sites (Rhode Island, Albany Pine Bush, Katama and Nantucket, all of which occurred. An additional trip was made to Rhode Island during July because one of the traps malfunctioned. We did not charge the project for this additional trip. Also, the September field sampling on Nantucket was conducted over two nights due to the time it takes to travel between sites (Linda Loring and Head of the Plains) and the time to walk out to each station at both sites. Because sun sets early in late September, in order to set six traps one would have to start in mid-afternoon, risking evaporation of the killing agent (ethyl acetate) well dawn.

All macro-moths from these samples have been sorted, and counted; and vouchers saved and spread. Selected micro-moths were also saved. Most Gelechiidae and leafminer Families were brought to the Albany Pine Bush visitor center where Jason Dombroskie would be picking them up for identification during the winter.

All appropriate field data (temperature, humidity, vegetation, weather conditions has been recorded, and data entered on Excel spreadsheets.

Progress Achieved: (For each Goal/Objective, list Planned and Actual Accomplishments)

The 21 field trips conducted throughout the 2021 field season captured 7,684 macro-moths, Limacodidae and Megalopygidae of which 1,492 were saved as vouchers covering 458 species, all of which have been pinned and spread (Table 1

Table 1. Total count, number of vouchers and species* at each site.

*macro-moths, Limacodidae and Megalopygidae

** April trips produced only six macromoths at Albany and Rhode Island sites

	# samples	count	# vouchers	# species
Nantucket				
Head of the Plains	9	572	145	85
Linda Loring Fdn.	15	674	161	98
Katama	15	3,120	392	195

Albany Pine Bush	18**	1,658	394	225
Rhode Island **				
Nicholas Farm WMA	13	1,272	275	198
Pratt Cons. Area	5	388	125	124

Data entry as per agreed upon format is completion. Penitrometer soil data was collected in May and August/September. Vegetation data is complete through September except for a few species that need confirmation,

Difficulties Encountered: The only difficulty encountered during the July - September sampling period was on Nantucket. Ferry service had to be booked in April, and yet, only wait list times were available for the July and August months.. Although I eventually did get my wait-list dates, the August trip occurred during a period of heavy rains and wind, so the dirt road to Head of the Plains was impassible in my car, and the winds kept the numbers low at Linda Loring.

Activities Anticipated Next Quarter:

All labelling will be completed

Vegetation data will be finalized.

Micro-moths in my possession will be identified, and those that I cannot identify will be sent to Jason Dombroskie or other expert on particular families.

Summary report by December 31, 2021.

Expected End Date: 31 October 2022 but 2021 field work and reporting submitted by December 30, 2021

Are you within the approved budget plan and categories? Yes



Signature:

Date: October 28, 2021