

Pollinator Working Group Meeting

Date: Thursday October 5, 2017

Time: 4:00 p.m. – 6:00 p.m.

Location: NRCS Conference Room

Minutes

Call to order at 4:05 PM

Attendees:

Working Group Members: Meg Kerr, Joel Tirrell, Shannon Brawley (absent), David Brunetti, Sara Churgin (absent), David Gregg, Rafael Nightingale (absent), Keith Salisbury, Robert Mann (absent), Henry Wright (represented by Heidi Quinn), Ken Payne (absent), Lisa Tewksbury (absent), Ken Ayars (absent), Howie Cook (absent)

Guest: Julia Gold (RIDOT), Judie Sky, Nyssa Sky (Golden Root), Brianna O'Connor (Golden Root), Julia Bancroft (NBEP), Pete August (URI), Gary Casabona (NRCS), Howard Ginsberg (USGS/URI)

Dates of next Working Group Meetings: The PWG is scheduled to meet on the following dates:

Thursday November 2, 2017 from 4 PM – 6 PM at the NRCS conference room
(Thursday December 2, 2017 at NRCS)

Thursday January 11, 2018 from 4 PM – 6 PM at the NRCS conference room

Thursday February 1, 2018 from 4 PM – 6 PM at the NRCS conference room

Year 2 report – Due February 15, 2018

Presentation by Julia Bancroft and Dr. Pete August

URI Professor Dr. Pete August introduced the presentation. Julia Bancroft, a student in his GIS analysis class, was interested in working with the Pollinator Working Group to use GIS data to explore pollinator habitats in Rhode Island. She did the analysis with support of a steering committee made up of Dr. August, David Gregg, Shannon Brawley and Meg Kerr (members of the PWG) along with Dr. Steve Alm and Dr. Howie Ginsberg.

Julia used existing GIS data layers from the RI Ecological Communities Classification and RI Forest data layers. The steering committee agreed to use a foraging radius for bees of 2.5 miles (4.0 km). For each pixel in the map, she looked at the total number of habitat types deemed most suitable for bees within this foraging radius and mapped the results state wide. She also looked at the abundance of habitat (total square kilometers of suitable pollinator habitats) within a 2.5 miles (4.0 km) foraging distance. These results were also mapped. Finally, she developed a map where the diversity and abundance were added together.

The maps were used to examine data collected by Dr. Alm at blueberry sites throughout the state. There are 13 hive sites near blueberries and for comparison 12 sites were randomly generated. They found that there was no difference in average bee habitat between the hive sites and randomly generated sites. There was significant difference in how variable the two datasets were. The random sites were three times more

variable than the blueberry sites. Julia ended by summarizing some next steps that could be taken with this analysis.

Julia is preparing a report that will be shared with the committee.

Discussion:

The areas of the map that show low diversity include both areas that are forested and areas with a lot of impervious cover.

Should areas with high habitat value be given priority for protection?

This analysis could be tweaked to give more importance to spring (red maple swamp, forested wetlands) and fall (hay land, shrub lands) plants.

John Tyler at URI is looking at urban gardens and pollinators.

Inventory and Monitoring Task Group – David Gregg

David Gregg discussed the draft workplan that is included at end of minutes.

He began by emphasizing the importance of distinguishing between a citizen science program primarily for building awareness and engagement and a robust scientific inventory of bees and other pollinators that may or may not include the participation of citizen scientists. Both are important but the former is not a substitute or a lower cost substitute for the latter.

Keith Salisbury mentioned that Jim Lawson has been working with the beekeepers on developing a good database of hive locations. Would this data be of interest? We agreed it would be very useful and one good direction to go to follow up on the habitat modeling.

The group discussed several areas for future work.

- Data from beekeepers – location of hives, success rates of hives
 - Does Julia's work help explain the success or failure of hives?
- Could the maps be divided into seasons – to examine the early and late habitats?

The group decided to develop an outline of possible future research that could be used when future grant opportunities arise or to provide ideas to interns and students with interest in this work.

6:00 p.m.: Adjourn Meeting

DRAFT

Rhode Island Pollinator Working Group:

Inventory and Monitoring Task Group

2017-18 WORKPLAN

David Gregg 9/13/2017

Scientifically robust inventory and monitoring is critical to efficient, effective management of the health of Rhode Island's pollinators. This is why expanded efforts in this regard were part of the February 2017 recommendations of the Pollinator Working Group (PWG).

Improving environmental managers' knowledge of pollinators through inventory and monitoring is distinct from improving the public's knowledge of pollinators through outreach and citizen science projects. Though citizen science can and, we hope will play a role in improving our knowledge of pollinators in the state, it makes up only one part of a suitable inventory and monitoring plan.

The activity of inventory and monitoring produces information on which bee species occur in Rhode Island as well as geographical and seasonal patterns and long trends in their populations.

We recognize that resources for new fieldwork are limited in Rhode Island. So in 2016 a task group led by Peter August and Julia Bancroft analyzed existing habitat data using reasoned assumptions about associations (positive and negative) of certain habitats with pollinators as well as about pollinator foraging range. From the analysis, distinct patterns of putatively good or poor pollinator habitat emerged.

To test the validity of the model, task group members with expertise in pollinator taxonomy and ecology advanced various plans using existing, archival data and/or new fieldwork.

Now that the field season is over, we need to assess these early validation efforts both for what they say about the model and their practicality given our circumstances. The value of the model as a step towards inventory and monitoring could then be evaluated and the task group could recommend modifications or new directions.

In addition, the inventory and monitoring group should provide input on the development of the PWG's citizen science projects so that in addition to meeting their outreach goals they contribute as much as possible to inventory and monitoring needs.