

September 25, 2017

Dear Members of the GCV Conservation Committee,

I first wanted to thank you for such a warm reception at the Conservation Committee meeting I attended this past June in Richmond. I enjoyed meeting all of you, and I was grateful to learn more about the Committee's initiatives and concerns for conservation and environmental issues across the state. As someone who is still learning more about conservation issues in Virginia, you all are a truly empowering group.

I want to share a preliminary progress report of my research during my tenure as a Garden Club of Virginia Conservation and Environmental Studies Fellow:

*Summer 2017:* Our summer 2017 work was completed on-time. Over the course of the summer, I was able to process and pin 5,000 bee specimens to be identified over the late summer and fall of 2017. We created a database to identify all of these bee specimens, and we have a webpage for our citizen scientists to view which bee species were found on their specific property. They are able to view how many bees were caught, how many have been identified so far, and which species we have identified on their property. Our citizen scientists have expressed that they enjoy learning about the bee diversity in their backyard and contributing to our understanding of bee diversity across the Commonwealth.

I'm also pleased to report we are interacting with a curator of the Virginia Museum of Natural History in Martinsville, and at the conclusion of our species identification effort, a number of these pinned specimens will be donated to their Collections Department for educational outreach purposes.

*Fall 2017:* We have begun our next phase of research on our bee hotels, which involves disease detection and disease identification. We are having our first collaborator videoconference with our colleagues at Cornell University this week on Wednesday September 27<sup>th</sup>. We will arrange travel plans, where I will visit Cornell and learn how to perform multiple disease detection and identification techniques. This research could not be possible without the help of many University of Virginia undergraduates – after interviewing a number of students, I will be managing twelve UVA undergraduates in the lab. These undergraduates will be learning dissection techniques and improving their database skills as we open up the 1,800 nesting blocks from our bee hotels to see what's inside.

At this time, we have happily discovered that our data size is going to be much larger than expected. This is a wonderful development, as a larger data set can lead to stronger understanding and signal greater impact of our research findings. This larger data set will require a greater amount of funds to be devoted to disease detection and identification efforts. Therefore, we intend to devote the entirety of the Conservation and Environmental Studies Fellowship budget towards disease detection and identification efforts. We intend share those results with our citizen scientist participants, the Conservation Committee, and the general public. Anticipated use of funds will begin in late October – early November. At this time, \$0.00 have been spent of the grant, but all funding will be spent within one year of the date of the grant.

Thank you again for the Garden Club Conservation Committee's generosity and commitment to funding my research efforts. I look forward to sharing more results with the Committee in the future. If the Committee has any further questions, I would be happy to answer them and explain more about my research.

Sincerely,

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