CITIZEN SCIENTISTS DOCUMENT GEOGRAPHIC PATTERNS IN POLLINATOR COMMUNITIES

Alison J. Parker and James D. Thomson

What makes a good pollinator? When plants are visited by many pollinators (most plants are) and those pollinators vary geographically and over the course of the season, it's sometimes hard to tell which pollinators are most important for plants. In order to find out more about how different pollinators affect the reproduction of plants, it is important to first figure out which pollinators are visiting, and where. For a lot of plant species, we don't have much information about how pollinators vary geographically and throughout the season. Citizen science is a good opportunity for documenting some of these large-scale patterns in pollination, because people are often eager to spend time outdoors to contribute to monitoring, often know a lot about their local plants and pollinators already and are already located throughout the range of the plant and pollinator species of interest.

We documented changing pollinator populations of *Claytonia virginica* and *Claytonia caroliniana* (also known as spring beauty) over the course of three years and throughout the east coast through the efforts of volunteer citizen scientists. We asked volunteers to find a patch of *Claytonia*

The bee-fly *Bombylius major* visiting *C. virginica*.

virginica or *Claytonia caroliniana,* learn to distinguish the common pollinators, conduct about two hours of observations over the course of three weeks, and share that information with us. Citizen scientists documented some interesting differences in pollinator communities; in particular, in the western side of the plants' range, *C. virginica* and *C. caroliniana* are visited more often by the pollen specialist bee *Andrena erigeniae*, and in the southern part of the range, the bombyliid fly *Bombylius major* visited more often. These data will help determine the best way to evaluate pollinators and add to our understanding of what determines the composition of pollinator communities.