To: Dr. Brandon Barton

Editor-in-Chief

Food Webs

From: Dr. Robert Clark

Research Scientist

Great Hollow Nature Preserve

& Ecological Research Center

225 State Route 37

New Fairfield, CT 06812

Dear Dr. Barton,

It is my pleasure to submit my manuscript titled “An ant-dispersed plant community recovers following three-year removal of elaiosomes in a Connecticut forest.” Globally there are over ten-thousand species of ant-dispersed plants, and these “myrmecochores” produce nutrient-rich elaiosomes that ants consume. However, despite the prevalence of this mutualism and its importance as a food source for ants, it is unclear if seed-dispersing ant populations are limited by this resource. Tests of the “elaiosome-limitation hypothesis” are few and far between. I know of no long-term trophic data examining this mutualism in the regions forests, and only laboratory studies have conclusively demonstrated the nutritional benefits for ants.

I designed this long-term experiment as a first-year Master’s student in 2009, where I completed a three-year removal of flowers and elaiosomes from all mutualistic, ant-dispersed plants. After eight years, I recorded the impacts of this manipulation on both plants and seed-dispersing ants (genus *Aphaenogaster*). It looks that small-scale disruptions to this mutualism did not significantly reduce the abundance of seed-dispersing ants or the diversity of ant-dispersed plants. I conclude that this mutualism is fairly robust with respect to some environmental changes, and this corroborates other experiments suggesting *Aphaenogaster* are not limited by food resources.

I appreciate having this manuscript considered for publication in *Food Webs*. The trophic perspective makes the story a good fit for *Food Webs*. This project has languished in a ‘to do’ folder, on and off, for over ten years. I would be thrilled to see it published – the original paper I wrote on this topic in 2012, in *Environmental Entomology,* is actually my most highly-cited paper. Trophic mutualisms are widely studied, and ant-dispersed spring ephemerals are immensely popular with naturalists that work and hike and in New England’s forests.

Thank you for your consideration.

Sincerely,

Robert Clark

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