Jenny Broderick

Commissioning Specialist

Frontiers in Ecology and Evolution

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Dear Jenny Broderick,

Thank you for the invitation to submit an article as part of Frontier in Ecology & Evolution’s article collection “**Untangling the Complexity: Recent Advances in Understanding Interactions Between Plants, Pathogens and Herbivorous Insects.**”

As part of an initial invitation to our co-author, Dr. Sanford Eigenbrode, we have prepared a manuscript that aligns with this special issue. This paper, titled “**Experimental evidence reveals that vector host preference and performance across host plants is not altered by vector-borne plant viruses**”, presents the first study examining the effects of viruses and aphid host-races together in a single experimental framework.

This project encompasses a series of bioassays investigating the ecology of pea aphids among multiple host-plant species, using pea aphids sourced from different ancestral populations showing adaptations to specific host plants. The five host plant species examined were exposed to different aphid vectored viruses in a factorial design. Our results indicate changes to both preference and performance mediated by both vector-borne plant viruses and host-race associations, but surprisingly these two ecological mechanisms did not disrupt one another.

Fitting with the topic of this special collection, we provide mechanistic insight into the role of host-race associations for herbivorous vectors and how those may function in environments where plants are exposed to vector-borne pathogens. We believe the results will be of interest to the readership of this issue.

Sincerely,

Robert E. Clark

Diego F. Rincon

Ying Wu

David W. Crowder

Sanford D. Eigenbrode