September 30, 2018

Dear Editor,

We are submitting a technique paper for you to consider as part of a video article in JoVE: “Determining primary sex ratio of *Bemisia tabaci* using a cytogenetic technique.”

Our paper contributes a technique to directly determine the primary sex ratio (=fertilization rate) of these haplodiploid insects. Whiteflies in the species complex collectively known as *Bemisia tabaci*, include some of the worst cosmopolitan pests. As vectors of plant viruses, they threaten cassava production for small landholders in Sub-saharan Africa, and direct damage to cotton lint in cotton production make them the worst pests of cotton in the USA. These insects have been the subject of several international conferences (International Whitefly Symposium) and hundreds of ecology, pest management and evolutionary biology papers, including papers in Science, PNAS, Current Biology and others.

While sex allocation studies are a staple of the behavioral ecology of insects and particularly of parasitoid Hymenoptera, to our knowledge, no one has determined the primary sex ratio of whiteflies, yet being able to predict sex ratios is important for population forecasting, and being able to determine whether fertilization occurs is important for determining what type of reproductive isolating mechanisms stand among the dozens of sibling species in this complex.

As our technique is difficult and novel for whiteflies, a video medium would allow a wider audience to fully understand and perfect this method.

Thank you for your consideration,

Martha S. Hunter and Elizabeth C. Bondy