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An examination of dilution in bumble bees: Spillover of RNA viruses through shared flowers depends on floral diversity

Principles of Complex Systems Project: Update 4

What I have completed Since my last update: This week I have finished cleaning my data and have completed the majority of my graphical analysis. I have done some work on my model and continued working on the writing of the paper. Figures below…

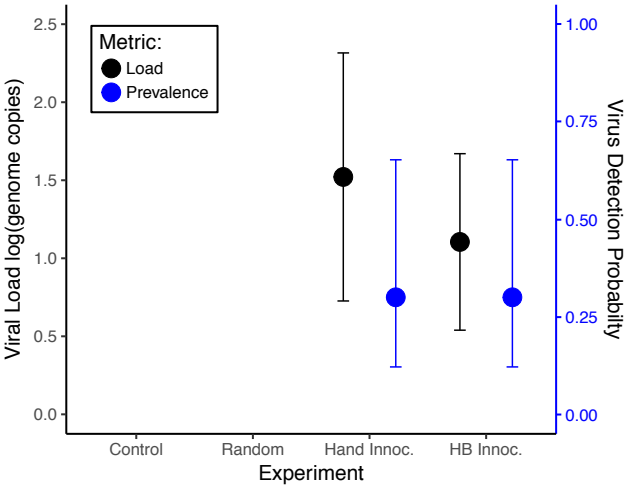

Figure 3 The viral load (black) and prevalence (blue) of bees that have been exposed to deformed wing virus on flowers. Control bees foraged on sterile sucrose solution on artificial flowers, "Random" bees foraged on flowers (red clover) haphazardly selected from a honeybee apiary, "Hand innoc." bees foraged on red clover that had been hand inoculated with a field-realistic dose of deformed wing viruses (1 million genome copies) and "HB innoc." bees foraged on red clover that had been exposed to infected honeybees. Blue bars represent the 95% confidence interval derived from the associated beta distribution's probability density function. Black bars represent standard errors.

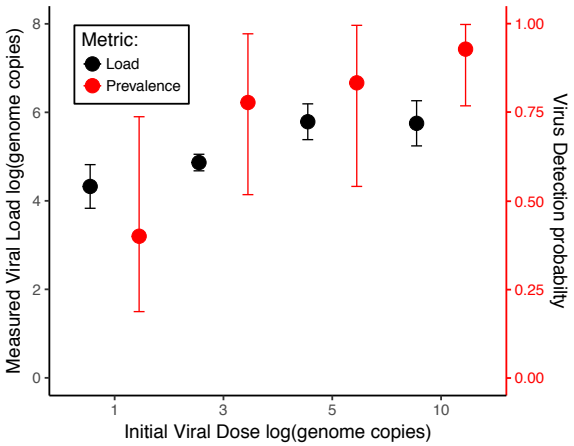

Figure 2 The viral load (black) and prevalence (red) 3 days after being inoculated with a variable dosage of deformed wing virus (1, 3, 5 and 10 million genome copies). Red bars represent the 95% confidence interval derived from the associated beta distribution's probability density function. Black bars represent standard errors.

What I plan to do next week: This week I plan to run my model, graph my parameter sweeps and finish my paper and slides.

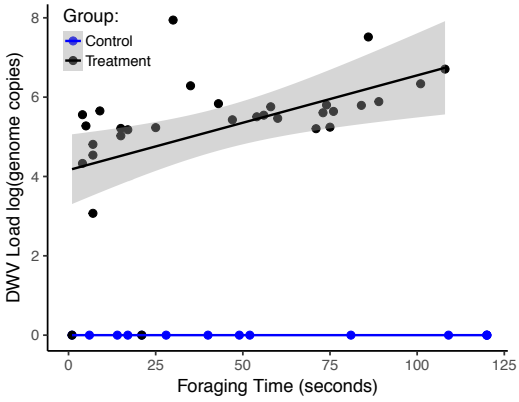

Figure 1 The amount of virus acquired by a foraging bee as a function of foraging time. Black dots represent individuals that foraged on inoculated flowers, while blue dots are control bees that foraged on sterile sucrose solution. Lines represent the line of best fit with shaded standard error.