

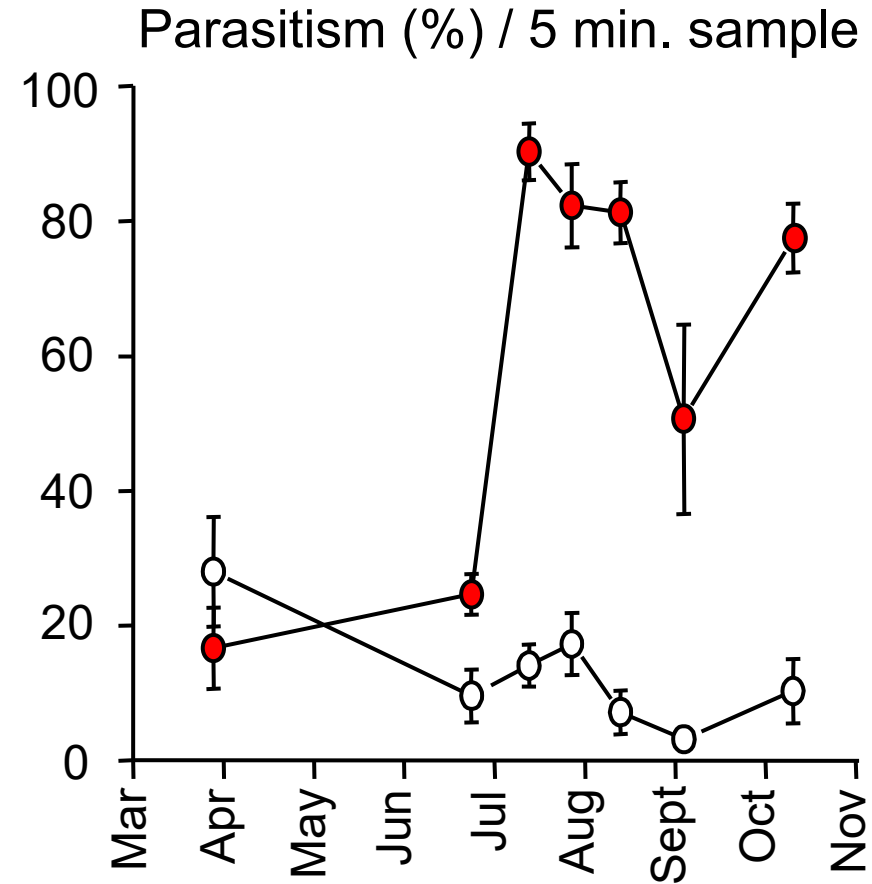
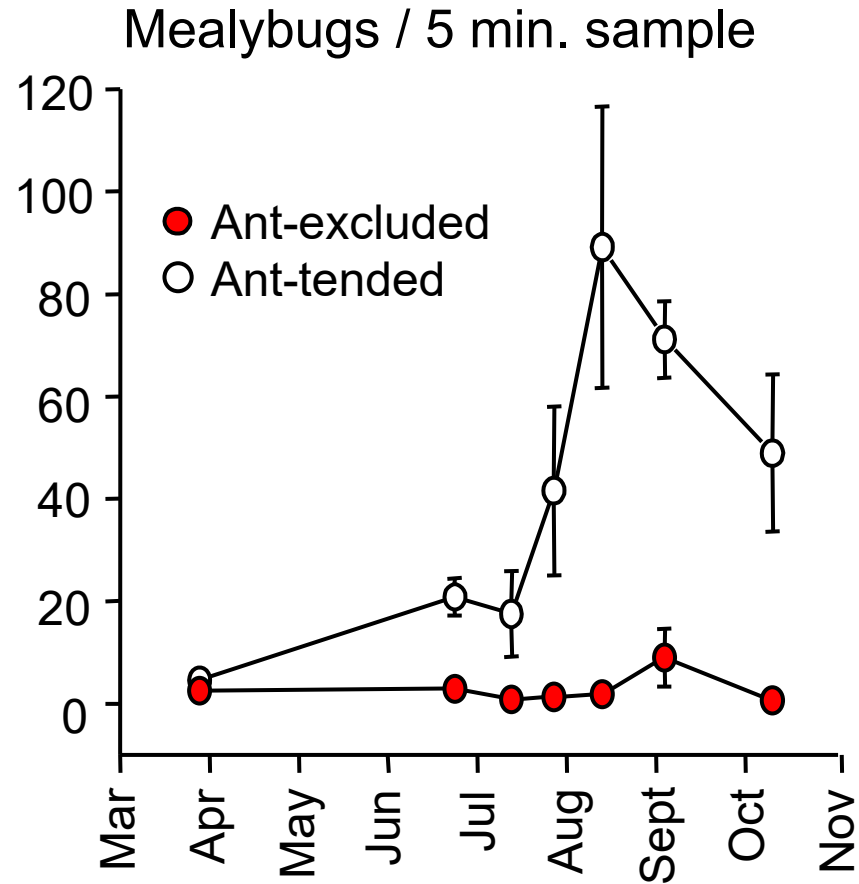
Hydrogel Ant Management



- Ants tend to honeydew producing insects, like vine mealybug
 - Protection from natural enemies
 - Increase mealybug survival
- Ant removal greatly reduces the number of mealybugs



Ant-tending Affects Obscure MB & Parasitism: Complete Ant Control



Monitoring for Ants

- Visual surveys can tell you presence/ absence
- Every 20 rows, place a cotton ball every 30 vines
 - Set them within 5 inches of a trunk on the ground
- In 2 hours, count all ants
 - 1: 1-10
 - 2: 11-49
 - 3: 50+



Ant Management

- Ant baits take advantage of social food sharing of ants to distribute the insecticide
- If you have a protein feeder there are some granular protein baits available
 - Fire ants aren't too common around here
- If you have a sugar feeding ant, it can be a bit more challenging



Sugar bait stations

- Liquid sugar bait stations work very well
- May need 100+ stations per acre
 - And need to be serviced frequently as the bait dries out

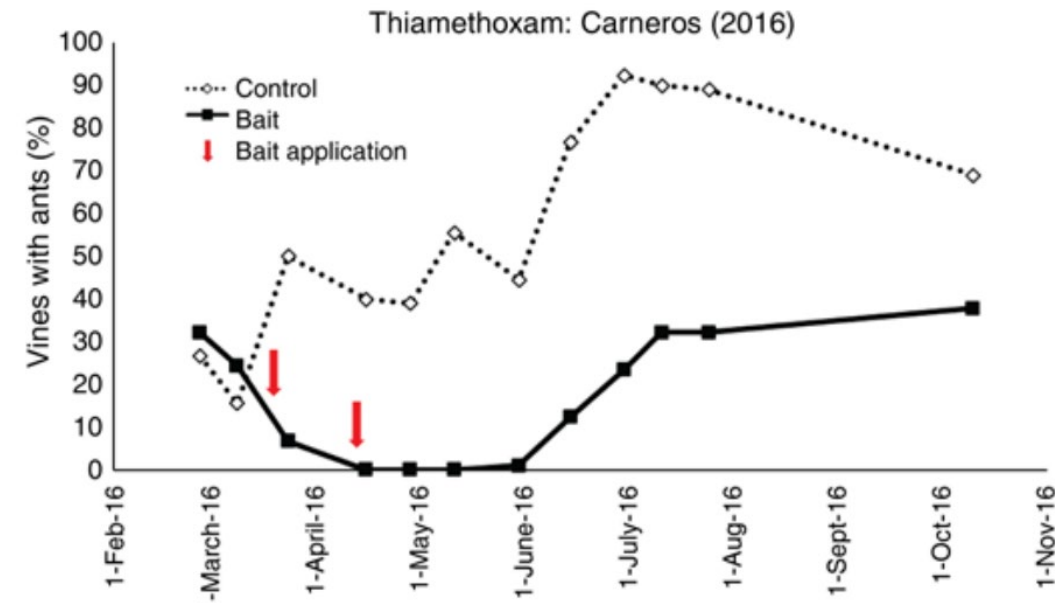


Polyacrylamide Crystals

- Water absorbent, 300x
- Effective on Argentine ant
- Very low quantities of insecticide
- Very low non-target impact



Saturated hydrogels





Pavement Ant, *Tetramorium immigrans*

- Native to southeastern Europe, North America in the late 1800s
- Colony ~ 15,000 workers in urban environments
- Omnivore/scavenger



Hydrogel Trial

- 5 insecticides at 5 and 10 GPA
- Crystals mixed with 25% sucrose water
- Half of plots received 1 application, rest received 2

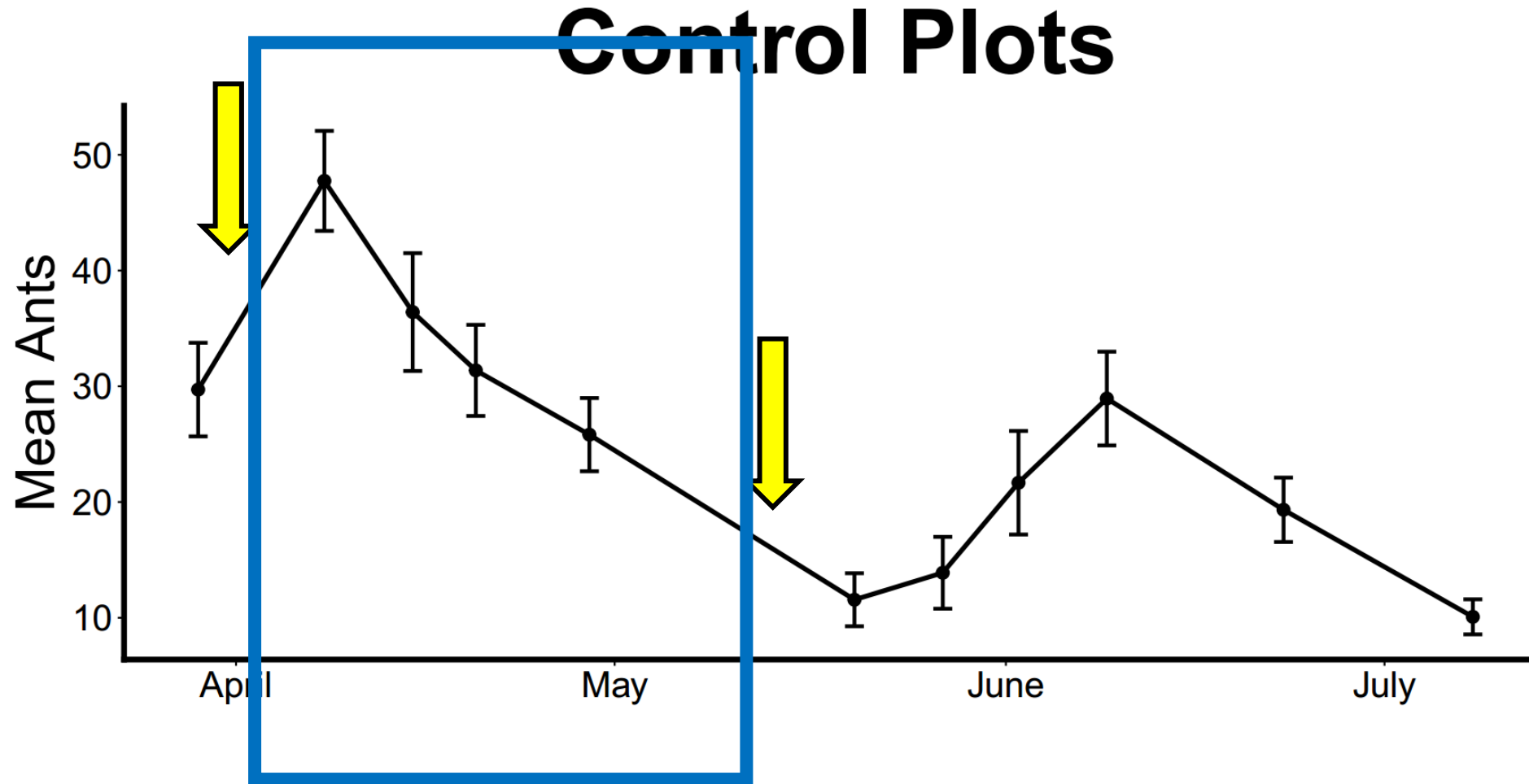


Insecticide Rates

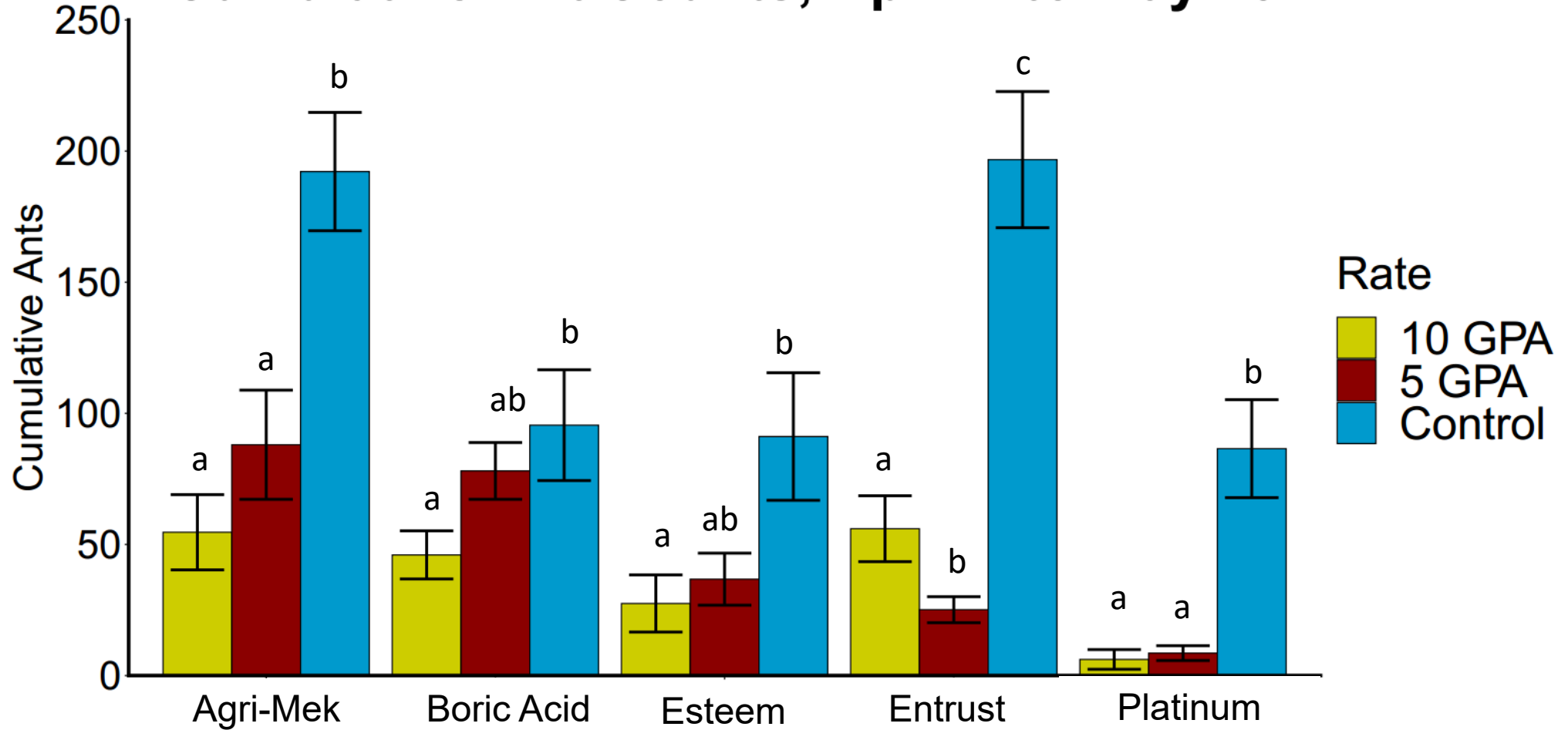
Insecticide	Label Rate	10 GPA	5 GPA
Agri-Mek	4.25 fl oz	0.042 fl oz	0.021 fl oz
Boric Acid	5%	6.7 dry oz	3.3 dry oz
Esteem	16 fl oz	0.16 fl oz	0.08 fl oz
Entrust	6 fl oz	0.06 fl oz	0.03 fl oz
Platinum	2.67 dry oz	0.026 dry oz	0.013 dry oz



2022

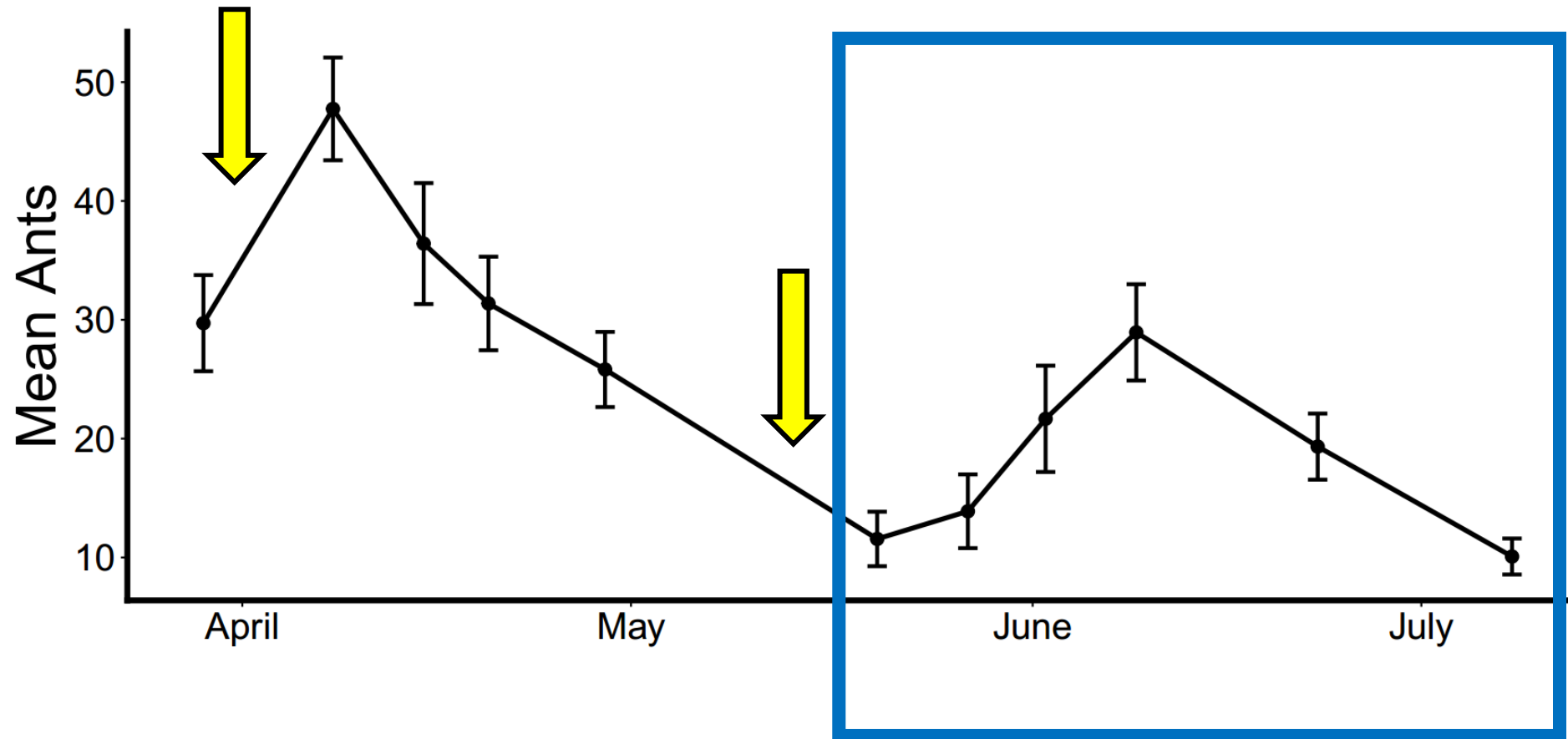


Cumulative Ant Counts, April 1 to May 13

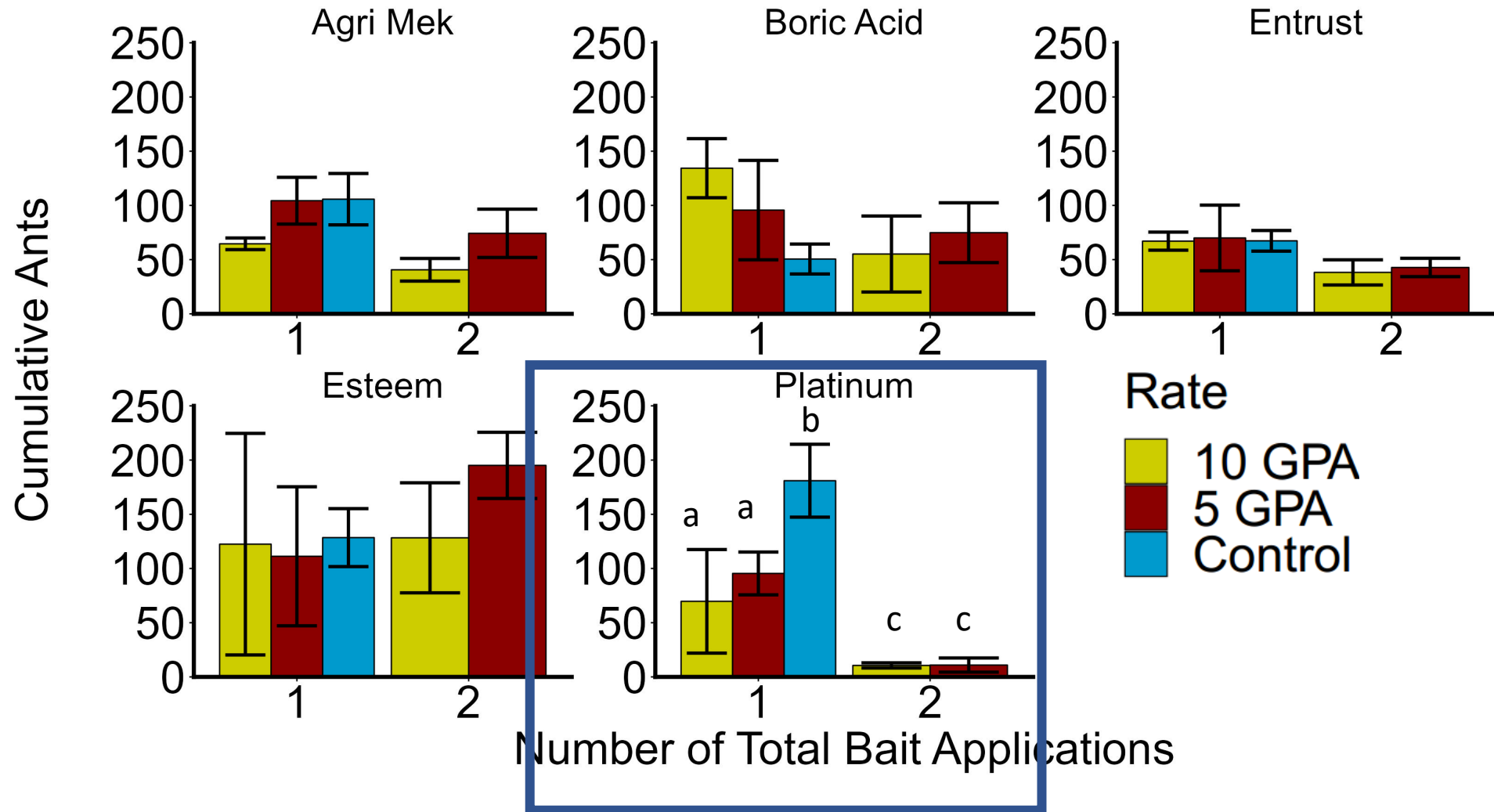


Results

Control Plots

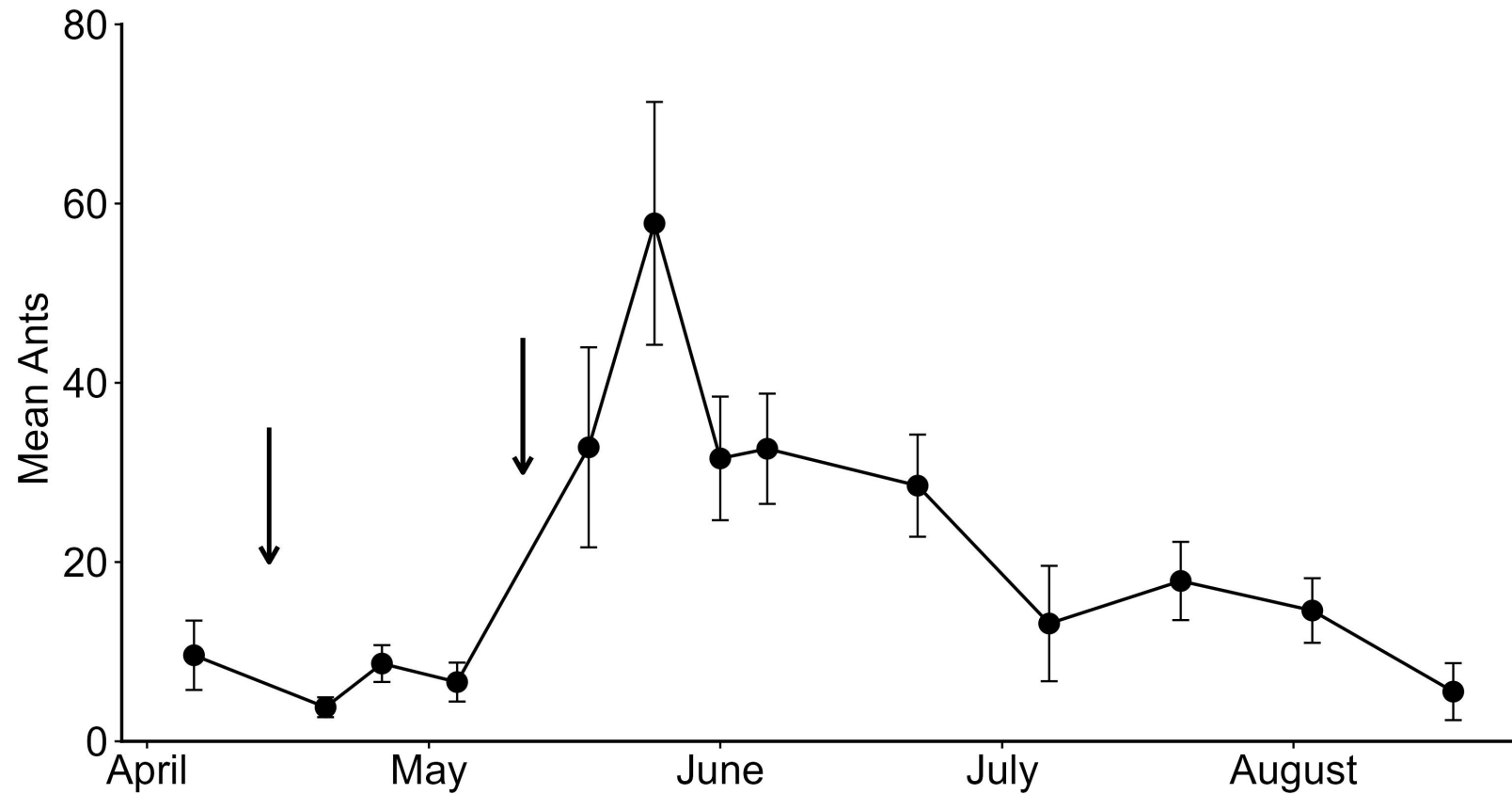


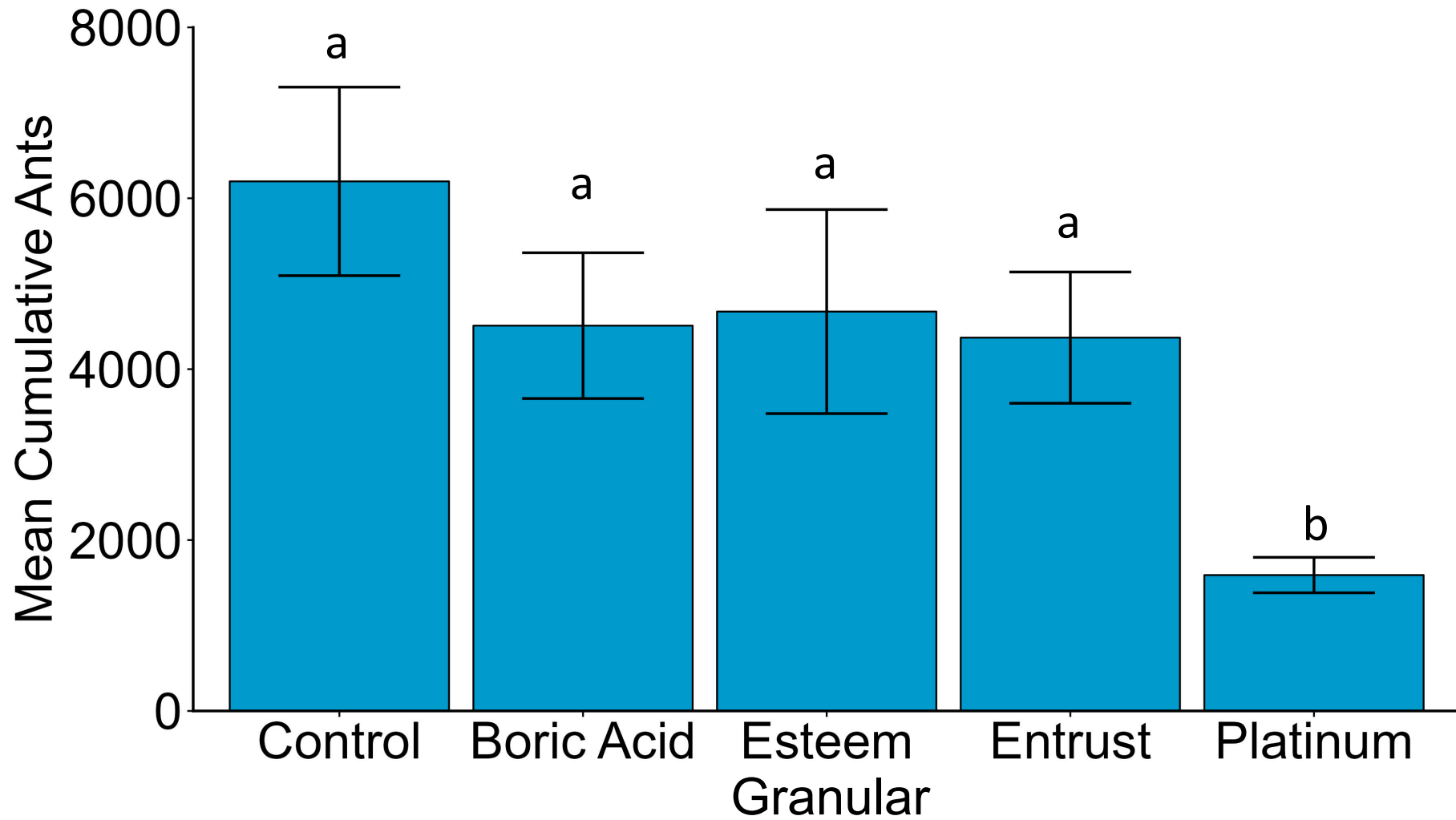
Cumulative Ants May 20 to June 8

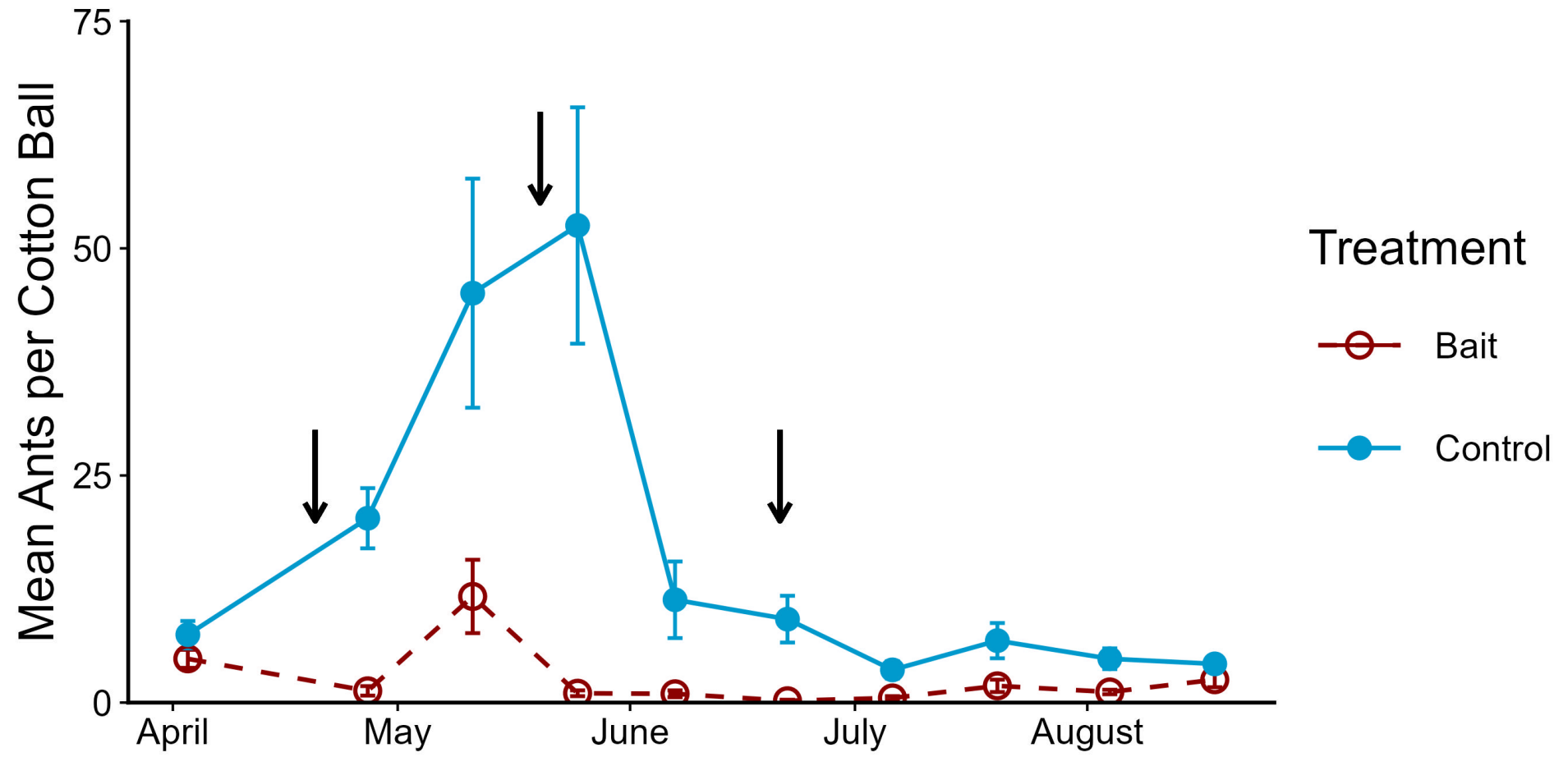


2023

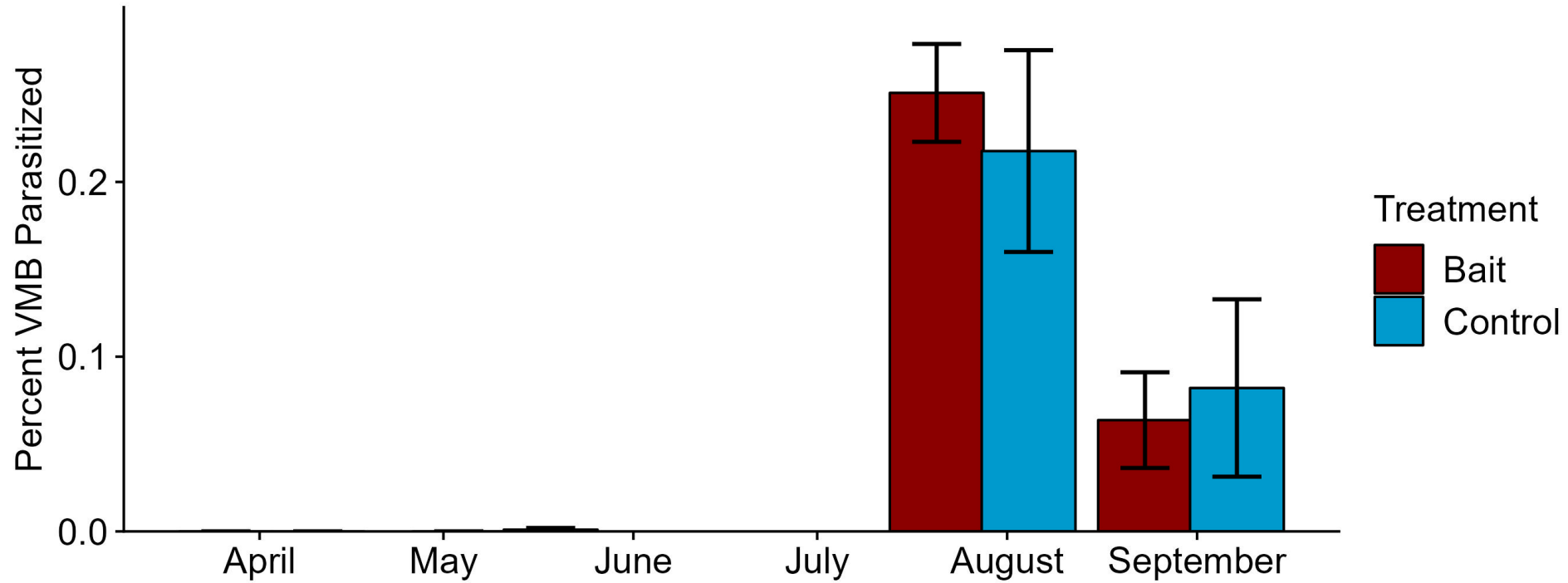
Untreated Control Plots

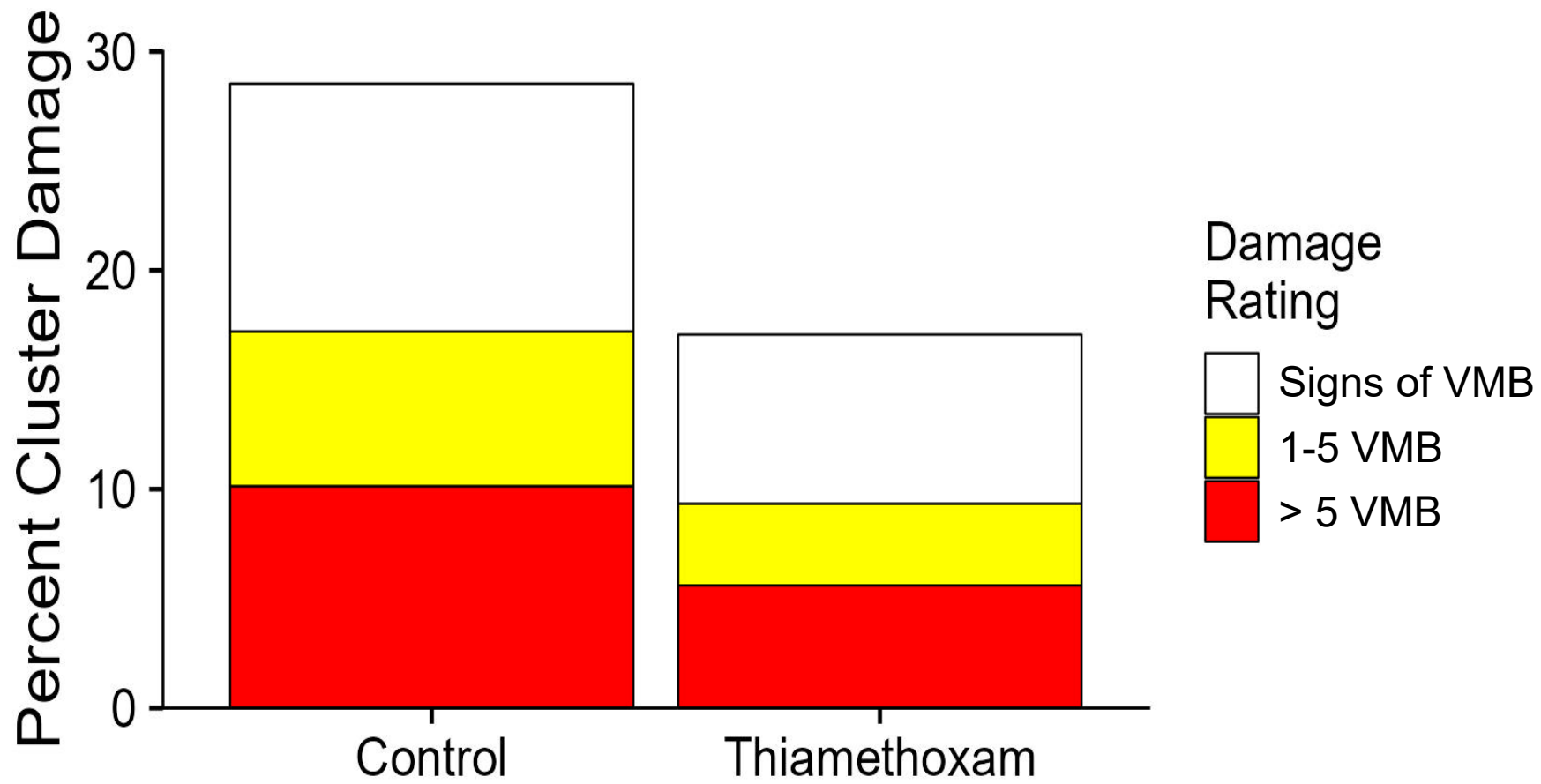






Parasitism Rates





Conclusions

- Hydrogels greatly reduced ants
 - Platinum worked the best
- 38% reduction in VBM in the cluster
- Ant controls are important part of managing VMB and the viruses they transmit





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