Orchard Trapping for Leaffooted Bugs

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8th Advances in PISTACHIO PRODUCTION

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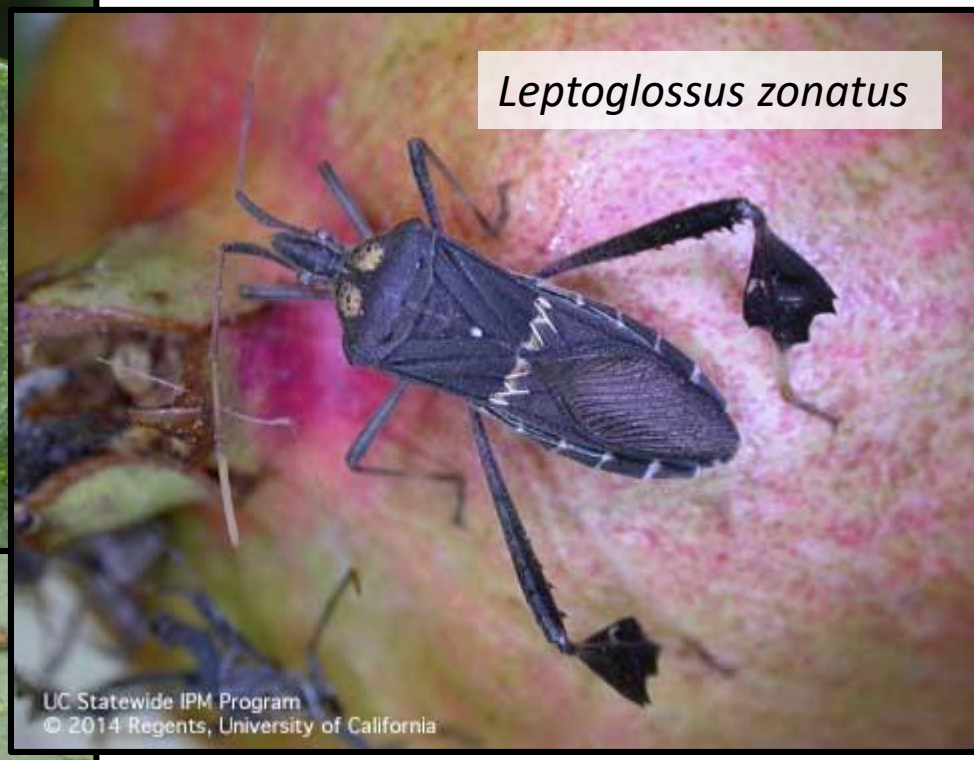
Leaffooted Bugs in Orchards

Hemiptera - Coreidae - *Leptoglossus* spp.



Leaffooted Bugs in Orchards

Leptoglossus zonatus

Two yellow spots just behind the head

Leaffooted Bugs in Orchards

Leptoglossus clypealis

Thorn-like projection extending from the head

Leaffooted Bugs in Orchards

Leptoglossus occidentalis

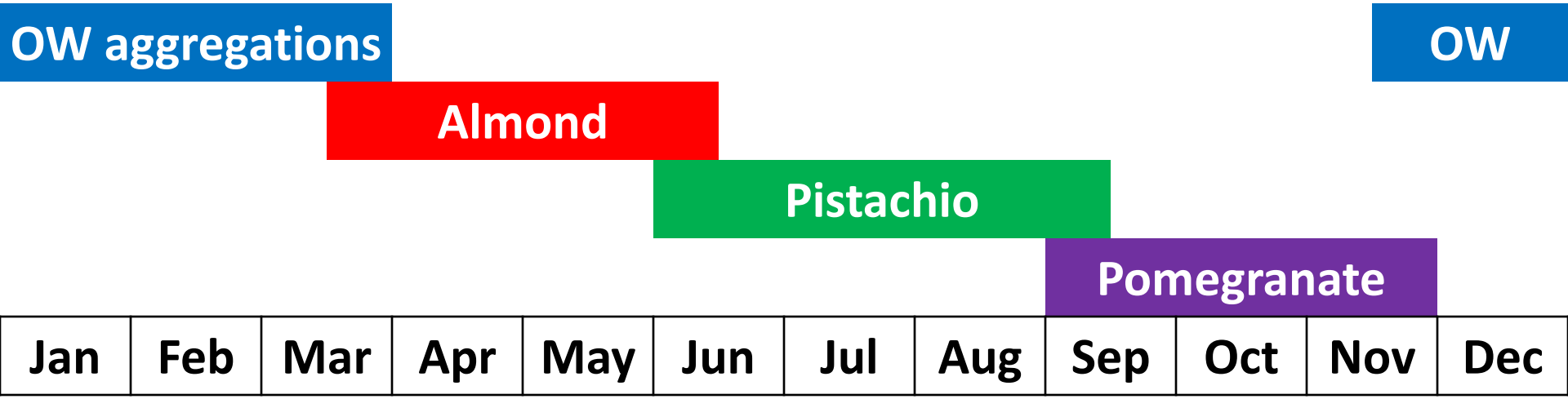
No spots, no clypeus

Leaffooted Bugs in Orchards

Leptoglossus spp.

Eggs and Nymphs

Seasonal Movement of LFB Between Orchards



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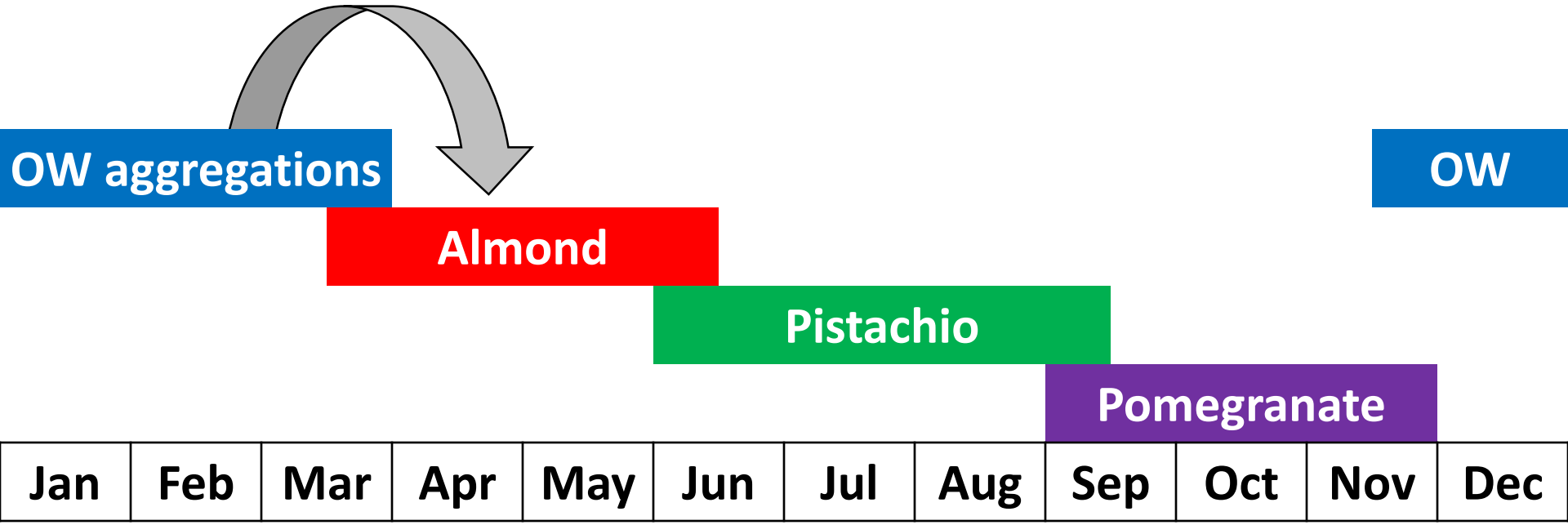

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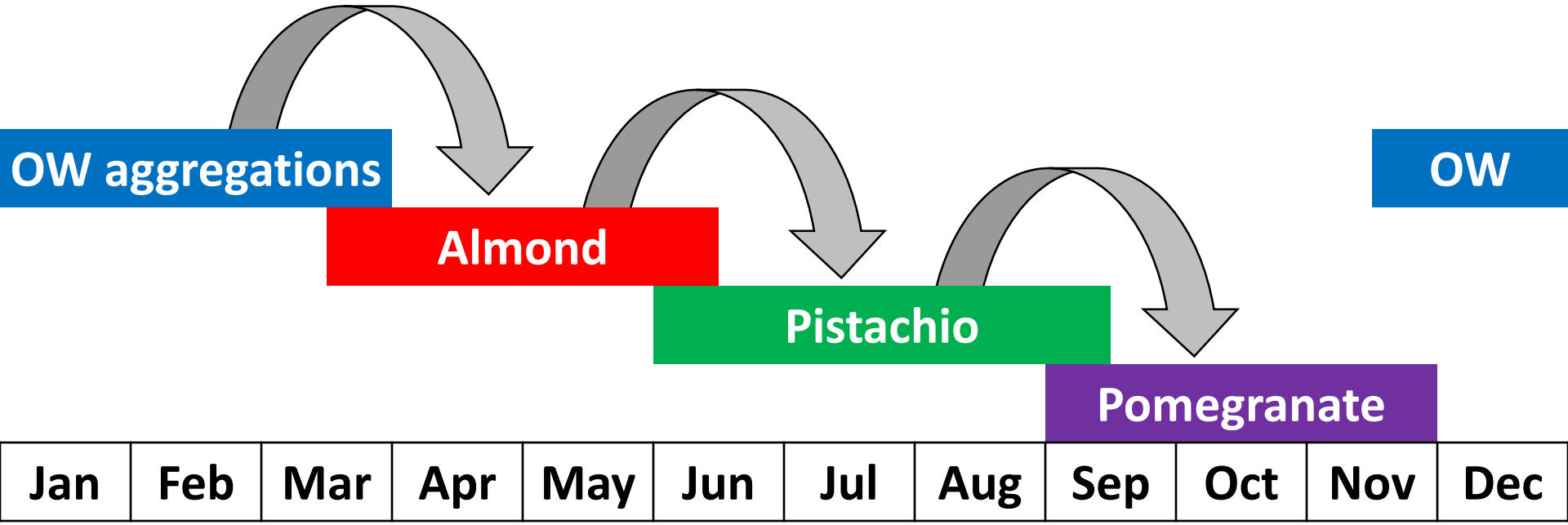

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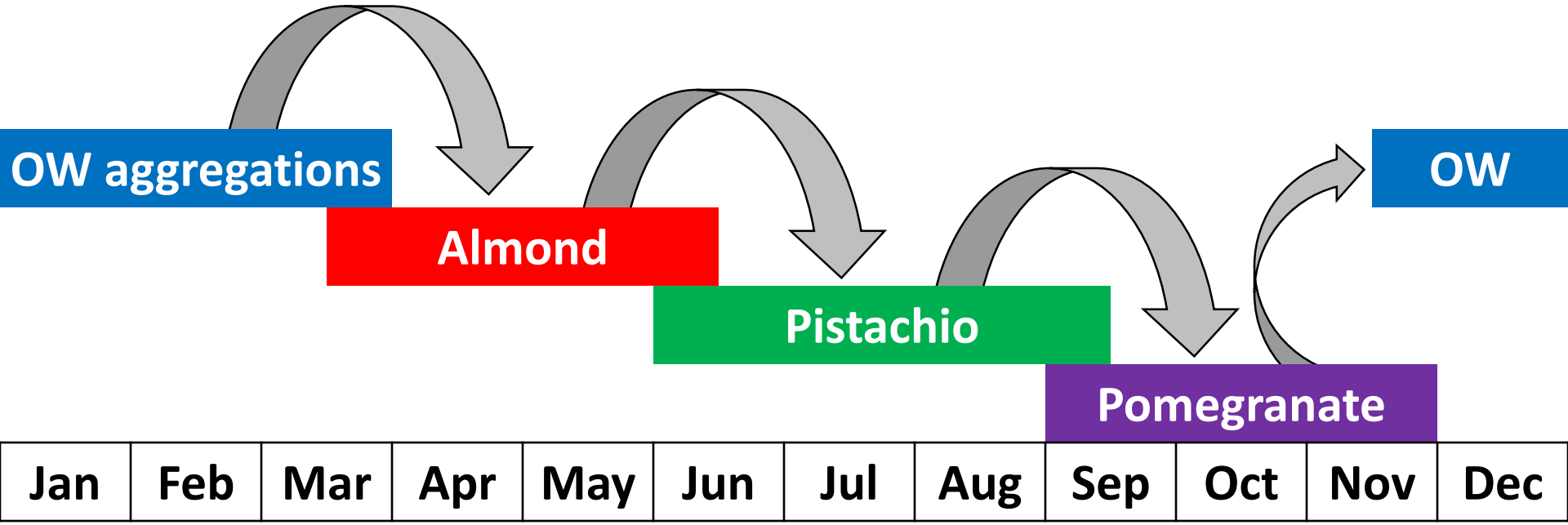
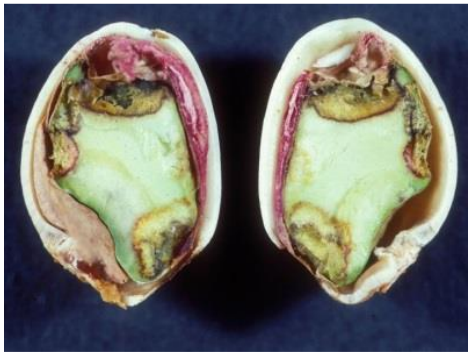


UC IPM – Current Program

Monitoring

Nut damage, aborted nuts, beat trays, look for adults



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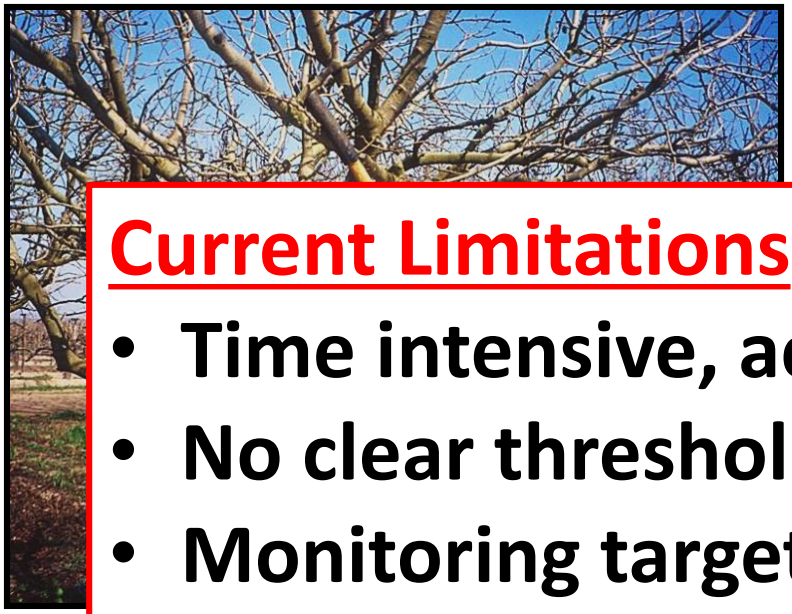
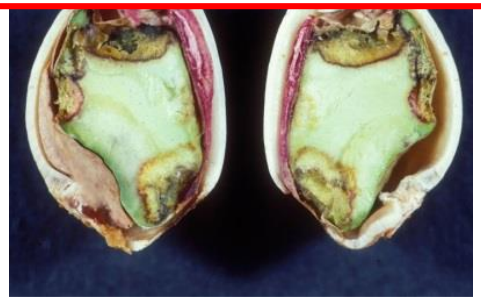


Current Limitations

- Time intensive, active monitoring
- No clear thresholds
- Monitoring targets “after the fact” signs



LFB Project

Improved Monitoring Program

Project Goals

- Passive monitoring system
- Identify colonization period
- Timing of reproduction + life cycle

Process

- Find a trap that works – Evaluate trap designs
- Find a bait that works – Host-plant volatiles? Pheromones?
- Trap density and arrangement
- Relate trap catch to populations/damage/timing

Trap Comparison

Experimental Design

Pyramid 4-ft

Pyramid 2-ft

Sticky

Hanging Panel

UniTrap

Trap Comparison

Experimental Design

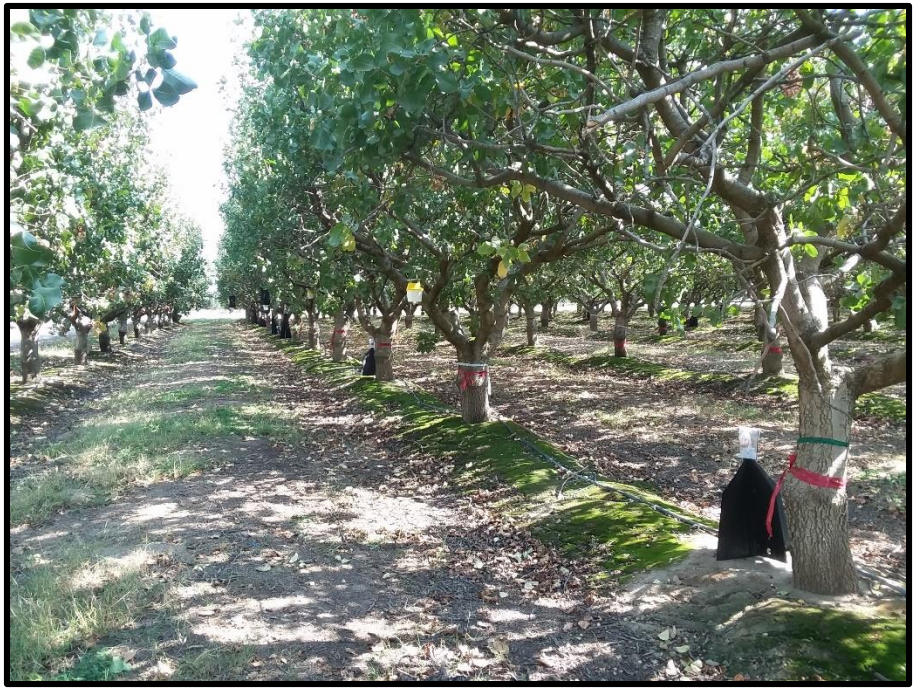
50g pomegranate (1/4 wedge)

50g almond meal + crude almond oil (10%)

Trap Comparison

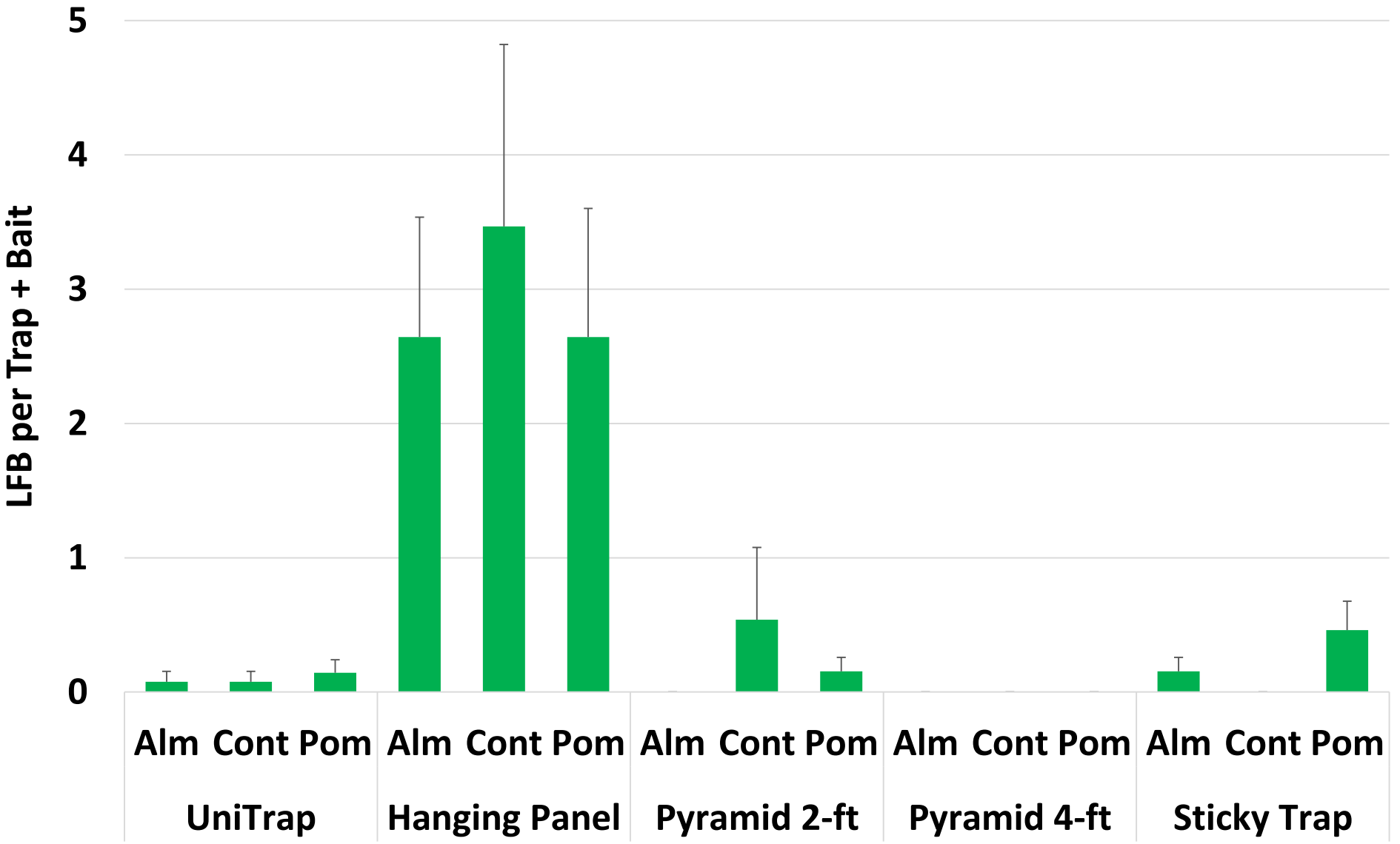
Experimental Design

3 sites x 5 replicates/site



Results

Hanging Panel Trap Works Well



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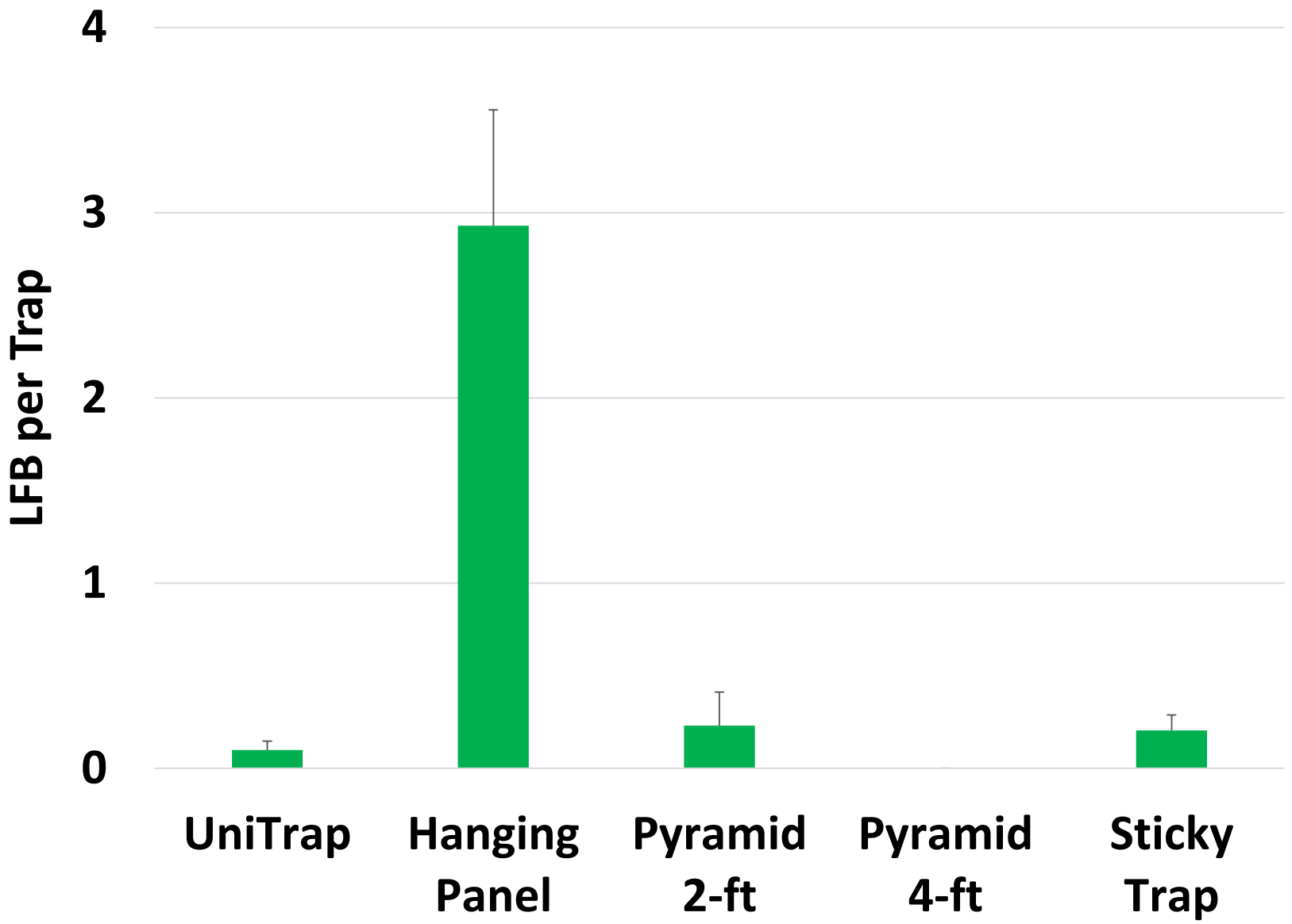
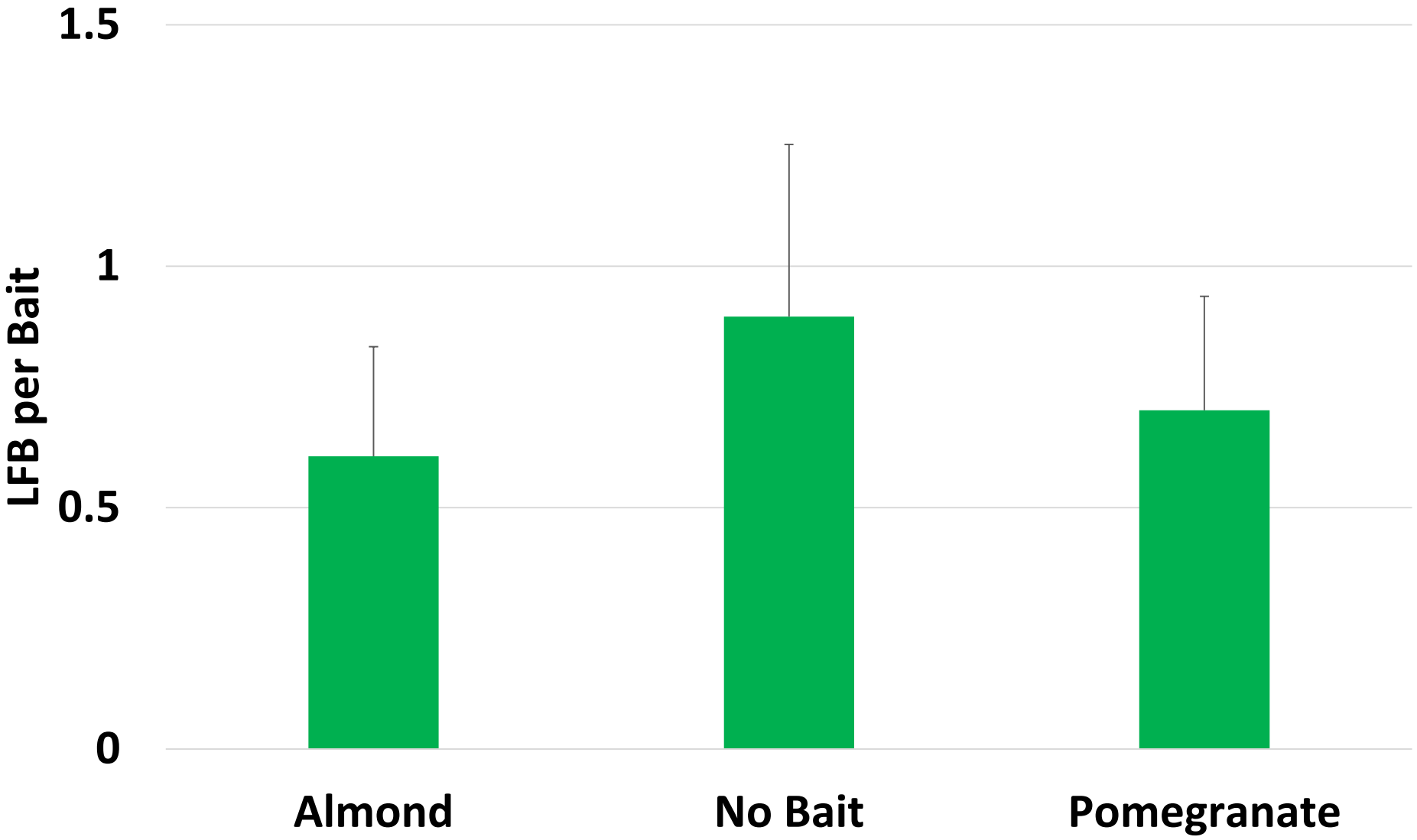


Results

No Bait Effect



Next Steps…

Follow-up Studies

Further Evaluation of Hanging Panel Trap

- Color, Position
- Location/Density etc.

Identify and Evaluate Various Baits/Attractants

- Host-plant volatiles
- Aggregation cues
- Pheromones

Relate Trap Catch to LFB Population in Orchards

- Colonization, Reproduction, Damage etc.
- Thresholds and Management

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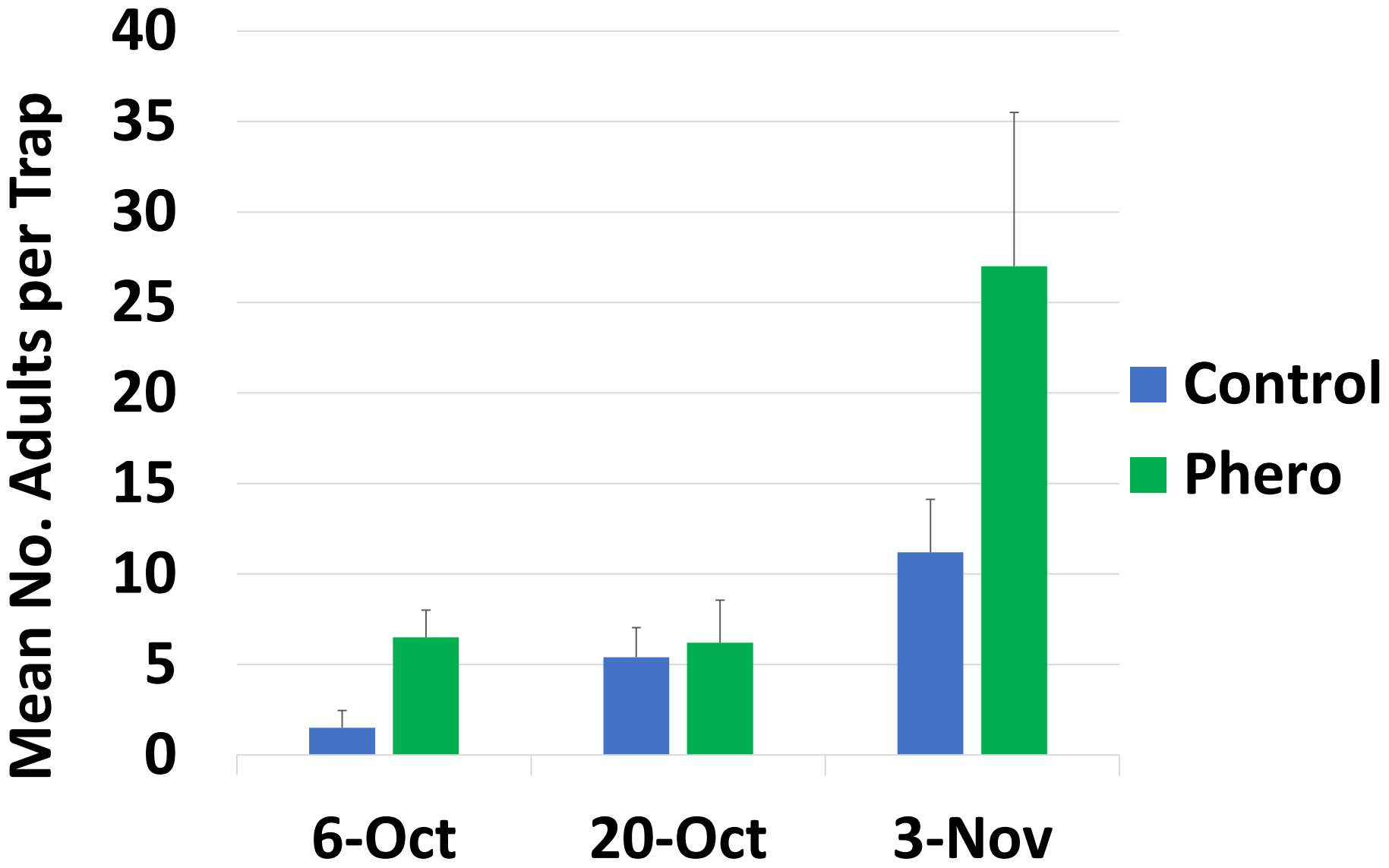
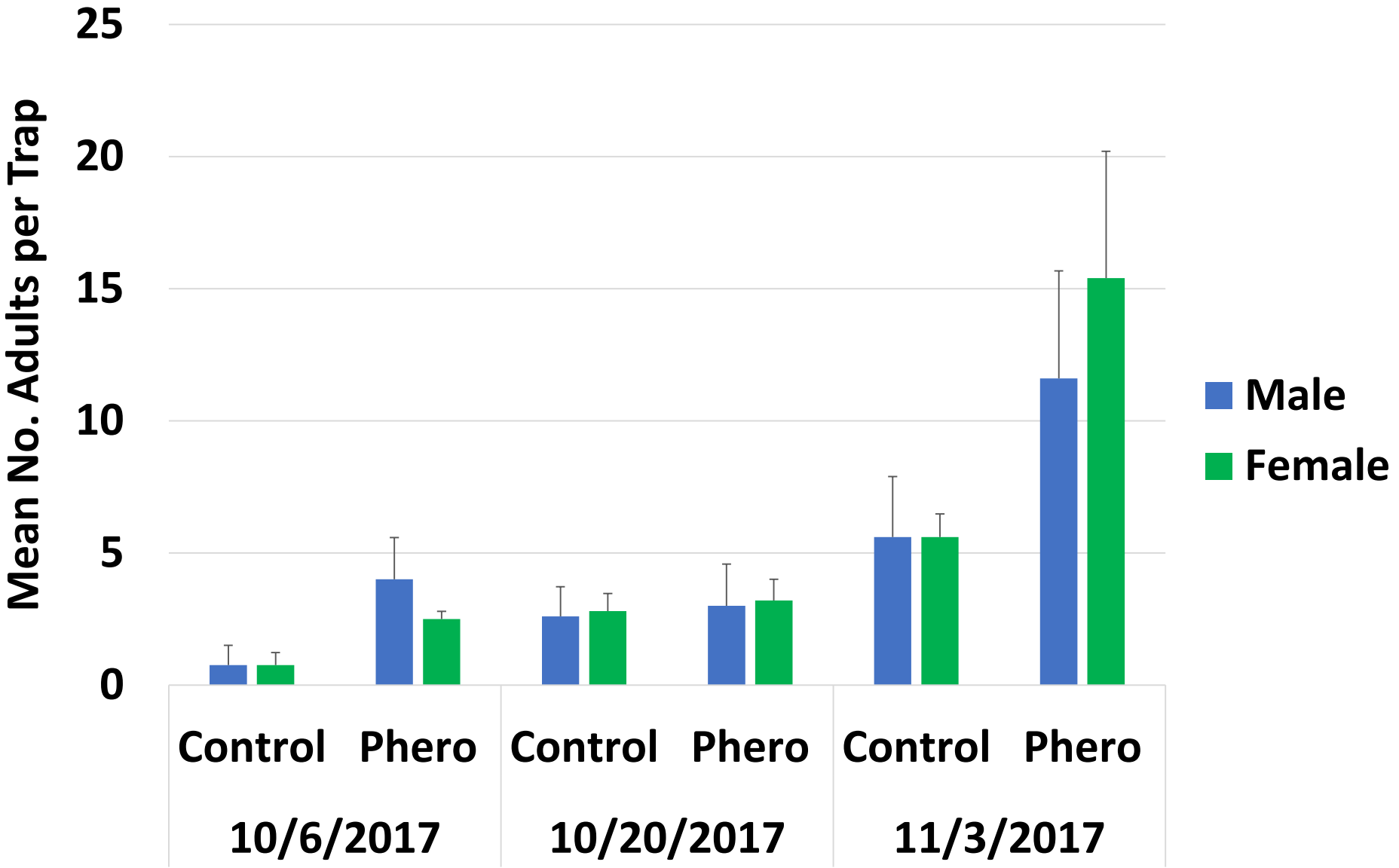
Pheromones – Preliminary Results

Finding More Adults…



Pheromones – Preliminary Results

…and Changes in Sex Ratio





Thank you!!

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