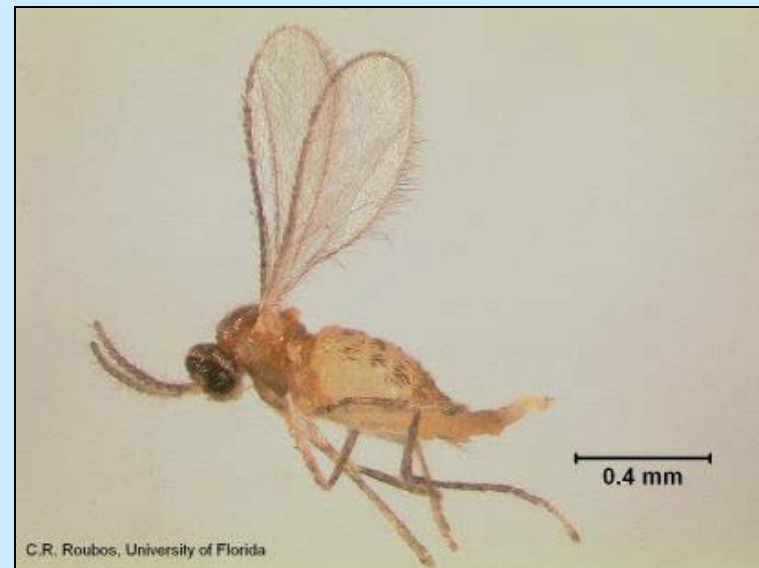


**Clear sticky sheets for
monitoring blueberry gall
midge, *Dasineura oxycoccana*
(Johnson), and parasitoid
rearing from flower and leaf
buds**

Elena M. Rhodes
University of Florida Entomology and
Nematology Department

Blueberry gall midge

- *Dasineura oxycoccana* Johnson
- Pupae overwinter in soil
- Adult females lay eggs in developing buds
- Up to 80% yield loss



Injury



Monitoring

- Bucket emergence trap

– Roubos 2009



- Clear panel trap

– Cook et al. 2011



- Comparable except at low population levels (Rhodes et al. 2014)

Parasitoids

- Most common genera
 - *Platygaster* (flower buds)
 - *Aprostocetus* (leaf buds)
- Other genera
 - *Synopeas*
 - *Telenomus*



Objectives

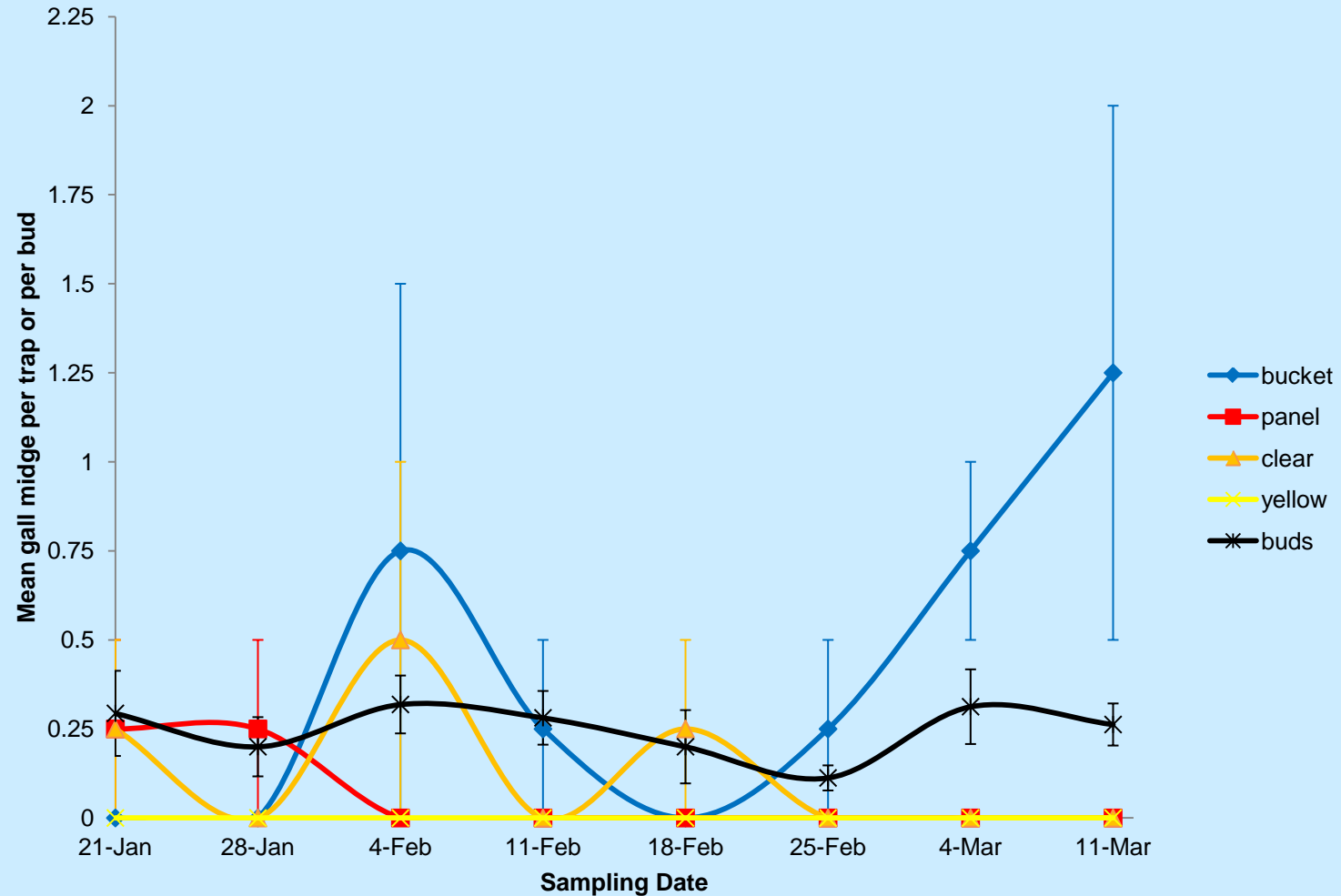
- To compare the efficacy of a clear sticky sheet and a yellow sticky trap hung unfolded to that of panel traps
- To develop a method for rearing gall midge parasitoids for improved field population assessment

Methods: trap comparison

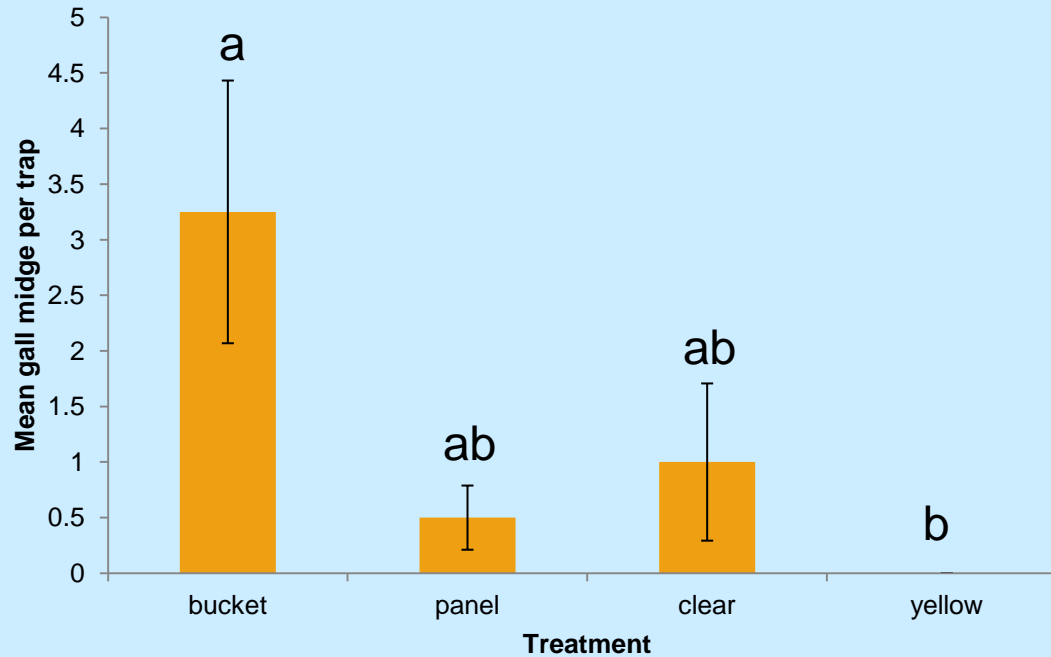
- 4 replicates of 4 treatments in RCBD
 - Bucket emergence trap
 - Clear panel trap
 - Clear sticky sheet
 - Yellow sticky trap hung unfolded
- Traps checked weekly
- Buds collected weekly to monitor larval population
- January – March 2014



Results: Mean midges per week



Results: Mean midges for the season



$P = 0.054$

Summary

- Yellow sticky traps hung unfolded caught no midges
- Midge populations were very low
- Clear sticky sheets appear to be as effective as panel traps

Methods: rearing

- 5 sets of 4 reps of 3 trts
 - Petri dish with damp filter paper (10 buds)
 - Petri dish with damp vermiculite (10 buds)
 - 24 well plate with damp vermiculite (20 buds, 1 per well, for 2 reps per plate)
- 4 samples of 150 buds
 - Flower buds: Feb. 7, 2014
 - Leaf buds: Mar. 28, 2014
- 1 set destructively sampled per week

Results: rearing

- Flower buds
 - 1 *Aprostocetus* sp. 4 wks post collection (3/7)
 - 1 unidentifiable 5 wks post collection (3/14)
 - Both in petri dishes with filter paper
- Leaf buds
 - No emergence due to rapid bud decomposition



Results: rearing

- Parasitoids emerged from gall midge rearing for another exp.
 - *Platygaster* sp. from buds collected 2/21
 - *Aprostocetus* sp. from buds collected 3/18



Summary

- Minimum of 4 wks was needed for parasitoid emergence
- Petri dish with filter paper and midge rearing container were effective
- Moisture control and keeping buds fresh crucial to prevent decomposition of buds and fungal growth

Conclusions and Future Work

- Clear sticky sheets appear to be as effective as panel traps
 - Height of sheet in canopy
- Parasitoid emergence takes at least 4 weeks
 - Need to keep buds fresh

Acknowledgements

- Dr. Oscar Liburd
- Dr. Nicole Benda
- Dr. Craig Roubos
- Small Fruits IPM Lab staff and students
- Gainesville organic blueberry farm
- SSARE for funding

