



Seasonal Variation of ALCB Pests

Lindsie M. McCabe & Theresa Pitts-Singer
USDA-ARS Pollinating Insects Research Unit

ALCB Pests

Melittobia



Sapyga



Trichodes



Monodontomerus



Pteromalus



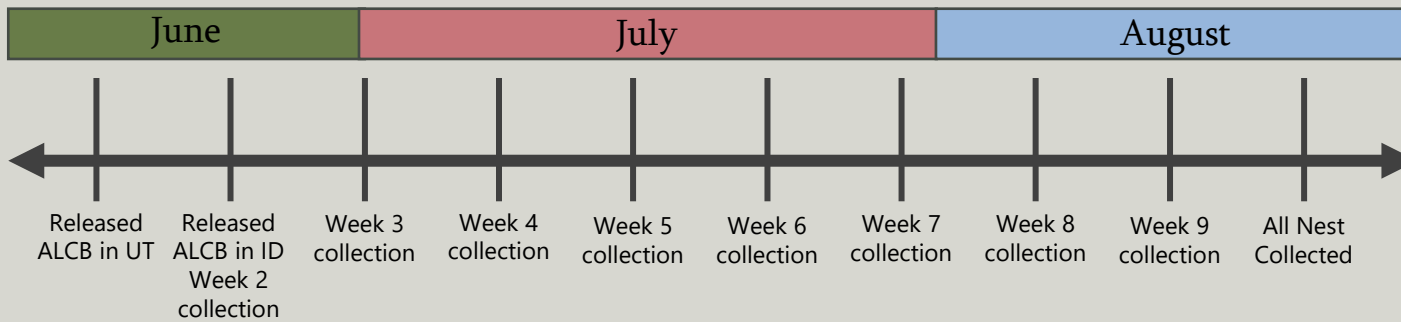
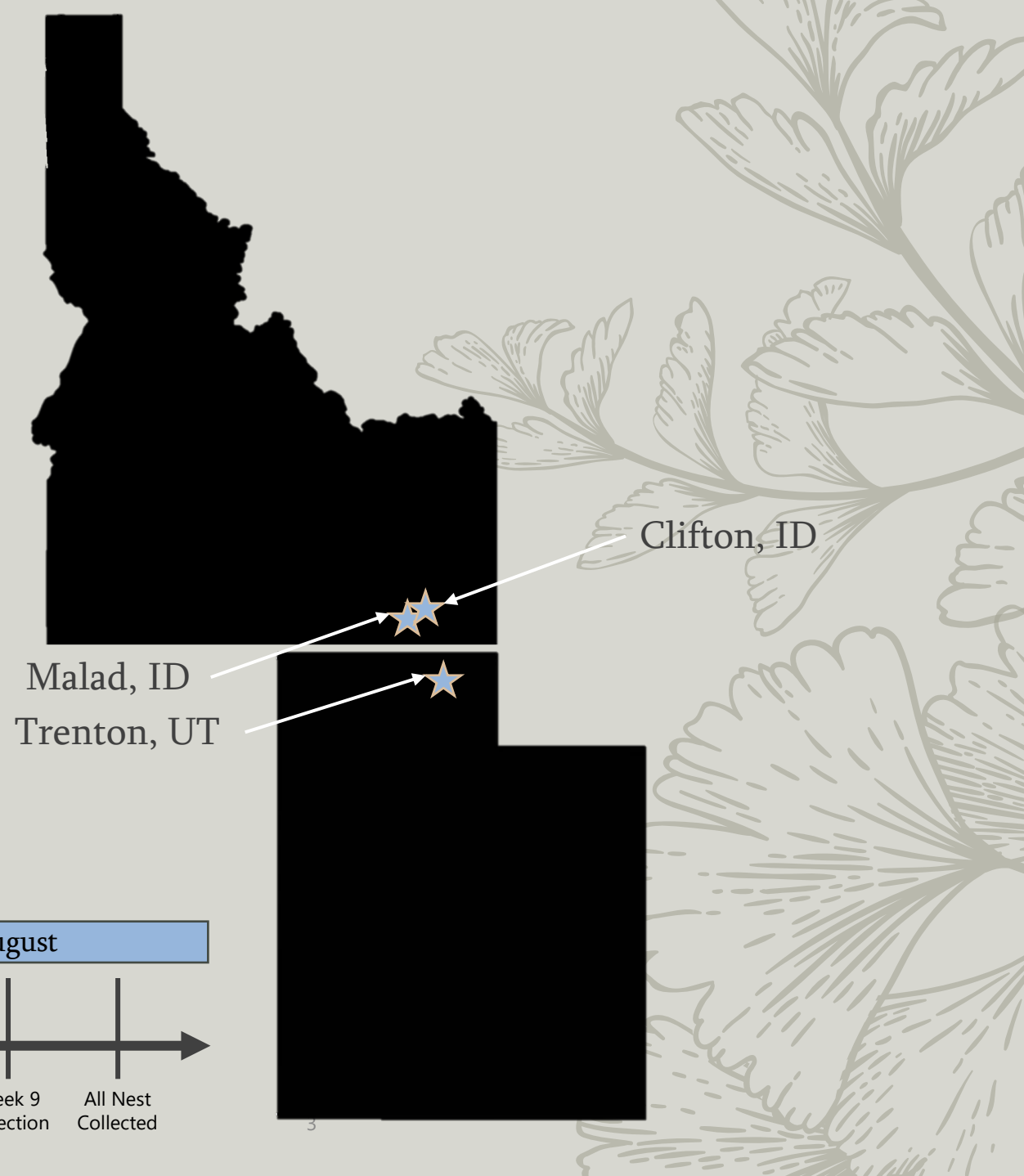
Tetrastichus



Meloidae



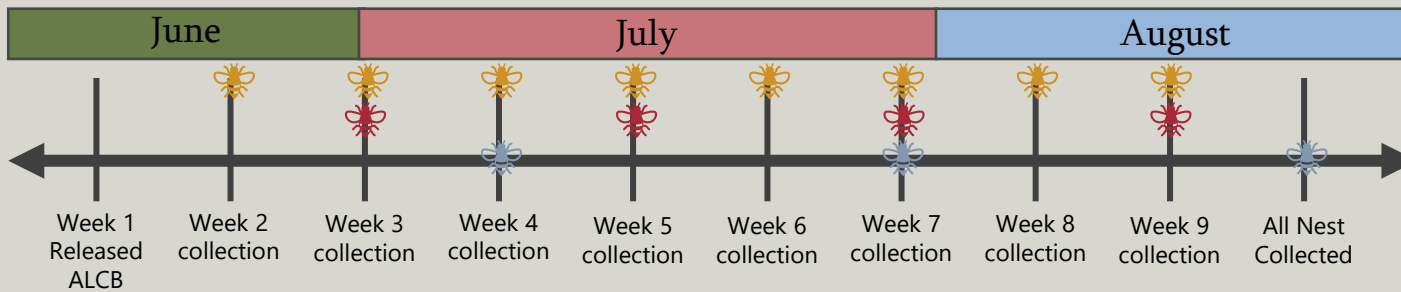
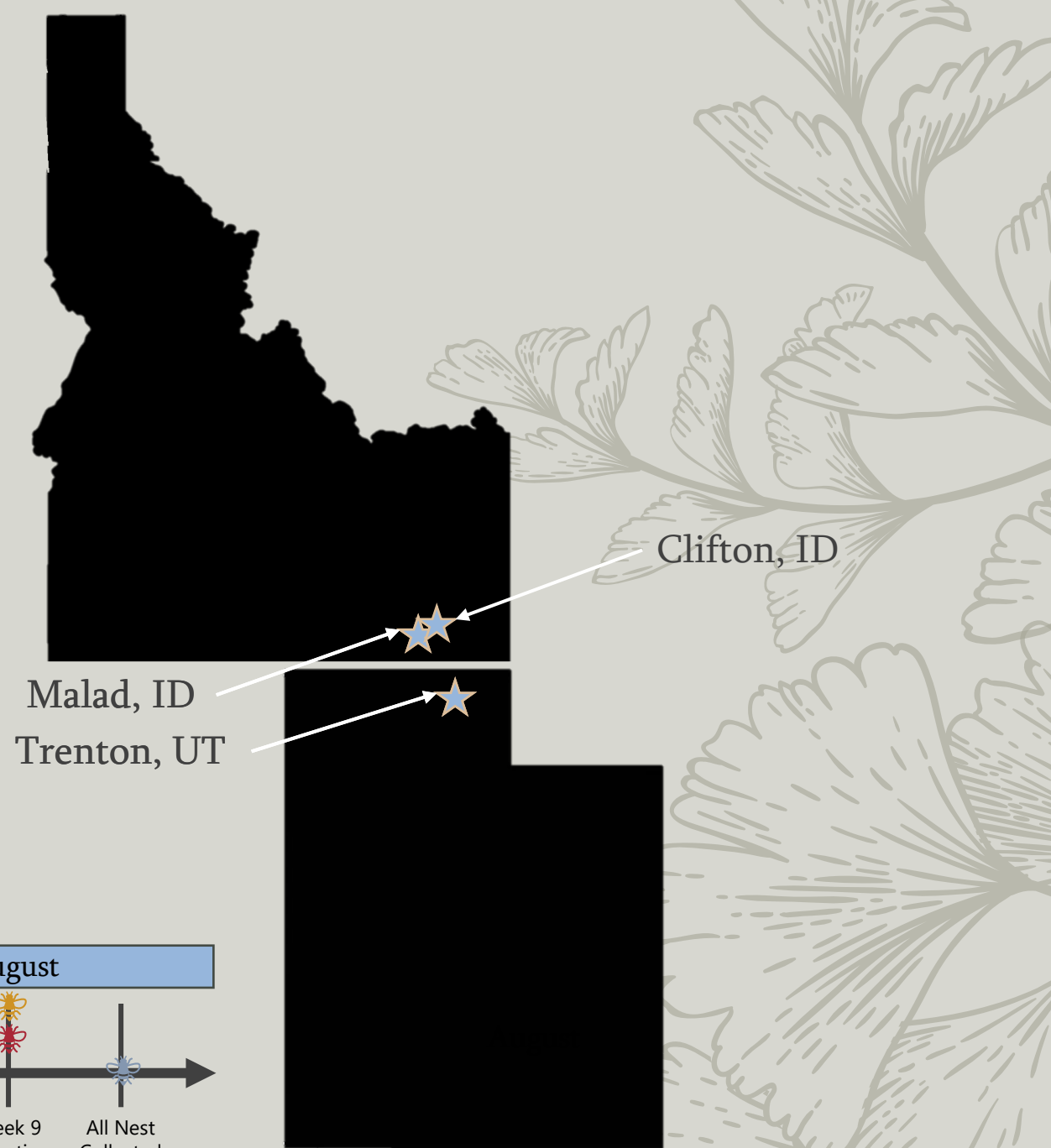
Methods

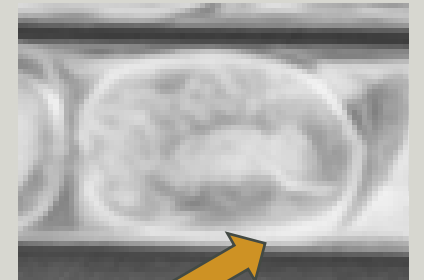
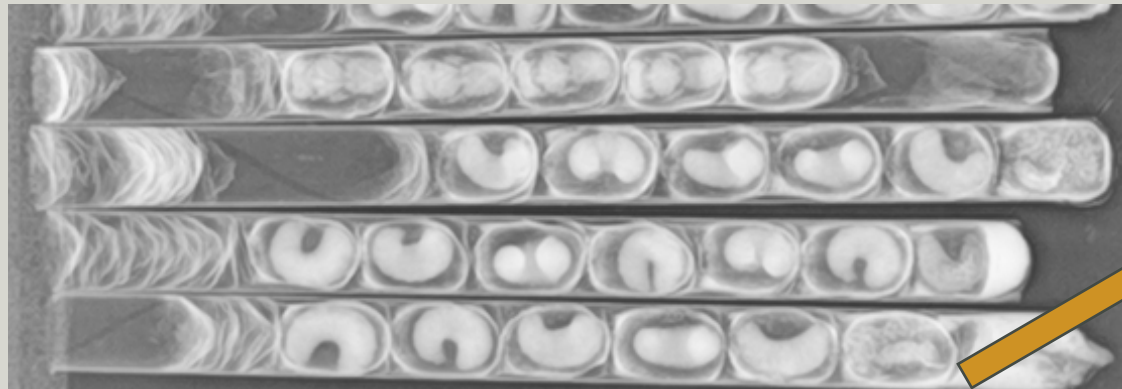
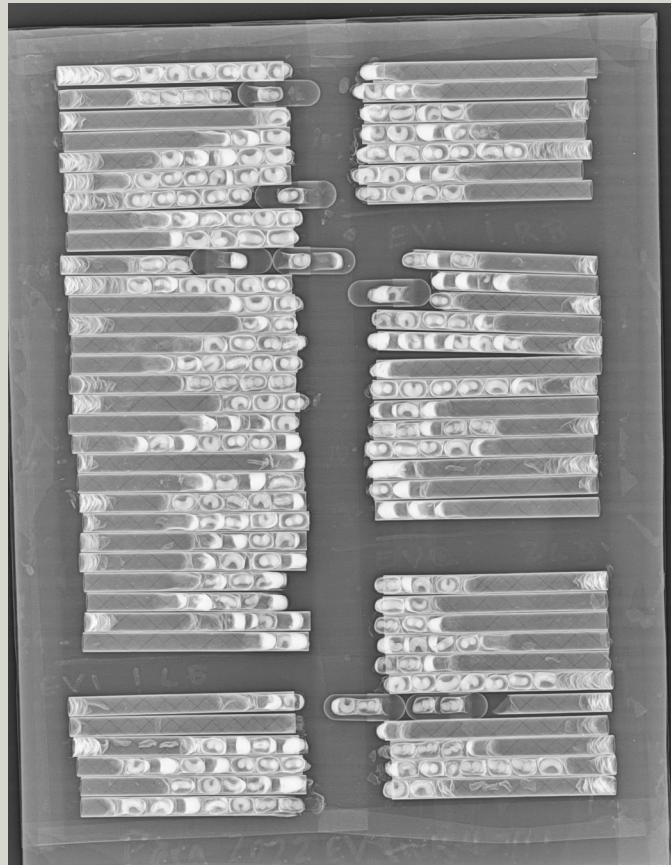
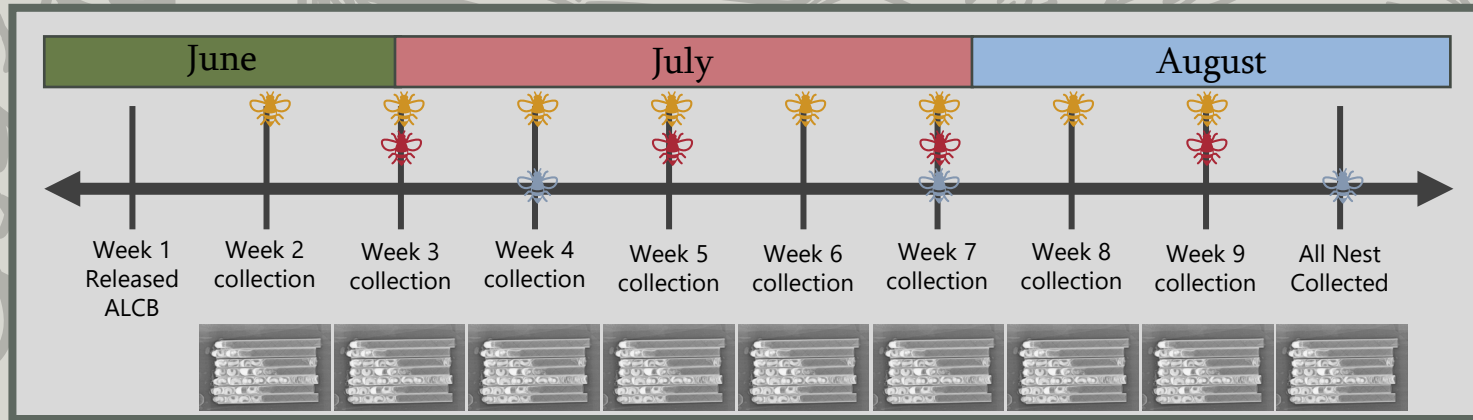


- 2 years 2022 & 2023
- 2 sites each year
- 3 boards
- Front & back of the middle of the board
- 3 straws representing different time period sampling



Methods





Parasites

Melittobia



Sapyga



Trichodes



Mesochorus



Pteromalus



Tetrastichus



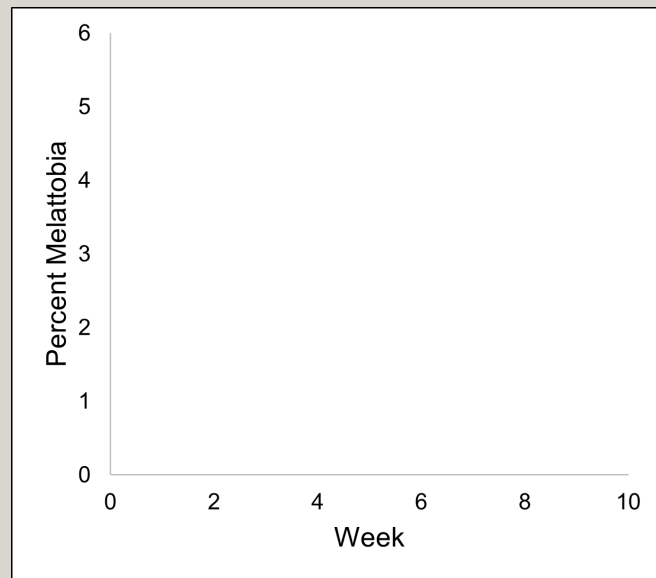
Meloidae



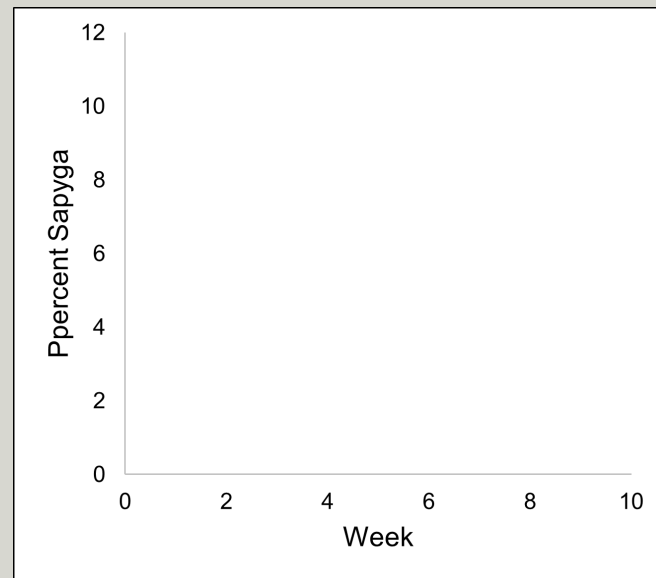
Seasonal Changes

percent of all cells (pests + ALCB)

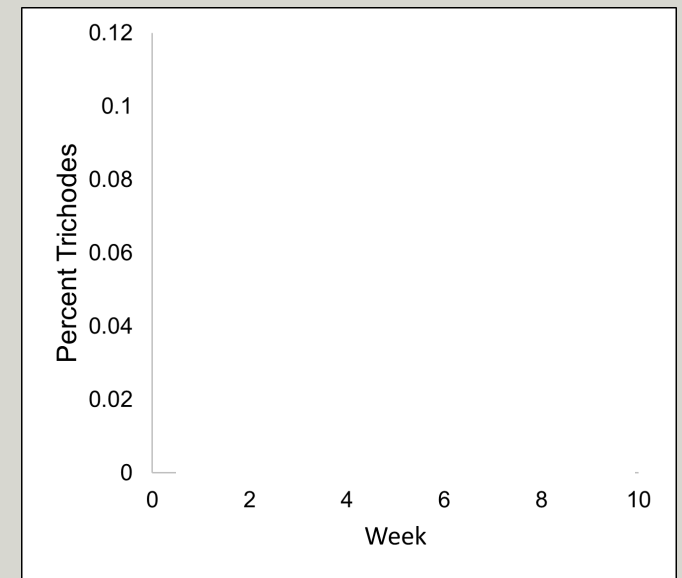
Melittobia



Sapyga



Trichodes

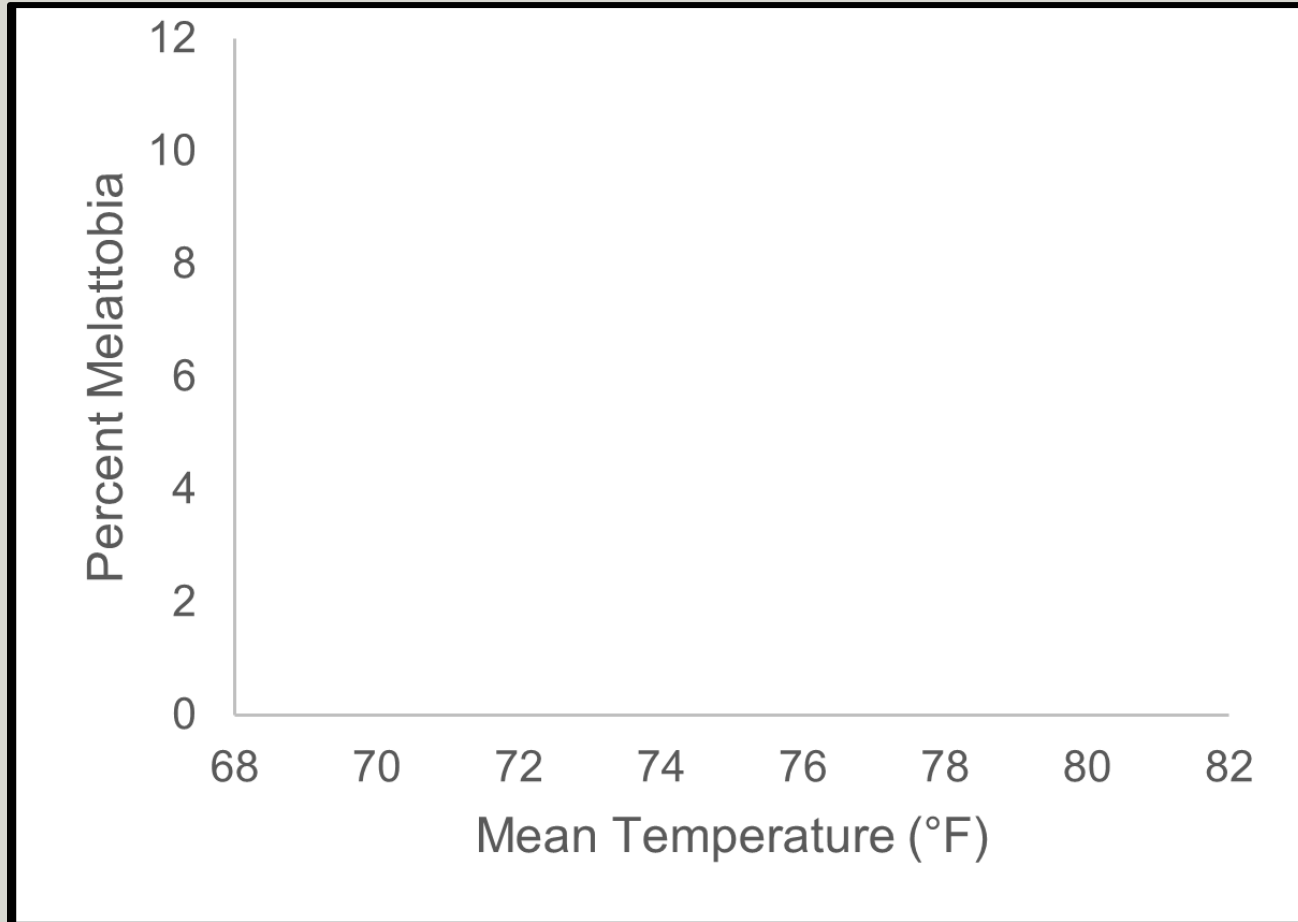


Environmental Changes

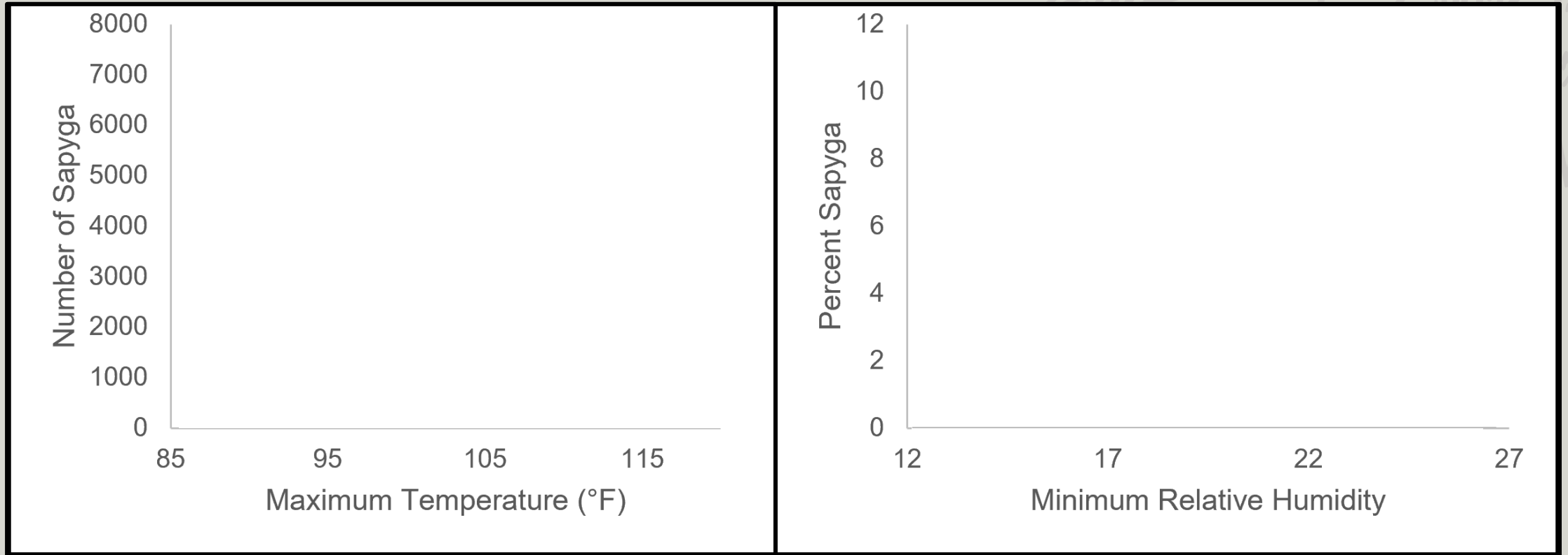
- Maximum temperature
- Mean temperature
- Minimum temperature
- Maximum Relative Humidity
- Mean Relative Humidity
- Minimum Relative Humidity



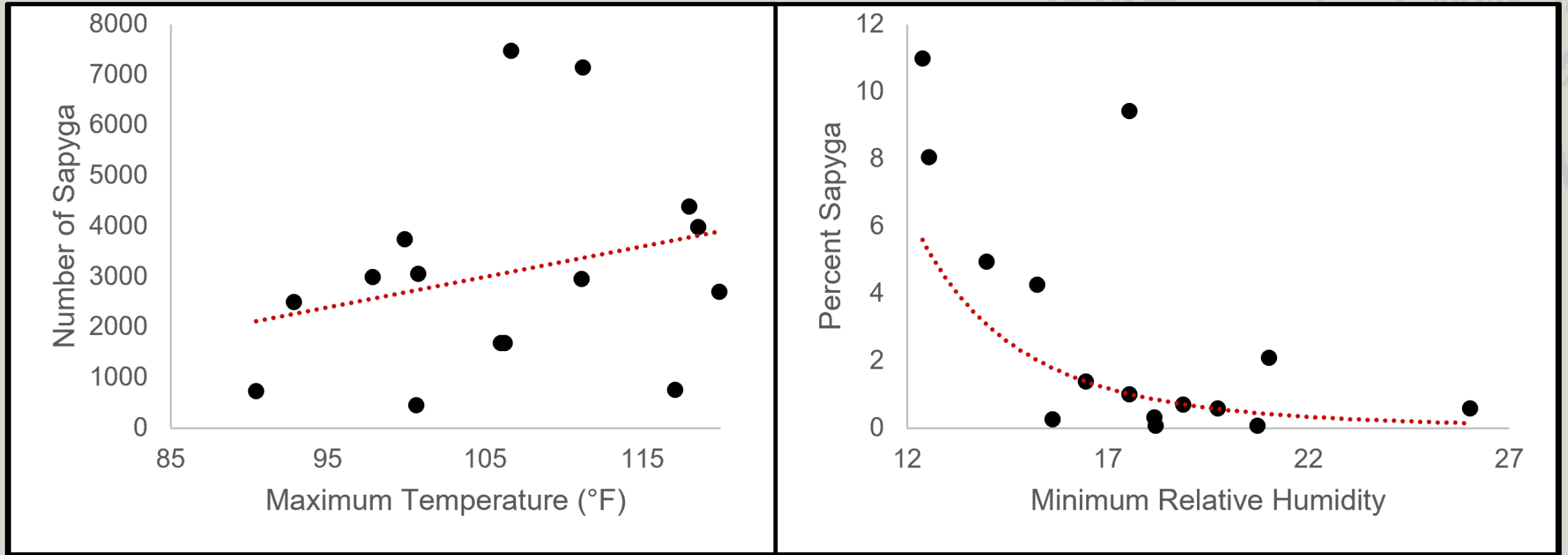
Melittobia



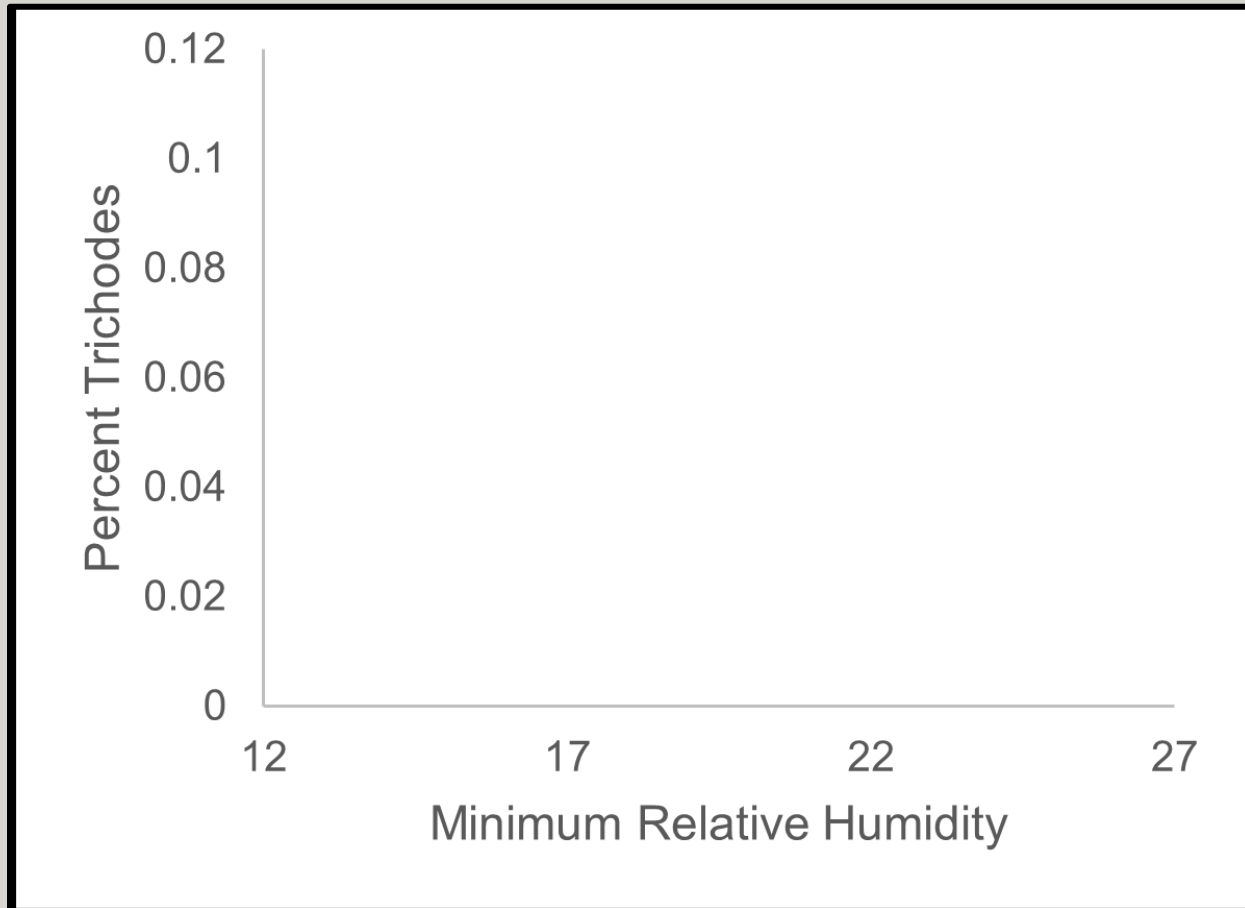
Sapyga



Sapyga



Trichodes

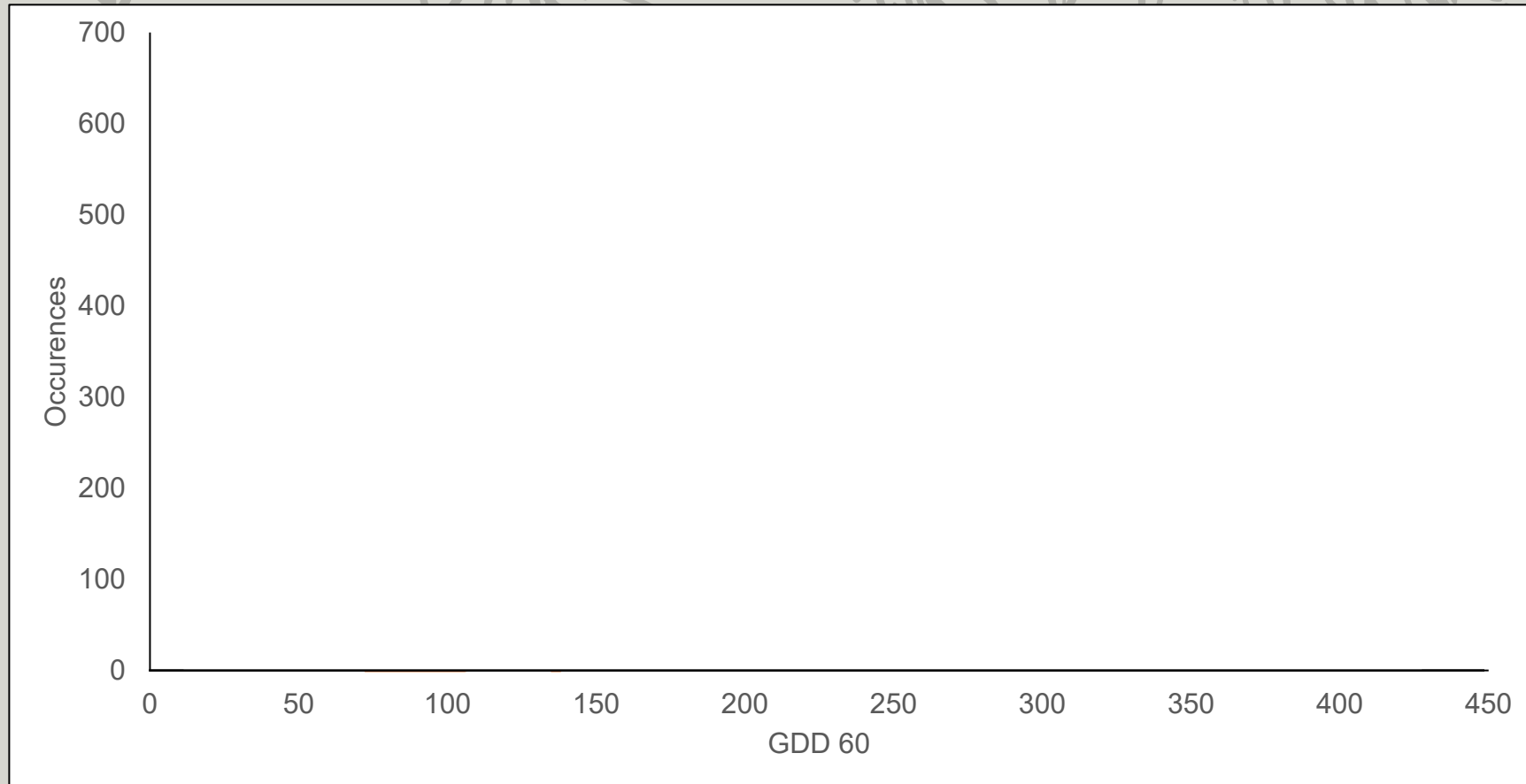


Summary

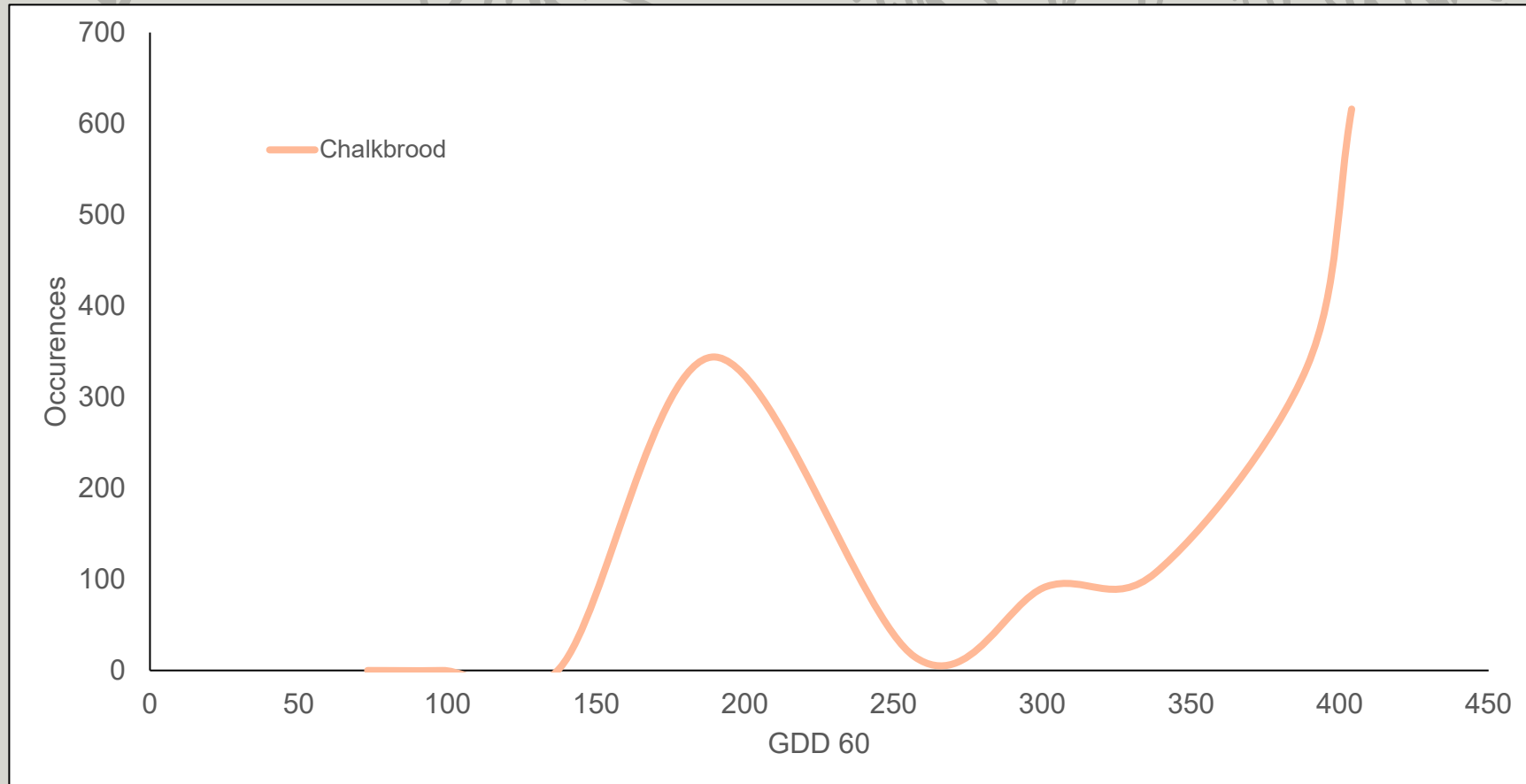
- Melattobia increased in cooler periods of the season
- Tricodes increased in wet periods of the season
- Sapyga increased in hot & dry periods of the season



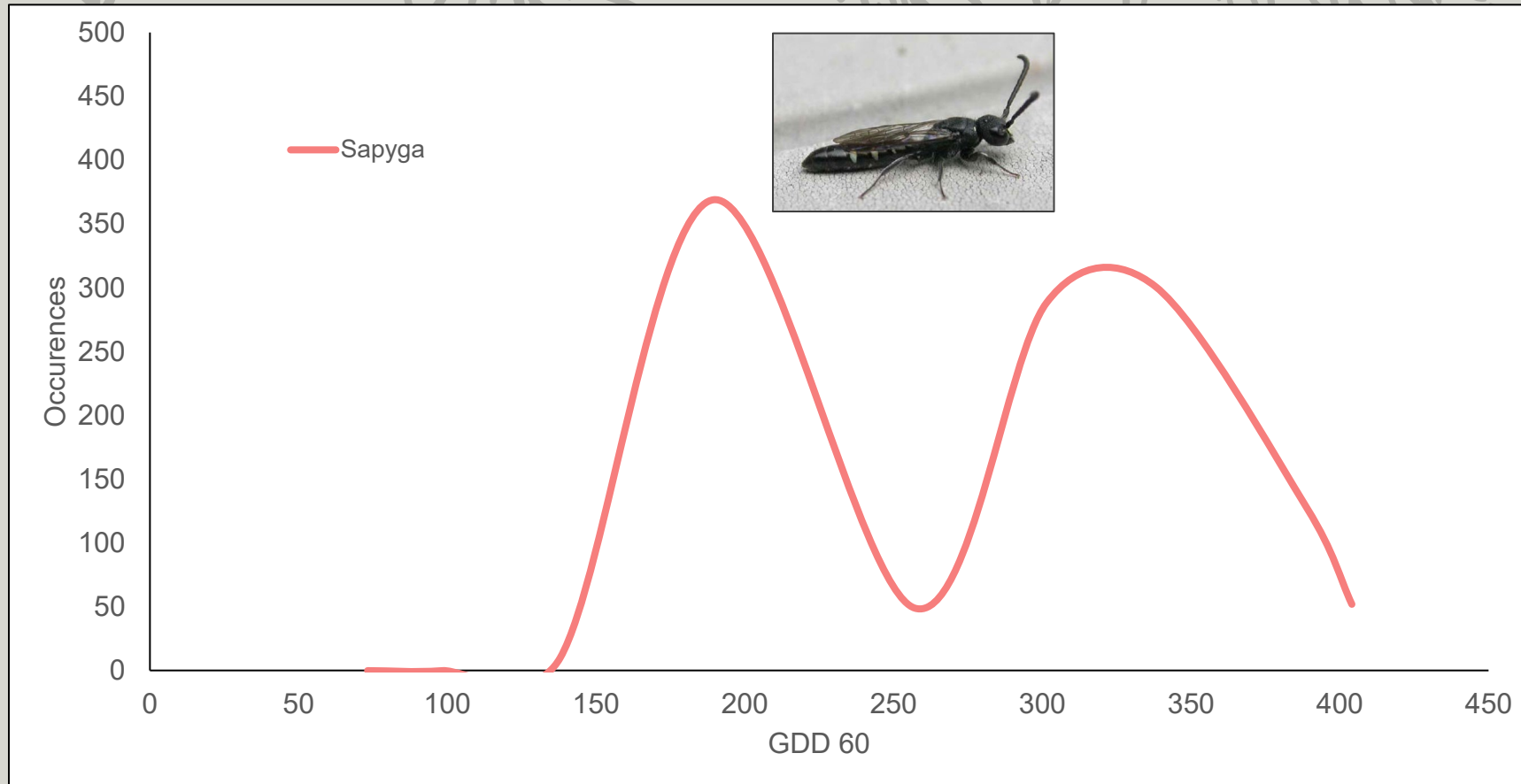
Phenology Model



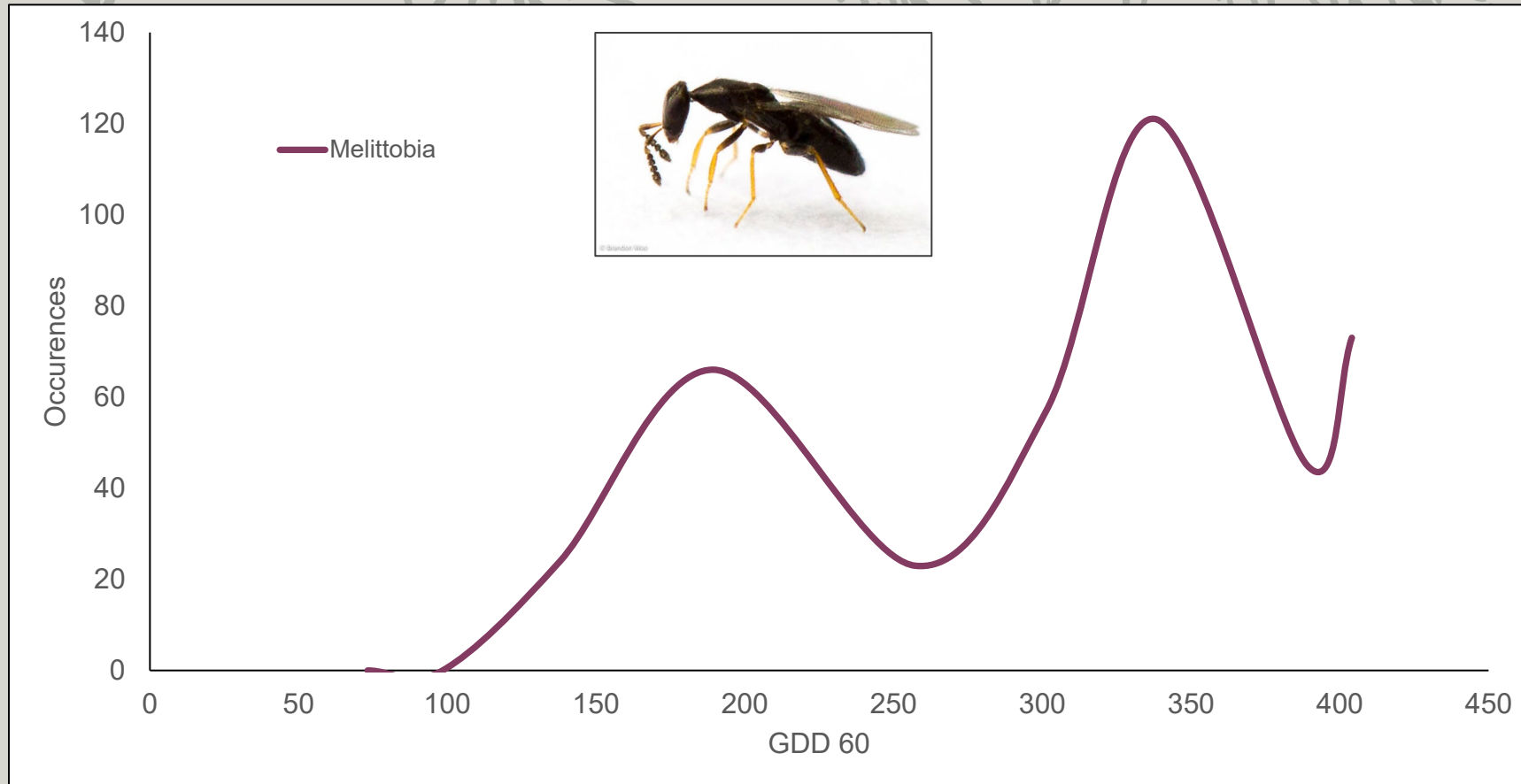
Phenology Model



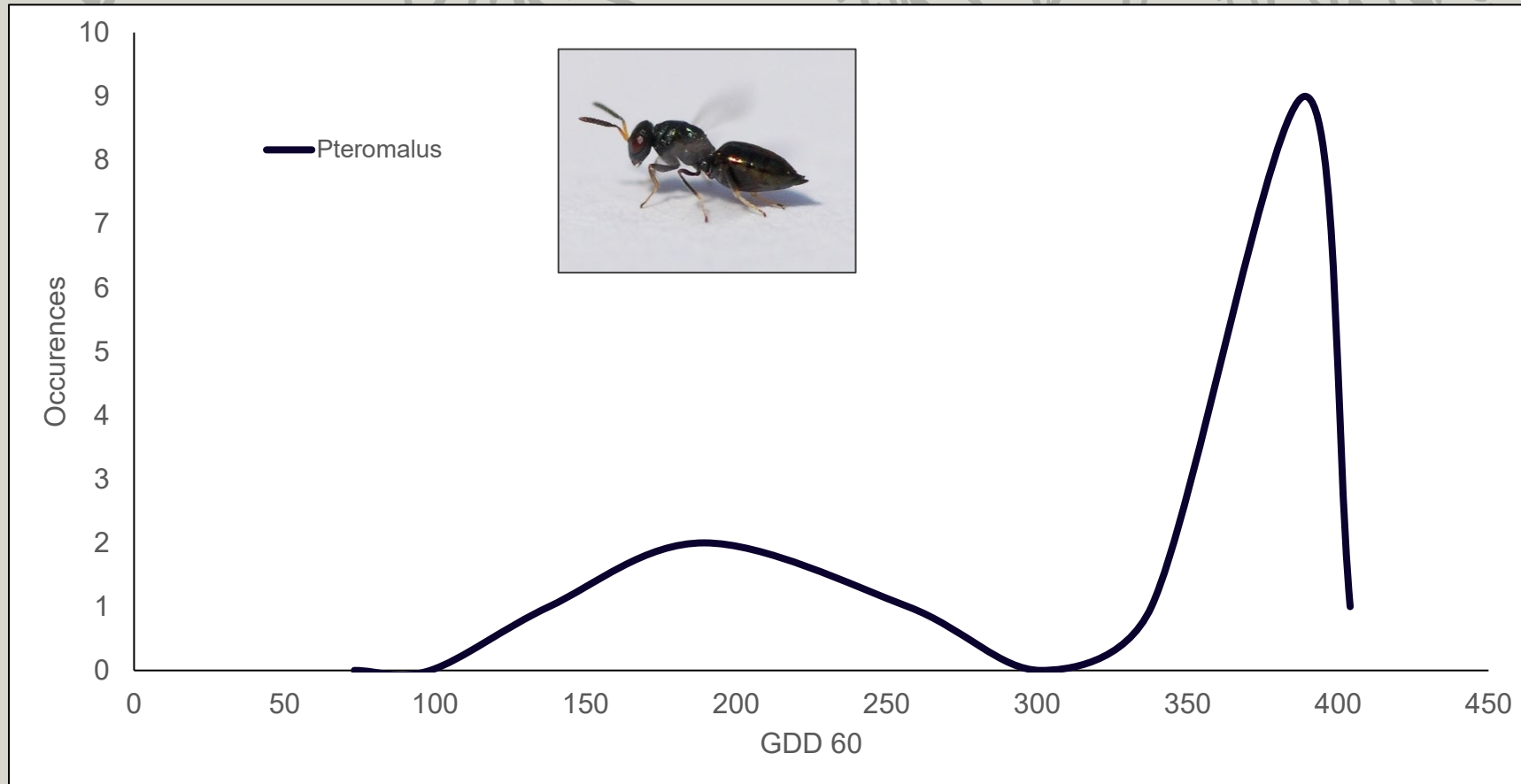
Phenology Model



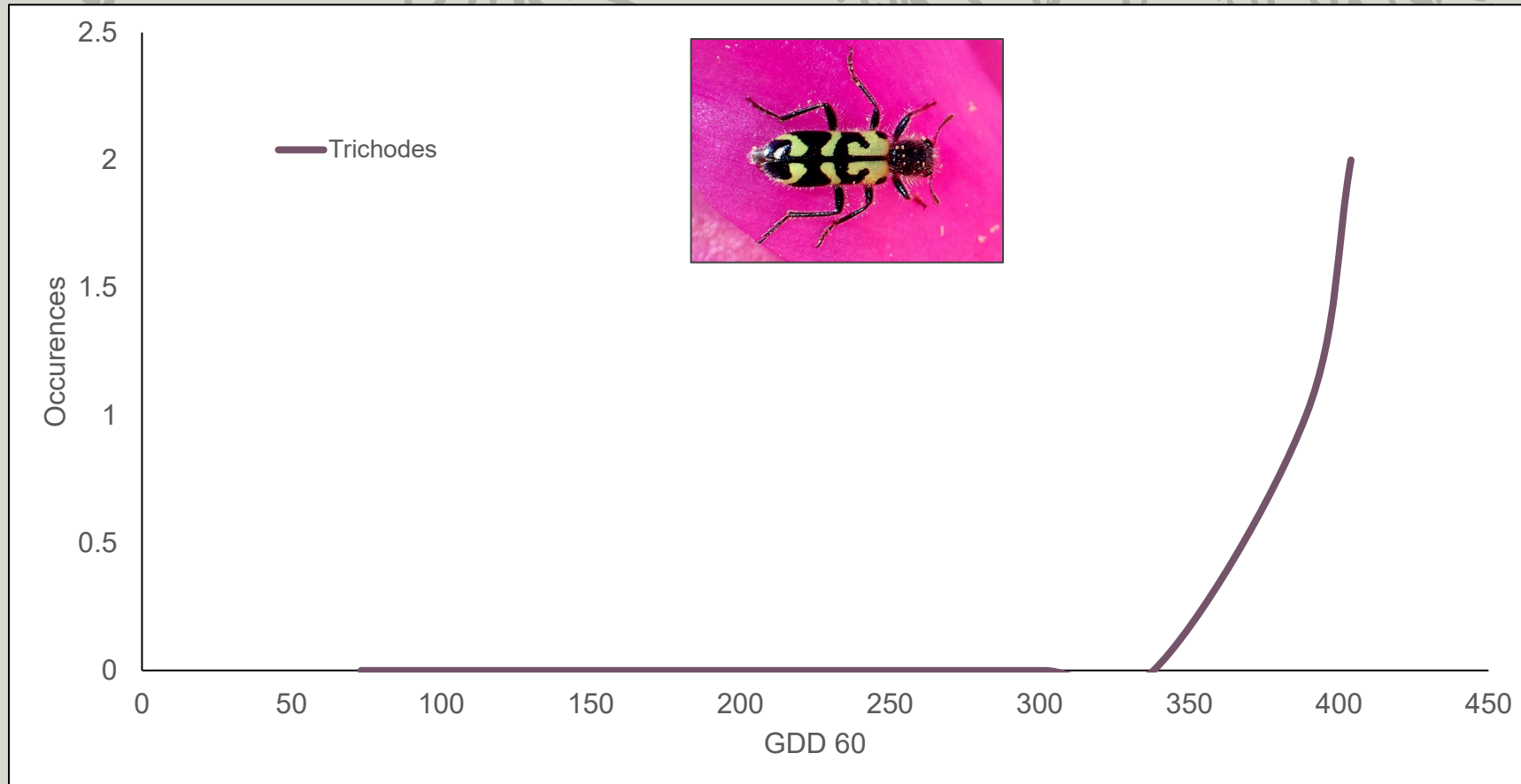
Phenology Model



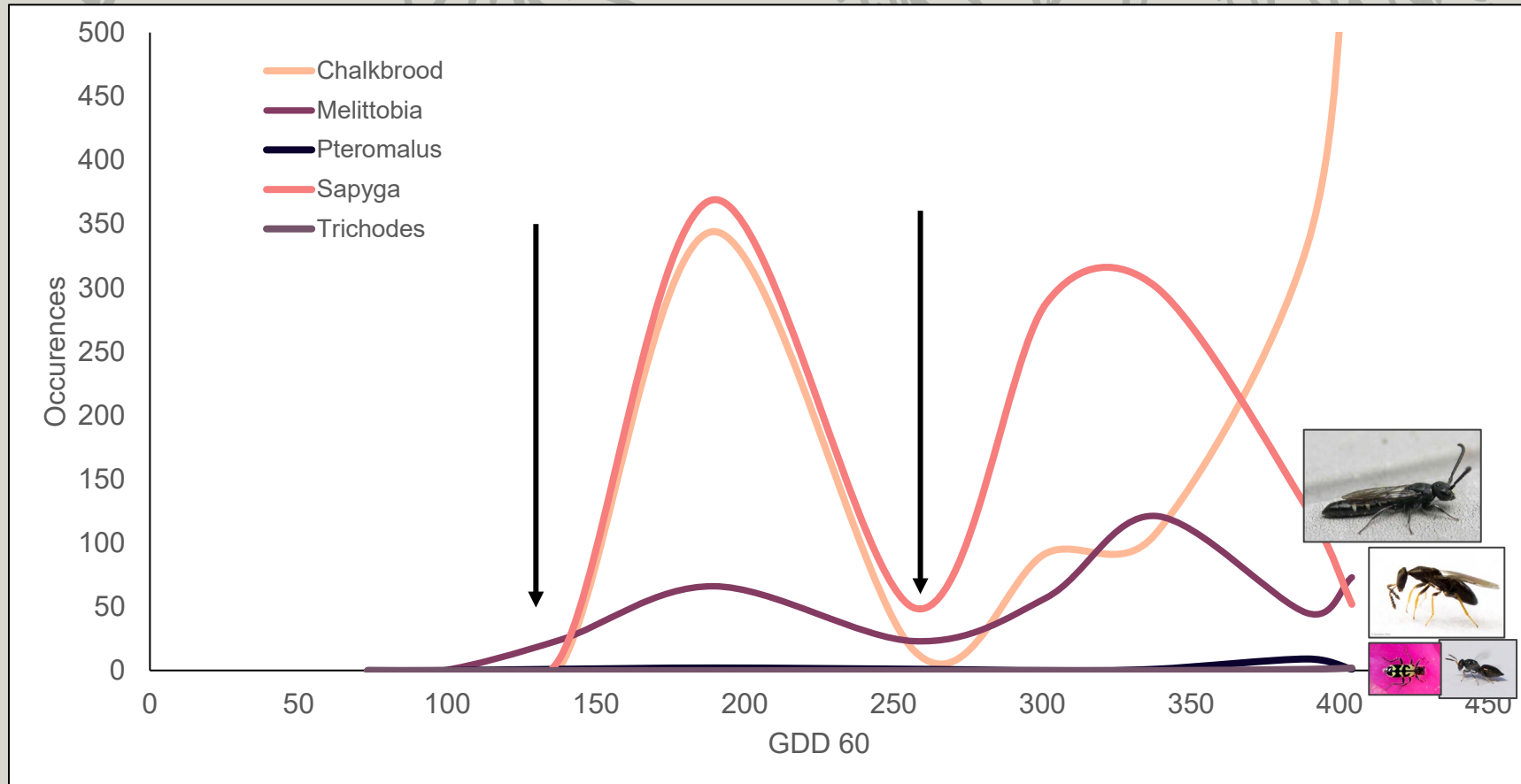
Phenology Model



Phenology Model



Phenology Model



Conclusions

- There are clear patterns for when to mitigate pest pressure
- This held consistence across years and sites
 - Although all three sites were relatively close
- Further expansion into other area





Questions?

Lindsie McCabe

Lindsie.McCabe@usda.gov