Turf Insect Pest Survey 2004

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Cooperative Extension

Introduction

- Phoenix: unique climate, environment
  - Limited insect pest knowledge
    - Taxonomy
    - Generations/season
    - Timing of emergence/occurrence
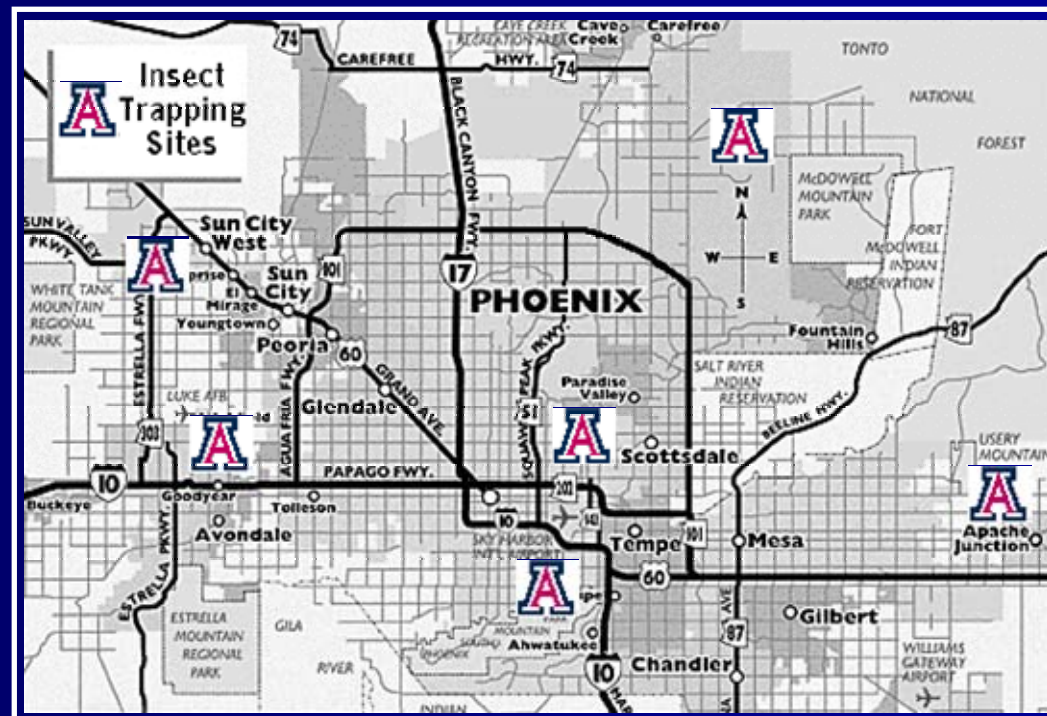   - Control strategies
    - Economic thresholds

Materials and Methods

Network of blacklight traps around valley
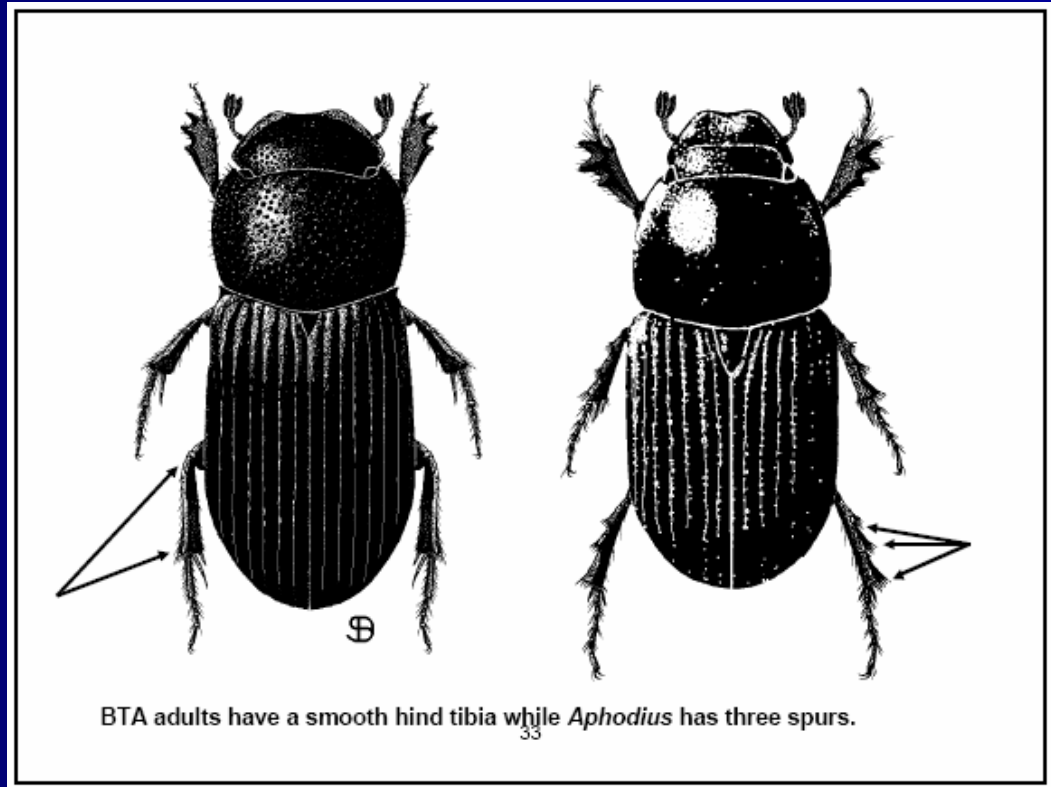
Materials and Methods

Network of blacklight traps around valley

Collection Results

- Pests
  - Moths
    - Sod Webworm
    - Armyworm, Cutworm
  - Beetles (white grub complex)
    - Masked Chafers
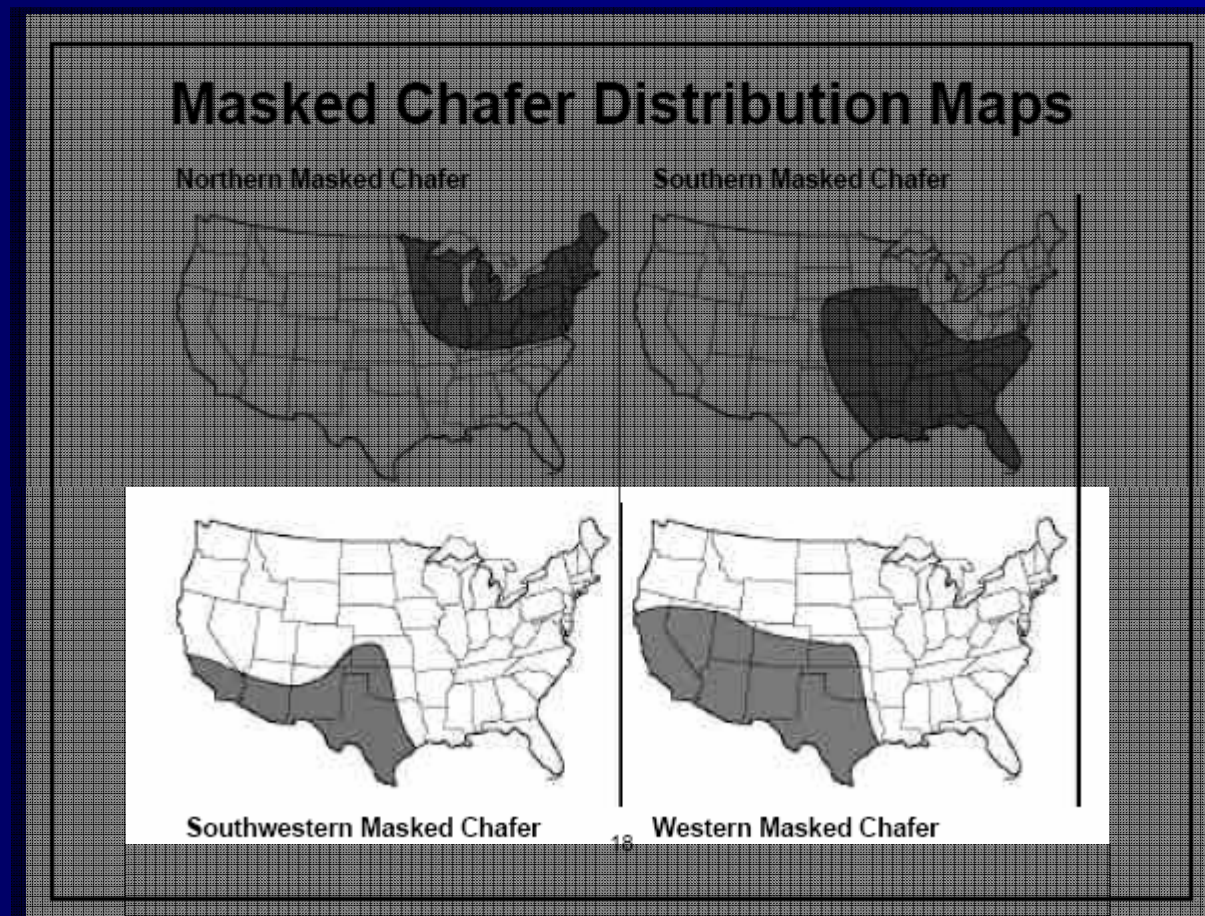   - BTAtaenius (and Aphodius)

Key Pests – BTA

BTA adults have a smooth hind tibia while *Aphodius* has three spurs.

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Key Pests – Chafer Beetles
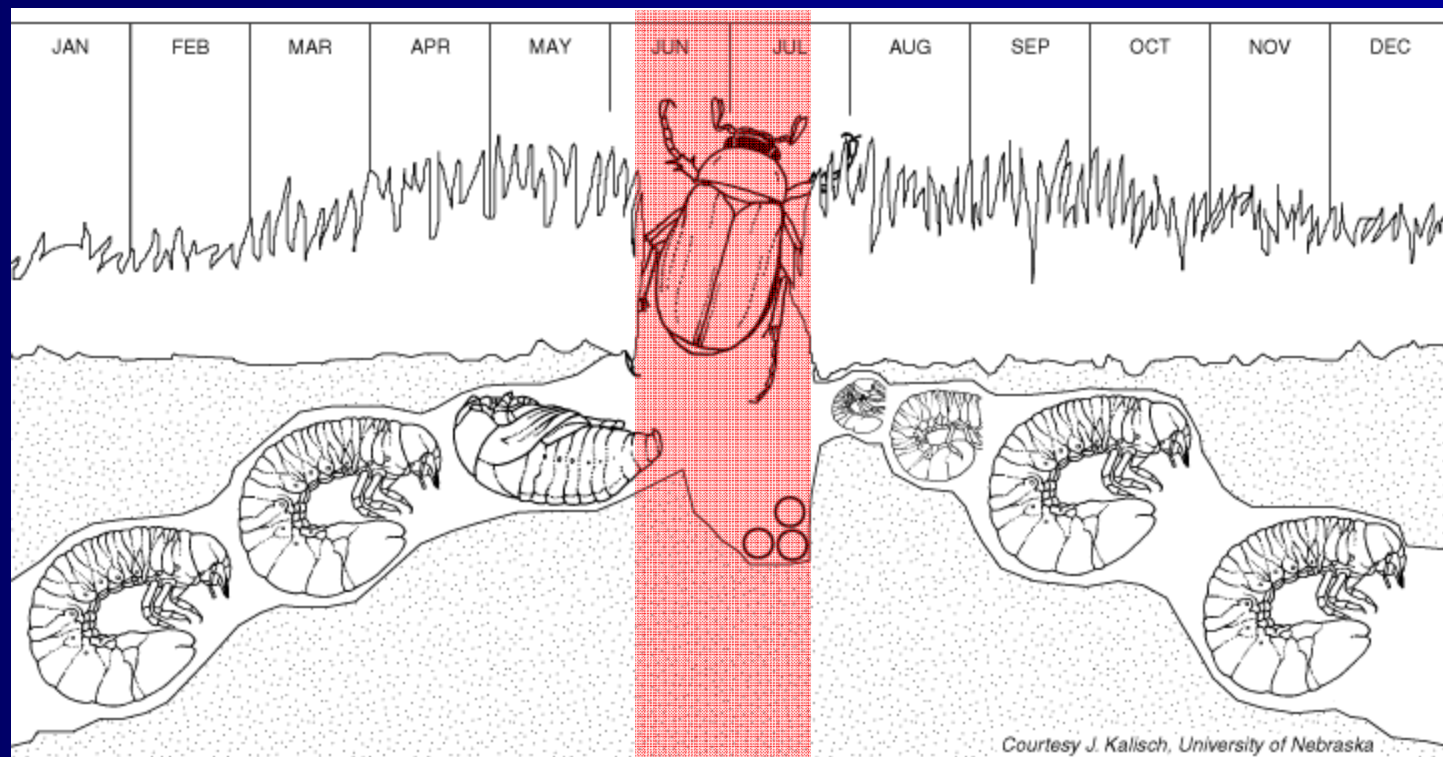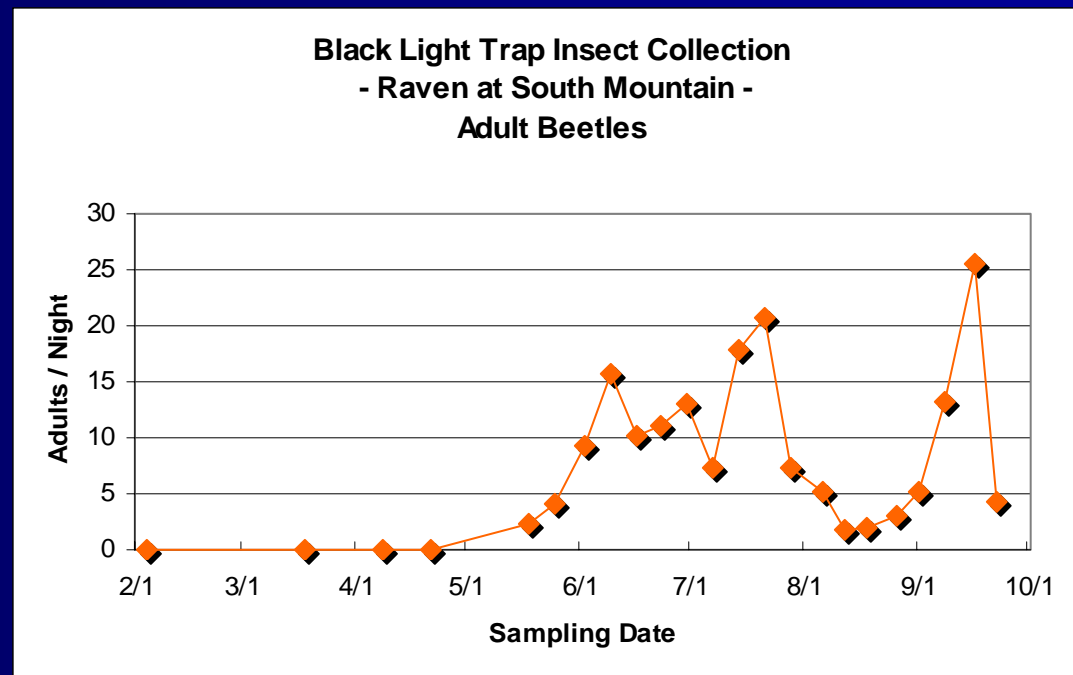
Part of the White grub complex
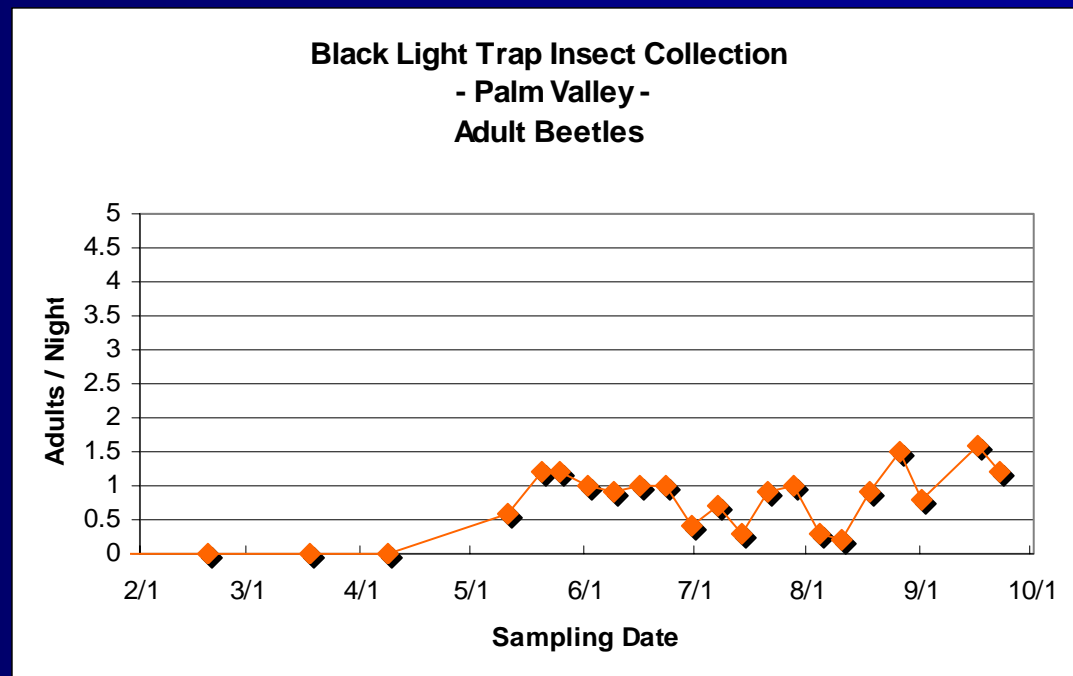
Key Pests – Chafer Beetles

Masked Chafer Distribution Maps

Northern Masked Chafer · Southern Masked Chafer

Southwestern Masked Chafer · Western Masked Chafer

Key Pests – Chafer Beetles

Lifecycle:

Courtesy J. Kalisch, University of Nebraska
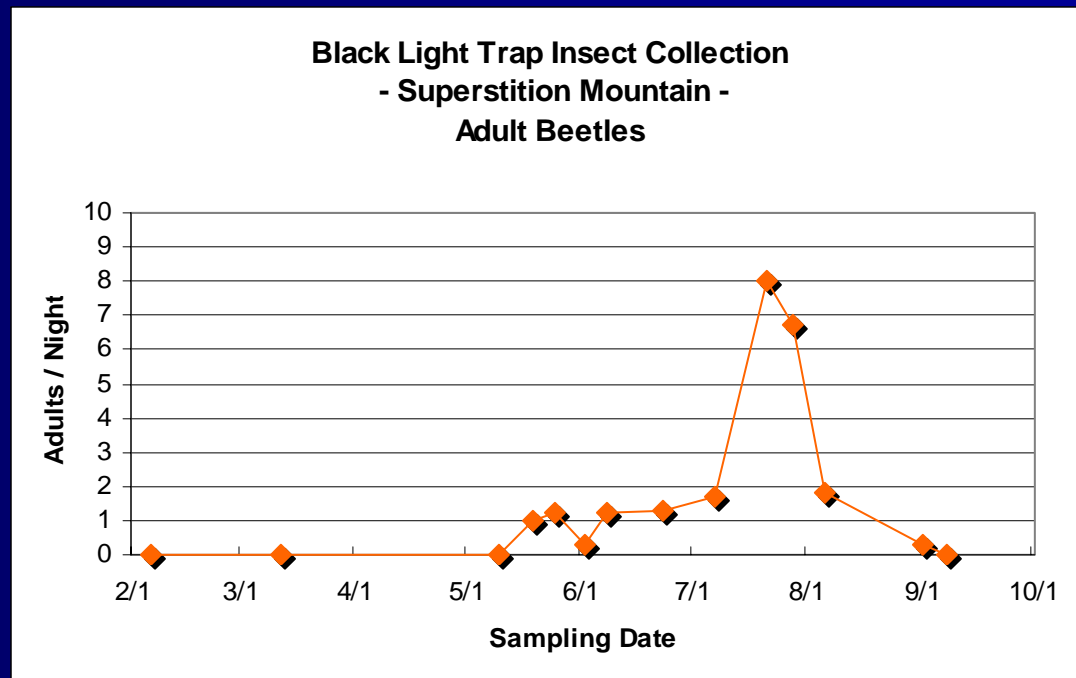
Collection Results

Black Light Trap Insect Collection
- Raven at South Mountain -
Adult Beetles

Collection Results

Black Light Trap Insect Collection
- Palm Valley -
Adult Beetles

Collection Results

Black Light Trap Insect Collection
- Superstition Mountain -
Adult Beetles

Collection Results

Collection Results

Black Light Trap Insect Collection
- AZ Biltmore -
Adult Beetles

Collection Results

Black Light Trap Insect Collection
- Sun City Grand 'Cimarron' -
Adult Beetles
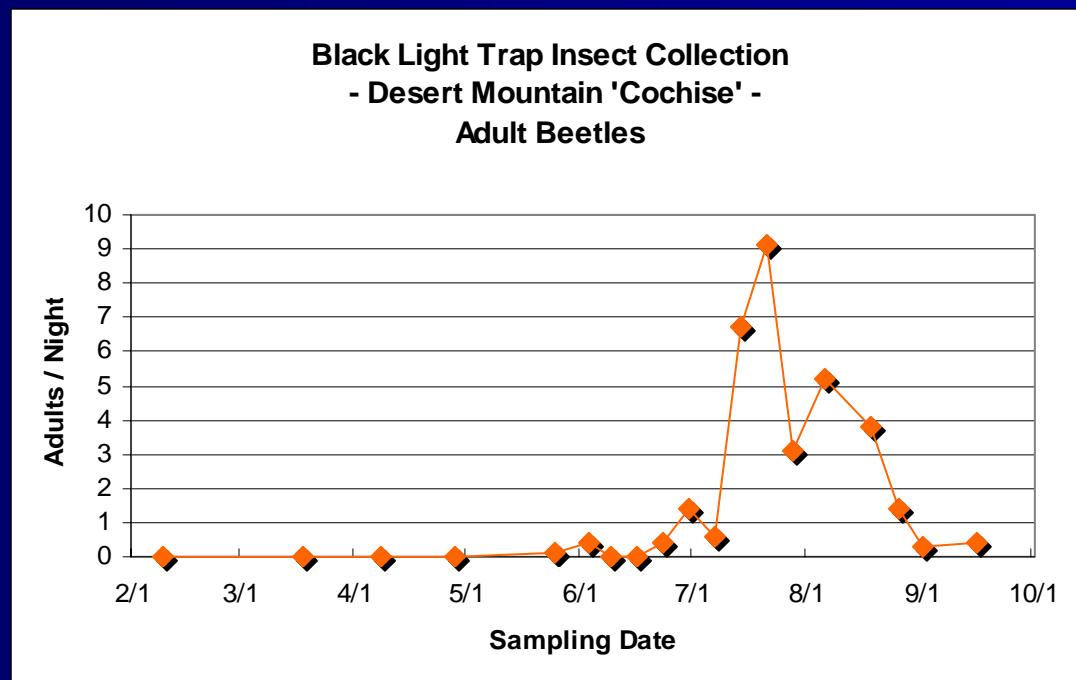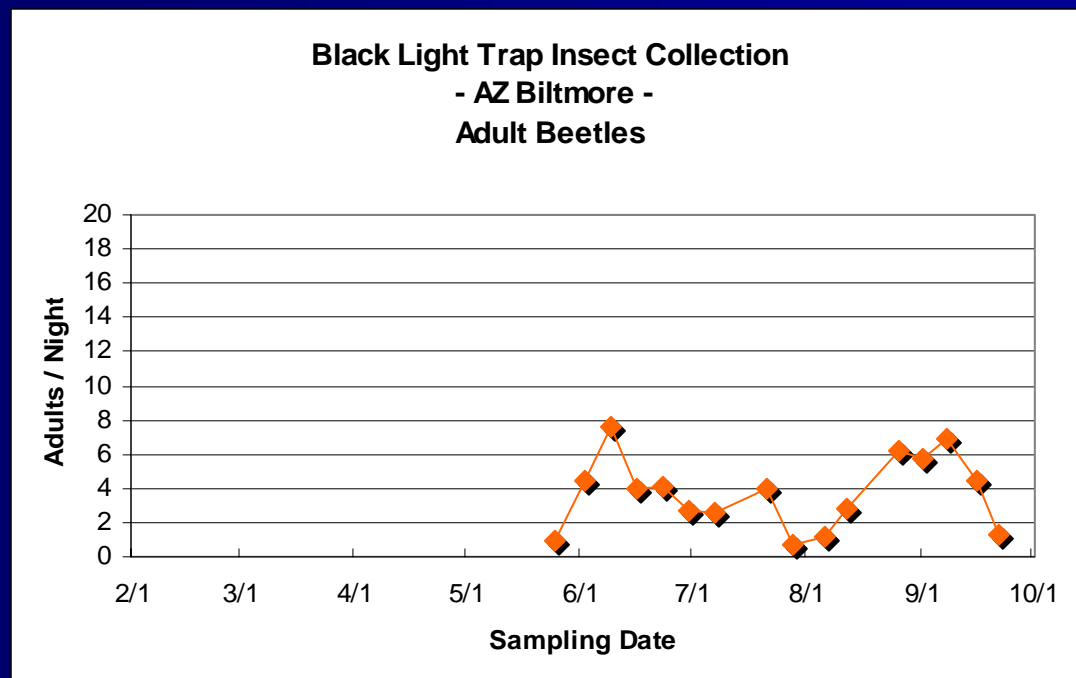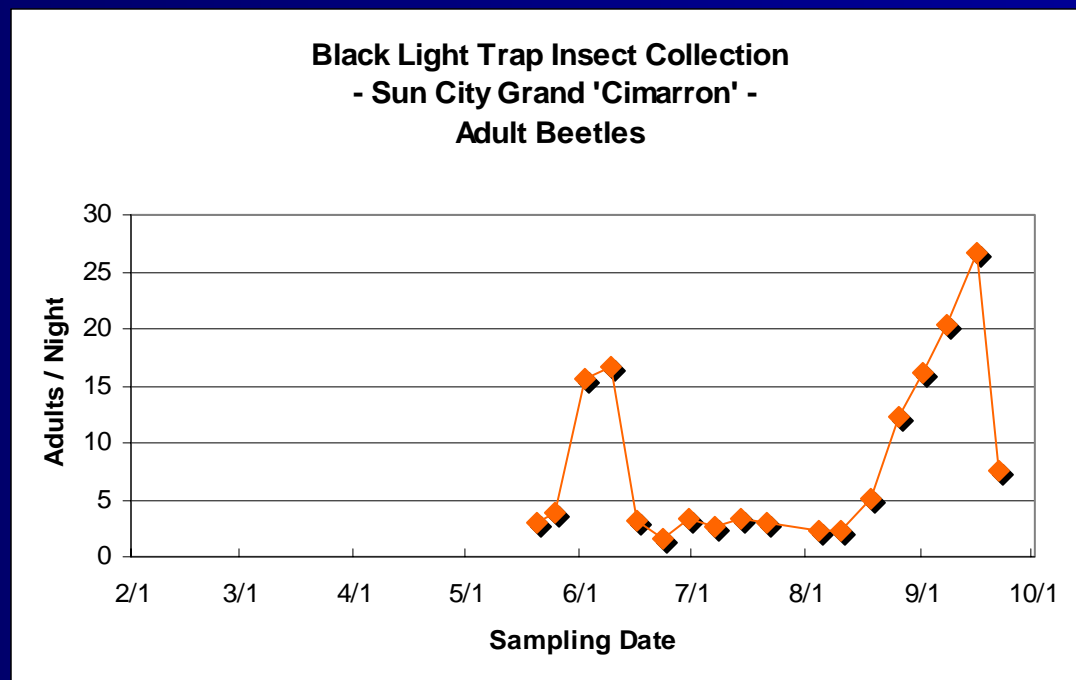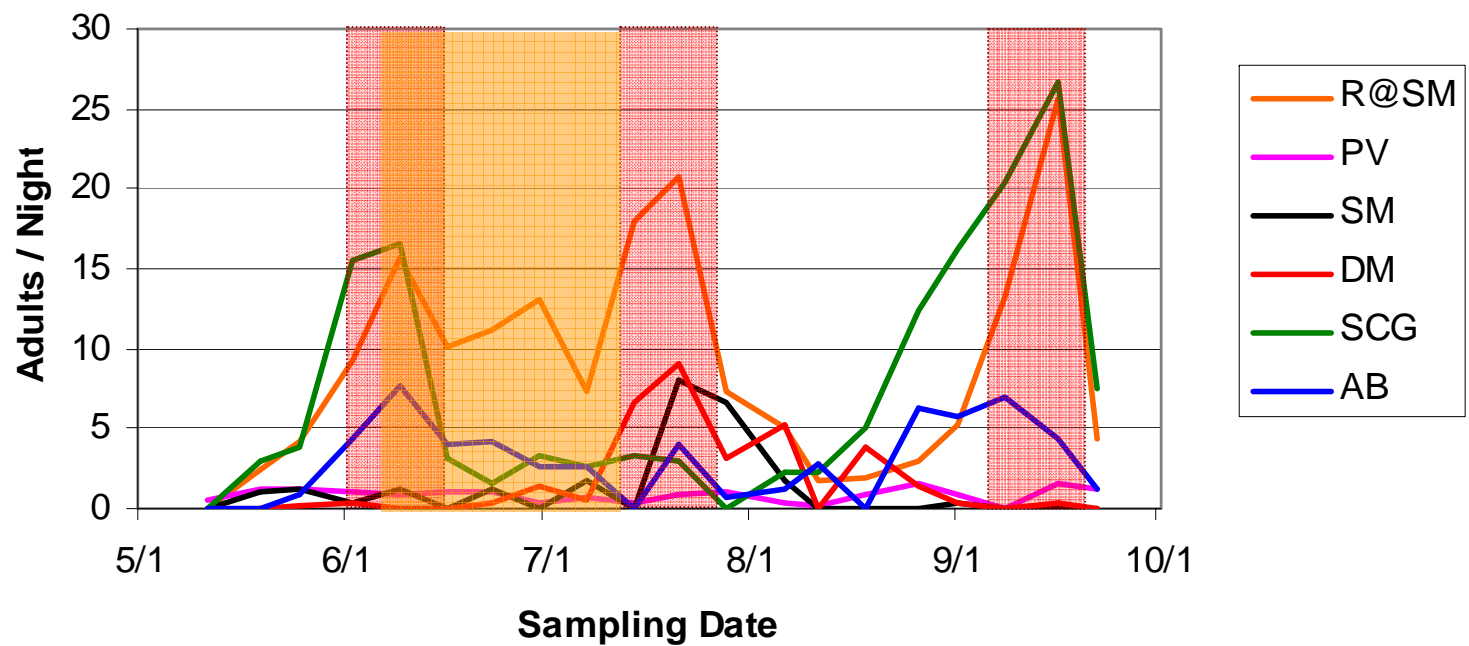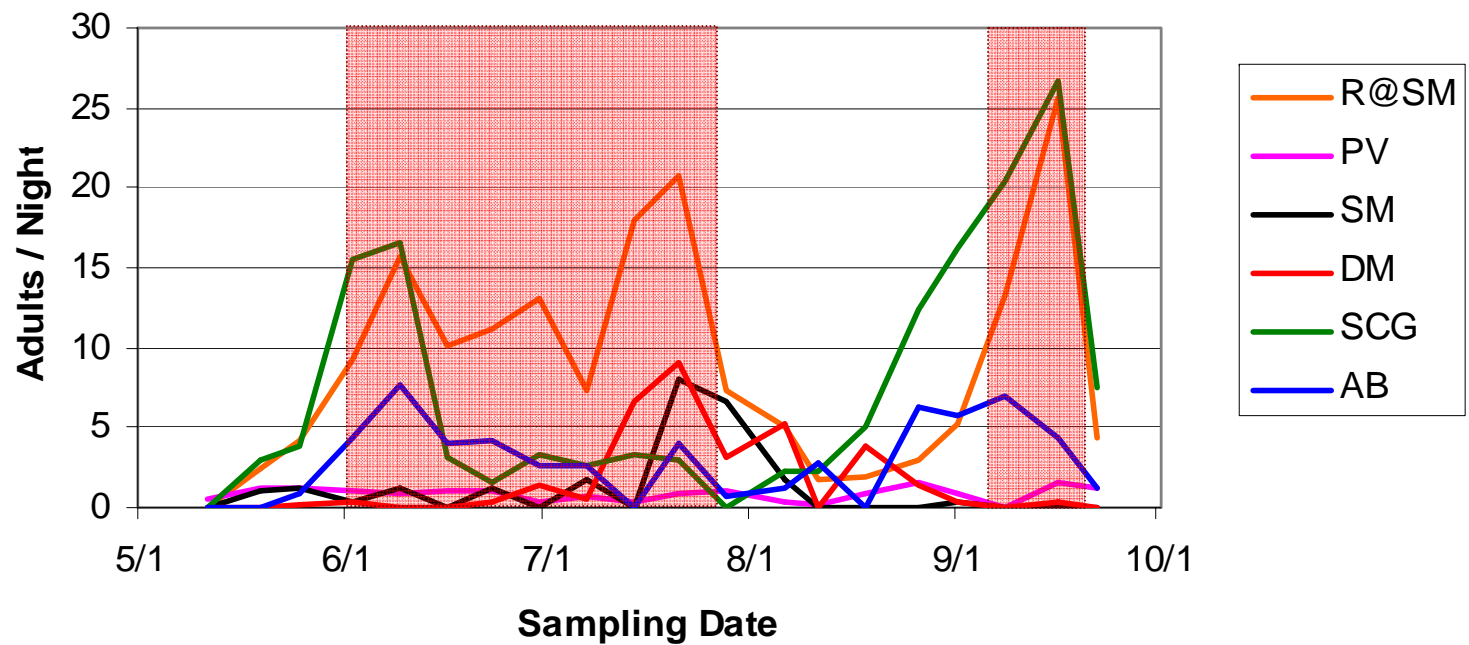
Collection Results

Black Light Trap Insect Collection
- All Sites -
Adult Beetles

Collection Results

Black Light Trap Insect Collection
- All Sites -
Adult Beetles
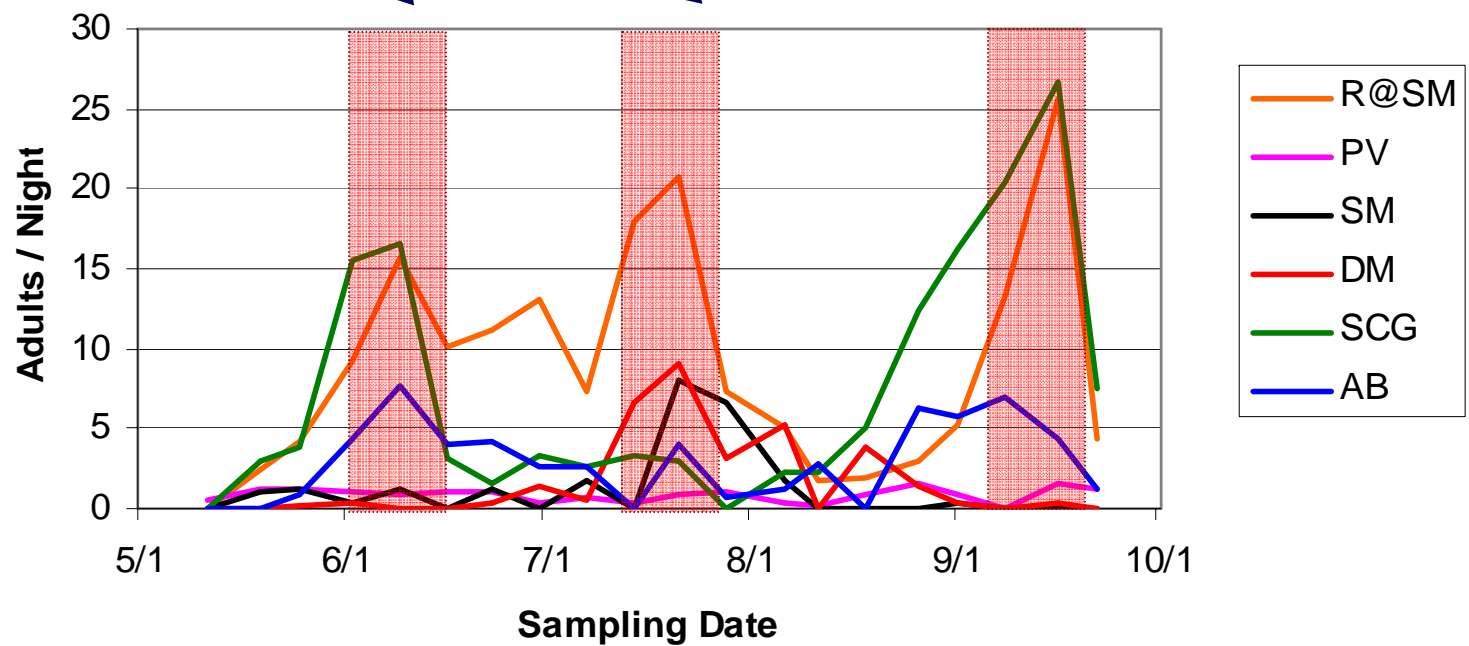
Regional Reports – PTRI

- Pace Turf Research Inst, San Diego
  - Chafer Beetles (1995-96)
    - Peak Chafer activity same every year
      - Peak 1: Mid-June
      - Peak 2: Late Aug/Early Sep
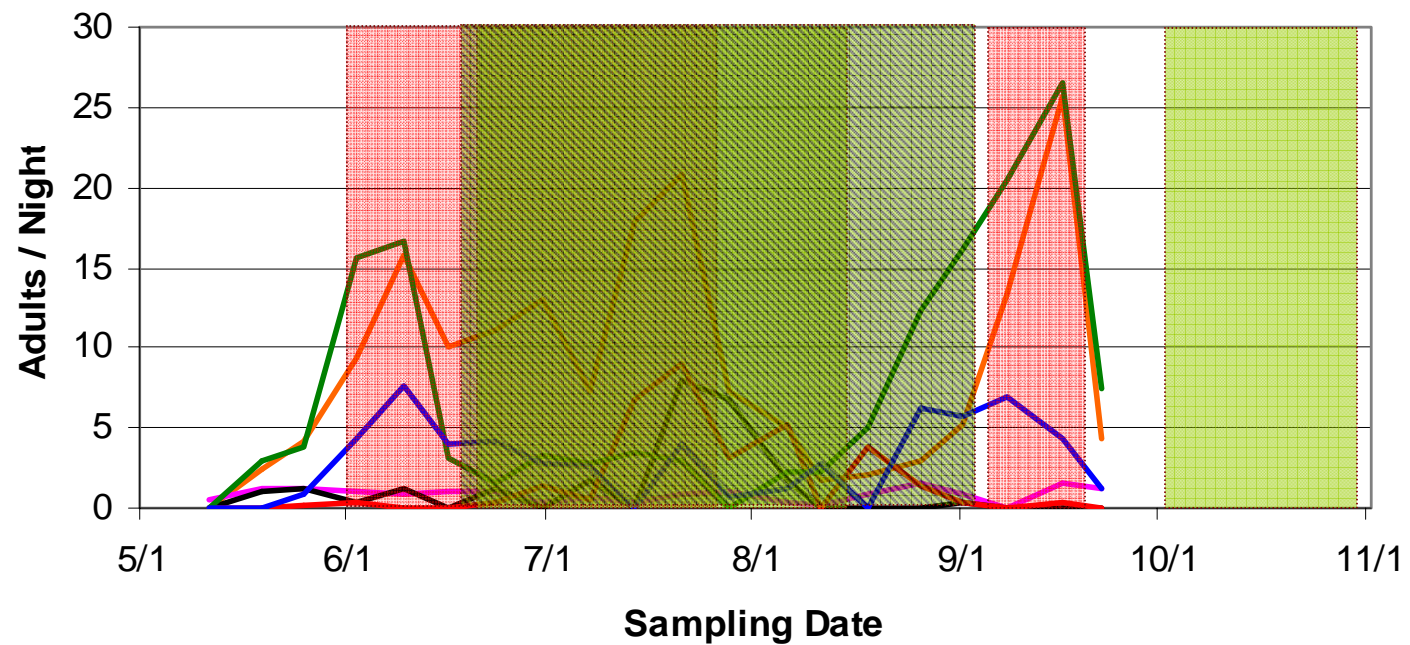   - Hypothesized 2 Peaks = 2 species

Collection Results

Collection Results

Black Light Trap Insect Collection
- All Sites -
Adult Beetles

Monitoring

How?

Monitoring

How?

Monitoring

How?

Where?

- Sites with a history of grub damage

- Geographic area to a lesser extent

**Black Light Trap Insect Collection
- Superstition Mountain -
Adult Beetles**

**Black Light Trap Insect Collection
- Raven at South Mountain -
Adult Beetles**
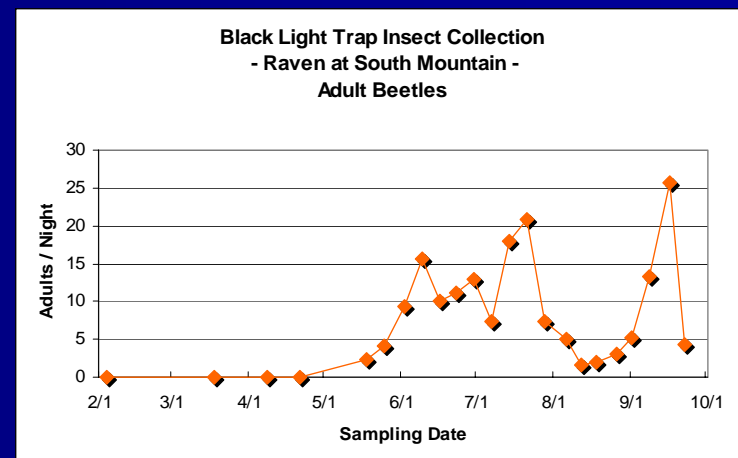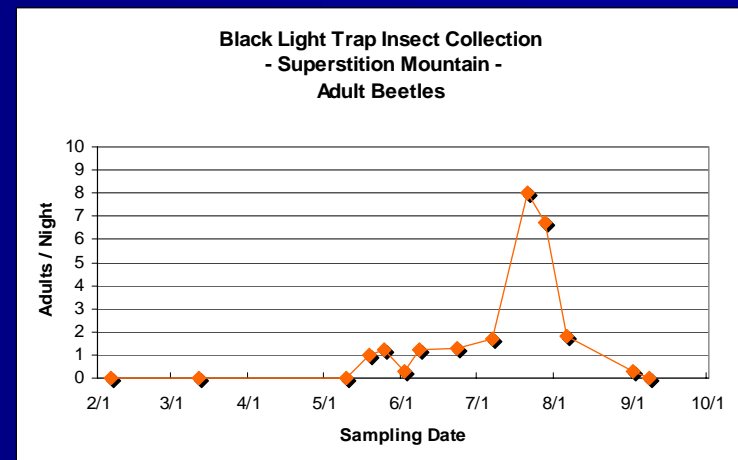
Monitoring

How?

Where?

When?

- Adults – PM, May thru October
- Grubs – 3 weeks after peak emergence

Monitoring

How?

Where?

When?

Why?

- ID - friend or foe?
- Informed decisions on control
- Save $ and protect turf

Summary

- Masked chafer appears primary grub
- 2,3 individual populations of chafers
- Each population active at diff. times
- Conventional trt regimes unacceptable?
- Monitoring = INFO
        = effective control for YOU

PHX is a unique environment in every way

University of Arizona Cooperative Extension

Turfgrass Research, Extension, and Education

cals.arizona.edu/turf

Now in Phoenix…

Turf Disease Diagnostic Lab

- Rapid Blight
- Pythium
- Rhizoctonia

and others too sinister to mention…

cals.arizona.edu/turf