

# Broad Mite Biology, Growth Stages, Damage to Blackberry and Control

Dr. Donn Johnson

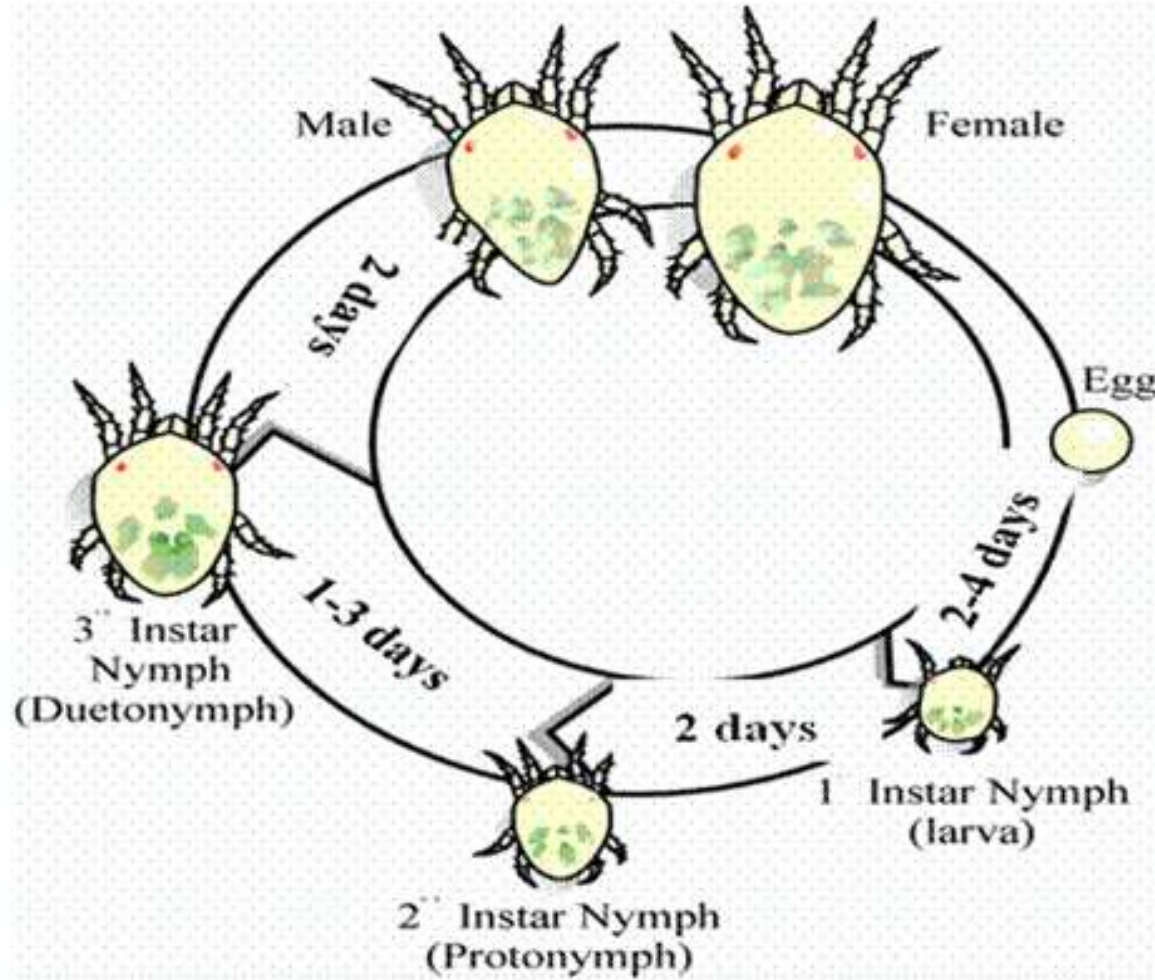
Department of Entomology

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(25 August 2016)

(Photos by D. Johnson unless specified)

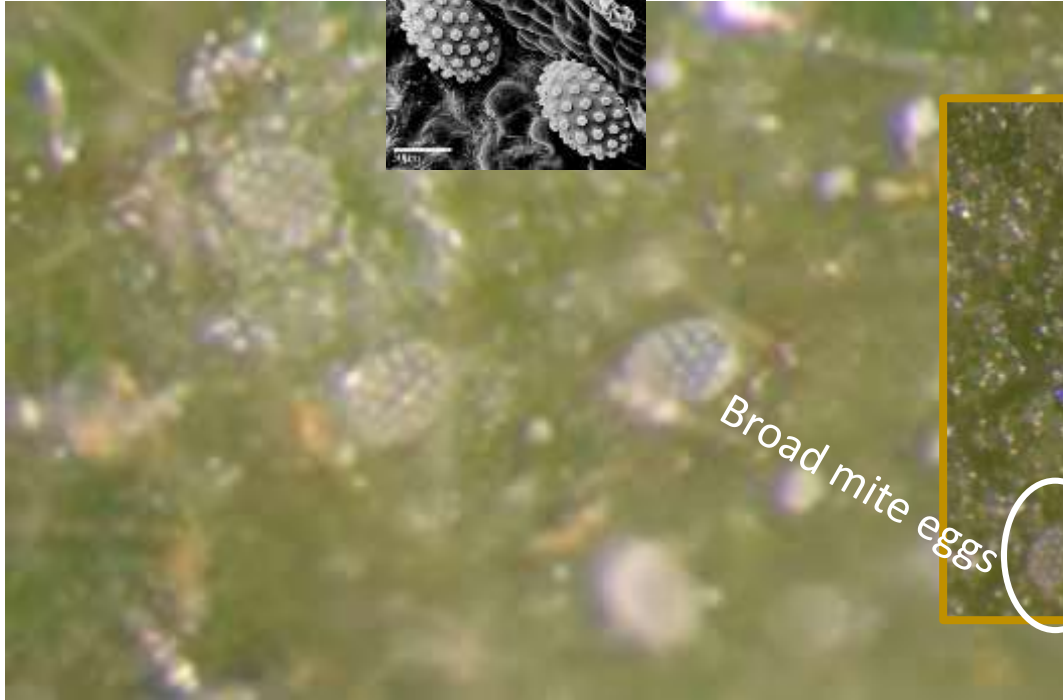
# Broad Mite Life Cycle (7 to 11 days)



Source: <http://organicsoiltechnology.com/broad-mite-description-control.html>

# Broad Mite Stages

SEM: USDA-BARC



Male

Predatory  
mite egg

Broad mite eggs



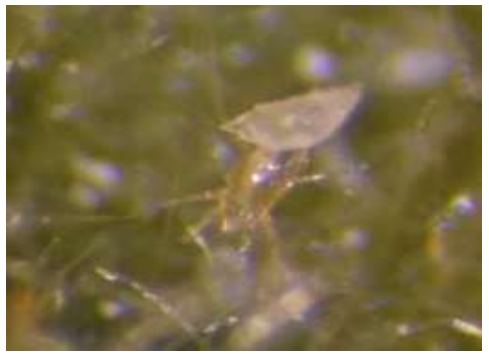
Spindle-shaped  
deutonymph

Amber  
adult male

Protonymph



Amber adult female (note hour  
glass on back)

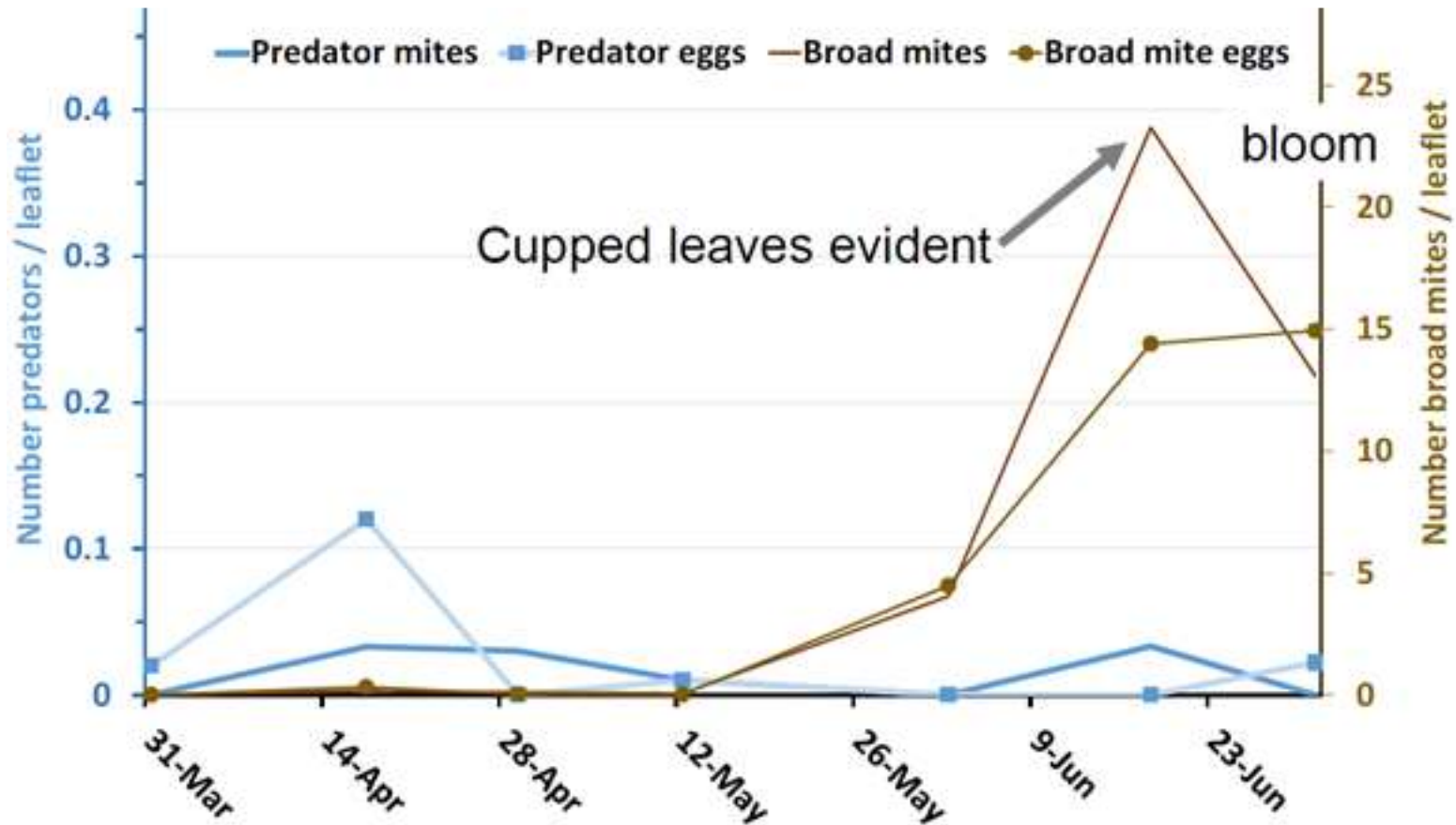


Male carrying deutonymph  
(resting stage) before mating

(SEM Photo: *Eric Erbe, Ron Ochoa and Chris Pooley, ARS*)



# Seasonal Changes in Numbers of Broad Mite per Prime-Ark® 45 Primocane Leaflet (White Co., AR in 2015)



Active broad mites and eggs (brown lines - right Y-axis)

Predatory mites (blue lines, left Y-axis)

(Graph: D. Johnson)



Healthy versus Broad Mite-Damaged Blackberry  
on 18 June 2015  
(Fruit Station in Clarksville, AR)

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# Healthy versus Broad Mite-Damaged Blackberry

Healthy flowering terminal



Downward cupped leaves



Upward cupped leaves



On same date, some terminals have downward cupped leaves (center – flower buds) and others have upward cupped leaves (right – no flower buds).

# Sequence from early terminal leaf bronzing/cupping to dead leaves





# Broad Mite Terminal Damage (19 Aug. 2015; White Co., AR)

Bronzing tip and downward cupped leaves



Downward cupped and dying leaves



Bronzing and upward cupped leaves





# Healthy versus Broad Mite-Damaged Laterals (19 August 2015; White Co., AR)



**Healthy lateral**



**Bronzing lateral**



**Broad mite killed lateral**

**Broad Mite Damage of 'Prime Ark<sup>®</sup> 45' Blackberry  
Before & After Agri-Mek SC Application  
on 15 July 2016  
(White Co. Arkansas)**

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July 7:

Significant broad mite damaged terminals before miticide treatment





On July 22:

Healthy primocanes, lateral shoot growth and fruit after Agri-Mek SC spray on July 15. The grower pruned off damaged terminals after the spray to promote lateral shoot growth (**area circled**).

