

Update on BMSB in the Southern Region

Jim Walgenbach

NC State University

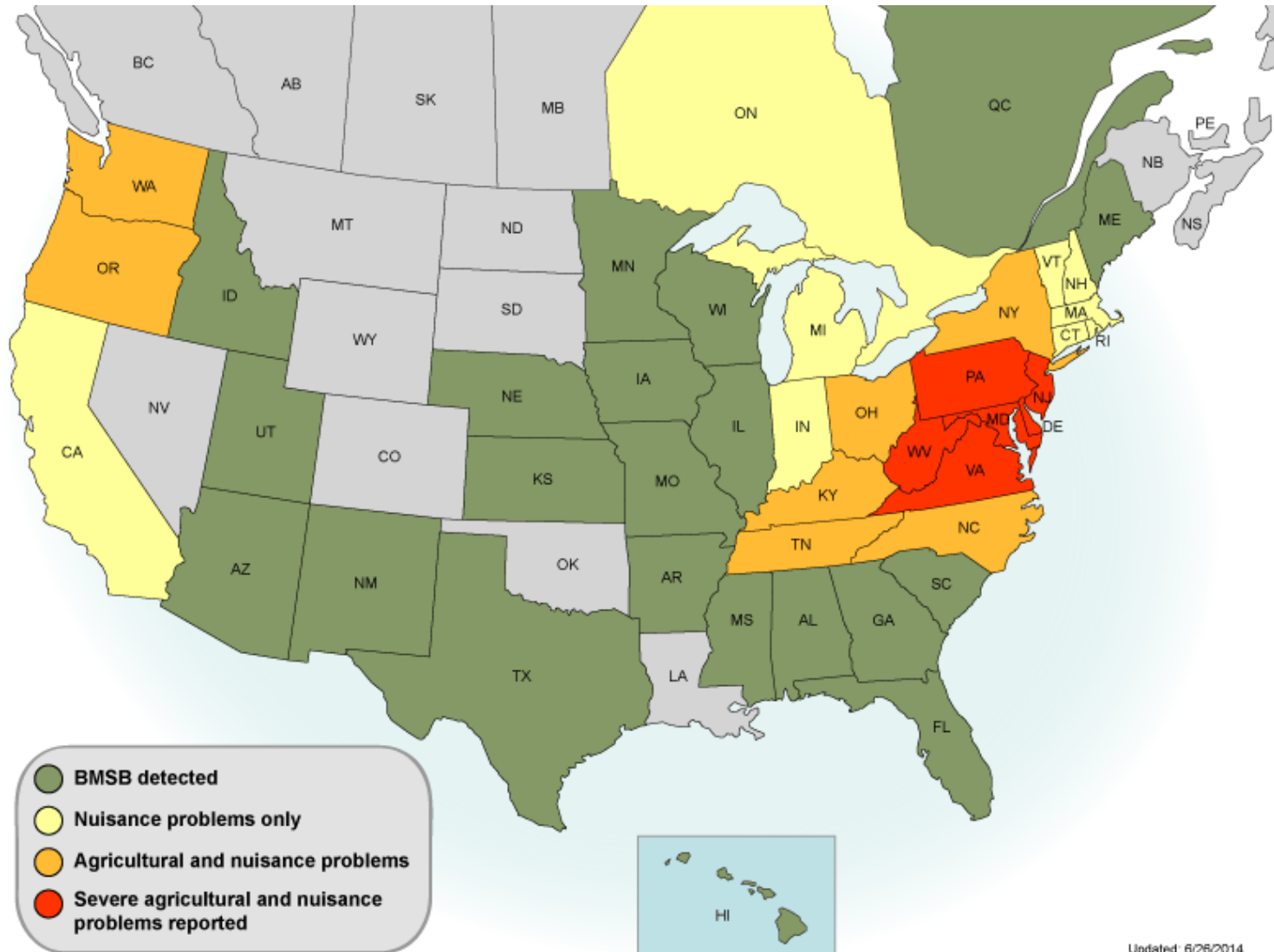
MHCREC, Mills River, NC

NC STATE UNIVERSITY

Acknowledgments

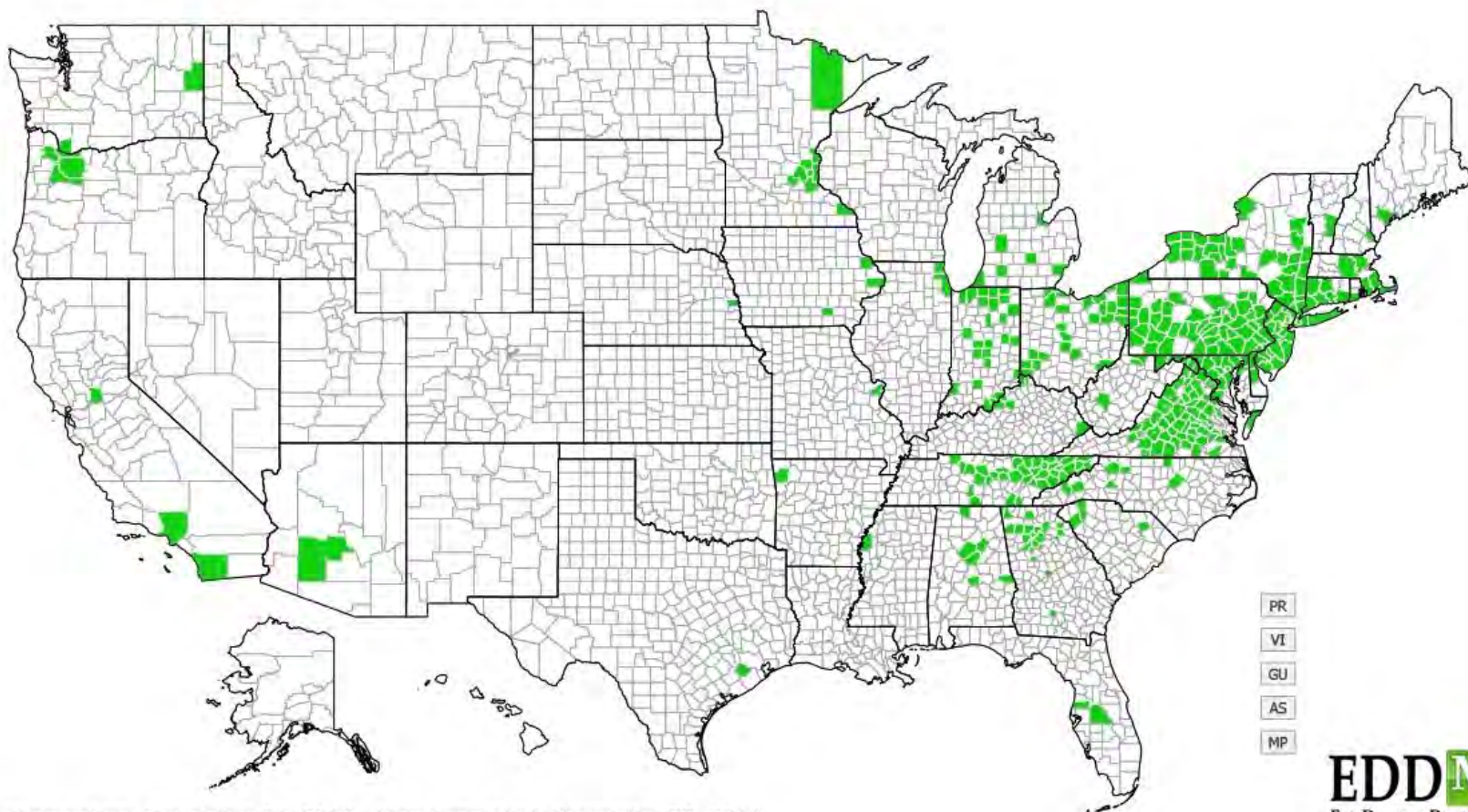
- Alabama
 - Charles Ray
- Arkansas
 - Donn Johnson
 - Sam Kim
- Florida
 - Amanda Hodges
- Georgia
 - Mike Toews
- Kentucky
 - Ric Bessin
- Louisiana
 - Alan Morgan
- Mississippi
 - Blake Layton
- South Carolina
 - Powell Smith
 - Andy Rollins
- Tennessee
 - Jenny Moore
 - Scott Steward
- Texas
 - Mike Merchant
- Virginia
 - Ames Herbert
 - Tom Kuhar

StopBMSB.org Distribution Map



Center for Invasive Species and Ecosystem Health University of Georgia

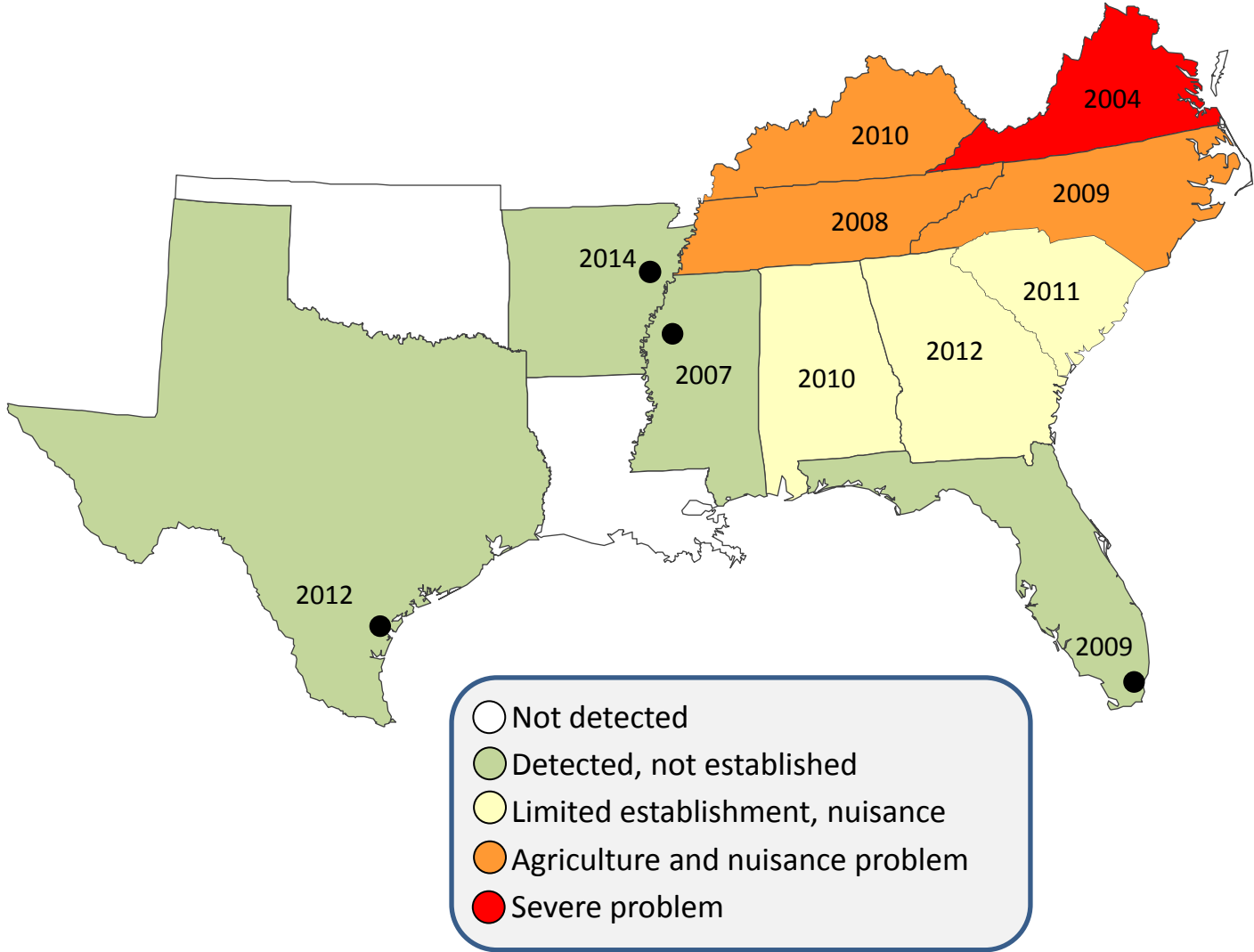
Halyomorpha halys



- PR
- VI
- GU
- AS
- MP

Last observation: November 29, 2014 - Map generated: November 30, 2014

Occurrence and Distribution of BMSB in the Southern Region

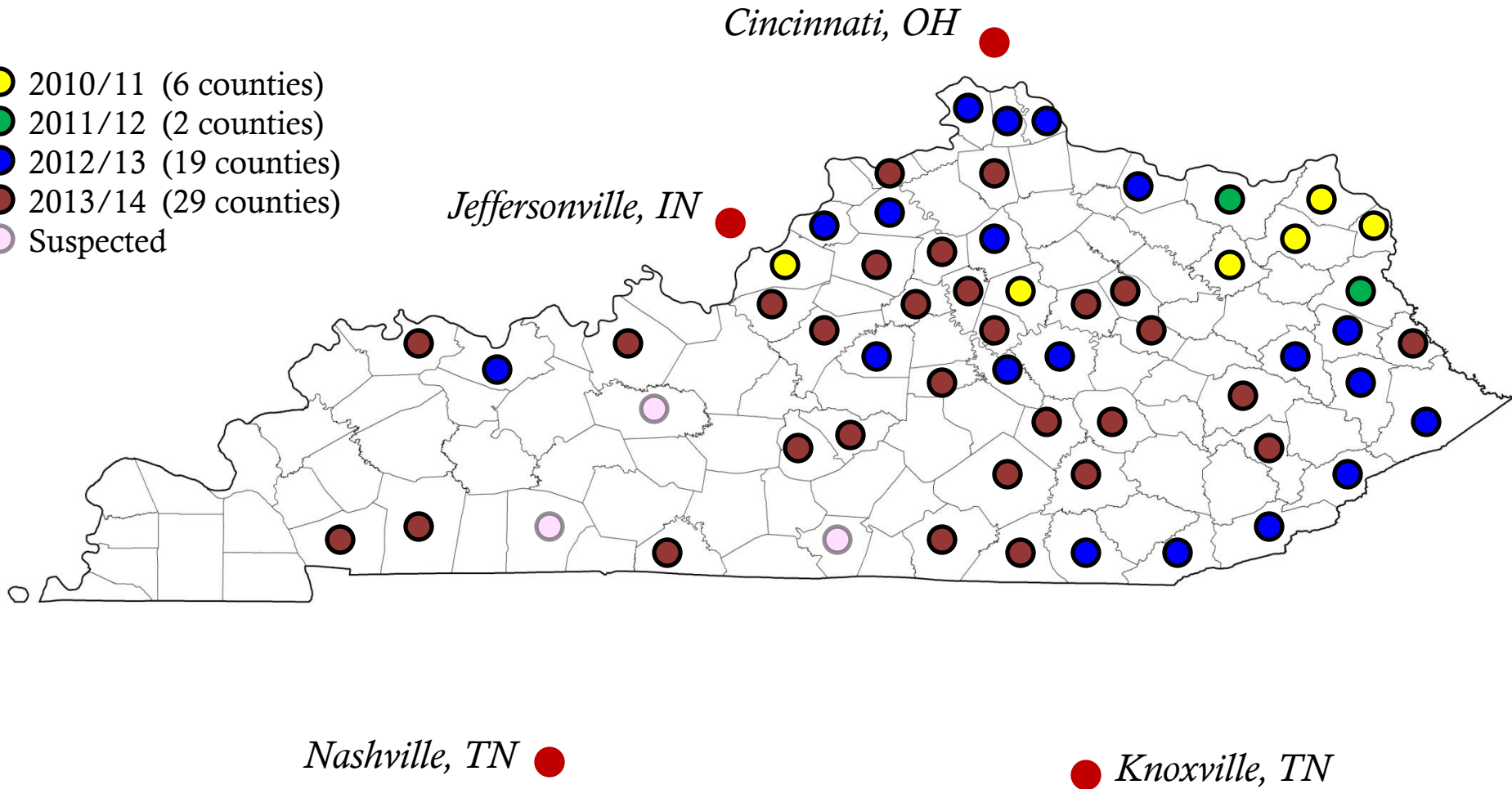


Brown Marmorated Stink Bug Timeline

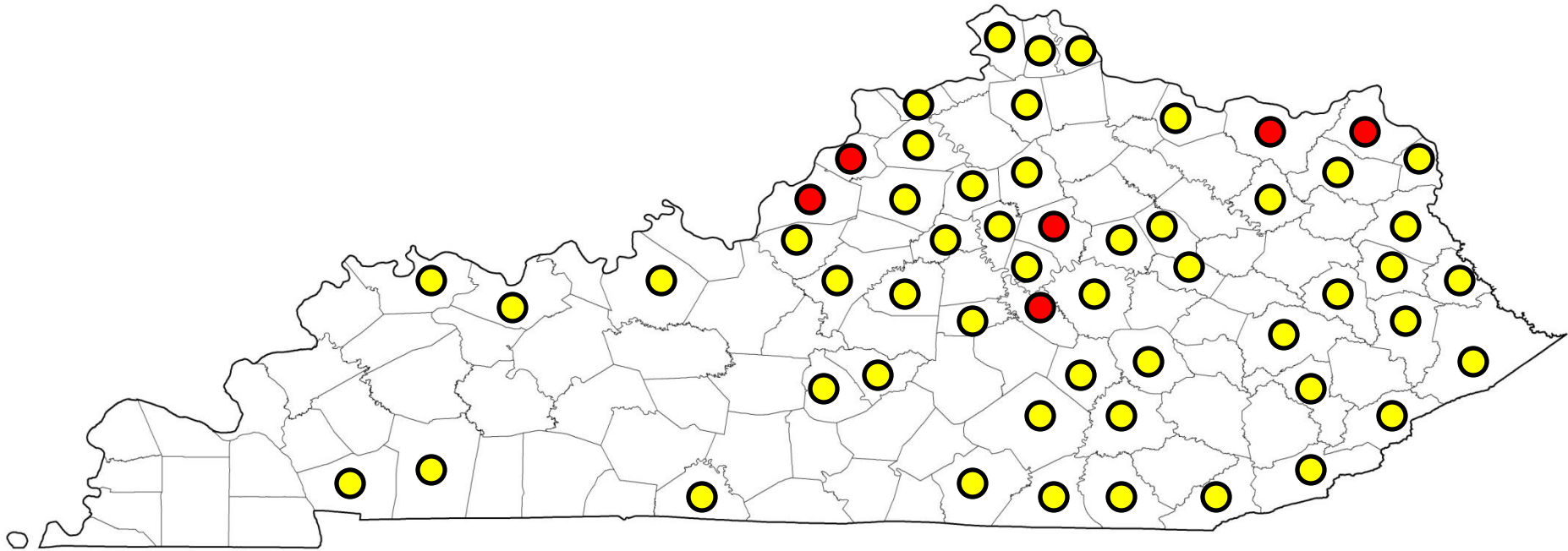
Counties with Detections

56/120 counties

- 2010/11 (6 counties)
- 2011/12 (2 counties)
- 2012/13 (19 counties)
- 2013/14 (29 counties)
- Suspected



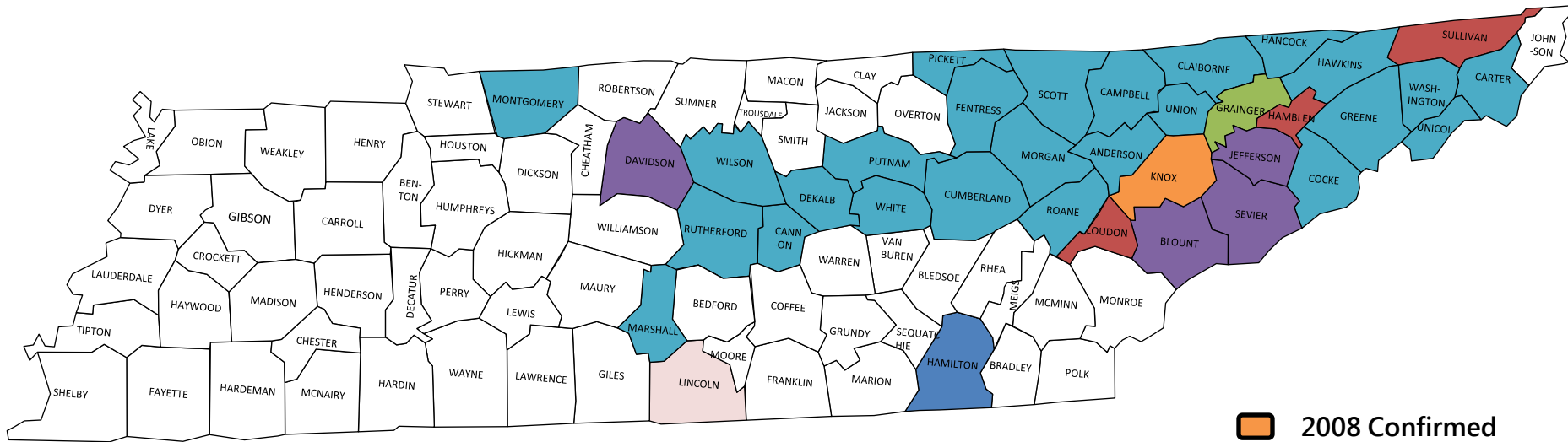
Brown Marmorated Stink Bug Ag Problem Areas



- Detected/nuisance
- Ag problems reported

Basically – Problems have been limited but are increasing quickly

Brown Marmorated Stink Bug Distribution 2008-2014



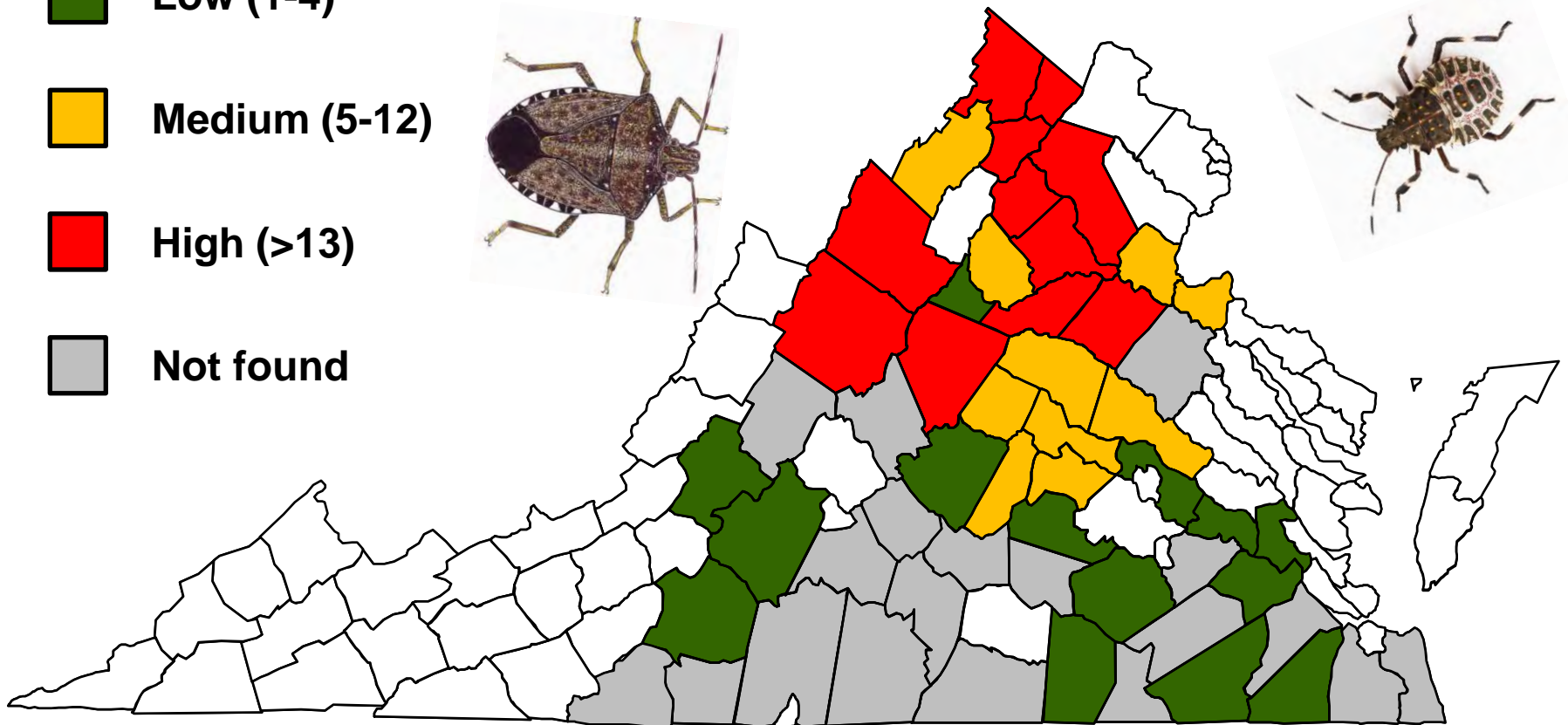
-  2008 Confirmed
-  2009 Confirmed
-  2010 Confirmed
-  2011 Confirmed
-  2012 Confirmed
-  2013 Confirmed
-  2014 Confirmed

Confirmed by UT Extension Agents (no specimen): Montgomery, Wilson, Marshall, Putnam, Roane, Hancock, Claiborne, Greene, Unicoi, Carter

*Knox Country New State Record

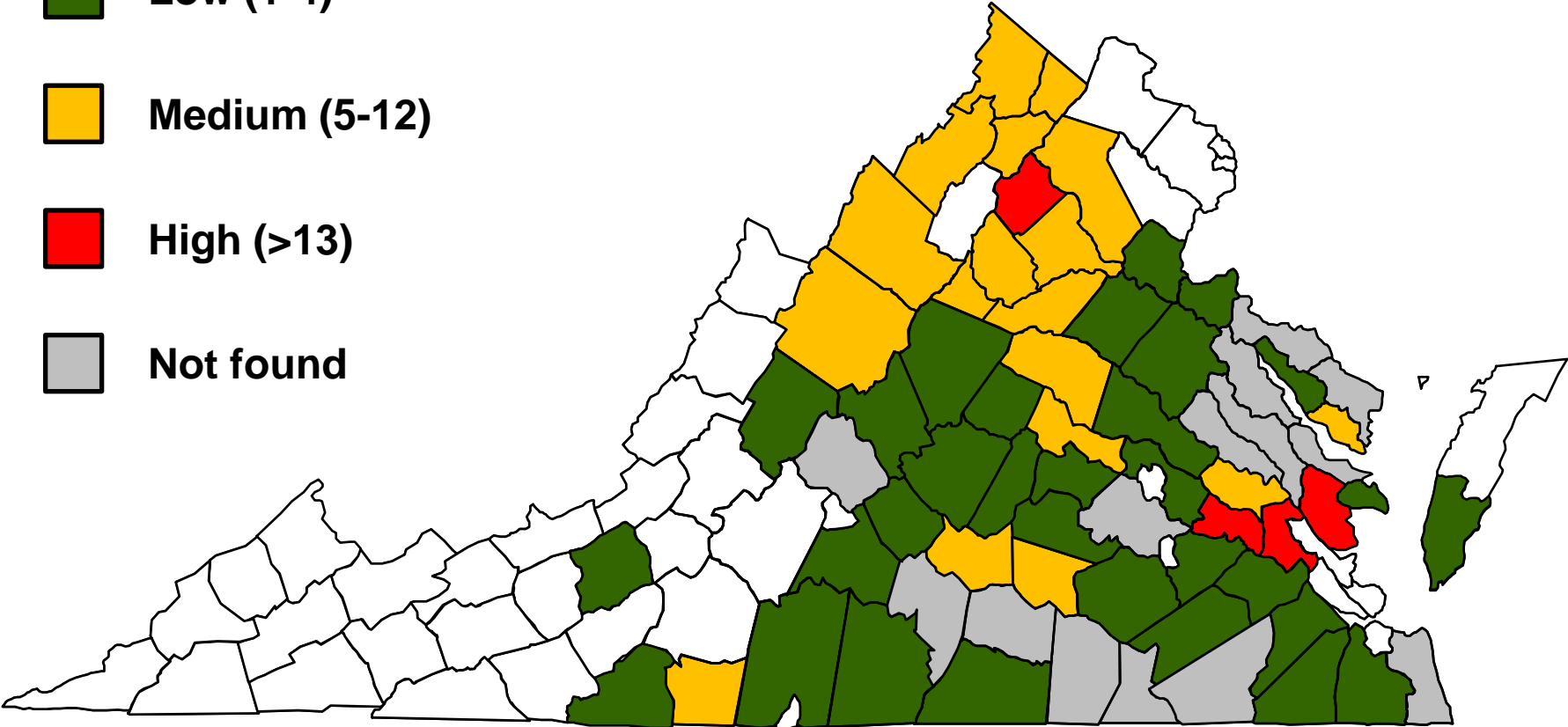
BMSB in Virginia soybean fields, 2013

-  Low (1-4)
-  Medium (5-12)
-  High (>13)
-  Not found



BMSB in Virginia soybean fields, 2014

-  Low (1-4)
-  Medium (5-12)
-  High (>13)
-  Not found



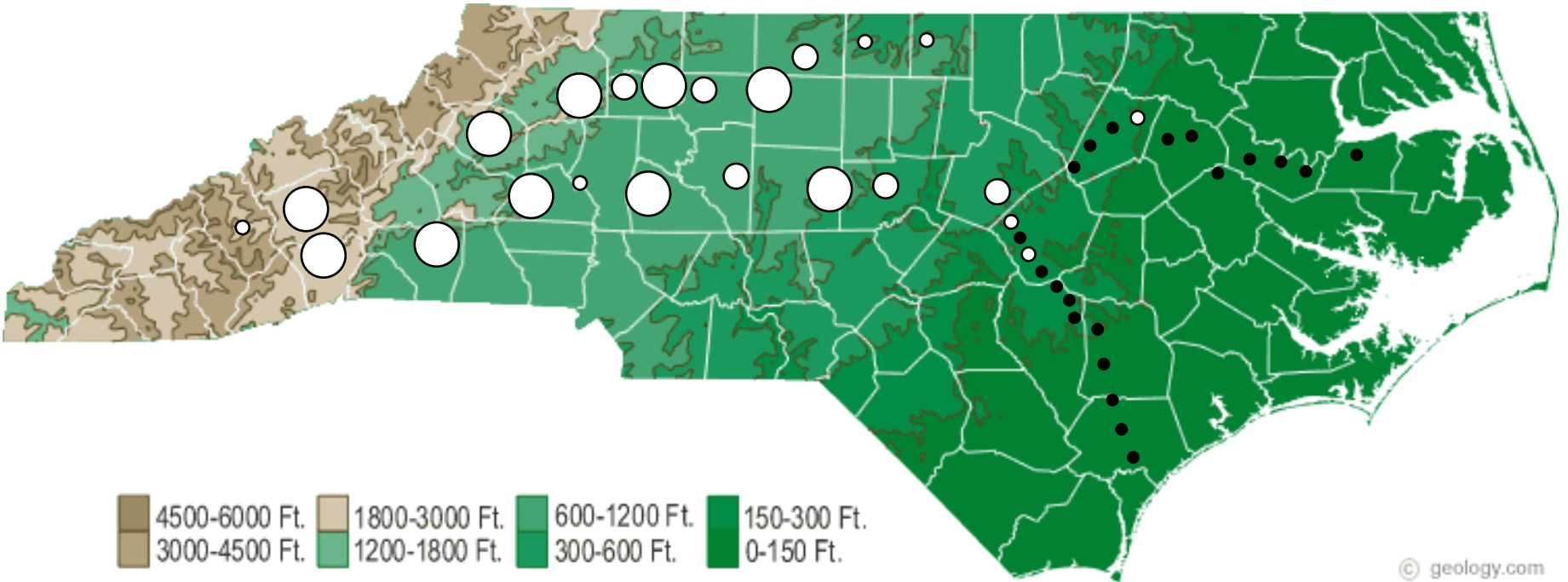
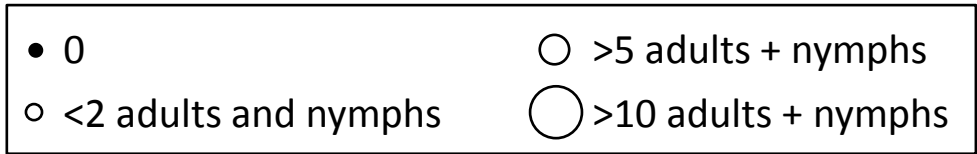
County Status



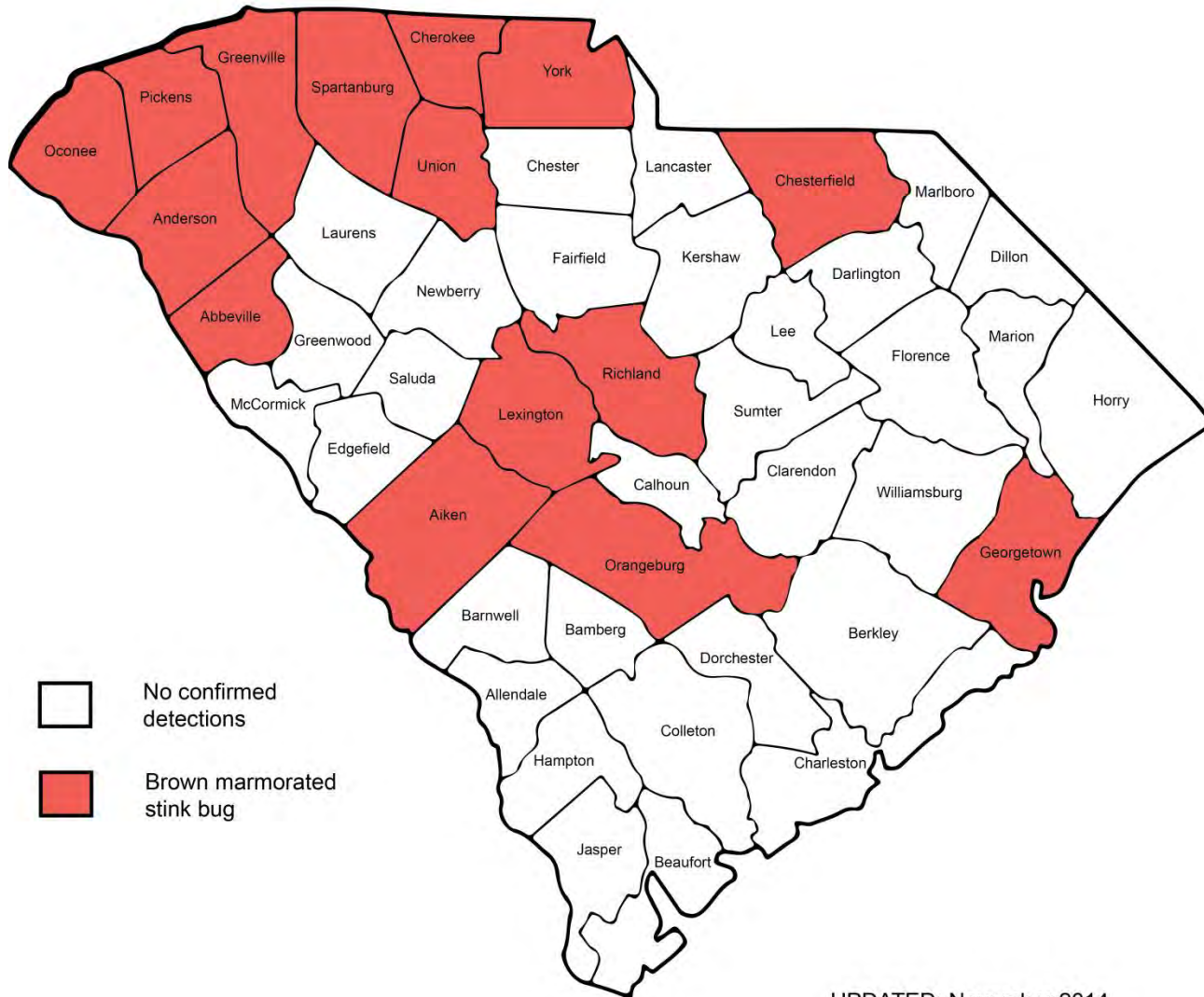
Updated October 2014

- Orange** BMSB recorded by scouting or confirmed reports (agents or general public)
- Yellow** BMSB recorded by unconfirmed reports (general public)
- Grey** BMSB absent during scouting, agent contacted and reports no sightings
- Blue** No reported BMSB, no scouting, but agent contacted and reports no sightings

Brown Marmorated Stink Bugs in NC Soybeans – September 2014

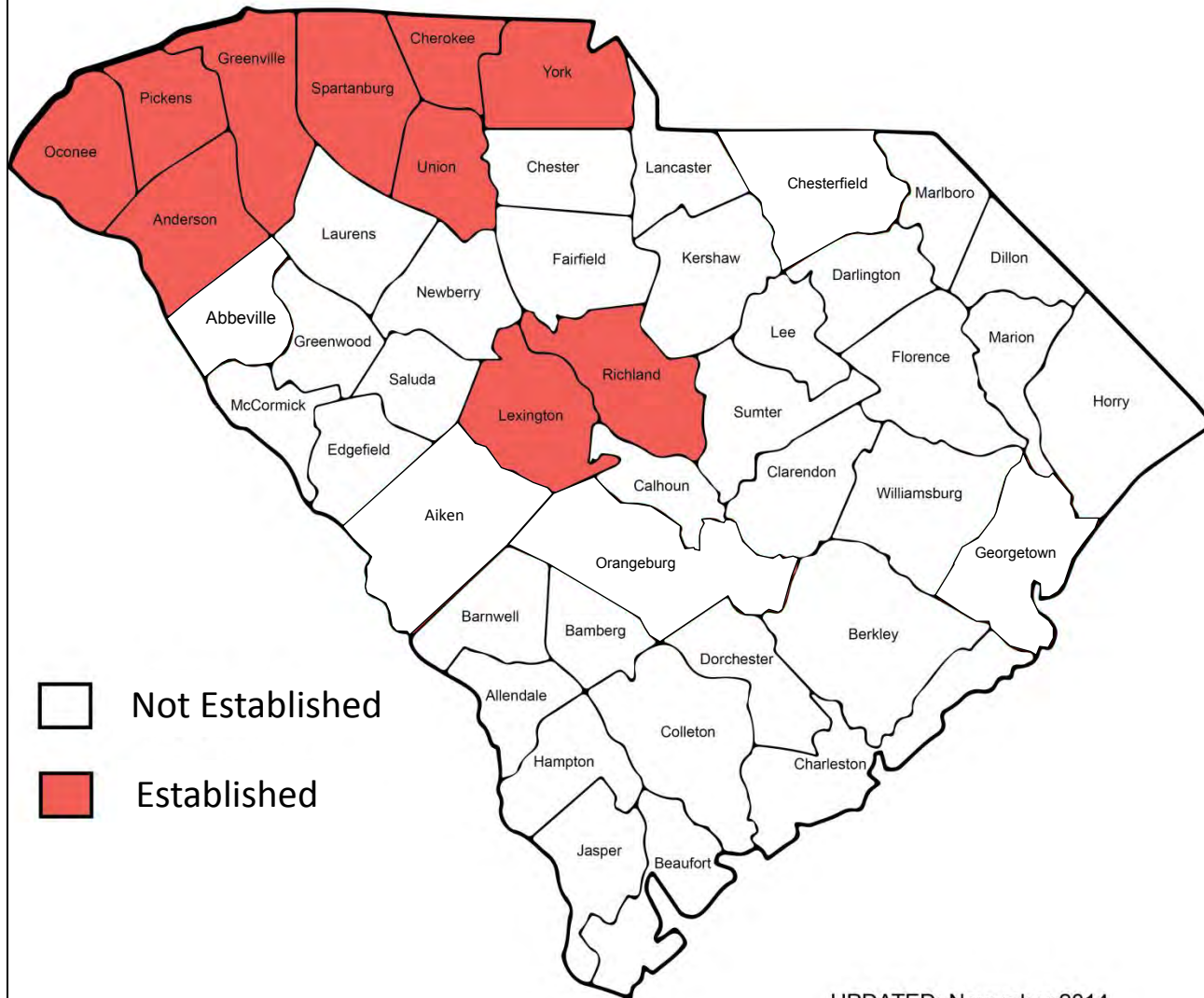


PEST DETECTIONS BY COUNTY



UPDATED: November 2014

PEST DETECTIONS BY COUNTY



UPDATED: November 2014

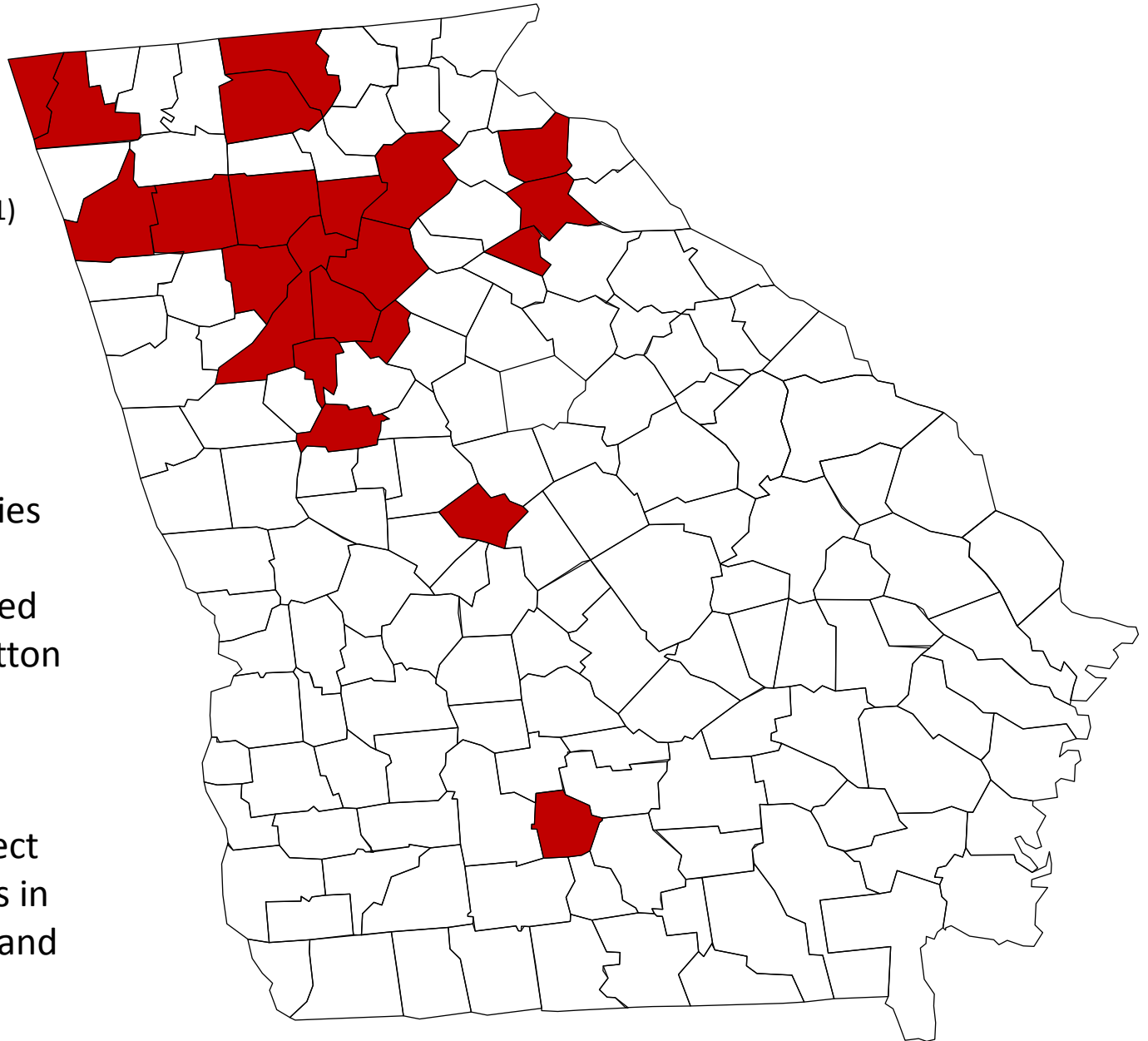
BMSB In Georgia

● Confirmed Counties (21)

2014: Reproducing
BMSB populations
were observed in
northern GA counties

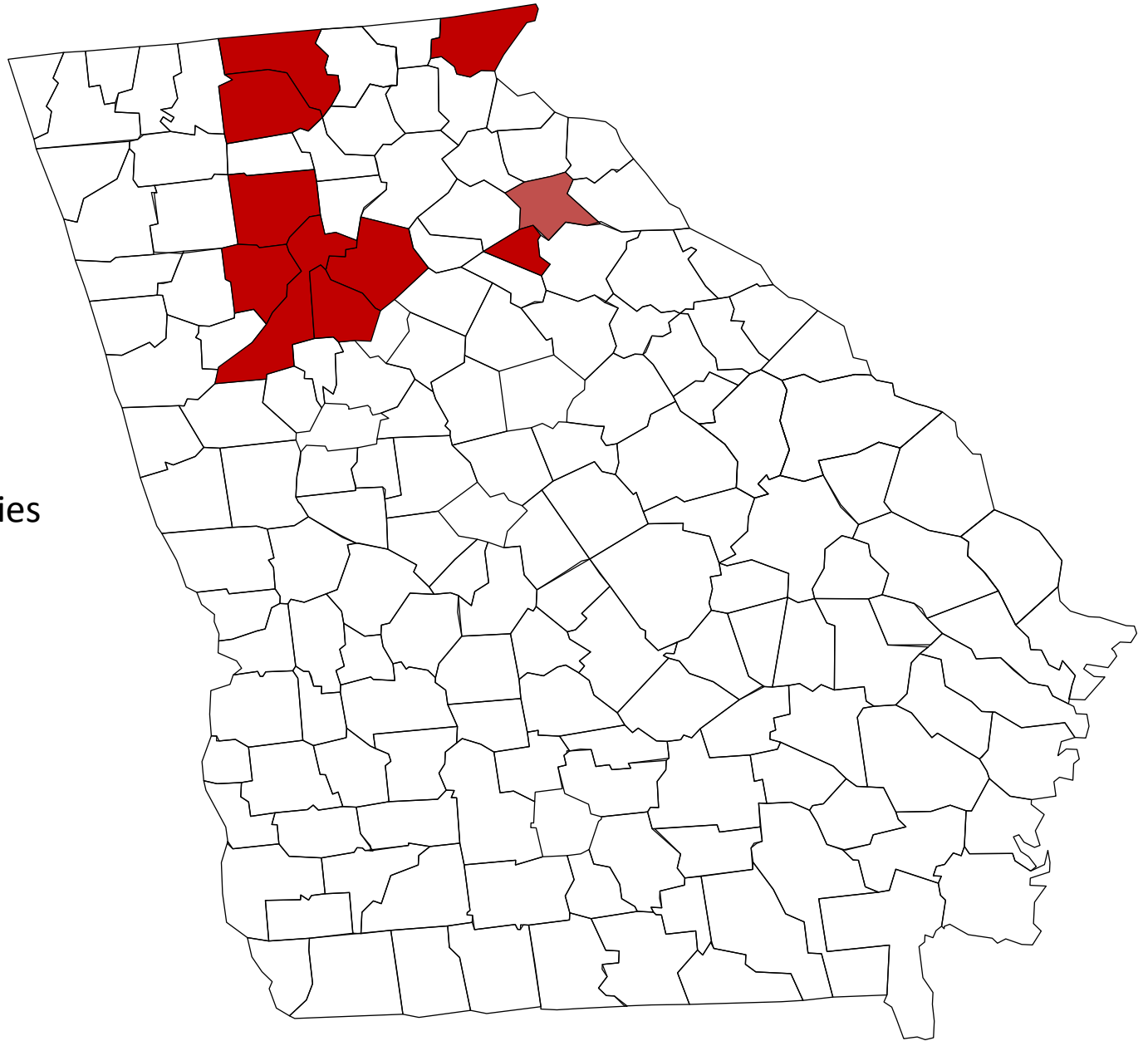
BMSB were observed
in GA piedmont cotton
in Sept.

University
entomologists expect
future observations in
all Blue Ridge Mtn and
Piedmont counties



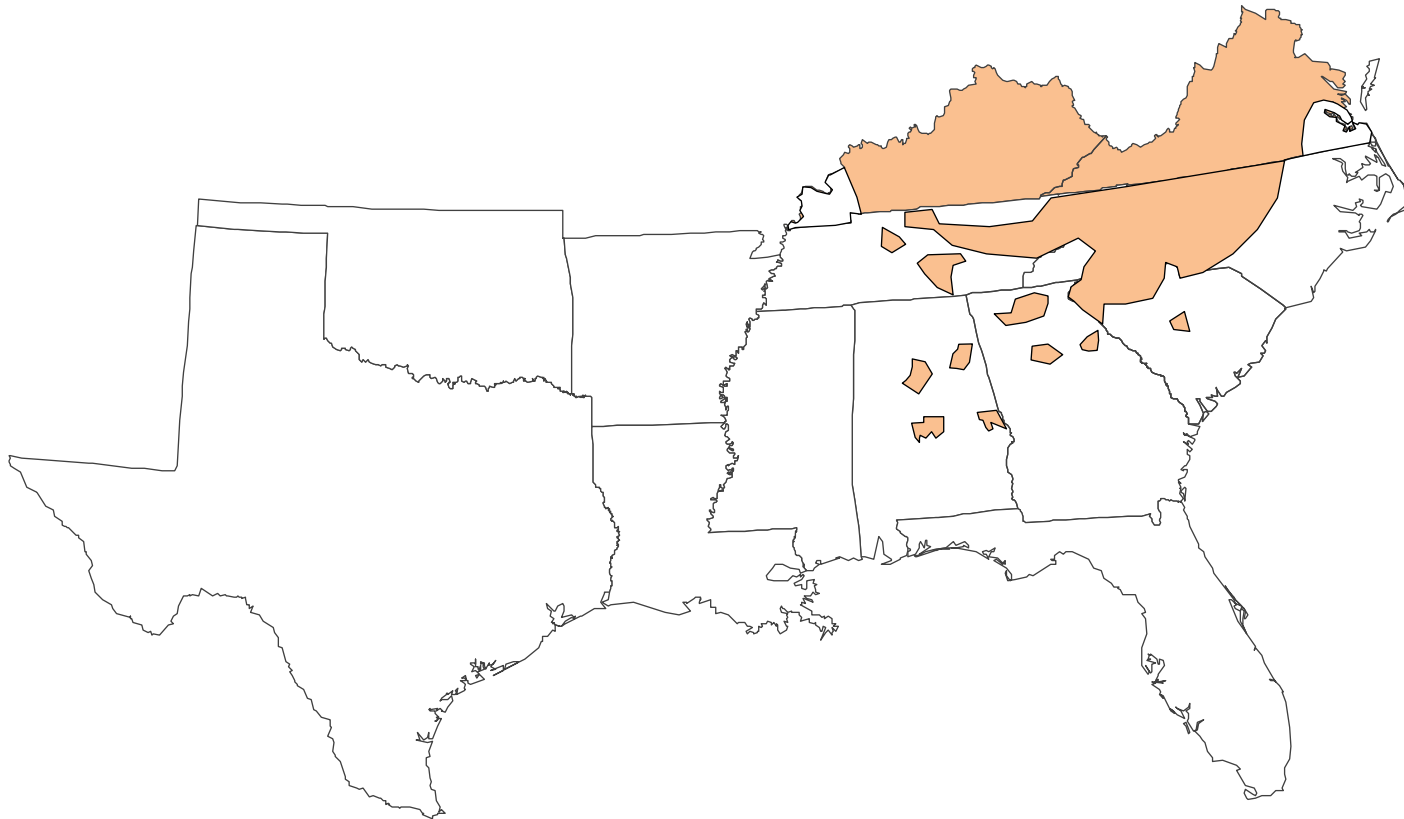
BMSB In Georgia

2014: Reproducing
BMSB populations
were observed in
northern GA counties

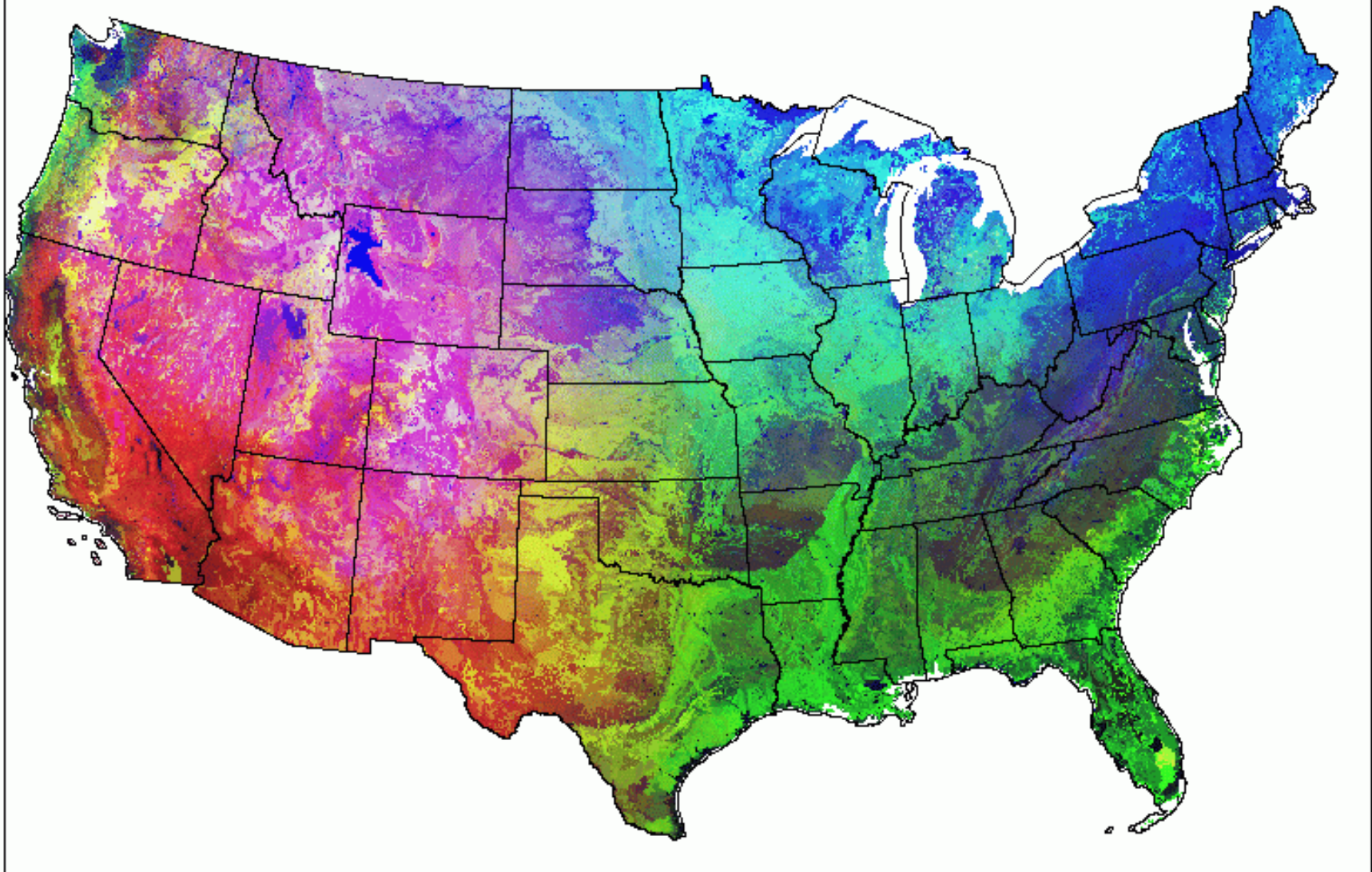


Distribution of BMSB in the Southern Region

- Established, reproducing populations
- Poorly or not established

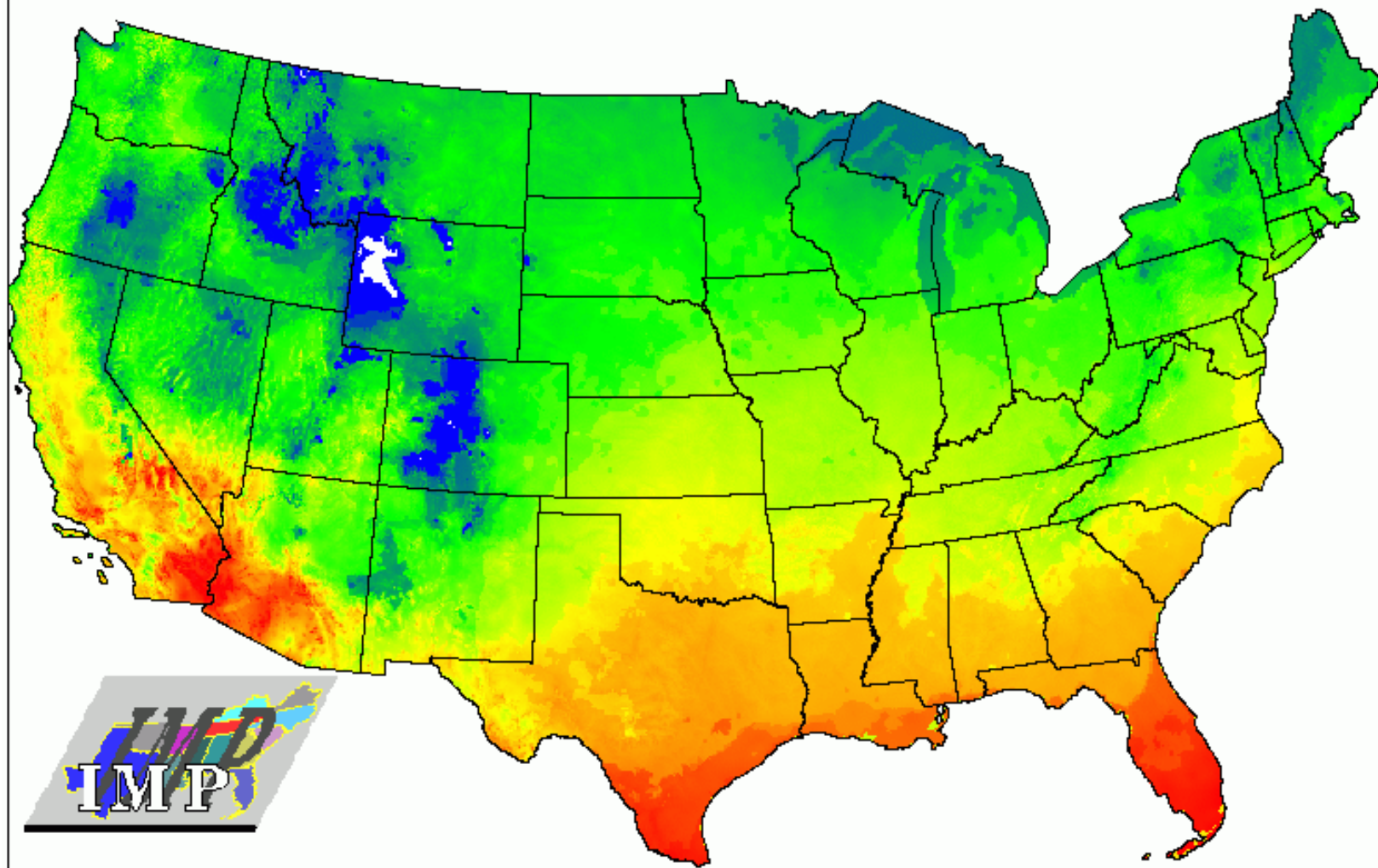


National Map Clustered on Elev, Soil and Climate into 3000 Areas



Hargrove, W.W., R.J. Luxmore. A new high-resolution national map of vegetation ecoregions produced empirically using multivariate spatial clustering. Oak Ridge National Laboratory. Oak Ridge, TN.
<http://www.geobabble.org/~hnw/esri98/>

Degree Days Heat Sum Above 5.55 C During Growing Season



BMSB Research Activities in the Southeast

- Kentucky (Ric Bessin)
 - Exclusion netting for organic control
 - Impact of biological control
 - Stink bug communities in soybean
- Tennessee (Jenny Moore)
 - Exclusion netting for organic control
 - Impact of biological control agents

BMSB Research Activities in the Southeast

- Virginia (C. Bergh, A. Herbert, T. Kuhar, D. Pfeiffer)
 - Management on tree fruit, vegetables, grapes and field crops
 - Seasonal movement patterns among habitats
 - Overwintering biology and ecology
 - Development on different hosts
 - Impact on soybeans, corn and cotton
 - Organic management on vegetables
 - Structural and household pest control approaches
 - Development of climate models for predicting spread

BMSB Research Activities in the Southeast

- North Carolina (J. Walgenbach, D. Reissig, G. Kennedy)
 - Management on fruits, vegetables and field crops
 - Impact of biologic control agents
 - Overwintering biology and ecology
 - Trap crops in organic systems
 - Factors affecting colonization of different regions
- Georgia (Mike Toews)
 - Impact on cotton

BMSB in NC Cotton – 2014

(D. Reissig)

