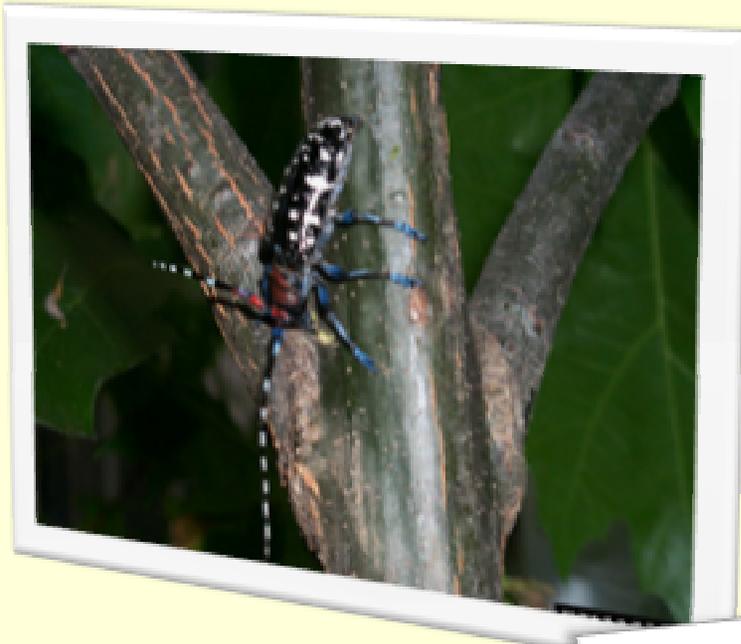




Forest Pests Knocking on the Door



Date: May 13,
2010

Name: Scott Griffin

Title: Forest Health
Specialist

Georgia Forestry
Commission

PO Box 819

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Outline

- Asian Longhorned Beetle
- Gypsy Moth
- Champion Tree Program



How Did They Get Here?



DCA3047028



CPA12141001



CPA12141001



Asian Longhorned Beetle (*Anoplophora glabripennis*)

General information

- Native to China, Japan, Korea & Isle of Hainan
- First found in 1996 - NYC
- Larger discovery in MA – 74 sq. miles removed 27,000 trees
- Quarantine on wood movement
- Hosts in SE – maples, locust, poplars, elm, willows, boxelder, birch, buckeye, fruit trees
- Industries affected: lumber, maple syrup, nursery, commercial fruit





Identification





Lifecycle



UGA4798041



Lifecycle



- one generation/year
- adults present from July thru fall
- Feed on young bark – few days
- can fly up to 400 yards
- lay 35-90 eggs





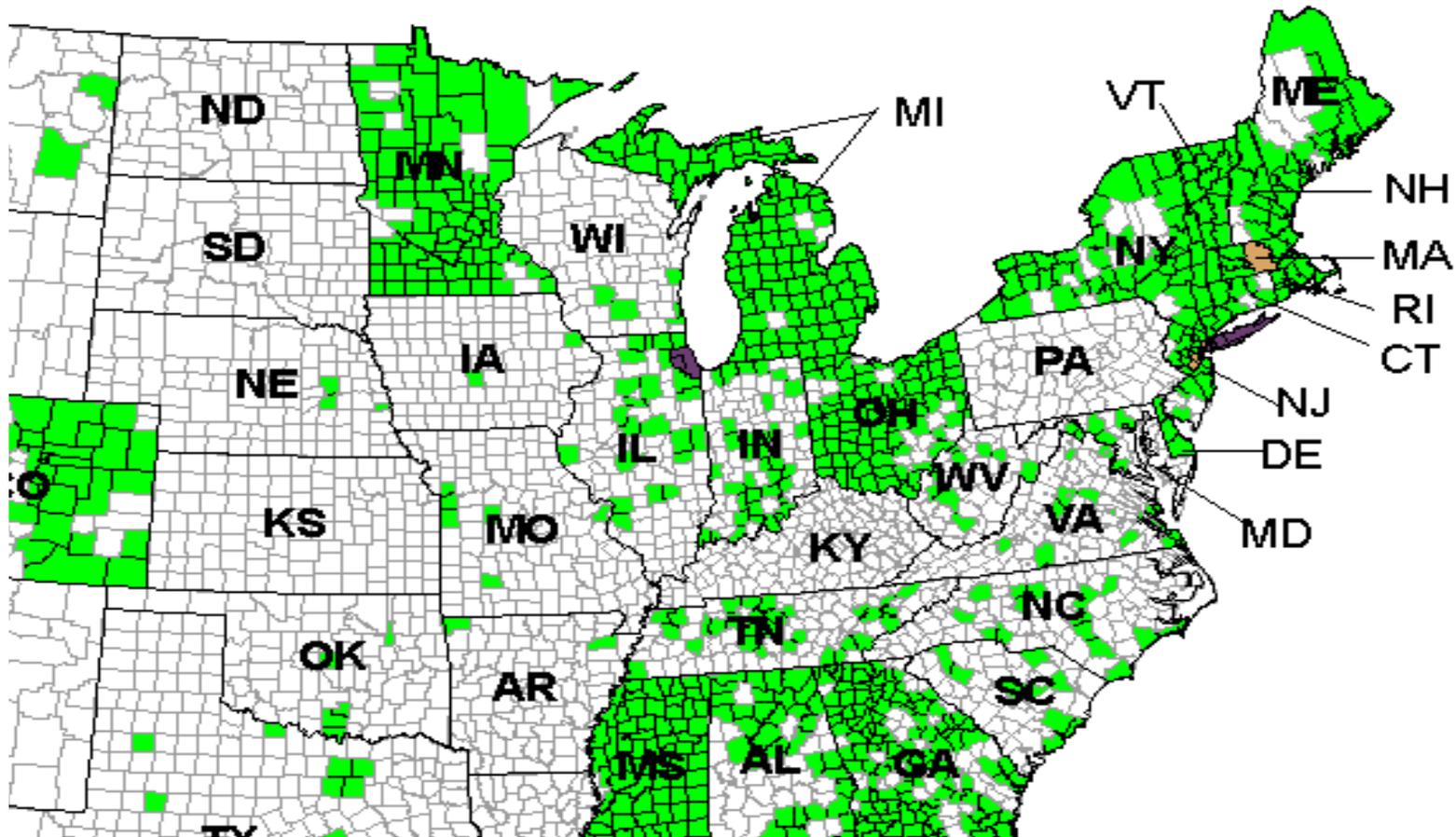
Lifecycle



- Larvae feed under bark for period
- Bore deep into wood to pupate
- Adult chews out



Distribution





Damage





Eradication

- Cut, chip & burn
- Preventative treatments using imidacloprid

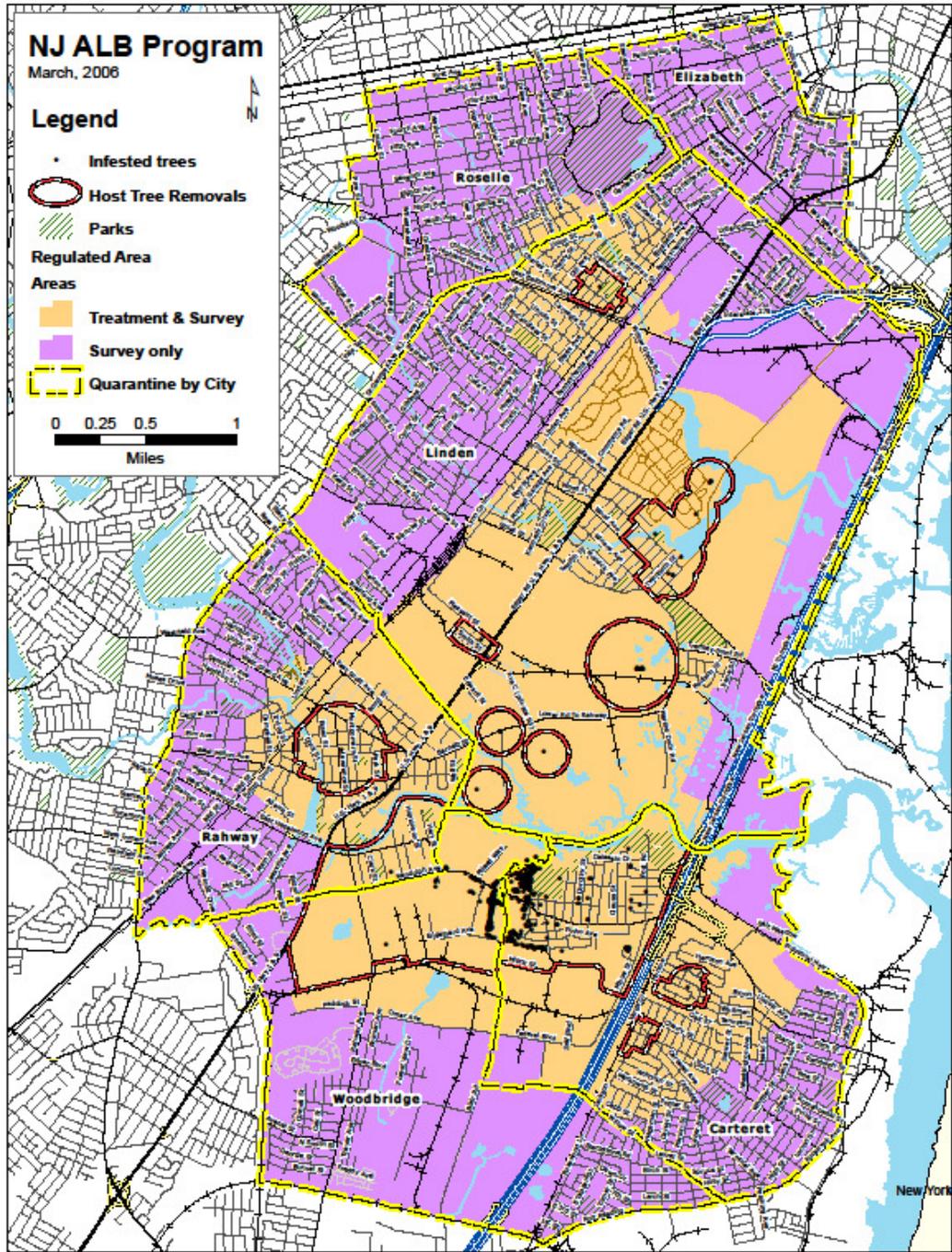
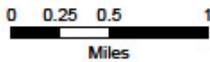


NJ ALB Program

March, 2006

Legend

- Infested trees
- Host Tree Removals
- ▨ Parks
- Regulated Area
- Areas
- Treatment & Survey
- Survey only
- ▭ Quarantine by City





Gypsy Moth (*Lymantria dispar*)

General information

- Native to Europe and Asia
- Introduced in the late 1800's
- Considered naturalized in NE US
- Favored hosts include oak, apple, alder, basswood, birch, sweet gum, willow, and hawthorn
- Will feed on many others





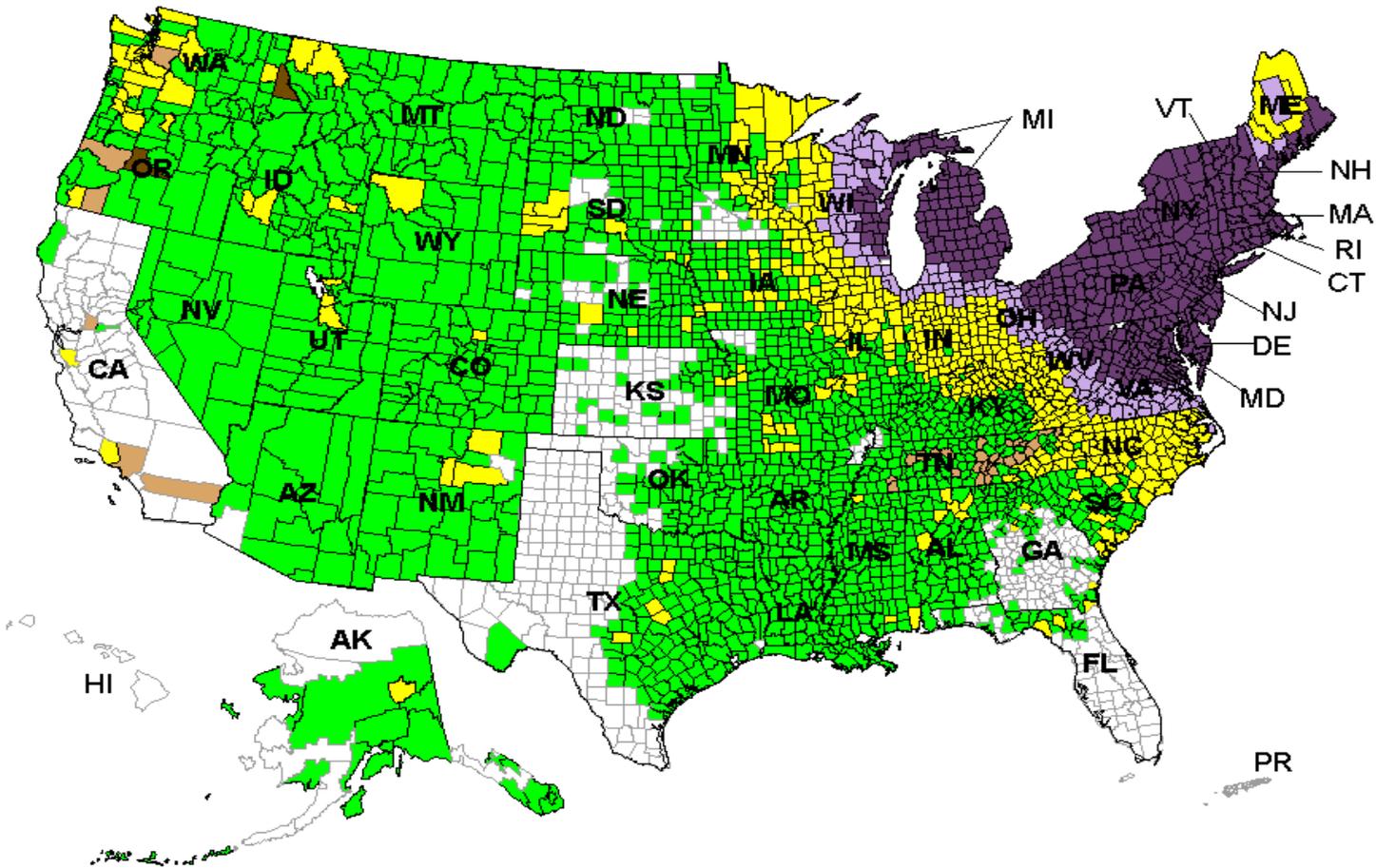
What season is this?



UGA2101096



Spread of the Gypsy Moth





History in Georgia



UGA2652037



Life Cycle of the Gypsy Moth

4 Different Life Stages

1. Larvae
2. Pupae
3. Moth
4. Egg



Larvae

- 5-6 instars
- 1st instars spread by wind (ballooning)
- 5 pairs blue dots & 6 pairs red dots
- Feed at night (except during epidemic populations)





Pupae

- Occurs 8 weeks after egg hatch
- Lasts 10-14 days





Moth

- Fly predominately during the month of June in GA
- Females can't fly
- Males have feathery antennae





Eggs

- Moth lays eggs during the summer
- Each female can lay up to 1000 eggs
- Dime to quarter size
- Covers with hairs from abdomen



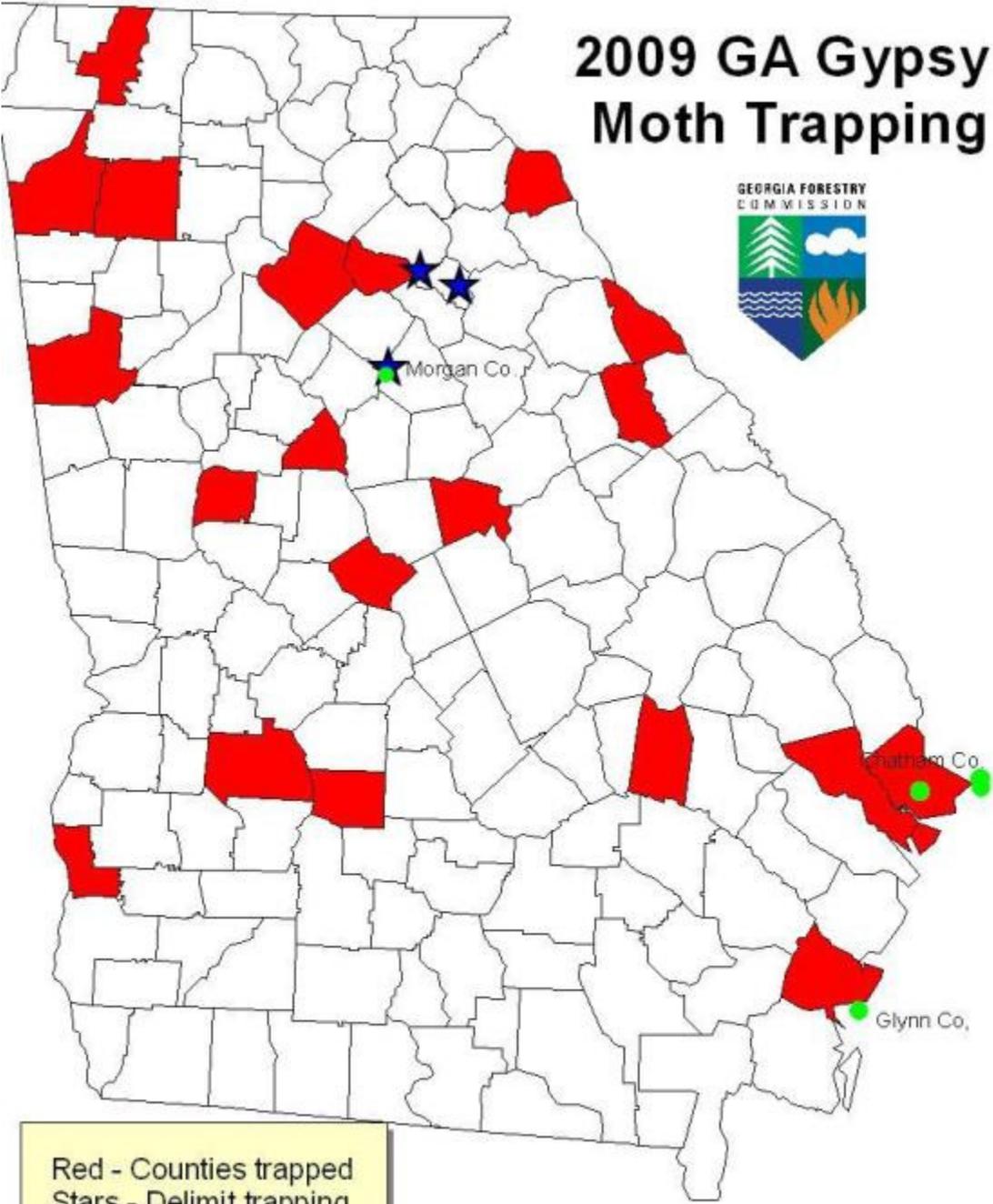


Monitoring

- Receive \$ from USDA-APHIS (Animal Plant Health Inspection Service) starting in 1986
- In 2010, GFC trappers will deploy 4500+ traps (statewide)
- Isolated traps deployed in other areas (Port Wentworth, Atlanta airport, Military bases, and other high risk locations)
- 11 moths caught in 2009



2009 GA Gypsy Moth Trapping



Red - Counties trapped
Stars - Delimit trapping
Dots - Positive catches

Thanks to USDA-APHIS for partial funding of this survey.



Control Options

- Natural – parasitic wasps & flies, birds, white footed mouse, fungus, virus
- Chemical treatments – B. t. k., Gypchek(virus), Disparlure(mating disruption), & Dimilin(insecticide)

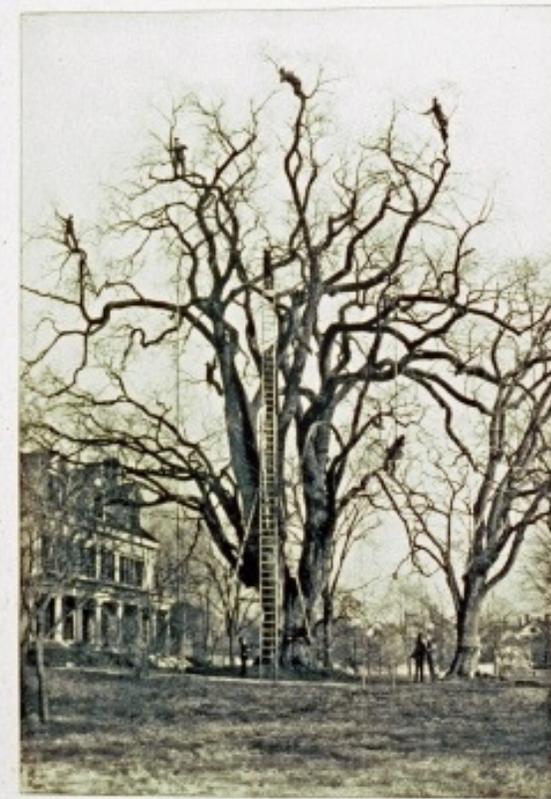


PLATE XXXVI. Men at work on the Dexter elm, Mahten. From a photograph.



GA's Champion Tree Program

- A champion tree is defined as the largest known tree of a particular species.
- The tree must have a woody, perennial stem, or trunk, at least 9.5 inches in circumference measured 4.5 feet from the ground, with a definitely formed crown of foliage, and be at least 13 feet in total height.
- The tree must not be considered an invasive tree species in Georgia. These species have the potential to displace our native trees and other vegetation.

www.gainvasives.org

- 340 + state champions

<http://www.gfc.state.ga.us/ForestManagement/ChampionTree.cfm>

- List is searchable by several criteria

- 29 National Champions <http://www.americanforests.org/resources/bigtrees>



GA's Champion Tree Program

- Largest specimens of each tree species – Trees are scored
- Useful tool to stimulate interest in trees
- Highest Scores – 536 (Live Oak) & 493 (Southern Red Oak)
- Largest circumference - 420 inches (Live Oak)
- Tallest Tree – 156 feet (Yellow Poplar)
- Widest average crown spread – 155 feet (Live Oak)



GA's Champion Tree Program





GA's Champion Tree Program - Scoring

Tree Score = Trunk Circumference Breast Height (inches) + Total Tree Height (feet) + $\frac{1}{4}$ Average Crown Spread (feet).

Tree Circumference Breast Height (CBH)

- 4.5 feet above ground





GA's Champion Tree Program - Scoring

Total Tree Height

- Difficult to measure
- Measure over center of stump
- Use clinometer, stick method, shadow method

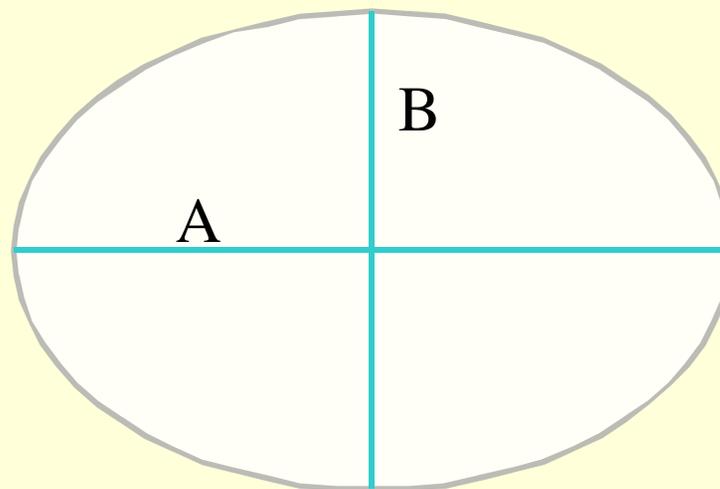




GA's Champion Tree Program - Scoring

Average crown spread is measured in feet.

Crown spread is estimated by taking two measurements at right angles to one another. The first crown spread measurement (A) is the widest crown spread, which is the greatest distance between any two points along the drip line of the tree. The drip line is the outline on the ground of the outermost leaves of the crown. Measure the second crown spread measurement (B) by turning the axis of the first measurement 90 degrees. The two measurements are averaged together (Figure 2) $\frac{A + B}{2}$



2



GA's Champion Tree Program





GA's Champion Tree Program





GA's Champion Tree Program





GA's Champion Tree Program





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