# Scale Control in Georgia Pecans

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**Types of Scales** 

- Soft scales:
  - Feed in conductive tissue
  - Produce lots of honeydew
  - Cover is part of the insect

- Hard (Armored) scales:
  - Feed cell by cell
  - No honeydew
  - Cover is separate



## Armored scale life cycle

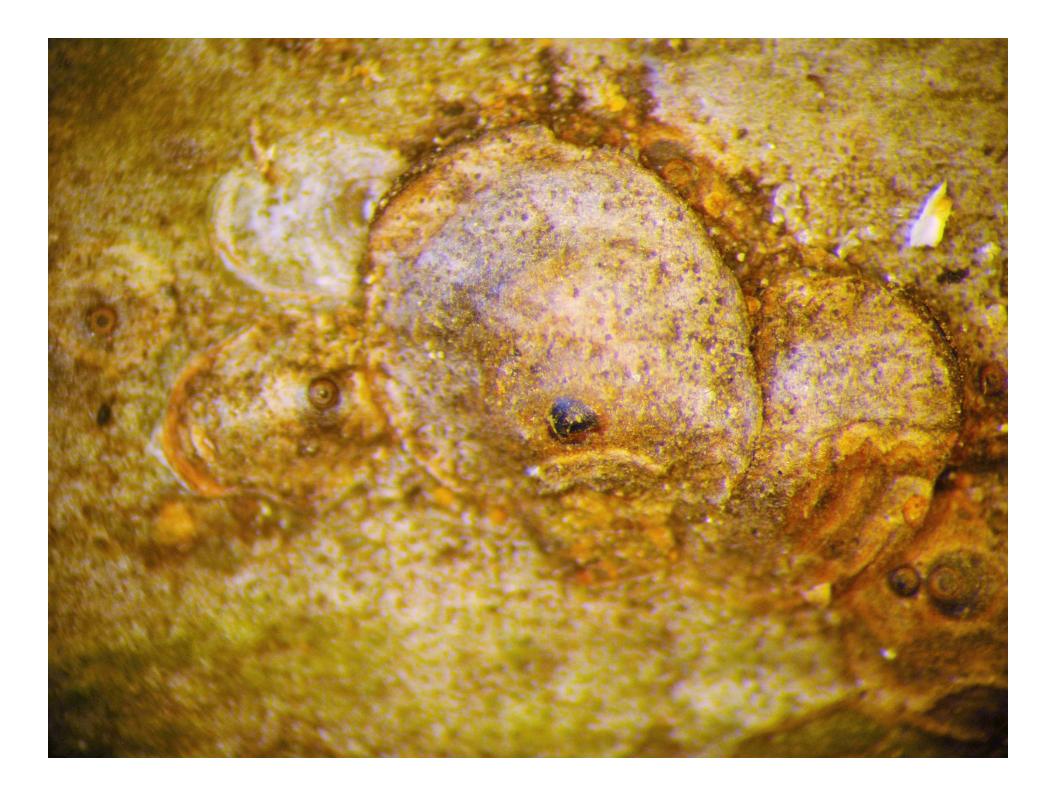
- Males develop wings

   (2), and emerge to seek
   a mate.
- Females never become "insect-like"
- Male covers are usually smaller, and often white.





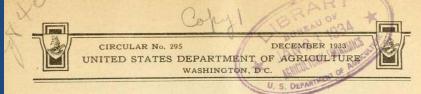




## **Obscure Scale**

### Life Cycle:

- Eggs produced from late May through August
- Nymphs feed and mature through the fall
- Feeding resumes in spring, with males maturing in May



#### THE OBSCURE SCALE ON THE PECAN AND ITS CONTROL

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#### INTRODUCTION

Because of the prevalence of the obscure scale in Louisiana pecan orchards, the increasing demands for recommendations for its control, and the wide variation in the control measures that have been recommended, a study of its biology and control was made from 1929 to 1932, inclusive, at the pecan insect laboratory of the United States Bureau of Entomology at Shreveport, La. The results of these investigations are reported briefly in this circular.

The obscure scale (Chrysomphalus obscurus Comst.)2 was first described in 1880 by Comstock (2, p. 303), when he found it attacking the willow oak (Quercus phellos) in the District of Columbia, and was first reported as a pest of the pecan by Herrick and Harned in 1909 (6), when they found it attacking the pecan in Mississippi. This scale is probably a native pest, as it has not been reported from any foreign country. It has now been reported from nearly all of the territory from Massachusetts south to and including Florida and west to include Illinois, Kansas, Oklahoma, and Texas (fig. 1). It is usually found on oaks and hickories but is occasionally found on other plants. The pecan is a favorite host plant, and this scale insect is a serious pest on both seedling and improved varieties in Texas, Louisiana, Arkansas, Mississippi, and Alabama. It formerly attracted only occasional notice, but, with the increasing importance of the pecan industry, it has lately come into more prominence.

In general, the measures recommended for its control have been those which have proved satisfactory for related scale insects, but in many instances they have been inadequate. Most writers (5, 7, 9) have quite generally agreed that lime-sulphur, at whatever

<sup>&</sup>lt;sup>1</sup> The author expresses his appreciation of helpful suggestions received from G. F. Moznette of the pecan insect laboratory of the U.S. Bureau of Entomology at Albany, Ga.

<sup>2</sup> Order Homoptera, family Coccidae, subfamily Diaspinae.

<sup>3</sup> Italic numbers in parentheses refer to Literature Cited, p. 19.

# Feb. 1, 2013

### **Immature Female Scale**



### **Immature Male Scale**



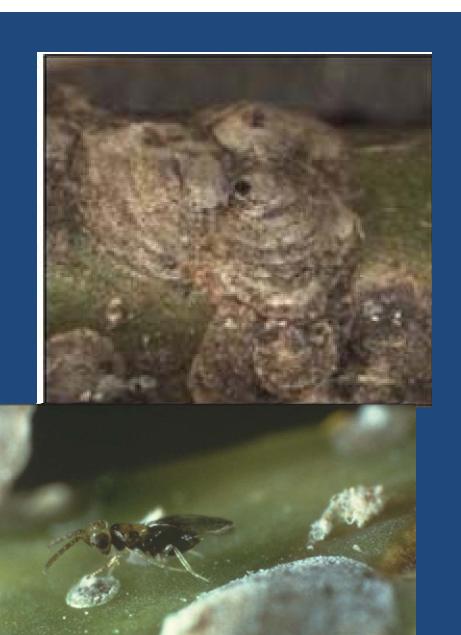


Obscure scale crawlers hatch in June-July.





UGA, Kris Braman Obscure Scale













## **Armored Scale Control in Pecans**

- Most nicotinyls have little effect on armored scale.
- Horticultural oils are effective but coverage is critical.
- Esteem/Knack is good as a growth regulator.
- Timing is everything.

