

PEST ALERT

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Florida Department of Agriculture and Consumer Services Division of Plant Industry

***Kuwanaspis bambusicola* (Cockerell) (Diaspididae: Hemiptera), a bamboo thread scale: a potential pest of Florida bamboo**

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INTRODUCTION

The first continental record of *Kuwanaspis bambusicola* (Cockerell), a bamboo thread scale, was collected on April 18, 2005, by Holly Glenn (retired UF staff), identified by Greg Hodges (FDACS-DPI) and confirmed by Douglass Miller (retired USDA Taxonomist) on *Bambusa* sp. from Miami-Dade County, Florida. There are at least five records after its first detection in Florida (E2005-2670, E2006-1657, E2010-1439, E2012-6470, E2012-6307) from four counties: Alachua, Collier, Hillsborough and Osceola. The most recent record was from a nursery in Pinellas County (E2020-1982). All of these records were recorded from *Bambusa* species. This is the first published report of its occurrence in North America (Florida, US).

DIAGNOSTICS

Field Lens View: The body of the female adult is about 1.5-2 mm long. The first nymphal shed skin is placed at the anterior end of the second one. The second nymphal shed skin is larger and lighter in color compared to the first one. Both the first and second nymphal shed skins show clear, transverse segmentations with a medial, longitudinal division giving the appearance of abdominal muscles. The upper half of the second nymphal shed skin is positioned at the anterior end of the wax cover of the adult female. The whitish-brown cover is elongate, slightly curved and broader posteriorly, depending on the population density (**Fig 1**).

Microscopic Slide View: The body of the adult female is elongate, about three times as long as wide at the abdomen, narrow anteriorly and slightly expanded caudally but more or less parallel-sided (**Fig 2**). Other compound microscope diagnostic characters are given in the **Fig 2** caption.

HOST PLANTS

Bamboo thread scale has been reported from at least three *Bambusa* species (*Bambusa bambos*, *B. blumeana*, *B. multiplex*), one *Dendrocalamus* species (*Dendrocalamus strictus*), one *Drepanostachyum* species (*Drepanostachyum falcatum*) and one *Phyllostachys* species (*Phyllostachys aurea*) all within a single host plant family Poaceae (García et al., 2016).

GEOGRAPHICAL DISTRIBUTION

Bamboo thread scale has been reported from eight countries on four continents including Africa (Algeria, Senegal), Asia (China, Indonesia, Nepal, Taiwan), Europe (Azores) and South America (Brazil).

ECONOMIC IMPORTANCE

Bamboo thread scale is likely an invasive species in Florida and could develop high populations causing economic damage without natural enemies present in the environment.

REFERENCES

García Morales, M., Denno, B. D., Miller, D. R., Miller, G. L., Ben-Dov, Y., Hardy, N. B. (2016). ScaleNet: a literature-based model of scale insect biology and systematics. Database 2016, 1-5.



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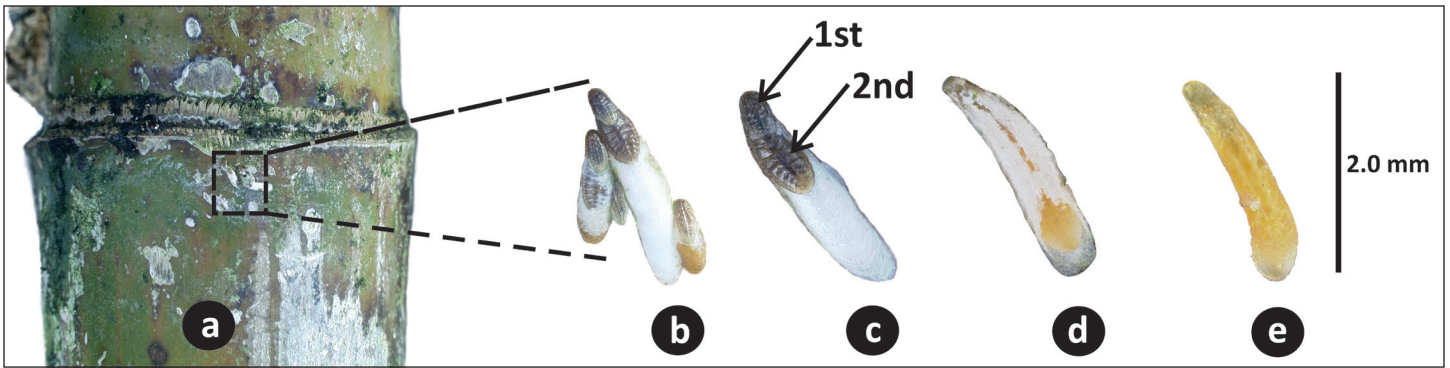


Figure 1. Infestation of *Kuwanaspis bambusicola* (Cockerell) on bamboo. (a) Naked eye view of scale population; (b) 30x enhanced view; (c) adult female body about 2 mm long with first nymphal skin at anterior end of second one, second nymphal skin is paler and larger than the first and basal half of second nymphal skin extends to an elongate and little curved whitish-brown secretion, dorsal view; (d) ventral view; (e) elongate yellowish-orange adult female body after removing scale cover. Photo by Lily Deeter and Muhammad Z. 'Zee' Ahmed, FDACS-DPI.

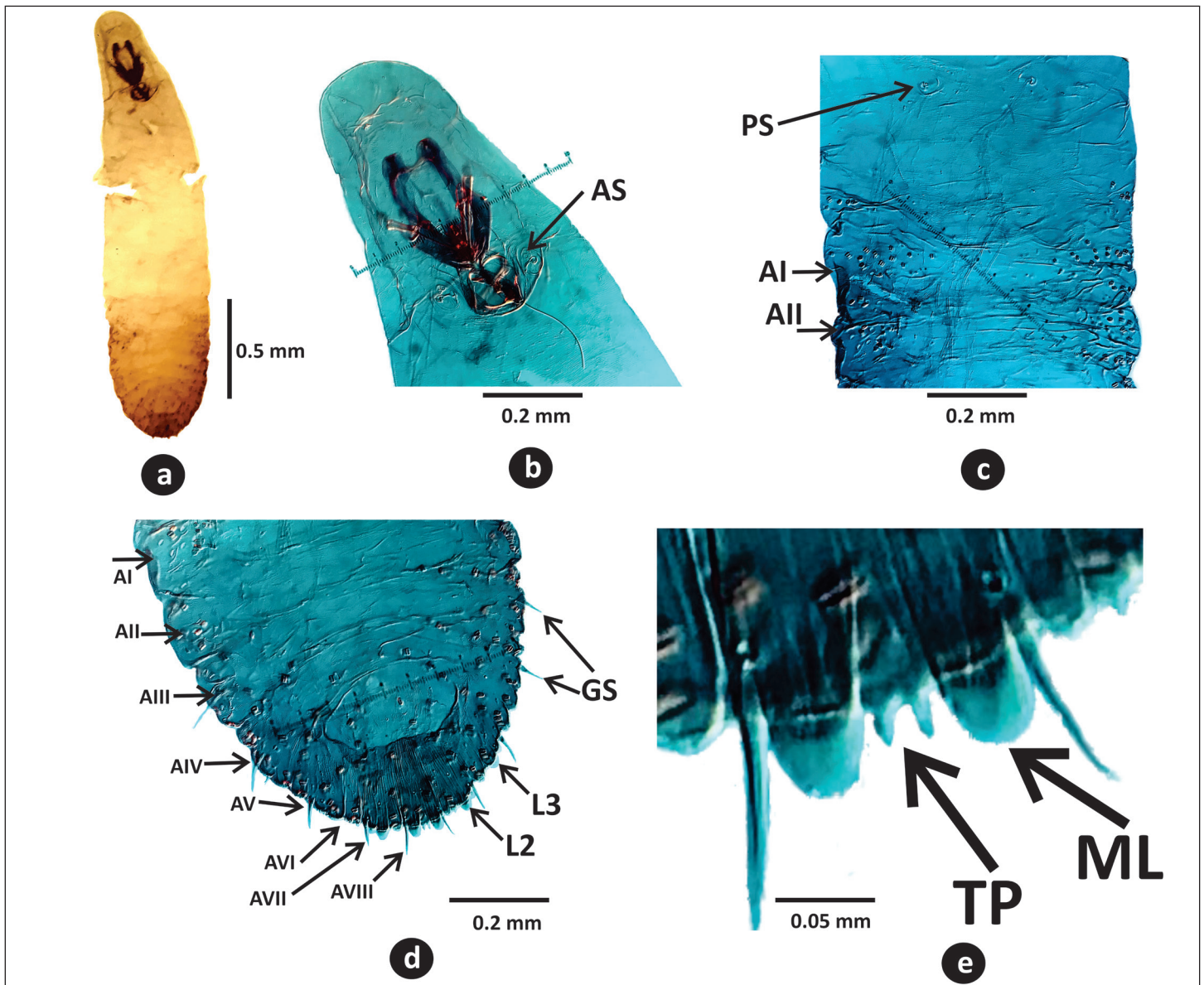


Figure 2. Slide-mounted characters of *Kuwanaspis bambusicola* (Cockerell). (a) Microscopic view (5x) of slide-mounted adult female; (b) narrowed anterior body towards head, 2-3 parastigmatic pores near anterior spiracles (AS); (c) broad thorax, no parastigmatic pores near posterior pores (PS), macroducts on marginal and submarginal abdominal segments (AI) and marginal macroducts on AII; (d) broad abdomen, marginal macroducts on all eight abdominal segments (AI-AVIII), five long marginal gland spines (GS), no perivulvar pores on pygidium, second lobe (L2) with two lobules, third lobe (L3) short and broad; (e) two short marginal toothed plates (TP) between median lobes (ML). Microscopic slide prepared by Gabi Ouwinga and photo by Muhammad Z. 'Zee' Ahmed, FDACS-DPI.