
***Aleuroglandulus subtilis* Bondar (Hemiptera: Aleyrodidae) in Florida¹**

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INTRODUCTION: Aroids (family Araceae), such as *Colocasia* spp., *Alocasia* spp., *Philodendron* spp. and *Caladium* spp., are popular indoor and patio plants in the United States, and in the subtropical climate of Florida they are also common elements in exterior landscapes. Of the >70 species of whiteflies (Aleyrodidae) in Florida, only a few have been collected from aroids. Of those, only *Crenidorsum* sp., *Bemisia tabaci* Gennadius ('sweetpotato whitefly') and *Aleuroglandulus subtilis* Bondar are common enough to be considered occasional pests. *Aleuroglandulus subtilis*, described originally from Brazil from *Chomelia oligantha* (Rubiaceae), has been in Florida since the 1920s, occurs in Cuba and Jamaica (Florida State Collection of Arthropods slide collection data), and is reported throughout most of the Caribbean (Bondar 1923; Evans 2008). It was recently reported from Hawaii from three collections (2006, 2010, 2011), all from aroids and present at moderate to severe levels (Nagamine and Garcia 2011). Martin (2005) revised the taxonomy of *Aleuroglandulus* in his treatment of whiteflies of Belize, and synonymized *A. malangae* Russell and *A. emmae* Russell with *A. subtilis*; previously, all slides in the Florida State Collection of Arthropods (FSCA) were identified as either *A. malangae* (the majority) or *A. emmae*.

A recent collection of *A. subtilis* from an infested aroid in Florida was heavily parasitized by *Amitus* sp. wasps (Platygastridae). Parasitism of *Aleuroglandulus subtilis* in Florida has not previously been noted, and the populations in Hawaii appeared to be free of parasitoids.

DESCRIPTION: This is a very distinctive species—no other Florida whitefly produces two pairs of wide diameter glassy-wax tubes projecting from the dorsum (Fig. 1). Three additional species were described by Russell (1944) based on variation in the architecture of the dorsal glands. The size and position of the anterior and posterior pair of dorsal wax pores varies significantly, up to complete absence of the second pair, but Martin (2005) concluded that this and other variable elements occur within a population and do not indicate taxonomic differences; all specimens examined from Florida show a well-marked posterior pair (Fig. 2). There is also a very distinctive 'tuft' of short, white filamentous wax projecting from the apex of the posterior margin. Less visible are the paired spiracular furrows at the level of the first pair of dorsal enlarged wax pores.

BIOLOGY: Although *A. subtilis* has not been frequently collected in recent years, it still occurs throughout Florida and can at least occasionally develop population sizes that are very large and easily noticed. Parasitoids such as the previously mentioned *Amitus* species, and perhaps other recorded parasitoids of this species (*Encarsia* spp., Aphelinidae) (Evans 2008), appear to suppress the populations to low and unnoticeable levels.

HOST PLANTS: Data from slides in the FSCA—Araceae: *Alocasia* sp., *Alocasia macrorrhizos* (L.) G. Don, *Caladium bicolor* (Aiton) Vent., *Colocasia esculenta* (L.) Schott, *Xanthosoma sagittifolium* (L.) Schott, *X. undipes* (K. Koch) K. Koch; Euphorbiaceae: *Euphorbia heterophylla* L., *Jatropha* sp.; Fabaceae: *Clitoria laurifolia* Poir; Lauraceae: *Persea borbonia* (L.) Spreng.; Orchidaceae: *Odontoglossum* sp.; Rhamnaceae: *Gouania lupuloides* (L.) Urb.; Rubiaceae: "Gardenia." Additional hosts listed by Evans (2008): *Ficus carica* L. (Moraceae), *Chamaedorea* sp. (Arecaceae), *Psidium guajava* L. (Myrtaceae).

DISTRIBUTION: Data from slides in the FSCA—Colombia, Cuba, Jamaica, Mexico, Puerto Rico. USA.
FLORIDA: Broward Co., Miami-Dade Co. Monroe Co., Putnam Co., Volusia Co. HAWAII: Hawaii Co. NORTH

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CAROLINA: Charlotte Co. Additional distribution data listed by Evans (2008) include a wider distribution throughout Central and South America, and the Caribbean.

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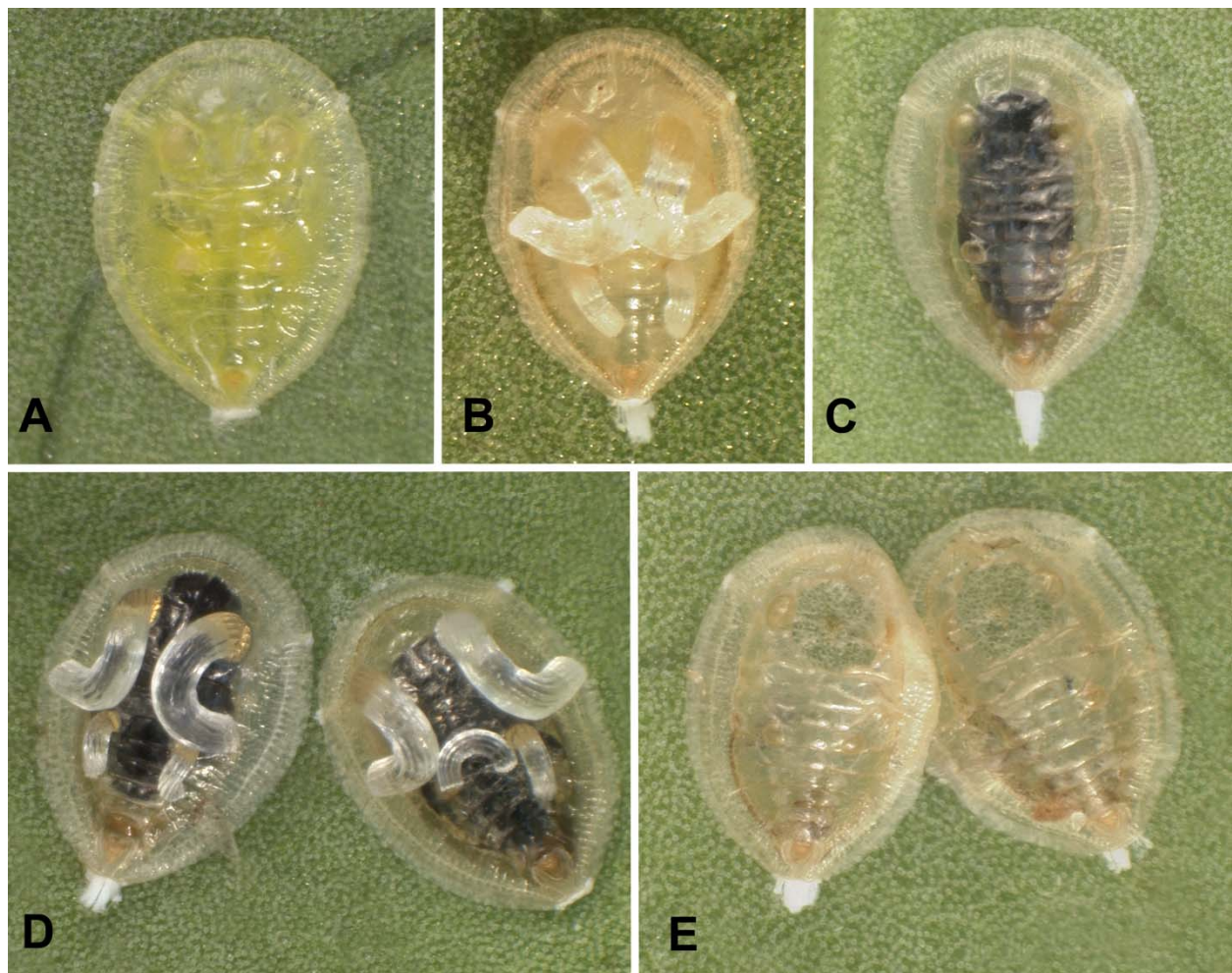


Fig. 1. *Aleuroglandulus subtilis*. A. Early pupa. B. Late pupa with two pairs of glassy-wax tubes. C. Parasitized pupa lacking glassy-wax tubes. D. Parasitized pupae with glassy-wax tubes. E. Empty parasitized puparia, showing wasp emergence holes. Photograph credit: Ian Stocks.



Fig. 2. *Aleuroglandulus subtilis*, slide-mounted female, showing important diagnostic characters. Photograph credit: Ian Stocks.