

First record of *Trachyderes succinctus succinctus* (Linnaeus, 1758) (Coleoptera: Cerambycidae) in *Khaya ivorensis* A. Chev. (Meliaceae) in Brazil

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The genus *Khaya* A. Juss. (Meliaceae) comprises six species of mahogany from Africa and Madagascar (The Plant List, 2013), and among them, *Khaya ivorensis* A. Chev. and *Khaya senegalensis* (Desv.) A. Juss. were introduced in Brazil to substitute the Brazilian mahogany *Swietenia macrophylla* King (Meliaceae) (Gaparotto et al., 2001). The African mahogany is a highly desired wood for the furniture and navy industry. The bark is used in dyeing and tanning leather, and in some African countries, for medicines purposes, as repel and to kill mosquitoes and to manage malaria (Taylor, 1960; Opuni-Frimpong et al., 2008; Zhang et al., 2009; Tepongning et al., 2013).

The longhorn beetle, *Trachyderes succinctus succinctus* (Linnaeus, 1758) (Coleoptera: Cerambycidae) is widely distributed in America, since Argentina through Mexico (Barreto et al., 2013; Monné and Chaboo, 2015). In Brazil, this beetle has been recorded throughout the country (15 Brazilian states), including forest and savanna landscapes (Silva et al., 1968; Maes et al., 2010; Barreto et al., 2013).

We report the first record of *T. succinctus succinctus* damaging *K. ivorensis* and the second report of a tree from the Meliaceae family in Brazil, which encompasses many timber tree species explored and grown in plantations in the tropics.

The study was realized in a *K. ivorensis* plantation in an experimental area (about 400 trees, 1 ha, spaced 5 × 5 m) of the Federal University of São Carlos in Araras, São Paulo, Brazil (22°31'15"S 47°38'38"W). The climate is Cwa in the Köppen classification, with a rainy and hot summer, and a dry winter. The vegetation type in the region is the Seasonal Semideciduous Forest, a closed-canopy forest in the Atlantic Forest with abundant deciduous and semi-deciduous trees and shrubs, which lose their leaves during the driest months (April to August) (Amazonas et al., 2017). Sugarcane, corn and soybean crops, eucalyptus

plantations, and forest restoration sites surround the *K. ivorensis* plantation, which was done in April 2013.

During a pruning at the experimental plantation in July 2018, we found *K. ivorensis* branches with damage (Figure 1A-C, indicated by white arrow) and larvae (Figure 1F, G). The branches were stored and the emerged specimens were identified as *T. succinctus succinctus* (1 ♂, 1 ♀ + 1 larvae) (Figure 1D-G), with the aid of entomological keys and comparison with other specimens from the Museu de Entomologia “Luiz de Queiroz” reference collection (ESALQ/USP). The specimens were registered in the Museum database (Silveira Neto et al., 2019) with the numbers MELQ 3903-1, MELQ 3903-2 and MELQ 3903-3.

The adults of *T. succinctus succinctus* bore into the wood of dead plants or already fallen trunks (Lima, 1955). The females lay their eggs into tree trunks (Sinavimo, 2019) and the larval eclosion occurs between six to eight days after oviposition (Penteado-Dias, 1987). The larvae feed inside of trunks and branches, opening holes (Figure 1A-C, indicated by white arrow) that prevent the normal translocation of sap in the plant (Sinavimo, 2019). Sometimes it is possible to find small excrement granules inside the holes, which are the larval feed waste (Figure 1C, indicated by black arrow). The life cycle (egg-larva-pupa-adult) is completed in six months (Penteado-Dias, 1987).

Considering that *T. succinctus succinctus* is a generalist species with high colonization capacities, it is likely that in periods of increased populations, these beetle may seek alternative hosts such as *K. ivorensis*. With this work, we expanded the lists of the beetle *T. succinctus succinctus* hosts as well as of the *K. ivorensis* pests. We advocate this pest now requires its integration into African mahogany pest monitoring programs, as well as further investigations and attention on pests that can attack this and other African mahogany species recently introduced in Brazil.



Figure 1. Damage, adults and larvae of *Trachyderes succinctus succinctus* (Linnaeus, 1758). (A, B) holes in trunks and branches of *Khaya ivorensis* A. Chev. made by larvae, indicated by white arrow; (C) hole with larval feed waste, indicated by black arrow; (D) Habitus of male, dorsal view; (E) Habitus of female, dorsal view. Scale bar = 1 cm; (F) Larvae, dorsal view; (G) Larvae, lateral view. Scale bar = 1 cm.

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