

First Record of *Xylosandrus Compactus* (Eichhoff) 1875 (Curculionidae: Scolytinae) in Guatemala

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ABSTRACT: The presence of the black borer *Xylosandrus compactus* is recorded in the Department of Petén, Guatemala associated with mahogany (*Swietenia macrophylla*).

Published Online:
August 17, 2024

KEYWORDS: *Xylosandrus Compactus*, Curculionidae, Scolytinae

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INTRODUCTION

This species is of Asian origin and currently has a wide global distribution. It was introduced to the American Continent in Florida, United States in 1941 (Wood, 1982), subsequently it has been recorded in Mexico, Brazil, Ecuador, Peru, Suriname and Trinidad and Tobago, although there is no information from other regions of the continent, it may be present in other countries in Central and South America and its presence is still very discreet. With the recent detection of *Xylosandrus compactus* in Mexico (Equihua *et al.* 2023), the potential presence of the species in other countries in Central America was considered.

A large number of shrub and tree species, both of agricultural and forestry interest, have been documented as hosts of this ambrosial insect. *Coffea canephora* (Brazil and Mexico, Oliveira *et al.* 2008; Equihua *et al.*, 2023), *Theobroma cacao* (Peru; Delgado & Couturier, 2017), *Mangifera indica* (Brazil, Oliveira *et al.* 2008) stand out for their importance in the American Continent.) and *Swietenia macrophylla* (Perú, Delgado & Couturier, 2010).

METHODS

Currently, monitoring is carried out with Ecoiapar traps (Barrera, 2003) baited with ethanol in natural areas and avocado plantations in the Petén region of Guatemala; additionally, samples are received from producers in the region. A sample was received from the Chachaklum Association of agricultural and forestry producers of the region of San Francisco, Petén, Guatemala with the coordinates 16°48'36.645"N, 89°56'18.211"W (Fig. 1), in addition, a visit to verify damage in mahogany (*Swietenia macrophylla*) nurseries, photographs and insect samples were taken for later identification. The species was identified using the keys of Wood (1982). The material is deposited in the collection of the Department of Zacapa (CUNZAC-CZI).

RESULTS

The sample received was identified as *Xylosandrus compactus* Eichhoff, 1875 (Curculionidae: Scolytinae) and represents the first record for Guatemala.

It was found in Mahogany (*Swietenia macrophylla*) nurseries causing damage (Figs. 2 and 3).

Although it is a first detection in this region of Guatemala, the exploration of mahogany nurseries and other species of fruit or forestry interest is recommended, as well as measuring the damage in nurseries infested with this species.

FINAL CONSIDERATIONS

This ambrosia species has a very wide range of hosts documented around the world, particularly its possible association with *Coffea canephora*, which has already been reported in Mexico associated with this species. The behavior of its aggressiveness may vary in each region, so other species of agricultural or forestry interest in the area where it was detected should be monitored. Although it is recorded in mahogany nurseries, it is a priority to know its distribution and damage levels. It is recommended to generate a management proposal that includes the most important advances for monitoring and control methods. In Mexico, monitoring with

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Ecoiapar traps baited with 96% ethanol has been recommended among the most used management measures has been the destruction of infested plants in nurseries to reduce levels of infection population.

Although the use of entomopathogens has been tested as a complementary control measure in several countries, it is necessary to know the behavior of the species locally to define the best application times of control measures. In this particular case, it is recommended to test with native strains of entomopathogens that are detected in the field for better efficiency.

Considering that once a species is detected in a new region, it generally has aggressive behavior, it must also be taken into account that other native species can respond to the stress condition of the plants, so an identification of the species accuracy is essential to avoid errors of interpretation.

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Figure Legends

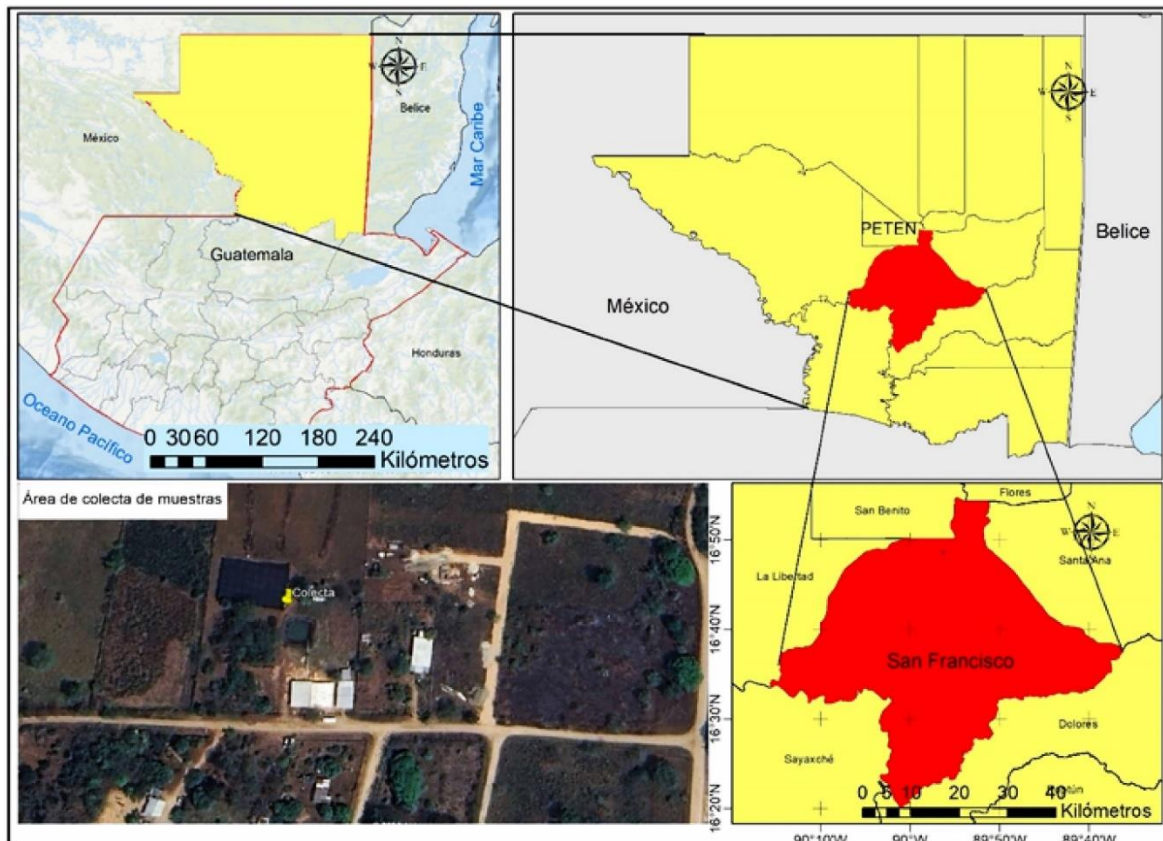


Fig. 1. Location of mahogany (*Swietenia macrophylla*) nurseries detected with damage by the black borer *Xylosandrus compactus* in San Francisco, Petén, Guatemala. 2023.



Fig. 2. *Xylosandrus compactus* damage in mahogany (*Swietenia macrophylla*) nurseries in San Francisco, Petén, Guatemala. 2023.



Fig. 3. *Xylosandrus compactus* damage and development stages in mahogany (*Swietenia macrophylla*) nurseries in San Francisco, Petén, Guatemala. 2023.