



## **Phloeotribus pruni (Coleoptera: Scolytidae) Associated with Peach (*Prunus persica*) Collapse in Coatepec de Harinas, State of Mexico, Mexico**

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# *Phloeotribus pruni* (Coleoptera: Scolytidae) associated with peach (*Prunus persica*) collapse in Coatepec de Harinas, State of Mexico, Mexico

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Ten-year-old peach trees cv. Robin, showing leaf yellowing, defoliation, internal and ascending branch necrosis, tree decline and tree death (Fig. 1A) were found in Apr 2015 in a 2 ha commercial orchard located at 18.9438°N and 99.8152°W in Coatepec de Harinas, State of México. Many holes with gum exudate, typical of trunk insect borers were observed on the trunk near the tree crown. Trees died 12 to 18 months after the onset of symptoms.

The bark was removed to reveal insect populations in each tree and 3 samples were taken per tree. One hundred percent incidence of symptomatic trees was found in 10 trees that were selected randomly from the edge and center of the orchard. Mean incidence was 3.3 adults and 4 larvae per 25 cm<sup>2</sup> of bark in the 10 sampled trees. Insects were collected in 70% alcohol and adults were identified morphologically using the taxonomic keys of Wood (1982) and Equihua and Burgos (2002).

All collected insects were identified morphologically as *Phloeotribus pruni* Wood (Coleoptera: Scolytidae) (Fig. 1B, C, D). In addition, a partial sequence of the mitochondrial cytochrome oxidase subunit I (COI) of 1 individual was amplified using the methods proposed by Folmer et al. (1994). A BLAST search was performed obtaining an 84% similarity with other sequences of *Phloeotribus* species deposited in the NCBI GenBank. The sequence we deposited (KU179443) represents the first for *P. pruni*. Reference specimens are kept in the Fruit Diseases Laboratory at the Colegio de Postgraduados, in Texcoco, Mexico.

Although *P. pruni* is considered a pest specific to *Prunus serotina* Ehrh., it also has been reported in *P. persica* L. Batsch, *P. armeniaca* Blanco, and *P. domestica* (Borkh.) (all Rosales: Rosaceae) as well as in *Pinus* sp. (Pinales) and *Quercus* sp. (Fagales) forests. The principal damage takes the form of galleries in branches and trunks of healthy, weak, or cut trees. *Phloeotribus pruni* is an important pest of *P. persica* and *P. virginiana* Du Roi (Rosales: Rosaceae), especially in poorly managed orchards (Atkinson et al. 1986a). Currently, this pest is distributed in the States of Morelos (*P. persica*, *P. serotina*, and *Pyrus communis* Koch [Rosales: Rosaceae]), Puebla (*P. persica*), Veracruz (*P. serotina*), and Guerrero (*P. serotina*). In the state of Mexico, it has been reported

in the municipalities of Texcoco (19.4908°N, 99.8091°W), Amecameca (*P. serotina*), Tlalmanalco (19.2088°N, 98.7577°W), (*Prunus* sp. and *P. serotina*), Cuijingo, Atlautla (*P. persica*), and Villa del Carbón (*P. serotina*) (Atkinson & Equihua-Martínez 1985a, b; Atkinson et al. 1986a, b).

This is the first report of *Phloeotribus pruni* in a peach orchard in Coatepec de Harinas, México. The 100% incidence of attacked trees, and the tree death after 12 to 18 months of the first detection of symptoms and the insect, point out the importance of this pest and the need to design an integrated pest management program to diminish the harvest losses, and to extend the longevity of peaches as an important income source for growers in this area.

## Summary

*Phloeotribus pruni* Wood (Coleoptera: Scolytidae) is reported for the first time associated with the collapse of peach (*Prunus persica*) trees in Coatepec de Harinas, State of Mexico, Mexico. One hundred percent incidence of collapsed trees was found in a 2 ha peach orchard. In 10 trees sampled, a mean number of 3.3 adults and 4 larvae per 25 cm<sup>2</sup> of bark were found. Trees died 12 to 18 months after the onset of symptoms. The 100% incidence of attacked trees, and the tree death 12 to 18 months after the first detection of the insect, point out the importance of this pest.

Key Words: peach collapse; ascending branch necrosis; tree decline; tree death

## Sumario

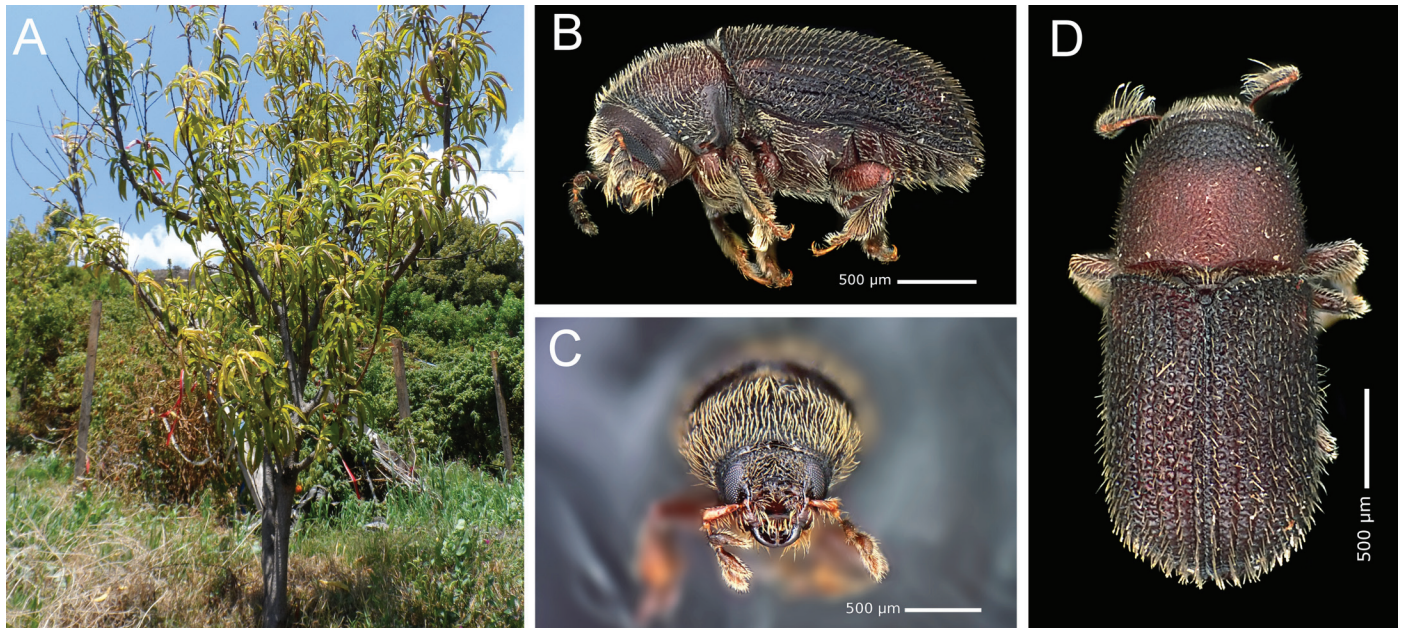
Se informa por primera vez la asociación de *Phloeotribus pruni* Wood (Coleoptera: Scolytidae) con el colapso de los árboles de durazno (*Prunus persica*: Rosaceae) en Coatepec de Harinas, Estado de México, México. Se encontró una incidencia del cien por ciento de árboles colapsados en un huerto de 2 hectáreas de melocotones. En 10 árboles muestreados, se encontró un promedio de 3.3 adultos y 4 larvas por

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**Fig. 1.** Peach (*Prunus persica*) collapse associated with the attack of *Phloeotribus pruni*. (A) Initial peach collapse symptom. (B) Adult lateral view. (C) Head front view and antennae detail. (D) *Phloeotribus pruni* adult dorsal view.

cada 25 cm<sup>2</sup> de corteza. Los árboles murieron 12-18 meses después de la aparición de los síntomas. El 100% de incidencia de árboles atacados y la muerte del árbol 12 para 18 meses después de la primera detección del insecto señalan la importancia de esta plaga.

Palabras Clave: colapso del melocotón; necrosis de rama ascendente; disminución del árbol; muerte del árbol

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