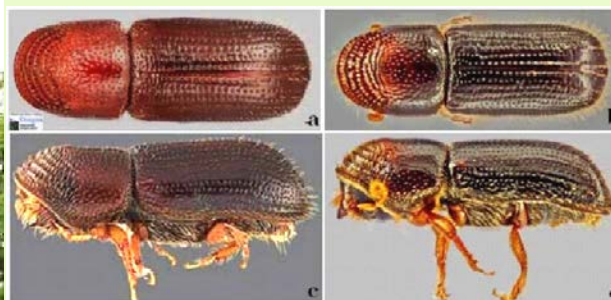


THOUSAND CANKERS DISEASE and WALNUT TWIG BEETLE *Identification Guide*



Walnut twig beetle attacks only species of *Juglans*; the fungus, *Geosmithia morbida*, is transported by walnut twig beetle

Field diagnosis: Flagging/yellowing foliage, leaf wilt, canopy thinning, branch dieback, epicormic shoots



Adult walnut twig beetle: a) female - dorsal view, b) male - dorsal view, c) female - lateral view, and d) male - lateral view (Photos: S. Valley, Valley, Oregon Dept. Agric).

For more information visit:
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Walnut twig beetle

(*Pityophthorus juglandis*)



Life cycle of walnut twig beetle

Adults emerge in spring; seek feeding sites on the bark, where they enter and form galleries as they feed. Beetles deposit conidia and the fungus grows within the galleries forming small cankers.

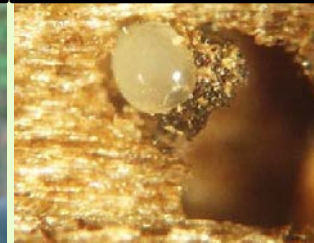
Entrance hole



Beetle galleries



Egg in gallery



Larva in gallery



Pupa in gallery



Teneral adult



Fungal development in black walnut

Fungus in beetle gallery



Geosmithia conidia



Fungal cankers



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