DAFM Plant Pest Factsheet

Pseudips mexicanus

Fig 1: *Pseudips mexicanus* adult

Pest Characteristics

- **Pest:** *Pseudips mexicanus*
- **Hosts:** This bark beetle has been recorded feeding on a wide range of pine (*Pinus*) tree species in its native region.
- **Invasive Risk:** *Pseudips mexicanus* has not previously established beyond its native range in Mexico and Guatemala.
- **Entry Pathways:** Wood, wood products, bark and wood packaging material of hosts are likely the main pathways for spreading this pest. *Pseudips mexicanus* is regulated in the EU as a non-European Scolytinae.
- **Adaptability:** *Pseudips mexicanus* tolerates a range of climate types in Mexico and Guatemala at various altitudes along mountainous ranges.
- **Impact:** This species is generally regarded as a secondary pest, with impacts on dying standing trees, felled trees and saplings. Trees are usually already stressed or infested by more aggressive bark beetle species. Limited research on *Pseudips* spp. exists, there is uncertainty regarding the risks, no impacts have been observed in Ireland to date.
- **Signs/Symptoms:** A distinctive characteristic of *Pseudips mexicanus* is the presence and shape of three spines on each side margin of the elytral declivity (red arrows) (Fig 2a). Adults of *P. mexicanus* can range from 3.5 - 5 mm making it a distinctively large bark beetle for Ireland (b). Presence of resinous exudates or reddish-brown boring dust has been observed with trees that contain *P. mexicanus,* which can reveal galleries underneath the bark. No symptoms have been observed in Ireland to date.

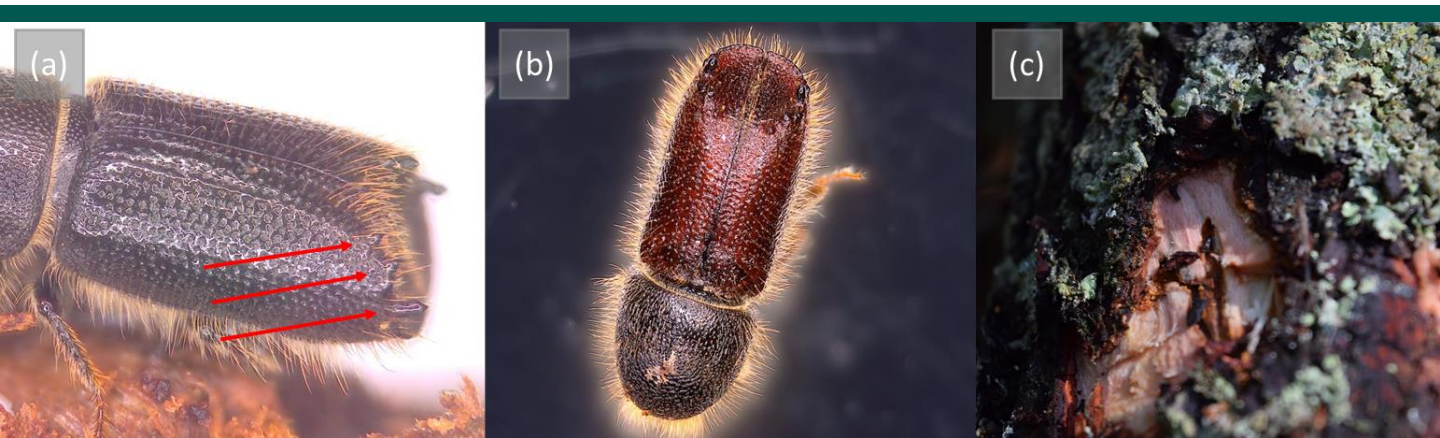

Fig 2 (a) Elytral declivity of *Pseudips* (b) dorsal view of adult (c) galleries being formed by *P. mexicanus*

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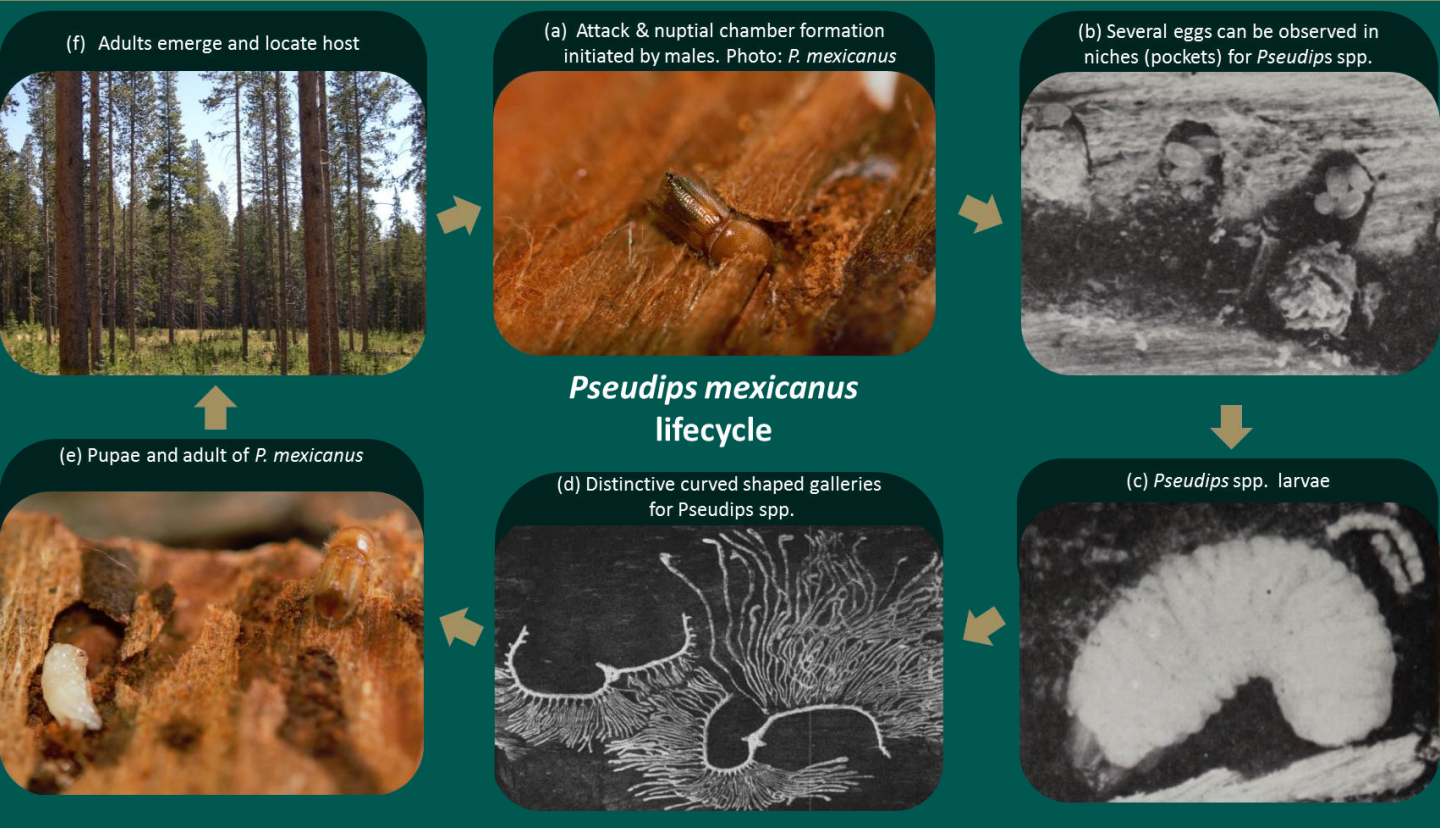

- **Lifecycle:** *Pseudips mexicanus* is a polygynous species; males initiate the attack in a host tree and build a nuptial chamber, and then can mate with up to five females, but usually only two to three. The type of gallery and egg-laying habits of *Pseudips* spp. are distinctive (b) & (d) particularly for *P. mexicanus* where galleries are curved and shepherds-hook shaped. There are four larval stages. Upon hatching, the larvae create individual tunnels that enlarge as they extend, ultimately ending in pupation chambers (e). The species can overwinter in both larval and adult stages. Stressed or dying standing trees are attacked near the base and higher up, while felled trees and saplings are also suitable sites for infestation. The species can have anywhere from 1 - 7 generations per year depending on local climate.
- **Dispersal:** Flight of adults is the main means of movement over short distances. Specific flight data for *P. mexicanus* is lacking. In general, bark beetles can fly distances ranging from a few hundreds of metres to several tens of kilometres.
- **Distribution:** The current known distribution of *P. mexicanus* ranges from Mexico to Guatemala (Fig 4).
- **If suspected:** If you find suspected symptoms or a specimen, please submit images to DAFM at: forestprotection@agriculture.gov.ie

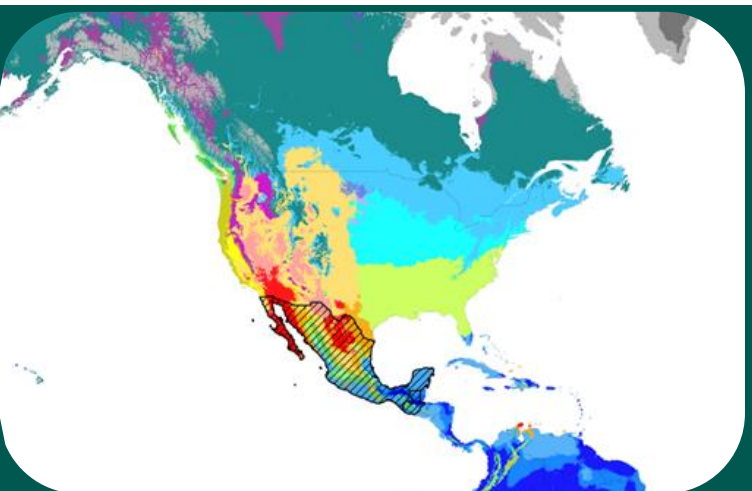

Fig 4: Distribution of *P. mexicanus* (cross hatched areas) overlaid on Köppen-Geiger climate classifications

Photo credits: Fig 1; Fig 2 (a) & (b) © Robyn Earl (DAFM). Fig 2 (c); Lifecycle (a) & (e) © M. in MRN Oscar Burgos Dueñas and Dr. Armando Burgos Solorio, Universidad Autónoma del Estado de Morelos, Centro de Investigaciones Biológicas (CIB).Lifecycle (b) & (c) © Struble, G.R., 1961. Monterey pine ips (Vol. 56). US Department of Agriculture, Forest Service. Lifecycle (d) © Hopping, G.R., 1963. The North American Species in Group I of Ips De Geer (Coleoptera: Scolytidae) 1. The Canadian Entomologist, 95(10), pp.1091-1096. Lifecycle (f) © Brytten Steed, USDA Forest Service, Bugwood.org

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