

GLOBAL INVASIVE SPECIES DATABASE

Orthotomicus erosus

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Scolytidae
Common name Synonym	European bark beetle (English), Mediterranean pine engraver beetle (English)			
Similar species	Ips latidens, Ips pini, Orthotomicus caelatus			
Summary	Orthotomicus erosus is an engraver beetle of the family Scolytidae. It is being introduced around the world, often due to the wood packaging material used in the shipment of textiles and other products. Orthotomicus erosus is a carrier for pathogenic fungi and is known to carry Sphaeropsis sapinea, which causes extensive mortality of many Pinus spp.			
	<u>view this s</u> p	pecies on IUCN Red List		

Species Description

LIST

Cavey *et al.* (2004) reports that the length of *Orthotomicus erosus* is generally between 2.7 and 3.5mm. It is reddish brown in colour. The anterior portion of the pronotum (the region of an insects body immediately behind the head) on this species is asperate (rough with points or projections). The elytral declivity (downward slope of the modified forewings of beetles serving as protective coverings for the hindwings) is also moderately concave with lateral spines or teeth on it. Please see <u>Cavey *et al.* 1994</u> for aid in identification.

Habitat Description

Campbell (2004) states that, \"*O. erosus* primarily attack pine species (*Pinus*) but can also occur on Douglas-fir (*Pseudotsuga menziesii*), spruce (*Picea*), fir (*Abies*), and cedar species (*Cedrus*). The beetle infests recently fallen trees, slash, and stressed living trees.\"

Reproduction

Campbell (2004) states that, \"While beetles inhabit non *Pinus* species, beetle reproduction is limited to infestations in pine species.\"

General Impacts

Campbell (2004) states that, \"As with other bark beetles, one of the major dangers from *O. erosus* is the transmission of pathogenic fungi, including blue stain fungi such as *Ophiostoma minus*.\" Wylie (2000) states that, \"The fungus *Sphaeropsis sapinea* has caused extensive mortality of *Pinus* spp. following hail damage in South Africa, and Zwolinski *et al.* (1990) have estimated that losses of US\$ 3.2 million per year have been incurred. Damage due to *Sphaeropsis* dieback is often exacerbated through infestation of trees by the weevil *Pissodes nemorensis* and *Orthotomicus erosus*.\"



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Management Info

Integrated management: Henin and Paiva (2004) state that, \"Management of bark beetle populations, such as O, erosus can only be achieved by adopting an integrated approach. Among preventive measures, this approach must combine "prophylactic" silviculture practices with an enhancement of their natural enemies, some of which have been shown to exert a significant impact upon bark beetle populations.\"

Chemical: In field experiments, Klimetzek and Vite (1986) were able to lure O. erosus into traps baited with a combination of the beetle produced compounds 2-methyl-3-buten-2-ol and ipsdienol. The authors state that, \"When offered along with 2-methyl-3-buten-2-ol, an up to 1000-fold increase in concentration of racemic ipsdienol led to a continual increase in catch of O. erosus and Ips sexdentatus, accompanied by a steady increase of .female..female..%. It is assumed that 2-methyl-3-buten-2-ol influences landing behaviour of O. erosus, while ipsdienol acts as a long distance signal\".

Mechanical: In South Africa, Wylie (2000) reports that, \"Sanitation felling and removal of Rhizina-infected older trees is necessary to prevent build-up of O. erosus.

Biologcial: Tribe and Kfir (2001) have been studying Dendrosoter caenopachoides, which was introduced into South Africa for the biological control of O. erosus.

Pathway

Orthotomicus erosus hast most commonly entered the United States from other countries through various crated exports such as, crating tiles, marble, and granite (Haack, 2001).

Principal source: Campbell (2004) states that, \"While beetles inhabit non Pinus species, beetle reproduction is limited to infestations in pine species.\"

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

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Pubblication date: 2005-08-29

ALIEN RANGE

[1] CHILE [4] SOUTH AFRICA [1] FIJI [7] UNITED STATES

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General information

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Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

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