

## Khapra beetle (483)

### Summary

- Restricted distribution. NOT in Australia, New Zealand, nor Pacific islands. Expert identification required. Prefers hot, dry climates.
- World's worst pest of stored grains, nuts, pulses, processed products, and a health hazard. Spoilage from larvae: (i) feeding directly and (ii) cast skins and hairs contaminating consignments causing health and decontaminating issues.
- Larvae reddish-brown, hairy, up to 7mm with brush-like hairs at hind end; adults, 2-3.5mm oval, reddish-brown, with fine hairs on the back. Adults suspend activity (diapause) if conditions unsuitable, for up to 9 months.
- Spread: infested grains, and other food stuff, processed products, and animal feeds, traded domestically and internationally.
- Biosecurity: see draft National Khapra Beetle Action Plan 2020-2030 (Australia) to manage threat: (<https://haveyoursay.awe.gov.au/khapra-beetle-action-plan>).
- Cultural control: hygiene: clean walls (and fill cracks), floors, vents, bins, and use new sacks; clear up spillages; check frequently for infestations and monitor with pheromone traps.
- Chemical control: fumigation with methyl bromide (check Montreal Protocol), phosphine, and (in Australia) sulfuryl fluoride for grain and seed storage facilities, and baled hay. Heat (60°C for 30 minutes or 42.5°C for 8 days). Malathion currently approved (in Australia) for infestations in structures and surrounding surface areas.

### Common Name

Khapra beetle

### Scientific Name

*Trogoderma granarium*; previously known as *Trogoderma afrum*, and *Trogoderma khapra*.



Photo 1. Larvae of khapra beetle, *Trogoderma granarium*.



Photo 2. Larvae of warehouse beetle, *Trogoderma variabile*, to compare with khapra beetle - Photo 1.

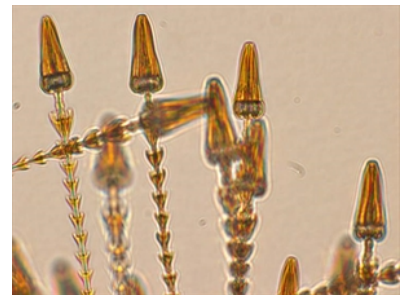


Photo 3. Close-up of hairs of the warehouse beetle, *Trogoderma variabile*. Khapra beetle is similar, so expert advice is needed to confirm identifications.



Photo 4. Khapra beetle, *Trogoderma*



Photo 5. Khapra beetle, *Trogoderma granarium*, front of the head.



Photo 6. Khapra beetle, *Trogoderma granarium*, viewed from the top.

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Information from CABI (2019) *Trogoderma granarium* (khapra beetle) Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/55010>); and Andras Szito (2020) Khapra beetle - declared pest. Department of Primary Industries and Regional Development (entomology). Government of Western Australia. (<https://www.agric.wa.gov.au/biosecurity/khapra-beetle-declared-pest?nopaging=1>); and from Akol AM, et al. (Undated) *Trogoderma granarium* Everts, 1899 - Khapra beetle. BioNET-EAFRINET Keys and Fact Sheets. ([https://keys.lucidcentral.org/keys/v3/eafrinet/maize\\_pests/key/maize\\_pests/Media/Html/Trogoderma\\_granarium\\_Everts\\_1899\\_-\\_Khapra\\_Beetle.htm#Contact](https://keys.lucidcentral.org/keys/v3/eafrinet/maize_pests/key/maize_pests/Media/Html/Trogoderma_granarium_Everts_1899_-_Khapra_Beetle.htm#Contact)). Photo 1 James D. Young, USDA APHIS PPQ, Bugwood.org. Photos 2-5 Simon Hinkley & Ken Walker (2005) Khapra beetle (*Trogoderma granarium*): PaDIL - (<http://www.padil.gov.au>).

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