

Vodka beetle

Attagenus smirnovi (Zhantiev)



GENERAL INFORMATION

The brown carpet beetle, *Attagenus smirnovi*, is a beetle from the Dermestidae family, and shared many characteristics with the black carpet beetle (*Attagenus unicolor*). Due to its specific epithet *smirnovi*, the beetle is also known in the United Kingdom as the "Vodka beetle", after the Smirnoff brand of vodka.

Naturally found in Africa, they have spread to Russia (where they were first observed in 1961, in Moscow, by E. S. Smirnov), the Czech Republic and other eastern European countries, along with Germany (where the first example was found in 1985 in Mecklenburg-Vorpommern), Denmark and the United Kingdom. The museums and scientific institutions of Northern Europe set up an international project to research the brown fur beetle's distribution in Europe and how this may be related to climate change. Its research areas include which climatic conditions allow it to spread by flying from house to house: <http://www.nrm.se/english/researchandcollections/collections/premal/research/smirnoviproject.6930.html>

SIGNS OF INFESTATION

The adult vodka beetle is a good flyer, and will actively move around. They can often be found in windowsills, as they sometime in their life cycle will seek light. In buildings the animals will be able to spread throughout rooms and between floors by moving through cracks in walls, ventilation ducts, etc. It is thought that at least during summer the adults may spread by flying from one building to another, but besides this the main route of spread have been as a stowaway in



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DIAGNOSTIC MORPHOLOGY

Adults:

- Length 2 - 5 millimeters
- Width of 2 - 2.5 mm
- Head and pronotum are dark red-brown to black
- Elytra (forewings) are densely hairy and light brown, reddish-yellow, or yellow in color
- Bodies are oval shaped and have a black base color
- Antennae and legs are reddish to yellow in color
- Male's 11th antennal segment is sabre-shaped and four times the length of the previous two segments together

Immature Stage:

- Up to 8 mm long
- Bronze-brown upperside and a yellowish brown underside
- Brush-shaped tuft of hair at the rear end.
- Larvae avoid light



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the transport of goods.

These beetles are predominantly diurnal and are often found near building openings as they attempt to enter in order to lay their eggs in the vicinity of possible food sources for their larvae. Fertilized females lay up to 60 eggs in small holes or other hiding places.

Signs of vodka beetle infestation will most likely be in the form of damage to specimens, frass and the cast skins from larval insects, as they complete several molting stages on the way to maturity.

FOOD SOURCES

Vodka beetles are a synanthropic pest which live in human buildings, homes and museums and eats wool-textiles, carpets, skin and fur.

The larvae feed on organic materials, such as dried plants, seeds, or animal material. *Attagenus smirnovi* has been reported to eat wool, feather, hides, and fur, and as such it is a museum pest. The larvae present a major problem in homes and stores particularly when they occur en masse as they cause serious damage to textiles and their excrement can cause severe food contamination.

LIFE CYCLE

The optimum condition for this species is about 24°C, and may be why observations in Northern Europe almost solely have been made indoors. The adult female lays about 50 eggs in her lifetime. At room temperature, the larva will develop into an adult beetle in 6 - 18 months. Larval development is dependent on environmental conditions (food, humidity and temperature) during which they shed

their skins 12 times. When the larvae are disturbed, they feign death.

As the species mainly lives indoors in Northern Europe, both larva and adults are found at all times of the year.

CONTROL & TREATMENT

Control can involve such IPM methods as: monitoring with sticky traps, pheromone lures and larval food monitors., discarding infested items, vacuuming and brushing.

Treatment methods can include: isolation, low temperature treatment, gas treatment, or pesticide/fumigation treatment.

MuseumPests.net

A Product of the Integrated Pest Management Working Group

Fact Sheet: Vodka beetle

References

<http://www.nrm.se/english/researchandcollections/collections/premal/research/smirnoviproject.6930.html>

www.insectoid.info

Encyclopedia of Life: http://eol.org/data_objects/22346033

Information from: Mallis, A., et al. (2011), Handbook of Pest Control - Tenth Edition, Mallis Handbook LLC, 701-703.

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Vodka beetle adult (Upper right corner) from Miroslav Deml from www.biolib.cz