

Spider Beetles

Spider beetles are small beetles belonging to the family Ptinidae (former family Anobiidae, which includes the wood boring Furniture and Death Watch Beetles). They are so named, as adults superficially resemble small spiders, and many species have a similar appearance. They are all globular beetles with a round thorax and round abdomen. The head is not visible from above and the long antennae appear to come from the thorax, giving the allusion of a fourth pair of legs. Most species are hairy, and some are covered with dense hairs on the body and legs.

Australian Spider Beetle

Niptus hololeucus
Golden Spider Beetle

Ptinus tectus
Not to be confused with

Biscuit Beetle
Stegobium paniceum

Furniture Beetle
Anobium punctatum

Not to scale

Australian Spider Beetle (*Ptinus tectus*). A widespread and troublesome pest in the UK, commonly found in food storage environments and occasionally in homes. Originally a native to Tasmania, it was introduced to the UK and Europe in the 19th century and has since become established. A reddish-brown or brown beetle with hairs and lines on the wing cases. Adults are 2.5-4 mm long, have biting mouthparts, a well developed thorax and 11-segmented antennae. The thorax has two cushions of hairs. The female beetle lays 100–120 sticky eggs over a period of 4–5 weeks in early summer, either singly or in small batches. At 20–25°C the eggs hatch in 3–16 days, producing larvae which are fleshy, curved, covered with fine hairs and relatively immobile. Larval development takes at least 6 weeks, during which time the larvae moult 4 or 5 times. When mature, they wander in search of a pupation site where they spin a cocoon in which to pupate. Adults emerge after 20 to 30 days and will live for as long 12 months. The species is considered as a pest in museums.

Golden Spider Beetle (*Niptus hololeucus*) . Covered in golden hairs, it has a distinctive appearance. Adults are 3.0-4.5mm making a long-legged beetle with a globular body. It has a preference for dark, moist places. It can often be found in poorly lit rooms such as store rooms, attics and cellars. As general scavengers, they will eat a wide range of natural material such as vegetable and animal debris, so are frequently associated with old birds' nests and found amongst stored food. In 1981, an infestation was located in a roof void above offices in Rotherham. This was traced to pigeons which were nesting within the loft: the beetles and their larvae were feeding upon their waste matter. Although the larvae will feed mainly on woollens and natural silks, attacking textiles, they can survive on any material of natural origin. The female beetle lays 20 to 40 eggs which then hatch after 11 to 30 days, this usually happens only once a year. The larval stage may last for up to 250 days. The larva then pupates, emerging as an adult beetle after a further 18 to 26 days. The adult beetles will live for up to approximately nine months, the peak activity reached being between August and November.

White Marked Spider Beetle (*Ptinus fur*) There is a big difference in the sexes. The prothorax is densely covered with pale hairs, while the red brown, studded elytra, bear white scales, looking like four pale white spots. Females are often more rounded and darker. The female is a globular dark brown beetle with patches of white hairs on wing cases. The males are pale brown and much thinner. It scavenges and breeds in dry organic matter. It has been reported as attacking flour and other stored products such as bran and grain. It is also a pest in museums, attacking insect specimens and stuffed birds. Fairly common in Britain with most records coming from central England and Wales.

Spider Beetles



Other less common species (in UK) of spider beetles:

Shiny Spider Beetle, (*Gibbium aequinoctiale*) occasionally confused with or also referred to as **Smooth Spider Beetle** (*Gibbium psyllodes*) which is also called **Hump Spider Beetle**. Mite-like in appearance, 1.7-3.2 mm long; shiny red-brown to black; lacks characteristic waist-like constriction and is devoid of hairs. This insect is tolerant of cool conditions and can survive for long periods without food supplies. The cuticle allows this insect to retain water and survive a dry environment up to three months.

Globular Spider Beetle (*Trigonogenius globulus*). Shiny and dark brown in colour, often found in cooler, darker spaces.

American Spider Beetle (*Mezium americanum*). The most common type of spider beetle in North America

Biology, Behaviour and Importance

Adult females can lay hundreds of sticky eggs, often hidden within food debris or cracks in flooring and shelving. They will hide in the cracks between floorboards. Their ability to exploit hard-to-reach areas makes them a persistent challenge in commercial properties. The larvae are fleshy and roll into a tight coil when disturbed. They live in tunnels which they bore through food and packaging which can lead to hidden infestations. They will excavate cavities when they are ready to pupate. Adults may feign death when threatened, making visual detection more difficult. The adults are longer-lived than many beetle pests. They also thrive in dirty, undisturbed areas where there are dead insects or old food.

Spider beetles are foragers. They tend to like to come out and feed at night and are usually most active during that time. The life cycle is normally 12 months but can be as short as 6 months. The pupae are surrounded by a globular silk cocoon from which the adult will eventually emerge. Although found with starchy foodstuffs they will also attack herbarium specimens, animal skins, dried plants and taxidermy. Books may also be attacked when there is a high starch content or animal glue in the bindings. Some herbarium sheets or books may look as if they have been eaten by furniture beetles, *Anobium*, or biscuit beetles, *Stegobium*. However, the holes are larger and often more irregular.

Spider beetles have been known to feed on dead insects such as accumulations of dead cluster flies and animal faeces, such as bat droppings. Troublesome infestations in heritage and older properties may be linked to bats roosting within the attic. This presents greater challenges when considering control remedies.

Management

Finding the real source of the infestation is key but can be very tricky. Although they may be found in food storage, they could be hiding in a rodent nest within the walls. This means that disposing of the infested food may not get rid of the spider beetle infestation. They are increasingly prevalent in historic houses and once established are difficult to eradicate.

Standard IPM prevention measures should be followed, including exclusion and elimination of food sources. Shiny spider beetles are known to tolerate lower temperatures than many other beetles, surviving below 10°C. Standard low temperature conditions, therefore, may not be effective in controlling the populations. In the event of infestation, the source should be removed if possible. Spider beetles prefer dark areas, making them hard to locate. Sticky traps may be effective in detection and monitoring.

- Remove infested materials and cleaning storage areas thoroughly
- Inspect hard-to-reach spaces such as under shelving, inside wall voids, and old stock areas
- Monitor with insect traps to detect activity early
- Improve stock rotation and waste handling procedures
- Preventive housekeeping is essential in any environment where stored product pests are a risk.

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