The case-bearing clothes moth belongs to a family of the Lepidoptera known collectively as the fungus moths which have specialised to eat an array of detritus, including stored material. Larvae of the case-bearing clothes moth feeds on natural fibres rich in keratin, and are associated with birds’ nests as well as households where they are considered pests. Household fabrics and furnishings made from natural fibres, such as wool, fur or feathers may be at risk of infestation.

**Identification**

Adults have silver grey-brown coloured wings which are held roof-like behind the body. Both fore and hind wings have a fringe of hairs along the margins. The forewings are brown with one large dark spot and two smaller dark spots, although these often rub off on older specimens. This moth has a wingspan of 9-16mm. The head is coated with grey hairs. Larvae can reach 12mm and are white with a hardened, brown head capsule and one ocelli (simple eyes). The moth derives its name from the tunnel-like cases that the larvae spin from silk and surrounding materials. The cases camouflage and protect the larvae, which carry the cases with them throughout growth.

**Possible confusion**

**Common clothes moth**

*Tinea bisselliella*  
The wings are golden with a wingspan of 12-17mm and a hairy fringe along the hind wing. The wings have no pattern and are held roof-like behind the body at rest. The head is coated with reddish hairs. Larvae can reach 13mm and are white with a hardened, brown head capsule and no ocelli (simple eyes). Like *Tinea pellionella* larvae spin a case, but do not carry this with them, emerging from it at night to feed.

**Distribution and habitat**

A result of global trade and importation of goods, case-bearing clothes moths are widespread throughout the world. The larvae naturally eats substances rich in keratin, such as feathers, hair and other detritus – it is often associated with bird nests. It can be a house-hold pest, feeding on woollen clothing, carpets and upholstery, wallpaper and vegetable produce. Clothes moths prefer low light levels and dirty fabrics, such as carpets and rugs, which contain essential nutrients and moisture for growth.
Life cycle
Females lay eggs within natural fibres, which hatch between 4-10 days in summer months and up to three weeks in colder weather. Larvae spin cases of silk and nearby materials which provide camouflage and protection. The larvae add to and expand the cases as they develop, remaining in them throughout growth. The larvae have five instar stages and can take from 1 month to 2 years to fully develop, depending on conditions. They pupate for 10-50 days, developing into an adult moth. Adults have atrophied mouth parts so do not feed and will often scramble across fabrics, rather than fly, as they try to find a mate. Between 1-2 days after emergence, they mate and lay eggs.

Damage
Adults do not feed, obtaining all nutrients needed for their final life stage during larval growth, and cause no damage to fabrics. Larvae commonly damage upholstery, carpets and clothing made of natural fibres, rich in keratin. They are also known to damage wallpaper, infest stored vegetables and even spices.

Prevention and Control
Traditionally chemicals were used to treat clothing, particularly mothballs which emit toxic fumes, kill larvae and prevent infestation. Nowadays natural control is favoured, for example introducing cedar oil or bags of dried lavender to wardrobes is thought to prevent infestation. Freezing to -8°C for several days or heating fabric to temperatures of 49°C for over 30 minutes kills all life stages and can be accomplished with home appliances, such as a freezer or washing machine. Dry cleaning destroys pests and removes the moisture and dirt from fabric essential to larval growth. Clothing can be stored in air tight bags and containers to prevent infestation. For carpets and upholstery, vacuuming helps to eradicate infestations. Pyethrin insecticides can be sprayed on fabrics which cannot be treated by freezing or cleaning, these instantly destroy moths and do not leave toxic residues like many traditional chemicals. Moth traps, adhesive boxes which emit artificial pheromones to attract adult moths, can be checked to monitor infestation.

To find out more:
Wikipedia page
www.en.wikipedia.org/wiki/Tinea_pellionella
Penn State College of Agricultural Sciences, Entomology, Clothes Moth Advice
www.ento.psu.edu/extension/factsheets/clothes-moth
Michigan State University, Clothes Moth Advice
www.pestid.msu.edu/insects-and-arthropods/clothes-moths/