

ID workshop:
Triple-spotted Clay and Double Square-spot

In this document, I will discuss how to separate Triple-spotted Clay (*Xestia ditrapezium*) from Double Square-spot (*X. triangulum*). These species fly from June to August and can be the source of confusion; however, when a recorder is familiar with both species, identification is usually straightforward. Useful features include resting position, forewing colouration, hindwing colouration and genitalia structure.

National status of each species

Double Square-spot is a nationally common species, found throughout the UK and is often numerous across a wide range of habitats. Triple-spotted Clay is nationally local and has a scattered distribution across the UK, favouring damp woodland habitats. Across most of the UK, Double Square-spot is the commoner species. Over much of the south of England, Triple-spotted Clay is rare or absent. In certain parts of the UK, county moth recorders may request evidence, such a specimen, before records of Triple-spotted Clay are accepted. The species can be common in the west and north of the UK; in parts of north Wales, for example, Triple-spotted Clay is actually the commoner species.

Resting position

Triple-spotted Clay tends to rest with its wings wrapped together more tightly, giving the moth a more slender appearance. In contrast, Double Square-spot presents less overlap of its two wings, giving it a broader appearance. This difference may only be apparent when the moth is fully settled.

Overlap of wing often encroaches on stigma



Slender

Triple-spotted Clay



Broader

Double Square-spot

Forewing colouration

Both species have very similar markings and are relatively variable. The two species can, however, usually be separated by the ground colour of their forewing. Double Square-spot is typically pale brown, occasionally displaying a slight pinkish tinge. Triple-spotted Clay is a darker moth, usually a purplish-brown colour.



Triple-spotted Clay

Double Square-spot

Hindwing colouration

The hindwings also show different colouration. Triple-spotted Clay typically has pale grey or light brown hindwings, while on Double Square-spot these are usually darker; often a smoky brown colour. The difference in colouration can be difficult to judge on a single individual without means of comparison, however.



Triple-spotted Clay

Double Square-spot

Genitalia determination

If there is doubt over a male specimen, morphological differences in the genitalia should provide a decisive identification. The juxta of Double Square-spot is short and stout, while it is taller and thinner in Triple-spotted Clay. The ampulla extend further in Triple-spotted Clay. In addition, in Double Square-spot the uncus remains relatively broad for most of its length; in Triple-spotted Clay it gets narrower along its length.

Additional confusion species

Square-spotted Clay (*X. stigmatica*) is a species to be aware of. It is a 'Nationally Scarce B' woodland species found in scattered populations across certain parts of England, Wales and Scotland. It has a dark ground colour, often a similar purple-brown to Triple-spotted Clay. Square-spotted Clay, however, has a very broad wing form.



Square-spotted Clay

Conclusion

Triple-spotted Clay and Double Square-spot can be hard to separate; however, there are a number of consistent differences between the pair that aid identification. As with many difficult species groups, experience with the species in question is invaluable. At home, where both species occur commonly, I have little difficulty separating the two on the basis of forewing colouration and resting position. In areas where Triple-spotted Clay is uncommon, it is likely to be more difficult to build up sufficient experience so more care might be required.

If in doubt, take plenty of photos, ideally across a range of natural lighting conditions. From these photos, expert determination should be possible (but be aware a specimen for Triple-spotted Clay may sometimes be required in certain parts of the UK).

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Photos by DB.