

1889 (7539) Peacock Moth *Macaria notata* (Linnaeus, 1758)

1890 (7540) Sharp-angled Peacock *Macaria alternata* ([Denis & Schiffermüller], 1775)

Local

Local

Diagnostic external characters

Characters listed by Waring *et al.* (2009) will enable the correct identification of most examples of this pair, provided they are in good condition. However, they are variable and can be deceptive, even if only slightly worn.

Other authors differ slightly in the use of various features. Riley (1991) stresses the importance of the continuous thin dark line along the termen on the underside of both wings found in *notata* (a series of dots being present in *alternata*). The line may be weak on the forewing, but this is probably the most reliable feature, and can also be seen on the upperside of the hindwing (but undersides should also be checked). Brown (2008) gives further detail, including a range of characters of varying reliability, including emphasis on the shape and colour of the apical concavity on the forewing (deeper and darker in *alternata*, shallower and less dark in *notata*). This is quite a good character, but there is some overlap in terms of shape, and although in a long series the darker concavity in *alternata* becomes very obvious, it relies on the cilia being relatively un-damaged and therefore has limited usefulness when one is dealing with worn individuals (Riley, 1991).

In summary, none of the external characters are entirely reliable, and therefore several features should be examined rather than relying on any one in particular. On individuals where these are found to be inconclusive, the eighth sternite (males) and genitalia (females) should be checked.

Diagnostic morphological characters of the males

The genitalia (not illustrated) are almost indistinguishable. On *alternata*, the sacculus is stated to be slightly more protruding than on *notata* (di Flamigni *et al.*, 2007), but this should not be regarded as diagnostic and therefore the full genitalia are not illustrated here. Examination of the eighth sternite is usually sufficient for identification purposes. It is necessary to dissect out and mount the sternite flat, as its curvature affects the apparent width of the groove between the lobes. On dried specimens it is in any case difficult to brush off sufficient scales in the groove in order to appreciate the width, without the abdomen disintegrating and making further inspection even more fiddly.

Eighth sternite deeply cleft; lobes set wide apart (Fig. 36).....*notata*

Eighth sternite deeply cleft; lobes set close together (Fig. 37).....*alternata*

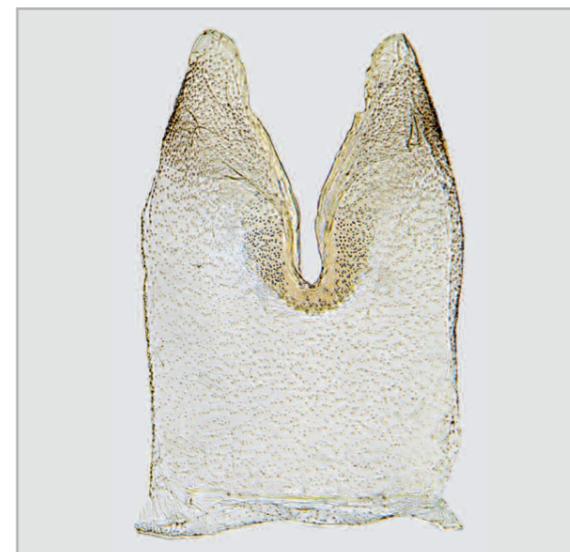
Diagnostic morphological characters of the females

Bursa copulatrix shorter than ductus bursae (Fig. 38, A).....*notata*

Bursa copulatrix twice or three times length of ductus bursae (Fig. 39, A).....*alternata*

Other similar species

Dusky Peacock *Macaria signaria* (Hübner) is superficially similar, but has only a slight concavity in the forewing termen and only slightly pointed hindwing, and is usually heavily dark-speckled. The dark mark on the post-median line of the forewing, although usually rather square or ill-defined, can be somewhat like a paw-print as in *notata* and *alternata*. Therefore, it could possibly be overlooked in the field as a worn example of one of those species.



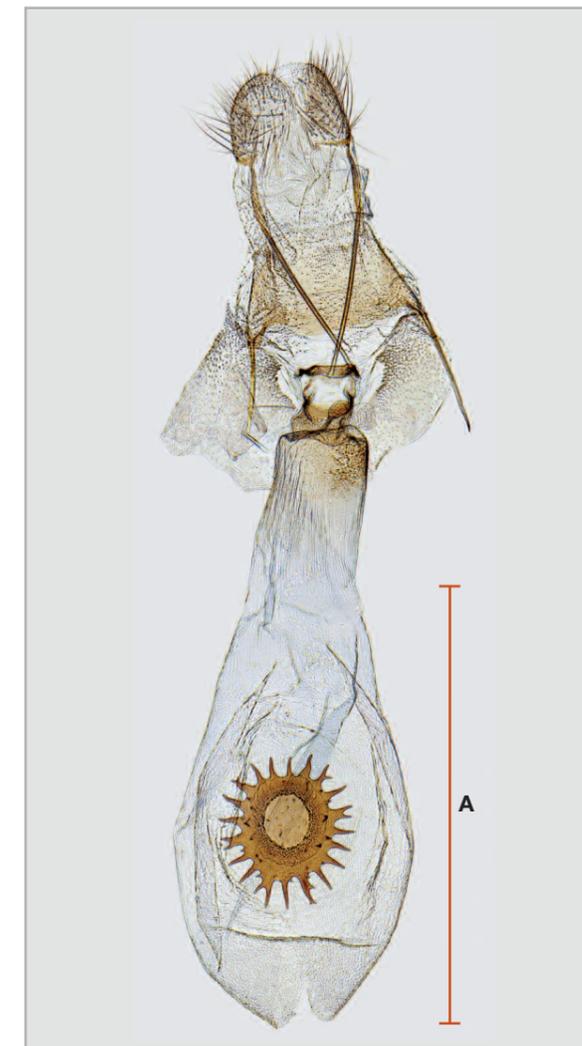
36. *Macaria notata* eighth sternite of male



37. *Macaria alternata* eighth sternite of male



38. *Macaria notata* female



39. *Macaria alternata* female