

- 2343 (9789) **Common Rustic *Mesapamea secalis* (Linnaeus, 1758)**
 2343a (9790) **Lesser Common Rustic *Mesapamea didyma* (Esper, 1788)**
 2343b (9791) **Remm's Rustic *Mesapamea remmi* Rézbányai-Reser, 1985**

Common
 Common
 (Probable hybrid)

History and status

As recently as 1983, it was first recognised that the taxon then known as *Mesapamea secalis* consisted of two species. This followed studies of material collected in the former USSR (Remm, 1983). The second species (herein known as *didyma*) was initially described as *secalella* (Remm, 1983) and Zilli *et al.* (2005) consider that *secalella* is the correct name for it. This species was subsequently found to be widespread in western Europe (Fibiger *et al.*, 1984), including Britain and Ireland. Differences are also described by Jordan (1986).

Subsequent screening of thousands of specimens originating from across Europe led to the proposal that two further species existed, namely '*remmi*' and '*insolita*' Rézbányai-Reser, 1996. However, <1% conformed to *remmi* and these were scattered throughout the shared geographical range of *secalis* and *didyma*, with no apparent pattern. In terms of the characteristics of the genitalia of *secalis* and *didyma*, those of male '*remmi*' are intermediate, and those of female '*remmi*' show abnormal features. '*M. insolita*' is known from only one specimen. Zilli *et al.* (2005) describe these factors and illustrate the genitalia of '*remmi*', concluding that it should be regarded as an occasional hybrid between *secalis* and *didyma*, and that '*insolita*' is either a hybrid or an abnormal specimen. Jordan (1989) recorded *remmi* as a new species to Britain, but since its status as a species is dubious, the genitalia are not shown here.

Diagnostic external characters

No reliable diagnostic features have been found, and examination of the genitalia is always required for confirmation. *M. didyma* is on average slightly smaller than *secalis*, but the size ranges overlap. Both species are highly variable with many forms and intermediates, which all occur in both species. According to Skinner (2009), intensely black forms with a bright white reniform stigma are invariably *didyma*. However, Plant (2008) reports this form in *secalis* from Slovakia.

Diagnostic morphological characters of the males

With practice, anaesthetised or freshly killed males may be identified by extruding the genitalia (as described under *Dissection methods* and by Agassiz, 1886), to reveal the clavus. To view the cornuti on the vesica the specimen must be dissected, but it is not necessary to evert it fully. Use two pairs of fine straight forceps, one pair holding the base of the aedeagus and one pair at the very tip. Gently pull the vesica out of the tip a short way, and with practice the cornutus will be easily extracted. Alternatively, if a permanent preparation is not required, a coarse way of achieving this is by tearing the walls of the aedeagus to reveal the cornutus, taking care not to damage the latter in the process.

Clavus heavily sclerotised, with many short teeth at apex (Fig. 110, A).

A single large, broad and rounded, apically dentate cornutus on vesica (B).....*secalis*

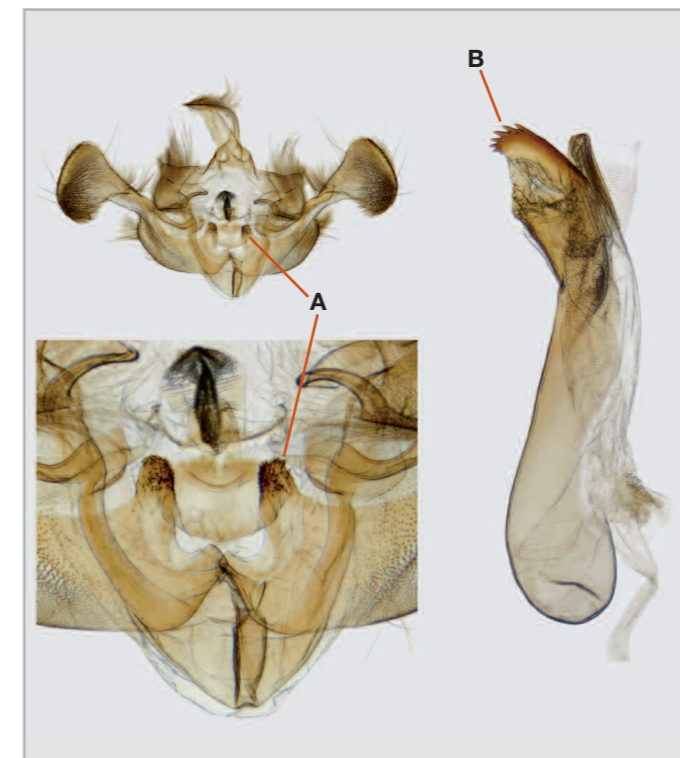
Clavus weakly sclerotised, with fine setae (Fig. 112, A).

A single large, long and narrow, apically dentate cornutus on vesica (B).....*didyma*

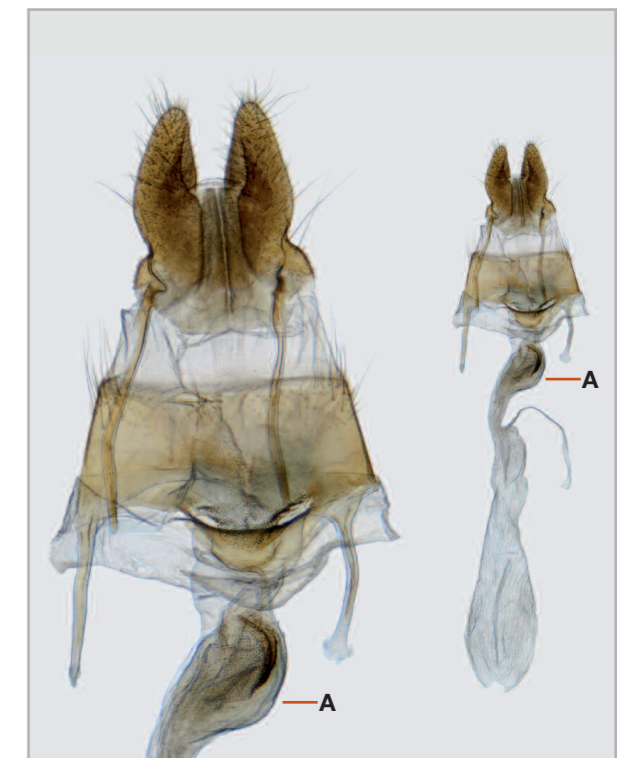
Diagnostic morphological characters of the females

Swelling of ductus bursae faces to the right in ventral view (Fig. 111, A).....*secalis*

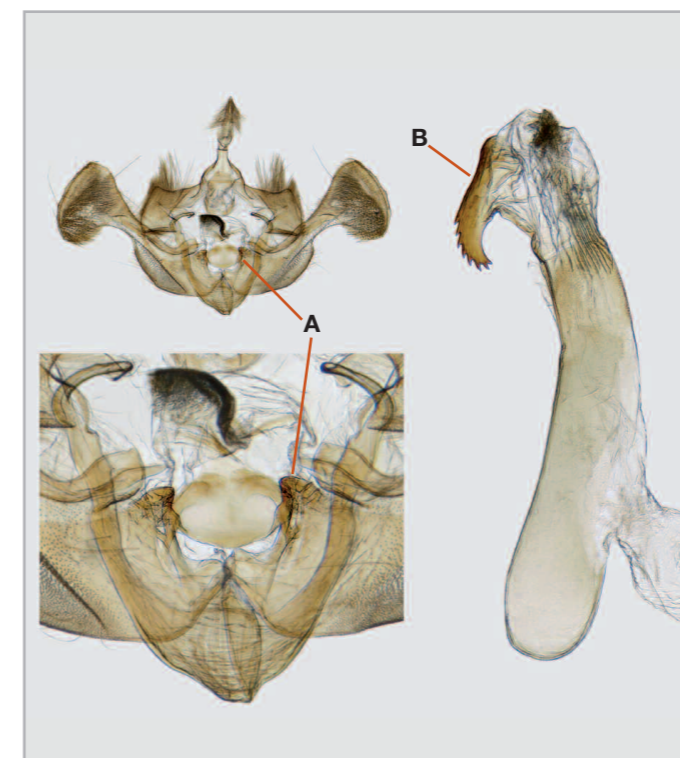
Swelling of ductus bursae faces to the left in ventral view (Fig. 113, A).....*didyma*



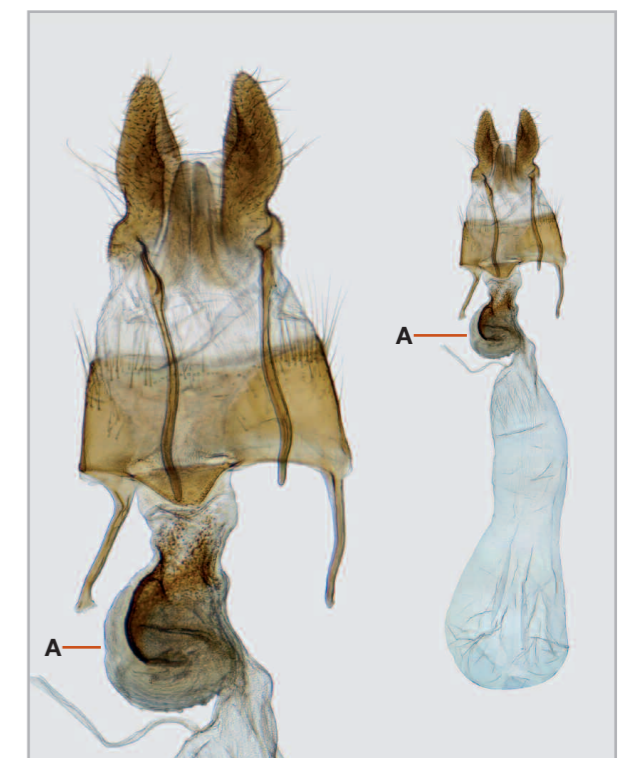
110. *Mesapamea secalis* male



111. *Mesapamea secalis* female



112. *Mesapamea didyma* male



113. *Mesapamea didyma* female