

SOME PRACTICAL HINTS FOR TREATING  
*MESAPAMEA* SPECIES

By the Rev. DAVID AGASSIZ\*

The structural differences between *M. secalis* and its sister species *M. secalella* are adequately described in Michael Jordan's paper in this issue of the *Record*. Readers will know that it is possible to guess from the wing colouration and pattern which species they are looking at, but they cannot know for certain without examination of the genitalia. This is a deterrent for many amateur lepidopterists because they may not have the facilities for making genitalia preparations, which is also very time consuming. Besides this cabinet specimens without abdomens never look quite as good as complete ones!

I offer these simple techniques which enable males of *Mesapamea* species to be identified quickly and definitely without the need to kill or damage them in any way. They can be applied in the same way to other difficult groups, e.g. *Acronicta psi/tridens*, *Amphipoea* spp. and *Oligia* spp..

The specimen is anaesthetised by placing it in a killing jar charged with ethyl acetate for about a minute, just long enough for it to become unconscious and no longer moving. It is then taken out and placed on the microscope stage or other suitable surface. Magnification between x10 and x30 is ideal. The moth is placed on its back and with one hand, using e.g. curved entomological forceps, gentle downward pressure is exerted on the underside of the abdomen until the genitalia begin to be extruded. Maintaining gentle pressure on the abdomen (which keeps it steady) the valves can then be prised apart with very fine forceps, until all the critical characters can be seen. With *Mesapamea* species the valves need to be spread very wide because the distinguishing shape of the *clavus* is right at the base of the valve. The projecting shape in *M. secalis* is dark brown, in contrast to the hairs and most of the rest of the genitalia.

Once the determination is made the specimen can be released, if only the record is of interest. Moths usually regain consciousness within a few minutes, if they suffer aches in the lower abdomen at least their complaints are inaudible! Specimens to be kept are not damaged if carefully handled.

This examination can be done quickly and easily for recording purposes, and the *secalis/secalella* group with practice can be determined at a rate of 3 or 4 per minute. Unfortunately no such procedure is possible with females since all the structures are internal. Whilst the technique is simplest with a stereoscopic microscope, it should equally be possible with a x20 or x10 hand lens. The only

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difficulty then is that if two hands are needed to manipulate the abdomen it is hard to hold the lens in place!

When specimens of such critical species are set it is always worth arranging the genitalia so that they can be examined without dissection (c.f. *MBGBI* 1: 130). Even if they have been determined it is good to allow further inspection without damage to the specimen. To achieve this it is again necessary to squeeze the abdomen (ventro-dorsally) to force out the genitalia. The valves should then be held open as wide as possible with a pair of pins, when dry the critical parts can then be examined with ease, using either lens or microscope.

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NOTE: As yet there are no reliable criteria for separating *secalis* and *secalella* by means of external characters. Both species are illustrated by Skinner (1984) in *Colour identification guide to moths of the British Isles* (plate 38 figs. 1-5), but the text comment on p. 160 of the first printing : "May be separated from the usually slightly smaller *M. secalis* . . . ." is erroneous, as *secalis* is generally slightly larger than *secalella*. This error has been corrected in the second printing. Both species appear to be common in suitable habitats throughout the British Isles, and we await with interest further details of the biology of these two species. A recent paper (in Danish) by Michael Fibiger and Poul Svendsen (*Ent. Meddr.* 53:31-38) has half-tone illustrations of a short series of each species as well as photographs of genitalia preparations. *Editor.*

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CUCULLIA LYCHNITIS RAMB. (THE STRIPED LYCHNIS) IN WEST SUSSEX — On 26th August 1985 whilst walking a small section of The South Downs Way above Treyford, West Sussex, I came across in excess of twenty five full grown larvae of *C. lychnitis*. Ramb. — the striped lychnis — feeding on two adjacent plants of *Verbascum nigrum*.

Surprisingly C. Pratt (*A History of the Butterfly and Moths of Sussex*) gives only two records for Sussex since 1945 and the distribution map in J. Heath (*The Moths and Butterflies of Great Britain and Ireland*: 10) shows no records for this area despite a suggestion in the accompanying text that it should occur.

Larvae have also been found relatively commonly in the Winchester area of Hampshire this year, thus hopefully a revival in the fortunes of this insect is perhaps indicated. J. W. PHILLIPS, 16 Grove Road, Havant, Hants.



Agassiz, David J. L. 1986. "Some practical hints for treating Mesapamea species." *The entomologist's record and journal of variation* 98, 45–46.

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