

Notes on the 2017 Scottish Macro-moth List

This list aims to include every species of macro-moth reliably recorded in Scotland, with an assessment of its Scottish status, as guidance for observers contributing to the National Moth Recording Scheme (NMRS). It updates and amends the previous lists of 2009, 2011, 2012, 2013 & 2014. Names and classification follow the revised British checklist by Agassiz, Bevan & Heckford (2013). The requirement for inclusion is a minimum of one Scottish record considered to be beyond reasonable doubt. Plausible but unproven species are relegated to an appendix, awaiting confirmation or further records. A second appendix contains records of adventives – individuals believed to have arrived in Scotland only due to human transportation.

At one time or another, virtually every macro-moth on the British list has been reported from Scotland. Many claims are considered to be misidentifications or other errors, including name confusion. They are omitted from this checklist altogether, even if published records exist. Note that inclusion in the *Scottish Invertebrate Records Index (SIRI)* does not guarantee authenticity.

A modern complication involves the unwitting transportation of moths inside the traps of visiting lepidopterists. Then on the first night of their stay they record a species never seen before or afterwards by the local observers. Various such instances are known or suspected, including three for my own vice-county of Banffshire. Surprising species found in visitors' traps the first time these are used here should always be regarded with caution.

Clerical slips – the wrong scientific name scribbled in a notebook – have long caused confusion. Today, an even greater problem involves errors when computerising the data. These are beginning to outweigh misidentifications as the cause of false records, a tribute to the advances that have been made in recent years with the help of modern field guides, websites and internet forums. Computer input errors are particularly prevalent when species are entered by a code number - transposed digits are inevitable sooner or later. Since there is no logic or pattern to such errors, they can be particularly dangerous. The 'experienced observer, unmistakable species' argument falls down here. Thus a Scarce Burnished Brass claimed for Aberdeenshire in 2013 turned out to be a misentered code for Small Autumnal Moth when queried. There have been many similar instances, particularly affecting the large Rothamsted Insect Survey (RIS) dataset.

Assessments of Scottish status have been reviewed where necessary to take account of range expansions or declines, and of increased knowledge. These assessments are necessarily brief. They also assume that suitable habitat for the species is present in an area. Note that UK designations such as RDB apply in Scotland too. The geographical terms used are broad: S means south of the River Tay, while W and E divide the country roughly in two. For greater detail of distributions, consult the latest NMRS maps online, particularly those prepared by Mark Cubitt on the Butterfly Conservation East Scotland Branch website. On the same website, the totals used to create the flight histograms give a good indication of regional abundance too.

The 2017 list introduces a new column that attempts to assess the Scottish trend for every species since about 1980. This proved easy where the change has been dramatic, involving major range expansion or reduction, less so for changes in abundance. Population sizes of a species can fall

considerably without much effect on its distribution map. A further complication is the great increase in Scottish moth recording since the establishment of the NMRS. This has been facilitated by the availability of mercury vapour light traps, followed by portable generators that enable them to be used in areas and habitats away from a domestic power source. Thus the distribution maps in Heath & Emmet (1979 & 1983) show far fewer Scottish dots than do the modern ones, irrespective of any change of status. Finally, the populations of most moths fluctuate annually or cyclically, and these changing fortunes do not necessarily imply any long-term trend. Such species are here described as stable unless there is evidence to the contrary.

Species added to the Scottish Macro-moths List since the previous version (2014)

Orange Footman *Eilema sororcula*, 31 May 2017, Tweedbank, Melrose, VC80, A. Bramhall. Photo

Follows recent range expansion into northern England.

Dark Crimson Underwing *Catocala sponsa*, 28 July 2017, Hoy, Orkney VC111, M. Harris. Photo.

Found at rest on a hen-house; part of a small immigration noted further south.

Grey Shoulder-knot *Lithophane ornitopus*, 25 Oct 2017, Rockcliffe, VC73, Richard Sutcliffe. Photo.

Follows recent increase and range expansion through northern England.

Species demoted from the main list to Appendix A

Wood Carpet *Epirrhoe rivata*. No confirmed Scottish record has been traced. Id problems.

Species added to the Scottish Macro-moths List Appendix B: Adventives

Lime Hawk-moth *Mimas tiliae*, 27 May 2016, Renfrew, VC76, Norman Tate. Photo.

Very fresh mated pair on lime in urban street, considered most likely reared and released.

Gypsy Moth *Lymantria monacha*, 27 July 2016, Fallin, Stirling, VC86, Helen Dawson. Photo.

Larva found on garden hedge clippings, female moth reared. Possible garden centre connection.

Thus the main Scottish Macro-moth List now comprises 558 species, but 10 of these have not been seen for over 50 years and are presumed extinct here. Appendix B contains a further 9 confirmed species considered to be adventives. If anyone can provide convincing evidence for further additions, I would be very pleased to hear from them.

Some significant Scottish records recently added

Pine Hawk-moth *Sphinx pinastri*, larva (reared) Sept. 1860, Achnacroish, Mull, VC103, W. Edwards.

Entomologist 19: 64-65. Convincing account, accepted by South. Earliest confirmed Scottish record.

Oleander Hawk-moth *Daphis nerii*, 4 Sept 2014, by day, St. Kilda, VC110. Photo

Tissue *Triphosa dubitata*, 7 Nov 2016, Gifford Castle, VC82, Katty Baird. Photo

First Scottish hibernation record; more soon followed (Baird & Cubitt, 2017).

Barred Carpet *Martania taeniata*, 1 July 2017, Tomintoul VC94, P. Moore (Highland Branch Outing).

Photo. New for NE Scotland.

Haworth's Pug *Eupithecia haworthiata*, 24 July 2017, Anstruther, VC85, Anne-Marie Smout. Photo

Pimpinel Pug *Eupithecia pimpinellata*, 15 July 2017, Tantallon, VC82, Katty Baird. Photo

Small Seraphim *Pterapherapteryx sexalata* (four), Caerlaverock, 5 June 2016, A. Robertson. Photos

Rannoch Brindled Beauty *Lycia lapponaria*, 21 Apr. 2015, Mull VC103, Barry Prater. Photo

Female on fence post, 8 more on 24th April. First Hebridean record.

Beautiful Snout *Hypena crassalis* (twelve!), 22 June 2016, Wood of Cree, VC73, T. Vorsterman. Photo

Second Scottish site, discovered the previous year.

Pale Tussock *Calliteara pudibunda*, 26 May 2017, Auchincruive, VC75, Tom Vorsterman. Photo

Alder Moth *Acronicta alni*, 7 July 2016, Puddledib, VC85, Gerald Lincoln. Photo. 1st north of the Forth
Pale Pinion *Lithophane socia*, 16 April 2017, Drumshee, VC96, Duncan Davidson. Photo
Shore Wainscot *Mythimna litoralis* (three), 19 Aug 2015, Camusdarach Dunes, VC97, Margaret Currie
& Andy Scott. Photo. Two hundred kilometres from any other known population.
Triple-spotted Clay *Xestia ditrapezium*, 13 Aug 2015, Dinnet, VC92, Mary Laing. Photo
First record for NE Scotland.

Note that all the above modern records were backed up by photographs. In some cases the moth was only identified from the photo, while other claims would doubtless have been regarded as unproven without this evidence. The digital camera has certainly revolutionised moth recording in recent years. But there are worrying dangers. Three instances of attempted fraud were brought to my attention in 2014, with wholly improbable claims accompanied by a photograph of the species in question. However, in two cases we found that very same image on the internet – one on a website based in Australia and the other in Florida. Then in 2016 a spectacular first for Scotland was claimed by a visitor to a remote west coast site. The account was meticulously detailed and supported by a digital photograph – with an embedded date nine days earlier than the supposed sighting. The moth was sitting on the door of a lock-up garage, but Google Earth showed no such building at the eight-figure grid reference, nor was any found when the location was visited. Presumably such spurious claims are intended as a spoof or joke.

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References

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