

## Slug (and other) records from Worcestershire Entomologists

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First, I must thank you for your efforts in finding so many from this under-recorded group of creatures. Altogether there are 113 slugs records, three of snails and four of *Riccardoella* mites which can infest slugs – 120 records in all. Worth quite a lot but of incalculable value, of course.

### The Mites.

These are often seen scurrying across the bodies of slugs, sometimes entering or exiting from the breathing pore. They are parasites and if present in sufficient numbers can seriously harm the slug. They are grossly under-recorded and I have to admit that, until recently, although I had noticed them, I had not recorded them. We have little idea if they have any preferred slug species and no idea of any annual cycles of activity. There are two species, separable under a microscope. *Riccardoella oudemansi* and *R. limacum*. The latter, although the name suggests slugs, is a parasite of snails and almost never has been recorded on any slug. *R. oudemansi* is sometimes found on snails but is almost always the one found on slugs. Because of the lack of existing records and lack of knowledge about the mites, any record, even at genus level, which gives information about annual activity, location and host species is useful. The NBN Atlas shows only four records of the genus and one of *R. oudemansi*. I know there are more records waiting to be verified but even so these four are not to be sneezed at.

### The Slugs:

There are five large *Arion* species, all of which may be of pretty well any colour from black through to white. *Arion ater*, the large black slug is a native. *A. flagellus* seems to be an ancient introduction to Ireland which has, over the past 30 years, started spreading westwards in the UK. It is possible that it is replacing *A. ater*. It is likely to have been taken for *A. ater* when it appears in the all-black form. *A. ater* is now generally found only in wilder places. In 'human' habitats it is replaced by any of the other three (probably) introduced

species – *A. rufus*, *A. vulgaris* and *A. sp. Davies*. I took two small individuals away with me because their colouration suggested they might be this last (very little known) species. However, they developed very rapidly and could then be identified as *A. flagellus*. Some slugs cannot be identified further than sub-genus level, possibly a result of hybridisation. Even if subjected to DNA analysis results may not be conclusive. These unknowns I have recorded as *Arion (Arion) agg. Arion flagellus* records are, at present, fairly scarce in this area so the number found shows how much it has spread recently.

The small *Arion* species – the 'Soil Slugs': *Arion distinctus* is the most common almost everywhere but as you travel southwards in the UK *A. hortensis* becomes more frequent. Worcestershire is on the edge of the main range of *A. hortensis*. A third member of the group, *A. owenii* is spreading fast – thanks to garden centre-to-garden transmission. It has arrived in this area and, no doubt, will become more common. I find it rather more handsome than these other two species but it is still a garden pest. A fourth member of the group – *A. intermedius* the Hedgehog Slug is rarely found in gardens, much more frequently found in areas with poorer soil where it suffers less competition from the larger members of the soil slug group – the *Arion (Kobeltia)* subgenus. The one record of this species was from woodland rather than a garden.

The Iberian Three-band Slug, *Ambigolimax valentianus*, is now widespread in gardens but there is a second (and possibly third species) and it is often not possible to know which. For the unknown ones they have to be recorded as *Ambigolimax* sp. Even records to genus level are useful as they show how rapidly slugs of these species are spreading.

*Limax cinereoniger* is a woodland resident, often an ancient woodland indicator species. It is our largest species. Excellent to see one.



*Limacus maculatus* is now very common having almost completely replaced *L. flavus* and increased in number far beyond the numbers we used to see of *L. flavus*. The species can hybridise and it seems that such hybridisation is unbalanced with the green features rapidly dominating. Why the yellow species has been almost completely replaced by the green is a very obvious and simple question to ask. A pity that no one has yet found an answer.

Three keeled slug species were found. *Tandonia sowerbyi* is very long established in the country but never seems to be very common, particularly in this area. The more recent invader, *T. budapestensis*, a major pest of potatoes, is far more common. It first appeared about 100 years ago but, unlike more recent introductions, seems to have spread, and is still spreading, only very slowly.

The Worm Slug, *Boettgerilla pallens* is the third keeled slug found and a fine little species. It is probably a carnivore, often subterranean

and rarely found in groups of more than one. It is now present in the UK from the Channel Islands in the south to the Orkney Islands in the north (and probably waiting for someone to find it in the Shetland Islands). Always good to see them and remarkable how they have spread so far since their first appearance in this country in 1976.

*Deroceras invadens* - I think the common name of 'Tramp Slug' is not really appropriate for the fastest moving slug species in the country. It arrived in the 1930s and spread slowly until the mid 1970s when it began to spread rapidly. It is generally associated with human habitation and less commonly found in wild places, particularly those more remote places.

It is worth looking at the current distribution maps on the NBN Atlas and you will see that, for some species, the records do fall in fairly blank areas. (<https://nbnatlas.org/>).

## Species recorded:

### Slugs

*Ambigolimax* sp.  
*Ambigolimax valentianus*  
*Arion (Arion) ater agg*  
*Arion (Arion) flagellus*  
*Arion (Arion) rufus*  
*Arion (Arion) vulgaris*  
*Arion (Kobeltia) distinctus*  
*Arion (Kobeltia) hortensis*  
*Arion (Kobeltia) intermedius*  
*Arion (Kobeltia) owenii*  
*Arion (Mesarion) subfuscus*  
*Boettgerilla pallens*  
*Deroceras invadens*  
*Deroceras reticulatum*  
*Limacus maculatus*  
*Limax cinereoniger*  
*Limax maximus*  
*Tandonia budapestensis*  
*Tandonia sowerbyi*

### Snails

*Cepaea nemoralis*  
*Cornu aspersum*  
*Oxychilus alliarius*