

NEWSLETTER

Number 29

Autumn 2014

AGM notice

All BMIG members are invited to attend the AGM to be held at 8pm on Friday, 10 April 2014. The venue will be Lowport Centre, Linlithgow, West Lothian.

The present committee welcomes nominations for officers and ordinary committee members from any BMIG member. Ideally nominations would be communicated to the secretary beforehand but they can also be made from the floor at the AGM.

Editorial

Along with this issue you should have received details of the next BMIG Annual Field Meeting to be held at Linlithgow, west of Edinburgh, between 9th and 12th April 2015. The area provides a good range of habitats ranging from raised bog to ancient woodland to sand dunes and there is also a variety of synanthropic sites in the region from post industrial sites to historic buildings. We will have access to the Royal Botanic Garden during the weekend. If you are interested in attending, especially if you would like a single room, then you need to return the booking form as soon as you can.

One of the main reasons for our annual meetings is to record myriapods and isopods but meeting organisers have to spend an inordinate amount of time trying to collate these records. Imogen Wilde tells me there are still a few records outstanding from Lincolnshire in 2013 and I know there are data missing from our Haltwhistle meeting earlier this year. Possibly there is material from these and earlier meetings that still needs to be identified. If you need help with identifying your collections then please contact the scheme organisers. Otherwise please make sure you are up to date with submission of your records including any collected other than at meetings.

The article on *Polyxenus lagurus* demonstrates the value of simple observation. It raises a number of points that readers may disagree with but it should stimulate some discussion (notes for this newsletter would be very welcome). The suggestions made by the authors provide scope for further investigation with structured studies.

Putting together this issue has been even more of a struggle than usual. Other than the piece by Helen Ikin and Steve

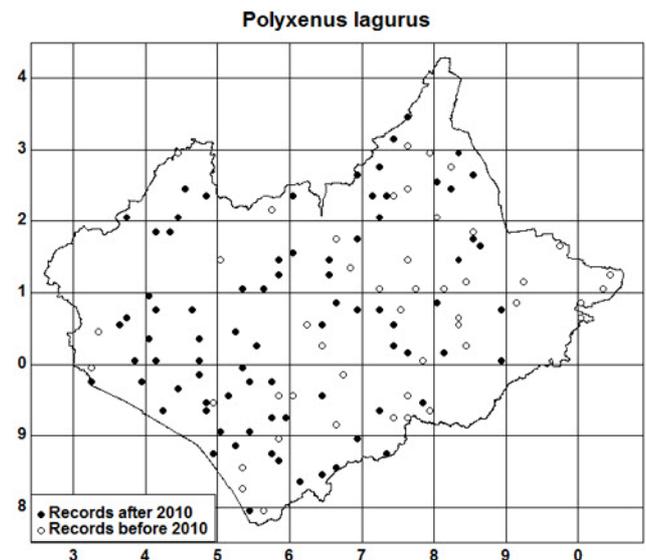
Woodward already mentioned I have, as is often the case, been totally reliant on my fellow recording scheme organisers for material. Please, please will all members consider sending me a short note or a longer article for inclusion.

Paul Lee, Little Orchard, Capel Road, Bentley. Ipswich IP9 2DW

The Ecclesiastical Millipede

Adapted by kind permission of the editor from an article in the Leicestershire Entomological Society Newsletter 51 (September 2014)

In the Leicestershire and Rutland millipede atlas (Daws & Ikin, 2010) the Bristly Millipede *Polyxenus lagurus* was shown to occur in 45 tetrads in the two counties. Since then we have been visiting churchyards throughout the counties primarily looking for solitary bees and wasps. We have searched the church walls and sometimes gravestones and tombs for the Bristly Millipede and found it on 91 of the 226 churches visited. Before 2004, Jon Daws and Ivan Pedley recorded it on a further 13 churches and churchyards as well as other types of site. The current distribution map is shown below.



Our earliest record in the year on walls is 3rd March and the latest we have seen it is 1st October. In November, January and February we have had records from among crumbling mortar at Grace Dieu Priory which seems to indicate that it may over-winter in sheltered cracks and crevices. Small,

presumably young, millipedes are evident at most times of year.

As you can imagine, such a tiny animal is not easy to find. We often find just one, or very few, on the whole church. We are surely missing many more, as a viable population must be a lot larger. We have only searched at or below eye level, of course - who knows how many we have missed on the higher parts of the church. When we do find larger numbers, they are usually clustered on just one part of the church, rather than being dispersed around it.

We have noted the aspect of many of the walls on which *P. lagurus* occurs and this is summarised below.

Aspect of walls	Number of walls on which Bristly Millipedes were found
North	18
East	19
South	27
West	16

It can tolerate a certain amount of direct sunlight and is certainly not found only in shady, damp places like most other millipedes. The bristles probably enable it to withstand more dryness and heat than other millipedes (Wright & Westh, 2006). It probably retires into cracks if it becomes too hot. So far we have not managed to study one church at all times of day to see if the millipede migrates around the church with the sun, but this seems unlikely for such a small animal.

The highest number of individuals seen was about 200 at Stoke Golding, on the blue brick tiles on top of a wall around the churchyard, under Sycamore trees. To the naked eye, there appeared to be nothing growing on the tiles that could sustain so many animals. Yet, under the hand lens we could see the millipedes moving their heads from side to side as if they were grazing. Geoffrey Hall had a close look at a tile fragment for us under the microscope and found chains of cells belonging to a microfungus, possibly a black yeast. Honeydew from aphids is commonly found under Sycamores and it seems likely that the millipedes were feeding on microfungi or algae growing on the honeydew.

Sandstone seems to be the millipede's preferred stone and it is rarely found on ironstone or on granite – neither of which support good algal, fungal or lichen growth. We rarely find it on stone covered in thick lichens or moss, more often it is on surfaces that appear to be free of any growth. It is sometimes numerous under loose stone or mortar flakes on window sills or below walls.

How has this tiny millipede managed to colonise church and other walls in the whole of VC55 and probably most other counties? It cannot fly and is very unlikely to walk far. We have no evidence of its hitching rides on flying insects as do pseudoscorpions. It seems to lack the tools to hang on to another species, although it seems to cling to vertical walls very efficiently. It can jump too if severely provoked.

Our records are mainly from church walls because churches are publicly accessible in each village but the millipede is just as likely to occur on suitable stone on houses and other walls. The books state that it is found under bark but we have rarely, if ever, found it in this situation.

We have been approached by a couple of vicars who listen in polite disbelief as we explain what we are doing. Many churches have CCTV to protect their copper lightning conductors and lead roofs, so we have probably been featured on several videos, peering closely at walls. Oh, it is just those strange millipede people again!

References:

- Daws, J. & Ikin, H. (2010) The Millipedes of Leicestershire and Rutland, *LESOPS* 22.
- Wright, J. C. & Westh, P. (2006). Water vapour absorption in the penicillate millipede *Polyxenus lagurus* (Diplopoda: Penicillata: Polyxenida): microcalorimetric analysis of uptake kinetics. *Journal of Experimental Biology* 209: 2486-2494.
- Helen Ikin, 237 Forest Road, Woodhouse, Woodhouse Eaves, Leics LE12 8TZ
- Steve Woodward, 19 Highfield Road, Groby, Leicester LE6 0GU

Gap Fillers – Woodlouse Recording Scheme

Records for woodlice and waterlice continue to trickle in. Thank you to all those who have submitted records. It is important to have up-to-date information, even for common species. A few are filling in otherwise blank areas on the distribution maps published in the atlas (Gregory, 2009). Please keep sending your records, or images for identification, to me.

Ian Evans has sent me specimens of *Asellus aquaticus* from the Scottish far north; Drumbeg (vc 108, West Sutherland) and Skelbo (vc 107, East Sutherland). Just in case, I checked the structure of male pleopods and 1st pereopods. Both are new vice county records. Although this is an abundant and ubiquitous species across much of Britain (Gregory, 2009) there is a paucity of records from northern and western Britain, and it is conspicuously absent from north-western Scotland. Tantalisingly, there are two records at the extreme north-eastern tip of the mainland (vc 109, Caithness). This apparent geographical distribution is unlikely to be due to winter cold since in Norway *A. aquaticus* will inhabit lakes that are covered with ice for up to 8 months of the year. It is more probable that it reflects an absence of recording across much of Scotland and Wales.

Brett Westward sent me an image of a handsomely marked Pill-Woodlouse, collected by John Bingham from Kingsford (vc 37, Worcestershire). It was alive and well, and living in a salad tray. It was clearly either *Armadillidium pulchellum* or its rare congener *A. pictum*, so I requested some close up images. John duly sent a series of images that clearly showed a 'chamfered' posterior edge of first pereonite; the scutellum extending as ridge around the 'face' from eye to eye; and a roundly truncated tip to the telson. These are all characteristic features of *A. pulchellum*. Whilst this is not as exciting as *A. pictum* would have been, it is another new vice county record, and fills the gap between the records

from Derbyshire and those on the Welsh borders (Gregory, 2009). If only all photographic requests for identification came with images of this quality.

Reference

Gregory, S.J. (2009) *Woodlice & Waterlice in Britain & Ireland*. BRC/FSC
Steve Gregory, Earth Trust, Little Wittenham, Abingdon, Oxfordshire OX14 4QZ

Further myriapods from an isolated island

I recently was sent a centipede from Grassholm by Amy Cooper who was engaged in some fieldwork on Gannets on the island. Grassholm is a rather low, flat-topped basalt island about 18km off the Pembrokeshire mainland with limited terrestrial vegetation due to the large number of breeding seabirds together with exposure and sea spray (JNCC, 2014). There is evidence of prehistoric and possibly early Christian or Viking settlement (RCAHMW, 2014).

The island is a longstanding RSPB reserve with landing not normally permitted which serves as a breeding site for 39,000 breeding pairs of gannets, apparently 10% of the World population. There is an early account of its natural history by Drane (1893). There seem to be few invertebrate records for Grassholm although W.S. Bristow published an account of the spiders in 1931 in which he listed 11 species along with one of ant.

I confirmed Amy's identification of the centipede as *Lithobius forficatus* (a female), collected 07.08.2014. *L. forficatus* is widely spread by human influence and this record invites comparison with the record of the same species from St. Kilda and Boreray (BMIG Newsletter 27) although that is even more isolated. This would certainly seem to be our most isolated Welsh centipede record at the present time.

Amy also collected several millipedes from Grassholm. The specimens were sent to Paul Lee who identified them as *Cylindroiulus latestriatus*.

References:

Bristow, W.S. (1931) The Spiders of the Island of Grassholm and some Additions to the Skomer Island List (South Wales). *Proc. Zool. Soc. Lond.* **101** (1):111-114
Drane, R. (1893) Natural History Notes from Grassholm. *Trans. Cardiff. Naturalists' Soc.* **26** (1):1-13
JNCC. SPA description. Grassholm.
<http://jncc.defra.gov.uk/default.aspx?page=200>
RCAHMW. Grassholm Island Settlement.
<http://www.coflein.gov.uk/en/site/404206/details/GRASSHOLM+ISLAND+SETTLEMENT/>
Tony Barber, Rathgar, Ivybridge, Devon PL21 0BD

The Spiky Yellow Woodlouse *Pseudolaureola atlantica*

Could woodlice be the new avocets or bumblebees? It seems everyone is in on the act of conserving the Spiky Yellow Woodlouse including RSPB and Buglife (who declared it bug of the month in May 2014) although the St Helena National Trust are the folks on the ground. Even Defra are involved in the partnership as St Helena is a UK Overseas Territory. The woodlouse appears to be restricted to a small

area of cloud forest on St Helena. Its population has declined 'alarmingly' since the 1990s according to the St Helena NT and its habitat continues to be threatened by clearance for flax farming. Competition from our own introduced species of woodlice may pose a further threat. RSPB reported the rediscovery of a second colony of the species early this year bringing the total estimated global population to around 100 animals.

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Iridovirus in North Dulwich

Josh Hulbert found the back end of a woodlouse in cobwebs on a fence at a bus stop outside North Dulwich station in London. Nothing out of the ordinary you might think; the remains of dead woodlice frequently turn up in cobwebs. However, he sent me an image with the following message: "My eye was caught by a spot of intense blue in a cobweb. It looks like the shed back section of *Porcellio scaber*, or just half of a dead one. But it is a vivid blue colour. At first I thought someone maybe had been spray-painting something blue and the woodlouse had been coloured. Closer inspection shows it isn't painted, the blue is actually in the exoskeleton". Josh wondered if could have been infected by an Iridovirus.

Iridoviruses are named after Iris the Greek Goddess of the Rainbow due to the vivid blue colours that develop in the advanced stages of infection. This colour occurs when viral particles collect in such large quantities within the woodlouse's body that they form intense blue crystalline structures. The tentative 'species' IIV-31 (Invertebrate Iridescent Virus) can infect many species of woodlice (other types of IIV infect invertebrates in general). I have occasionally seen Iridovirus infections in *Trichoniscus pusillus* agg. where the reddish body pigments and blue virus crystals produce a bright purple colour to the naked eye. In 'Ye Olde' BISG newsletter No. 24 (May 1988) Arthur Chater reports one infected "vividly violet coloured" *Ligidium hypnorum* among many normally coloured specimens in Sussex, and Paul Whitehead found an infected "brilliant mauve" *Philoscia muscorum* in Worcestershire. It is thought that 'covert' infections, where no symptoms are displayed by the host, may be quite widespread.

Josh's specimen was indeed the remains of a *P. scaber* and I believe the colour is almost certainly due to Iridovirus. A very interesting observation, and in Josh's words "proving that there's interesting things to find wherever you are". A stunning example – which supports the case – can be seen at www.flickrriver.com/photos/44150996@N06/5337124838/.
Steve Gregory, Earth Trust, Little Wittenham, Abingdon, Oxfordshire OX14 4QZ

Chordeuma proximum in Suffolk

Following on from Tony Wardaugh's records of *Chordeuma proximum* from NE Yorkshire in the last issue, I can now report another extension of range. During 2013 I was pitfalling for spiders in an area of heath at Upper Hollesley Common, Suffolk. Three transects of traps were used over several months. I have not completed the sorting of all of the samples but one of the traps (TL333472) emptied on 10th

June contained a single male specimen of *C. proximum*. This represents the first Suffolk record of any Chordeumatid and the only East Anglian record of *C. proximum* to the best of my knowledge.

As with most British records of *C. proximum* the Hollesley site lies less than 15km from the sea but otherwise the habitat and the relatively late date were atypical for the species here. It is typically associated with woodland rather than heathland and British records show no strong link with acidic soils although acidic sands do underlie Upper Hollesley Common. An association with acidic soils has been noted in Europe.

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More swarming millipedes

Earlier this year I was contacted by Amanda Cardy from Aberdeen who had noticed 'loads of very cute and black millipedes on the dunes at the beaches around Aberdeen'. Although this was not the first time she had seen millipedes on the beach, on the 17th May 'there were so many, and they appeared to have deliberately clustered together under 'crusts' of sand - all tangled together'. I forwarded Amanda's email to Mike Davidson and he established that Amanda had observed the swarm just south from the Murcar golf club house (roughly NJ959117). Mike got a chance to investigate further on 26th May. He walked up the beach in warm and sunny conditions (a change for Aberdeen) and had a good look round the area of dune Amanda had indicated. There were fairly large numbers of the *Ommatoiulus sabulosus* wandering about on the dune face, mostly heading up hill and a few *Tachypodoiulus niger* in the vegetation at the top of the dune. There were also groups under bits of turf that had fallen down the dune face. Mike suggests perhaps that's why they were climbing back up! He also notes that *Ommatoiulus* is very common on the dunes here and remembers someone at Balmedie, many years ago, catching large numbers in pitfall traps at about this time of year.

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In the journals

Lucio Bonato, Massimo Lopresti, Alessandro Minelli, Pierfilippo Cerretti. (2014) ChiloKey, an interactive identification tool for the geophilomorph centipedes of Europe (Chilopoda, Geophilomorpha). *ZooKeys* **443**: 1-9 doi: 10.3897/zookeys.443.7530

This paper introduces a matrix-based, interactive key to all 179 species of Geophilomorpha (Chilopoda) recorded from Europe. The key is freely available through the web at: <http://www.biologia.unipd.it/chilokey/> and at <http://www.interactive-keys.eu/chilokey/>. (I encourage all readers to try out the key over the next few months and would welcome a review of the key for a future issue of the newsletter. No problem if I receive several reviews. I will either publish all submissions or summarise them if a large number arrive.)

On the web

Paul Harding has drawn my attention to the wiki page that Sam MacNally has produced highlighting the life of CAW Jeekel and his research activities. The article can be found at https://en.wikipedia.org/wiki/C._A._W._Jeekel

CIM

The 16th International Congress of Myriapodology and CIM General Assembly were held at Olomouc (Czech Republic) in July 2014. The only British based representatives present were John Lewis and Greg Edgecombe of the NHM who is currently CIM president. A number of significant changes within CIM were announced. Of relevance to discussions with BMIG was that Bulletin 47 was the last ever hard-copy CIM bulletin. All future publications will appear on the website at www.myriapology.org. The secretariat of CIM will be moving from its long time base at the Muséum National d'Histoire Naturelle (Paris). Jean-Jacques Geoffroy and Monique Nguyen Duy-Jacquemin have served the CIM most admirably as General-Secretary and Treasurer, respectively, over many years. They will assist the new officers, Stylianos Simaiakis and Hans Reip, through a transitory period as they settle into their new roles. It was decided to change the frequency of International Congresses and CIM Meetings, moving from a three year period to a two year period. However, the 17th ICM will take place in 2017 in Thailand and move to a biennial event thereafter.

NEXT NEWSLETTER: Spring 2015

Please send your contributions to reach the editor by
30 April 2015

Supplies of record cards and additional copies of the British Myriapod and Isopod Group Newsletter can be obtained from the Biological Records Centre.

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