

NEWSLETTER

Number 25

Autumn 2012

AGM notice

All BMIG members are invited to attend the AGM to be held at 8pm on Friday, 12 April 2013. The venue will be Brook House Barn and Cottage, Scamblesby, Lincs.

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.

2013 BMIG AGM and Field Weekend

BMIG will be meeting in central Lincolnshire in Spring 2013, at Scamblesby, between Horncastle and Louth. This will be a good location for exploring under-worked areas such as the Lincolnshire Wolds, the Limewoods, heaths near Market Rasen and Woodhall Spa and also coastal dunes. The meeting will be held from Thursday 11th April to Sunday 14th April. We will be taking over Brook House Barn and Cottage (see www.barnbreaks.co.uk for photos, facilities and details of location) and the more members that attend the lower the costs will be. Early booking is necessary. No bookings will be accepted after 28th January 2013.

Glow-worms and Luminous Centipedes.

Records of luminous geophilomorph centipedes of several species occur scattered in the literature and indeed, one local name is "glow worm". As our local wildlife trust was encouraging recording of (coleopterous) glow worms this season it seemed an opportunity to ask if there were any records of luminous centipedes coming in at the same time.

As a consequence, I was put in touch with Robin Scagell of the UK Glow Worm Survey and, although we do not know the species, a series of reports of what would appear to be luminous centipedes were given to me: Bickleigh, E. Devon (December 2005); Leicestershire (October 2009); Elcombe, Stroud, Gloucestershire (January 2010); Bruton, Somerset (June 2011); Mountnessing, Brentwood, Essex (August to November 2011); Lyminster, Hampshire (May 2012); Buckland in the Moor, Devon (June 2012); Mid Wales (June 2012).

These records, even if not all reliable and without species determination, certainly indicate that the phenomenon of

bioluminescence in our species is not that uncommon. What would be valuable would be for people to look out for these and, most usefully, identify the species which, on available data, could be *Stigmatogaster subterranea*, a *Strigamia* species or "*Geophilus carpophagus*" or possibly others. There is no clear evidence so far that *Geophilus electricus* is luminescent.

Tony Barber, Rathgar, Ivybridge, Devon PL21 0BD

A fourth British site for the "Cornish yellow centipede", *Stigmatogaster souletina*.

A recent Bioblitz (16th June 2012) at the University of Exeter / Falmouth University College campus at Tremough, Penryn, north of Falmouth yielded further specimens, a male and an immature, of *Stigmatogaster souletina* (Brölemann), a species only known from West Cornwall and the Pyrenees. The site is that of a former country house upon which much development is now taking place although the site from which this species was taken was the edge of a small area of woodland adjacent to the gardens. Specimens of *Stigmatogaster subterranea* were taken elsewhere on the campus where *Lithobius pilicornis* was abundant.

This site is about 3km south of the CWT Reserve at Devichoys Wood where the species was found during BMIG field meetings in 1998 and 2009 which in turn is only about 2km west of the original Cornish site (Carclew) where Ted Eason found it in 1960. The species was also recorded from the National Trust garden at Trelissick during the 2009 meeting, a site about 5km from Carclew and 6km from Devichoys but separated from these sites by Restronguet Creek and which, interestingly, also yielded *Eurygeophilus pinguis* otherwise known in Britain from the North Devon area.

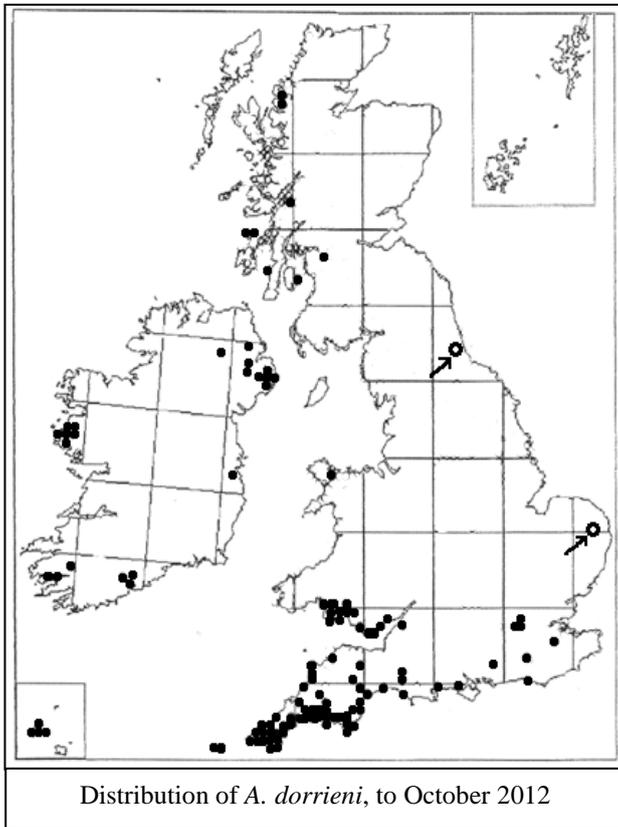
All this suggests, whether native or introduced, the population of *S. souletina* in this area of Cornwall between Truro and Falmouth is well established. It would be interesting to search for the centipede in further sites both within the same area and in adjacent areas.

Tony Barber, Rathgar, Ivybridge, Devon PL21 0BD

Significant new records for the Landhopper *Arcitalitrus dorrieni*

The Landhopper or Woodhopper *Arcitalitrus dorrieni* is our only terrestrial amphipod. It is similar in appearance to the

familiar supra-littoral sand-hoppers, and like these species it will leap into the air when disturbed. However, the Landhopper differs from its beach-dwelling relatives in being dark in colour (almost black) and can be found inland among leaf litter and under dead wood, etc, in gardens, waste ground and woodland. It is flattened from side to side, giving a characteristic 'shrimp-like' appearance, quite distinct from woodlice.



This species was originally described from the Isles of Scilly in 1925. Terrestrial amphipods are typically found in the tropics and this species was presumed to have been introduced along with imported plants. We now know that *A. dorrieni* is native to eastern Australia. From Scilly, it rapidly colonised south-western England and by 1980 had reached Kew Gardens (London). It has spread much further afield in western Britain and its range extends through coastal areas of Wales and western Scotland, including several off-shore islands (see map). It is also widespread in Ireland. However, Kew Gardens had remained its most northerly locality in the 'east'.

Thus, it was with some surprise when Stephen Kelly (Tyne & Wear Archives & Museums) recently sent me a record of *A. dorrieni*, supported by photographs, from inside a house in Sunderland on the north-eastern coast of England (top arrowed circle on map). This is some 350km north of Kew Gardens. It is suspected that the land-hoppers entered the house though ventilation bricks from the garden outside following removal of deep accumulations of soil and leaves from a concrete path. Further specimens were also found in out-building under a rubber mat.

A few days later I was sent another record, also backed by photos, from a site discovered by Dan Hoare (Norfolk Recorder for Aquatic Invertebrates) near Norwich, Norfolk (lower arrowed circle on map). Although this site is some 20 miles inland, it borders the River Yare and is just a few metres above sea level. Here *A. dorrieni* was found in a damp well vegetated yard, beneath sheets of plywood, oil drums and traffic cones. Previous surveys here had not found the species before so it is thought to be a fairly recent colonist.

It is possible that *A. dorrieni* has been over-looked in eastern England, but it is still expanding its range elsewhere. However, its known distribution in Britain and Ireland exhibits a close correlation with mean January temperatures. The southern and western coasts of Britain experience relatively warm winters and this is where *A. dorrieni* occurs. Its expansion may be partly due to climate change, but the east coast of England would seem to be an inhospitable place for a Landhopper, unless the effects of low winter temperatures are ameliorated by coastal (maritime) or human (urban heat-island) influences.

For several years now *A. dorrieni* has been officially adopted by the BMIG Woodlouse Recording Scheme as an honorary woodlouse. It still appears to be spreading, and I would urge all to keep a look out for terrestrial 'Land-hoppers'. If found please send your records to me. Your records are needed (and will be gratefully received).
Steve Gregory, Earth Trust, Little Wittenham, Abingdon, Oxfordshire OX14 4QZ

A report from the BMIG AGM and Field Weekend at Stainborough, South Yorkshire 11-15th April 2012

About 20 BMIG enthusiasts met up for this annual event, some long timers, others complete novices. This was the first time the event had been held in Yorkshire in recent years and the settings were wonderful. We stayed in the Grade I listed Building that is Wentworth Castle (Northern College) and the span of events of this BMIG weekend was grade I too!

Thursday evening was occupied by a lecture on local reserves and their management (Sheffield and Barnsley) by Derek Whiteley, places such as Dearne Valley Park and Worsborough Reservoir to name a couple. Derek enthralled us with the variety of habitats he over sees, potential sites for unusual myriapoda and isopoda species and central to his message was record, records, records - the name of the game. Derek was followed by Paul Richards, formerly curator at Sheffield Museum, who described the local species diversity, including the elusive *Armadillidium pulchellum*. The latter was found locally in flood debris in 2011.

On Friday, after breakfast, members chose different sites to survey. Many initially remained in the Castle grounds. The opportunity to search in the Walled Garden, politely opened specifically for us, was too good to miss. The search was very productive, about 12 species of Isopoda were recorded.

After tea, we were entertained again by great talks, all proved to be fascinating. Wallace Arthur, retired University of Galway Biological Sciences Department Head, enlightened us on variation in number of leg bearing segments of Geophilomorphs. He raised questions including was there a genetic base to this phenomenon, was it related to geography, was it a plastic or fixed condition? His answer was that there are presently too many unresolved variables and more research is needed before any firm conclusions are derived. Tony Barber kept us informed on the status of the New Zealand landhopper *Arcitalitrus dorrieni*. This was first recorded at Tresco in winter 1923/24 and is now spreading fast through SW England.

Steve Gregory and Mark Telfer let us know of their survey work at the gem that is The Eden Project. Surveys of the Mediterranean and Tropical Biomes have been fruitful. Many unusual species have been found here (via importations of plants). This included one millipede of a new order for the UK, a Siphonophorida.

On Saturday we split into several groups choosing local sites of varied habitats eg Langsett Reservoir and Dunford by the River Don where *Lithobius calcaratus* was found along the river bank. Searching the old limestone railway line near the Pennine Way proved rather fruitless. As the weather closed in it was back to base for more fried food! Here there was an opportunity to view some of the specimens under a microscope [the BMIG microscope purchased with OPAL funding – ed.] including Keith Lugg's fantastic finds of the shingle specialists, the millipede *Thalassiosobates littoralis* on the Norfolk coast and the centipede *Pachymerium ferrugineum* from the south coast.

On Sunday, after breakfast, we all set off for home. I for one was enthused to get out there and search, search, search for these wonderful invertebrates. My thanks to all involved in the organisation, as it was a fantastic and informative weekend, especially for the novices.

Una Garland, Hayes', Knapps Lane, Harpford, Sidmouth, Devon, EX10 0NH

Mass mortality of *Ommatoiulus sabulosus* at Merthyr Mawr National Nature Reserve

I witnessed what I thought was a disturbing phenomenon during a visit to the Merthyr Mawr National Nature Reserve (NNR) on the South Wales coast (VC41 East Glamorgan) on the 27th May 2012. Wandering around the dunes I became aware of red-stripped millipedes *Ommatoiulus sabulosus*, in ones or twos, also wandering, seemingly aimlessly as I was, and possibly in some distress in response to the rather hot weather conditions prevailing on the day at this site. I noted that a few were moribund or dead and as I approached nearer to the coastline the number of millipedes found, dead and alive, notably increased (see photo below). These appeared to include specimens in a variety of developmental stages. It seemed that many were seeking some refuge from the hot conditions and along the upper shore line millipedes were found under pieces of washed up flotsam and jetsam where there was a sufficient level of moisture to offer relief from the heat and the prospect of survival. Even under some

of the larger pieces of debris millipedes appeared to be under some stress. No other millipede species appeared to be involved in this movement.

In the following days I found myself trying to work out the reasons for this mass dispersal and mortality. The species is considered to be strongly associated with maritime habitats, most notably from dunes (Blower, J. G., 1985, **Millipedes, Synopses of the British Fauna (New Series), No. 35**, pp.131-134), and is well adapted to surviving in dry conditions that frequently occur in dune habitats (Lee, P., 2006, **Atlas of the Millipedes (Diplopoda) of Britain and Ireland**, Pensoft, pp. 150-151). Two factors may have contributed to this mass mortality. *O. sabulosus* populations often fluctuate from year to year and have been recorded making movements (or 'migrations') in large numbers (Gilham, M. E., 1987, **Sand Dunes, The Glamorgan Heritage Coast Wildlife Series, Volume 1**, Heritage Coast Joint Management and Advisory Committee, pp. 60-61). High levels of rainfall were recorded for the previous weeks and months in the area which led to abnormally high levels of water in the dune slacks, as well as a raised water table and increase in humidity generally across the site. It is possible that a large number of millipedes were encouraged to move out onto areas of the dune which perhaps would not normally support such large numbers. With a sudden change to hot conditions and a drop in water levels (the effects of temporary high water levels and their consequent drop in the dune slacks were very visible) many millipedes may have been overwhelmed on the drier parts of the dunes – a rapid diminishing of areas offering suitable refuge already occupied and forcing others to wander until they eventually succumbed to the daytime heat. Mary Gilham in her book about the Merthyr Mawr sand dunes (see above) also reported on the occurrence of another millipede species with a coastal bias – *Cylindroiulus latestriatus*. This was observed in some years to occur in 'plague proportions' and at these times was predated on by birds as evidenced by pellets containing large numbers of the undigested integument of this species. In addition there were large



numbers of intact dead specimens on the dunes which, it was suggested, had blown in from other (litter-rich) areas. It is possible that in these cases, *C. latestriatus* was faced with the same problems as suggested above for *O. sabulosus*. I have not been previously aware of such incidents affecting populations of millipedes in this way and I would be very

interested to hear of other cases of such mortality observed by myriapodologists and especially if they have a better explanation than the one offered above for the mass mortality at Merthyr Mawr.

Jim Flanagan, 12 Coronation Road, Stocksbridge, Sheffield S36 1AX.

Ebooks on iBooks

BMIG have recently produced three introductory guides to British Myriapods and Isopods. In order to allow for extensive illustrations at an affordable price (further subsidized by a grant from OPAL), they are in the form of electronic books. However this does not tie you to your desktop computer to view them. If you would like to have the ebooks available to you in the field, where you can view species images and check diagnostic features, why not upload them to a portable media device, such as an iPhone, iPad or Kindle? The Kindle of course only offers a black and white rendition, while the iPad is a little large or vulnerable to take into the field. However, an iPhone offers a very portable, colour alternative. It is useful for offering ready access to the keys and images of diagnostic features for anyone needing a reminder in the field, to check against live specimens. I have found it to be very useful in providing images to illustrate species when describing to students or participants on a guided walk. The 'pinch/stretch zoom' facility offers an almost microscope-like experience.

It is very easy to install the ebooks on these devices. First, follow the instructions for your device (as described in the ebook CD introduction) to install each book on your computer and then sync them to your 'phone. For an iPhone I use this method:

- Open CD folder on your computer (from disk or download file)
- Move individual PDFs into iTunes.
- Install iBooks app on iPhone 4/4s/5
- Connect iPhone to computer via cable/Bluetooth etc
- Sync the selected books to the iPhone

No doubt there are more technically minded people out there who can suggest other ways to do this, but I just wanted to raise the possibility with those who have already bought the books and whet the appetite of those who have yet to take the plunge. Never again will you have to leave home without your field guide.

While on the subject, I should also answer a question that I frequently hear; "How do I get out of the ebooks once open on my computer? There is no exit button." The easy answer is to press 'esc' on the keyboard, but 'Control/alt/tab' will also switch you to another program.

Finally I should mention, for those of you who prefer a 'proper' book that the ebooks do print out very nicely. The cheapest way is probably to print six ebook pages per portrait A4 paper page. This is really the smallest you can legibly go, while still reproducing the images at a useable size. All three books will fit well into a 40 page display

folder with clear plastic wallet pages. The very best alternative is to print out two ebook pages in a portrait layout, which produces a very clear reference manual. The Woodlice need a 40 page folder, but the Millipedes and Centipedes will each suffice with 30 plastic wallet pages.

The ebooks can be obtained for £12 from:

<http://www.naturebureau.co.uk/introduction-centipedes-millipedes-woodlice>

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Millipedes

Note its telson, note its head
gonapods, antennae, alive or dead
check its collum, check its form
segment numbers, unusual or norm
observe paranota, observe ocelli too
habitat and geology, give a clue
record the sex, record its age
bark, soil, rubble, present a stage
mark its growth, setae pattern seen
characters noted, features to glean
watch its beauty, watch its style
wonderful creatures, its all worthwhile
note grid reference, name, site, date
spring and autumn, records to collate.

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NEXT NEWSLETTER: Spring 2013

**Please send your contributions to reach the editor by
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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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