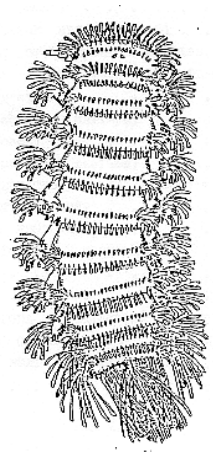
British Myriapod and Isopod Group



Spring 2010 **Newsletter number 20** **Editor: Paul Lee**

BMIG business

Help! Putting together this issue of the newsletter has been hard work. There is still far more white paper than I wanted. I need your help with the next issue. Please send in your observations, details of unusual records and notes of anything else that your fellow myriapodologists and isopodologists may be interested in. If you look back through the last few issues the list of authors is very much the same each time. There must be more of you out there with stories to tell.

After a long down period the BMIG website is now back online at:
www.BMIG.org.uk
Take a look. The site is now being hosted by BRC and although it is not vastly different from the version previously hosted by Craig Slawson there are plenty of changes planned. Keep checking back for updates and refinements. Amongst other things to look out for is an announcement about a possible autumn field meeting in Scotland.
Paul Lee, Oakdene, The Heath, Tattingstone, Ipswich IP9 2LX

AGM notice

All BMIG members are invited to attend the AGM to be held at 8pm on Friday, 9th April 2010. The venue will be St Deiniol's Library, Hawarden, Flintshire.

The present committee is keen to receive nominations for new committee members from any BMIG member. Nominations for chairman and vice-chairman are also required. Ideally nominations would be communicated to the secretary beforehand but they can also be made from the floor at the AGM.

2010 BMIG AGM and Field Weekend

The 2010 meeting will be held from Thursday 8th to Sunday 11th April 2010 and will be based at St Deiniol's Library, Hawarden in Flintshire.

To the west and south of Hawarden the varied landscapes reflect a range of Palaeozoic geology, including large areas of Carboniferous limestone with areas of grassland and woodland. Arrangements are being made for access to various North Wales Wildlife Trust nature reserves and possibly National Trust properties. There are extensive areas of Access Land and the southern shore of the Dee estuary is a few miles away.

If you want to join the meeting it is still possible to attend but you will need to make your own arrangements for accommodation in the area and you must phone me as soon as possible.
Paul Harding, 60 Boxworth Road, Elsworth, Cambridge CB23 4JQ.
Tel: 01954 267218. Email: pha@ceh.ac.uk .

FSC Myriapod and Isopod courses

Following a break of several years the FSC course led by Paul Lee, "Identifying Centipedes, Millipedes and Woodlice" is being offered again from 29th October - 1st November 2010 at Flatford Mill. Early booking is recommended as places are limited. To book or for further details contact: Flatford Mill, East Bergholt CO7 6UL. Tel: 01206 298283

A new course is also on offer at Kindrogan in Perthshire. Gordon Corbet will be leading "Finding and Identifying Millipedes and Centipedes" from 7th to 10th May 2010. To book or for further details contact: Kindrogan Field Studies Centre Enochdhu, Blairgowrie, Perthshire, PH10 7PG. Tel: 01250 870150

BENHS Workshops

An introductory workshop, led by Steve Gregory, on the identification of woodlice, millipedes and centipedes was run by the British Natural History & Entomological Society at Dinton Pastures, near Reading, Berkshire on Saturday 3rd October 2009. After a presentation on the characters used to identify these groups, participants had the chance to name their own material or specimens made available on the day. The workshop will be repeated on Saturday 2nd October 2010. Advance booking is essential to reserve a binocular microscope. Please contact Dr. Ian McLean, BENHS Indoor Meetings Secretary, (E-mail: ianmclean@waitrose.com).

Bulletin of the British Myriapod and Isopod Group Volume 24

The editors are in the final stages of preparing volume 24 of the Bulletin of the British Myriapod and Isopod Group. There will be plenty of copies available for sale at the field meeting in April if you want to avoid postage and packing charges. If you are not attending the meeting you will need to contact Paul Harding to get your copy. As soon as it is published further details including the price will be announced on the website and through the discussion forum so keep checking and remember that back issues can also be purchased from Paul. His contact details are:
Paul Harding, 60 Boxworth Road, Elsworth, Cambridge CB23 4JQ.
Email: pha@ceh.ac.uk .

Les crustacés isopods de la Manche

This publication was produced by Alain Livory of the Association Manche-Nature in 2007. It covers 73 species of terrestrial (woodlice), brackish and marine Isopods in the French region of La Manche in Normandy. Although the Association Manche-Nature has a website manche-nature@wanadoo.fr it is not possible to purchase their publications online. The 94 page book is available at 28 euros plus postage from Association Manche-Nature, 83 rue Geoffroy-de-Montbray, 50200 Coutances.

The Aberdeen Bestiary

The Aberdeen Bestiary belongs to Aberdeen University Library and is considered to be one of the best examples of its type. The manuscript, written and illuminated in England around 1200, is of added interest since it contains notes, sketches and other evidence of the way it was designed and executed. A wide range of animals, real and mythical are described and illustrated.

Interestingly there is a descriptions of the Millipede within the "account of worms" – but unfortunately no illumination:

"The land-based millipede, *multipes*, is so called from its large number of feet; rolled up in a ball, it swells in pitchers."

The manuscript can be found on-line at http://www.abdn.ac.uk/bestiary/intro.hti where there is a search facility and translation of the original latin text.
Mike Davidson, 77 Mile-end Avenue, Aberdeen AB15 5PS

RES Conference and Network Meeting (ENTO10)

BMIG members are invited to attend the Royal Entomological Society Conference & Network Meeting to be held at Swansea University from July 26th to 28th 2010. Further information, registration, abstract and booking forms are available on www.royensoc.co.uk or phone: +44 (0)1727 899387.

Red listing Myriapods

Recently I was appointed chair of the Terrestrial Invertebrate Red List Authority for IUCN's Species Survival Commission. This means that I have responsibility for organising and coordinating assessments and reviews for the Red List of threatened species. My grouping covers all terrestrial and freshwater invertebrates that do not have a dedicated specialist group at present and which are not part of a major IUCN assessment programme. The Red List is now one of the most important and useful activities of IUCN, it now has good representation of all vertebrate groups but invertebrates are seriously under-represented. Our aim is to significantly increase the number of invertebrates on the list.

Over the next few months I will be establishing new systems for increasing the number of invertebrates on the Red List. I am hoping that it will be possible to find people who will be interested in assessing the status of myriapods (preferably as whole taxonomic groups, or geographical faunas, but single species assessments can also be accommodated). Before moving to assessment I need to locate people who will act as reviewers of assessments. For each assessment we need 2 reviewers. I will act as one and will need a few people who are able to provide a quick review of the accuracy of the assessment. Reviewers do not need to be expert in that particular species, we need people with experience of similar groups (e.g. families) who can tell if the information presented and its interpretation is reasonable for that type of organism. The lack of reviewers and the lack of any organised assessment process for most invertebrates has so far prevented more than a few invertebrates reaching the Red List.

If you are interested in being involved please contact me, I can then provide more detail on what information is needed. I do not expect there to be much action on this for a while as I am just starting to organise a system, activity in future will depend on the level of enthusiasm. I hope we can improve the assessment of myriapods (from 31 Doratogonus millipede species) before too long.
Dr. Justin Gerlach, Scientific Co-ordinator - Nature Protection Trust of Seychelles, 133 Cherry Hinton Road, Cambridge CB1 7BX, UK
e-mail: JstGerlach@aol.com

Seashore Myriapods

The data on littoral myriapod species which I presented at the Görlitz congress and which has now been published in Soil Zoology (copies of pdf available on request) has also been entered into WORMS (World Register of Marine Species) at www.marinespecies.org/index.php .

I am interested in littoral myriapods from anywhere around our coast, the Irish coast, the north coast of France and further afield. They are unexpected unless you are looking for them and sometimes you can spend ages without finding any - as I did on the Somme estuary last year.

Centipedes:
Strigamia maritima - rock crevices, shingle (e.g. near rocks, groynes), under rocks on rocky /shingle shore. Often very abundant. Largish, reddish.
Hydroschendyla submarina - rock crevices down to below high water. Elusive - need to split open rocks ('crowbar'). Largish, reddish.
Geophilus gracilis (*Geophilus fucorum seurati*) estuarine, saltmarsh etc - pale

Schendyla peyerimhoffi estuarine, saltmarsh, rock crevices etc - pale

Other species may also be found on or close to the shore e.g. *Stigmatogaster subterranea* and *Geophilus flavus*. The few records we have of the small pale *Geophilus pusillifrater* are all coastal and our only records of *Pachymerium ferrugineum* are from coastal shingle.

Millipedes:
Our only true halophilic millipede is *Thalassisobates littoralis* which resembles other nemasomatids / blaniulids such as *Nemasoma varicorne*. There are isolated records around our coastline and, amongst other techniques, trapping in shingle has produced it. Those of us at the Oban meeting found it on Seil Island. *Cylindroiulus latestriatus* is very often found above high tide level on shores.
Tony Barber, Rathgar, Ivybridge, Devon PL21 0BD

Some thoughts on cryptic species in British and Irish Isopoda

I have just received my copy of Steve Gregory's masterful synthesis of the distribution and ecology of British and Irish terrestrial and aquatic Isopoda (Gregory, 2009). Looking through the maps reveals that some species are widespread and common, others are known from only a few sites, often widely spaced, and rare. Whenever I see distributions for rare species I immediately wonder how such species exchange genes with other members of the same species in order to maintain genetic continuity. This question is especially pertinent for species on islands, as Britain and Ireland both are. A further complication is that the known range for some species are often very large, even extending into Africa in some cases. The combination of extensive ranges, with the British and Irish species at the north-western margin of these ranges, plus the isolated island populations, sends a strong message that we should immediately think of cryptic species. What are cryptic species? They are species in which real, often highly divergent, species are all "hidden" behind similar morphology. There are many examples of these species in the literature and they are particularly common in Crustacea, especially Amphipoda. For example we recently looked at mitochondrial DNA sequences from the cytochrome oxidase I (COI) gene in two "subspecies" of the subterranean amphipod *Niphargus kochianus kochianus* (fond in southern England) and *Niphargus kochianus irlandicus* (found in Ireland). There is no overlap in the distribution of these two taxa but they are very similar morphologically. COI sequences showed that these two taxa are highly divergent with no common ancestor for 23 million years (Hanfling et 2008).

What does this mean for the Isopoda of Britain and Ireland? I would hypothesise that some, perhaps the majority, of the species known from only a few squares are in fact cryptic species. There is support for this hypothesis in the "subspecies" *Oniscus asellus asellus* and *Oniscus asellus occidentalis.* Bilton et al (1999) used allozymes (protein products of DNA) to show that these two taxa are divergent with Nei D values suggesting that they are separate species. Bilton et al interpreted the fact that they can interbreed to maintain them as one species but it is equally valid to consider them as good species which have not yet attained reproductive isolation.

Other species which jump out as potential cryptic species are: *Buddelundiella cataractae* (range Mediterranean Finland and England to Georgia), *Miktoniscus patiencei* (north-west Spain to Ireland), *Ortoniscus flavus* (Spain to Ireland), Irish populations of *Trichoniscoides albidus* (Ireland to Denmark), Irish population of *Trichoniscoides sarsi* (Ireland to Sweden), Irish populations of *Halophiloscia couchii* (GB and Ireland to Senegal!), Irish populations of *Armadillidium depressum*, *nasatum* and *pulchellum* (all throughout Europe), *Eluma caelatum* (GB and Ireland to NW Africa), Irish populations of *Porcellio laevis* (Europe and N. Africa). Perhaps the best example is the isolated Irish population of *Acaeroplastes melanurus* which is otherwise found in southern Europe. I find it impossible to believe that this can be the same species as individuals found in Croatia or the Azores.

Paradoxically it appears that French and British populations of *Proasellus cavaticus* may be closely related (C. Douady pers. comm.).

References

Bilton, D.T., Goode, D. and Mallet, J. 1999. Genetic differentiation and natural hybridization between two morphological forms of the common woodlouse, *Oniscus asellus* Linnaeus, 1758. *Heredity* **82**:462-469

Gregory, S. 2009. *Woodlice and waterlice (Isopda: Oniscoidea and Asellota) in Britain and Ireland*. BRC and FSC. 175 pp.

Hanfling, B., Douerello-Soler, I., Knight, L. and Proudlove, G.S. 2008. Molecular studies on the *Niphargus kochianus* group (Crustacea: Amphipoda: Niphargidae) in Great Britain and Ireland. *Cave and Karst Science* **35**:35-40.

Graham S. Proudlove, Department of Zoology, The Manchester Museum, The University of Manchester, Manchester M13 9PL. Email: g.proudlove@manchester.ac.uk

Urban millipedes

I'm looking for some references on millipedes of urban areas, especially from western Europe. Can you help me? "Simple" faunistic ones would also be perfect.
Dr Ferenc Vilisics, Szent István University, Fac. Vet. Sci., Institute for Biology, H-1077, Budapest, Rottenbiller str. 50. HUNGARY
e-mail: vilisics.ferenc@gmail.com

In the journals

The following publications may be of interest to BMIG members:

Barber, A.D. 2009. Littoral myriapods: a review. *Soil Organisms*, 81(3):735-760.
Representatives of many terrestrial arthropods groups including myriapods (Pauropoda, Symphyla, Diplopoda and Chilopoda) have been recorded from sea shore habitats. The Chilopoda, notably the Geophilomorpha, have a relatively large number of species from different genera and locations around the world which have been recorded as halophilic. In a survey of relevant literature, problems have occurred in

identifying species as halophiles because of lack of precision of habitat details. There seem to be some features of geophilomorphs which pre-adapt them to a littoral habitat and to be able to survive transportation in seawater. This could lead both to wide distribution and the occurrence of isolated populations.

AIDGAP Key to the identification of British centipedes
A.D.Barber ■ Date: 2008 ■ Price: £8.00
This AIDGAP identification guide should enable non-specialists to identify the 57 species of centipede found on the island of Britain, including 7 species known only from greenhouses. It includes dichotomous and tabular keys backed up by concise confirmatory notes.

Linnean Society Synopses of the British Fauna: Centipedes
A.D.Barber ■ Date: 2009 ■ Price: £35.50
Aside from the insects, centipedes (Class Chilopoda) are some of the commonest larger arthropods found in gardens, waste ground, woodland, grassland and moorland. This new *Synopsis of the British Fauna* covers the entire British list. Illustrated keys are given to the four orders and to 61 species, including species which have only been found within heated buildings. There are detailed taxonomic notes on the 10 families and 18 genera.

Both keys are available from FSC Publications:
http://www.field-studies-council.org/publications/index

NEXT NEWSLETTER: Autumn 2010
Please send your contributions to reach the editor by 30 September 2010

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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