THE BRITISH ISOPOD STUDY GROUP

Newsletter of the Isopod Survey Scheme

Number 21 September 1986

## EDITORIAL

My requests in Newsletter 20 for information on various aspects of woodlice biology and ecology invoked a response from several recorders. In answer to the question "What eats woodlice?", Martin Speight (Forest and Wildlife Service, Bray, Ireland) writes:

> "For the past year I have maintained a small population of frogs (Rana sp.) almost exclusively on woodlice (Oniscus asellus and Porcellio scaber) collected from our back garden. Whilst collecting the daily dose of frog food, I have frequently noted lithobiid centipedes in the process of eating woodlice (usually after dark by torchlight)."

Concerning colour varieties, Arthur Chater (British Museum, Natural History) writes:

> "While searching among litter and moss on a damp clayey slope in ash/alder wood on the east bank of Afon Mwldan 1.5 km north-west of Penparc (vice-county 46), I found one specimen of Oniscus asellus (7 mm) and several Trichoniscus pusillus which were a vivid violet colour. All were within an area 50 cm x 20 cm among a mixed community of normal Oniscus asellus, Trichoniscus pusillus, Porcellio scaber and Philoscia muscorum."

The plot thickens! I have found 'albino' specimens of Oniscus asellus on a couple of occasions but never purple ones. Observations on any other strangely coloured woodlice would be gratefully received.

It seems that the conservation of woodlice is being taken seriously. The Nature Conservancy Council is shortly to publish a Red Data Book of threatened insect species and is now beginning to collect data for a similar publication on non-insects. The Isopod Scheme is fortunate in having already determined which species of woodlice are most under threat. In 'Woodlice in Britain and Ireland', Paul Harding and Steve Sutton highlight 3 species in Great Britain and 4 species in Ireland which are considered either 'vulnerable' or 'rare'. One of these species Metatrichoniscoides celticus was thought to be endemic to the South Wales coast but has recently been found further north (see article by Arthur Chater elsewhere in this Newsletter). Accurate assessment of the true rarity of isopods obviously requires accurate knowledge of their distribution, so continued recording is essential. There are still large areas of the UK which are under-recorded for all but the commonest species, so keep sending in the cards!

## BISG/BMG JOINT MEETING - SPRING 1987

The annual gathering of the isopod and myriapod groups will be held at Langford near Bristol from Thursday 23 to Sunday 26 April. Details are enclosed with this Newsletter. The Bristol area is excellent for isopods and will offer opportunities to visit coastal sites on the Severn Estuary and limestone areas on the Mendips and Avon Gorge. It will also allow northerners the chance to wrestle with the gigantic Armadillidium depressum (bring your large size specimen tubes!).

## BISG/BMG MANCHESTER MEETING - 2-6 APRIL 1986

The "greatest concentration of educational buildings in Europe" played host to the 1986 joint meeting of the BISG and BMG study groups. The meeting had a strong diplopodan flavour with the presence of 3 of Europe's leading myriapologists. Henrik Enghoff graced us with the biggest smile this side of the Urals, Wolfgang Dohle gave the Charles Brookes Memorial Lecture on "Myriapoda and the Ancestry of Insects" and Gordon Blower managed to organize a very successful meeting, despite the attempts of the Loxford Tower staff to change the timetable just as the latest revision to the programme rolled off the photocopier. However, there was plenty of interest for the woodlousers even though several participants could be seen to be longing for a slumping cliff or salt-marsh. It is always a pleasure to spend a few days with friends with the same interest in "litter critters" and I hope that as many recorders will make the trip to the West Country for the next meeting. It is interesting to note from the species list below that Armadillidium vulgare was not found by any collectors confirming that this is a rare animal in central northern England.

## ISOPODS COLLECTED AT BISG/BMG MEETING AT MANCHESTER 2-6 APRIL 1986

Compiled from lists supplied by Adrian Rundle, Desmond Kime, Douglas Richardson, Paul Lee, Steve Hopkin and Tony Barber

| | 33(SJ) 77 Tabley | 33(SJ) 57 Delamere | 33(SJ) 97 Kerridge | 33(SJ) 80 Smedley | 33(SJ) 89 Gorton | 33(SJ) 89 Milesplatting | 33(SJ) 89 Polytechnic | 33(SJ) 89 University | 33(SJ) 89 Heafon Mersey | 33(SJ) 89 Didsbury | 43(SK) 08 Whaley Bridge | 43(SK) 27 Coombes Dale | 43(SK) 17 Cressbrook Dale | 43(SK) 16 Lathkill Dale | 43(SK) 15 Mill Dale | 43(SK) 15 New Inn | 43(SK) 15 Hall Dale | 43(SK) 17 Monks Dale |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oniscus asellus | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Porcellio scaber | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | |
| Porcellio spinicornis | | | | | | | | | | | | | | | | ✓ | | |
| Trichoniscus pusillus | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ |
| Trichoniscus pygmaeus | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | |
| Philoscia muscorum | ✓ | ✓ | | | | | | | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ |
| Armadillidium pulchellum | | | | | | | | | | | | ✓ | | | | | | |
| Androniscus dentiger | | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | |
| Haplophthalmus mengei | | | | | | | | | ✓ | ✓ | | | ✓ | | | | | |
| Cylisticus convexus | | | | | | | | ✓ | | | | | | | | | | |

If you have not already done so, PLEASE send cards of these records to me as soon as possible.

## ASELLUS IN THE SOUTH-EAST

During a general survey of aquatic invertebrates, on the Local Nature Reserve at Rye Harbour (SSSI) in East Sussex, begun in June 1982, I have recorded Asellus aquaticus in some of the drainage dykes and a shallow stream, though not in the brackish waters of the coastal strip. Whether its preference for cul-de-sacs rather than the main flow of the drainage system is real or merely apparent is under investigation. This species is also widespread in the deep, flooded gravel pits and 2 shallow ditches of the Castle Water Estate (SSSI) sandwiched through the LNR; the pits form an extensive interconnected system.

Since 1984 the survey has been extended to a greater variety of sites including, among others, a private lake and an ancient moat at Iden, old gravel pits at E Guldeford (SSSI), and a pond in the grounds of Smallhythe Place (National Trust) in East Kent. I also noted A. aquaticus at 2 sites in Leicestershire during a field weekend with the Balfour-Browne Club when my attention should have been on water beetles.

A. meridianus is also wide-ranging here in East Sussex, and its sites do include a brackish ditch close to the River Rother estuary. I have found it in a drainage dyke on The Dowels near Appledore; in ponds near Peasmarsh, Iden, Beckley (the Sussex Trust property in Flatropers Wood), and at Fairlight; and I found one small one in Powdermill Reservoir near Hastings. So far I have not discovered any logical pattern for the relative distribution of the 2 species.

Lasting visual records of the animals in action on videotape are being made, using a video camera on the microscope, and adding titles and dates and any other relevant comments. The tapes can be edited and an audio commentary added, with quite dramatic results.

Like most aquatic invertebrates, a dead Asellus can be quickly taken over by a saprophytic fungus such as Saprolegnia, and a video of S. diclina bearing zoosporangia and oogonia, completely investing the body of a water louse, makes a vivid demonstration of Nature's rapid utilization of "waste".

In this continuing study, thanks are due to the landowners, the Wardens and Management Committee of the LNR, the Nature Conservancy Council, the National Trust, the Sussex Trust for Nature Conservation, the Southern Water Authority, and the Hastings Fly Fishers Club.

References

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Steel, E.A. 1961. Some observations on the life history of Asellus aquaticus (L.) and Asellus meridianus Racovitza (Crustacea: Isopoda). Proc. zool. Soc. Lond., **137**, 71-87.

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Williams, W.D. 1963. The ecological relationships of Isopod Crustaceans Asellus aquaticus (L.) and A. meridianus Rac. Proc. zool. Soc. Lond., **140**, 661-679.

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# RECENT WOODLOUSE RECORDS FROM DYFED

The purpose of this note is to draw attention to several extensions of range or habitat in south-west Wales that have come to light since recording ended for Woodlice in Britain and Ireland in 1982.

## Metatrichoniscoides celticus

On 28 March 1986, in the company of I K Morgan and A P Fowles, I collected 5 individuals of this species in an overgrown, disused limestone quarry 7 km inland near Crwbin in Carmarthenshire, vc 44, 22/468128, at 170 m a.s.l. The identification was confirmed by Alison Trew. The animals were under large blocks of limestone embedded 15 cm or more in damp, stoney soil among sparse, scrubby vegetation on the floor of the quarry, and half a dozen or so were seen under each suitable stone lifted in an area c. 10 x 5 m. Associated species under the same stones were Trichoniscus pygmaeus, T. pusillus, Androniscus dentiger, Armadillidium vulgare, Philoscia muscorum, Oniscus asellus, Porcellio scaber and Platyarthrus hoffmannseggi (ants' nests were frequent). The site is some 50 km from the previous sites for M. celticus, and is the first inland one. It is clearly worth searching other inland sites for this species, which is easily provisionally identified with a hand-lens by the complete absence of ocelli and the spinulose dorsal surface. In contrast to reports of the supralittoral specimens, the Crwbin animals were quite active and moved at about the same speed as Trichoniscus pygmaeus individuals of comparable size.

## Halophiloscia couchi

As indicated in Woodlice in Britain and Ireland p 65, this species, previously thought not to occur in Britain north of Nash Point in Glamorgan, has been found in several other places on the Welsh coast, at Porthmelgan beach, St David's Head, Pembrokeshire, and at 3 sites in Cardiganshire. In 1985 it was found at Craig Ddu 2.5 km west of Llanstephan in Carmarthenshire, and, during the BISG meeting, at Penmon in Anglesey. At all these sites it was found in the usual situation in storm beaches forming a terrace above the normal intertidal part of the beach, under unstable, sometimes earthy cliffs. The Cardiganshire and Pembrokeshire sites are on acidic rocks. Considerable energy and agility are required even to see, let alone to capture the animals, though juveniles are easier to corner. It is doubtless widespread all up the Welsh coast and should certainly be looked for at least in north-west England if not further afield.

## Armadillidium album

This species was collected from the Ynys-las dunes (Dyfi NNR), Cardiganshire, by M G Morris in 1971. It has been repeatedly searched for since, and was thought to be extinct, perhaps because of extreme disturbance of the strandline by the quarter of a million visitors who drive, picnic, play and collect driftwood on the intertidal sands and dunes here each year. However, in April 1986 A P Fowles refound the species in small numbers under driftwood on the western seaward side of the dunes, and in considerable quantity in a largely buried driftline along some 600 m of the northern and eastern, inland side of the dunes, mostly within the 1 km square 22/6094. This driftline consists chiefly of Spartina (Cord-grass) debris with some seaweed, and is on average 15 cm deep and at least 50 cm wide. It is well above the normal high tide driftline and is presumably thrown up by storms; it is largely buried by blown sand. How regular a feature of these dunes this driftline is is not yet known. Most handfuls of this debris contained 1-5 individuals, so A. album is

probably present in this particular microsite in great abundance, as well as being present in presumably lesser numbers elsewhere along the strandline. As I had spent a total of at least 10 hours searching in vain for the species here on various occasions over the years, it is perhaps unwise to assume too hastily that it is extinct in any particular locality. It is also clearly unwise to assume that even extreme disturbance necessarily causes extinction.

In June 1986 A P Fowles found one specimen of A. album under debris on the strandline on the east side of the Teifi estuary at Pen yr Ergyd, Cardiganshire, 22/163485. This is an unusual site for the species as the shore is steeply sloping, the intertidal zone being only some 20 m wide. Poppit Sands, on the opposite side of the estuary in Pembrokeshire, with a very wide intertidal zone of 500 m or more in places, looks a much more typical habitat for the species but it has not yet been searched for properly here.

A. pulchellum*

There seem to be no records of this species from synanthropic sites in Britain and Ireland. In Dyfed it occurs chiefly on coastal cliff slopes in mats of moss, Stonecrop and Thyme on partly vegetated, often rather earthy scree. In June 1984 I was surprised to find it in abundance under moss and ivy on the crenellated top of a 12 m long mortared stone wall marking the entrance to a farm drive in a very rural part of Cardiganshire, just south of Tre-groes, at 22/409443, at 95 m a.s.l. and 12 km inland. The surrounding land is pasture with old hedges. The wall, partly shaded by hedge trees, is probably at least 50 years old, and from its overgrown appearance seems to have been undisturbed for a long time. In June 1985 I found the species under ivy on the smooth cement coping of a much shorter stretch of mortared and cemented wall at the entrance to Blaenpennal churchyard in another equally rural part of Cardiganshire, 22/625640, 230 m a.s.l., and 11 km inland. This wall is probably at least as old as the other. In May 1986 I found it in a sparsely vegetated, tumbledown unmortared wall of water-worn stones by an abandoned vegetable garden at Rhydrosser, also in Cardiganshire, 22/564678, 150 m a.s.l., and 4 km inland. At none of these sites is there any rock outcrop or any sort of suitable natural habitat nearby, and it is difficult to guess how and when A. pulchellum reached these short, isolated bits of wall.

Porcellio dilatatus

There is a thriving population of this species in a group of long-disused, overgrown limekilns on the Cardiganshire coast near Llanrhystud, 22/519684. It was presumably introduced with limestone in the nineteenth century (although most of this came from the Gower Peninsula where the species is not recorded).

* Editor's note: In June 1985 I discovered A. pulchellum under bark of a fallen pine tree near Bramshill Plantation (41766613, vc 12, N Hants). This species should therefore be looked for in similar habitats over the whole of southern England.

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## ARMADILLIDIUM DEPRESSUM IN SOUTH-EAST ENGLAND

A. depressum has generally been assumed to have a south-western distribution in England and Wales with a few synanthropic outliers (Woodlice in Britain and Ireland pp 76-77 (1985)). During casual recording in south-east England in 1983-1985 I found it in 6 sites and it seems worth drawing attention to these in the hope that further searches will show whether it is significantly more widespread here than has been thought. The south-east seems to have been rather poorly recorded for woodlice as a whole, which is unfortunate as from the point of view of interpreting distribution patterns it is one of the more important parts of the country.

Five of the sites are churchyards, at Bury 51/015132, Sompting, 51/162056, and Findon, 51/116085, in West Sussex, vc 13; and at West Firle, 51/472072, and Wilmington, 51/544042, in East Sussex, vc 14. At Wilmington it was especially abundant in every possible niche in old tombs, walls and under loose stones, and was abundant on walls elsewhere in the village. At West Firle, under a loose stone 25 x 35 cm between gravestones against the east wall of the south aisle, it was in the company of A. vulgare, Porcellio laevis, Porcellionides pruinosus, Androniscus dentiger and Philoscia muscorum, a rewarding microsite. The sixth site is in vc 14 at the Bentley Wildfowl Reserve, 51/486159, where A. depressum was abundant after dark on a mortared brick wall beside the drive and lawns of the mansion.

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## TRACHELIPUS RATHKEI NEW TO GLOUCESTERSHIRE

On 16 May 1986 at Wingmoor Farm Refuse Tip (32 933276), I discovered a population of Trachelipus rathkei. Their habitat is distinctive, seemingly being restricted to the lower reaches of a long unvegetated embankment of dumped clay, rubble and masonry, covering domestic refuse. The embankment faces roughly north-east, reaches some 10 m in height and rests on heavy, wet pasture on Lower Lias Clay.

I am grateful to Gloucestershire County Council for permission to study at the site.

P F Whitehead, Moor Leys, Little Comberton, Pershore, Worcs.

## 'ISOPODA'

Plans are now well advanced for the production of the first issue of this new publication (ISSN 0950 2130). It is intended to publish articles of interest to isopodologists which merit more than a newsletter article but which are not suitable for the mainstream scientific journals. In the first issue, which should be available in Spring 1987, I hope to include Adrian Rundle's field key to British woodlice together with up to date distribution maps for those species for which our knowledge of their range has changed significantly since recording for the first part of the scheme ended in 1982. Any articles on aspects of isopod biology and ecology would be gratefully received. Authors will receive a free copy. It is hoped to keep the price for non-contributors at below the £2 mark. Articles for inclusion should be typed or written in legible handwriting and illustrations made with black ink on paper no larger

than A4 size. If you are intending to submit an article, please let me know by the end of this year at the latest. Isopoda is a speculative venture and its success or failure depends very much on whether enough contributions are submitted.

## 'FLIED LICE'

The following item appeared in The Daily Telegraph of 22 August 1986.

> "Chinese restaurant owner Kwai Tim Wong who admitted serving up a fried woodlouse in a portion of chips, was fined £20 by Matlock, Derbyshire magistrates yesterday."

On a similar theme, while working in Bristol a few years ago I ran a competition to see who could come up with the most unusual place in which they had found a woodlouse. The winner produced a rather desiccated specimen of Armadillidium depressum which he had found inside the anti-static gun resting on the top of his stereo record player! Is there anyone out there who knows of a more unusual microsite for isopods?

## BISG/BMG MEETING 1988

The myriapodologists feel it will be our turn to organize the annual meeting in 1988. Any suggestions or volunteers, please contact Paul Harding at BRC.

## ADDRESSES

All completed record cards, enquiries concerning the Non-marine Isopod Recording Scheme and articles should be sent to me at the following address:

Dr Steve Hopkin
Department of Pure & Applied Zoology
University of Reading
PO Box 228
Whiteknights
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RG6 2AJ

Supplies of blank record cards are available free from:

Biological Records Centre
Monks Wood Experimental Station
Abbots Ripton
Huntingdon
Cambs
PE17 2LS

Newsletter 22 will appear in May 1987. Until then, how about some winter recording?

Newsletter 21 edited by Steve Hopkin