

THE BRITISH ISOPODA STUDY GROUP
NEWSLETTER OF THE ISOPODA SURVEY SCHEME

May 1979

No. 12

INTRODUCTION

It is over two years since the last newsletter was circulated. We apologise for this, but pressure of work overtook the preparation of a newsletter planned for the spring of 1978. This newsletter includes up-to-date coverage maps for woodlice and for Asellus spp., and news of the recording scheme for marine species. Also included in this number are some accounts of recording woodlice in Scotland, of some rare species, and various other items.

MARINE SCHEME

The survey covering marine Isopods was launched publically in 1974 (D.M. Holdich & R.J. Lincoln, Field Studies, Vol. 4, 97-104). Since then, considerable progress has been made with abstracting published records, obtaining records from material in the British Museum collections, and field recording. A provisional atlas is now in an advanced stage of preparation. In September 1979, Roger Lincoln goes to New Zealand for twelve months. He will be working at the N.Z. Oceanographic Institute in Wellington. During Roger's absence, Miss Joan Ellis, Crustacea Section, BM(NH), will continue to look after the interests of the marine scheme on his behalf.

MAPPING - WOODLICE

Coverage, for woodlice, of Britain and Ireland (Map 1) has increased considerably since the publication of the provisional atlas at the end of 1976. The number of 10 km squares from which records have been received has increased from 1,675 (Atlas, July 1976) to 2,675 (May 1979). The best increases in coverage have been in Ireland and northern Scotland. In Ireland only about 100 squares remain without coverage. In Britain, about 1,100 squares await coverage. It is to be hoped that the present stage of general survey will be nearing completion in 1982 after which a fully revised atlas will be published.

Recording of the commoner species is progressing well, but the items on the rarer species and on "Woodlice in South-east Fife" will hopefully stimulate recorders to search for some of the apparently less common species with renewed vigour. Notice of a proposed course to help recorders with finding some of the less common species is included at the end of the newsletter.

MAPPING - ASELLUS spp.

Mapping of the distribution of Asellus spp. has progressed considerably, but coverage is still very patchy (Map 2). It is hoped that a set of preliminary distribution maps will be circulated to recorders and other interested persons later in 1979.

RECORDING WOODLICE IN SCOTLAND

Coverage in Scotland continues to improve, largely due to the activity of, and the lead given to others by, Dawn & Glyn Collis.

We were fortunate in being able to recruit Dr. Graham Oliver of the Royal Scottish Museum as a recorder in 1977. The article below summarises some of his findings in Fifeshire. Graham has moved recently to take up the post of assistant keeper of Zoology at the National Museum of Wales, Cardiff in succession to Dr. June Chatfield (now at the Gilbert White Museum, Selborne). Graham, together with Alison Trew, is continuing his study of T. saerocensis (see section on rare species) in south Wales.

Arthur Chater, a well known botanist, has developed an interest in woodlice. He reports on his holiday collecting in western Scotland, including some interesting observations on "common" species.

WOODLICE IN SOUTH-EAST FIFE

by Graham Oliver

In 1977 woodlice recording was commenced in S. E. Fife concomitant with mollusc collecting in the area. Due to initial promising finds this has intensified with the aim of relating species to habitat in this north easterly region. Mollusc studies indicate numerous coastally biased distributions in this area and it is one of the intentions to define similar trends in woodlice. Consequently many of the stations are in the supralittoral and coastal zones. Woodlice additionally display a higher degree of synanthropic associations and this has been noted. To date, over one hundred stations have been sampled, of which only a few are inland. Of the latter, many are atypical in that they are situated on calcareous outcrops, notably the Cults Carboniferous Limestone exposure near Cupar. The preliminary results are of considerable interest and four possible distributional groups have been identified.

Group I - Ubiquitous

Oniscus asellus, Philoscia muscorum, Porcellio scaber and Trichoniscus pusillus. The known preferred habitats of these species is confirmed, but it is noted that P. muscorum is frequent among supralittoral vegetation and even under strandline debris.

Group II - Synanthropic

This group includes species with very close associations with man, and occurrences have so far been limited to farms. Metoponorthus pruinus is abundant in farm buildings, especially cow-sheds, in the Boarhills district. It has been recorded outside but in both cases among dumped farmyard rubbish. Porcellio dilatatus is known from a single specimen occurring with M. pruinus.

Group III - Synanthropic

This group includes species with a much looser association. Porcellio spinicornis is common in mortar walls, but has also been taken from crevices in a volcanic ash outcrop by the sea. The vegetation on this volcanic plug suggests a calcareous element. Androniscus dentiger has been recorded only 3 times, from a limestone quarry, a sea-tip and a pile of mossy stones. Cylisticus convexus appears to have a dual distribution pattern. Away from the coast it has been found only twice, from a mortared wall and limestone quarry. At the coast 6 sites are known from the supralittoral fringe, 3 are partially synanthropic (farm rubbish, waste dump), 3 appear natural. The latter sites are typified by sandy soils and ruderal plants, eg Atriplex spp., Sonchus arvensis and Potentilla anserina.

Group IV - Coastal

Armadillidium vulgare has already been recorded from coastal sites in N. Fife (J. Sage) and behind sand dunes at St. Andrews (G. Collis). It has only been recorded once in this study, near Inverkeithing, but there it is abundant in supralittoral grassland and woodland on the shore. Platyarthus hoffmannseggii was recorded from St. David's Harbour, Inverkeithing by W. Evans in 1900 (Ann. Scot. Nat. Hist., 1900, p. 186). It has now been rediscovered there and occurs in nests of both red (Myrmica rubra) and black (Formica lemni) ants. Numerous other nests have been examined throughout the study area but no other records have been obtained. The limitation of this species to Inverkeithing is unexplained. Trichoniscoides saeroeensis has now been recorded from 5 stations along the coast between St. Andrews and Fife Ness. The typical site is under

deeply embedded stones in the erosion bank formed by the sea just above EHMOS. The soil is derived from shales, is clayey, usually blue-grey and always damp. This species can be considered to be frequent in such sites. These sites are very similar to those described for T. albidus and T. sarsi by Patience (1908 Ann. Mag. Nat. Hist., 8 ser. 2 p. 87). Investigation of riverbank sites is now required, as they are probable habitats of this genus. Haplophthalmus mengei has been recorded from 7 sites, all but one being coastal. Usually it occurs with T. saeroeensis but it is not restricted to clayey soils, occurring in a brown loam at Dalgety Bay and a black friable soil at Kinghorn. The latter two sites were at the same level as the T. saeroeensis sites. The inland site was from a black woodland soil on the Cults limestone. The known distribution of this species suggests that this coastal bias is anomalous and that more thorough sampling is necessary.

Non-habitat associated species

The single record of Trichoniscus pygmaeus is placed here as the sampling of suitable habitats has not been extensive. It was taken with H. mengei at Cults. (The habitat described at this site is typical of that at many other sites for these two species. Ed).

It must be emphasised that these results are preliminary and will undoubtedly be modified extensively. They do serve to show that the number of species occurring on the east-coast is much higher than expected from current distribution maps. It is expected that only A. vulgare and T. saeroeensis will be found to be coastal species. P. spinicornis, A. dentiger, C. convexus, M. pruinus, P. dilatatus will probably be proved synanthropic in this area. H. mengei and T. pygmaeus are probably widespread native soil species.

A WOODLOUSE FORAY IN WEST SCOTLAND

by Arthur Chater

A holiday at Strontian in the middle fortnight of September 1978 gave a good opportunity to cover all 16 of the 10 km squares in Morvern and Ardnamurchan and four adjacent squares. As a result, 61 new species records were provided to supplement the 39 already in the Atlas for these squares. It was clearly possible to find five common species, Ligia oceanica, Oniscus asellus, Philoscia muscorum, Porcellio scaber and Trichoniscus pusillus, in every square, and indeed this always proved to be the case.

L. oceanica was not ubiquitous on the coast, but was usually in sheltered places, especially under stones on salt marshes and amongst Pelvetia in crevices and creeks in rocks. O. asellus besides occurring in almost every suitable synanthropic locality, was characteristic of dead wood, an all too common habitat in an area where many oakwoods have been killed and underplanted with conifers. Very large populations of O. asellus develop in these dead oaks. Porcellio scaber similarly occurred in synanthropic and wild habitats, but was especially abundant on seashores. One surprising habitat was an exposed shingle beach by Loch Linnhe, 5.5 km SW of Inversanda, from which L. oceanica was completely absent. Just below the driftline of spring tides, where the beach consisted of stones 1.5 - 3 cm in diameter, P. scaber was abundant at a depth of 10 - 15 cm in the shingle where rotting seaweed was mixed with the stones (an average of 20 animals, all full grown, per handful of shingle); this colony, which extended at least 10 m along the beach, must have been submerged by every high tide for some days previously. Trichoniscus pusillus was often ubiquitous in the leaf litter in oakwoods and in damp patches of moss, but was especially abundant in wet earth and litter under dripping rocks (a common habitat in the wet autumn).

The most unexpected result of the recording was the frequency of Philoscia muscorum. It was rarely abundant, but it was almost always possible to find it in any suitable locality within 10 or 20 minutes (although it eluded me for 70 minutes in Glen Moidart). It was especially characteristic of tussocks of Calluna, rather loose grass tussocks (especially those with bracken stalks), and beds of loose oak leaf litter, in fact in habitats where the animals could move around unobstructed in a suitable atmosphere with a considerable volume of air around them; they were usually (in daytime) resting on heather twigs or grass stems several centimetres off the ground. The species was perhaps most common in or at the edges of woods, but it also occurred at several places in open moorland a kilometre or more away from any woodland. Both P. muscorum and T. pusillus were much more common in this area of Scotland, famous for its richness of Atlantic bryophytes and lichens and characterised by extreme wetness and very equable winter temperatures, than I had found them to be the previous summer in the Torridon and Glenelg areas, further north, where the rainfall and humidity are less and the winter minimum temperatures are lower.

Two species which are apparently rare in Scotland provided some excitement. The large walled kitchen garden at Ardtornish contained a thriving colony of Androniscus dentiger, which was abundant under stones, in old mortared brick walls in cold frames and in greenhouses. The large numbers, and the information I was given that boxes of plants or soil had not been brought to the garden from the south in recent years, suggested that the colony had been there for some time; a few individuals were found elsewhere by the neighbouring estate farm. Only 16 of the 140 sites recorded were examined after dark, but at one of these, a 15 m length of concrete wall at the top of a beach by a remote jetty at the head of Loch Sunart, near a corrugated iron shed but 700 m from any other building, I was surprised to see about a dozen specimens of Cylisticus convexus foraging on the sparse lichen and moss, along with an equal number of P. scaber and about 30 O. asellus. One specimen of C. convexus was found in a heap of rubble near the Ardtornish estate farm, the site was difficult to search thoroughly and no idea of the size of this population was obtained.

RECORDING WOODLICE IN IRELAND

Communications with Ireland have been increasingly difficult in recent months due to strikes in the postal and telephones services. It has not been possible to get a report from Declan Doogue but coverage has improved since the most recent available map was produced (Map 1). An atlas of the Irish woodlice is in preparation.

LIGIDIUM HYPNORUM IN GLOUCESTERSHIRE

by P.F. Burns & G.A.F. Hendry

In spring 1977, several specimens of Ligidium hypnorum were found near the Little Avon River on Lower Wetmoor Nature Reserve (ST/74 87) and later about $\frac{1}{2}$ km from the river in another part of the wood. Specimens were also found at Midger Wood Nature Reserve (ST/79 89) and at Ozleworth, Glos. (ST/79 92). The two nature reserves are managed by the Gloucestershire Trust for Nature Conservation and all three sites are in the Little Avon River drainage system. At each site, L. hypnorum was found, usually singly, close to the stream over distances of several hundred metres, and usually in vegetation and under logs and other debris in the damp deciduous woodland. Nowhere did it seem particularly abundant and was often outnumbered by Oniscus asellus and/or Trichoniscus pusillus. Later that summer, a single specimen was found on the Avon Gorge National Nature Reserve (ST/56 73), again in woodland but in a much drier area. These four sites were re-visited in May and June 1978 and the habitat described, L. hypnorum is clearly well established at 3 sites in the Little Avon river system, in damp calcareous woodland, and at the Avon Gorge NNR in a dry site on Carboniferous Limestone.

Wetmoor was a damp oakwood which was mentioned in Domesday Book. It is on Keuper Marl with the river terrace cutting through to Carboniferous Limestone. All the microsites were on this river terrace where the soil was silt of pH 7.0 to 7.2. The vegetation consisted of Alnus glutinosa, Corylus avellana and Crataegus monogyna with Allium ursinum, Galeobdolon luteum, Alliaria petiolata and Mercurialis perennis. The mosses Eurhynchium praelongum, Thamnium alopecurum and Mnium undulatum were found at the actual locations of individual L. hypnorum specimens.

Midger was an oak-ash wood on the Cotswold escarpment. The soil was alkaline and, where L. hypnorum occurred, was silt or rich in humus or in oolite fragments but always very damp. Trees in these parts of the wood included Alnus glutinosa, Corylus avellana, Fraxinus excelsior and Acer campestre, with a groundflora of Carex pendula, Mercurialis perennis, Festuca gigantea, Hedera helix and Dryopteris felix-mas. The liverwort Plagochilia asplinoidea and the mosses Eurhynchium praelongum, Thamnium alopecurum, Thuidium tamariscinum and Fissidens taxifolius were found in L. hypnorum microsites.

The habitat at Ozleworth - another Cotswold escarpment site - was an alder-ash wood with a little hazel. It was cleared about 30 years ago (except the alder) and the herbs are more typical of damp meadows than woodland but including Festuca gigantea, Geum urbanum, Circaea lutetiana, Geranium robertianum, Mercurialis perennis and Ranunculus acris. The soil was alkaline silt.

The Avon Gorge NNR site was completely different being a well-drained site in a mixed plantation of chequered history on Carboniferous Limestone. Trees in the immediate locality of L. hypnorum were Acer campestre and Corylus avellana and the ground flora consisted almost entirely of Hedera helix and Mercurialis perennis.

THE HABITAT OF TRICHONISCOIDES ALBIDUS

by Adrian Rundle

Going by what has been published in recent years it would appear that Trichoniscoides albidus is one of our rarer woodlice. Sutton (1972) referred to but one recent record and four years later in the Atlas this had increased to only four. Edney (1953) in his Linn. Soc. Synopsis referred to the species as widespread.

During the past four years the writer has been engaged in a detailed tetrad (2 km x 2 km) survey of the woodlice of Bedfordshire (see below) and T. albidus has turned out to be fairly common. The species has undoubtedly been overlooked in the past, firstly because it looks similar to its associate, Trichoniscus pusillus, and secondly because its habitat is rarely searched. It usually occurs in wet soil in ditches and on river and stream banks, although it has been found once under the bark of an elm log on a roadside bank, once in the soil of a flower bed in a garden and even once in the nest of the ant Lasius niger. The best places to search for this species are roadside culverts or ditches because in addition to stones and pieces of dead wood there are often bricks, pieces of concrete, etc. left lying about, on the underside of which T. albidus is often found. It is easy to distinguish T. albidus from T. pusillus in the field even without the use of a hand lens because it is not shiny and does not run quickly when disturbed as does T. pusillus. On closer examination with a hand lens (x20) the dorsal surface is seen to be tuberculate and the single ocellus (T. pusillus has three) is usually visible.

To date (19.4.1979) the species has been found at 55 localities in Bedfordshire, 4 in Surrey, 2 in North Essex, 1 in Berkshire and 1 in Nottinghamshire in addition to the sole Irish record in the Atlas. It is reasonable to believe that the species may prove to be quite common and widespread if specifically searched for.

OBSERVATIONS ON TRICHONISCOIDES SAEROEENSIS IN FIFE

by Graham Oliver

The currently known distribution of T. saeroeensis (provisional atlas) suggests a possible coastal bias. This has been confirmed in Fife with the discovery of this species at 5 sites along the 12 km coastline between St. Andrews and Fife Ness. T. saeroeensis was usually found with Haplophthalmus mengei in Fife although the latter was more widespread. In the field T. saeroeensis appeared as a small (to 3mm) white, slow-moving animal (slower than Trichoniscus pusillus but more active than the duller white H. mengei). On closer inspection the pleon usually had a pink-brick hue and occasionally this could also be seen extending along the median line. Under low magnification all specimens showed a variety of reddish colouring. All specimens had a single reddish ocellus.

The habitat was fairly constant along the shore. All the specimens were found under stones deeply embedded in the soil of the erosion bank formed by the sea. This bank lay at or just above the extreme high water mark and was often inhabited by the typical splash zone amphipod Orchestia sp.. At St. Andrews this bank lay at the bottom of a 15 m slumping cliff but at Babbet Ness (7 km to the east) the bank itself was topped by maritime vegetation and itself was only 50 cm to 1 m high.

The soil at 4 of the 5 sites was derived from shale, was clayey, bluish grey in colour and always very damp. At one site near Fife Ness, the soil was very sandy and brown but again it was very damp. The dampness of the soil appeared to be important, no animals were found in clayey soils which were at all dry, but similarly wet areas provided no animals. The most specimens were found under stones embedded at least 5 cm in the bank. Similar sites were given by Patience (Ann. Mag. Nat. Hist., 8th Series 2 : 84-88) for T. albidus and T. sarsi in the Clyde area.

RESEARCH ON TRICHONISCUS PUSILLUS

George Fussey, a post-graduate student at the Department of Pure & Applied Zoology, Leeds University, is engaged on research into the ecology of Trichoniscus pusillus. He has contributed the following note on the identification of the two forms (or sub-species). George is interested in receiving samples of populations of T. pusillus from anywhere in Britain or Ireland. Recorders willing to help by collecting a few samples in their own area should contact him at Leeds.

THE IDENTIFICATION OF THE TWO FORMS OF TRICHONISCUS PUSILLUS

by George Fussey

Trichoniscus pusillus is probably the most common and numerous woodlouse in Britain, reaching densities of the order of 1000 per m² in woodland and grassland. In Britain, the species comprises two forms (or sub-species): T. pusillus provisorius is bisexual and diploid, and T. pusillus pusillus is parthenogenetic and triploid. The aim of this document is to provide a means of identifying populations (rather than individuals) of both forms, and to relate any differences in their distribution to habitat preferences.

Previously, identification by collectors relied upon differences in shape of the first exopodite of the pleopods (Figure 1). Permanent preparations of these structures can be made by staining with Fast Green or Lignin Pink and mounting in DePeX under a small coverglass (facilitating rapid location of the structure). However, the variability of the exopodite may be high so that separation of the two forms may be open to some doubt. Note, however, that the differences can be more marked than the examples in Sutton(1972).

Ecological researchers (Standen, Sutton, Frankel) have made use of two statistical techniques to separate the two forms. Since the pusillus form is

parthenogenetic, it produces all female broods, and so populations of pusillus generally contain less than 3% males. Populations of the bisexual form, provisorius, have a 1:1 sex-ratio and therefore carry 50% males in their populations. For this reason, identification until now using the male exopodite has resulted in the misleading impression that provisorius is more common than pusillus, simply because it provides more males for identification. The composition of any Trichoniscus pusillus population is indicated by the sex-ratio of a sufficiently large sample (>30) taken from the smallest distinct microsite. Mixed populations, which seem to be quite common, contain males in the population at intermediate percentages. This method is confounded by not knowing which animals are sexually mature, since immature animals included in a sex-ratio overestimates the number of females. Recognizably smaller and less pigmented animals may be discounted, but complications arise because males are smaller than females and diploid provisorius are smaller than triploid pusillus. As a rough guide, any animal longer than 1.8 mm (headwidth >.375 mm) can be included.

The second method is provided by a regression of the number of embryos in the brood pouch against headwidth (which is a more precise measurement of size than body length). Because provisorius are, on the whole, smaller than pusillus but carry the same number of eggs (7 on average), a separation is possible on this basis. The error here is quite low (see Frankel, 1978), but is enlarged by the fact that later in the breeding season animals having their third or fourth broods carry fewer embryos and so provisorius are misidentified. In addition, we have little information as to the extent that environment and time can affect these regressions, but clearly they are still useful ecological parameters for a given population at a site in time.

The sex-ratio is thus the best method available for separating the two forms, but it could be confirmed by pleopod study and ecologically enhanced by an embryo/headwidth regression. In order to show if the two forms differ in their preferred habitats one should take as large a sample as possible from one small discrete microsite (and therefore hopefully one microhabitat), and record the total sample size, number of adults and sex-ratio, as well as the usual habitat data. We might then correlate the distribution of the two forms with their habitat, and provide a more meaningful and precise record for our commonest terrestrial isopod.

References

- Frankel, B. (1978). The identification of gravid females of two sub-species of Trichoniscus pusillus Brandt (Crustacea : Isopoda). J. nat. Hist., 12 : 177-183.
- Sutton, S.L. (1972). Woodlice. Ginn & Co., London.

TETRAD MAPPING OF ISOPODS IN BEDFORDSHIRE

by Adrian Rundle

Detailed mapping of the distribution of woodlice and water lice in Bedfordshire using the tetrad system was started in April, 1975. A tetrad is a 2 km x 2 km square using the Ordnance Survey grid, a unit 1/25th the size of the 10 km squares being used in the national census schemes. The increased detail afforded by using tetrads is eminently suitable for recording in single counties and gives units more manageable in size than 1 km squares. Since tetrad mapping was generally accepted as the best way of recording the distribution of many groups of wildlife in the county by the Bedfordshire N.H.S. two atlases using this scheme have been published. The first was the plant atlas by Dony in 1976 with 800 species maps and this was followed by the bird atlas by Harding in 1979 with 113 species maps. With such an intensive level of activity in the county it may come as something of a surprise to learn that the most widely recorded organism in the area is the woodlouse Oniscus asellus which is now known from 380 of the 383 tetrads - its nearest rivals are several of the birds with 371 tetrads.

Five species of woodlouse are particularly noteworthy in that they are sufficiently common to be worth searching for in all tetrads. Although they all have areas where they are difficult to find it seems likely that they all occur in every tetrad. This ubiquitousness has been utilised to form the basis of the field recording method and they (Oniscus asellus, Philoscia muscorum, Porcellio scaber, Armadillidium vulgare and Trichoniscus pusillus) have become known as 'the big five'. The field objective has been to try to get each tetrad at least up to the level of 'the big five' plus one (i.e. with at least one of the "rarer" species) thus enabling a fairly even and detailed coverage to be obtained.

About half of the habitats surveyed so far are synanthropic, the remainder being either natural or seminatural. The recording technique has been to search out sites which look as if they will yield a reasonable number of species, sites which look unfavourable are generally by-passed except occasionally and in tetrads where there is little choice if any records are to be obtained. These favoured sites are often piles of builders' rubble, bricks, pieces of concrete, asphalt, etc. on roadside verges, especially in ditches and next to culverts; under pieces of dead wood, in leaf litter and in soil in all habitats and under the bark of dead trees (the ravages of Dutch Elm Disease have for once been put to good use in this work!). For the study of soil and leaf litter samples the material has generally been graded using a pair of sieves and this has greatly facilitated the finding of the smaller, more elusive, species.

Several of the species found in Bedfordshire to date are worthy of special mention:

Platyarthrus hoffmannseggi

This species has been found in the nests of the following ants: Myrmica rubra, M. ruginodis, M. scabrinodis, Lasius niger, L. flavus and L. umbratus. Contrary to what is generally believed this species does not seem to be restricted to basic soils. (88 tetrad records)

Cylisticus convexus

An uncommon synanthropic species being found in ones and twos in roadside drainage channels, near drains and in roadside ditches. (16 records)

Porcellio dilatatus

Only two records since the scheme was started - one in a cellar and the other on a roadside verge (not yet refound on the Chalk downland despite several attempts).

Porcellio laevis

Only known from a single farmyard manure heap. On the basis of a couple of Hampshire records it is expected to occur in old hay barns in the area.

Metoponorthus pruinosis

Often abundant in the drier outer portions of older farmyard manure heaps. (34 records)

Trachelipus rathkei

This species does not appear to be as common here as in Hunts. (See atlas). Several records from beside the River Great Ouse, under stones, etc.. (10 records)

Trichoniscus pygmaeus

The next most common woodlouse after 'the big five'. Occurs in a wide variety of habitats often with T. pusillus although rarely in large numbers. Easily separated from pusillus on the basis of its pale colour, matt dorsal surface (not shiny), paler lines on middle of back and by its slower movement. (163 records)

Trichoniscoides albidus

See elsewhere in this newsletter.

Haplophthalmus danicus

Fairly common, especially in rotting wood and in thick frass under bark. (70 records)

Haplophthalmus mengei

An uncommon soil species sometimes occurring with the above. (9 records)

As can be seen from the above the level of recording in the county is now quite good. All but one of the tetrads have records and there are now 2,382 tetrad records. It is hoped to get a sufficiently good level of recording by about the end of the year to justify the production of an atlas. If this proves possible it will also include both the centipedes and millipedes and will have keys to the species.

THE USE OF SIEVES WHEN RECORDING WOODLICE

by Adrian Rundle

In his book "Woodlice", Sutton (1972, p.108) states that sieving is "unsatisfactory for woodlice, although perhaps this is because little attention has ever been given to their use". This note puts on record that the method is a very useful one for recording the smaller species.

Sieving has been generally accepted as a good method of finding small species of land molluscs in soil and leaf litter for many years so it was obvious for the writer to adopt this method when he started studying woodlice. The result has been that a great many records of the smaller and more elusive species have been obtained which would otherwise have been missed. The soil or leaf litter sieved must be sufficiently friable for the finer material to pass through the coarser sieve and should not be waterlogged. The most suitable material is the soil from under hedges or next to walls and damp leaf litter from hollows in the ground, although a great many other habitats can prove productive.

The two sieves used are about 10 inches in diameter with mesh sizes of 10 and 30. These meshes have proved to be the most effective in that such small species as many of the trichoniscids collect on the lower finer mesh and can be easily found in the absence of obscuring coarse material. The author's sieves are home-made from light, but strong, white plastic plant bulb bowls with the bolting nylon mesh secured over the sawn-off bottoms. If one cannot make one's own, British standard 8 inch brass sieves prove quite adequate.

WEEKEND FIELD COURSE ON RECORDING UNCOMMON WOODLICE

26th - 28th October 1979

The purpose of holding a weekend course on woodlice is to get experience at finding some of the "rare" and poorly recorded species in an area where there are easily accessible known sites. It is hoped that getting to know the habitats and learning to recognise the species in the field will assist those taking part in finding these species more easily elsewhere. The Bedfordshire list of woodlice now stands at eighteen species so there are quite a few species that can be searched for - of these the following very under-recorded species can be guaranteed: Metoponorthus pruinus, Trichoniscoides albidus, Trichoniscus pygmaeus and Haplophthalmus danicus. It is probable that centipedes and millipedes will also be covered during the course, if there is sufficient interest.

The course will be run by Dr. Adrian Rundle and will be centred at Monks Wood Experimental Station where comfortable hostel accommodation for 14 people, in single rooms, is available. Field work will be mainly in Bedfordshire, travelling by car or mini-bus. There will also be opportunities to study preserved specimens, examine slides of the habitats of other uncommon species, look at distribution maps and generally immerse oneself in woodlice for a couple of days.

The course will cost about £14.00 including V.A.T.. This would include accommodation and meals from the night of Friday 26th (but not dinner that evening) to the afternoon of Sunday 28th October.

Please apply for a booking form as soon as possible and not later than 6th July 1979. Forms are available from Paul Harding (address below).

RECENT PUBLICATIONS

This newsletter is already very long. It is therefore impractical to include the usual section on "recent publications" except to notice the publication late in 1977 of Professor J.L. Cloudsley-Thompson's long awaited review volume "The water and temperature relations of woodlice". This appeared in the Patterns of Progress series published by the Meadowfield Press Ltd., Shildon, Co. Durham.

ADDRESSES

Correspondence concerning the Study Group as a whole, the newsletter or the survey scheme for non-marine Isopoda should be sent to Mr. P.T. Harding, Institute of Terrestrial Ecology, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, Cambs. PE17 2LS, England (Telephone: Abbots Ripton 381). Correspondence concerning the marine survey should go to Dr. R. J. Lincoln, Crustacea Section, Department of Zoology, British Museum (Natural History), Cromwell Road, London.

STOP PRESS

HABITAT RECORDING

Thanks to the enthusiastic help of Dr. C.P. Fairhurst of Salford University and staff at the University Computing Laboratory, we now have some interesting summaries of the habitat records from 16,000 species records. This is very much a preliminary analysis; at least a further 5,000 species records already await checking before going into the computer. It is hoped that a reasonably up-to-date analysis of the habitat records will be available for the next newsletter, in 1980.

Grassland (3,652 records), woodland (2,393), waste ground (2,136) and garden (1,172) are all well recorded. Marsh (274 records), arable (295) and heath (274) are poorly recorded presumably because they are considered by most recorders to be unproductive habitats. The second order habitats show a strong bias to records from roadside verges (1,437 records) and shore/strandline (1,247). The most favoured microsites for records are stones (5,350 records), dead wood (2,614) and litter (1,810).

If recorders could consider attempting to redress the balance in their recording by looking in some of the apparently unfavourable or unusual habitats and microsites, it might help to give a more realistic picture of the habitat preferences of woodlice. A very large number of our records are from stones on roadside verges adjacent to grassland!

PRELIMINARY ATLAS OF ASELLUS spp.

Professor H.P. Moon and Paul Harding hope to produce maps for a preliminary atlas of the Asellus spp. later this year. The atlas will be distributed free to recorders, but will not be available for sale. The purpose of this preliminary atlas will be to show the state of recording and (hopefully) to stimulate further work.