

THE BRITISH ISOPODA STUDY GROUP  
NEWSLETTER OF THE ISOPODA SURVEY SCHEME

No. 10

June 1976

The year since the last Newsletter was circulated has been a busy one for all concerned. This is partly why Newsletter No. 10 has taken so long to appear, but the main delay has been that we have been awaiting the completion of the Provisional Atlas.

Non-Marine Isopoda Recording Scheme

Provisional Atlas of the distribution of Oniscoidea (Woodlice)

Many recorders made a special effort during 1975 to cover under- or un-recorded areas in preparation for the Atlas. We are very grateful to all those who sent records; the response was much greater than anticipated. The Atlas is complete and should go to press soon. In 1975 coverage of 10 km squares increased by 50% over that attained in the previous 6 years. There are just over 1,500 squares with records in the Atlas.

You may well wonder why the Atlas is only now going to press when records were supposed to be in to P.T.H. by October 1975! Over 3,500 record cards were received between May and December. When these had all been checked, processed, and the maps prepared, we found at the end of March, that some areas were conspicuously lacking in records. Since then S.I.S. and P.T.H. assisted by various recorders, have helped to close some of these gaps, so that in Britain south of the Forth/Clyde, coverage is much more evenly spread. Declan Doogue and Niall Reardon, assisted by various other recorders, have continued to send in a large number of records from Ireland during the first 5 months of 1976.

The Atlas is limited to Woodlice because the coverage of records of Asellus is too sparse to warrant their inclusion. We hope to be able to produce maps for Asellus in a few years.

Future recording and "Devolution"

The Non-Marine Isopoda Recording Scheme is continuing to function in the same way as before and more records are required from everywhere in Britain and Ireland. Having completed the provisional atlas we must now look towards the production of a "definitive" atlas in 5-10 years. We also hope that recorders will collect in a greater range of habitats in future so that a wide spectrum of habitat data is available. It is hoped that an analysis of the 11,000 species records we now hold can be done soon. With that information we should be able to suggest which habitats require special attention.

The need for records of Asellus is now obvious. Professor Moon has contributed a section on recording our freshwater Isopods (see below).

Many recorders are now able to identify all or most of their specimens for themselves. This considerably eases the burden on the scheme organisers. A further extension of this is that recorders living in Ireland and Scotland now

deal directly with their own regional scheme organisers. This has been in operation since early 1976 and is proving to be highly successful. We are very fortunate in being able to enlist the help of Glyn Collis (ably assisted by his wife Dawn) and Declan Doogue as regional organisers.

Recorders living in Ireland should contact:

Declan Doogue, Esq.,  
12 Glasilawn Road,  
DUBLIN 11.

Recorders living in Scotland should contact:

Dr. G.M. Collis,  
c/o Department of Psychology,  
University of Strathclyde,  
155 George Street,  
GLASGOW,  
G1 1RD

All other correspondence etc should continue to go to:

Paul T. Harding, Esq.,  
Institute of Terrestrial Ecology,  
Monks Wood Experimental Station,  
Abbots Ripton,  
Huntingdon,  
PE17 2LS

#### Marine Isopoda Recording Scheme

#### Progress

There have been few developments during the last year, but records continue to accumulate. R.J.L. hopes to be able to devote more time to Marine Isopoda when he has completed his monograph on Amphipoda. Any recorders interested in Marine species should contact Dr. R.J. Lincoln at the British Museum (Natural History), Cromwell Road, London, SW7 5BD, if they have not already done so.

D.M.H. left for an eight month sabbatical in Australia earlier this year. He is working on marine Isopods on the Great Barrier Reef.

#### Kew Hothouse Woodlice

Dr. Adrian Rundle is well known among conchological circles, but during 1975 he acquired an interest in Woodlice, Millipedes and Centipedes. He has been very active in Surrey, Bedfordshire and elsewhere recording these groups. He lives in Kew and is fortunate in having permission to collect in the hothouses at Kew Gardens. He has contributed the following account of his finds of Woodlice.

"The Royal Botanic Gardens at Kew has a rich assortment of glasshouses, many of them about 100 years old, and has been the main source of hothouse alien animals in this country. With the kind permission of the Director I have made four visits to the hothouses in the gardens during the past year or so in order to find out what aliens are living therein. The result of these visits, isopod-wise, is that five alien species have been found as well as five species which live outdoors in this country. The species found so far are as follows:

Hothouse Alien Species

Cordioniscus stebbingi  
Cordioniscus spinosus

Tropical Fern House - common under pieces of peat  
Tropical Fern House - frequent under pieces of peat  
- New Kew Gardens Record

Chaetophiloscia meeusi  
Chaetophiloscia?

"T" Range (House No. 9a) - uncommon under stones  
"T" Range (House No. 10) - common under stones on wet  
staging at E. end of Waterlily Tank

Reductoniscus costulatus

Palm House - very common under pieces of peat  
"T" Range (House No. 9a) - common in peaty soil

British Outdoor Species

Haplophthalmus danicus  
Oniscus asellus  
Metoponorthus pruinosis  
Armadillidium nasatum

Palm House - common in peaty soil  
Tropical Aroid House - uncommon under stones  
Frequently common in all houses mentioned here  
Palm House - frequent under pieces of peat  
Tropical Fern House - one dead specimen found  
Palm House - frequent under pieces of peat  
"T" Range (House No. 9 - one dead specimen found."

Armadillidium vulgare

Recording Asellus

We have received records for Asellus from only about 500 ten km squares. Coverage is very irregularly spread, and only Leicestershire and Cheshire can be considered to be thoroughly covered.

Recorders are asked to make a special effort to collect Asellus in their area during 1976 and 1977. There is a new Key for identifying Asellus (Gledhill et al.) available from the Freshwater Biological Association, The Ferry House, Ambleside, Cumbria (see Recent Publications). Professor Moon and P.T.H. are willing to identify specimens for recorders, and they have compiled the following notes which it is hoped will be of help to those who have not collected Asellus before.

Equipment

- Pond Net - This is an essential item. The simplest and often most effective net is a 6" or 8" diameter wire kitchen strainer (sieve) attached to a broom handle by string, wire or a "Jubilee" clip. Proper pond nets are expensive and can be purchased from Griffin & George Ltd., Wembley, and Philip Harris Ltd, Shenstone, Staffs.
- Sorting tray - A white enamel or plastic dish at least 6" square with sides a minimum of 1½" high - available from hardware shops and photographic suppliers.
- Other items - Forceps and wide bore bulb pipettes for picking out specimens; watertight bottles or tubes for containing specimens and 5 % Formalin solution as a preservative can usually be obtained from a chemist or from the two companies listed above. Other preservatives such as 70% alcohol or iso-propyl alcohol are suitable.

Where to find Asellus

- Commonly found in slow flowing or still waters eg field ponds, canals, sluggish streams and rivers. Occurs in mud, rotting leaves and other dead vegetation, reed beds and dense aquatic vegetation.
- Less commonly occurs in stony/gravelly streams and small rivers, and on the

wave washed shores of lakes and reservoirs.

- Rarely found in mountain streams, peat pools or above 700 feet (210 metres) altitude.

- Asellus cavaticus is a subterranean species recorded only from wells and caves.

#### How to find Asellus

- In mud, rotten leaves and other debris. The net should be agitated in the top  $\frac{1}{2}$ " to 1" of substrate over a wide area and swept through the resultant cloud of debris.

- In dense vegetation and reed beds. Work the net vigorously through the substrate and vegetation.

- In stony/gravelly substrates. Disturb the substrate by wading or stirring and run the net through the disturbed debris, allow any current to wash debris down into the net. Large stones etc. should be rubbed over to disturb specimens which may cling to the surface.

#### Sorting

It is often better to sort net samples at home. Asellus survives well in damp vegetation or debris kept in a polythene bag or bottle. Sorting is best done in a large white tray whether done at home or in the field. This enables one more easily to see the animals among the vegetation etc.

#### Use of the Habitat Recording Card

The Habitat Card was designed mainly for use with terrestrial animals, but it should be possible to place one tick in each of Sections A, B, C, and G. Bear in mind that Section C (other than the Aquatic portion) refers to the general area in which the pond, stream, ditch, etc. occurs. Thus if you find Asellus in a pond in a field of ungrazed grass, tick "Grassland: ungrazed" in Section C and "Pond" in Section D. Remember to make use of the space for notes to describe the habitat if you are really unsure of how to treat it within the habitat classification.

#### Specimens for identification

Professor H.P. Moon is willing to examine specimens from anywhere in Britain or Ireland. His address is:

"The Beeches",  
48 Elmfield Avenue,  
Stoneygate,  
Leicester LE2 1RD

P.T.H. is also willing to examine specimens and to answer queries regarding Asellus.

#### Recent Publications

A further selection of papers, mainly by group members:

Bedding, R.A. 1973. The immature stages of Rhinophorinae (Diptera: Calliphoridae) that parasitise British Woodlice. Trans. R. ent. Soc. Lond. 125, (1), 27-44.

- Dominiak, B. 1970. Studien über die Landasseln (Isopoda terrestria) Polens. Fragmenta Faunistica, 15, 401-472. (Contains distribution maps for Polish woodlice. Polish text, German summary.)
- Edney, E.B., Allen, W. & McFarlane, J. 1974. Predation by Terrestrial Isopods. Ecology, 55, 428-433.
- Ellis, J.P. & Lincoln, R.J. 1975. Catalogue of the types of terrestrial Isopods (Oniscoidea) in the collections of the British Museum (Natural History). II Oniscoidea, excluding Pseudotracheata. Bull. Br. Mus. nat. Hist. (Zool.), 28, 65-100.
- Fish, S. 1970. The biology of Eurydice pulchra (Crustacea : Isopoda). J. mar. biol. Ass. U.K. 50, 753-768.
- Fish, S. 1972. The setae of Eurydice pulchra (Crustacea : Isopoda). J. Zool. Lond. 166, 163-172.
- Gledhill, T. Sutcliffe, D.W. & Williams, W.D. 1976. Key to British freshwater Crustacea : Malacostraca. Freshwater Biological Association Scientific Publication No. 32. pp 72.
- Harding, P.T. 1975. A bibliography of the occurrence of woodlice (Crustacea Isopoda, Oniscoidea) in Ireland. J. Soc. Bibliophy nat. Hist. 7, 285-290.
- Holdich, D.M. 1974. An investigation of the surface of the cuticle and associated sensory structures of the terrestrial Isopod, Porcellio scaber. J. Zool. Lond. 172, 469-482.
- Lincoln, R.J. & Ellis, J.P. Catalogue of the types of terrestrial Isopods (Oniscoidea) in the collections of the British Museum (Natural History). 1. Superfamily Pseudotracheata. Bull. Br. Mus. nat. Hist. (Zool.), 27, 191-246.
- McQueen, D.J. & Carnio, J.S. 1974. A laboratory study of the effects of some climatic factors on the demography of the terrestrial Isopod Porcellio spinicornis Say. Canadian J. Zool. 52, 599-611.
- Naylor, E. 1972. British Marine Isopods. Linnean Society Synopses of the British Fauna (New Series) No. 3. pp 86.
- Schmalfuss, H. 1974. Skeleton and appendage musculature in the Isopod cephalothorax - a contribution towards clarification of Phylogenetics and Systematics in the incertae-sedis-Family Tylidae (Crustacea). Z. Morph. Tierre 78, 1-91. (German text, English summary.)
- Schmalfuss, H. 1975. Morphology, function and evolution of tergal tubercles in terrestrial Isopoda (Oniscoidea, Isopoda, Crustacea). Z. Morph. Tierre. 80, 287-316.
- Stachurski, A. 1972. Population density, biomass and maximum natality rate and food conditions in Ligidium hypnorum L. (Isopoda). Ecologia Polska, 20, 185-198.

Sunderland, K.D., Hassall, M. & Sutton, S.L. 1976. The population dynamics of Philoscia muscorum (Crustacea, Oniscoidea) in a dune grassland ecosystem. J. Anim. Ecol. 45, 487-506.

Recent records of Woodlice

Innumerable interesting records of woodlice have been received during the last year, but the following are particularly notable because they constitute either an extension of the range known for the species, or are first recent records from the area in question. The collector is indicated for each record.

Androniscus dentiger - Aberlour, Banff (D.E. Hanson): Dunrobin, Sutherland, (A.G.H. Osborn).

Armadillidium pictum - Black Mountains, Brecon (R.P. Bray).

A. pulchellum - Four Crosses, Denbigh (PTH): Skomer (SLS): Ravensdale (L.Lloyd-Evan) and Monsal Dale, Derby (PTH)

Cylisticus convexus - Glanmire, Cork (N.M.Reardon): Belfast (R.Anderson).

Halophiloscia couchi - Lulworth, Dorset (PTH): Howth, Dublin (D. Doogue).

Haplophthalmus danicus - Howth, Dublin (PTH).

Metoponorthus cingendus - St. John's Point, Down (R. Anderson)

Porcellio dilatatus - Kanturk, Cork (N.M. Reardon): Clontarf & Howth, Dublin (D.Doogue)

Trichoniscoides saeroeensis - Clogher Head, Louth (PTH): Fota Island, Cork (S. Fleming).

Course for Naturalists - Millipedes, Centipedes and Woodlice

This course, held in April 1976, was based on Salford University for an evening of lectures and displays, followed by a day of field work at two sites in Cheshire and an hour or two of identification practice at the Delamere Forest Field Centre. Unfortunately, it was not possible to tell many recorders about the course as it was organised at rather short notice. It may be possible to arrange a similar weekend course (not necessarily in Cheshire) in 1977. Anybody interested in such a venture is asked to contact PTH.

Addresses of Scheme Organisers

Non-Marine Isopoda

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Dr. S.L. Sutton, Dept. of Pure and Applied Zoology, University of Leeds, Leeds LS2 9JT

Marine Isopoda

Dr. R.J. Lincoln, Dept. of Zoology, British Museum (Natural History), Cromwell Road, London, SW7 5BD.

Dr. D.M. Holdich, Dept. of Zoology, The University, Nottingham, NG7 2RD

Newsletter No 10 Irish Supplement

We only started recording Woodlice in Ireland with any seriousness in 1975. Up until spring 1975 we had records from just over 110 squares, of which less than 25% were of squares with 4 or more species. Since then the situation has improved greatly and records from about 250 Irish squares are being used in the Provisional Atlas of Woodlice mentioned in this newsletter.

Ireland still compares unfavourably with Britain, however, as we have coverage of less than 30% of Irish squares whereas for Britain we have approximately 50% coverage. It is hoped that by the end of 1977 we will have sufficient records to make worthwhile the preparation of a Provisional Atlas for Ireland.

We hope that we can have your co-operation throughout the next 18 months to make a special effort to collect woodlice in un-recorded parts of Ireland as well as recording in a range of habitats in better known areas. A map showing all the squares from which we have records is attached; Open Circles indicate pre 1960 records, solid circles indicate records from 1960 onwards.

Declan Doogue  
Paul T. Harding

