THE BRITISH ISOPODA STUDY GROUP

NEWSLETTER OF THE ISOPODA SURVEY SCHEME

No. 7 January 1973

(PLEASE KEEP FOR FUTURE REFERENCE)

## 1. PROGRESS OF THE SCHEME:

The fact that we only managed to produce one Newsletter last year should not be taken as a sign of inactivity, rather, the opposite is true. Delays in organisation and printing have led to a build up of material and in fact we have enough to fill two or three newsletters in quick succession. Significant recent events include the printing of the marine recording card and the instruction card to go with it, the publication of the provisional map for the woodlouse *Platyarthrus hoffmannseggi* and the development of computer techniques for retrieving information from cards. Three and a half thousand punched cards are now in computer store at Leeds and a variety of programmes are being developed to analyse the information available. By the end of this year it should be possible to offer a limited service to people who have specific queries on habitat range and distribution, and such queries are welcome as from now. The speed with which they are answered will depend on the extent of other commitments, and the availability of suitable programmes.

The next maps to be printed will be those dealing with the four species of *Asellus* recorded in Britain (the fourth is the American *Asellus communis* for which there is one record). PTH is collaborating with Prof. H.P.Moon who has studied the ecology and distribution of this group extensively.

We regret the poor quality of the *Armadillidium album* map which was issued with the last newsletter (it was a particularly difficult one to cope with) and hope to reprint it when our technique has improved somewhat.

We should be able to deal with quite a quantity of new material during the year and appeal to all active recorders to send in specimens and cards.

## 2. MARINE ISOPODS:

The marine card is now ready and a copy, along with instructions to collectors, is enclosed with this newsletter. Anyone wishing for additional copies should contact R.J.L. It is hoped that as many of you as possible will take part in the survey of marine isopods, and that you will encourage others to do so - especially if they are involved in organising marine field trips where a large number of students are collecting in the littoral zone (schools, techs., universities, etc.). As mentioned in the instruction card there is available a less detailed recording card which can be used to record any marine group on. Details from R.J.L.

A new series of 'Synopses of the British Fauna' is being published by Academic Press. No. 3 in the series is entitled 'British Marine Isopods' by E. Naylor (Professor of Marine Biology at Liverpool University, and Director of the Port Erin Marine Station) and is now on sale. This book should prove invaluable for the scheme as it will aid positive identifications.

The distribution and habitat preferencies of one marine isopod in Britain, *Dynamene (= Naesa) bidentata,* have been extensively studied [Holdich (1970) : J. nat. Hist. 4]. However, before the picture can be completed more information is needed on its distribution in Ireland, S.E. England (as far west as, and including, the Isle of Wight), and the Scottish Isles. Any records for this species, especially from the areas mentioned above, would be greatly appreciated. Midtidal crevices, large barnacles, and fucoid seaweeds (summer only) are the most likely microhabitats to reveal this isopod.

At present two short expeditions a year are planned to carry out intensive surveys of selected parts of the British Isles. Scotland (July) and Cornwall (April) are first on the list and one trip has already been made to each of these areas (see below). In Scotland it is initially intended to study selected areas in detail rather than to try and cover every 10 Km. square. Species lists and habitat preferences will be produced in the Newsletter from time to time.

Advice on collecting in the littoral zone is continued in this Newsletter and future issues will deal with sand and mud, parasitic species, and offshore species.

During the course of collecting isopods one cannot help but encounter amphipods. As even less is known about these animals than about isopods it would be valuable to obtain data on their distribution and habitat preferences. The amphipods are a notoriously difficult group to identify and as yet a recording card has not been produced to deal with them, although the habitat data for marine species will be virtually identical to that for marine isopds, and that for fresh water and semi-terrestrial species the same as that for woodlice. If you encounter amphipods in the same microhabitats as isopods please include them with your samples noting that you have done so on the recording card.

Remember please, that it is vital to read the instructions carefully before filling out the cards.

R.J.L's. full adress is:- Dr. R.J. Lincoln, Dept. of Zoology, British Museum (Natural History), Cromwell Road, London, S.W.7.

## 3. MARINE ISOPODS – EXPEDITION 1972.

As with last year the area studied was Scotland - this time from south of Cape Wrath along the north coast and down the east coast as far south as Wick. The commonest isopods by far were *Idotea granulosa* and the *Jaera albifrons* group of species. A number on detailed surveys of *Jaera spp.* were carried out on the north coast to try and determine their distribution habitat preferences. Other isopods collected included - *Idotea emarginata* and *I. pelagica, Eurydice pulchra, Munna kroyeri, Janiropsis breviremis.* The absence of *Dynamene bidentata* along the north coast now seems certain, the most northerly record standing at Tarbet (opposite Handa Island) which is just south of latitude 58° 30'.

Those present on this years trip were R.J.L., D.M.H., and Mr. & Mrs. B. Scotter. Next year it is hoped to complete the survey of the east coast of Scotland.

## 4. CURRENT WORK ON ISOPODS:

In this and future issues of the Newsletter it is intended to produce lists of current references dealing with isopod biology (see item 6). Also included will be major references which have appeared in the last few years (post 1968). Prior to 1969 the Zoological Record should be consulted - this lists all references for any one year separately under subject, species, and author. The record appears each year (but is always two years behind) and is invaluable for retrospective searches.

It would also seem a good idea to get various workers in the isopod field to contribute short articles on their current research to the Newsletter. Anyone who would be interest in doing so should contact David Holdich (Dept. Zool., University of Nottingham). We start the series with a report from Dr. P.R. Evans of the Dept. of Zoology, University of Durham, South Road, Durham:-

During studies of possible effects of lead from car exhausts on the invertebrates and small mammals of roadside verges, collections were made of woodlice (chiefly *Philoscia muscorum*) from roadsides near Catterick, north Yorkshire, and Durham City. Determinations of lead content were made on all samples collected, with the following results at Catterick:

| Distance from edge of road (ft.) | 9 | 33 | 65 | 85 | 165 |
|---|---|---|---|---|---|
| Total lead in soil | 111 | 102 | 71 | 70 | 69 |
| Lead in living vegetation | 135 | 32 | 18 | 11 | 8 |
| Lead in woodlice | 682 | 665 | 467 | 288 | – |

(All concentrations of lead are parts per million of dry weight)

The results from Durham were in general agreement with this picture of decreasing lead content with increasing distance from the road. In spite of the very high body burden of lead, the woodlice were most abundent close to the edge of the road. Clearly other factors than lead in their food were more important in determining their distribution and abundance.

This work is in press in the Bulletin of Environmental Contamination & Toxicology.

5. WEEKEND STUDY COURSE ON NON–MARINE ISOPODS:

It is hoped that sufficient support can be found to make it worthwhile running a weekend course in 1973. The course will be open to all who have a genuine interest in woodlice and waterslaters (Asellus), however inexperienced they may be. It will be led by S.L.Sutton and P.T.Harding and will be held at Monks Wood Experimental Station near Huntingdon on 14th to 16th September 1973. Collecting trips will be made to Woodwalton Fen and Monks Wood National Nature Reserves where collecting techniques and the use of the recording card will be demonstrated. The evenings will be devoted to demonstrations of identification, of living specimens of some species not met with during the days collecting, and to a discussion of the activities of the Survey Scheme.

The accommodation cost will be £5 (Friday evening to Sunday lunch) with free transport to the collecting sites. Numbers are limited to 14, so you are asked to write as soon as possible, if you wish to attend, to:-

Paul T. Harding, Monks Wood Experimental Station, Abbots Ripton, Huntingdon PE17 2LS.

6. PUBLISHED WORK ON ISOPODS:

The references given here and in the next few issues have been published since 1968. They have been chosen to indicate the scope of present research activity. For the future we hope to cite selected papers as they are published.


ALEXANDER, C.G., 1970. Studies on the nervous system of an isopod crustacean *Ligia oceanica.* Comparative Biochemistry and Physiology 33 (2) 323-332.

CLIFFORD, B.
WITKUS, E.R. 1971 The fine structure of the hepato pancreas of the woodlouse *Oniscus asellus.* Journal of Morphology 135 (3), 335-349.

JONES, D.A., 1970 Population densities and breeding in *Eurydice pulchra* and *E. affinis* in Britain. Journal of the Marine Biological Association of the U.K. 50 : 635-655

JONES, M.B.
NAYLOR, E., 1971 Breeding and bionomics of the British members of the *Jaera albifrons* groups of species, *Isopoda Asellota* Journal of Zoology (London). 165 (2) : 183-199

LINDQUIST, O.V.
SALMINEN, I.
WINSTON, P.W. 1972 Water content and water activity in the cuticle of terrestrial isopods. Journal of Experimental Biology. 56 : 49-55

STANDEN, V., 1970 The life history of *Trichoniscus pusillus pusillus* (Crustacea: Isopoda) Journal of Zoology (London) 161 : 461-470

SUTTON, S.L., 1970 Predation on woodlice - an investigation using the precipitin test. Entomologia experimenta et applicata. 13 : 279-285

WIESER, W.
SCHWEIZER, G., 1970 A re-examination of the excretion of nitrogen by terrestrial isopods.
Journal of Experimental Biology. 52 : 267-274

WILLIAMS, W.D., 1972 Occurrence in Britain of *Asellus communis* Say, 1818, a North American freshwater isopod.
Crustaceana Suppl. 3 : 134-138

7. HABITATS 3 (continued):

COLLECTING IN THE LITTORAL ZONE – CREVICES (additional notes on certain species):

*Cymodoce truncata* may be found in large empty tests of *Balanus perforatus* and *B. crenatus* in the lower eulittoral and infra-littoral fringe.

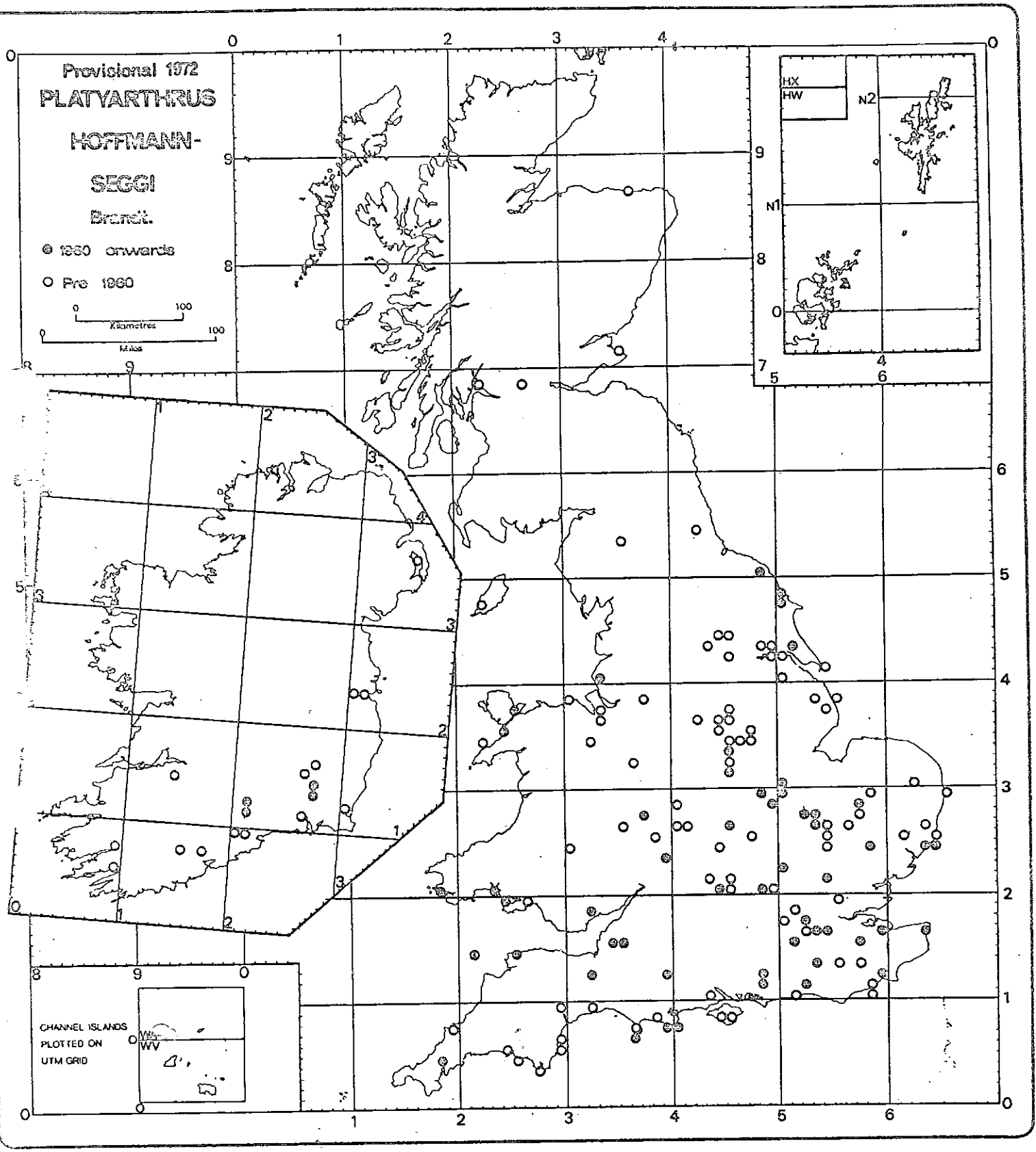
*Limnoria lignorum* and *L. quadripunctata* (and probably *L. tripunctata*) may occupy the same piece of wood and even adjacent burrows. They can only be separated with certainty under a high power lens.

*Sphaeroma serratum* may occur in large numbers under loose, damp stones in the upper eulittoral and even in the lower edge of the splash zone along with talitroid amphipods. Often the 'characteristic' serrated uropods are not obviously serrate and to separate *S. serratum* from the other species and maxillipedes and pereiopoda need to be examined. However, the other species all tend to occur in more estuarine situations.

*Zenobiana prismatica* may occur along with *Janira maculosa* and *Idotea baltica* on the underside of stones in the infra-littoral fringe.

Empty annelid tubes (e.g. *Sabellaria, Pomatoceros,* and *Hydroides*) may contain isopods.

Polymorphismn - *Sphaeroma, Cymodoce, Dynamene,* and *Idotea* (especially *I. baltica*) all tend to be polymorphic for colour - either general body colour or distinct patterning.


Provisional 1972
PLATYARTHRUS
HOFFMANN-
SEGGI
Brandt.
1960 onwards
Pre 1960
0 100
Kilometres
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Miles
HX
HW
N2
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CHANNEL ISLANDS
PLOTTED ON
UTM GRID
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