

THE OCCURRENCE OF ASELLIDAE IN THE BRITISH ISLES. PART 1.

ASELLUS CAVATICUS

PAUL T. HARDING

Institute of Terrestrial Ecology, Monks Wood Experimental
Station, Abbots Ripton, Huntingdon, Cambs. PE17 2LS.

INTRODUCTION

The distribution of Asellidae (freshwater isopods, waterlice or hoglice) in the British Isles was reviewed by Moon & Harding (1981, 1982). Since these publications, further records of Asellidae have been submitted to the Non-marine Isopoda Recording Scheme. In a series of short papers, of which this is the first, the occurrence of the four species of waterlice recorded in the British Isles will be updated.

ASELLUS CAVATICUS IN THE BRITISH ISLES

Asellus cavaticus is eyeless and devoid of pigment. All waterlice occurring underground and with little or no colour, should not be assumed to be Asellus cavaticus without first checking the distinguishing features given by Gledhill et al. (1976) because almost colourless specimens of Asellus aquaticus and Asellus meridianus have occurred.

Asellus cavaticus has been recorded mainly from underground streams, pools and wet surfaces in limestone caves and mines, and from where underground waters issue on the surface, such as springs and the water sources of watercress beds, and also from wells and boreholes. There was an active phase of biological recording in caves and mines, mainly in the 1950's and 1960's, when most of the 80 records of Asellus cavaticus in Britain were made. Collecting biological specimens is no longer popular with cavers, or is not properly co-ordinated, so that few records have been made since 1970.

The distribution map (Fig. 1) summarises all records of Asellus cavaticus received to the end of 1988. The species was recorded for the first time in Britain from a well at Ringwood, Hampshire. Subsequently, it has been found at watercress beds and a spring in Dorset, cave systems in South Wales, a spring and river gravels in mid Wales, mines in Wiltshire and Oxfordshire, and a well in Kent. The majority of records are from carboniferous limestone cave systems in the Mendip Hills and in South Wales, especially Brecknock. Despite surveys of similar cave systems in Derbyshire and North Yorkshire, Asellus cavaticus has not been recorded in these northern caves. The most recent records, both by Steve Ormerod, are also the most northerly. Ormerod & Walter (1984) described the site at which

Harding - Asellus cavaticus

it was found on the Hiranant River in 1982, but gave an incorrect grid reference. In 1985, Ormerod found Asellus cavaticus at Nant Esgair Garn at 50 cm depth in gravel.

Moon & Harding (1981) noted the loss of contact with underground waters which has resulted from the abandonment of domestic wells in favour of piped water supplies. No records have been received from bore-holes supplying water for domestic use. Any opportunity to sample underground waters for Asellus cavaticus, or for the equally interesting species of subterranean amphipods, should be eagerly followed up. More information on these animals is needed, especially now that pollution of groundwaters by pesticides and fertilizers is believed to be a serious problem in some areas. The fact that ground waters are being much more intensively used to supply domestic water requirements may also pose a threat to some populations of Asellus cavaticus and subterranean amphipods. The insecticide Permasect W.T. is marketed to water authorities to control invertebrates in water for public supply, particularly 'Asellus'.

Concern about human impacts on subterranean crustacea in Belgium has been expressed by Fiers & Wouters (1985). In particular, they noted the effects of eutrophication on groundwaters and general disturbance in cave systems open to the public. In Britain, the Nature Conservancy Council has recently sought information on cave faunas, including Asellus cavaticus (Harding & Greene 1988). Additional information on the occurrence of Asellus cavaticus, subterranean amphipods, and the other species of Asellidae would be most welcome. Records and specimens should be sent to me at the above address.

REFERENCES

- FIERS, F. & WOUTERS, K. (1985). Human impacts on the crustacean stygiofauna. Proceedings of the Conference - Debat Invertebres menacants, Invertebres menaces. Gembloux: Faculte des Sciences Agronomiques de l'Etat.
- GLEDHILL, T., SUTCLIFFE, D.W. & WILLIAMS, W.D. (1976). Key to British Freshwater Crustacea : Malacostraca. Sci. Publ. Freshwater Biol. Assoc., No. 32.
- HARDING, P.T. & GREENE, D.M. (1988). Computerization of data on cave fauna in Britain. CSD Report No. 886). Peterborough : Nature Conservancy Council.
- MOON, H.P. & HARDING, P.T. (1981). A preliminary review of the occurrence of Asellus (Crustacea : Isopoda) in the British Isles. Abbots Ripton : Biological Records Centre.
- MOON, H.P. & HARDING, P.T. (1982). The occurrence of Asellus (Crustacea : Isopoda) on offshore islands in the British Isles. Naturalist, 107, 67-68.
- ORMEROD, S.J. & WALTERS, B. (1984). Asellus cavaticus Schiodte (Crustacea : Isopoda) from a hillstream in north Breconshire. Nature in Wales, (1983), 2, 109.

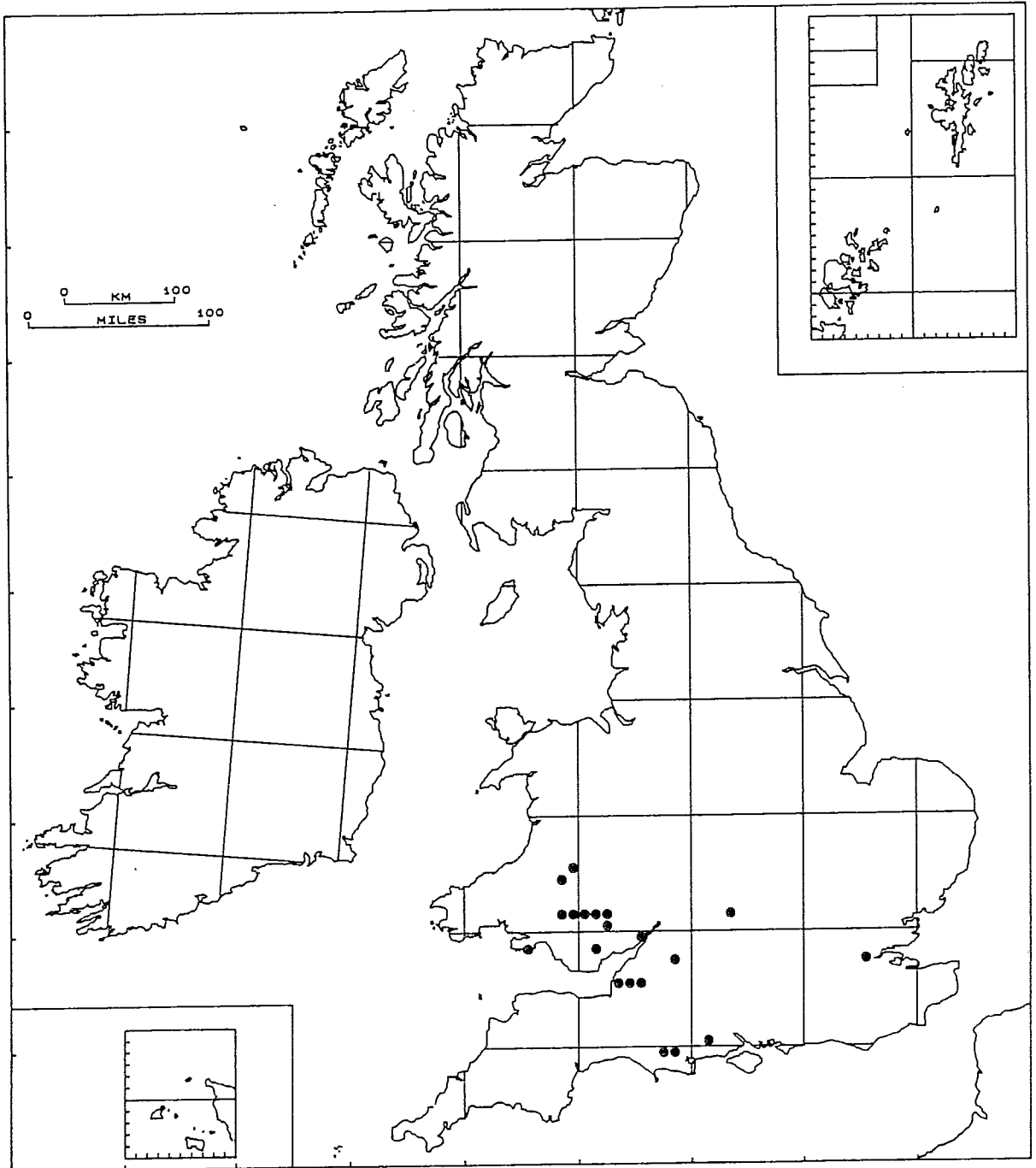


Fig. 1 : Asellus cavaticus. Recorded occurrence in Britain in 10 km squares up to December 1988.