EUROPEAN INVERTEBRATE SURVEY

PROVISIONAL ATLAS OF THE ARACHNIDA OF THE BRITISH ISLES

Part 1

PSEUDOSCORPIONES

Edited by PHILIP E. JONES

1980

BIOLOGICAL RECORDS CENTRE

Institute of Terrestrial Ecology,
Monks Wood Experimental Station,
Huntingdon

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FOREWORD

The results of work done over some 11 years are summarised by my colleague, Mr Philip Jones, in this provisional atlas. Data from recent collecting, from museum collections and from published sources are brought together, so that almost all the data available on the distribution of pseudoscorpions in the British Isles are summarised.

The maps and notes presented in this atlas are only a summary of the data accumulated by Mr Jones. A copy of the complete data has been deposited in the archives of biological records held by the Biological Records Centre. The Biological Records Centre is grateful to Mr Jones for providing the original data and for compiling and editing this provisional atlas.

Under the terms of a contract with the Natural Environment Research Council the work of the Biological Records Centre receives financial support from the Nature Conservancy Council. This support is given as part of the Nature Conservancy Council's programme of research into the conservation of nature.

Monks Wood
August 1980

Paul T Harding
General Editor

INTRODUCTION

Out of a total of 441 species of pseudoscorpion found in Europe (Vitali-di Castri 1973), only 25 species are found in the British Isles. In spite of this, they have been somewhat neglected by collectors in the past because of taxonomic difficulties and the lack of a reliable key to species.

Most species were first described at the end of the 19th and beginning of the 20th century. It was during this period that most of the early studies on the group were made. Kew (1911 and 1916) produced keys to 24 species, but apart from a few papers by him, little was published on pseudoscorpions in this country between 1916 and 1954. Evans and Browning (1954) published the first revision of the British species, based on material in the collections of the British Museum (Nat. Hist.). The publication of this key aroused new interest in an otherwise much neglected order. However the key is now out of print and itself very much in need of revision because of changes in classification and unreliability of certain characters used for identification. Legg (1971 and 1972) has produced more up-to-date keys to species based on those of Evans and Browning.

Up to the present day research in this country has been mainly concerned with the taxonomy, morphology and life histories of species. Various other aspects of their ecology have been much neglected and very little is known as yet about the habitat preferences and geographical distribution of species.

Distribution records of the British and Irish species have been given by Pickard-Cambridge (1892) and Kew (1911 & 1916), mainly in the form of county records, plus a few named localities. Godfrey (1908) published a comprehensive list of localities for each of the species known to occur in Scotland up to July 1907. Many small notes on distribution appeared in the national and regional literature from 1916 onwards, but no comprehensive list was given until the publication of Evans' and Browning's key (1954). In this key the description of each species is followed by brief statements about its habitat and distribution. Legg's keys (1971 & 1972) give much the same information about habitats and distributions. Distribution maps and habitat preferences for 5 British species are given by Jones (1980b).

The present atlas includes distribution maps of 25 species of pseudoscorpion considered to be native or well-established in the British Isles. Maps of *Chthonius dacondes* Navas and *Microbisium dumicola* C.L.Koch (mentioned in Evans and Browning 1954) are not included, as there is no evidence to suggest that these species have become established in the British Isles.

The records have been divided into two date classes: pre 1960 and 1960 onwards. Records have been received from 841 ten km squares, of which those from 540 squares date from 1960 or later (mainly the 1970s). The number of species recorded per square varies from one to 11, although most squares have only one to 3 species.

Sources of records

The main source of records has been the Pseudoscorpion Recording Scheme. This scheme was set up in 1969 and a recording card was produced by the Biological Records Centre in 1970. Progress during the first 10 years has been quite slow (Jones 1977a, b; Mothersill 1978) since the number of people who have collected specimens and sent in records regularly is very small. Most of the records received have been provided by a nucleus of about 35 people who have found pseudoscorpions while searching for other invertebrates, such as Coleoptera and Mollusca, in similar habitats and have sent them in to the scheme organiser for identification. Because of the present unreliability of any published key, the identification of each specimen has had to be checked by the scheme organiser, or some other expert, for the record to have been accepted for the Recording Scheme.

Records have been extracted from national and regional literature (especially that of local natural history societies). Data have also been received from museum collections at Cardiff (National Museum of Wales), Colchester, Doncaster, Dublin (National Museum of Ireland). Edinburgh (Royal Scottish Museum), Ipswich, Leicester, Liverpool, Norwich, Oxford (University Museum), Reading, Sheffield, and the British Museum (Nat. Hist.) in London.

The identification of specimens recorded in the literature and in many museum collections has not usually been checked by the scheme organiser.

Changes in species names

Recent changes in some species names have been proposed and seem likely to be generally accepted. *Microcreagris cambridgei* (L.Koch) becomes *Roncocreagris cambridgei* (L.Koch); the genus *Microcreagris* is now restricted to species occurring in the Far East (Mahnert 1976). *Toxochernes panzeri* (C. L. Koch) becomes *Dinocheirus panzeri* (C. L. Koch); *Toxochernes* is a junior synonym of *Dinocheirus* (Mahnert 1978). *Withius subruber* (Simon) has proved to be a junior synonym of *Withius piger* (Simon), so the latter name must now be used (Hertault 1970).

Future recording

Very few of the maps in this atlas show any distinct patterns of distribution and many are probably a good indication of the distribution of collectors. It is obvious that in the future much more emphasis must be placed on searching the poorly-recorded areas of the British Isles, especially Ireland, the highlands and some of the lowland areas of Scotland, and parts of south-west England. It is hoped that this atlas will stimulate existing collectors and encourage new recorders to search for species in these areas and to increase the total number of species in each of the squares already recorded. Recording cards, instructions and hints on collecting pseudoscorpions can be obtained from Philip Jones, c/o Biological Records Centre at Monks Wood.

Acknowledgements

I would like to thank the many naturalists and museums, too numerous to name, who have contributed to the mapping scheme by sending in records or specimens for identification. I am especially grateful to the following recorders for help in covering whole counties or larger areas: Mr E Broadbent, Mr J Crocker, Miss C M Merrett and Dr A J Rundle. Finally I am grateful to Paul Harding of the Biological Records Centre for his invaluable help and guidance in the production of this atlas.

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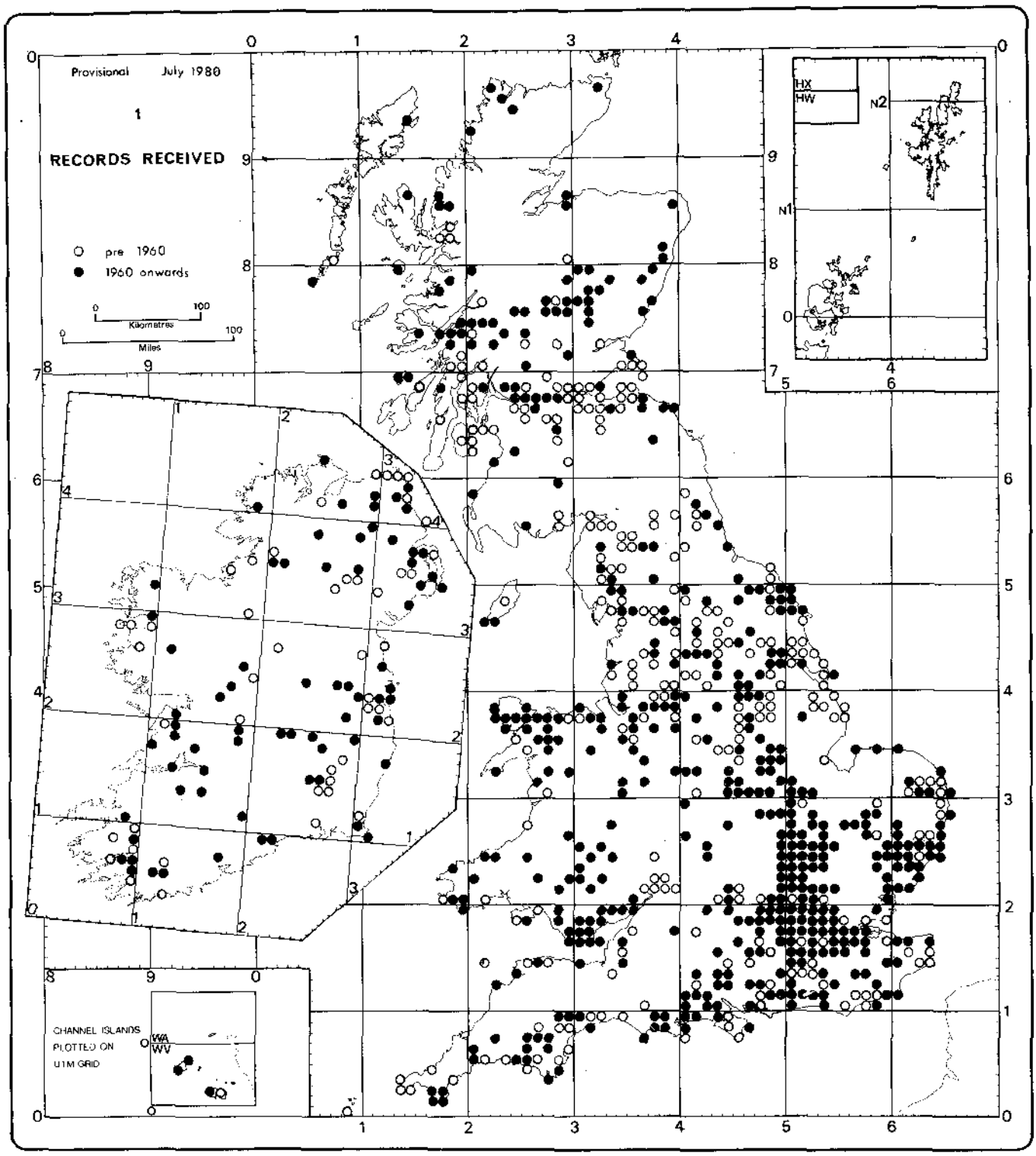
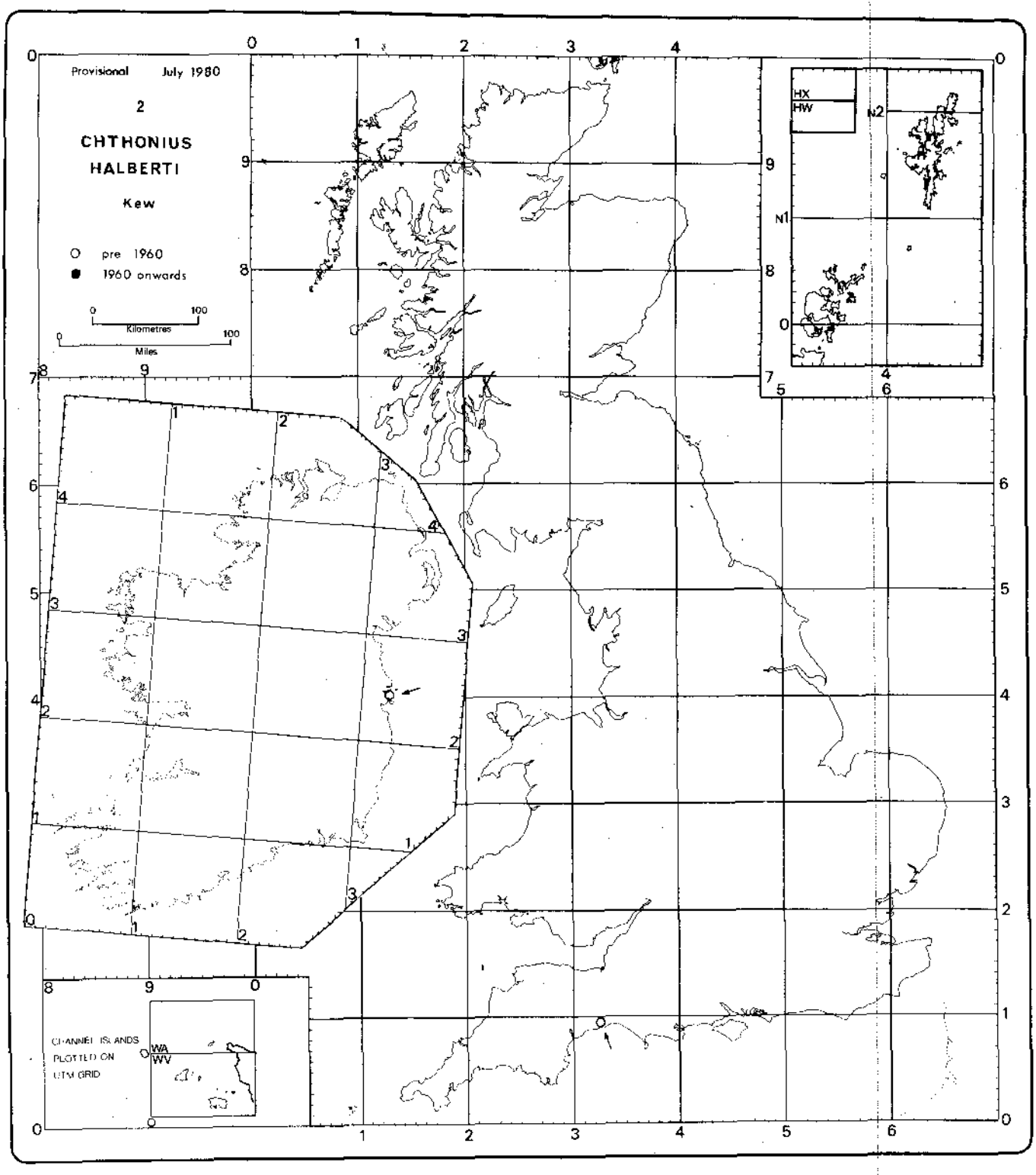
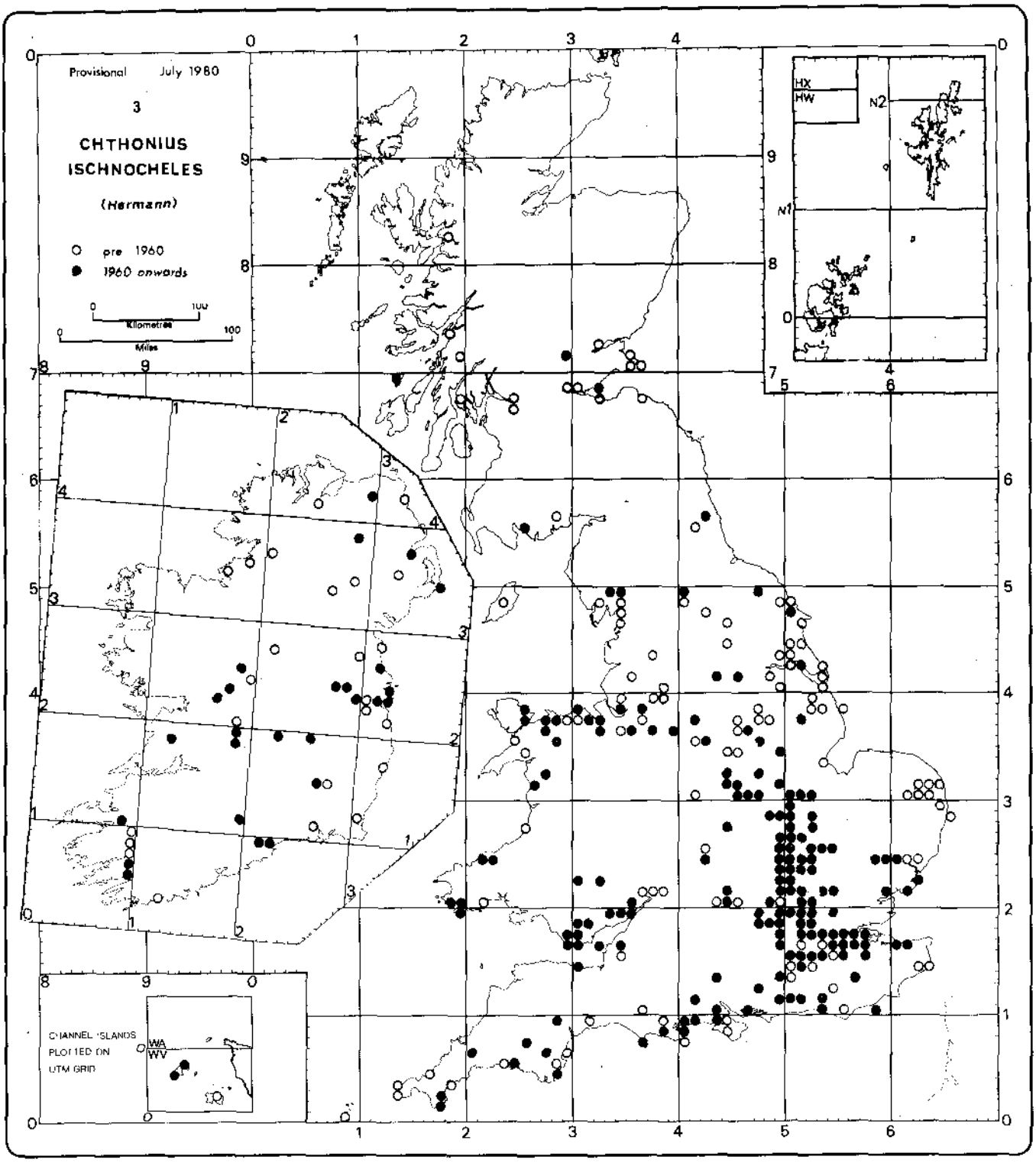
July 1980 Philip E Jones



Records received

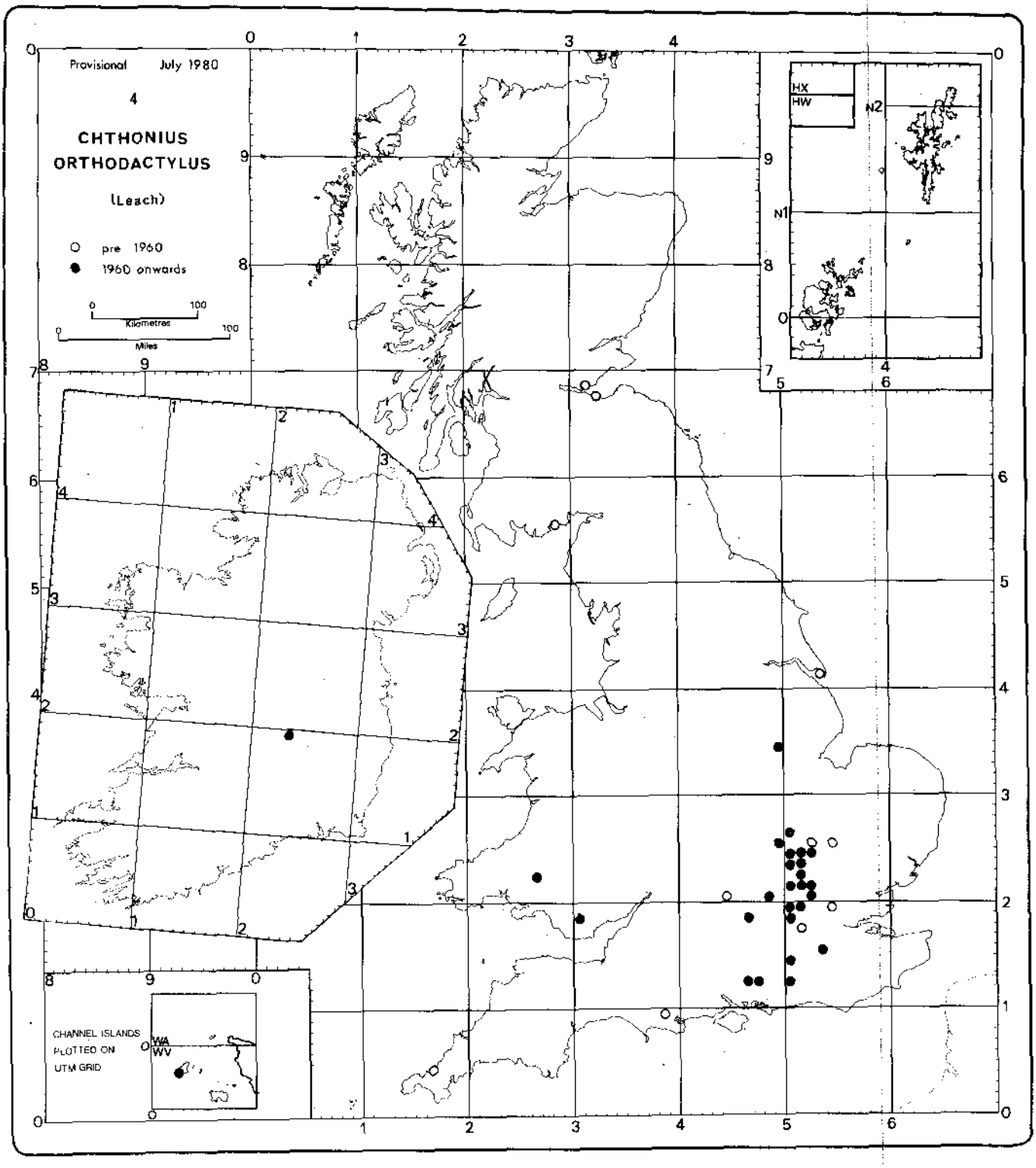


Chthonius halberti Kew. First recorded in the British Isles in 1915 by J.N. Halbert at Malahide, Co. Dublin, under stones on the seashore between the levels of orange lichens and *Pelvetia canaliculata*, i.e. just above high water mark (Kew 1916). Two specimens believed to be the same species were collected by H.W. Kew in 1916 at Axmouth, Devon, under stones on the beach near and below high water mark (Muchmore 1968). Several attempts in recent years to re-find the species at both localities have proved unsuccessful. Beier's (1963) description of *Chthonius halberti*, based on specimens from the south coast of France, does not fit the type specimens of *C. halberti* in the National Museum of Ireland, Dublin (Muchmore 1968). Some authors consider *C. Halberti* to be the type species of the genus *Kewochthonius*. This is reviewed by Muchmore (1968).

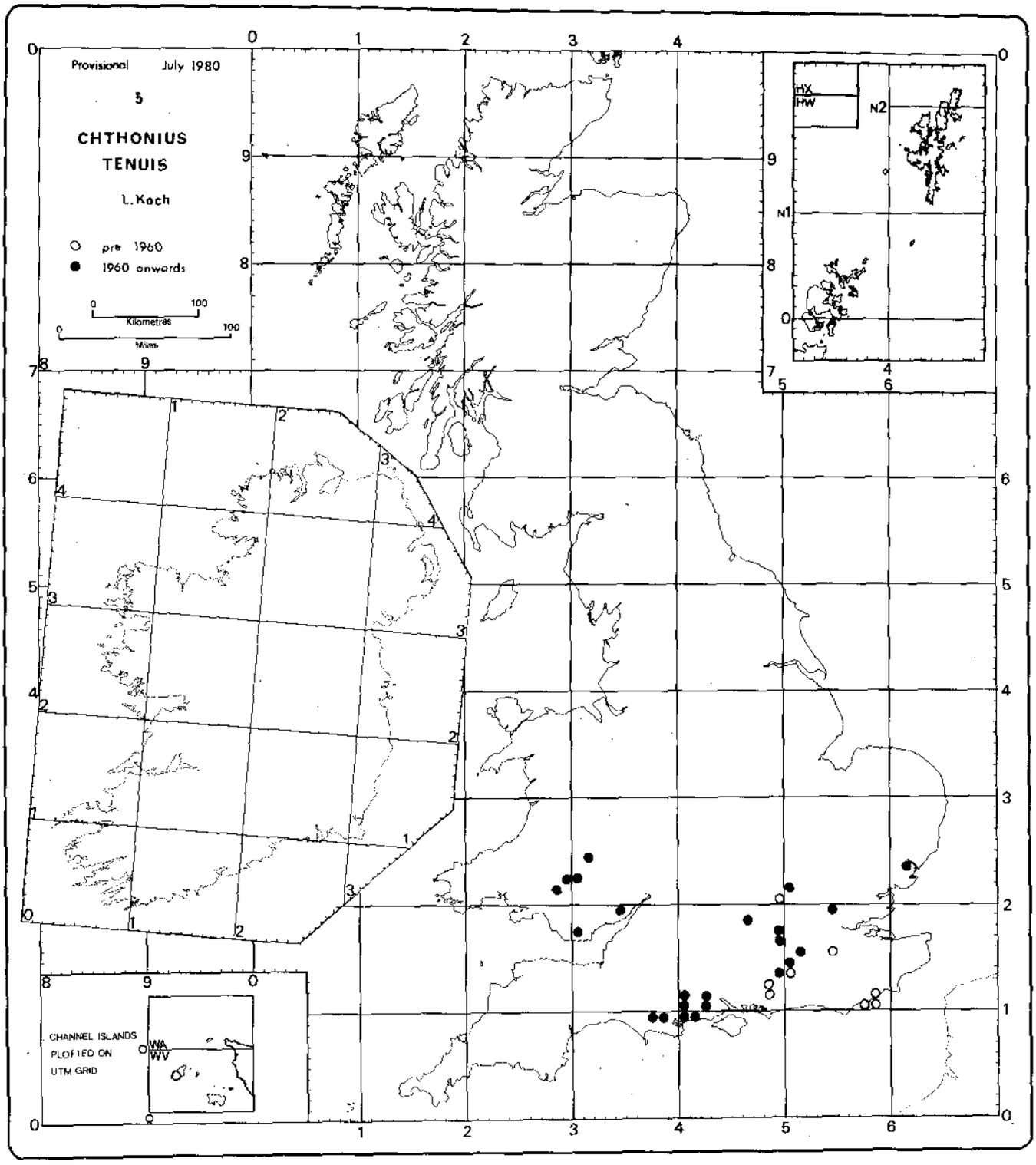


Chthonius tenuis L. Koch. Common in southern Britain. Occurs in deciduous leaf litter (particularly beech) and dead wood, also under stones. Abundant on the Dorset heathlands. A southern European species which reaches the northern limit of its range in the south of Britain.

Transpose caption to Map 5.

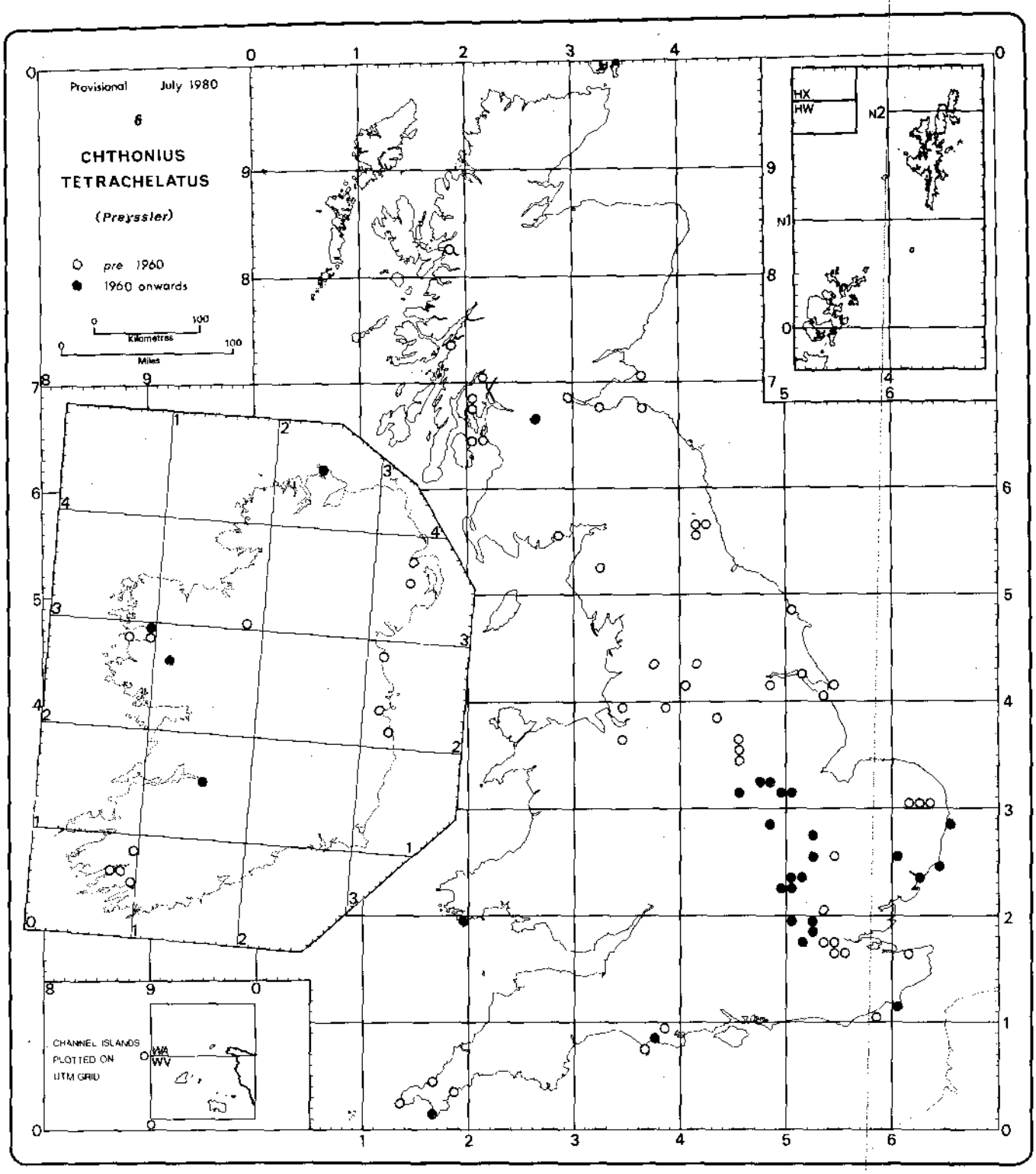


Chthonius orthodactylus (Leach). Most common in south-eastern Britain, where it occurs in deciduous leaf litter (mainly beech and oak), moss, under stones and in soil.

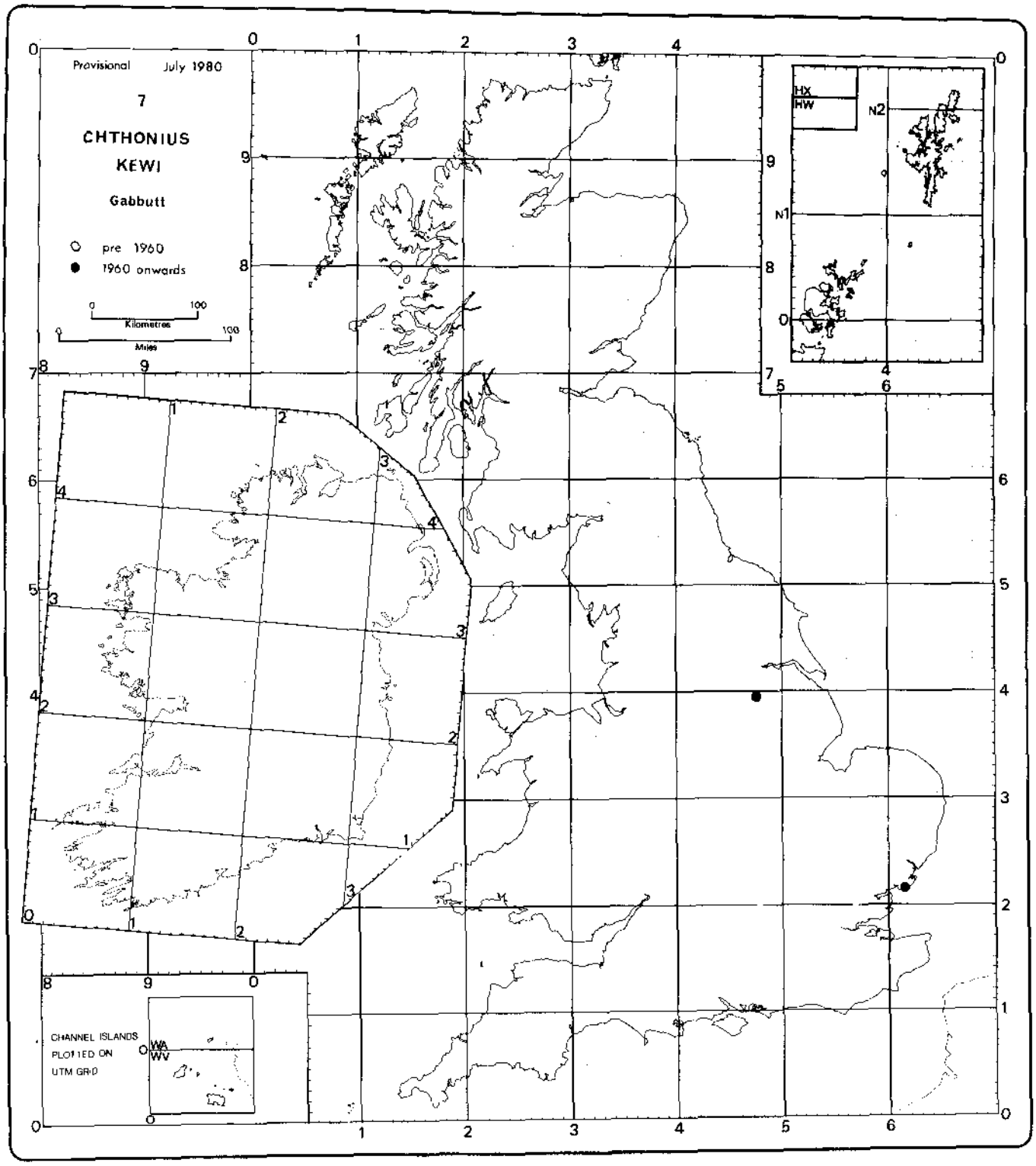


Chthonius ischnocheles (Hermann). One of the commonest species in the British Isles, and widely distributed. It occurs in a variety of biotopes, but is most frequently recorded from deciduous leaf litter (rarely coniferous), moss, rotten wood, under logs, under stones and in the soil.

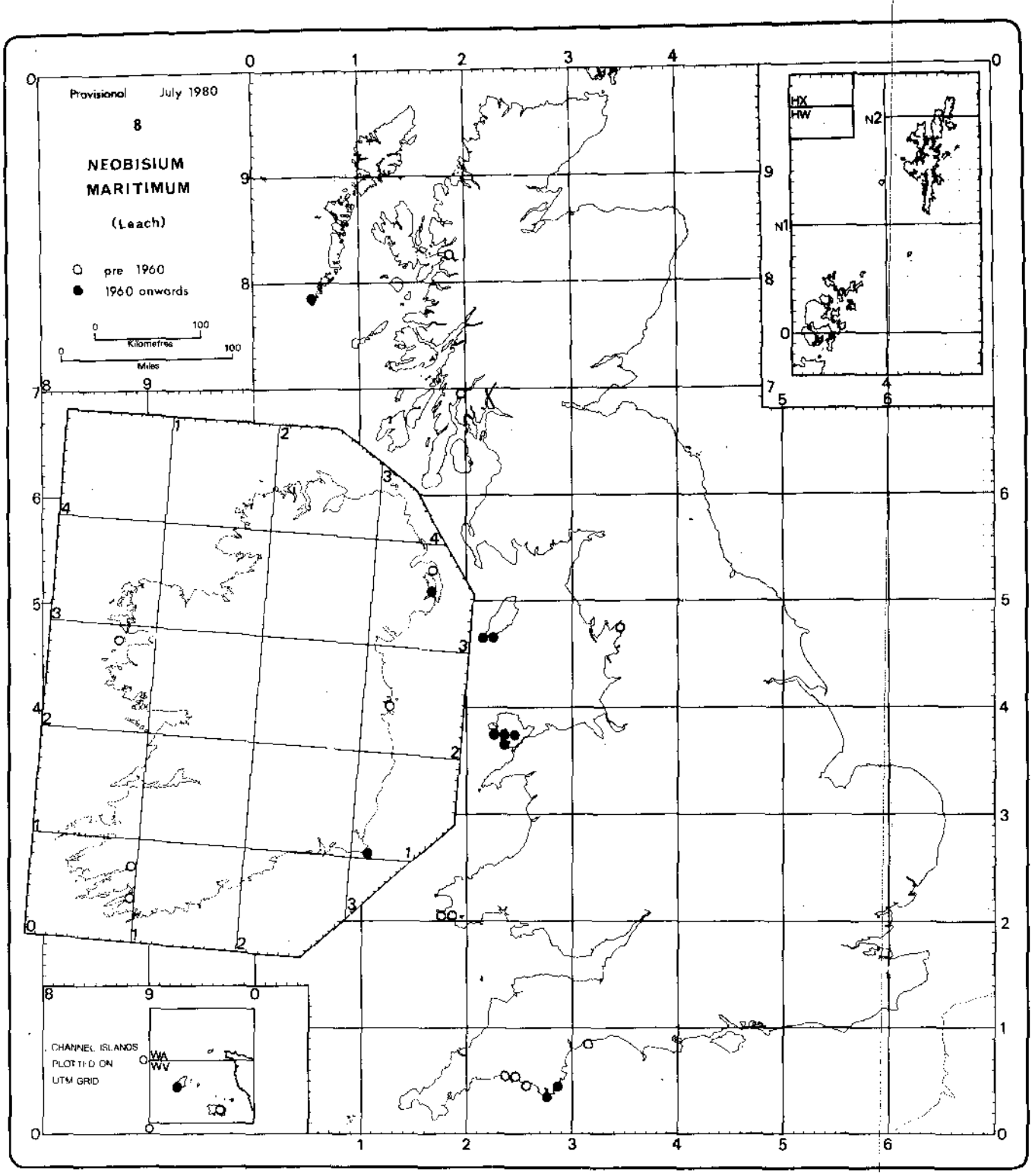
Transpose caption to Map 3.



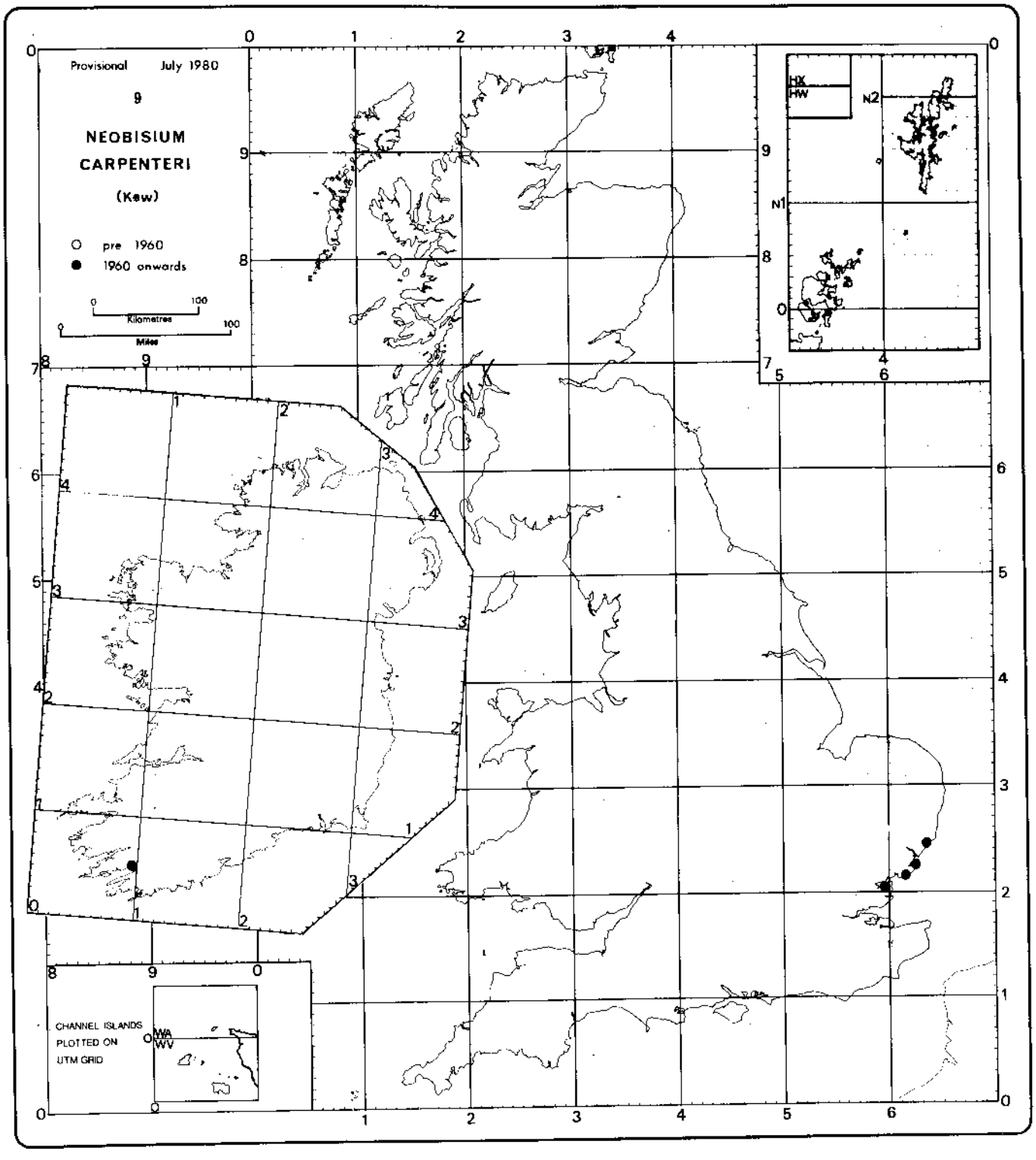
Chthonius tetrachelatus (Preyssler). Widespread in the British Isles, especially on the coast and a little distance inland. Occurs under stones and rocks, and in leaf litter and other decaying vegetation. It is also associated with synanthropic habitats, especially greenhouses, old established gardens, quarries and waste ground.



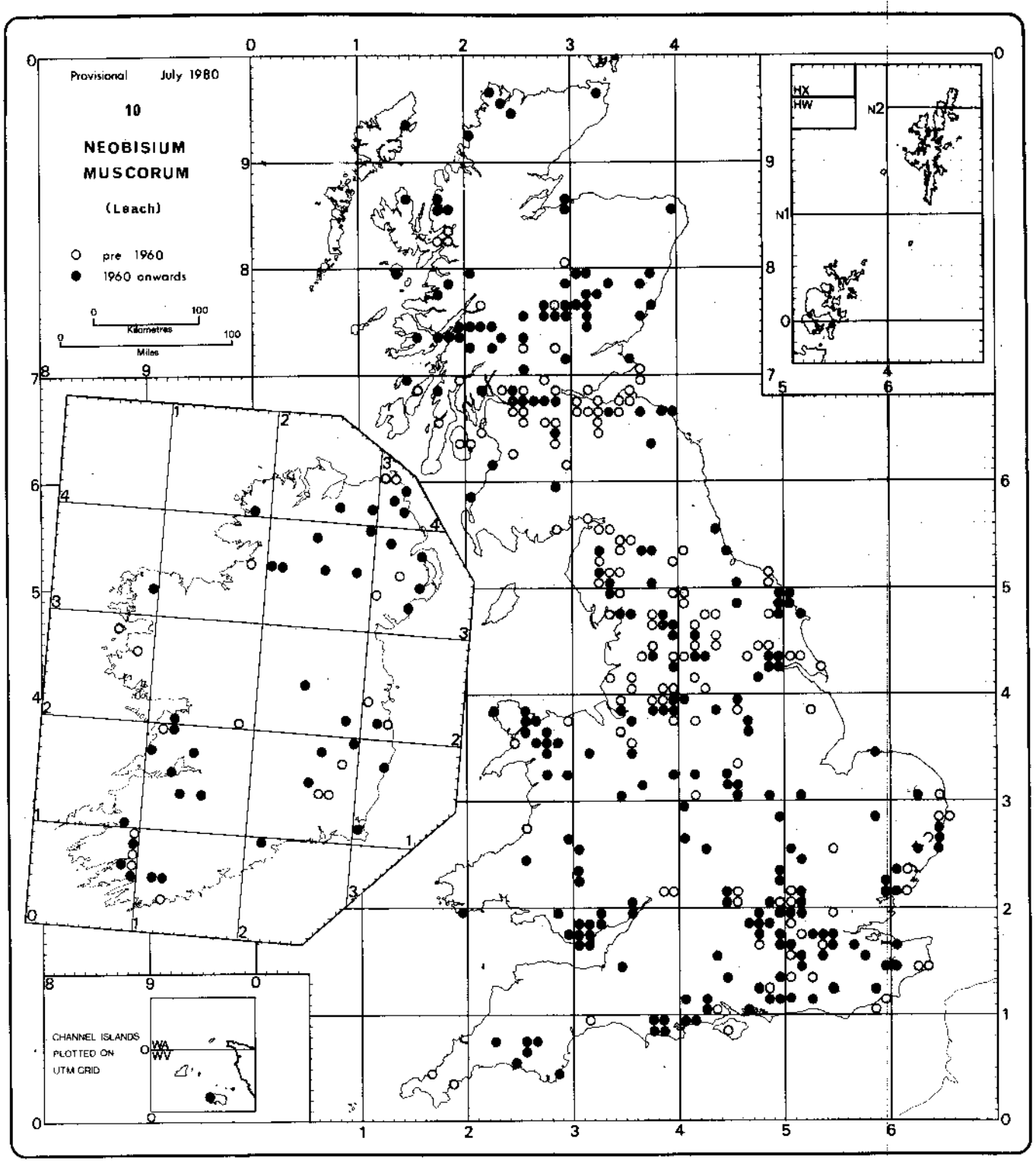
Chthonius kewi Gabbutt. First discovered in the British Isles in 1961 at Colne Point, near St Osyth, on the Essex coast (Gabbutt 1966). It occurs here in large numbers in marram grass, *Agropyron* litter and debris at the base of the sea wall. Also recorded in 1971 at Idle Stop, Lincolnshire, in heaps of rotting aquatic plants dredged onto the banks of a dyke and left to rot. Legg (1971) suggests that this species may in fact be a variety of *C. tetrachelatus* (Map 6).



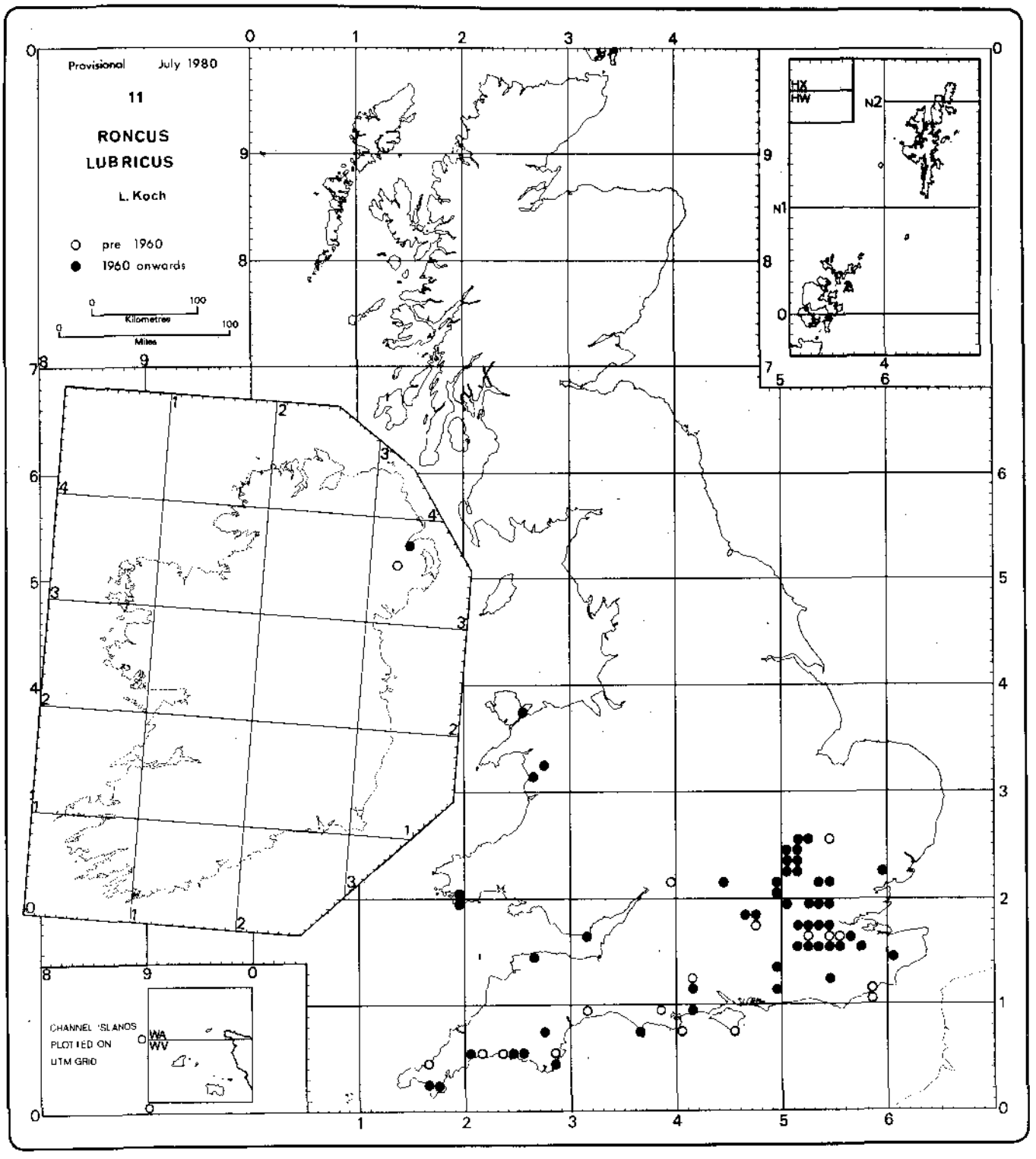
Neobisium maritimum (Leach). Littoral. Occurs in rock crevices and under stones between tide-marks. Recorded elsewhere in Europe only on the west coast of France (Beier, 1963).



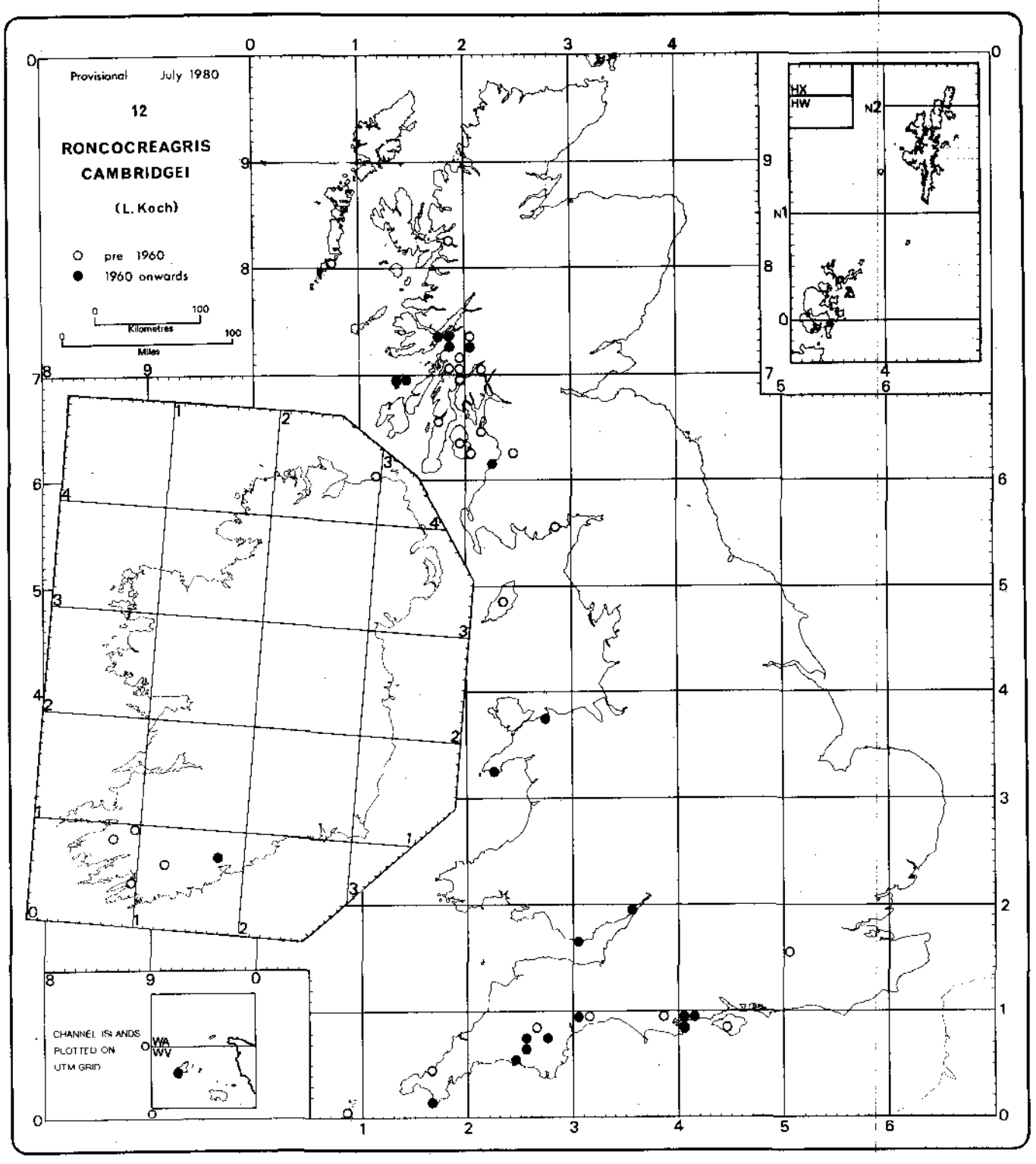
Neobisium carpenteri (Kew). First recorded in the British Isles by Kew in 1909-10 on a rocky wooded hillside at Glengariff, Co. Cork under the flaking outer bark of arbutus trees, in rock crevices and among dead leaves. First recorded on the Essex coast in 1958 at Colne Point. Since then recorded in large numbers nearby at the base of the sea wall and on the saltmarsh in plant litter (particularly *Agropyron* sp.), in shingle and under debris. Specimens found near Seal Harbour, Glengariff, in 1971, came from clumps of sphagnum on the cliff top. Not yet recorded outside the British Isles.



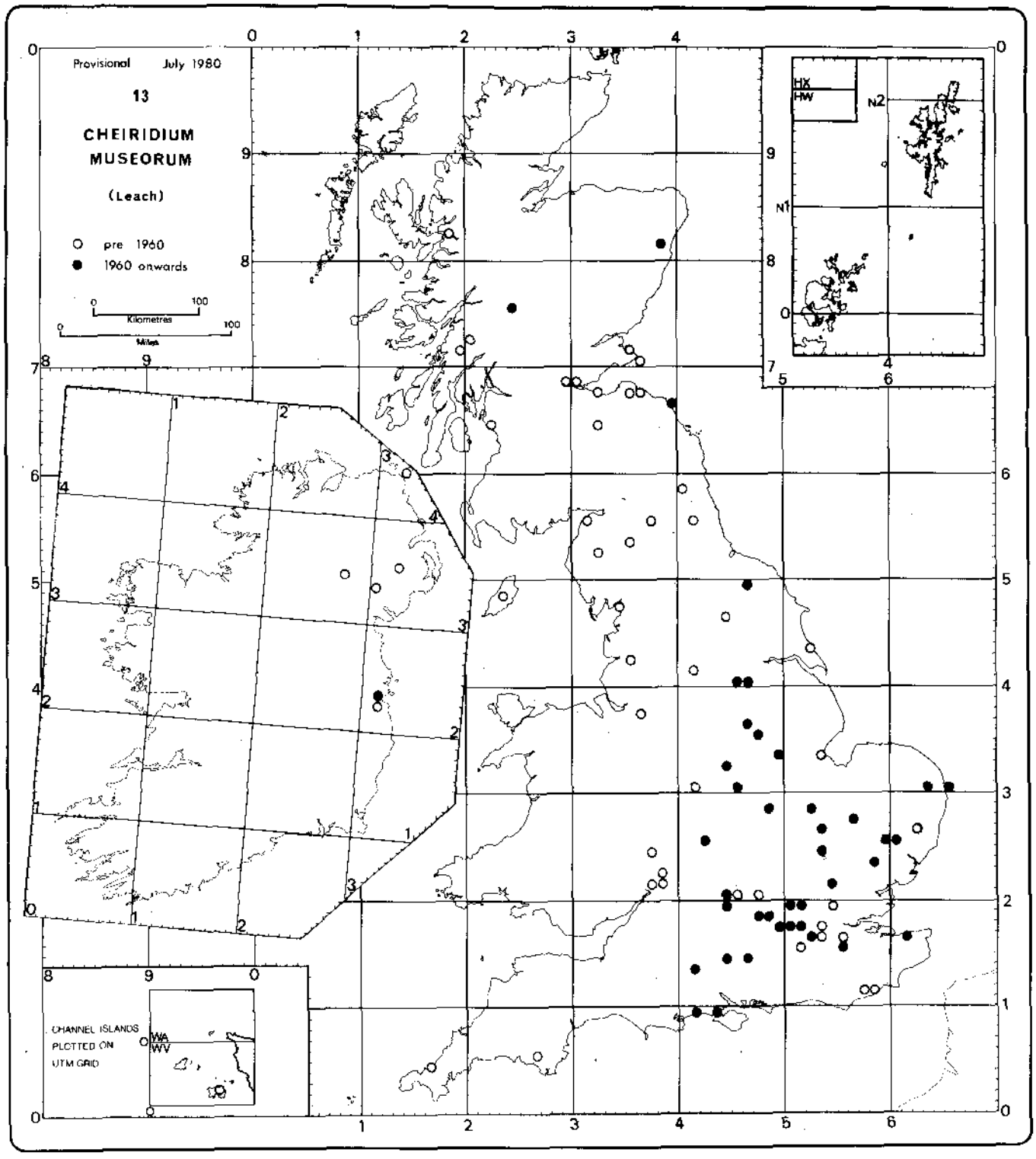
Neobisium muscorum (Leach). Undoubtedly the commonest and most widespread species occurring in the British Isles. It is found in a wide range of biotopes, including decaying vegetation (particularly leaf litter), moss, under stones, in soil, under bark, in birds' nests—from sea-level to over 3,000 ft. (915 m.).



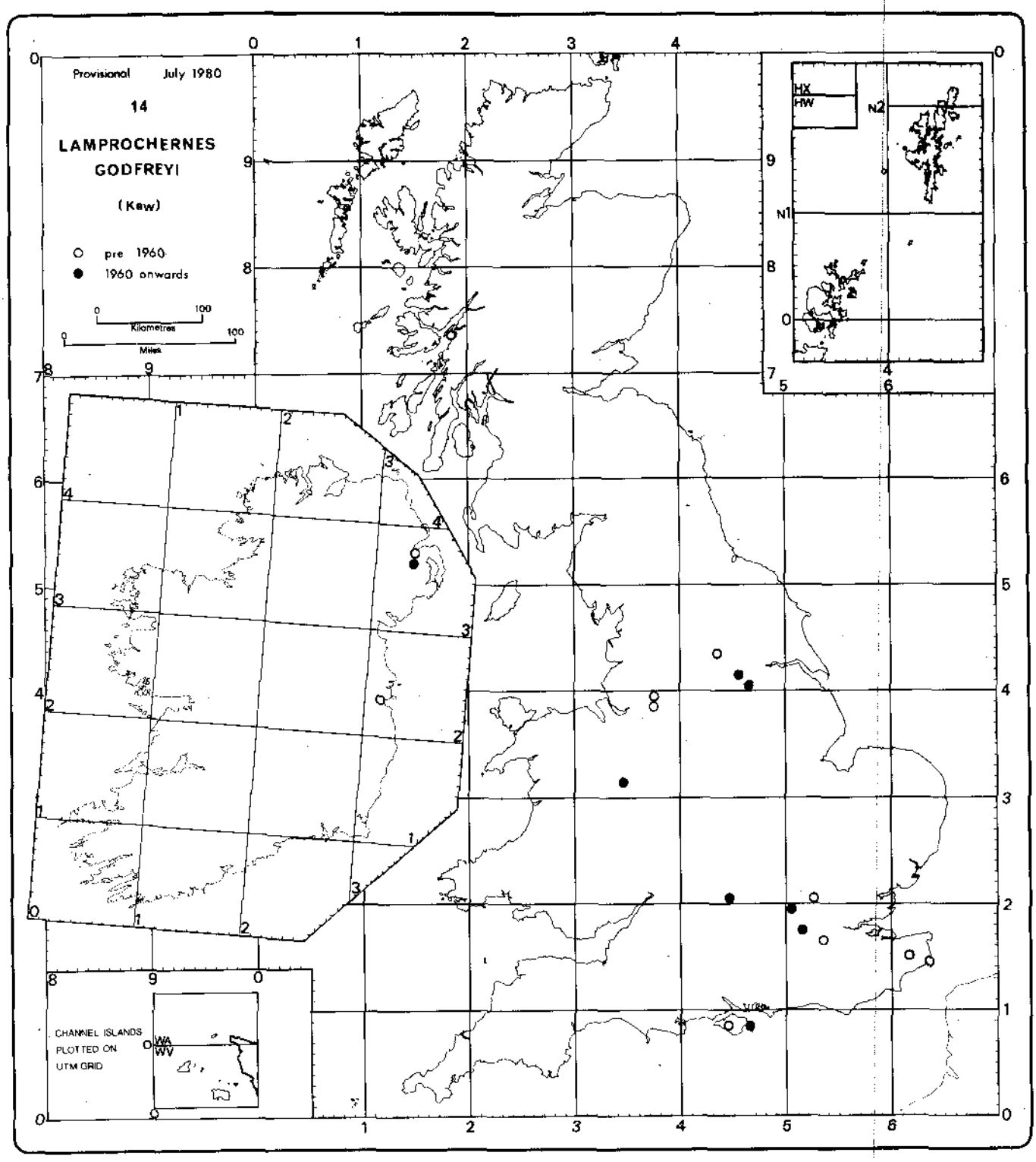
Roncus lubricus L. Koch. Common in damp places such as leaf litter (particularly beech), moss, and under stones. Also recorded from grass, soil and under bark.



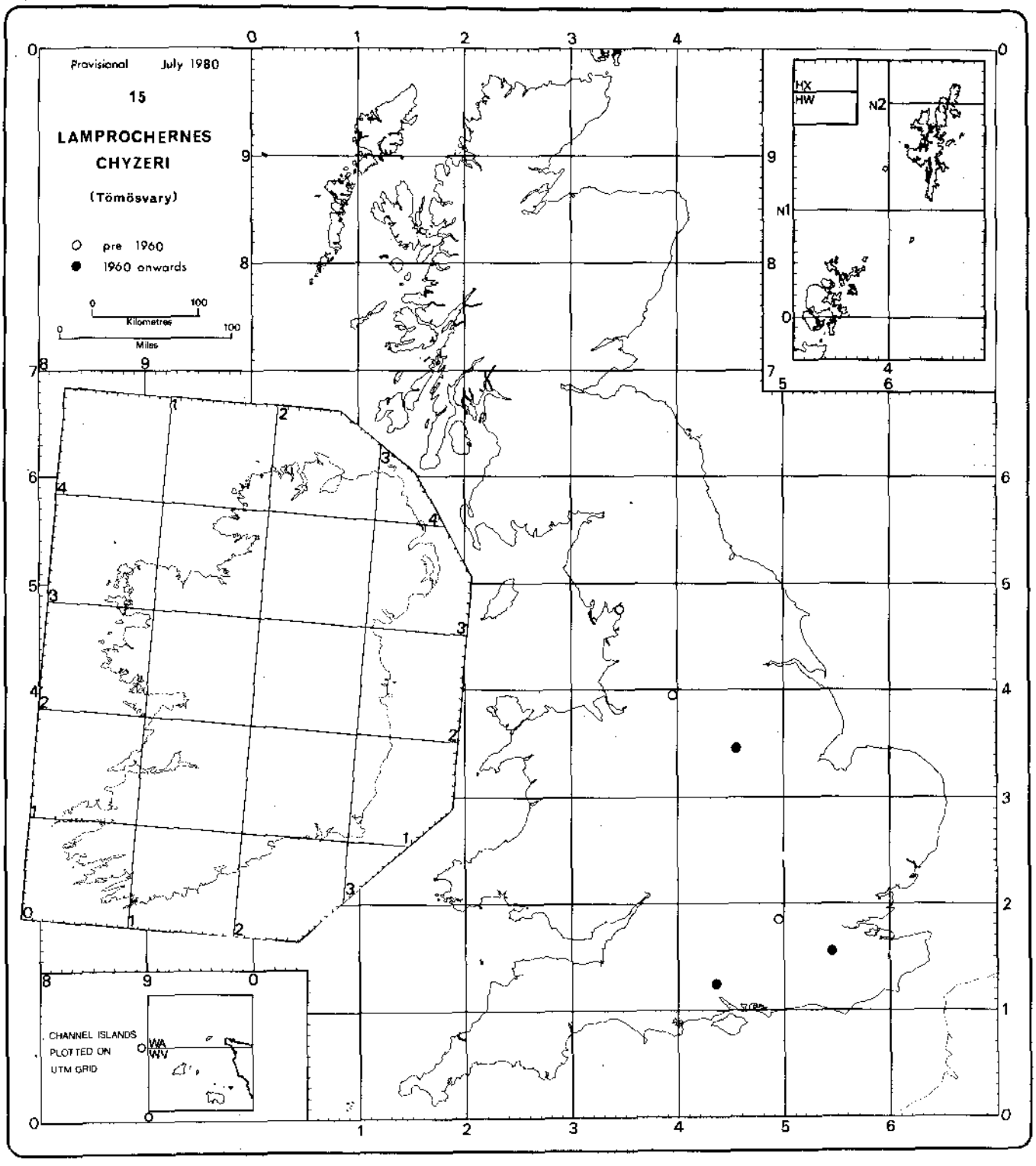
Roncocreagris cambridgei (L. Koch). This species shows a distinct western distribution. It is common in deciduous leaf litter, moss and under stones on the coast and a little distance inland. Also occurs in Spain, Portugal and western France.



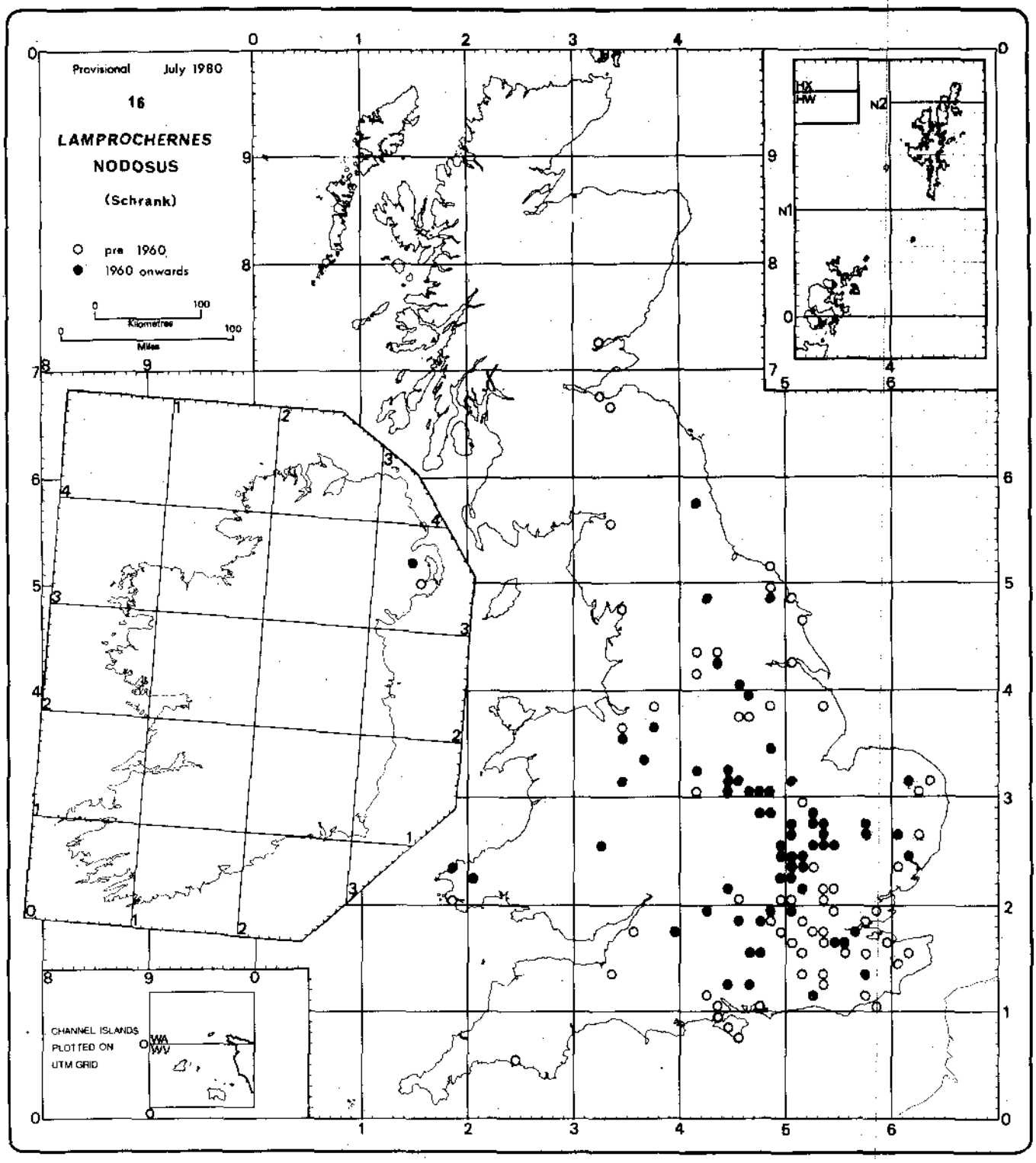
Cheiridium museorum (Leach). A common synanthropic species occurring in shops, dwelling-houses, barns, grain stores, stables. It is also frequently recorded from the nests of birds associated with human habitation, e.g. house sparrow, starling, house martin (Jones 1975).



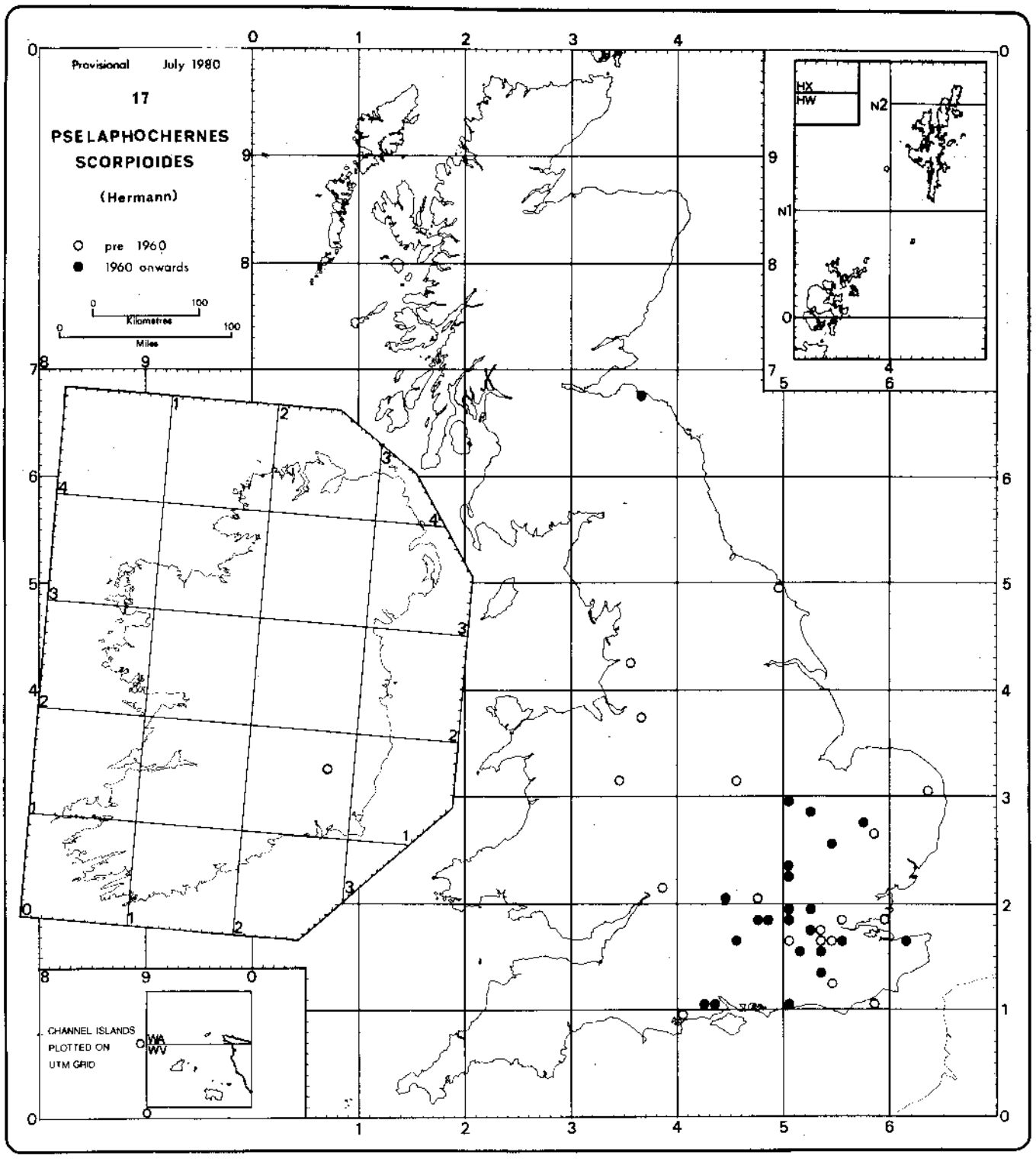
Lamprochernes godfreyi (Kew). All records are from synanthropic places such as compost/manure heaps, rubbish heaps and plant beds (Kew Gardens, Surrey). Commonly phoretic on flies (Jones 1978), but sparsely distributed.



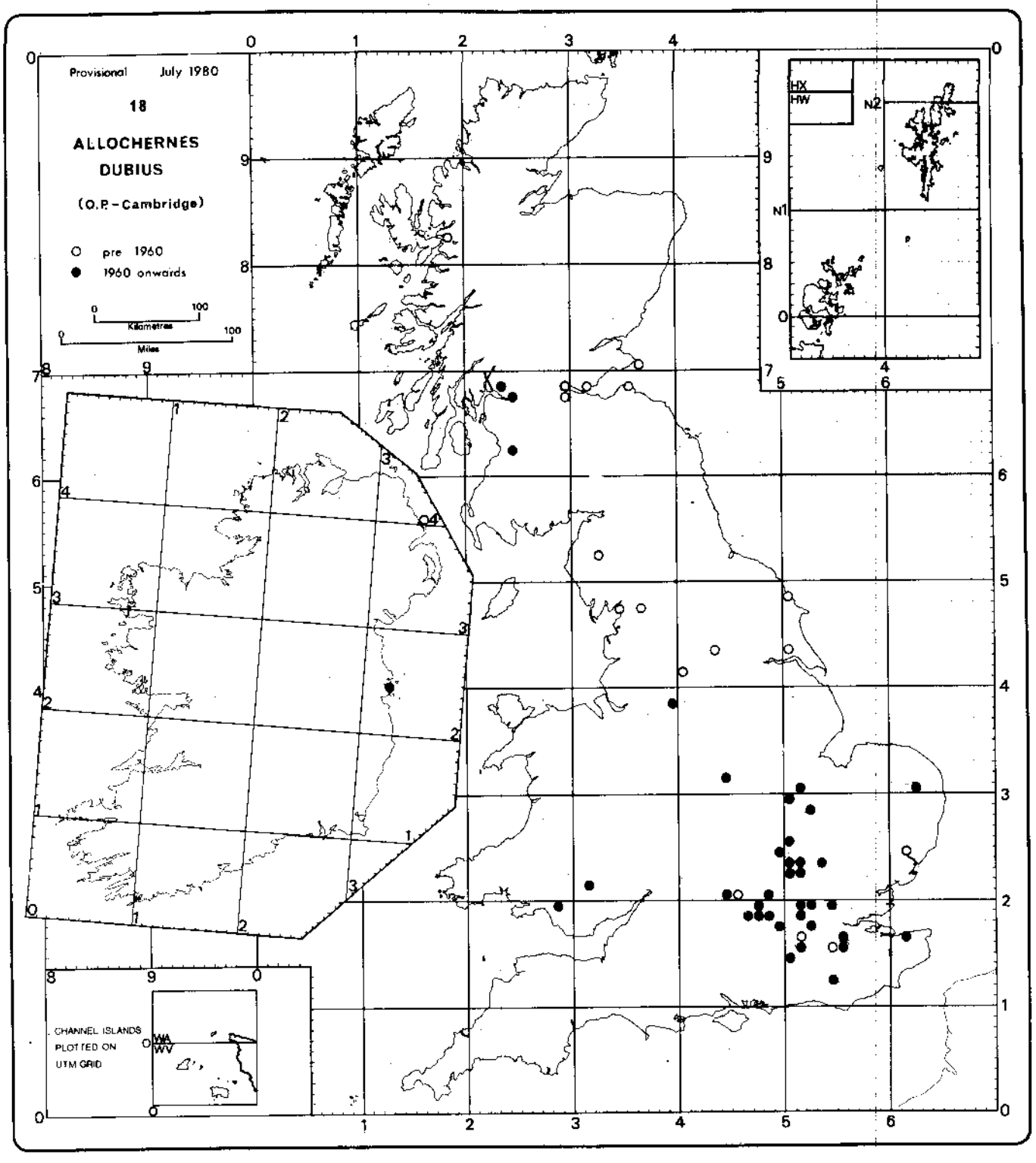
Lamprochernes chyzeri (Tomosvary). This species is probably more widespread than the map suggests. The paucity of records may be because of confusion of this species with *L. nodosus* (Map 16) in the past. It has beeen found in Britain under the bark of old beech and birch trees and recorded phoretically on the legs of flies. Beier (1963) records it as occurring almost exclusively on aspen.



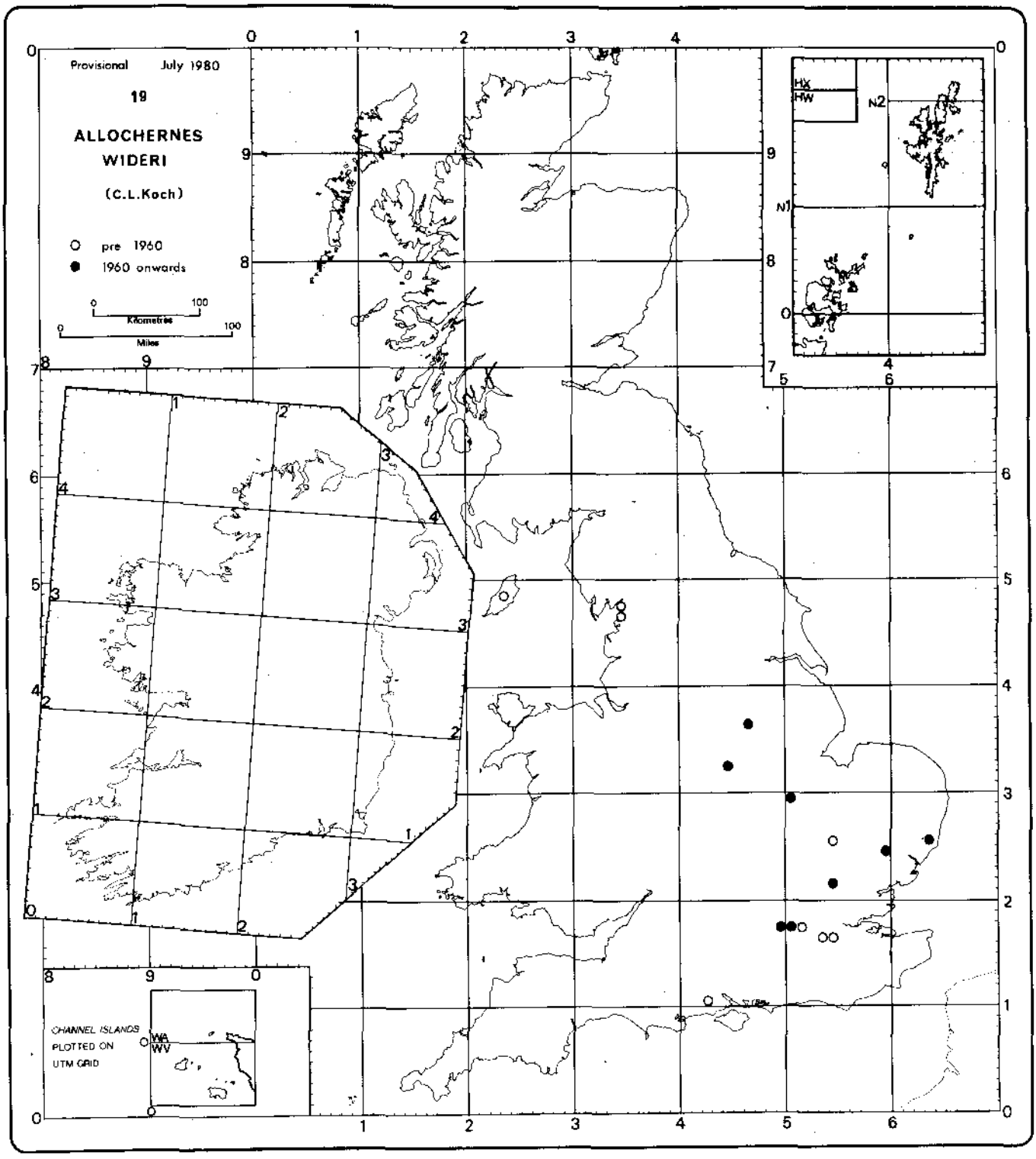
Lamprochernes nodosus (Schrank). Synanthropic. Widely distributed and common in England and Wales, especially in areas of dense population. Occurs in compost/manure heaps, under the bark and in rotten stumps of dead trees, and is very often seen in houses and office buildings attached to the legs of flies (Jones 1970). Some of the older records of this species may include records of *L. chyzeri* (Map 15).



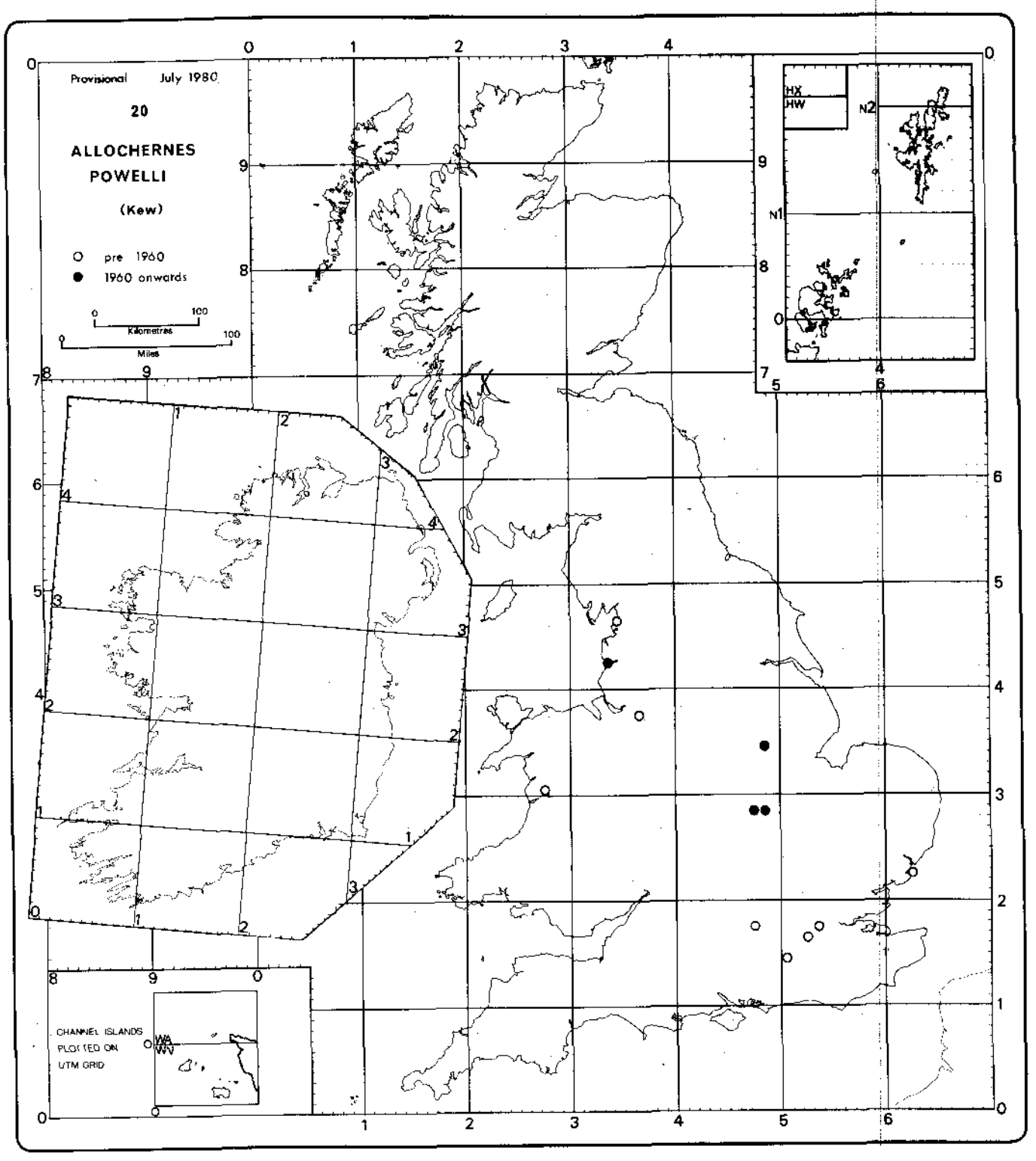
Pselaphochernes scorpioides (Hermann). Recorded mainly from synanthropic places such as compost/rubbish heaps, straw debris, gardens, but also occurs in leaf litter, dead wood, and in nests of the ant *Formica rufa* L. A single (recent) Scottish record from Dunbar in old straw debris.



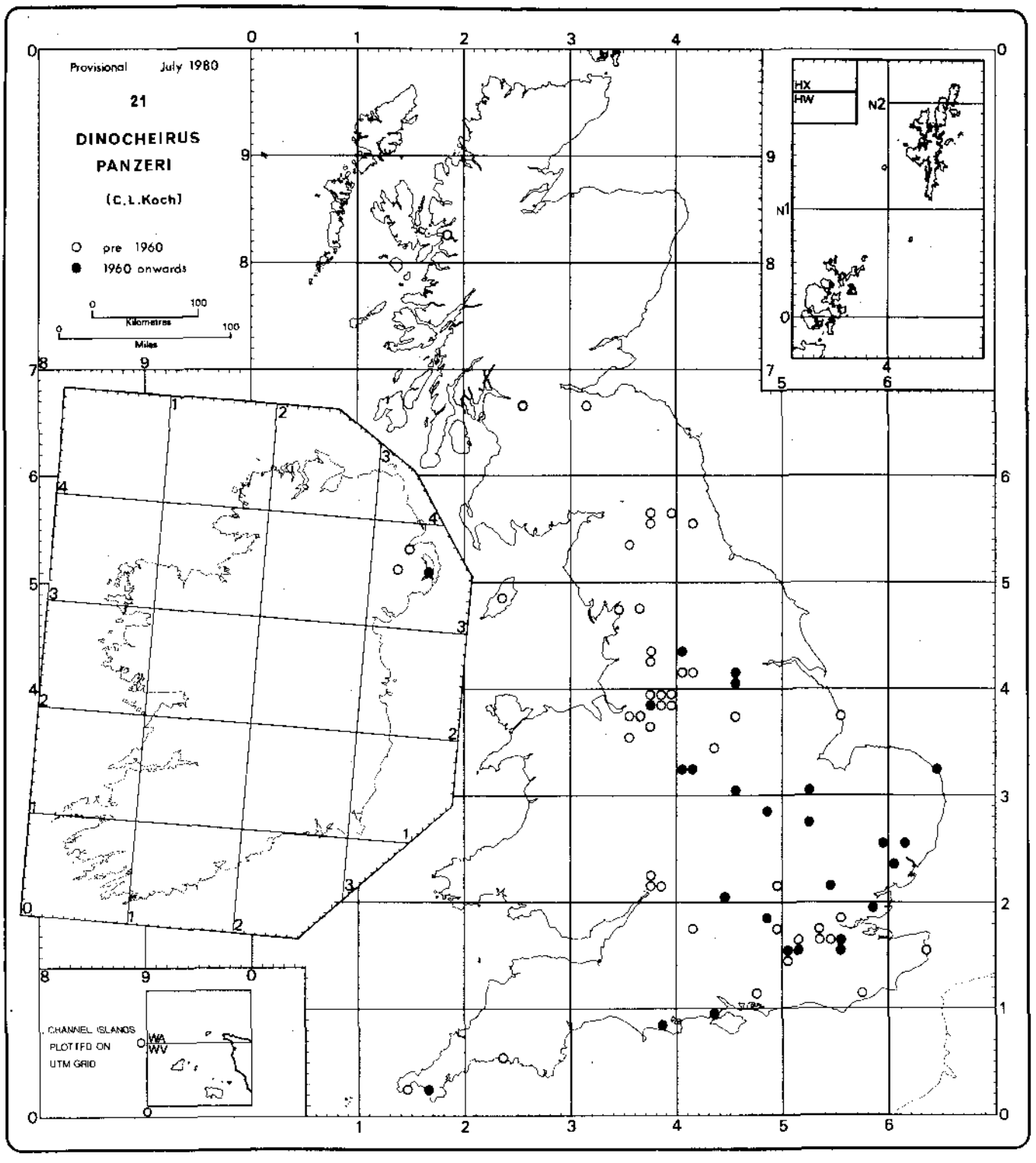
Allochernes dubius (O.P.-Cambridge). Common in southern Britain, but more local in Scotland and parts of northern England. Occurs mainly in calcareous grassland and woodland in soil and turf, under stones, in leaf litter and occasionally in decaying wood.



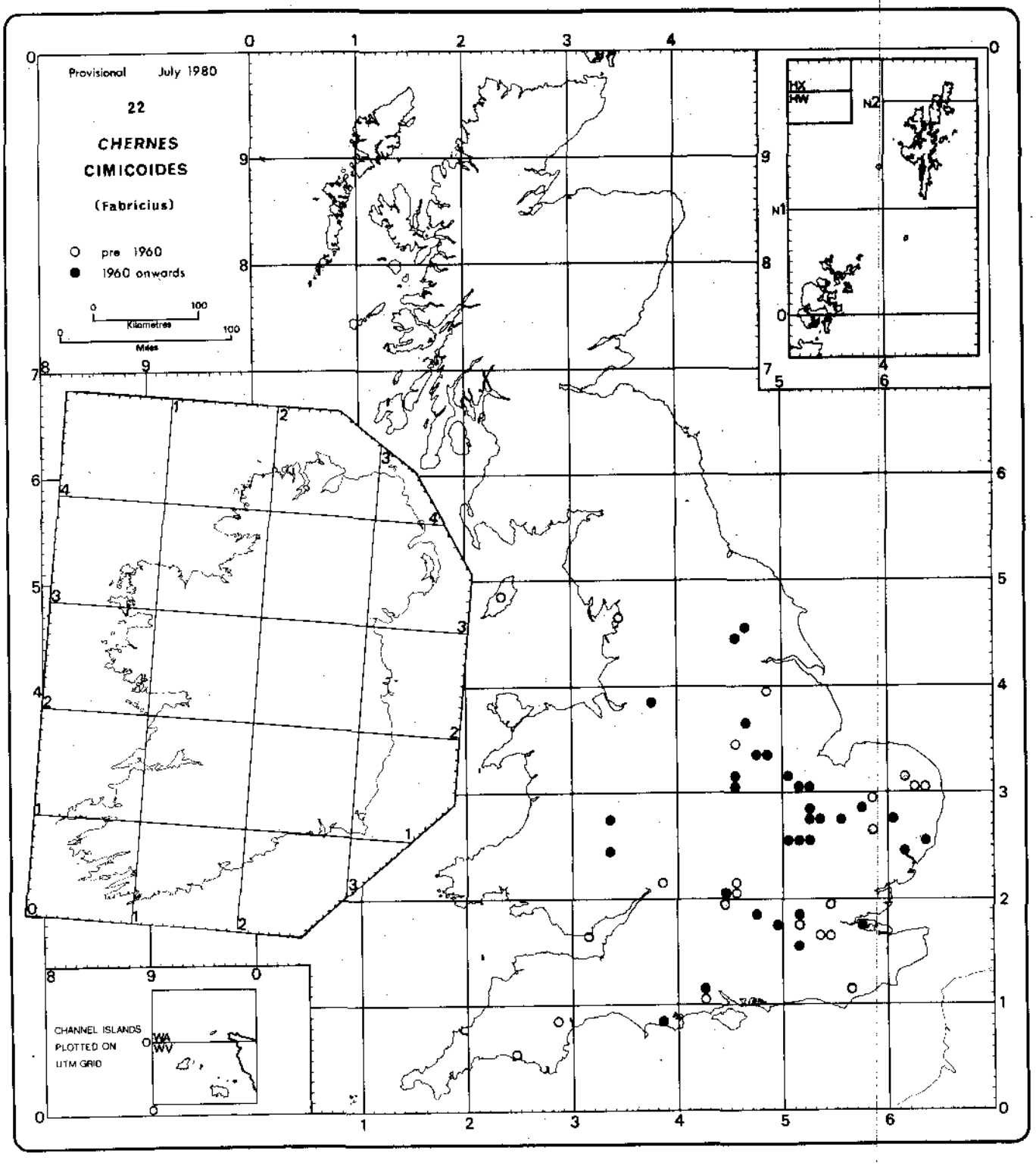
Allochernes wideri (C.L. Koch). Widely distributed in southern England where it occurs under the bark and in the rotten wood of dead trees (particularly oak), and less commonly in hay and grain residues in barns.



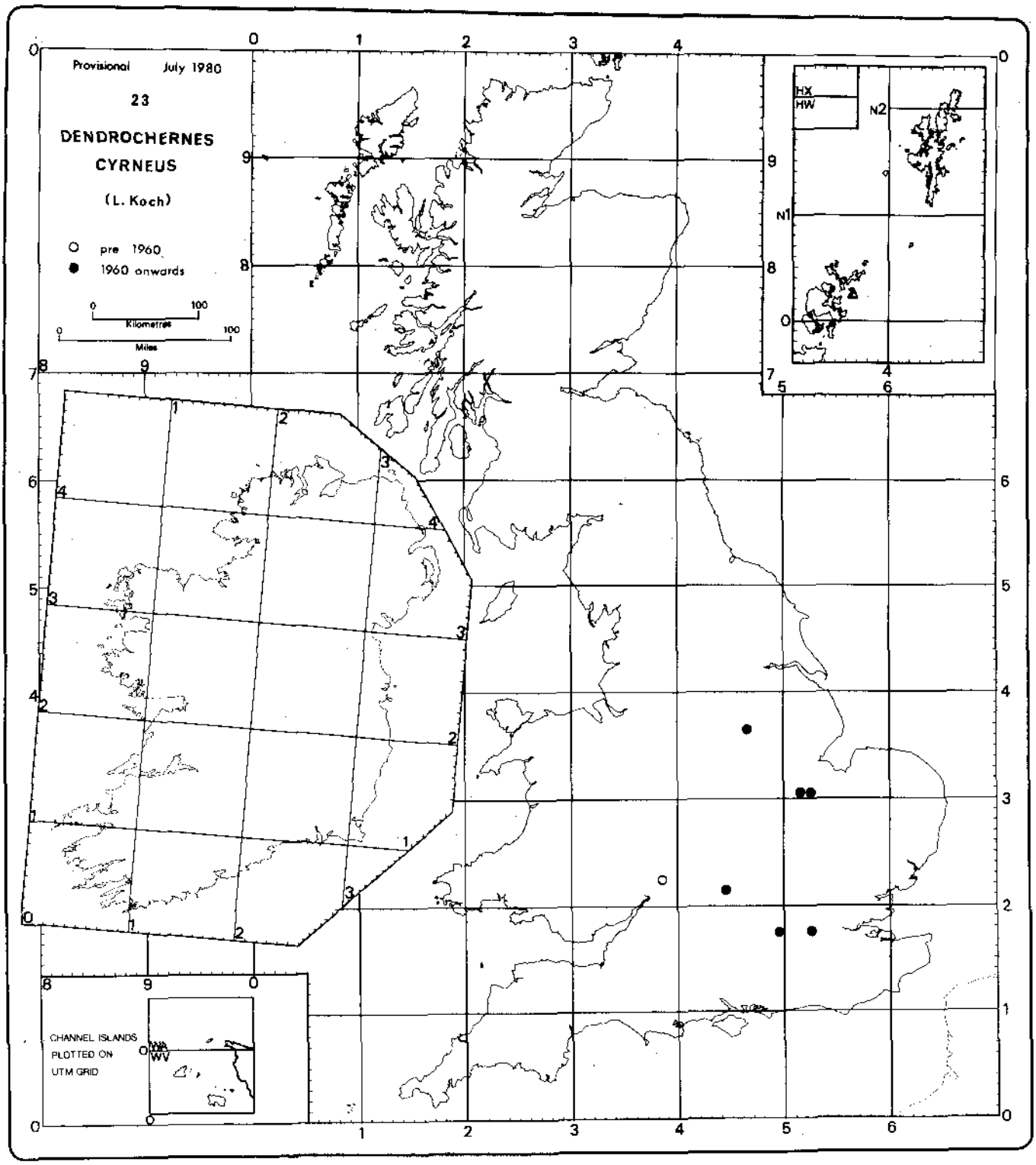
Allochernes powelli (Kew). Not recorded from Scotland or Ireland, and not very common in England and Wales. May not be native in the British Isles. A synanthropic species found in straw/hay refuse and grain residues in barns and stables.



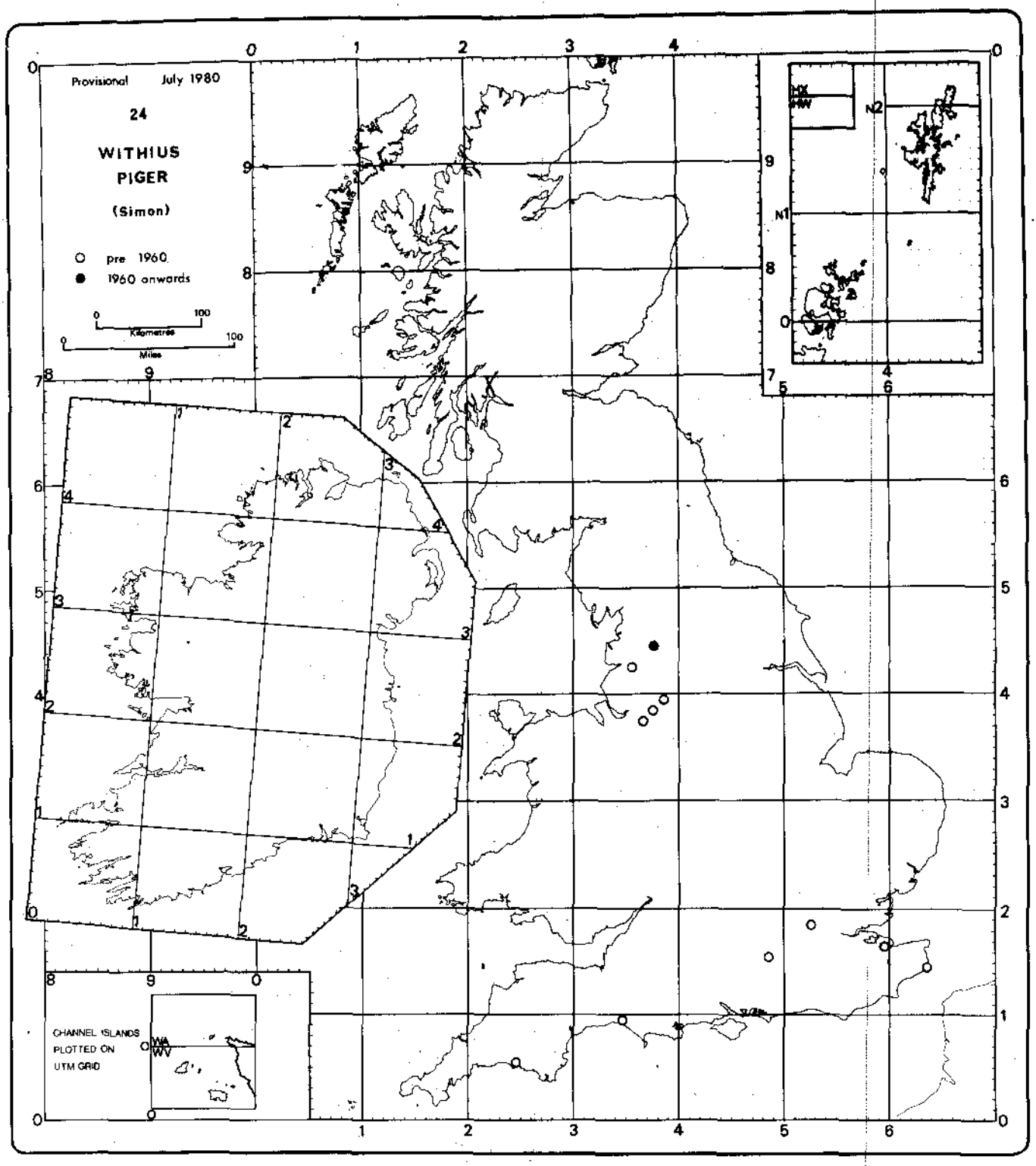
Dinocheirus panzeri (C.L. Koch). Synanthropic. Occurs in hay/straw refuse and grain residues in stables and barns. Also in the nests of birds, small mammals and ants, and occasionally under bark and in rotten stumps of trees.



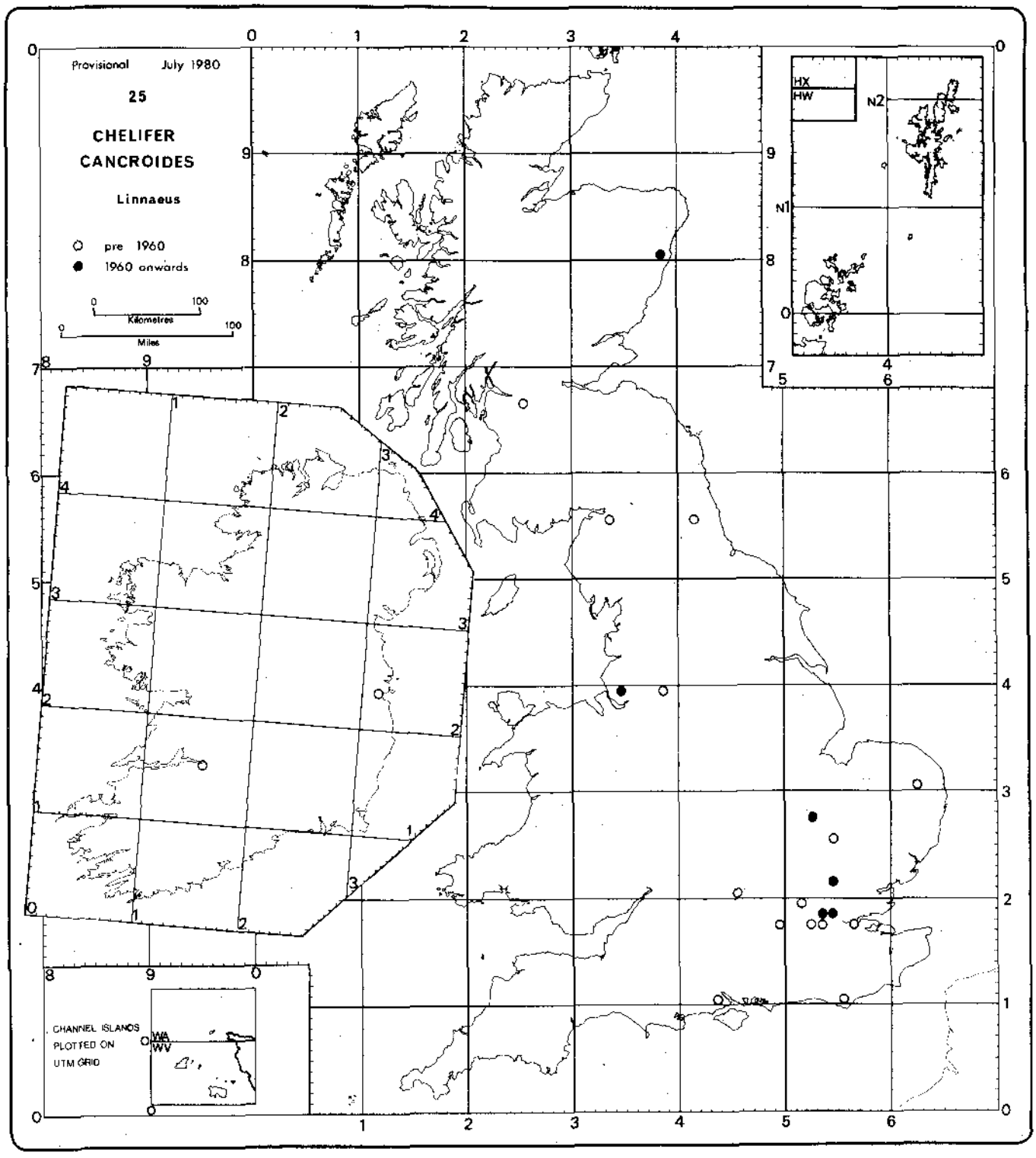
Chernes cimicoides (Fabricius). A typical species of old native woodland. Common in south-east England under bark and in the rotten wood of decaying/dead trees, particularly oak and beech. Also recorded from rotten logs on the ground and in moss and leaf litter. Occasionally found in the nests of ants, notably *Lasius brunneus* (Lat.) and *Formica rufa* L.



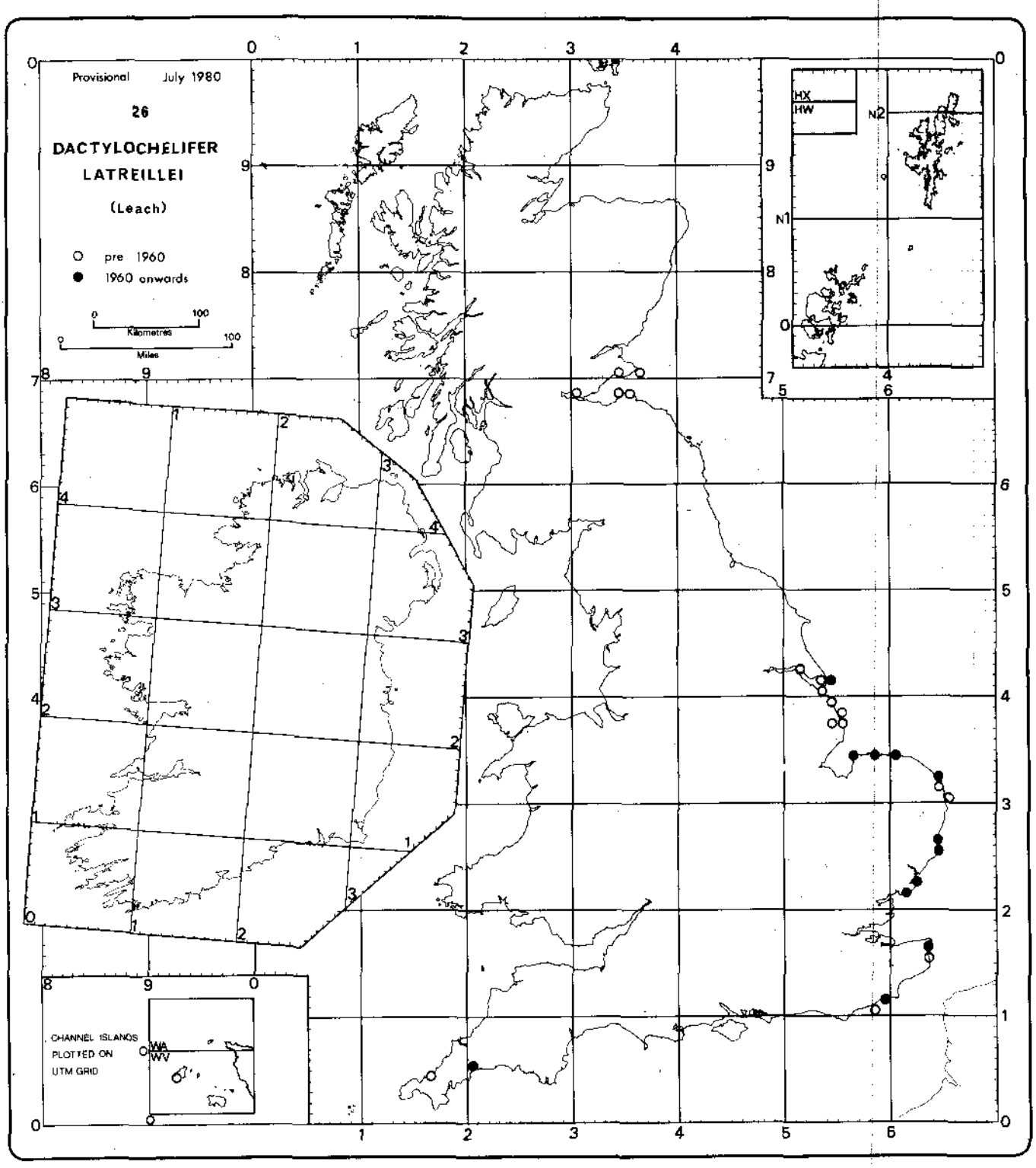
Dendrochernes cyrneus (L. Koch). The largest (up to 4 mm. long) and possibly also the rarest British species. Restricted to ancient native woodland/forest, where it occurs under pieces of loose or easily-removed bark and in very dry sapwood of dead or decaying trees, particularly oak (Jones 1980a).



Withius piger (Simon). Occurs in refuse and stored food products (especially grain) in warehouses near English ports. Not very common or widespread. Probably introduced into this country with ships' cargoes. In southern Europe occurs under the bark of trees (Beier 1963). One British record of it occurring under oak bark at Dunham Park, Cheshire, in 1917.



Chelifer cancroides (Linnaeus). All records are synanthropic, from stables, barns, grain stores, flour mills, factories, houses. There is a single record of it being phoretic on a housefly at Rathmines (Co. Dublin) in 1908. Although long-established in Britain, it is doubtfully indigenous.



Dactylochelifer latreillei (Leach). Common on sandy coasts of southern and eastern Britain, rare on rocky coasts. Found at the roots and bases of marram tussocks and under driftwood. Old records from around the Firth of Forth, Scotland, and Guernsey are of specimens found under stones and in rock crevices. A single inland record, dated 1943, from under stones in a garden at Tuckingmill, Cornwall (4 km. inland).

INDEX TO MAPS

RECORDS RECEIVED – MAP 1

Allochernes dubius	18
powelli	20
wideri	19
Cheiridium museorum	13
Chelifer cancroides	25
Chernes cimicoides	22
Chthonius halberti	2
ischnocheles	3
kewi	7
orthodactylus	4
tenuis	5
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