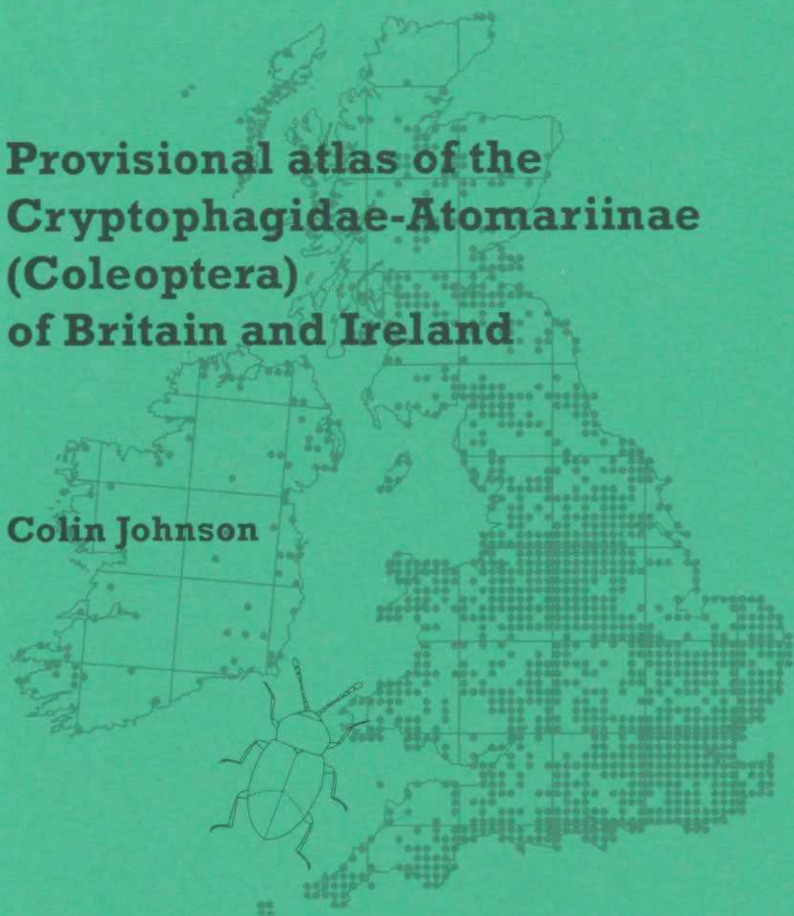




**Provisional atlas of the
Cryptophagidae-Atomariinae
(Coleoptera)
of Britain and Ireland**

Colin Johnson



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**Colin Johnson
(Manchester Museum)**

Edited for the Biological Records Centre
by Paul T Harding and Julian C M Dring

Biological Records Centre
NERC Institute of Terrestrial Ecology
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PREFACE

Atomariinae beetles are rather different from most groups of insects which hitherto have been mapped. They are neither conspicuous to the public, nor popular with the average collector. On the contrary, almost all species are less than two millimetres in length, and live such secretive lives that specialised collecting techniques are needed. If decaying substances are seived, some species can be rather abundant insects. Many hundreds of individuals may be found, for example, living and breeding in garden compost heaps. Adults and larvae of most species probably feed on fungal hyphae and moulds.

The small size and often slight differences between species, as well as the incomplete state of knowledge, means that the identification of Atomariinae will always be difficult. Accepting published records from even the primary scientific literature is fraught with uncertainty in such circumstances. My own approach is that of the specialist and taxonomist, where records are

based upon personally studied specimens. The permanent collections of our museums, with their rich material going back to the start of last century, have provided a major source of data which enable recent captures by myself and others to be placed in historical perspective. It therefore seems appropriate to dedicate this *Atlas* to all collectors, living or departed, whose painstaking fieldwork has produced the specimens upon which it is based. The *Atlas* also breaks new ground in its inclusion of a special section on distribution records. There has long been a need for this kind of information to be generally available in our literature.

Publication of this *Atlas* was only made possible with assistance from staff of the Biological Records Centre. I would especially like to thank its head, Paul Harding, for his administrative and editorial help; also Val Burton and Julian Dring for data processing and data management respectively.

Colin Johnson

September 1992

INTRODUCTION

The family Cryptophagidae (including Hypocopridae) is a group of Clavicorn beetles, 103 species of which are currently known from Britain and Ireland. These obscure beetles are relatively small in size, most being between 1 and 3 mm in length, and so closely allied that the accurate identification of many is extremely difficult, even for the specialist. The subfamily Atomariinae may be recognised by the antennal insertions being located on top of the head as opposed to at the sides as in the other subfamilies. In recent years the genus *Caenoscelis* Thomson has been transferred from Atomariinae to a separate tribe within Cryptophaginae (Crowson 1980, 1988). However, the genus is included in this *Atlas* in view of its long association with Atomariinae. The bulk of our Atomariinae belong to the genus *Atomaria* Stephens, which is divided into two subgenera. In the subgenus *Atomaria* s.str. (17 species), species are generally very elongated and have the antennal insertions close together. More spaced antennal insertions and a much shorter body with its sides more curved, in general, characterises the subgenus *Anchicera* Thomson (26 species). The genera *Ootypus* Ganglbauer and *Ephistemus* Stephens are much more rounded in shape, and are each represented by a single species.

Identification and keys

A milestone was reached when Sjöberg (1947) published his studies on the nordic species of the genus *Atomaria*. With its extensive keys and genitalia figures, this paper covered not only the Fennoscandian species, but also a number of species from neighbouring parts of Europe and Asia. It was in the light of this work, and of a recent project on the central European fauna (Lohse 1967), that my own studies on Atomariinae commenced. A total of 43 species of *Atomaria* are now recognised from Britain and Ireland, which contrasts markedly with the 30 and 31 species recorded by Joy (1932) and Fowler (1889) respectively in their standard works on the British/Irish fauna. These differences are due to a number of factors. Apart from an elucidation of taxonomic problems, additional species have been recognised which were either overlooked in the field or confused in collections, whilst others are more recent immigrants. Keys for the identification of all the species covered by this *Atlas* are to be found in the *Die Käfer Mitteleuropas* series (Lohse 1967) and its supplement (Johnson 1992c). In particular, the latter includes a new key to *Atomaria*, and the nomenclature in that key is followed here. However, many species

remain difficult to identify using only keys, and may require access to museum collections for comparison with named specimens. A list of museums whose specimens I have redetermined is given under the Acknowledgements section of this *Atlas*.

Habitat preferences and collecting

The occurrence of Atomariinae is described, for each species, in terms of major habitat types (such as woodland, wetland or grassland) and the microhabitats in which the species are most frequently found. However, dispersing or hibernating individuals are often found in very different circumstances, and such captures tell us only that the beetles are able to crawl or fly, or become passively dispersed by the wind or other agents. My own fieldwork, supplemented by that of other workers, forms the basis for these ecological notes.

Woodland species are usually dependent on dead wood in some form, although the presence of shade provided by trees is probably a factor for at least those species which frequent dung. Wetland species are dependent upon marshy conditions in fens, swamps and wet carr. Grassland species occur on natural and improved grasslands and pastures

where the openness of the terrain seems to be the most important factor. Thus, grassland species are quite likely to be found in almost any other open and non-wet habitat, and it is this group of species which is especially favoured by agriculture and gardening.

The beetles are mostly to be found associated with decaying plant and animal debris, and so occur especially in dark and humid microhabitats where there is mould or other fungal growth. Species which live among dead wood, dead leaves, moss, grass tufts and man-made heaps, such as farm dung heaps, hay stacks and grass and compost heaps, can usually be found throughout the year. Species which occur at river edges, in marsh debris, fungi, carrion, animal dung and tidal refuse can be found between spring and autumn. Many species seek sheltered sites to hibernate, which are often different from their habitats when active. Sieving of debris is an essential method for collecting these beetles, whose abundance varies according to species. Certain grassland species may occur in large numbers, whilst some of the rarest and geographically most localised species are usually found singly. Many species fly, and can be collected with flight interception traps or with the aid of a sweep net, especially in the evening. Others have only rudimentary wings, and live more cryptic lives.

CHECK LIST

The following revised and updated list of the Cryptophagidae-Atomariinae of Britain and Ireland includes synonyms used in the British literature. Synonyms are inset.

CAENOSCELIS Thomson C G 1863

ferruginea (Sahlberg C R 1820)

pallida (Wollaston 1847)

sibirica Reitter 1889

fleischeri Reitter 1889

grandis Thomson C G 1892

subdeplanata Brisout de Barneville 1882

ferruginea sensu Champion 1895, not (Sahlberg C R 1820)

ATOMARIA Stephens 1829

subgenus *Atomaria* s.str.

badia Erichson 1846

sahlbergi Sjöberg 1947

barani Brisout de Barneville 1863

bella Reitter 1875

diluta Erichson 1846

fimetarii (Fabricius 1792)

impressa Erichson 1846

linearis Stephens 1830

lohsei Johnson & Strand 1968

bella sensu Lohse 1967 partim, not Reitter 1875

nigrirostris Stephens 1830

fuscicollis Mannerheim 1852

umbrina sensu Erichson 1846, not (Gyllenhal 1827)

nigriventris Stephens 1830

procerula Erichson 1846

longicornis Thomson C G 1863

pulchra Erichson 1846

affinis sensu auct. Brit. not (Sahlberg R F 1834)

badia sensu auct. Brit. not Erichson 1846

prolixa sensu auct. not Erichson 1846

puncticollis Thomson C G 1868

nigriventris sensu auct. Brit. partim, not Stephens 1830

punctithorax Reitter 1887

consanguinea Johnson 1976

nigriventris sensu auct. Brit. partim, not Stephens 1830

- strandi* Johnson 1967
 alpina sensu auct. Brit. not Heer 1841
 elongatula sensu auct. Brit. not Erichson 1846
- umbrina* (Gyllenhal 1827)
 fumata Erichson 1846
- wollastoni* Sharp 1867
- subgenus *Anchicera* Thomson C G 1863
- apicalis* Erichson 1846
- atra* (Herbst 1793)
- atricapilla* Stephens 1830
- basalis* Erichson 1846
 nitidula sensu auct. not Heer 1841
- clavigera* Ganglbauer 1899
- fuscata* (Schönherr 1808)
- fuscipes* (Gyllenhal 1808)
- gutta* Newman 1834
- hislopi* Wollaston 1857
 gibbula sensu auct. Brit. not Erichson 1846
- lewisi* Reitter 1877
- mesomela* (Herbst 1792)
 mesomelaena auct. (misspelling)
- morio* Kolenati 1846
- munda* Erichson 1846
- nigripennis* (Kugelann 1794)
- nitidula* (Marsham 1802)
 analis sensu auct. Brit. not Erichson 1846
 borealis Sjöberg 1947
- ornata* Heer 1841
 contaminata Erichson 1846
- peltata* Kraatz 1853
- pseudatra* Reitter 1887
 reitteri Løvendal 1892
- pusilla* (Paykull 1798)
- rhenana* Kraatz 1853
 elevata Allen 1938
 godarti sensu Sjöberg 1947, not Guillebeau 1885
- rubella* Heer 1841
 berolinensis Kraatz 1853
 bicolor sensu auct. Brit. not Erichson 1846
- rubida* Reitter 1875
 cognata sensu auct. Europeae, not Erichson 1846
 gibbula sensu Allen 1968, not Erichson 1846
 versicolor sensu auct. Brit. not Erichson 1846

viennensis Reitter 1875
rubricollis Brisout de Barneville 1863
divisa Rye 1876
scutellaris Motschulsky 1849
testacea Stephens 1830
dorsalis Stephens 1830
ruficornis (Marsham 1802) not (Gmelin in Linnaeus 1789)
zetterstedti (Zetterstedt 1838)

OOTYPUS Ganglbauer 1899

EPHISTEMUS sensu Fowler 1889 partim, not Stephens 1829
globosus (Waltl 1838)

EPHISTEMUS Stephens 1829

globulus (Paykull 1798)
dimidiatus (Sturm 1807)
dubius Fowler 1889
gyrinoides (Marsham 1802)

THE DATA

Sources

Virtually all of the records included in this *Atlas* are based upon specimens which I have identified personally. Hardly any records have been taken from collectors' manuscript lists or from the literature, since these abound in misidentifications which became readily apparent when voucher specimens were studied. For example, in one museum, I found six different species in a series of 12 old specimens standing over a single species name! Apart from my own captures in the field, the most notable of which are in the collections of the Manchester Museum, I have redetermined material from collections in 30 different museums. In addition, I have identified specimens from numerous individuals, both collectors and researchers. A list of the museums and individuals is given in the Acknowledgements section.

Computerised data set

The complete data set is held on computer file at the Biological Records Centre. It comprises approximately 10 800 records, each consisting of the vice-county, locality, collector, date class (pre-1960 or 1960 onwards) and 10 kilometre square grid reference (taken from the Ordnance Survey

gazetteer (Anon 1972) or other gazetteers if not available with the specimen) for the species concerned. The very few manuscript and literature records are indicated separately.

Access to the data can be provided by the Biological Records Centre, with selective sorting of categories. The data also exist in manuscript form on sheets held by the Biological Records Centre and the Manchester Museum.

Format of the *Atlas*

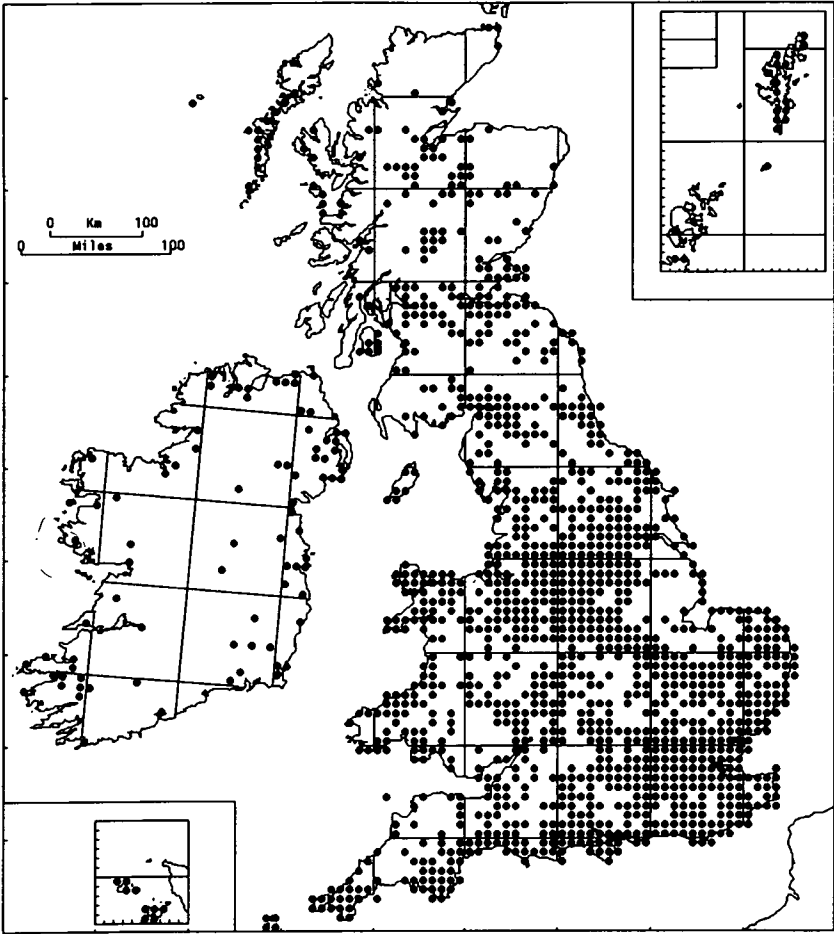
The distribution maps summarise the occurrence of each species using both date classes of records ie pre-1960 and 1960 onwards. In addition, information on the bionomics of each species is given below the maps, together with various comments and details of overseas distribution, the latter being based upon specimens which I have identified.

Following the maps, the data have been used to compile more detailed distribution records, within Britain and Ireland, for each species. The vice-county distribution of all species is given, either summarised or with fuller records for the more interesting species. Such species may be defined as those which are either uncommon, declining, vulnerable

(due to physiological factors, such as rudimentary wings, and/or ecological factors), or hitherto little known. A number of species which have rarely, if at all, been correctly identified in collections, and are thus poorly documented in the literature, are included in the last category.

DISTRIBUTION MAPS AND SPECIES ACCOUNTS

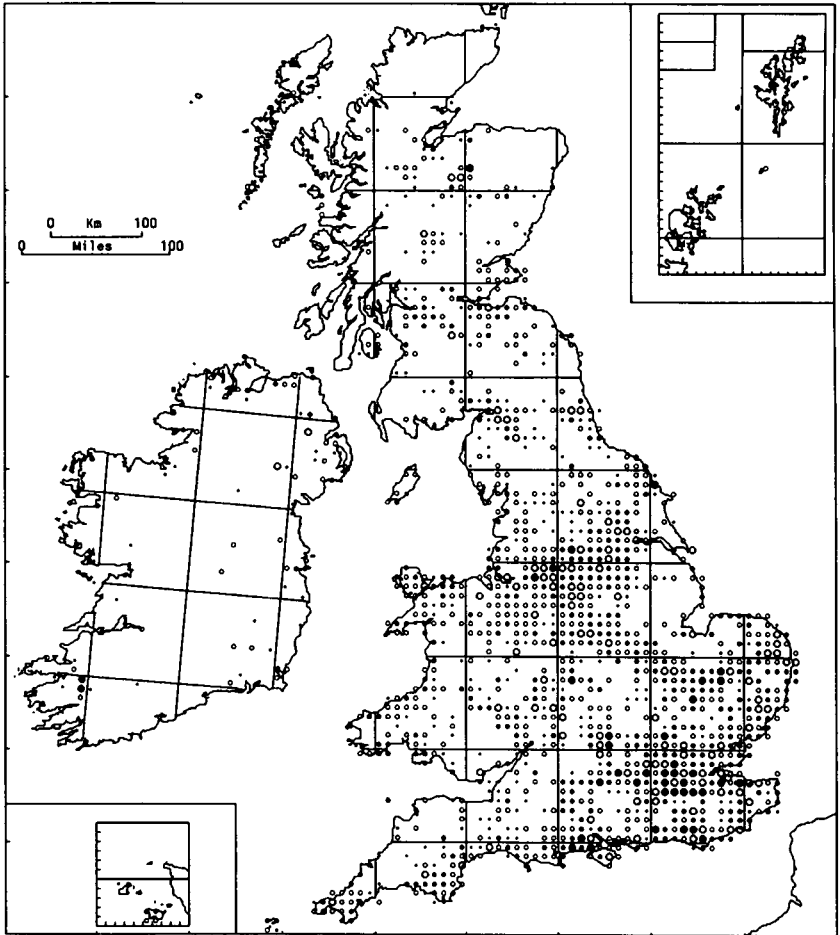
Map 1 Overall coverage



All records

- Recorded before 1960 only
- Recorded from 1960 onwards

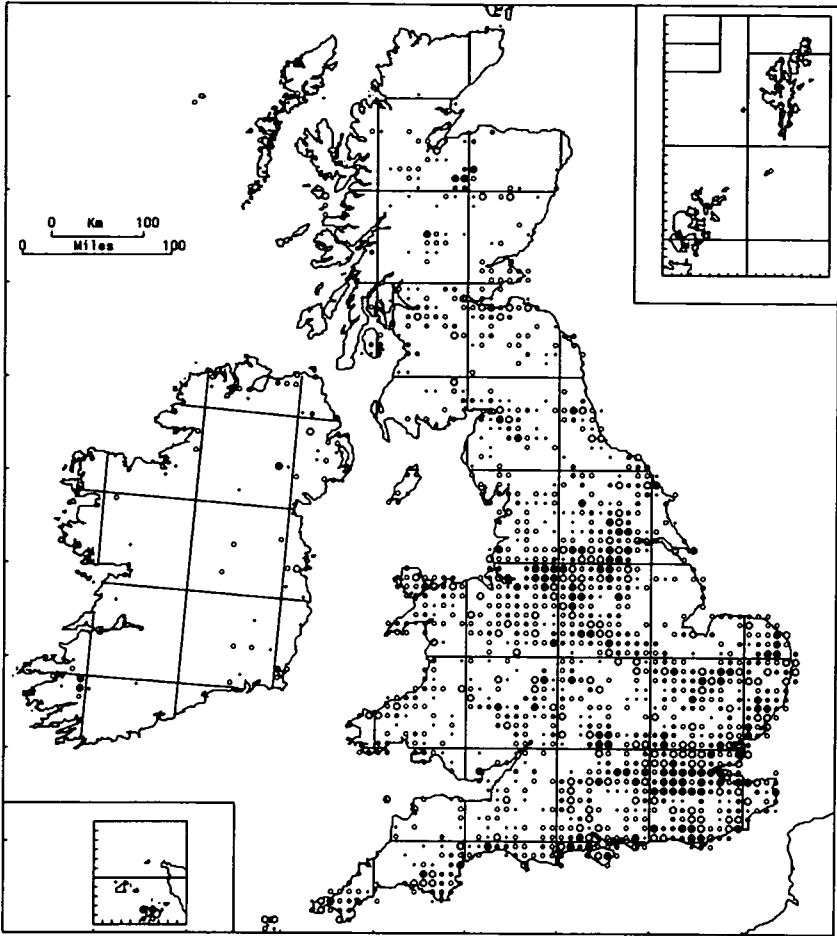
Map 2 Number of species recorded in each 10 km square



- 16 or more species
- 11-15 species
- 6-10 species
- 2-5 species
- 1 species only

Records from all dates are combined.

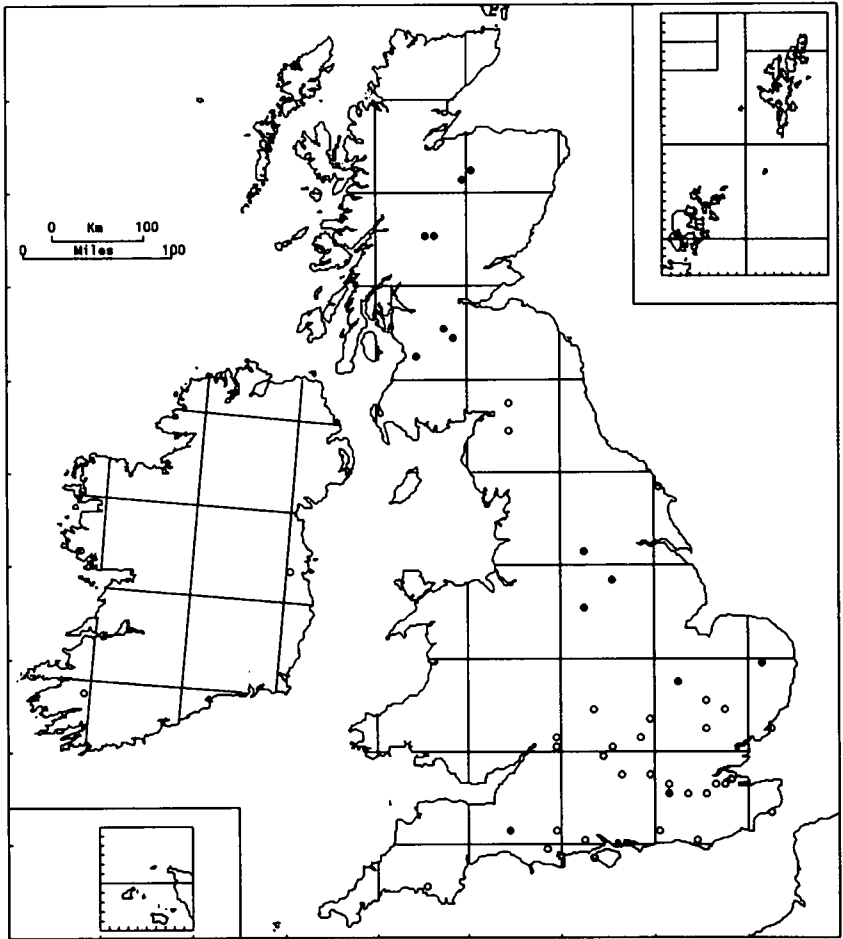
Map 3 Number of records from each 10 km square



- 21 or more records
- 11-20 records
- 6-10 records
- 2-5 records
- 1 record only

Records from all dates are combined.

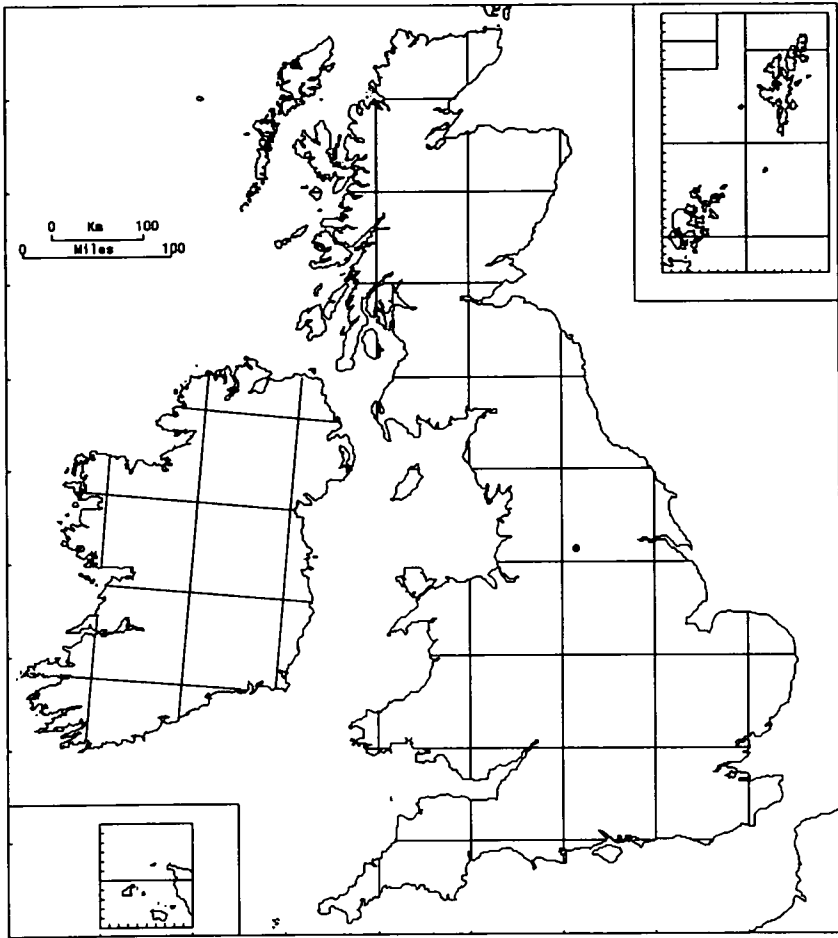
Map 4 *Caenoscelis ferruginea* (Sahlberg, C.R. 1820)



This woodland species occurs especially in broadleaved areas, but also in mixed and coniferous forests. It has been found in rotten wood debris, fungi heaps, leaf litter, flood refuse and by evening sweeping, and also with the ant *Lasius fuliginosus* (Joy 1932). It is localised and rare and occurs only sporadically, usually as single specimens.

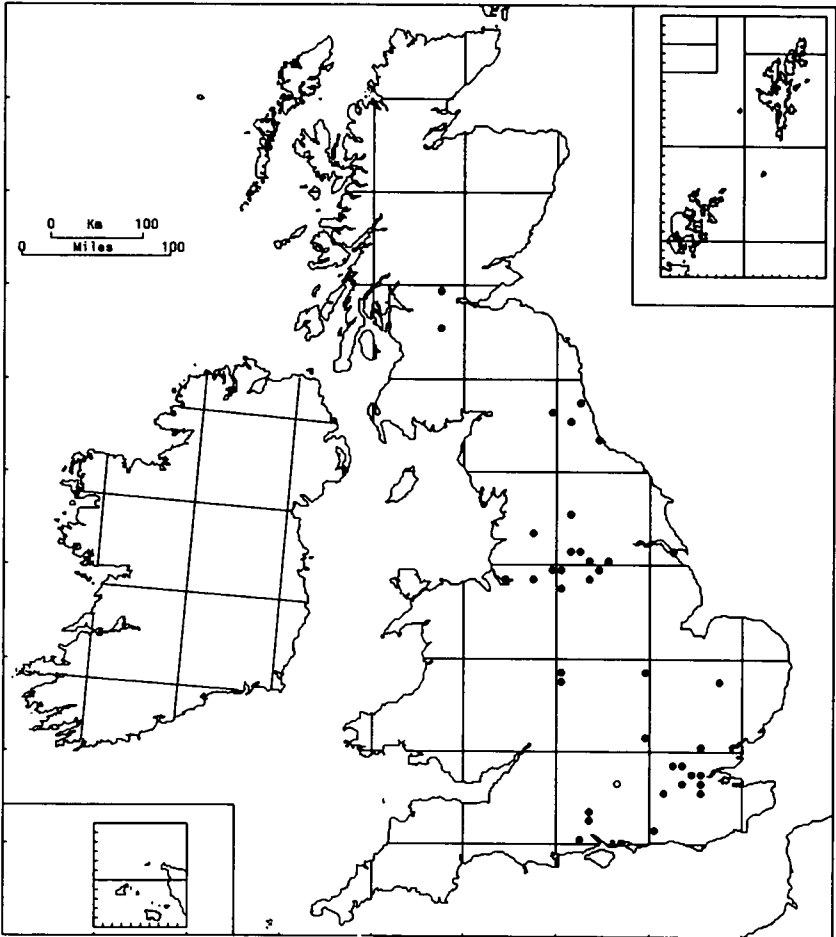
There are scattered records from Europe and eastern Siberia, North America and Greenland.

Map 5 *Caenoscelis sibirica* Reitter 1889



This species is known in Britain from only a single specimen from Yorkshire (Johnson 1992b). It is a broadleaved woodland species, but also occurs abroad in mixed and coniferous forests and is found among rotten wood debris. It has a boreo-alpine distribution in Europe, occurring in Fennoscandia and the Alps, and can be found in Siberia eastward to the Far East, Mongolia and northern Japan.

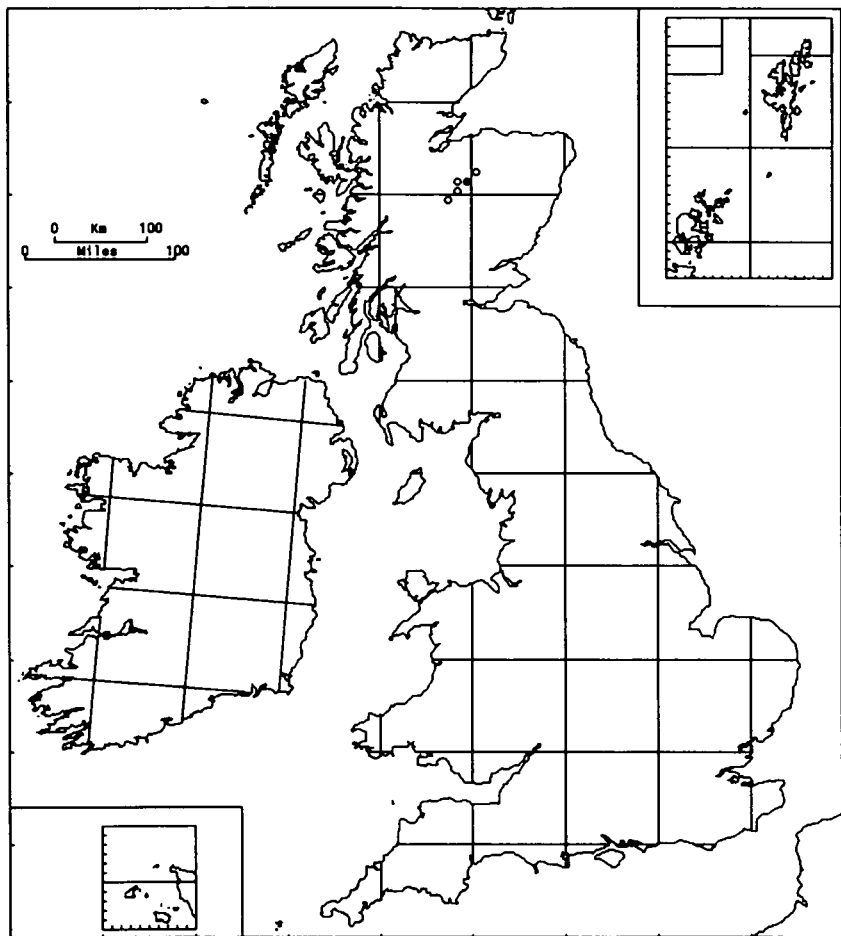
Map 6 *Caenoscelis subdeplanata* Brisout de Barneville 1882



This is a broadleaved woodland species associated especially with burnt wood, sawn timber and leaf litter. It flies readily and is often captured on surfaces (eg windows), in buildings, at light or in flight interception traps, frequently well away from trees. A recent immigrant into Britain during the 1950s, first recorded from Yorkshire (Johnson 1966a), it is now widespread and frequent. Its occurrence is somewhat unpredictable, usually in small numbers and often singly.

Widespread but localised over much of Europe, it has become commoner in central and northern parts over the last 40 years. It also occurs in eastern Siberia and North America.

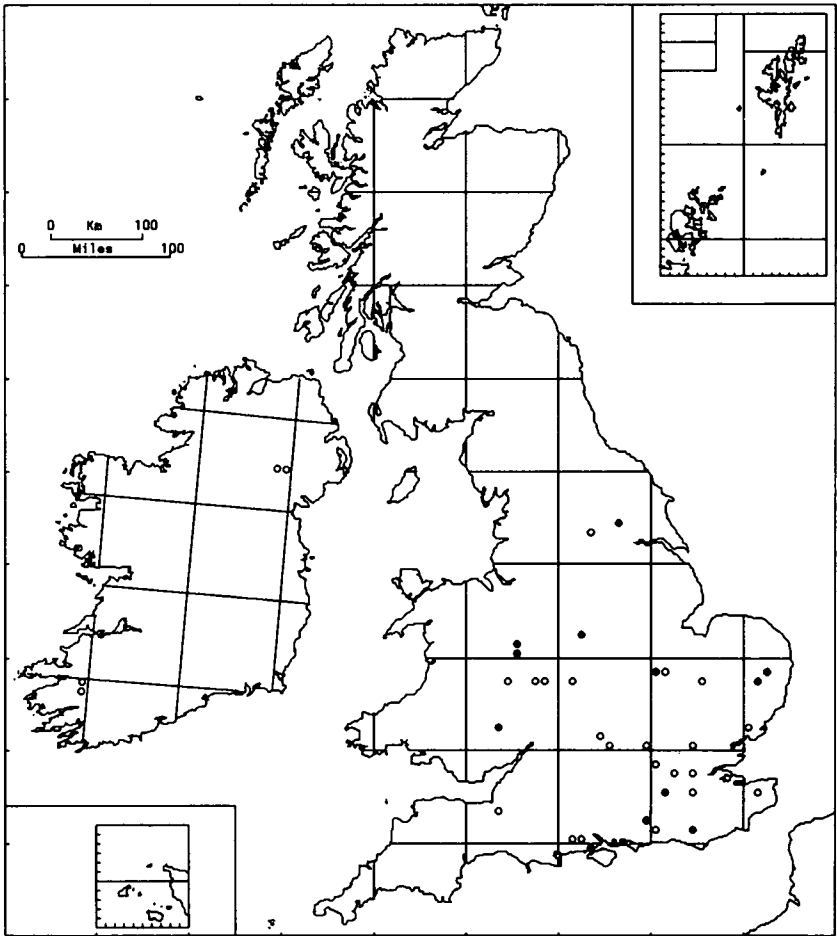
Map 7 *Atomaria (s.str.) badia* Erichson 1846



A species of coniferous forests, associated with dead wood, which has been recorded under pine (*Pinus* spp.) bark, in a wasp nest and in a Malaise trap. It is restricted to the Caledonian pine forests of the Scottish Highlands where it is rare and occurs only sporadically, usually either singly or in very small numbers.

A. badia is mainly a boreo-alpine species in Europe, although a few captures are known from some localities in Germany, north of the Alps. It occurs eastward to the Ukrainian Carpathians and also in Bosnia.

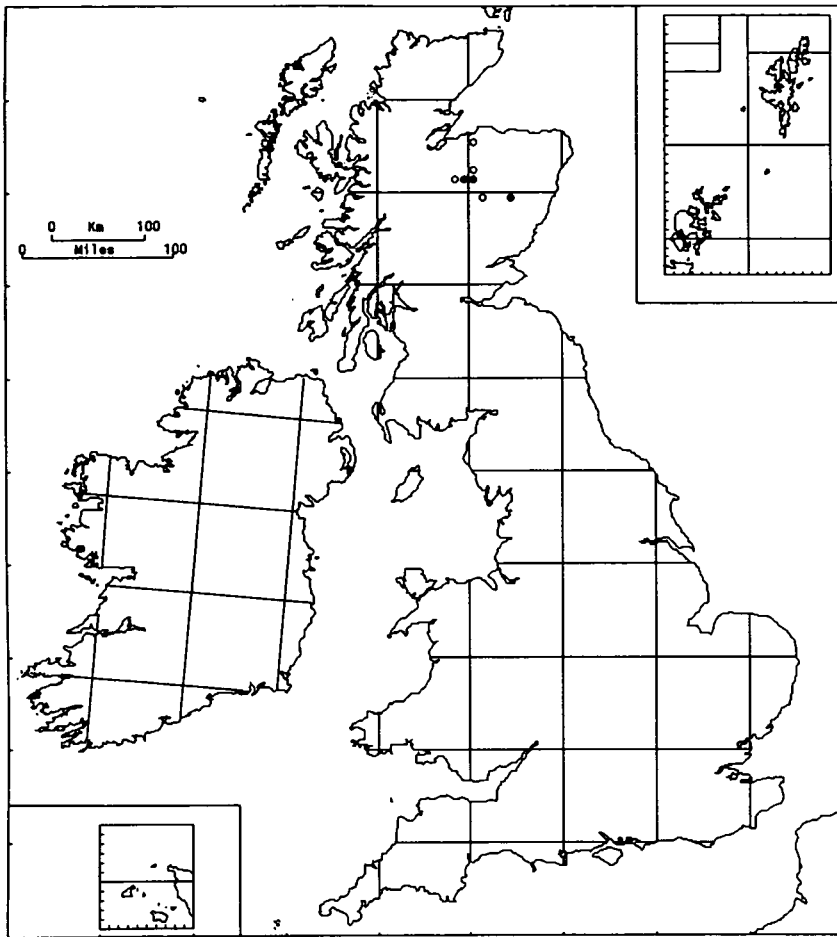
Map 8 *Atomaria (s.str.) barani* Brisout de Barneville
1863



This is a wetland species, occurring in fens and marshes, often where there is carr. It has been collected from marsh litter, old bulrush (*Typha* spp.) stems, flood refuse and mossy rotten wood. Localised and rare, it occurs only sporadically and in small numbers, often singly.

There are scattered records from throughout Europe, apart from the extreme north and south; it also occurs in eastern Siberia and Afghanistan.

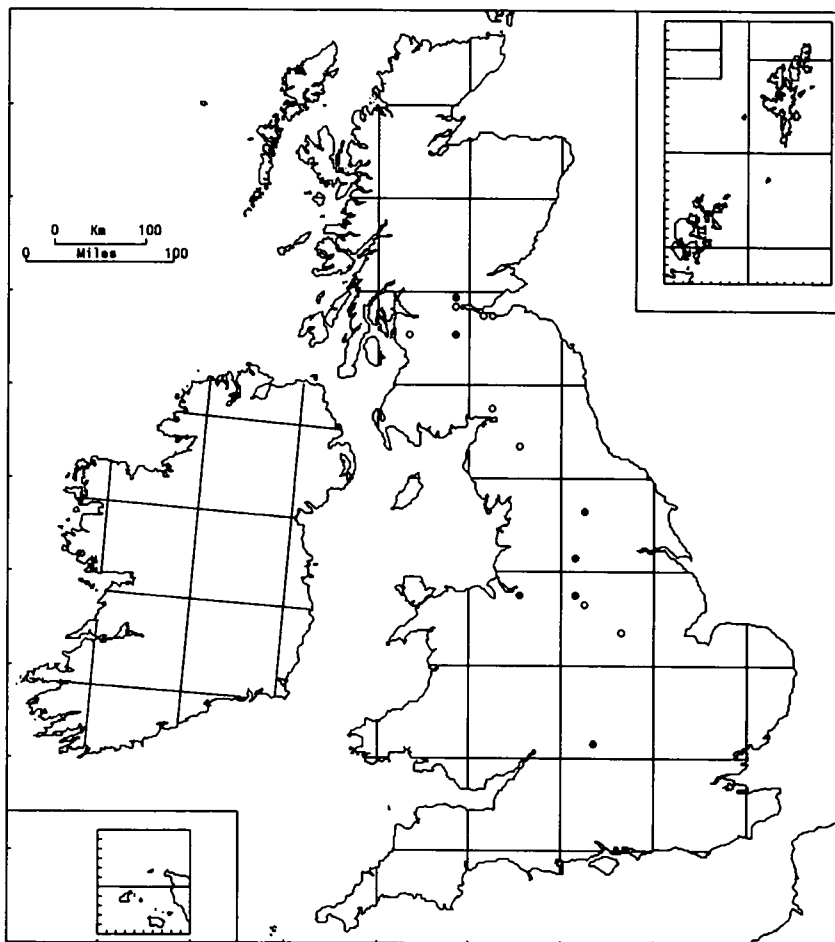
Map 9 *Atomaria (s.str.) bella* Reitter 1875



A coniferous forest species which occurs in rotten wood debris, pine litter, under the bark of larch (*Larix* spp.), it has also been caught in a Malaise trap. Restricted to the Caledonian pine forest areas of the Scottish Highlands, it is rare and occurs only sporadically, usually either singly or in very small numbers. It was first recorded from Britain in 1967 (Johnson 1967).

It is mainly a boreo-alpine species in Europe although there are a few records from German localities north of the Alps. In Fennoscandia it is more widespread and frequent.

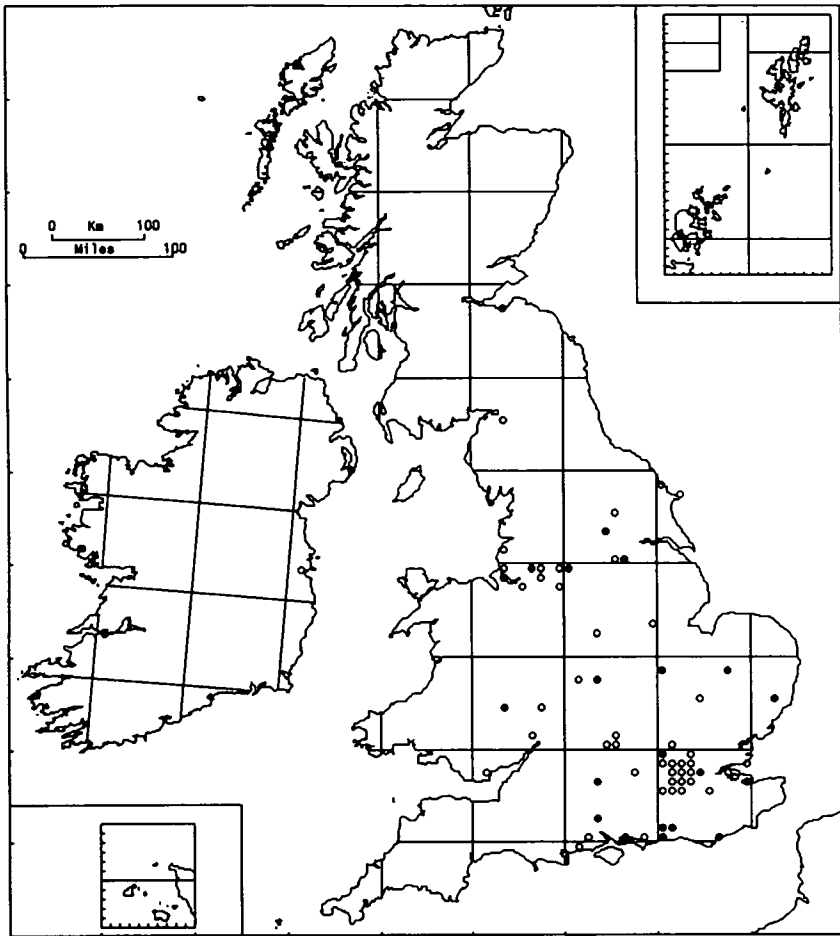
Map 10 *Atomaria (s.str.) diluta* Erichson 1846



A woodland species, especially associated with broadleaved trees in river valleys, it occurs under and in rotten wood debris, dead leaves and moss, and has also been recorded by sweeping. This species has a localised northern distribution, is rare and occurs only sporadically, usually singly or in very small numbers. According to Allen (1968), it was unjustifiably omitted by Joy (1932) from the British list.

There are scattered records from central Europe, north to central Sweden and east to the Ukrainian Carpathians.

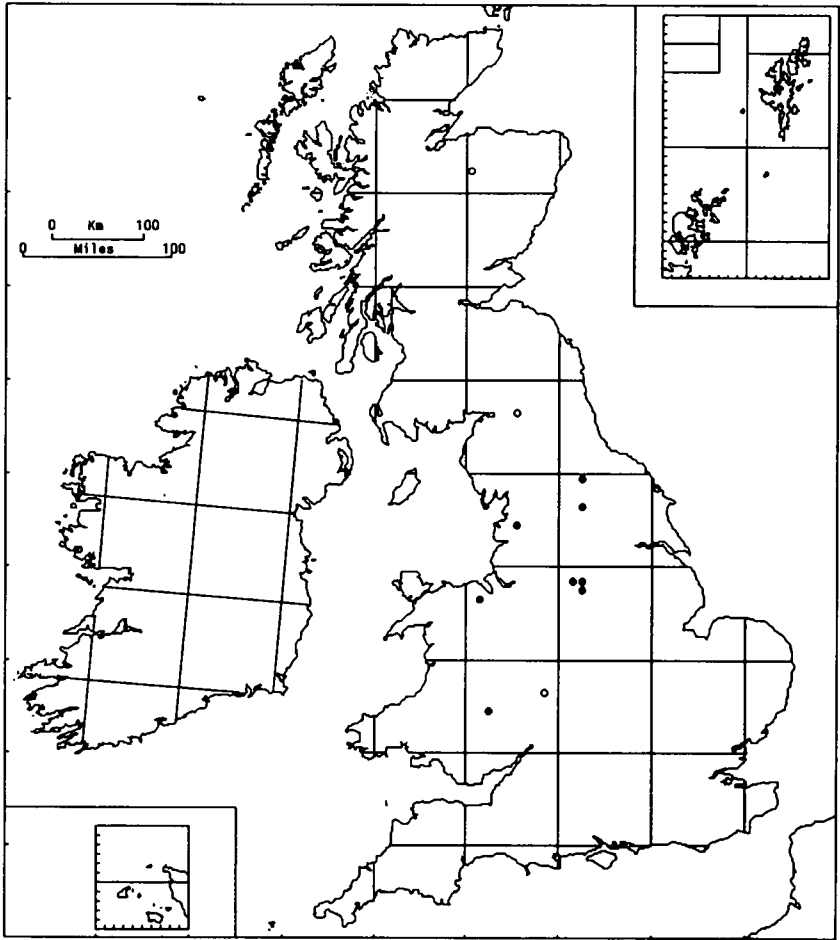
Map 11 *Atomaria (s.str.) fimetarii* (Fabricius 1792)



This is a grassland species which is often found near farms and in gardens. It is associated with the shaggy ink cap fungus (*Coprinus comatus*), burrowing in the base of the stipe. It has been found once in an old dung heap, and has been recorded by sweeping. It is widespread, but probably much overlooked, and often occurs in numbers, depending on the abundance of its host fungus.

There are scattered records from much of Europe, apart from the extreme north, and it also occurs in North Africa and North America.

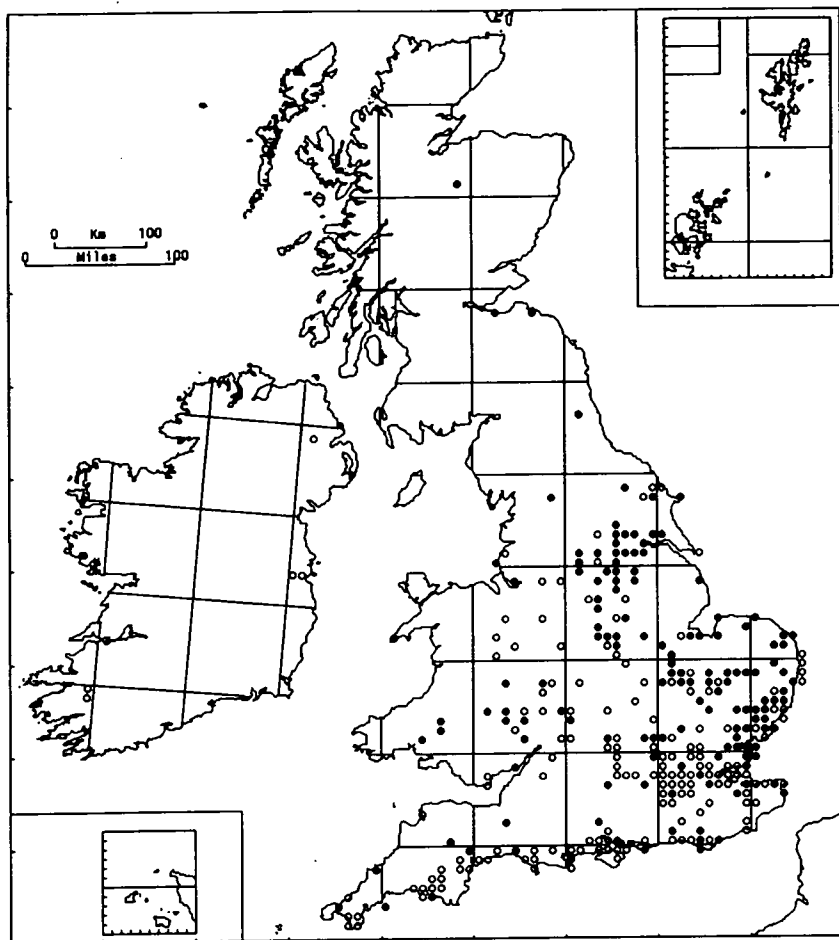
Map 12 *Atomaria (s.str.) impressa* Erichson 1846



A woodland species, mostly associated with broadleaved trees in river valleys, it occurs amongst heaps of twigs and other refuse deposited near the river by floods, and also occasionally in rotten wood. It has a localised, northern distribution and is rare, usually occurring singly or in very small numbers.

It is mainly a boreo-alpine species in Europe, but also occurs in Turkey.

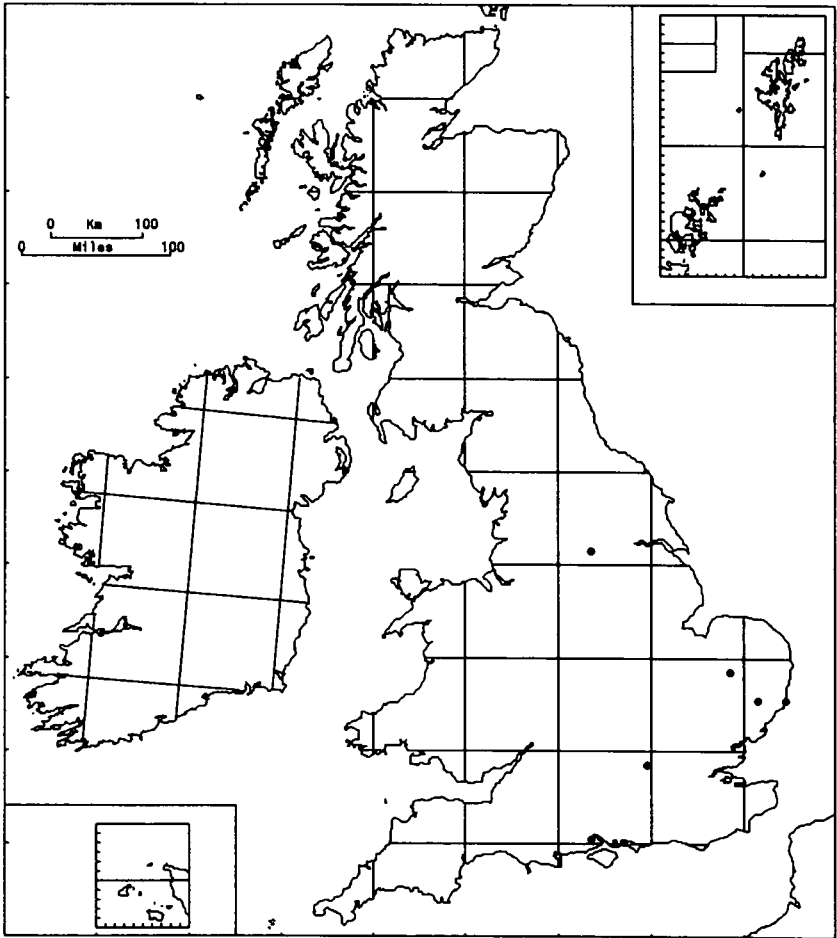
Map 13 *Atomaria (s.str.) linearis* Stephens 1830



A farmland species which is an agricultural pest (pygmy mangold beetle) of mangolds and sugar beet (Newton 1932). It occurs in all kinds of open habitats, especially grasslands, near farms, in gardens, in heaps of cut vegetation, such as grass and compost heaps, and in haystacks. It is often taken by sweeping. Although widespread in the south and east, it is much less widely recorded further northwards. It occurs in only small numbers away from its foodplants. It is one of the commonest parallel-shaped species in Britain.

It is widely distributed in Europe, apart from the more northern and southern areas, and occurs in central Asia, Manchuria and North America.

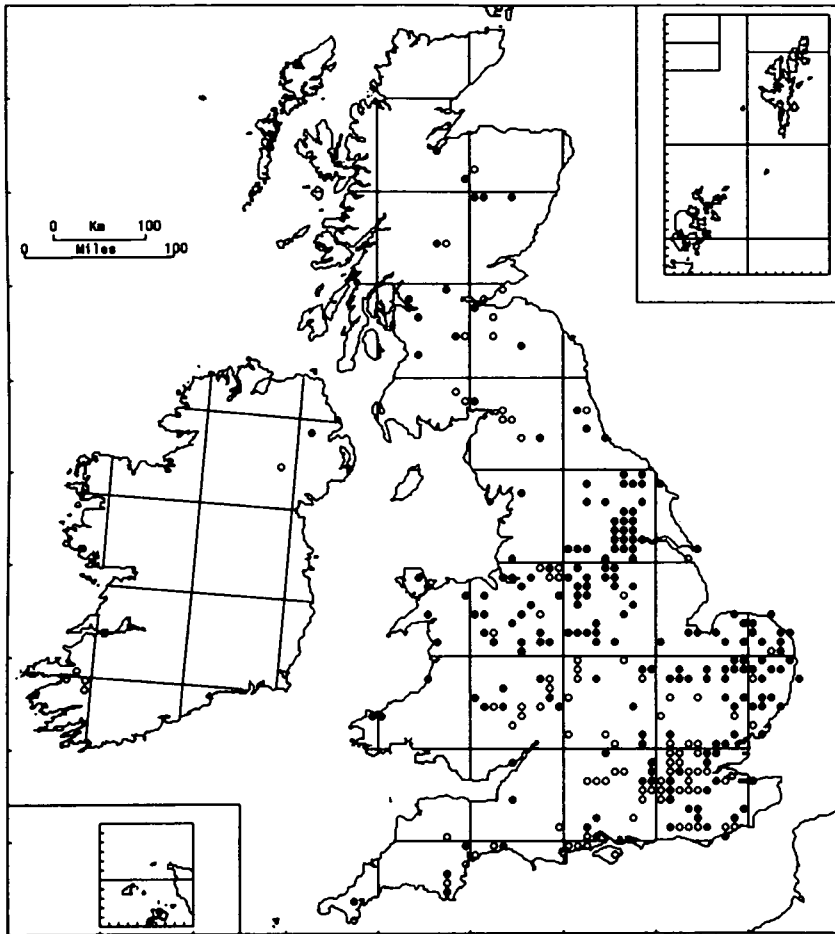
Map 14 *Atomaria (s.str.) lohsei* Johnson & Strand 1968



This forest species is associated mainly with conifers. It has been found in rotten wood debris abroad and is usually taken in flight interception traps. A recent immigrant to Britain, it was first recorded from the New Forest (Johnson 1976b). It is very localised and rare, occurs only sporadically, and is usually collected singly. It was listed by Shirt (1987) as *Red Data Book* category 3 (Rare).

The species was originally described from Germany, but it is only a recent (post-1948) immigrant there and is now widespread (Johnson 1992b). Also known from Switzerland (1987) and Spain (old and new records), it perhaps originated from the Iberian peninsula.

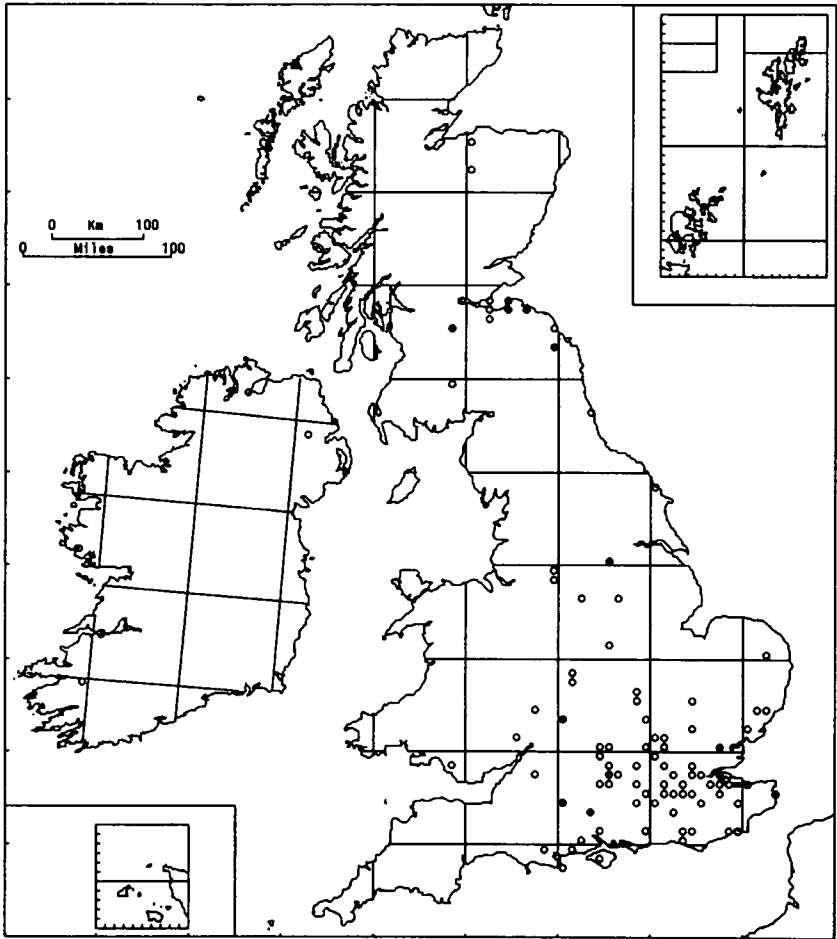
Map 15 *Atomaria (s.str.) nigrirostris* Stephens 1830



A woodland species, mostly associated with broadleaved trees, it occurs on and under dead wood on the ground, in moss, leaf litter, flood refuse and general ground litter. It also occurs under hedgerows. This widespread and frequently recorded species is usually found only in small numbers or singly. It is one of the commonest parallel-shaped species in Britain.

It is widely distributed throughout Europe and also occurs in Siberia, Turkey, Iran, central Asia, Mongolia and North America.

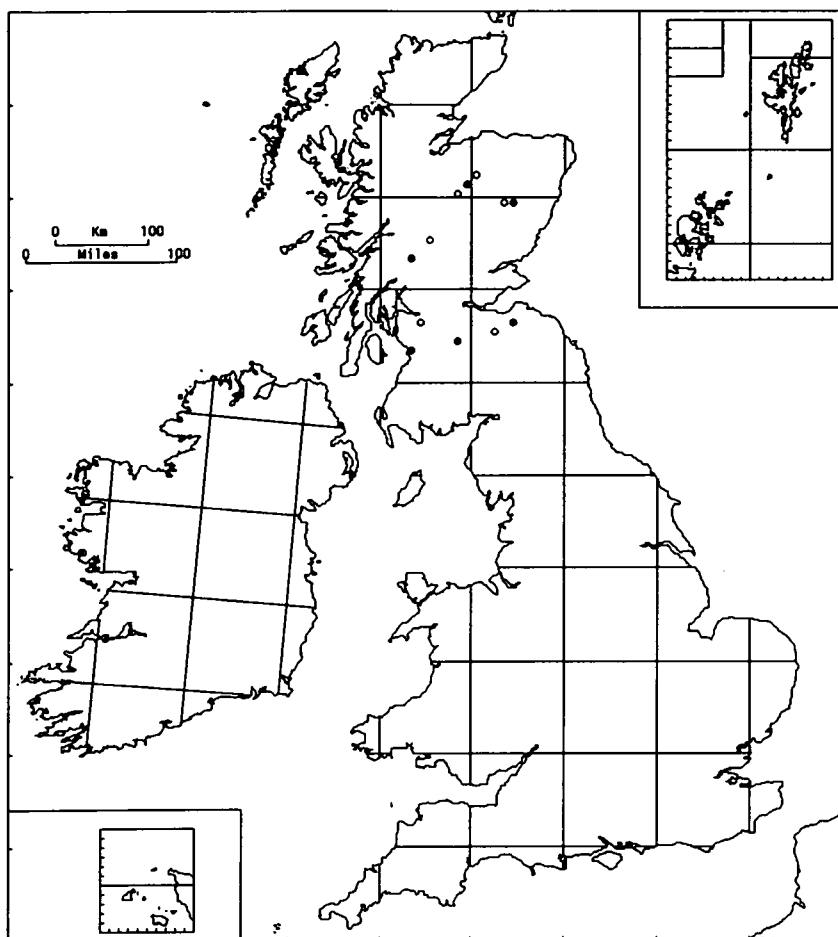
Map 16 *Atomaria (s.str.) nigriventris* Stephens 1830



This is a grassland species, which is found especially around farms, but with some captures from other habitats. It occurs in heaps of cut vegetation, eg compost and grass heaps, and in haystack bottoms. It is a declining species which nowadays is very localised and rare; it occurs only sporadically and is usually collected singly. The species might be declining at the expense of the closely related species *Atomaria (s.str.) punctithorax*.

It is well-represented in older British and European collections. It was formerly widely distributed in Europe apart from the northerly regions, but nowadays is rarely found. It occurs also in Turkey, Cyprus and Israel.

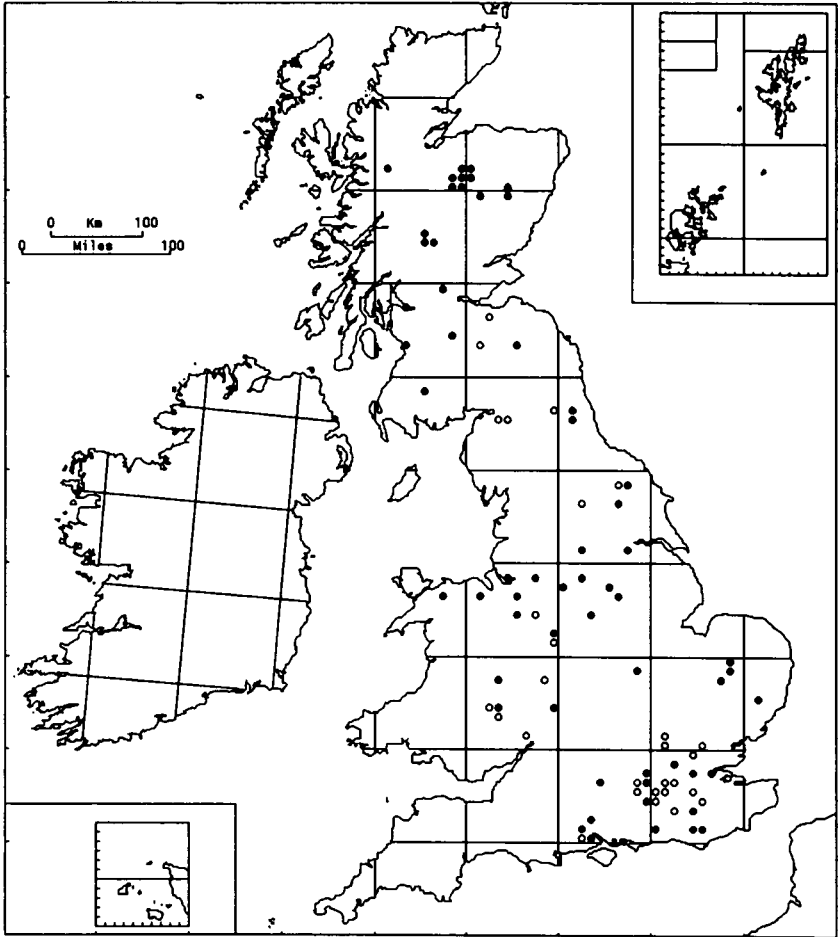
Map 17 *Atomaria (s.str.) procerula* Erichson 1846



A woodland species associated with broadleaved and coniferous trees, it has been collected from rotten wood, including that with fungi, and once on mouldy bones. It has been recorded only in Scotland where it is very localised and rare. It is found only sporadically, usually singly or in very small numbers.

It is mainly a boreo-alpine species in Europe, but occurs in many localities in Germany north of the Alps. It is also known from Siberia and northern Japan.

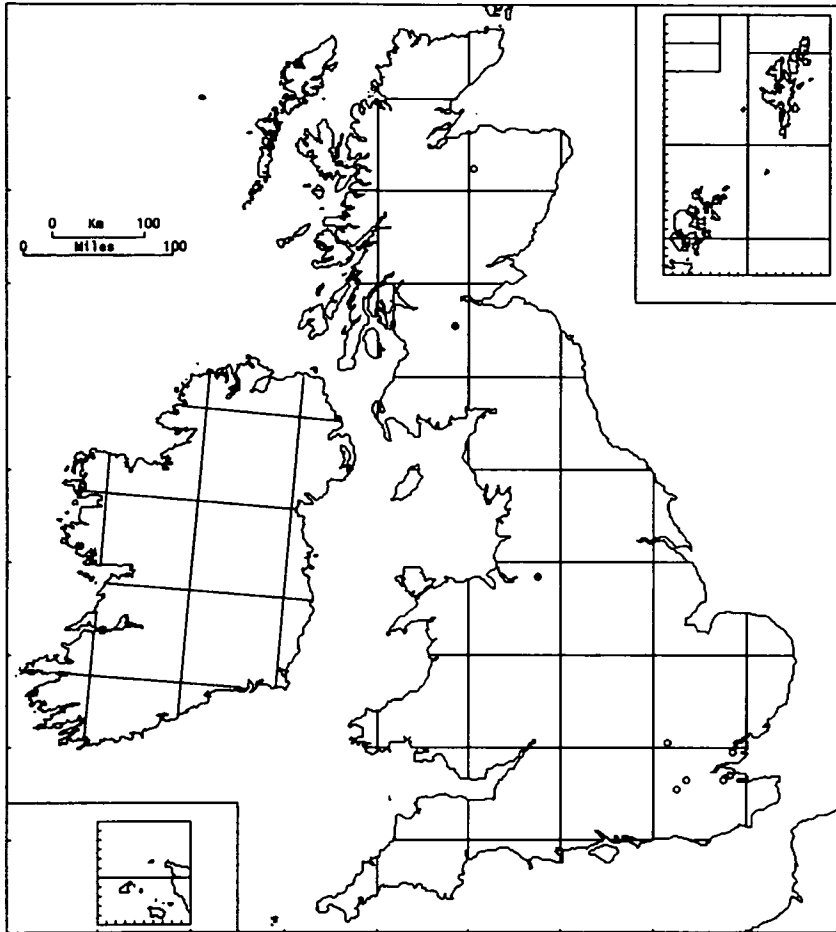
Map 18 *Atomaria (s.str.) pulchra* Erichson 1846



This woodland species is mainly associated with conifers, but also occurs with broadleaved trees. It is found on all kinds of dead or rotten wood, heaps of bark shavings, burnt wood, sawn logs and stacked timber and can also be collected by beating conifer branches and in flight interception traps. It is widespread and frequent, but localised and often in small numbers. This is the most frequently recorded of the British parallel-shaped species associated with dead wood.

A. pulchra is widely distributed throughout Europe, including Tenerife, and also occurs in Turkey, Iran, Siberia, Mongolia, the Himalayan area, Japan and North America.

Map 19 *Atomaria (s.str.) puncticollis* Thomson 1868

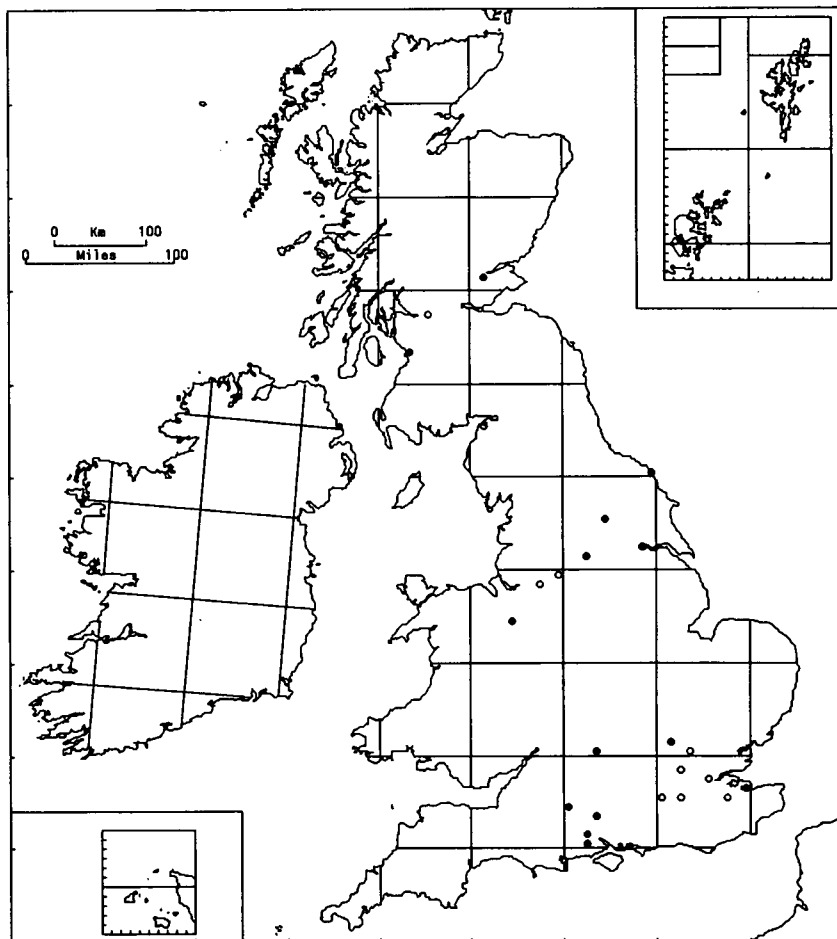


This species was first recognised in Britain from Scotland (Johnson 1976b), but has been found to be confused with *A. nigriventris* in some older collections.

It is a woodland species associated with broadleaved trees, but probably also with conifers. Over fifty specimens occurred in 1992 in Cheshire amongst mouldy wood shavings and adjacent sawn timber of beech and oak lying on them. Previous British records were of single specimens taken by sweeping and in dead grass. This species has a scattered distribution, is localised and rare, and usually occurs singly or in very small numbers.

It has been recorded at scattered localities in central and northern Europe, especially in mountainous areas, and also in southern Italy.

Map 20 *Atomaria* (s.str.) *punctithorax* Reitter 1887

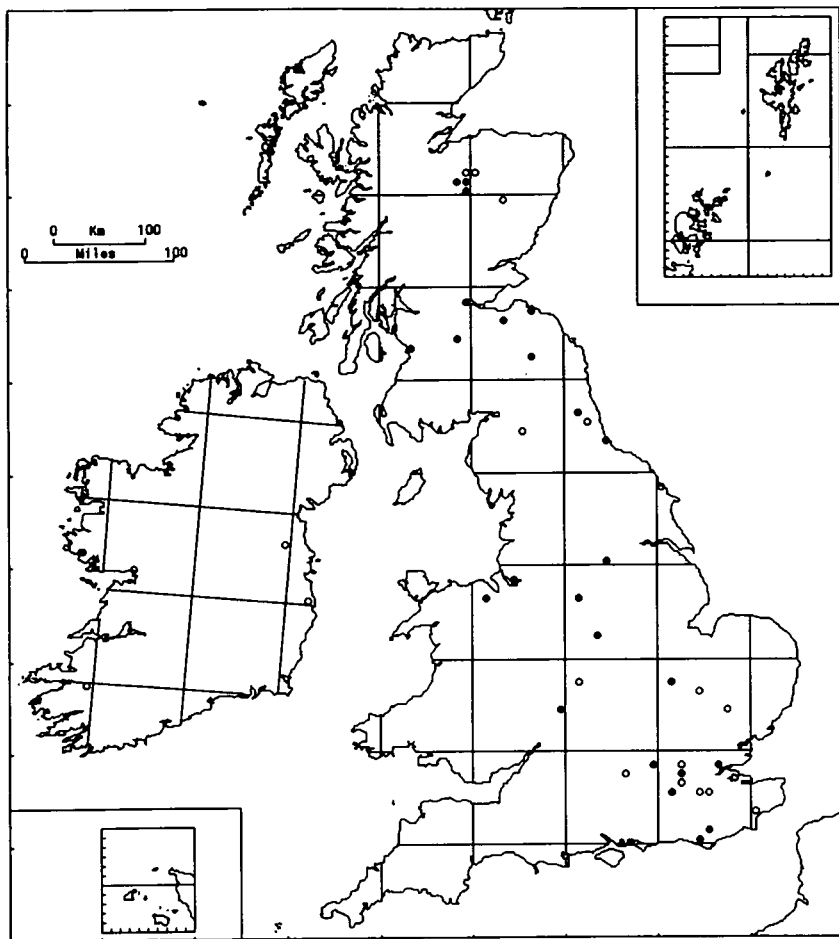


This species was first recognised in Britain in 1976 (Johnson 1976b), but has been found mixed with *A. nigriventris* in some older British collections.

It is a grassland species, found especially near farms and in gardens. It occurs mostly in fungus-infested hay bales, but has also been collected in glasshouses, among compost and grass, in flight, and once in the debris of a hornet (*Vespa crabro*) nest. Although this species is widespread, it is localised and occurs only sporadically, and usually in small numbers.

Originally described from Dalmatia, it is a recent (post-1950) immigrant into central Europe, north to southern Sweden (Johnson 1992c), and also occurs in Spain.

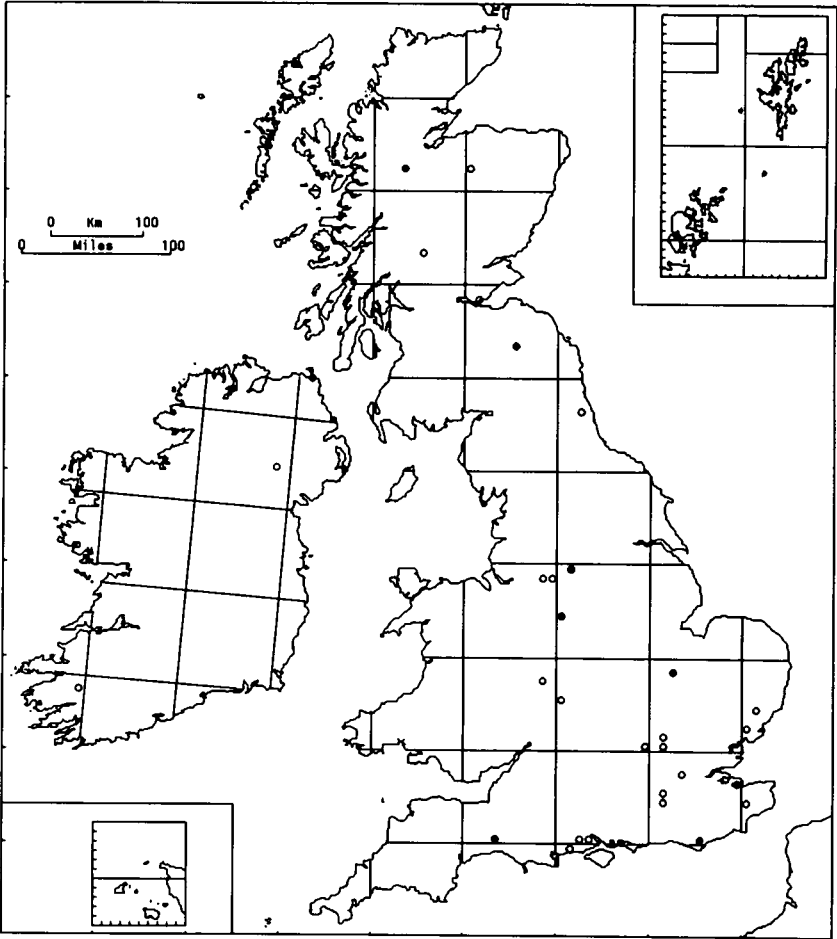
Map 21 *Atomaria (s.str.) strandi* Johnson 1967



This woodland species is associated especially with conifers, but has also been found in broadleaved woods. It has been collected by beating spruce (*Picea* spp.) branches and has been found on burnt wood, in rotten wood debris, and in woodland litter samples. It has also been taken in flight interception traps and by sweeping. It is a widespread but localised and infrequent species, usually found in very small numbers or singly.

Originally described from Britain and Norway (Johnson 1967), it appears to be very scattered and rare abroad, occurring in Finland, Austria, Romania, Spain and Corsica.

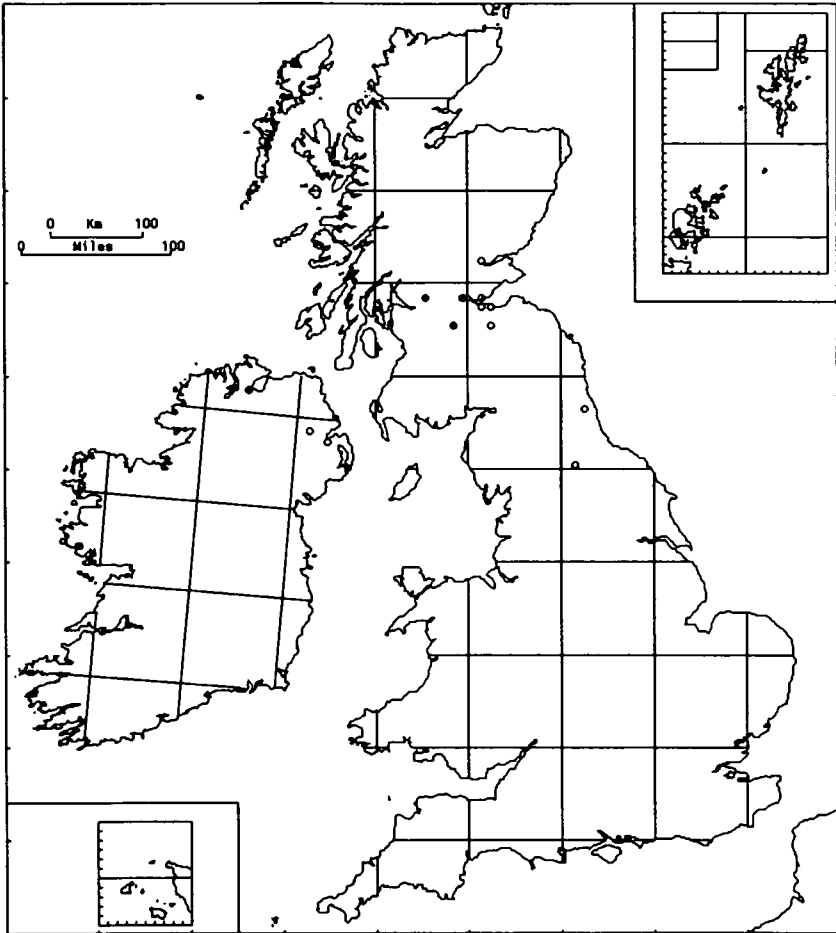
Map 22 *Atomaria (s.str.) umbrina* (Gyllenhal 1827)



This woodland species occurs mainly with broadleaved trees, but sometimes in mixed woodland. It can be found in rotten and fungus-infested wood debris and, on the continent, it is associated with *Armillaria* spp. and *Pholiota* spp. fungi on tree stumps. It is localised and rare, and occurs only sporadically, usually singly or in very small numbers.

It is widespread but localised over much of Europe, apart from the south, and is also recorded from Siberia.

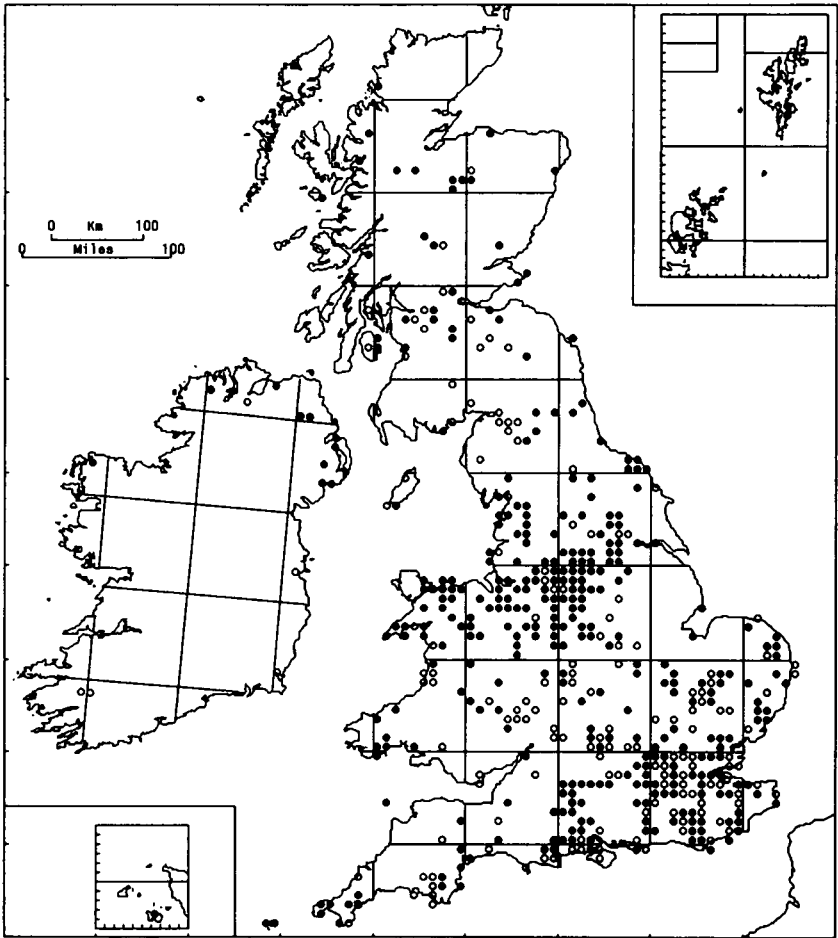
Map 23 *Atomaria (s.str.) wollastoni* Sharp 1867



Little is known of the bionomics of this species in Britain and Ireland: it is possibly a wetland species having been collected on the banks of a loch and in flood refuse. It has a northern, localised distribution and is rare, being found singly or in only very small numbers.

It is a boreal species in Europe, occurring south to Denmark and northern Germany. There is an old record from the Netherlands. It has also been collected from Estonia, eastwards to the Moscow region of Russia and Siberia.

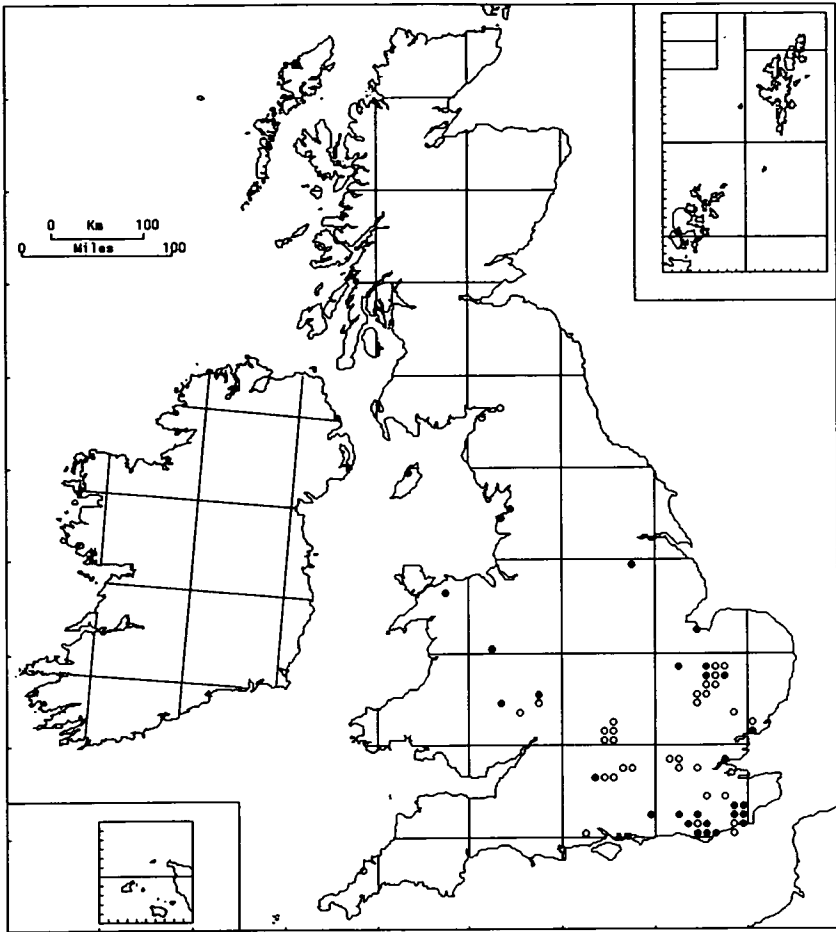
Map 24 *Atomaria (Anchicera) apicalis* Erichson 1846



This is a grassland species, which has been recorded especially around farms, gardens and parks, but often occurs in other habitats. It has been collected in man-made heaps of refuse, especially cut vegetation, grass, compost and dung heaps, flood debris, and more rarely on carrion and rotting fungi. This is one of the most widespread and common species in Britain and Ireland.

It is widely distributed throughout Europe and occurs in the Atlantic islands, Turkey, Israel, Iran, Siberia, Mongolia, central Asia, North Africa and North America.

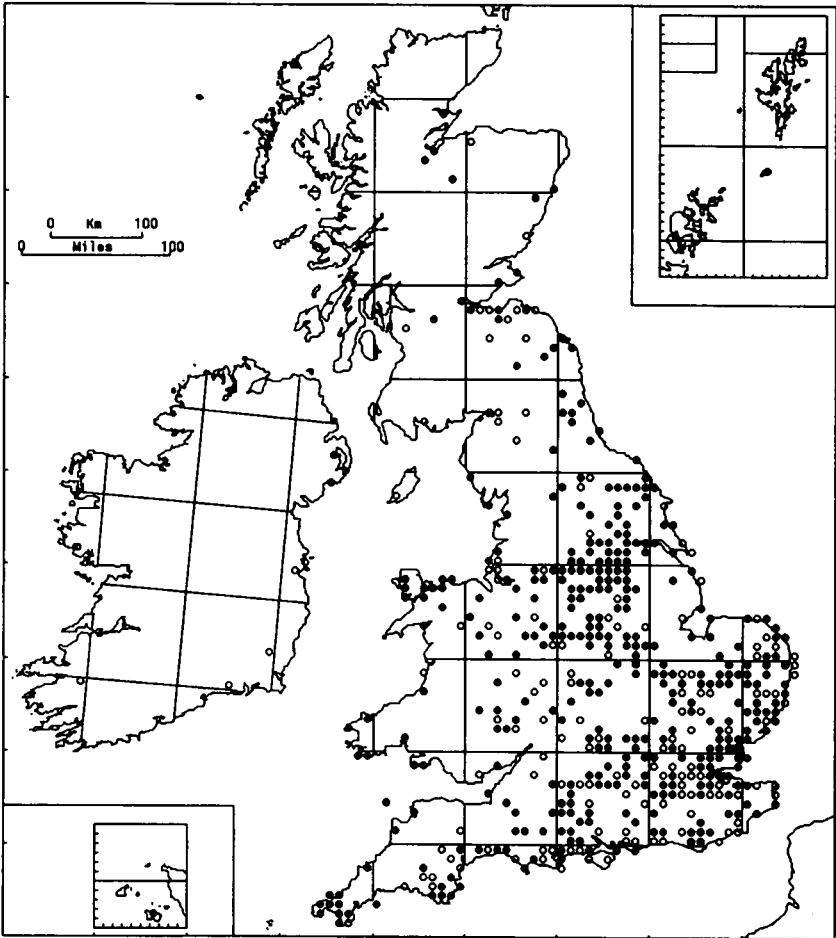
Map 25 *Atomaria (Anchicera) atra* (Herbst 1793)



This is a wetland species occurring in fens and marshes and more rarely on the edge of brackish coastal marshes. It has been collected in marsh litter, river flood refuse and, more rarely, tidal drift-line debris. It is very localised and scattered away from the south-east. It can be found frequently and in small numbers at suitable locations. The wings are rudimentary in most specimens.

It is recorded from scattered localities in Europe, apart from the extreme north and south, and is also known from Siberia.

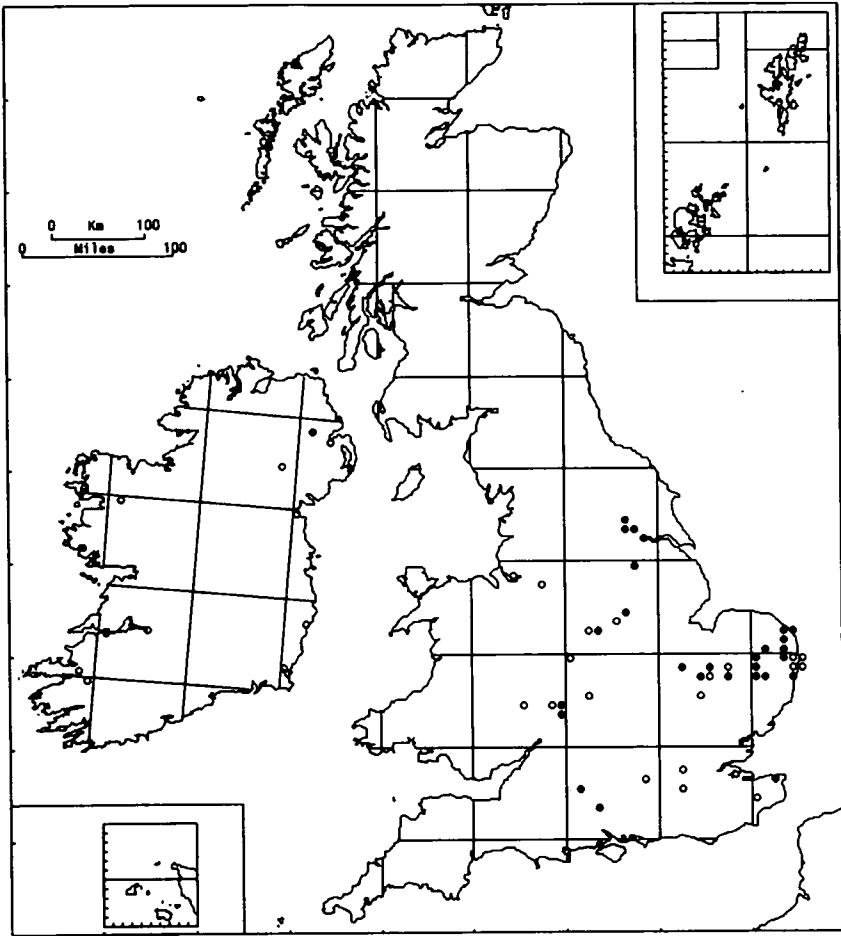
Map 26 *Atomaria (Anchicera) atricapilla* Stephens 1830



This grassland species occurs especially around farms and gardens, but also often in other habitats. It has been recorded in man-made heaps of refuse, especially cut vegetation, grass, compost heaps and flood refuse, and has often been collected by sweeping, in flight and at light. It is one of the more widespread and common species in Britain and Ireland, although the numbers of individuals seen can vary.

It is widely distributed throughout much of Europe, apart from the extreme north, although it has been recorded in Spitzbergen where it may have been introduced. It is also known from Turkey, Cyprus, Syria, Israel and Jordan.

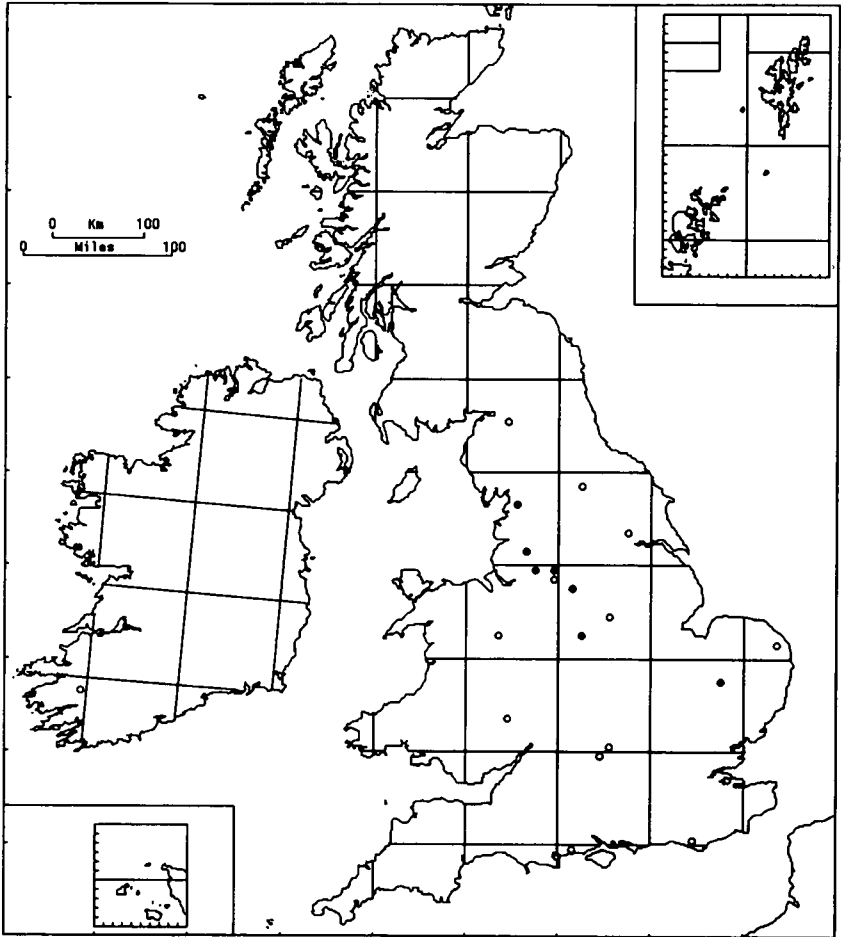
Map 27 *Atomaria (Anchicera) basalis* Erichson 1846



This wetland species occurs in fens and marshes, in marsh litter and river flood refuse. Its distribution is very localised and scattered, although in favourable locations it can be found frequently and often in numbers.

There are scattered records from northern and central Europe, most commonly in Germany. It also occurs across Siberia.

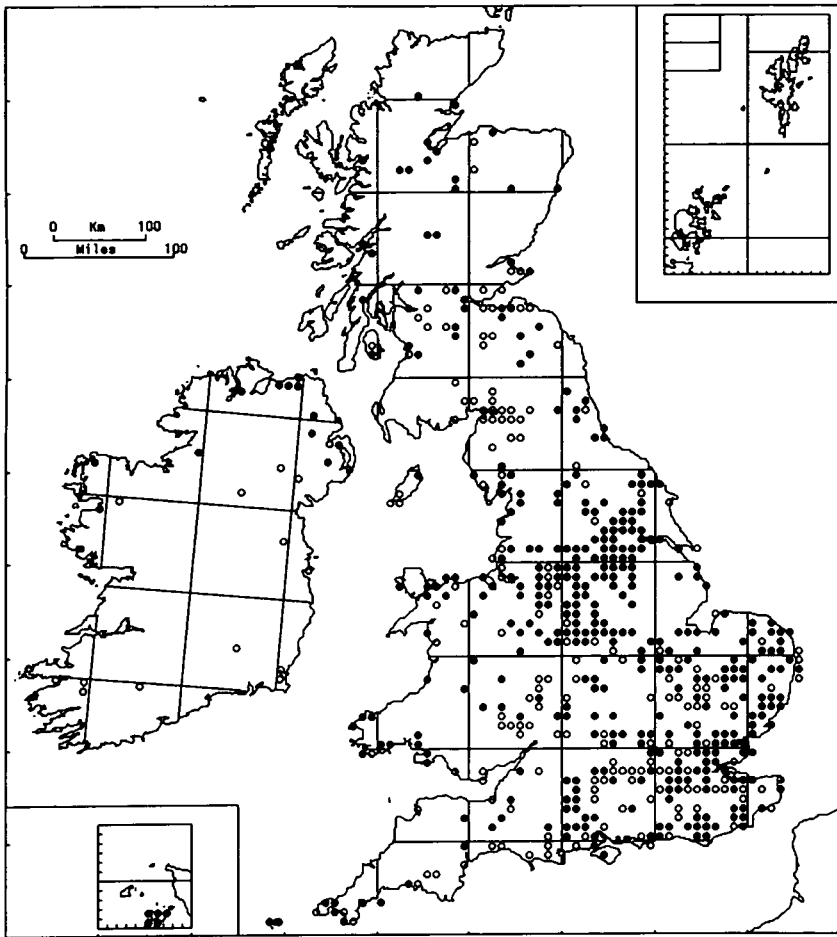
**Map 28 *Atomaria (Anchicera) clavigera* Ganglbauer
1899**



Although this is probably mainly a grassland species, it occurs in a range of habitats, including vegetation at the edge of sewage ponds, gardens, river banks and the edge of wetland carr. It has been collected by sweeping, on sawn wood, in rotten trees, among flood refuse, and at light. This is a very localised and rare species. It occurs only sporadically, almost always as single specimens. It was first recognised from Britain in Cheshire (Johnson 1966b), and was subsequently found mixed with other species in older collections.

Although it is recorded scattered throughout Europe, apart from the south, it is rare everywhere.

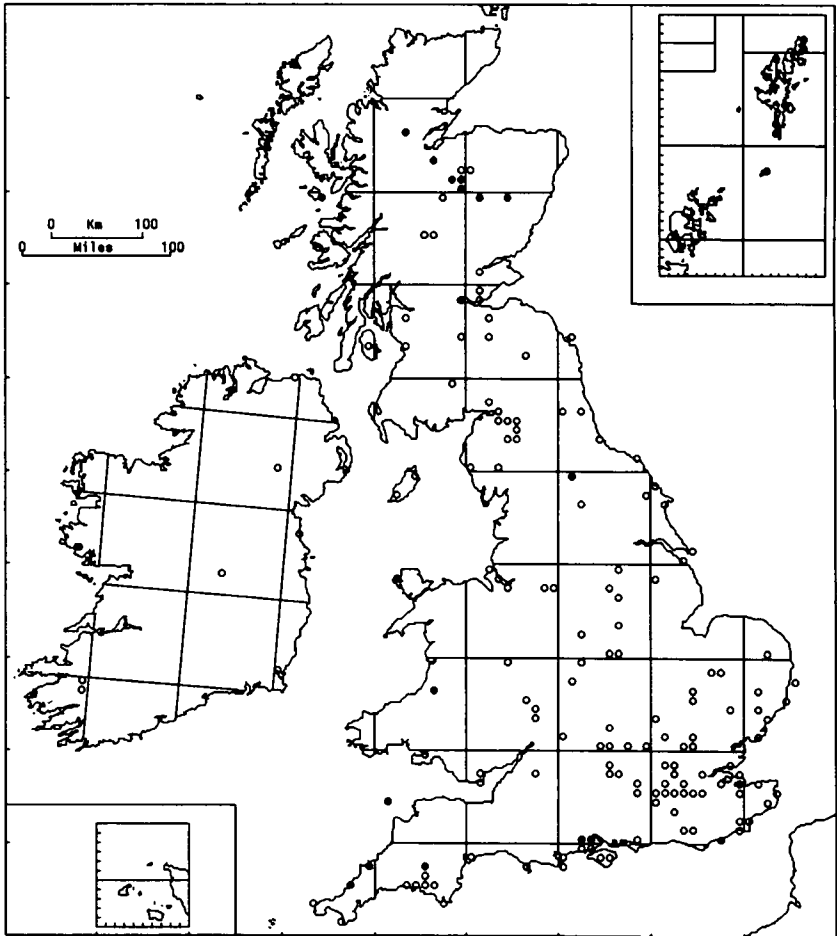
Map 29 *Atomaria (Anchicera) fuscata* (Schönherr 1808)



It occurs in a range of habitats - grassland, wetland and woodland - especially in damp situations, and has been collected in litter, moss, flood refuse, cut vegetation and compost heaps, and by sweeping and at light. This is one of the commoner and more widespread species in Britain and Ireland, although numbers of individuals can be variable.

It is widely distributed throughout most of Europe, except for the south-west, and it has been recorded in Israel, also in western Siberia to Kamtschatka, northern Japan and North America.

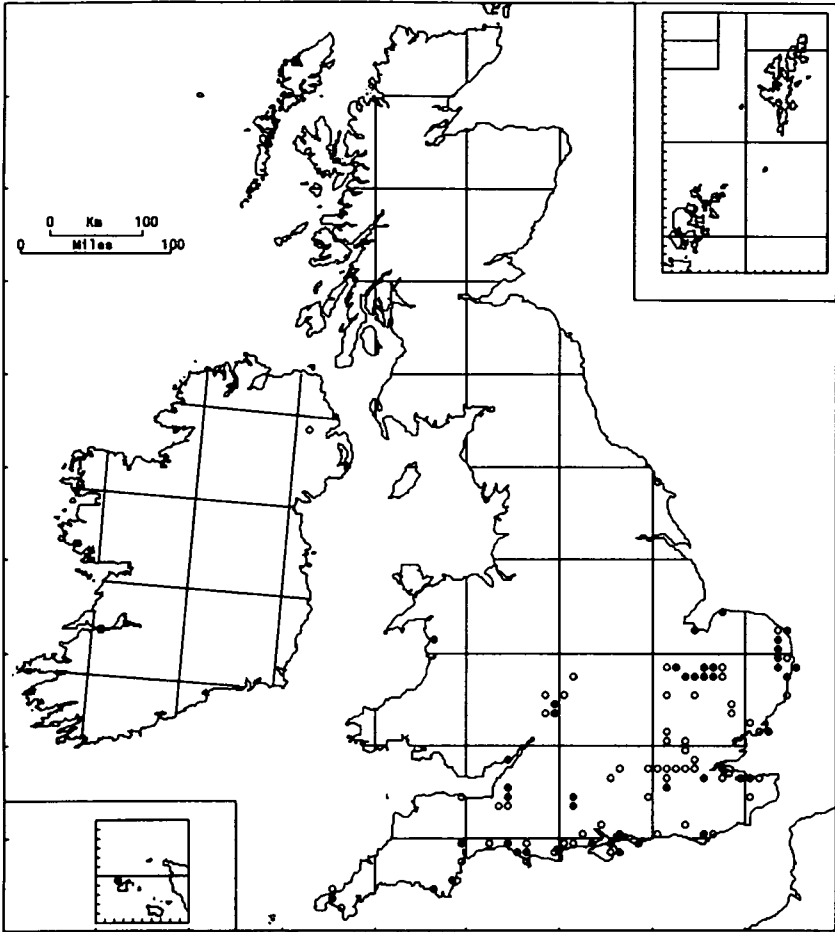
Map 30 *Atomaria (Anchicera) fuscipes* (Gyllenhal 1808)



A grassland and woodland species, it is found in the dung of herbivores, especially that of sheep, deer and horse. Earlier records include some from haystack refuse, manure heaps and heaps of seaweed (Fowler 1889). This is a declining species which nowadays is very localised and rare, having disappeared from many areas. It occurs in very small numbers, at least in some of its Scottish localities.

Scattered records are known over most of Europe, but it is now more rare than formerly in many areas.

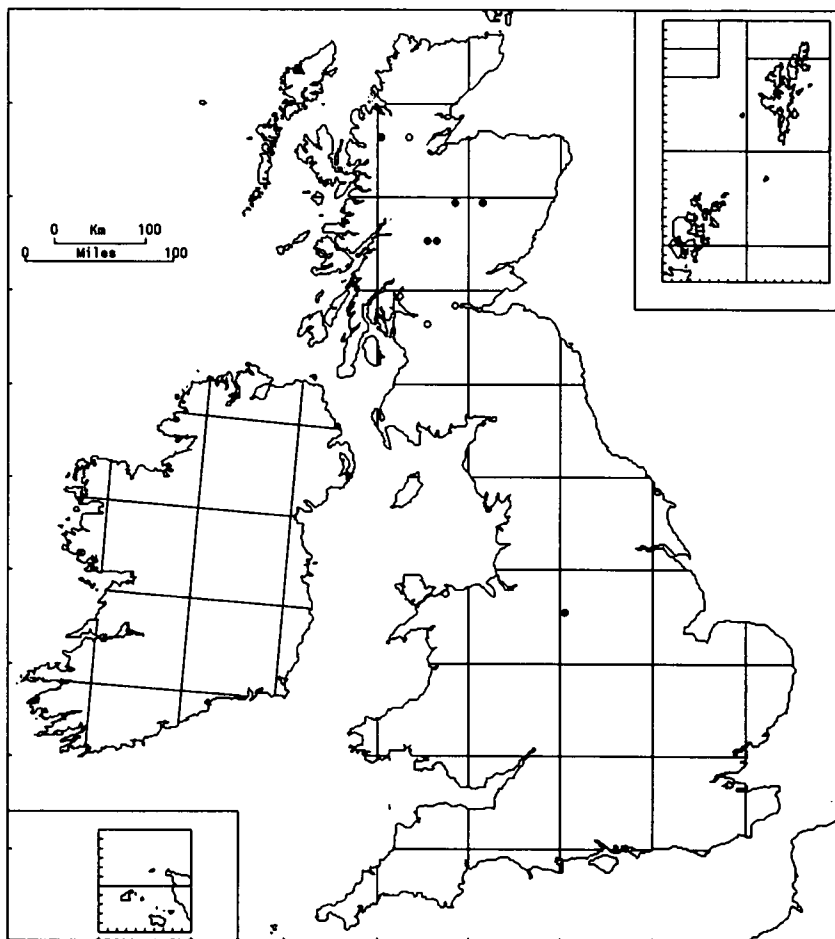
Map 31 *Atomaria (Anchicera) gutta* Newman 1834



This wetland species occurs in fens, marshes and ditches, often near the coast, and has been collected in marsh litter and flood refuse. Its distribution is very localised and scattered, being found especially in the south-east. In favourable locations it can be collected frequently, but only in small numbers. The wings of most specimens are rudimentary.

It is widely distributed but localised in much of Europe, apart from the extreme north, and it also occurs in Turkey.

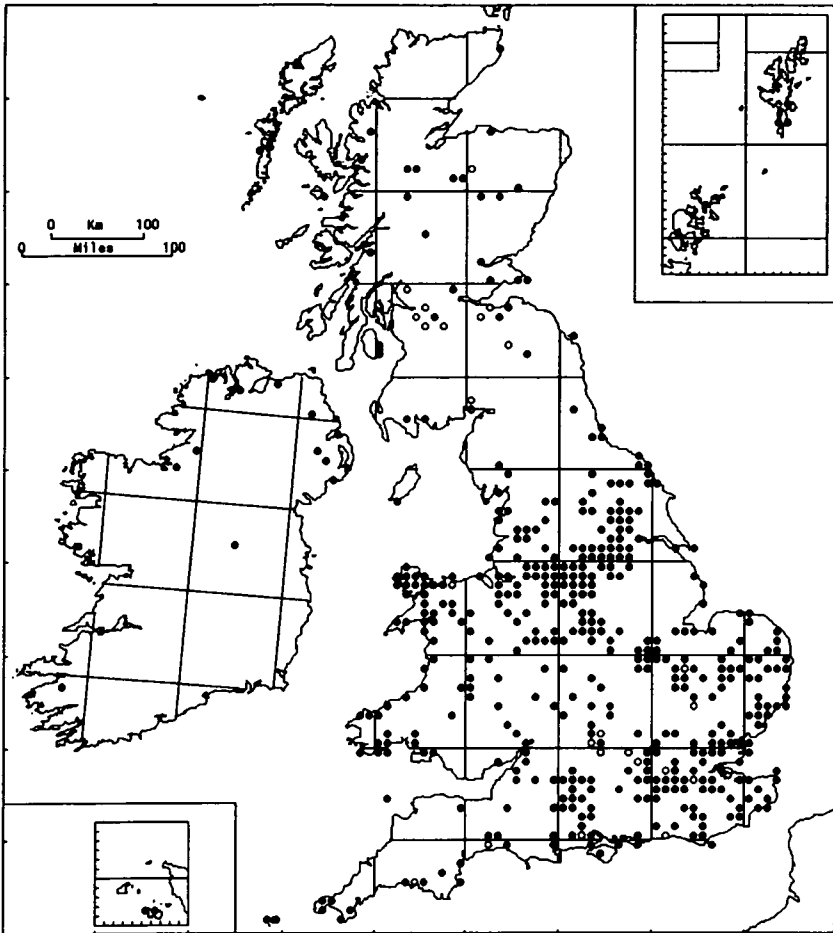
Map 32 *Atomaria (Anchicera) hislopi* Wollaston 1857



This is a species which is especially associated with coniferous woodland and only rarely with broadleaved trees. It has been collected in dung, especially that of deer, and more rarely of sheep, horse and grouse (*Tetraonidae*). It has a northern distribution and is very localised and rare. It usually occurs singly, except at some Scottish localities where it can occur in small numbers.

This is a boreal species in Europe, occurring mainly in mountainous areas. It is very restricted and rare in central Europe, known only from the Harz Mountains of Germany and the Ukrainian Carpathians.

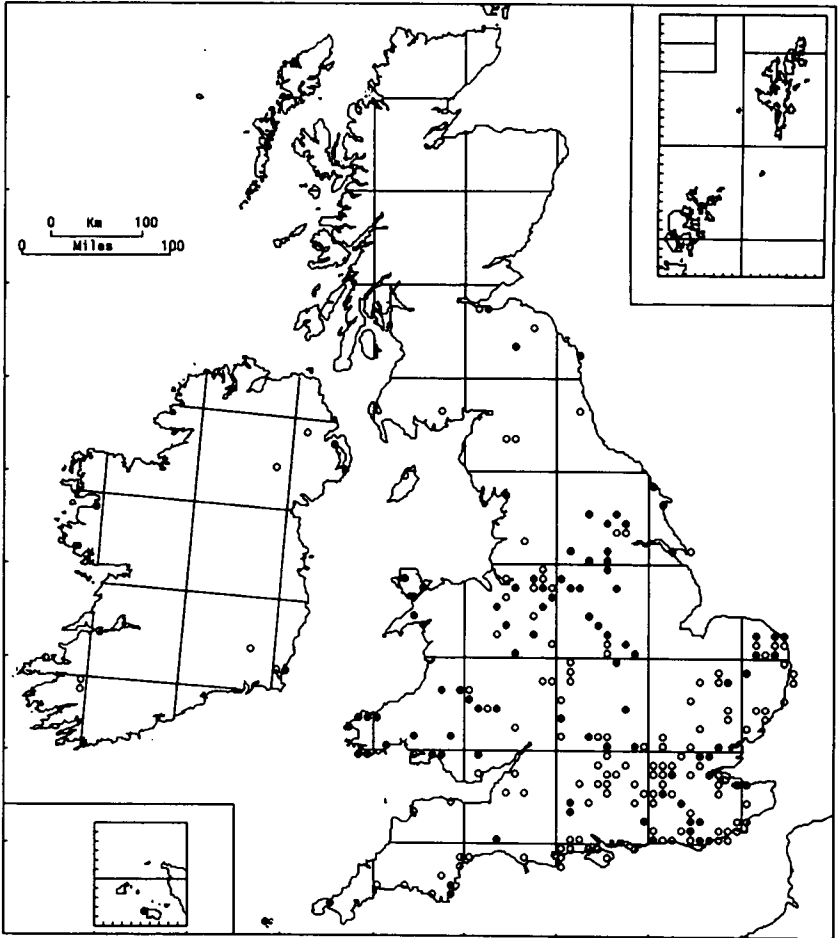
Map 33 *Atomaria (Anchicera) lewisi* Reitter 1877



This is a grassland species which has been recorded especially around farms, gardens and parks, but it often also occurs in other habitats. It has been collected in man-made heaps of refuse, especially cut vegetation, hay, grass, and compost, and has often been captured by sweeping and at light. It is widespread and common, and often found in large numbers. An immigrant from the Far East, the first European specimens were recorded from London (Allen 1938).

It is widely distributed throughout most of Europe, except the south-west, and also occurs in Spitzbergen, Mongolia, eastern Siberia, Japan, Korea, China, central Asia, Afghanistan, the Himalayas, South and East Africa, Australia, New Zealand, North and Central America and southern Brazil.

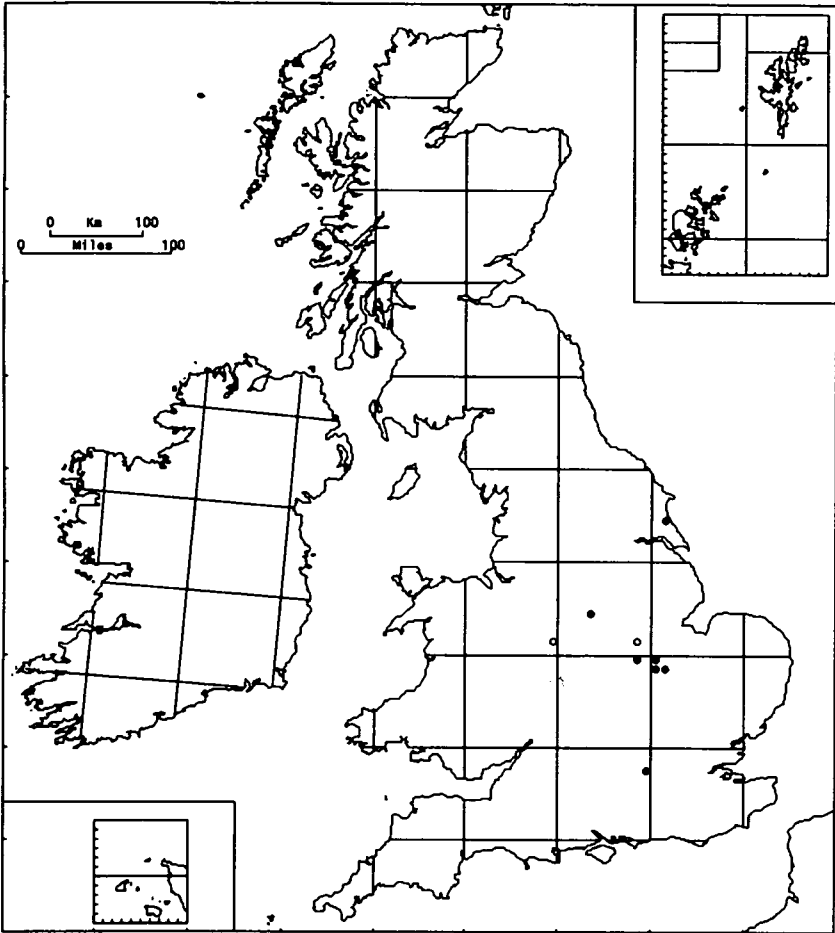
Map 34 *Atomaria (Anchicera) mesomela* (Herbst 1792)



This wetland species occurs beside meres and ponds and in marshes and fens. It is usually found in marsh litter, tussocks, old bullrush stems and flood refuse. It is widespread but localised, especially in the north and perhaps in the south-east. Where it occurs, it is frequent and can be found in some numbers in suitable localities. It is the most widespread and frequent of our wetland species, except in the south-east.

It is widely distributed but localised over much of Europe and more thinly distributed in the extreme north and south. It has also been recorded from North Africa.

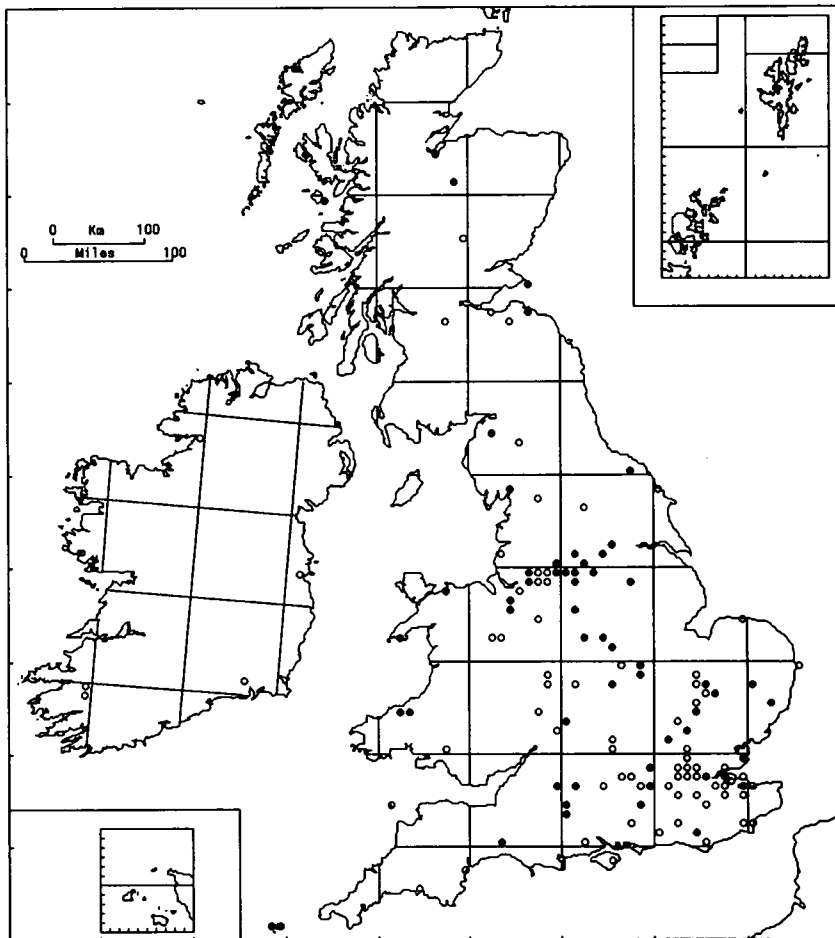
Map 35 *Atomaria (Anchicera) morio* Kolenati 1846



This woodland species is especially associated with broadleaved trees. It has been found in bird nests in hollow trees, especially those of jackdaw (*Corvus monedula*), woodpeckers (Picidae) and barn owl (*Tyto alba*), and also in grey squirrel (*Sciurus carolinensis*) dreys. Occasional specimens have been found elsewhere, such as in a nesting box, among sawn timber, and in the nest of a mole (*Talpa europaea*). It is a very localised and rare species which occurs only sporadically and usually in very small numbers or singly. It was first recorded in Britain from Windsor Forest (Donisthorpe 1929).

It occurs scattered throughout Europe, apart from the south, and in Siberia, Israel and North America.

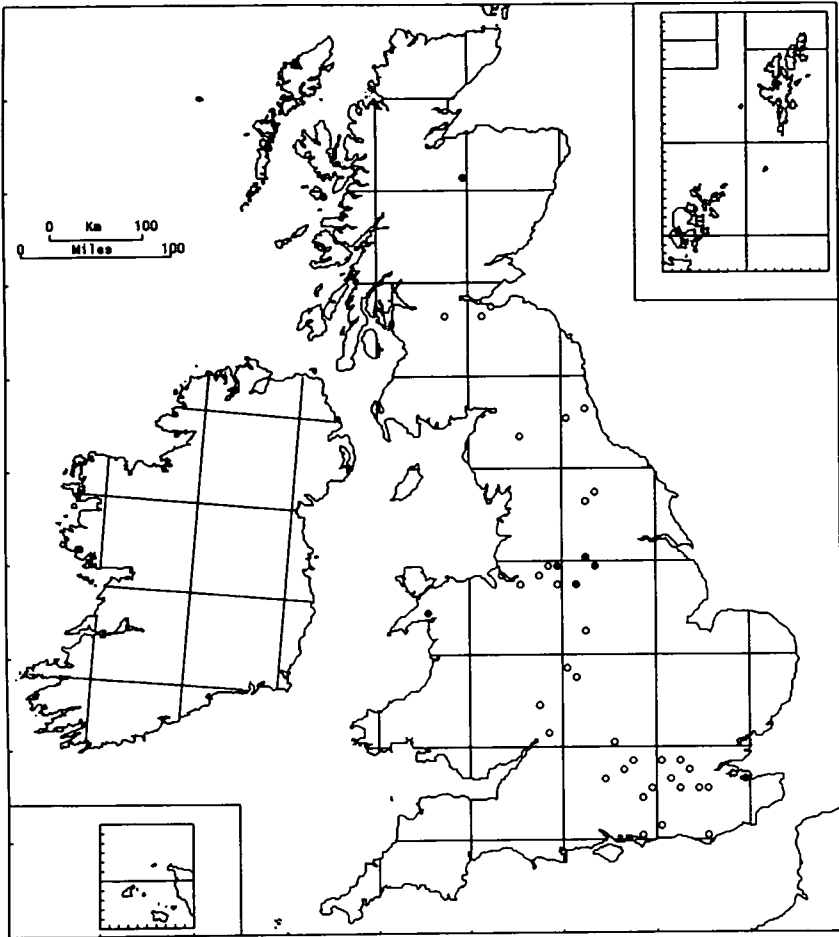
Map 36 *Atomaria (Anchicera) munda* Erichson 1846



This grassland species has been found around farms, often indoors in barns, but only rarely elsewhere. It occurs in heaps of mouldy and decaying hay and straw, haystack bottoms and old dung heaps. It is a localised but widespread species, with records thinning out towards the north. Although it is often found in some numbers, it occurs only infrequently.

It is widely distributed but localised over much of Europe, apart from the extreme north, and is also known from Turkey, Israel, Afghanistan, central Asia, the Atlantic islands and North Africa.

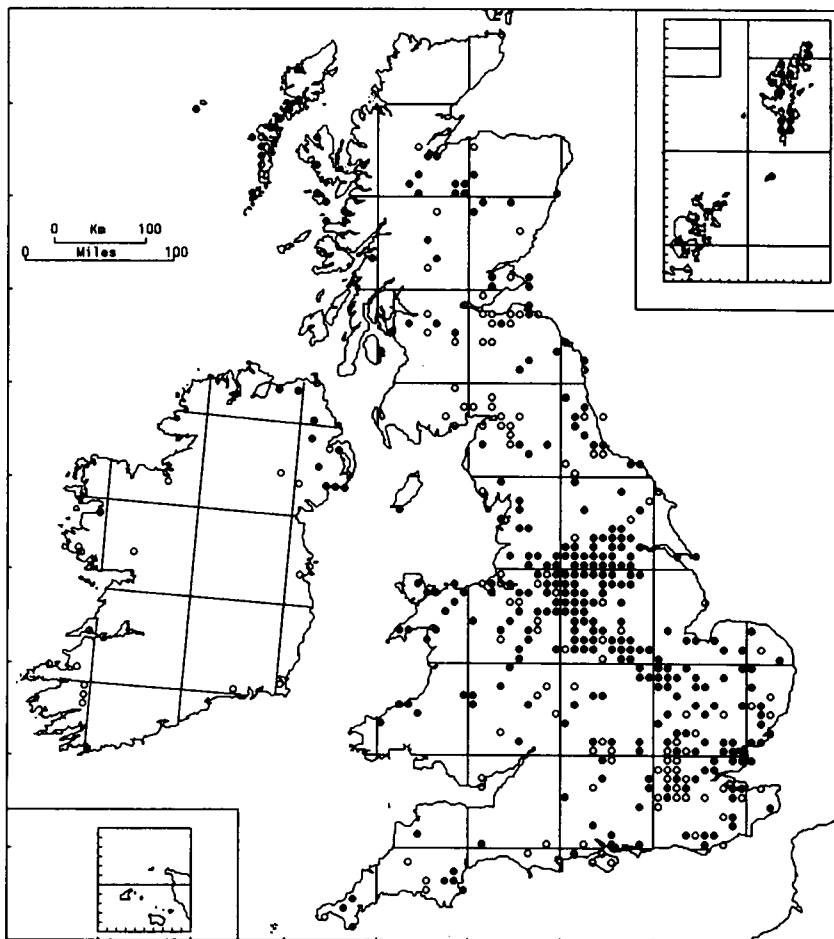
Map 37 *Atomaria (Anchicera) nigripennis* (Kugelann 1794)



This grassland species has been found around farms, and often indoors in barns and cellars, where it occurs in heaps of mouldy and decaying hay and straw, in haystack bottoms, and on fungi in cellars. It is a very localised species which occurs only sporadically, but often in numbers.

It has been recorded scattered over much of Europe, apart from the extreme north, and also from North Africa.

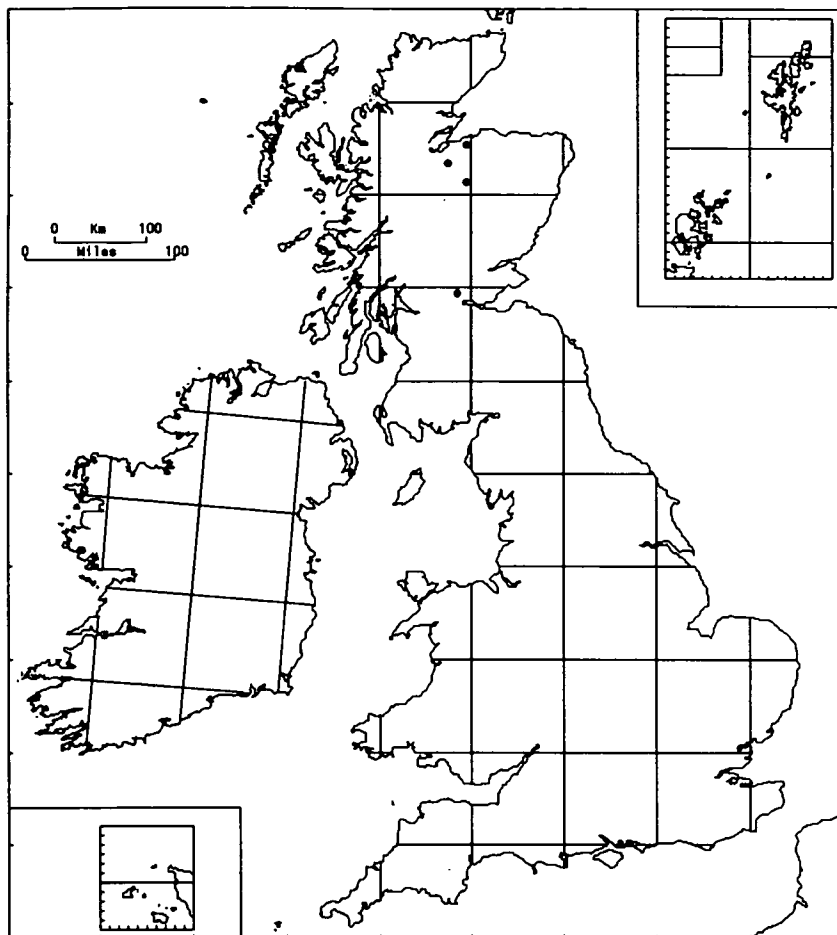
Map 38 *Atomaria (Anchicera) nitidula* (Marsham 1802)



It occurs in a wide range of habitats which include grassland, parks, gardens, moorland, woodland and damp localities. It has been found in a variety of plant and animal debris, such as cut vegetation, grass, litter, moss, old dung heaps, compost heaps, haystack bottoms, flood refuse, fungi and animal dung. This is one of the commonest species in Britain and Ireland; it is widespread but the numbers found can be variable.

It is widely distributed in northern Europe and western Europe to western Germany, Switzerland and the western Austrian Alps (Johnson 1992c).

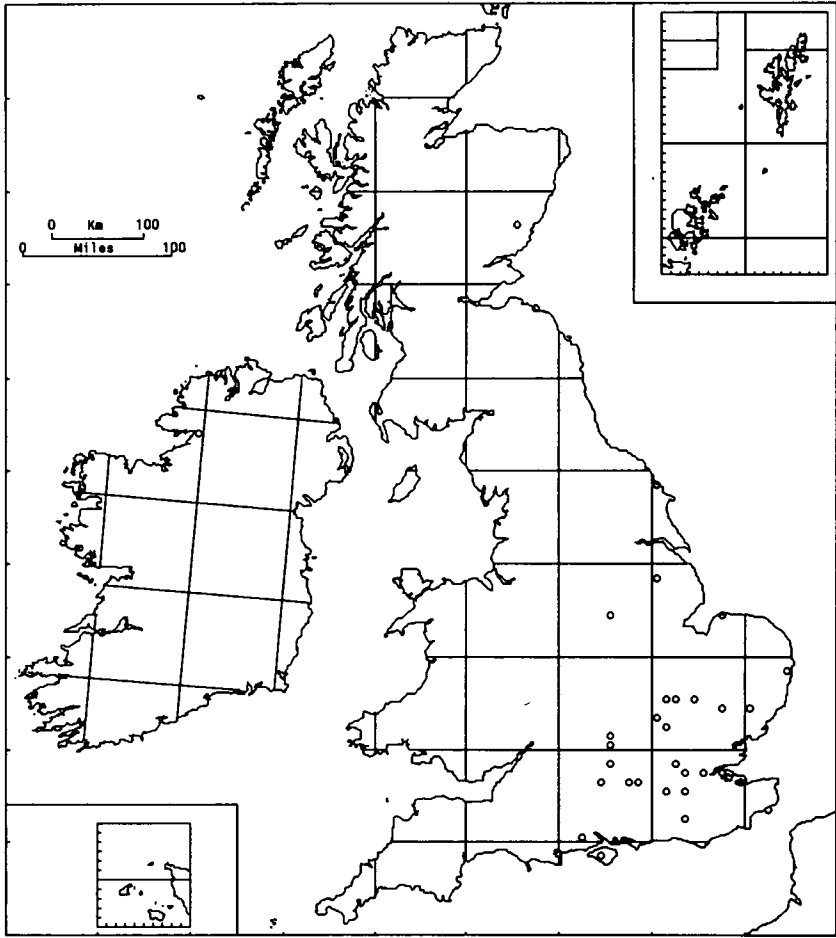
Map 39 *Atomaria (Anchicera) ornata* Heer 1841



This species was first recorded in Britain from Stirling (Johnson 1976b). It is associated with coniferous forests where it occurs amongst decaying fungoid twigs and in cones of pine and spruce lying on the ground. It is very localised, occurring mainly in the Caledonian pine forests of the Scottish Highlands where it is rare and occurs only sporadically, usually singly or in very small numbers.

It is widespread but localised in northern and central Europe, especially in mountainous areas with conifers.

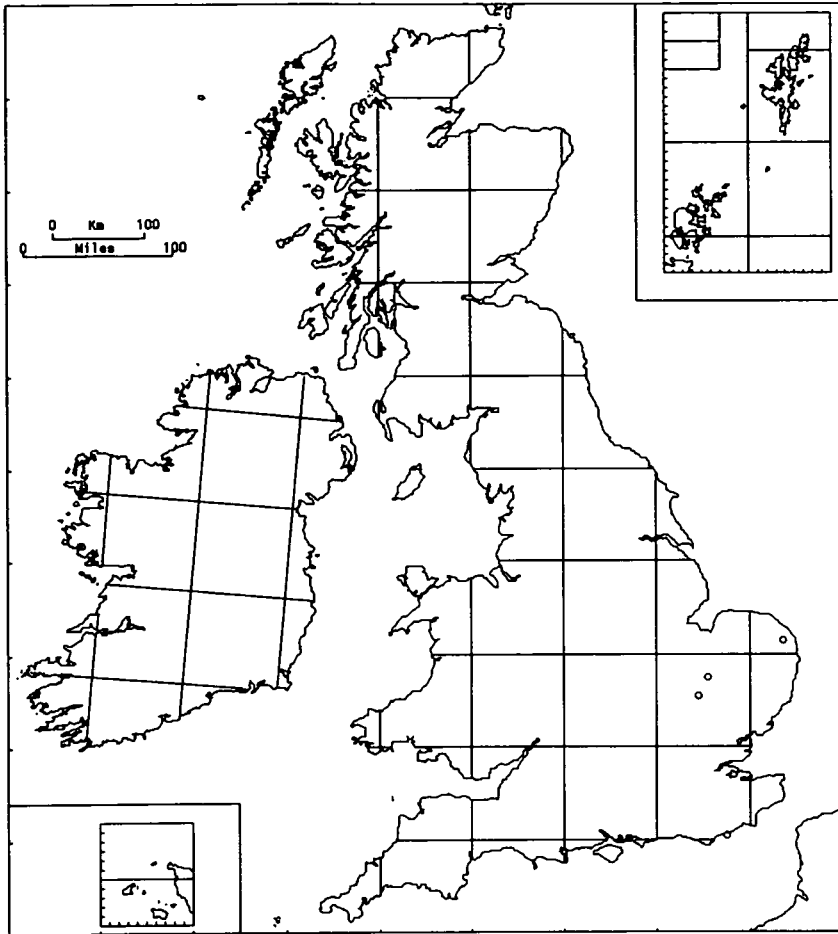
Map 40 *Atomaria (Anchicera) peltata* Kraatz 1853



This grassland species occurred near farms in vegetable and haystack refuse (Fowler 1889). It has apparently been extinct in Britain and Ireland since 1959 and, with the majority of records being from the east, it is possible that this species was at the edge of its range.

It is widespread but localised over much of Europe, except the south-west, but is commonest in the east. It occurs in Siberia, Mongolia, Iran, and Afghanistan.

Map 41 *Atomaria (Anchicera) pseudatra* Reitter 1887

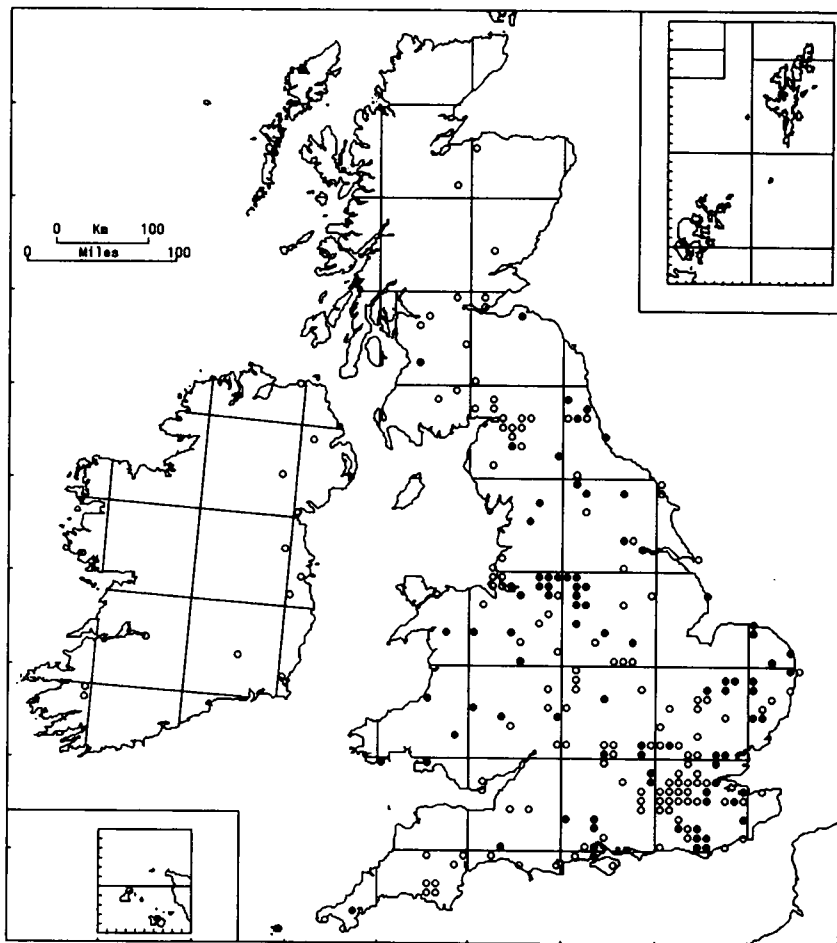


This species was first recorded in Britain from near Cambridge (Allen 1968) and listed by Shirt (1987), as *Red Data Book* category 1 (Endangered), under the name *A. reitteri*.

This wetland species was found in fens and marshes where it occurred in marsh refuse and cut reeds (*Phragmites australis*). It has apparently been extinct in Britain since 1931 and the five known records are all of single specimens. It has only rudimentary wings.

It is recorded as being scattered in northern and central Europe, but rare everywhere.

Map 42 *Atomaria (Anchicera) pusilla* (Paykull 1798)

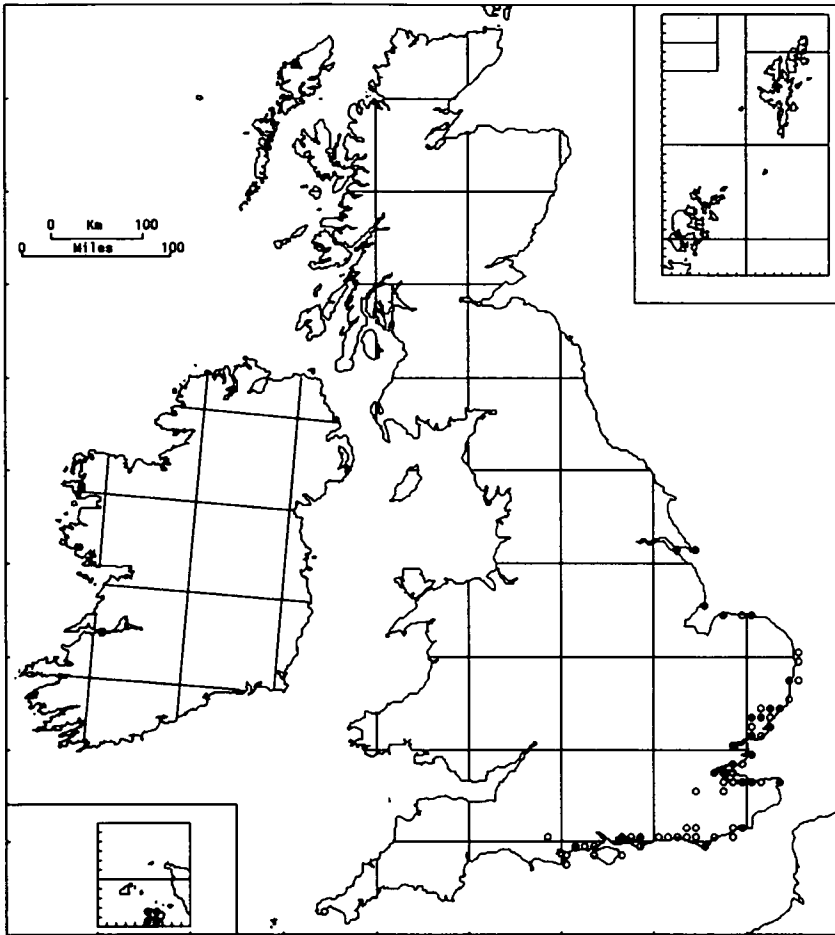


This is a grassland species which is found especially around farms and gardens and only rarely elsewhere. It has been collected in man-made heaps of refuse, cut vegetation, hay, grass and compost heaps, by sweeping, in flight and at light.

It is localised but widespread and perhaps declining. Where it occurs it is frequent, but only in small numbers. It is the smallest species in Britain and Ireland with a length of only 1 to 1.2 mm.

It is widely distributed throughout most of Europe apart from the extreme north, and also occurs in Mongolia, Turkey, Iran, Afghanistan, central Asia, the Atlantic Islands, North Africa and North America.

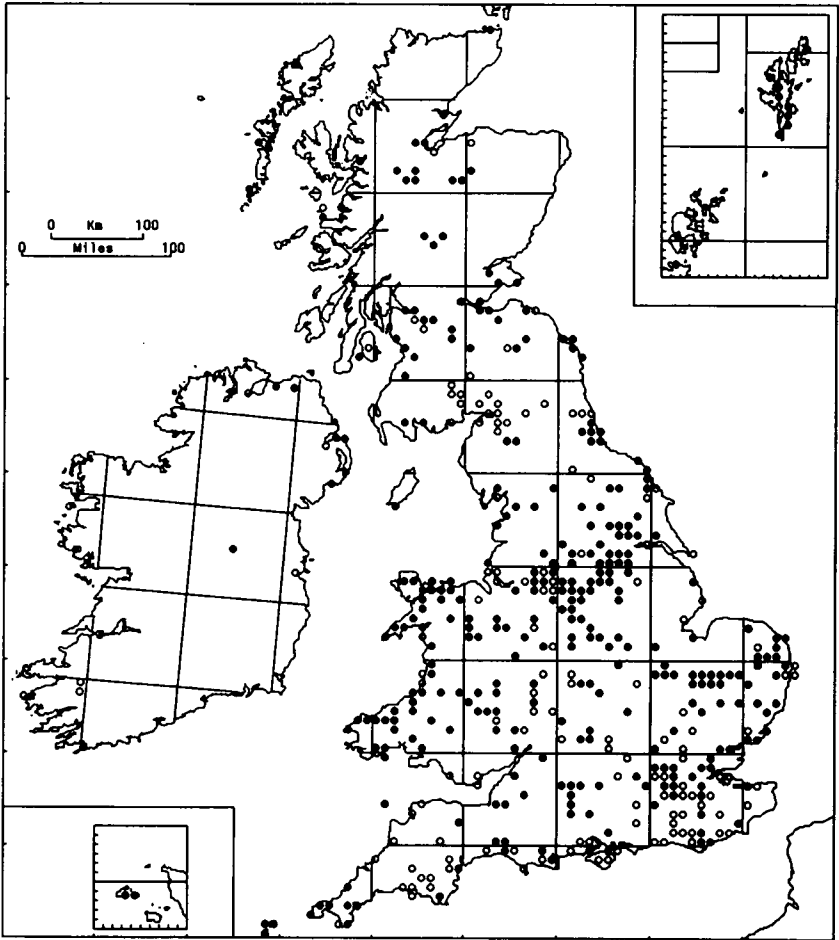
Map 43 *Atomaria (Anchicera) rhenana* Kraatz 1853



This is a halophilous species which occurs on the coast and along tidal rivers, especially on salt marshes, but occasional inland captures (windblown specimens?) are known. It has been recorded at or above high water mark among marsh and tidal refuse, dead seaweed, at plant roots and under stones. Although very localised, it is widespread along the southern and eastern coasts of England and in the Channel Islands. At suitable localities it can be frequent but it occurs only in small numbers. The wings in this species are rudimentary.

It occurs along the coasts of western Europe from southern Scandinavia to Portugal, and from the western Mediterranean - Spain, southern France and Algeria.

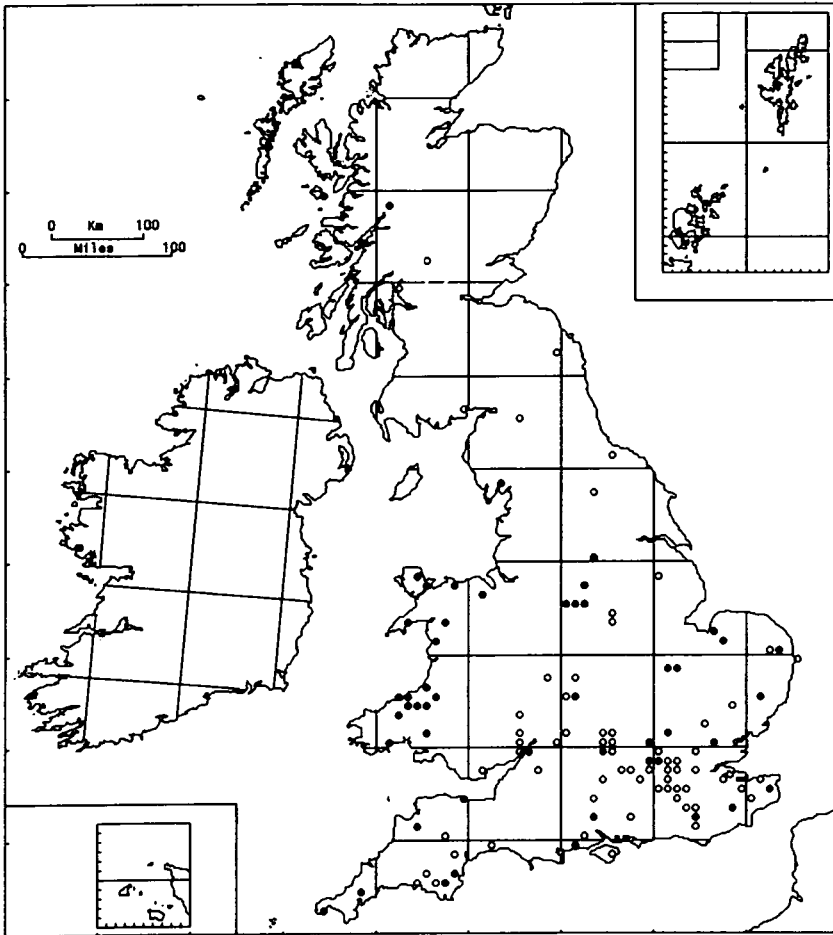
Map 44 *Atomaria (Anchicera) rubella* Heer 1841



A. rubella has been recorded in a range of habitats, such as wetland, grassland and woodland, especially in damp situations. It occurs in litter, moss, cut vegetation, haystack bottoms, compost, flood refuse, and at roots, and has been collected by pitfall trapping and sweeping. It is one of the commoner and more widespread species in Britain and Ireland, although numbers are often variable. The wings of this species are rudimentary.

It is widely distributed throughout much of Europe, apart from the extreme north and south.

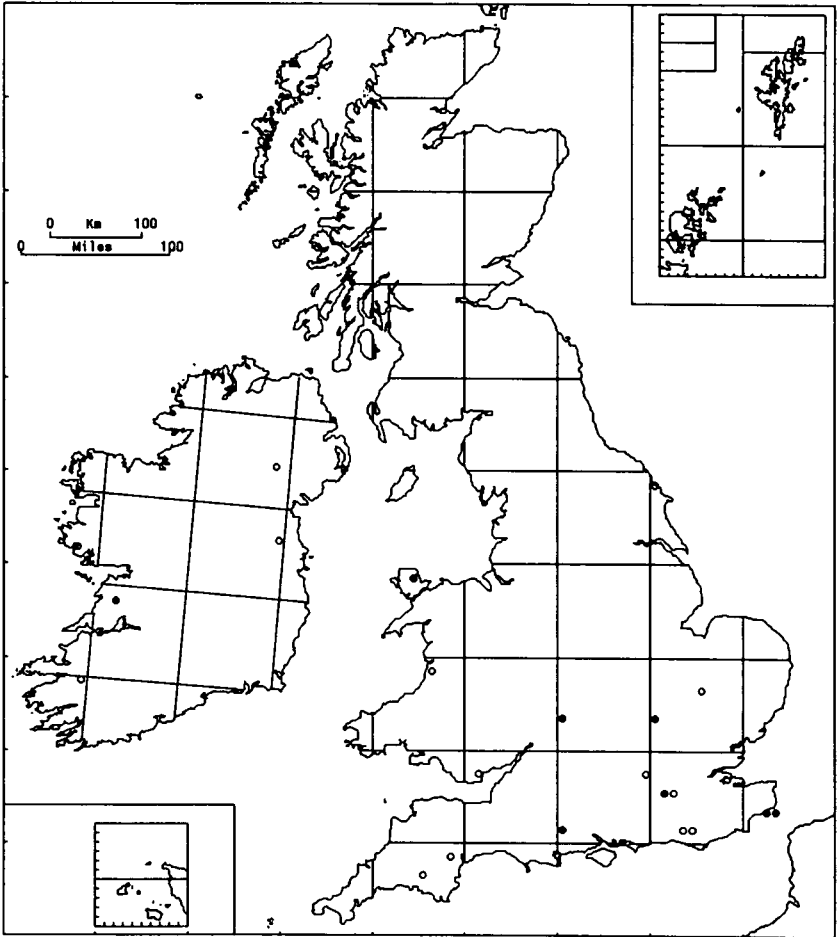
Map 45 *Atomaria (Anchicera) rubida* Reitter 1875



This is a grassland species which is often found near woodland, but there have been occasional captures elsewhere. It occurs in the dung of herbivorous mammals, especially that of horse, sheep and cow. It is a very localised but widespread species which is infrequent and usually occurs only in very small numbers.

There are records of this species from scattered localities over much of Europe, apart from the extreme north.

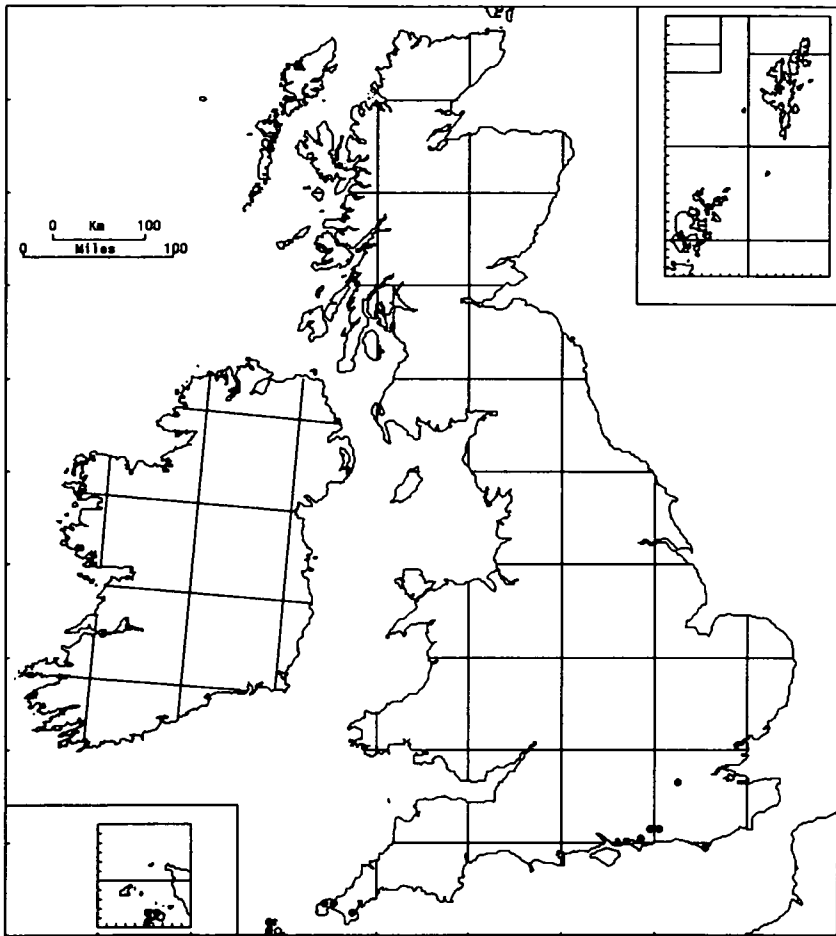
Map 46 *Atomaria (Anchicera) rubricollis* Brisout de Barneville 1863



It appears to be a grassland species which often occurs in wet areas, especially on base-rich soils. It has been recorded mainly by use of pitfall traps, but has also been found in swan (*Cygnus* spp.) dung and in a nest of the ant *Lasius flavus*. This is a very localised and rare species which occurs only sporadically, usually singly or in very small numbers.

There are records from scattered localities over much of Europe, apart from the south-west and extreme north. It is also known from Turkey, Cyprus, Syria, Israel, Jordan, Iran and central Asia.

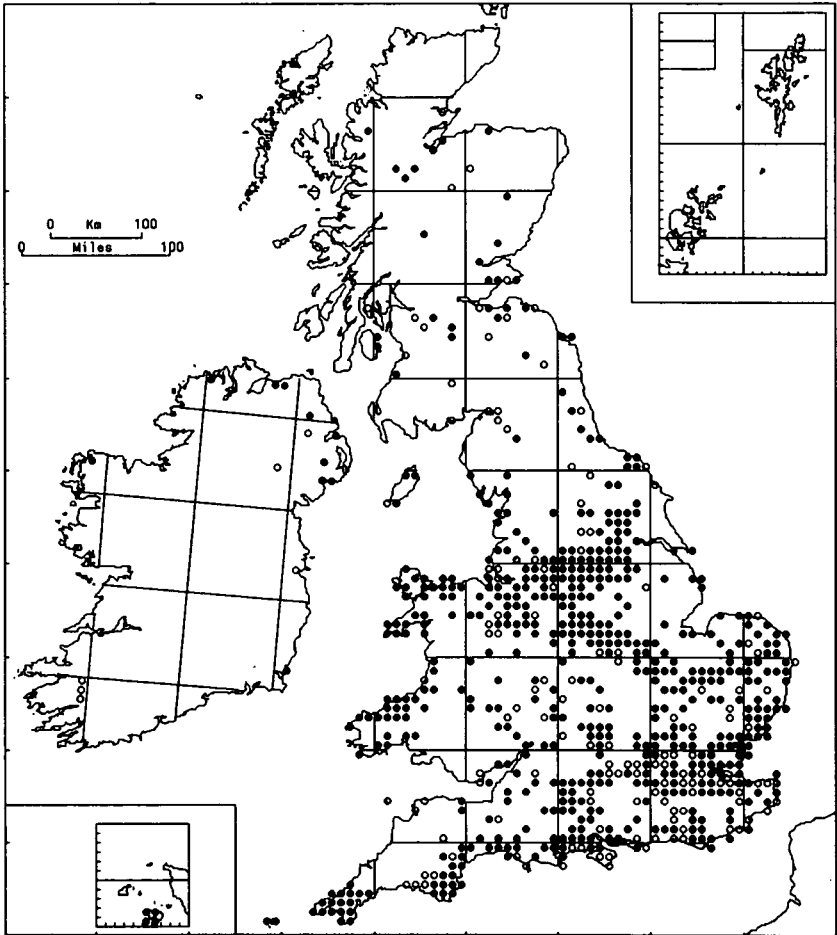
Map 47 *Atomaria (Anchicera) scutellaris* Motschulsky
1849



It occurs in a range of habitats, especially saltmarsh and grasslands, but also in broadleaved woodland, usually on or near the coast. It has been found at roots and by sweeping, in tidal refuse, piles of grass and fungus-infested wood, and has also been collected in pitfall traps. The species is very localised along the south and south-west coast of England and on the Channel Islands. It is rare and occurs only sporadically, usually as single specimens. It was first recorded in Britain from the Scilly Isles (Allen 1968), and now seems to be extending its range inland in southern England.

This is a Mediterranean species, occurring in southern Europe, Turkey, Israel, North Africa and the Atlantic islands.

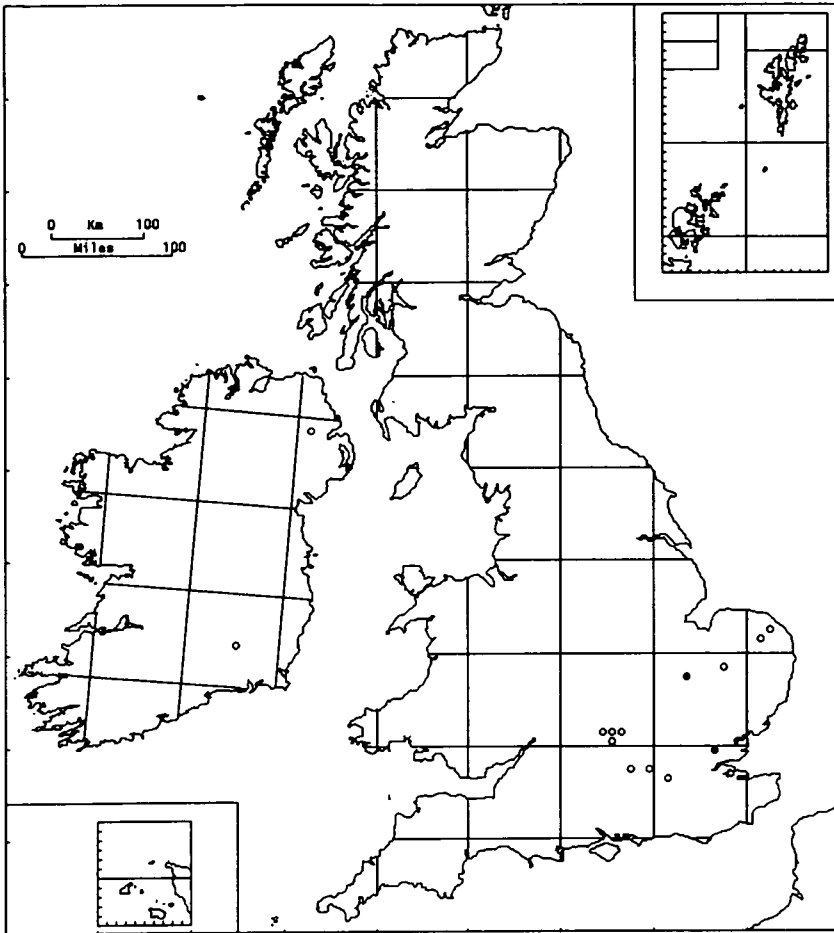
Map 48 *Atomaria (Anchicera) testacea* Stephens 1830



This is mainly a grassland species which has been recorded especially around farms, gardens and parks, but it often occurs in other habitats. It has been collected in man-made heaps of refuse, especially cut vegetation, grass, hay, haystack bottoms and compost, more rarely in dung or dung heaps. It is often collected by sweeping. It is one of the most widespread and common species in Britain and Ireland, often occurring in large numbers. Its biology has been studied in detail (Evans 1961a,b,c,d).

It is widely distributed throughout Europe and is also known from Turkey, North Africa, Siberia, Mongolia, central Asia and North America.

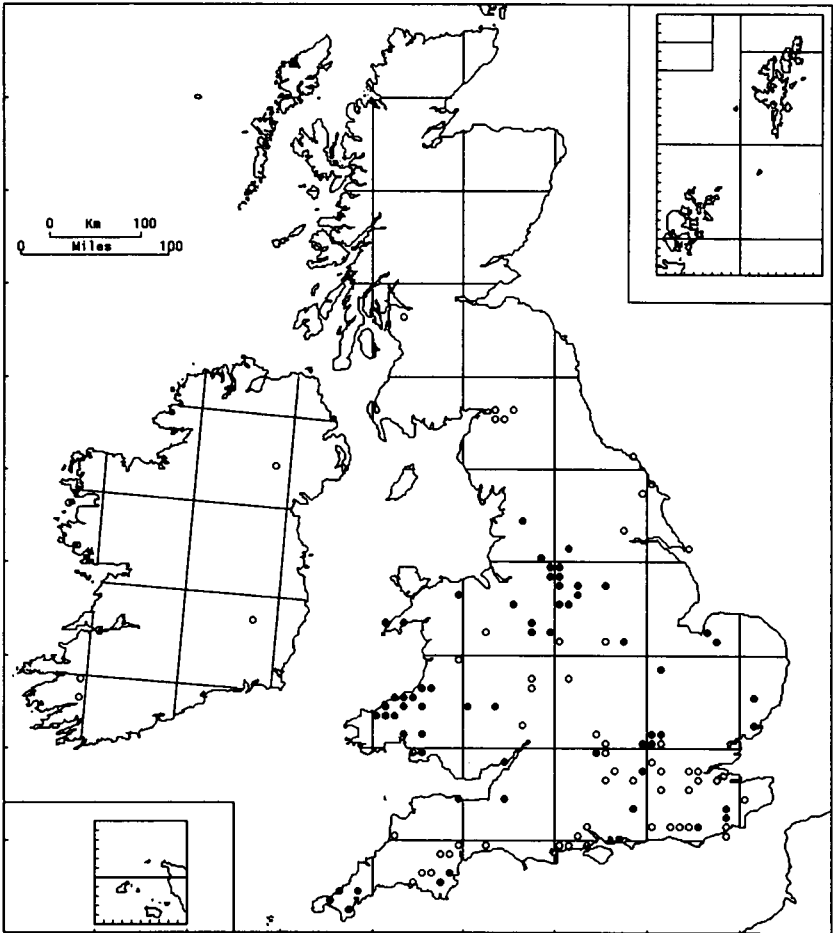
Map 49 *Atomaria (Anchicera) zetterstedti* (Zetterstedt 1838)



A wetland species which is usually found on willow (*Salix* spp.) catkins in spring and also in marsh litter; it appears to be very localised and rare and occurs only sporadically and in very small numbers. It is possibly under-recorded because of its specialised habitat. It was first collected in Britain in the Oxford district by Joseph Collins, who found it in numbers at Weston-on-the-Green and Yarnton (Champion 1918).

There are scattered records from throughout much of Europe, apart from the extreme south, and from Siberia and North America.

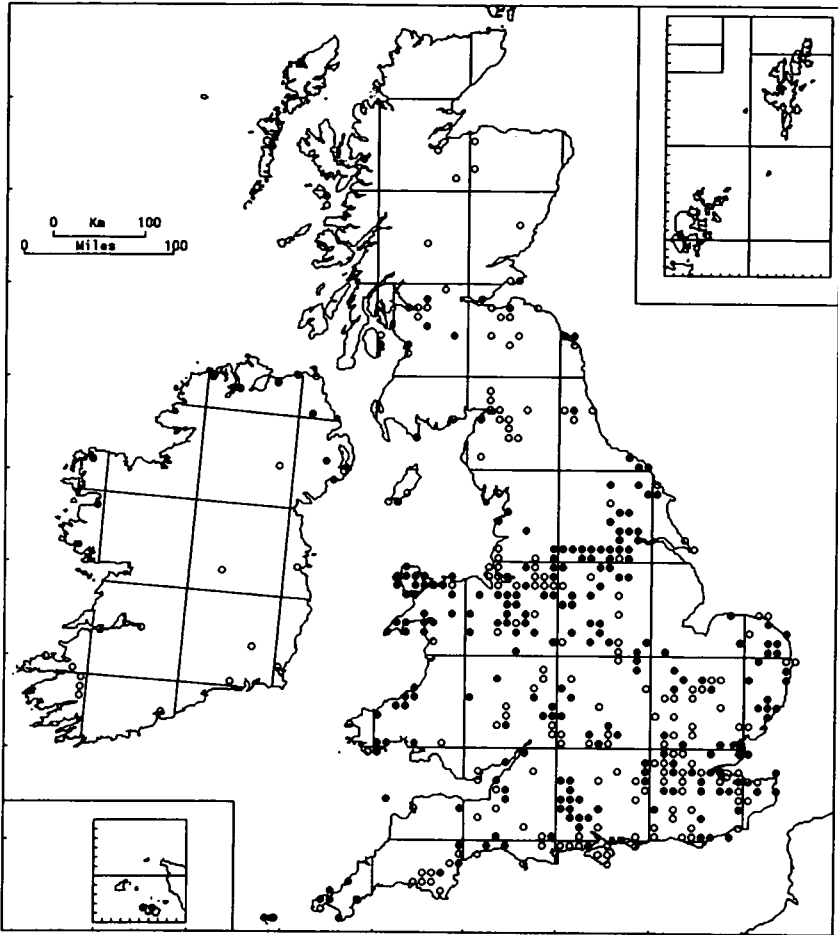
Map 50 *Ootypus globosus* (Waltl 1838)



This grassland species is found in the dung of herbivorous mammals, especially horse and cow, but there are occasional specimens from other habitats. It is a localised but widespread species which is often overlooked because of its sluggish habits. Where it occurs it is frequent, but usually in small numbers. Misidentified large specimens of *Ephistemus globulus*, purporting to be *O. globosus*, have often been found in older collections.

There are scattered records from Europe, apart from the extreme north and south.

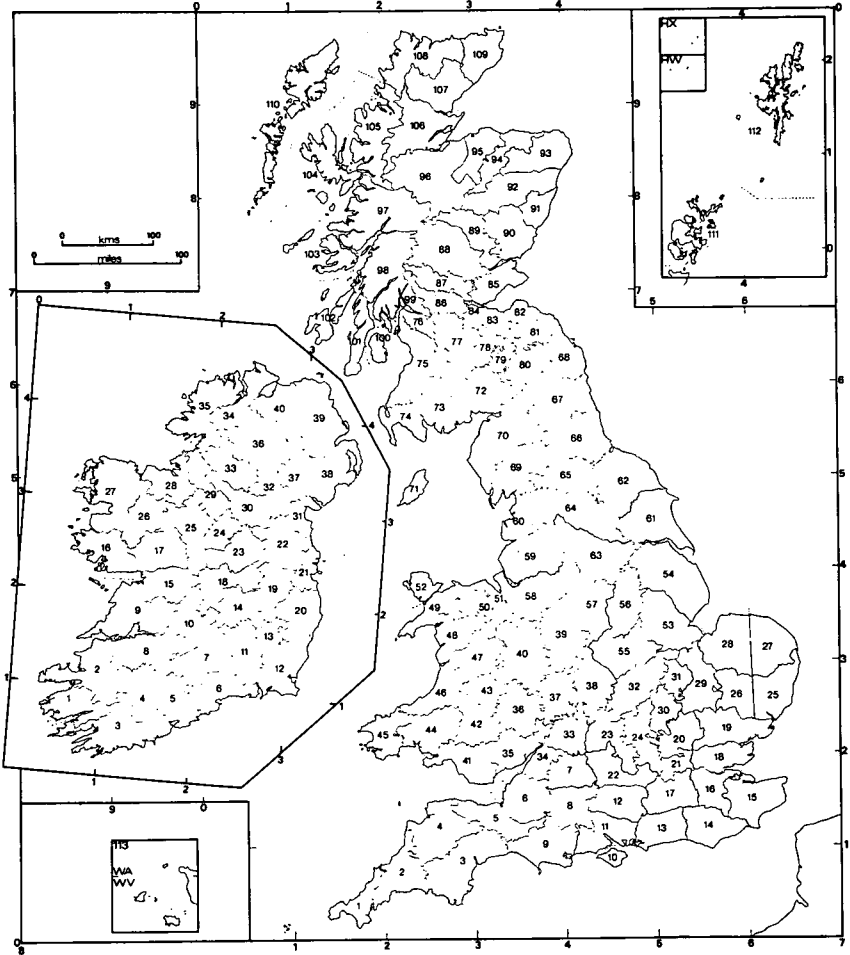
Map 51 *Ephistemus globulus* (Paykull 1798)



This is a grassland species which is found especially around farms, parks and gardens and only rarely elsewhere. It occurs in man-made heaps of refuse, especially cut vegetation, hay, haystack bottoms, grass and compost. It is widespread and common and is often found in large numbers. It is very variable in size, and small specimens externally resemble *E. reitteri* Casey (Johnson 1971), a European species which has not yet been found in Britain or Ireland.

This species is widely distributed throughout Europe but is more scattered in the south. It also occurs in North Africa and the Atlantic islands, as well as Iran, Mongolia, northern China, New Zealand and North America.

Map 52 Vice-county map



A list of vice-county names is given in Appendix 1.

DISTRIBUTION RECORDS

In the following section, records are listed by country - England (including the Channel Islands), Wales, Scotland and Ireland - then by vice-counties (which follow Dandy 1969 and Webb 1980). Alphabetical symbols (based on Balfour-Browne 1940) are used to indicate vice-counties, a key to which is given at Appendix 1.

For the less common species, localities are listed in alphabetical order within vice-counties, and are followed by the 10 kilometre square co-ordinates in letters and numbers (eg SP93). Collectors' names are abbreviated to their initials as far as possible (see Appendix 2 for a list of abbreviations and names). Records are in two date classes: a minus sign after the collector abbreviation (eg CE-) indicates a pre-1960 record, but records from 1960 onwards are shown without a sign (eg CJ).

For the more common and generally distributed species, only vice-counties are listed without additional data.

Caenoscelis ferruginea (Sahlberg, C.R.)

Map 4

England - **BD**: Woburn Sands SP93 (CE-). **BK**: Bradfield SU67 (NHJ-); Tubney SU49 (JJW-, litt.); Windsor Park SU97 (AAA-). **BX**: Halton SP81 (EGE-, ms). **CB**: Fulbourn TL55 (WWF-, litt.). **CU**: Middleseugh NY44 (FHD-); Penton NY47 (FHD-). **DT**: Bloxworth SY99 (AWPC-); Crichel ST91 (PH-). **DY**: Matlock Bath SK25 (CJ). **EK**: Chatham dist. TQ76 (JJW-); Folkestone TR23 (GRW-). **EN**: Fundenhall TM19 (PMH). **EX**: North Banks TQ40 (CHM-). **EY**: Scarborough TAO8 (RL-, TW-). **GE**: Birdlip SO91 (WGB-). **GW**: Costwold Hills SO90 (WWF-, litt.). **HU**: Monks Wood TL27 (RCW, ms). **IW**: Yarmouth SZ38 (JAP-, OEJ-). **NE**: Birdbrook TL74 (JAP-); Takeley TL52 (PH-); Walton TM22 (CJS-). **OX**: Oxford dist. SP50 (JJW-). **SD**: Brixton SX55 (AVM-, JHK-, JJW-); Marsh Mills SX55 (JHK-); Yealmpton SX55 (JHK-). **SH**: New Forest SU20 (JJW-). **SR**: Caterham TQ35 (GCC-); Claygate TQ16 (JAP-, OEJ-); Mickleham TQ15 (JAO) (WWF-, litt.); Oxted TQ35 (WWH-). **SS**: Norton-sub-Handen ST41 (GLF). **WK**: Cobham Park TQ66 (JJW-, litt.); Knole Park TQ55 (AAA-); Otford TQ55 (ECB-, PH-). **WW**: Compton Wyngates SP34 (JJW-). **WX**: Pulborough TQ01 (GWN-). **WY**: Roche Abbey SK58 (WAE); Stocksmoor SE21 (EWA).

Scotland - **AY**: Annbank NS42 (RAC); Failford NS42 (RAC). **EI**: Coylumbidge NH91 (MC). **EL**: Nethy Bridge NJO2 (JAO). **LA**: Coolzow Castle NS75 (RAC); Craignethan Castle NS84 (RAC). **PM**: Black Wood, Rannoch NNS5 (RMD), NN65 (PDO).

Ireland - **KD**: Leixlip 003 (JNH-). **NK**: Muckcross, Killarney V98 (EFB-).

Caenoscelis sibirica Reitter

Map 5

England - **WY**: Huddersfield SE11, 7.2.1981 (MLD).

Caenoscelis subdeplanata Brisout de Barneville

Map 6

England - **BK**: Mortimer SU66 (BMNH-). **CH**: Dukinfield SJ99 (CJ); Dunham Park SJ78 (SB); Goyt Valley west SU07 (CJ); Hollingworthhall Moor SJ99 (PJH, ms); Newton SJ99 (MR). **DM**: Castle Eden NZ43 (MLL); Lockhaugh Bank Wood NZ15 (LJ). **DY**: Simmondley SK09 (CJ). **HT**:

Ashridge Park SP91 (SB). **MX**: Chiswick House TQ28 (PMH); Holborn TQ38 (BL). **MY**: Swinsty Resr. SE15 (WAE). **NH**: Leckford SU33 (SAW). **NO**: Weldon SP98 (GW). **SE**: Stondon Massey TL50 (DCT). **SH**: New Forest SU20 (AEC). **SL**: Denton SJ99 (CJ); Langho SD73 (Pha); Liverpool, Clarke Gardens SJ48 (SB). **SN**: Dipton Wood NY96 (MW, ms); Gosforth Park NZ27 (MW, ms). **SR**: Boxhill TQ15 (JAO); South Croydon TQ36 (BP). **SY**: Sunk Island TA21 (RJM). **WX**: Blackheath TQ47 (AAA); Charlton TQ47 (AAA); Darenth Wood TQ57 (AAA, SAW); Horton Kirby TQ56 (SAW); Knole Park TQ55 (SAW). **WS**: Mildenhall TL77 (PSH). **WW**: Edgbaston SP08 (PJO); Northfield SP07 (JCr). **WX**: Arundel Park TQ01 (PJH, ms). **WY**: Bretton Park SE21 (CJ); Huddersfield SE11 (MLD); Limb Valley SK38 (WAE); Rotherham dist. SK49 (WAE); Sprotbrough SE50 (RJM); Worsborough Resr. SE30 (JL).
 Scotland - **LA**: Larkhall NS75 (RAC, litt.). **SG**: Bridge of Allan NS79 (RML).

***Atomaria (s.str.) badia* Erichson**

Map 7

Scotland - **EI**: Feshie Bridge NH80 (PH-); Loch Garten NH91 (JAO); Newtonmore NN79 (JEB-). **EL**: Aviemore NH81 (GCC-, PH-); Nethy Bridge NJ02 (DS-).

***Atomaria (s.str.) barani* Brisout de Barneville**

Map 8

England - **BX**: Chesham SP90 (EGE-). **CB**: Wicken TL57 (PH-). **DY**: Marston on Dove SK22 (CJ). **EK**: Canterbury TR15 (RTB-). **ES**: Flixton TM28 (MC); Hoxne TM17 (MC). **EX**: Framfield TQ41 (PJH). **HF**: Leintwardine SO47 (GHA-). **HU**: Holme TL18 (JJW-). **LR**: Burley Wood SK80 (DAL). **MM**: Llangua SO32 (CJ). **MX**: Cowley TQ08 (JAP-); Hammersmith TQ27 (DS-, GRW-); Notting Hill TQ27 (JAP-). **MY**: Stanks pond SE33 (EAW-). **NE**: Colchester TM02 (PH-); Roydon TL40 (DP-). **NO**: Hemington TL08 (RCW). **OX**: Oxford dist. SP50 (JJW-); Yarnton SP41 (Jc-). **SH**: Lyntonton SZ39 (PH-); New Forest SU20 (PH-); Pitts Deep SZ39 (PH-); Ringwood SU10 (WDH-). **SP**: Attingham Park SJ51 (DAL); Eaton Constantine, R. Severn SJ50 (CJ). **SR**: Cobham TQ15 (JAO); Mickleham TQ15 (AME-). **SS**: Bridgwater ST33 (CET-). **SY**: Wheldrake SE64 (RJM). **WX**: Eltham TQ47 (DS-, JAP-); Lee TQ47 (GCC-). **WO**: Areley Wood SO77 (GHA-); Hartlebury SO87 (GHA-, THB-). **WW**: Knowle SP17 (WGB-) **WX**: Lurgashall SU92 (AME); Pulborough TQ01 (GWN-)

Ireland - **AR**: Armagh H84 (JRBT-, NMI-, WJF-); Lowry's Lough H94 (JRBT-). **NK**: Ardagh, Killarney V98 (EFB-); Killarney V99 (EFB-).

***Atomaria (s.str.) bella* Reitter**

Map 9

Scotland - **AS**: Braemar NO19 (DS-); Glen Tanar NO49 (RAC). **EI**: Abermety Forest NJ01 (DAL); Loch Garten NH91 (JAO). **EL**: Aviemore NH81 (PH-); Boat of Garten NH91 (JAO); Forres NJ05 (DS-); Grantown-on-Spey NJ02 (AAA-).

***Atomaria (s.str.) diluta* Erichson**

Map 10

England - **CH**: Weaver Valley SJ57 (SB, TME). **CU**: Great Salkeld NY53 (HB-). **DY**: Darley Dale SK26 (JRBT-); Monsal Dale SK17 (CJ). **MY**: Fountains Hall SE26 (EAW-); Grantley Hall SE26 (WDH-); Spa Gill SE26 (EAW-); Studley, R. Skell SE26 (RJM). **NM**: Radcliffe-on-Trent SK63 (FMR-). **OX**: Charlbury SP31 (MDD). **WY**: Storthes Hall SE11 (EWA).

Scotland - **DF**: Kirlie Valley NY27 (JM-). **ED**: Corstophine Hills (DS-); Edinburgh NT27 (OEJ-). **LA**: Cambusnethan Priory NS85 (RAC). **RF**: Lochside NS35 (AF-). **SG**: Bannockburn NS89 (RH-); Bridge of Allan NS89 (RML); Falkirk NS88 (RH-).

Atomaria (s.str.) fimetarii (Fabricius)**Map 11**

England - **BK**: Kintbury SU36 (CJ); Reading SU77 (JRBT-); Wytham Park SP40 (JJW-, litt.). **CB**: Cambridge TL45 (CET-). **CH**: Bredbury SJ99 (JIP-); Delamere SJ57 (JRH-); Dunham Park SJ78 (JRH-); Macclesfield SJ97 (GWRB-); Sinderland SJ79 (HB-). **CU**: Carlisle NY35 (FHD-). **DY**: Repton SK32 (WG-, litt.); Simmondley SK09 (CJ). **EK**: Sittingbourne TO96 (PJH). **ES**: Leathersingham TM25 (ACW). **EX**: Eastbourne TO60 (RDD). **EY**: Clifton, York SE56 (WCH-, JAP-); Scarborough TA08 (RL-, TW-). **GW**: Forest of Dean SO61 (EBB-). **HF**: Moccas Park SO34 (JCr); West Malvern SO74 (JRBT-). **HT**: St. Albans TL10 (PH-); West Hyde TO09 (AME). **LS**: Ropesley Wood SK93 (HB-). **MX**: Enfield TO39 (CJCP-, litt.); Harrow TO18 (WES); Hayes TO08 (SK-, SRA-); Hendon TO28 (WES-); Lampton TO17 (AAA-, HSJKD-); Parliament Hill TO28 (EAN-); Stamford Hill TO38 (EAN-, HH-, WWF-); Stoke Newington TO38 (HH-). **MY**: South Millford SE43 (CJ). **NO**: Hemington TL08 (RCW, ms). **OX**: Oxford SP50 (JC-); Oxford dist. SP50 (JJW-); Wolvercote SP40 (JC-); Wood Eaton SP51 (JC-). **SE**: Thorpe Bay TO98 (CET-). **SH**: Awbriidge SU32 (CMV); Christchurch SZ19 (CES-); New Forest SU20 (PH-); Portsmouth dist. SU60 (NH, ms). **SL**: Ashton Moss SJ99 (WP-); Birkdale SD31 (EJBS-, GWC-, JKT-, JRBT-, NHJ); Liverpool SJ39 (RW-); Otterspool, R. Mersey SJ38 (TME); Risley Moss SJ69 (SB); Southport SD31 (EJBS-, JRBT-, NHJ-, THB-). **SR**: Ashtead TO15 (HSJKD-, litt.); Banstead TO25 (HRL-); Carshalton TO26 (GRW-); Mitcham TO26 (GRC-, GRW-, SK-, WFJ-); Purley TO36 (JLH-); Surbiton TO16 (HH-); Tooting Jct. TO27 (HSJKD-); Woking TO05 (FJC-, SK-). **SY**: Flamborough TA27 (WWF-, litt.). **WK**: Charlton TO47 (AAA); Dulwich TO37 (WWF-, litt.); Eltham TO47 (HH-); Higham TO77 (THB-); Otford TO55 (AMM-). **WO**: Malvern SO74 (JRBT-). **WS**: Lakenheath Warren TL78 (JP). **WW**: Knowle SP17 (WGB-); Ryton Wood SP37 (IM). **WX**: Arundel Park TO00, TO01 (PJH); Chichester SU80 (CET-); Washington TO11 (GPV). **WY**: Armthorpe SE60 (PS); Doncaster SE50 (MLT-).

Wales - **GM**: Penarth ST17 (HMH-, JRBT-, PH-).Scotland - **ED**: Musselburgh NT37 (RSM-).Ireland - **DU**: Mount Argus 013 (EOM-); St. Annes, Clontarf 013 (EOM-).***Atomaria (s.str.) impressa Erichson*****Map 12**

England - **CU**: River Irthing NY56 (TJB-). **DY**: Grindelford, R. Derwent SK27 (JAO); Hathersage, R. Derwent SK28 (CJ); Hope, R. Noe SK18 (CJ). **EY**: Scarborough TA08 (RL-). **HF**: Hay-on-Wye SO24 (SAW). **ML**: Brock Vale SD54 (SB). **MY**: Studley, R. Skell SE26 (RJM). **NY**: Great Langton, R. Swale SE29 (HM). **WO**: Bishop Wood, Hartlebury SO86 (GHA-).

Wales - **DB**: Loggerheads, R. Alun SJ16 (TME).Scotland - **EL**: Nethy Bridge NJO2 (BSW-).***Atomaria (s.str.) linearis Stephens*****Map 13**

England - **BD**, **BK**, **BX**, **CB**, **CH**, **DT**, **DY**, **EC**, **EK**, **EN**, **ES**, **EX**, **EY**, **GE**, **GW**, **HF**, **HT**, **HU**, **IW**, **LN**, **LR**, **LS**, **MM**, **MX**, **MY**, **ND**, **NE**, **NH**, **NM**, **NO**, **OX**, **SD**, **SE**, **SH**, **SL**, **SN**, **SP**, **SR**, **SS**, **ST**, **SY**, **WC**, **WK**, **WN**, **WO**, **WS**, **WW**, **WX**, **WY**.

Wales - **CM**, **CR**, **DB**, **GM**, **MC**, **RA**.Scotland - **ED**, **EI**, **HD**.Ireland - **AN**, **DU**, **KD**, **NK**.***Atomaria (s.str.) lohsei Johnson & Strand*****Map 14**

England - **BX**: Burnham Beeches SU98 (PMH). **ES**: Chillesford TM45 (CSB); Shrubland Park TM15 (DRN). **SH**: Denny Incl., New Forest SU30 (SAW). **WN**: Santon Downham TL88 (JFd); Thetford TL88 (JAO, MC). **WY**: Haw Park SE31 (RJM).

Atomaria (s.str.) nigrirostris Stephens**Map 15**

England - BD, BK, BX, CB, CH, CI, CU, DM, DT, DY, EK, EN, ES, EX, EY, GE, HF, HT, HU, IW, LN, LR, LS, ML, MM, MX, MY, ND, NE, NH, NM, NO, NS, NW, NY, OX, SD, SE, SH, SL, SN, SP, SR, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.

Wales - A, CD, DB, MG, MN, PB, RA.

Scotland - AN, AS, AY, DF, DN, ED, EI, EL, KB, KF, LA, LL, PE, PM, RF, RX, SC.

Ireland - AN, AR, NK.

Atomaria (s.str.) nigriventris Stephens**Map 16**

England - **BD**: Whipsnade TL01 (BSW-); Woburn Sands SP93 (CE-). **BK**: Aldworth SU57 (NHJ-); Basildon SU67 (JRBT-); Bradford SU67 (JRBT-, NHJ-); Maidenhead SU88 (EAN-); Newbury SU46 (PH-, WHH-); Streatley SU58 (JRBT-); Theale SU67 (JRBT-); Tubney SU49 (JC-); Wasing SU56 (JRBT-); Wellington College SU86 (JRBT-); Wytham Wood SP40 (CSE-). **BX**: Chesham SP90 (EGE-); Cowcroft SP90 (EGE-); Olney SP85 (DS-). **CB**: Cambridge TL45 (DS-). **CH**: Marple SJ98 (JRH-). **DM**: South Shields NZ36 (TJB-). **DT**: Bloxworth SY89 (AWPC-); Swanage SZ07 (AJC-). **DY**: Darley Dale SK26 (JRBT-). **EK**: Charing TQ94 (AJC-); Chatham TQ76 (JAP-); Faversham dist. TR06 (AJC-); Maidstone TQ75 (PDLG-); Rainham TQ86 (DS-); Sandwich TR35 (JAO). **EN**: Bixley TG20 (JE-). **ES**: Belstead Wood TM14 (CM-); Bramford TM14 (CM-); Foxhall TM24 (CM-); White Bridge, R. Gipping TM14 (CM-). **EX**: Barcombe TQ41 (CJS-); Brighton TQ30 (DS-); Bunkers Hill TQ30 (CHM-); Camber TQ91 (WGB-); Ditchling TQ31 (HCD-); Guestling TQ81 (EPC-). **EY**: Scarborough TA08 (GBW-, TW-). **GW**: Dodington ST77 (AJC-). **HF**: Berry Hill SO51 (T-); Coddington SO74 (JRBT-). **HT**: Berkhamstead SP90 (AAA-); Harpenden TL11 (BSW-); Rickmansworth TQ09 (GWN-, JWA-); St Albans TL10 (BSW-, PH-); Symonshyde TL11 (BSW-). **IW**: no loc. SZ48 (GRW-). **LR**: Quorn SK51 (WGB-). **MX**: Hammersmith & Marshes TQ27 (GRW-, JAP-); Sudbury TQ18 (HH-). **NE**: Colchester TMO2 (PH-, WHH-). **NH**: Leckford SU33 (SAW). **NM**: Sherwood SK66 (JRBT-, JRH-). **NN**: Berwick NT95 (LWR-); River Till NT93 (DAL). **NO**: Wellingborough SP86 (TVW-). **OX**: Enslow SP50 (JC-); Oxford and dist. SP50 (GCC-, JJW-). **SE**: Barking TQ48 (JAP-); Galleywood TL70 (PMH). **SH**: Chilworth SU41 (EAN-); Christchurch SZ19 (GCC-); Lyndhurst SU20 (DS-); New Forest SU20 (DS-, GCC-, HSJKD-). **SL**: Ashton Moss SJ99 (WP-). **SR**: Banstead TQ25 (GWN-); Caterham TQ35 (GCC-); Claygate TQ16 (JAP-); Croydon TQ36 (GCC-, GRW-); Esher TQ16 (JAP-); Farnham SU84 (JAP-); Horsell SU95 (JAP-); Mickleham TQ15 (JAP-); Purley TQ36 (DS-); Reigate TQ25 (HEC-); Shirley TQ36 (CE-); Shiere TQ04 (EAN-) Wimbledon & Common TQ27 (DS-, EAW-, HH-). **SW**: Shrewton SU04 (DRN). **WK**: Charlton TQ47 (DS-); Cobham TQ66 (GCC-); Darenth TQ57 (JAP-); Eltham TQ47 (DS-); Erith TQ57 (GRW-); Higham TQ77 (CJ); Lee TQ47 (DS-, GCC-, JAP-); Tonbridge TQ54 (WGB-); Westerham TQ45 (PH-). **WO**: Broadway, Pye Corner SPO3 (PFW); Malvern SO74 (JRBT-); Yardley SP18 (WGB-). **WW**: Ccleshill SP18 (WGB-); Knowle SP17 (WGB-). **WX**: Colgate TQ23 (EAN-); East Dean SU91 (PH-). **WY**: Sprotbrough SE50 (RJM).

Wales - **GM**: Candleston - Pyle SS88 (JRBT-).

Scotland - **DF**: Eccles, R. Nith NX89 (DS-); Thornhill NX89 (DS-). **ED**: Edinburgh NT27 (DKK-); Liberton NT26 (RH-); Swanston NT26 (AT-). **EL**: Forres NJ05 (AJC-); Nethy Bridge NJ02 (PH-). **HD**: Aberlady NT47 (DS-); Craigelaw, Aberlady NT48 (RAC); Gosford NT47 (MDD); Longniddry NT47 (THB-); Tynninghame NT67 (RAC). **KF**: Burntisland NT28 (DS-). **LA**: Dalsersf NS85 (RAC). **SG**: Millfield NS98 (RH-).

Ireland - **AN**: Antrim J18 (JRBT-). **ED**: Foyle dist. C42 (NMI-). **NK**: Killarney V99 (EFB-).

Atomaria (s.str.) procerula Erichson**Map 17**

Scotland - **AS**: Ballater NO39 (RH-); Cambus O'May NO49 (RAC). **AY**: Dundonald NS33 (RAC). **ED**: Penicuik NT25 (WE-). **EI**: Kincaig NH80 (PH-); Loch Garten NH91 (JAO). **EL**: Nethy

Bridge NJO2 (DS-, GHA-, THB-). **HD:** East Saltown NT46 (DKK-). **LA:** Milton Lockhart NS84 (RAC). **PM:** Collie Chuile, Tyndrum NN33 (RAC); Rannoch NN55 (GWN-). **RF:** Johnstone NS46 (AF-); Paisley NS46 (GCC-, MW-).

***Atomaria (s.str.) pulchra* Erichson**

Map 18

England - **BK:** Crowthorne SU86 (CES-, ECB-); Silwood Park SU96 (GAL); Wellington College SU86 (EME-, GWN-, JRBT-, JWA-); Windsor Forest & Park SU97 (AAA-, ECB-, HM, HSJKD-, JAO, PSH). **BX:** Burnham Beeches SU98 (PMH). **CH:** Abbots Moss Hall SJ56 (PW); Bickley SJ54 (CJ); Dunham Park SJ78 (TME); Coyt Valley west SJ07 (CJ). **CU:** Durdar NY45 (FHD-); Orton NY35 (FHD-). **DM:** Lockhaugh Bank Wood NZ15 (Lj). **DY:** Kedleston Park SK34 (CJ); Ladybower Quarry SK28 (DRN). **ES:** Shrubland TM15 (DRN). **EX:** Barcombe TQ41 (CJS-); Chelwood Gate TQ43 (PJH); Crump's Wood TQ41 (MC); East Hoathly TQ51 (PJH). **EY:** Hell Bank, Pickering SE78 (WAE); Strensall Common SE66 (EWA). **GW:** Forest of Dean SO61 (WGB-). **HF:** Abbey Dore SO33 (JRBT-); Brampton Bryan Park SO37 (JCr); Cusop SO24 (JRBT-); Moccas Park SO34 (AAA-, JCr). **HT:** Bricket Wood TL10 (PH-); Harpenden TL11 (PH-); St. Albans TL10 (BSW-); Symonshyde TL11 (BSW-). **MX:** Chiswick House TQ28 (PMH). **MY:** Studley Park SE26 (EAW-). **NH:** Ball Hill SU46 (AEC); Fleet SU85 (AMM-). **NM:** Edwinstowe SK66 (CJ); Sherwood Forest SK66 (ECB-, JKT-); Worksop SK57 (EWA). **NO:** Geddington SP88 (CJ). **NY:** Helmsley dist. SE68 (WDH-). **SE:** Epping Forest TQ49 (HWF-); Ongar Park Wood TL50 (HWF-). **SH:** Awbridge SU32 (CMV); Denny, New Forest SU30 (SAW); Ladycross, New Forest SU30 (CM-); New Forest SU20 (DS-, JJW-, RTB-). **SL:** Speke Hall SJ48 (SB, TME). **SN:** Close House, Heddon-on-the-Wall NZ16 (MLL); Corbridge NY96 (RSB). **SR:** Ashtead TQ15 (HRL-); Chobham SU96 (GCC-); Coombe TQ26 (JAP-); Esher TQ16 (ECR-, GCC-, JAP-, JJW-, SRA-); Guildford TQ04 (GCC-); Hankley SU94 (JAO); Oxshott TQ16 (ECB-); Woking TQ05 (GCC-). **ST:** Brocton Coppice SJ92 (CJ); Cannock Chase SJ91 (CES-); Madeley SJ74 (HWD-). **SW:** Hamptworth SU21 (DRN). **WK:** Gravesend TQ67 (JAP-); Shooters Hill TQ47 (AAA); Tonbridge TQ54 (WGB-); Westerham TQ45 (HSJKD-, PH-, WHH-). **WN:** Stanford TL89 (MC). **WO:** Elmley Castle SO94 (PFW); Hartlebury SO87 (GHA-). **WS:** Mildenhall TL77 (ABD); Theford TL88 (PMH). **WX:** Colgate TQ23 (EAN-); Houghton Forest TQ01 (HRL); Storrington TQ01 (HRL). **WY:** Bretton Park SE21 (CJ); Thorne Moors SE71 (EJS).

Wales - **CR:** Cwm Crafnant SH76 (WPIS). **DB:** Loggerheads SJ16 (TME).

Scotland - **AS:** Ballochbuie Forest NO19 (CJ); Braemar NO19 (DS-); Glen Quoich NO19 (CJ); Glen Tanar NO49 (CJ, RAC); Logie Coldstone NJ40 (CJ). **AY:** Dundonald NS33 (RAC). **DN:** Ardmore Point NS37 (RAC). **ED:** Bilston NT26 (DKK-). **EI:** Abernethy Forest NH91 (PDO); Glen Affric NH12 (AMM); Glen Einich NH90 (EWA); Insh NH80 (AEG); Kincaig NH80 (PH-); Loch-an-Eilean, Rothiemurchus NH90 (DKK-, EWA, GEW); Loch Garten NH91 (JAP); Rothiemurchus & Dell NH81, NH91 (CJ, EWA). **EL:** Abernethy Forest NJ01 (ABD, RAC); Aviemore NH81 (AEG, AMM, ECB-, DKK-, JTS-, PH-); Boat of Garten NH91 (GLF); Carrbridge NH92 (DKK-, PH-, WOS); Craigellachie, Aviemore NH81 (WOS); Dulnain Bridge NH92 (PH-); Nethy Bridge NJ02 (GHA-, JAO). **KB:** Garroch, Dalry NX58 (RAC). **LA:** Falls of Clyde NS84 (RAC); Fidler Glen NS84 (RAC). **PE:** Stobo NT13 (JAO-). **PM:** Black Wood, Rannoch NN64 (PDO), NN55 (JCr, RMD); Dall, Rannoch NN55 (CJ). **RX:** Gledswood, Melrose NT53 (RAC). **SG:** Bridge of Allan NS79 (RML).

***Atomaria (s.str.) puncticollis* Thomson**

Map 19

England - **CH:** Dunham Park SJ78 (CJ). **EK:** Bredhurst TQ76 (GEF-). **HT:** St. Albans TL10 (BSW-, PH-). **SE:** Hockley TQ89 (CET-). **SR:** Chipstead TQ25 (ECB-); Shirley TQ36 (ECB-).

Scotland - **EL:** Nethy Bridge NJ02 (PH-, THB-). **LA:** Dalsersf NS85 (RAC). [The Tynningame record given by Johnson (1976b) is best referred to a large aberrant *A. nigriventris*].

Atomaria (s.str.) punctithorax* Reitter*Map 20**

England - **CH**: Shocklach SJ44 (CJ); Timperley SJ78 (HRPC-). **CU**: Silloth NY15 (FHD-). **EK**: Isle of Sheppey TQ96 (JJW-). **EY**: Robin Hood's Bay NZ90 (CJ). **HT**: Cheshunt TL30 (AAA-); Wheathampstead TL11 (CJ). **MX**: Hendon TQ28 (HH-). **MY**: Tockwith, R. Nidd SE45 (EWA). **NH**: Leckford SE33 (SAW). **OX**: Hardwick SP30 (CJ). **SH**: Mark Ash, New Forest SU20 (AEG). **SL**: Ashton Moss SJ99 (WP-); Droydsden SJ99 (JSW-). **SR**: Banstead TQ25 (HRL-); Ockham TQ05 (HRL-). **SW**: Hamptworth SU21 (DRN); Shrewton SU04 (DRN). **WK**: East Malling TQ75 (AMM-). **WY**: Stocksmoor SE21 (EWA); Blacktoft Sands SE82 (CJ).

Scotland - **AY**: Gailles NS33 (RAC). **DN**: Bearsden NS57 (AHM-). **PM**: Abemethy NO11 (DKK).

Atomaria (s.str.) strandi* Johnson*Map 21**

England - **BK**: Bradfield SU67 (NHJ-). **BX**: Burnham Beeches SU98 (PMH). **CB**: Horningsea TL46 (GWN-). **CU**: Baron Wood NY54 (FHD-). **DM**: Castle Eden Dene NZ43 (CR); Lamesley NZ25 (TJB-). **DY**: Lathkill Dale SK16 (ACW); Repton SK32 (DRN). **EK**: Ham Street TRO3 (AAA-). **EX**: Glynde TQ40 (PJH); Laughton TQ51 (PJH). **EY**: Scarborough TA08 (TW-). **HU**: Monks Wood TL17 (RCW). **MX**: Chiswick House TQ27 (PMH); Highgate TQ28 (JAP-, OEJ-). **NE**: Birdbrook TL74 (JAP-). **SE**: Thorndon Park TQ68 (IM). **SL**: Speke Hall SJ48 (SB, TME). **SN**: Close House, Heddon-on-the-Wall NZ16 (MLL). **SR**: Ashted TQ15 (JAO); Boxhill TQ15 (AAA); Coombe TQ26 (JAP-); Mickleham TQ15 (JAP-). **WK**: Otford TQ55 (AAA-); Westerham TQ45 (JRBT-, PH-). **WO**: Elmley Castle SO94 (PFW). **WW**: Knowle SP17 (WGB-). **WY**: Howell Wood SE40 (PS).

Wales - **DB**: Moel Famau foot SJ16 (TME).

Scotland - **AS**: Ballater NO39 (AHM-). **AY**: Dundonald NS33 (RAC). **ED**: Dalkeith NT36 (RAC). **EI**: Loch Garten NH91 (GWN-); Rothiemurchus NH90 (WOS); Rothiemurchus & Dell NH81, NH91 (CJ, EWA). **EL**: Aviemore NH81 (AEG, ECB-); Boat of Garten NH91 (PH-); Granish NH92 (PH-); Nethy Bridge NJ02 (ECB-, PH-, THB-). **HD**: Broxburn NT67 (RAC). **LA**: Corra Linn NS84 (RAC). **RX**: Ancrum Hill NT62 (RAC); Ralrips Castle NT62 (RAC). **SG**: Millfield NS98 (RH-).

Ireland - **ME**: Balrath N96 (GWN-). **NG**: Galway N32 (JRBT-). **NK**: Killarney V99 (EFB-). **WI**: Kilcool O20 (JNH-).

Atomaria (s.str.) umbrina* (Gyllenhal)*Map 22**

England - **BX**: Chesham SP90 (EAN-, EGE-, HH-). **CH**: Cotterill Clough SJ88 (HB-); Marple SJ98 (WP-). **DT**: Chardstock ST30 (GLF). **DY**: Alport Dale SK19 (EJS). **EK**: Isle of Sheppey TQ96 (JJW-); Wye TR04 (AMM-). **ES**: Bramford TM14 (CM-). **EX**: Abbots Wood TQ50 (RDD). **HT**: St. Albans TL10 (BSW-, PH-); Symonshyde TL11 (GWN-). **HU**: Wood Walton Fen TL28 (IM). **NE**: Colchester TM02 (BSW-, PH-). **SH**: Hum SZ19 (PH-); Matley Bog, New Forest SU30 (RTB-); New Forest SU20 (AMM-). **SN**: Gosforth NZ26 (TJB); Newcastle NZ26 (JAP-, TJB-). **SR**: Abinger TQ14 (CM-, ECB-); Mickleham TQ15 (ECR-). **SS**: Tatworth ST30 (GLF). **ST**: Consall Forge SK04 (CJ). **WO**: Hartlebury SO87 (THB-); Kidderminster SO87 (GHA-). **WW**: Salford Priors SPO5 (WGB-).

Scotland - **EI**: River Affric, Tomich NH32 (PDO). **EL**: Nethy Bridge NJ02 (DS-). **KF**: Balmuto NT18 (JAP-). **PM**: Glen Lochay, Killin NN53 (DKK-). **RX**: Melrose NT53 (RAC).

Ireland - **AN**: Ballycastle D14 (GWC-, JRBT-, NMI-). **AR**: Armagh H84 (JNH-, JRBT-, NMI-). **NK**: Flesk, Killarney V98 (EFB-); Killarney, Cahirane V98 (EFB-).

Atomaria (s.str.) wollastoni* Sharp*Map 23**

England - **NY**: Richmond NZ10 (GBW-). **SN**: Gosforth NZ26 (TJB-).

Scotland - **ED**: Corstorphine Hills NT17 (DS-); Edinburgh NT27 (DS-); Penicuik NT25 (DKK-); Ratho NT17 (WE-). **KF**: Balmuto NT18 (JAP-). **LA**: Cambusnethan Priory NS85 (RAC). **LL**: Hawthornden NS98 (THB-). **PM**: Perth NO12 (VDP-). **SG**: Endrick, Killearn NS58 (PM).
Ireland - **LD**: Foyle Dist. C42 (NMI-). **AN**: Belfast J37 (NMI-); Shanes Castle J18 (NMI-).

***Atomaria (Anchicera) apicalis* Erichson**

Map 24

England - **BD**, **BK**, **BX**, **CB**, **CH**, **CI**, **CU**, **DM**, **DT**, **DY**, **EC**, **EK**, **EN**, **ES**, **EX**, **EY**, **GE**, **GW**, **HF**, **HT**, **HU**, **IM**, **IW**, **LR**, **LS**, **ML**, **MM**, **MX**, **MY**, **ND**, **NE**, **NH**, **NM**, **NN**, **NO**, **NS**, **NW**, **NY**, **OX**, **SD**, **SE**, **SH**, **SL**, **SN**, **SP**, **SR**, **SS**, **ST**, **SW**, **SY**, **WC**, **WK**, **WL**, **WO**, **WS**, **WW**, **WX**, **WY**.

Wales - **A**, **BR**, **CD**, **CM**, **CR**, **DB**, **FT**, **GM**, **MG**, **MN**, **PB**, **RA**.

Scotland - **AM**, **AS**, **AY**, **B**, **DF**, **DN**, **ED**, **EI**, **EL**, **FF**, **KB**, **KF**, **LA**, **LL**, **PE**, **PM**, **RF**, **RW**, **RX**, **S**, **SC**, **SI**, **SK**.

Ireland - **AN**, **DO**, **DU**, **LD**, **NK**, **WD**, **WM**, **WX**.

***Atomaria (Anchicera) atra* (Herbst)**

Map 25

England - **BK**: Bradfield SU67 (JRBT-, NHJ-, PH-); Kintbury SU36 (CJ); Newbury SU46 (PH-); Reading SU77 (HEA-); River Kennet SU56 (NHJ-); Thatcham SU56 (JRBT-, NHJ-); Theale SU67 (JRBT-, NHJ-, PH-). **CB**: Burwell Fen TL56 (MGLP-); Cambridge TL45 (CET-); Devil's Dyke TL66 (GWN-); Ely TL58 (CET-, CJ, RGB); Flean Dyke TL55 (GWN-); Newton TLA4 (GWN-); Quy Fen TL56 (GWN-); Shelford TL45 (GWN-); Upware TL57 (CET-); Wicken & Fen TL57 (AJC-, AMM-, BSW-, CES-, CET-, CJ, DS-, ECB-, EME-, GBW-, PH-, PMH, SOT-, SRA-, WGB-). **CU**: Anthorn NY15 (FHD-). **EK**: Newenden TQ82 (JP); Potman's Heath TQ82 (JP); Reading Street TQ93 (JP); Smallhythe TQ82 (JP); Tenterden TQ83 (JP). **EX**: Abbots Wood TQ50 (CHM-); Alfriston TQ50 (RDD); Barcombe TQ41 (CJS-); Camber TQ91 (CET-); Chiddingfold TQ51 (RDD); Ditchling TQ31 (HCD-); Glynde TQ40 (CHM-); Great Durn Wood, Horam TQ51 (PJH); Hastings TQ80 (JRBT-); Isfield TQ41 (CJS-); Landport TQ41 (CHM-); Lewes TQ40 (PJH), TQ41 (CJS-); Milton Street TQ50 (PJH, RDD); Offham Brooks TQ31 (JCr); Pett TQ81 (CES-); Pevensey TQ60 (PH-, PJH); Pond Lye, Cuckfield TQ22 (PJH); River Rother SU92 (NHJ-); Rye TQ92 (JP, PH-); Rye Harbour TQ91 (PJH); Uckfield TQ42 (PJH); Winchelsea TQ91 (JRBT-). **HF**: Coddington SO74 (JRBT-); Hereford, R. Wye SO53 (AAA-); Moccas Park SO34 (JCr). **HU**: Holme Fen TL28 (CET-); Wood Walton Fen TL28 (CJ, GWN-, RSK). **IM**: Curragh SC39 (JRBT-); Sulby SC39 (MLL). **LS**: Gedney Drove End TF42 (CJ). **ML**: Barnaby's Sands SD34 (CJ); Cockerham Marsh SD45 (CJ). **MX**: Alperton TQ18 (EAN-); Bishop's Wood TQ28 (EAW-); Hendon TQ28 (JWA-); Notting Hill TQ27 (JAP-). **NE**: Colchester TM02 (PH-); Henny TL83 (PH-); Langenhoe, Wick Marsh TM01 (ACW); Wyvenhoe TM02 (WGB-). **NM**: Idle Stop SK79 (CJ). **OX**: Bicester SP52 (JJW-); Oxford & dist. SP50 (EFB-, EWA, JJW-); Sparsey Bridge SP51 (ET-); Washford SP50 (OWR-); Wolvercote SP40 (JHK-, JJW-); Yarnton SP41 (JC-). **SE**: Canvey, Smallgains TQ78 (ACW). **SH**: New Forest SU20 (JJW-). **WC**: Newquay SW86 (EME-). **WK**: Lee TQ47 (JAP-); Marden TQ74 (AMM-); Tonbridge TQ54 (WGB-). **WO**: Bransford Bridge SO75 (CJ). **WS**: Barton Mills TL77 (MDD); Brandon TL78 (JRBT-, PH-); Burnt Fen - Lakenheath Station TL68 (CM-); Freckenham TL67 (HSJKD-). **WX**: Lurgashall SU92 (AME).

Wales - **CR**: Dolgarrog SH76 (CJ). **MG**: Welshpool SJ20 (AME).

Scotland - **DF**: Greta NY36 (JM-).

***Atomaria (Anchicera) atricapilla* Stephens**

Map 26

England - **BD**, **BK**, **BX**, **CB**, **CH**, **CI**, **CU**, **DM**, **DT**, **DY**, **EC**, **EK**, **EN**, **ES**, **EX**, **EY**, **GE**, **GW**, **HF**, **HT**, **HU**, **IM**, **IW**, **LN**, **LR**, **LS**, **ML**, **MM**, **MX**, **MY**, **ND**, **NE**, **NH**, **NM**, **NN**, **NO**, **NS**, **NW**, **NY**, **OX**, **SD**, **SE**, **SH**, **SL**, **SN**, **SP**, **SR**, **SS**, **ST**, **SW**, **SY**, **WC**, **WK**, **WL**, **WN**, **WO**, **WS**, **WW**, **WX**, **WY**.

Wales - **A**, **CD**, **CM**, **CR**, **DB**, **GM**, **MG**, **MN**, **PB**, **RA**.

Scotland - **AM**, **AS**, **BW**, **DF**, **ED**, **EI**, **EL**, **FF**, **HD**, **KB**, **KF**, **LA**, **LL**, **PE**, **RE**, **RF**, **RX**, **SI**.

Ireland - **DO**, **DU**, **NK**, **WA**, **WX**.

Atomaria (Anchicera) basalis Erichson

Map 27

England - **BK**: Wellington College SU86 (HSJKD-). **CB**: Cambridge TL45 (GWN-); Ely TL58 (CJ); Ewell Fen, R. Great Ouse TL47 (CJ); Wicken Fen TL57 (GCC-). **CH**: Mobberley SJ77 (JS-). **DY**: Repton SK32 (WWF-, LUS). **EK**: Preston TR26 (B); Wye TR04 (BSW-, PH-). **EN**: Brundell TG30 (JE-); Catfield & Great Fen TG32 (CJ, PH-, THB-); Earlham TG10 (EWA); Hicking Broad TG42 (MC); Horning TG31 (DS-, ECB-, HCD-, HJT-, PH-, WHH-); Lopham Great Fen TM08 (MC, RDP); Lopham Middle Fen TM07 (CJ, MC); Old Buckenham Fen TM09 (JAO); Ranworth TG31 (JE-); Stalham TG32 (AJC-, JC-, THB-); Upton Broad and Marshes TG31 (MC, MS); Wheat Fen TG30 (ABD, CJ, EWA, PDO); Wroxham TG31 (HJT-). **ES**: Beccles TM49 (HWF-); Benacre TM58 (CM-); Blythburgh TM47 (CJ, EWA); Dunbergh TM39 (EWA); Oulton Broad TM59 (CM-, ECB-, HCD-, THB-); Walberswick TM47 (CJ); Worlingham Marshes TM48 (GRW-). **HF**: Westhide SO54 (JRBT-). **HU**: Wood Walton & Fen TL28 (ABD, CET-, CJ, IM, RGB). **MX**: Hammersmith & Marshes TQ27 (DS-, JAP-). **NH**: Leckford SU33 (PJH, SAW). **NM**: Beeston SK53 (WER-); Idle Stop SK79 (CJ); Gunthorpe SK64 (LUS). **SH**: Lyminster SZ39 (AEG). **SL**: Oglet SJ48 (JRBT-). **SR**: Putney TQ27 (EAN-, ECR-); Reigate TQ25 (ECB-). **ST**: Burton-on-Trent SK22 (JTH-). **SW**: Fittleton SU15 (DRN). **SY**: Aughton SE63 (RJM); Aughton Ings SE73 (CJ); Bubwith SE73 (CJ); Wheldrake SE64 (RJM). **WO**: Birlingham SO94 (PFW); Bredon SO93 (PFW); Upton-on-Severn SO84 (JRBT-). **WS**: Barton Mills TL77 (CET-); Brandon TL78 (AJC-, JRBT-, PH-); Mildenhall TL77 (DS-); Tuddenham TL77 (RDP). **WW**: Stratford-upon-Avon SP25 (WGB-); Sutton SPO9 (WGB-). **WY**: Blacktoft Sands SE82 (PS); Ousefleet SE82 (CJ).

Ireland - **AN**: Belfast J37 (NMI-); Lough Neagh, Antrim J18 (IM, OWJ-, WJF-). **AR**: Armagh H84 (NMI-, WJF-). **LK**: Limerick R55 (EFB-, GCC-). **NK**: Castlemaine Q80 (EFB-); Killarney V99 (EFB-). **WI**: Arklow T27 (JNH-). **WM**: Castlebar M19 (NMI-). **WX**: Wexford TO2 (NMI-).

Atomaria (Anchicera) clavigera Ganglbauer

Map 28

England - **BK**: Denman Park SU49 (RWL-). **CH**: Carrington Moss SJ79 (CJ); Marple SJ98 (JRH-). **CU**: Petherill Valley NY45 (FHD-). **DY**: Marston on Dove SK22 (CJ); Monks Dale SK17 (ACW). **EN**: Horning TG31 (DS-). **EX**: North Banks TO40 (CHM-). **HF**: Breinton SO43 (EAB-). **ML**: Caton SD56 (DRN). **NM**: Aspley SK54 (WER-). **NY**: Masham SE28 (WAT-). **OX**: Oxford dist. SP50 (JJW-). **SH**: Hum SZ19 (PH-). **SL**: Denton SJ99 (CJ); Red Moss SD61 (AR). **SP**: Kinnerley SJ32 (JH-). **SY**: Bubwith SE73 (WJF-). **WS**: Eriswell TL77 (PMH); Tuddenham TL77 (PMH).

Ireland - **NK**: Killarney, Bunroe V98 (EFB-).

Atomaria (Anchicera) fuscata (Schönherr)

Map 29

England - BD, BK, BX, CB, CH, CI, CU, DM, DT, DY, EC, EK, EN, ES, EX, EY, GE, GW, HF, HT, HU, IM, IW, LN, LR, LS, ML, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, NY, OX, SD, SE, SH, SL, SN, SP, SR, SS, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.
Wales - A, BR, CD, CM, CR, DB, GM, MN, PB, RA.

Scotland - AM, AS, AY, B, BW, CT, DF, DN, ED, EI, EL, HD, KB, KF, LA, LL, PE, PM, RE, RF, RW, RX, SG, SI.

Ireland - AN, AR, CV, DO, DU, ED, EM, FE, KK, LD, ME, NK, SK, WM, WX.

Atomaria (Anchicera) fuscipes (Gyllenhal)

Map 30

England - **BD**: Sharpenhoe TL03 (BSW-). **BK**: Aldworth SU57 (NHJ-); Bradfield SU67 (JRBT-, NHJ-); Crowthorne SU86 (EAN-, WES-); Godstow SP40 (JC-); Streatley SU58 (JJW-). **BX**: Chesham SP90 (EGE-). **CB**: Cottenham Fen TL46 (GWN-); Gog Magog TL45 (GWN-). **CH**: Ince SJ47 (JWE-); Langley SJ97 (GWRB-); Spital SJ38 (JWE-); Wallasey SJ29 (JWE-); Whirley SJ87

(GWRB-). **CU:** Baron Wood NY54 (GBR-); Burgh NY35 (FHD-); Carlisle NY35 (FHD-); Cummersdale NY35 (FHD-); Durdar NY45 (HB-); Great Salkeld NY53 (HB-); Kirkbampton NY35 (FHD-); Langwathby NY53 (HB-); Little Salkeld NY53 (HB-); Newton Moss NY43 (FHD-); Orton NY35 (FHD-); Seascale NY00 (FHD-); Tarn Lodge NY55 (GBR-). **DM:** Hart NZ43 (GBW-). **DT:** Ballard Down SZ08 (CET-); Swanage SZ07 (JRBT-); Weymouth SY67 (WGB-). **EC:** Whitsands SX35 (JKT-). **EK:** Chatham & dist. TQ76 (AJC-, GCC-, JJW-); Deal TR35 (AJC-, DS-, EAN-, GCC-, SRA-); Eythorne TR24 (EAW-); Huntingfield TQ95 (AJC-); Lydd TRO2 (CET-); Sheerness TQ97 (HH-); Sheppey TQ96 (AJW-, JJW); Strood TQ76 (DS-); Whitstable TR16 (?). **EN:** Norwich TC20 (JE-). **ES:** Aldeburgh TM45 (CJS-, GWN-, HS-); Beddingfield TM16 (WWF-); Ipswich TM14 (WHH-); Southwold TM57 (CM-). **EX:** Barcombe TQ41 (CJS-); Camber TQ91 (EPC-, WGB-); Ditchling TQ31 (HCD-); High Woods, Bexhill TQ70 (JP); Rye TQ92 (PH-). **EY:** Bridlington TA16 (TVW-); Scarborough TA08 (TW-); Whitby NZ81 (HBj-). **GE:** Colesborne SP01 (JE-). **GW:** Dodington ST77 (AJC-). **HF:** Bromyard SO65 (JRBT-); Ridgeway, Hereford Beacon SOT3 (AAA-); West Malvern SO74 (JRBT-). **HT:** Almond TL30 (DS-); Harpenden TL11 (BSW-). **IM:** Colby SC27 (JRBT-); Ramsey SC49 (WGB-). **IW:** no loc. SZ48 (WGB-); Sandown SZ58 (CES-). **LN:** Cleethorpes TA30 (JRH-); Spidlington TF08 (TVW-). **LR:** Evington SK60 (SOT-); Leicester Common SK50 (SOT-); Stoughton SK60 (SOT-). **MY:** Spa Gill SE26 (EAW-). **MX:** Ealing TQ18 (MGLP-); Highgate TQ28 (EAN-, EAW-); Sudbury TQ18 (HH-). **ND:** Lundy Island SS14 (RCW). **NE:** Clacton-on-Sea TM11 (EAN-); Dovercourt TM23 (CE-); Harlow TL41 (PH-). **NH:** Fleet SU85 (GCC-). **NM:** Cuckney SK57 (CM-); Radcliffe SK63 (WER-); Sherwood SK66 (WGB-). **NN:** Holy Island NU14 (GCC-). **NS:** Polsham ST54 (HGA-). **NY:** Bellerby SE19 (EWA). **OX:** Bicester SP52 (JJW-); Oxford dist. SP50 (JJW-); Shotover SP50 (HB-); Thame Park SP70 (HB-); **SD:** Bittaford SX65 (JHK-); Budleigh Salterton SY08 (GCC-); Ivybridge SX65 (JHK-); Kingsbridge road SX55 (JHK-); Plymouth SX45 (EAN-); Princetown SX57 (CJ); Roborough Down SX56 (JHK-); Salcombe SX73 (H- & PBM-); Yelverton SX56 (JHK-). **SE:** Epping TL40 (DP-); Southend TQ88 (TVW-). **SH:** Brockenhurst SU20 (DS-, JCr); Denny Incl., New Forest SU30 (SAW); Lyminster SZ39 (FJC-); Lyndhurst SU20 (DS-); Milford SZ29 (HH-, JJW-); New Forest SU20 (DS-, ECB-, WGB-). **SN:** Gosforth NZ26 (TJB-); Ovingham NZ06 (GBW-). **SP:** Church Stretton SO49 (WGB-). **SR:** Banstead TQ25 (HRL-); Bookham Common TQ15 (AME-); Boxhill TQ15 (GWN-); Caterham TQ35 (GCC-); Esher TQ16 (JAP-); Gomshall TQ04 (GCC-); Guildford TQ04 (GCC-); Purley TQ36 (JLH-); Putney TQ27 (GRW-); Rusper TQ23 (EAN-); Woking TQ05 (JJW-). **ST:** Stretton SK22 (WGB-). **SY:** Sherburn SE97 (BSW-); Spurn TA41 (WDH-). **WC:** Lizard SW61 (JHK-); Padstow SW97 (CWC-); Perranporth SW75 (RTB); St. Just SW33 (RTB-). **WK:** Brasted TQ45 (PH-); Darenth TQ57 (SRA-); Otford TQ55 (BSW-, CES-, ECB-); Westerham TQ45 (PH-). **WL:** Wan Fell NY30 (HB-). **WO:** Malvern SO74 (JRBT-). **WS:** Brandon TL78 (AJC-); Lavenham - Long Melford TL84 (CM-). **WW:** Knowle SP17 (WGB-); Shustoke SP99 (WGB-). **WX:** Bosham SU80 (PH-). **WY:** Rossington SK69 (HHC-).

Wales - **A:** Holyhead SH28 (D-). **CD:** Tregaron SN66 (CJ). **GM:** Gower SS59 (PH-); Lavernock ST16 (JRBT-); Llandaff ST17 (JRBT-).

Scotland - **AS:** Braemar NO19 (DS-); Cambus O'May NO49 (CJ); Glen Quoich NO19 (CJ). **AY:** Shewalton NS33 (AF-). **B:** Machrie, Arran NR93 (AF-). **DF:** Bellevue NX89 (DS-); Kirtle Valley NY27 (JM-); Springfield NY36 (JM-). **ED:** Braid Hills NT26 (DS-). **EI:** Inverarnie NH63 (GLF); Loch Garten NH91 (DKK-, JAO); Loch Morlich NH90 (GHA-); Newtonmore NN79 (JEB-); Rothiemurchus NH90 (DKK-, EWA), NH91 (CJ). **EL:** Aviemore NH81 (CES-, DKK-, ECB-, PH-, THB-); Carrbridge NH92 (DKK-); Craigellachie, Aviemore NH81 (EWA); Grantown-on-Spey NJO2 (AAA-); Nethy Bridge NJO2 (AHM-, DS-, GHA-, JEB-, PH-, THB-). **KF:** Balmuto NT18 (JAP-); Glen Farg NO11 (THB-); Lochgelly NT19 (JAP-). **LA:** Cleghorn NS94 (AF-). **LL:** Hawthornden NS98 (JEB-, THB-). **PE:** Peebles NT24 (JEB-). **PM:** Abernethy NO11 (DKK-); Rannoch NN65 (DS-, PH-). **RE:** Garve NH36 (JAO). **RF:** Bridge of Weir NS36 (AHM-). **RX:** Jedburgh NT62 (JEB-). **S:** Kinloch, Rhum NM49 (EWA, WOS). **SI:** Bigton HU32 (MEB); Burrafirth, Unst HP61 (JAO); Fair Isle, Dronger HZ27 (MEB); Fair Isle, Vaasetter HZ27 (MEB); Hillswick HU27 (JAO); Isbister HU39 (JAO); Mainland, Whiteness HU44 (MEB); Scousburgh HU31 (MEB); Unst HP60 (CMKJ).

Ireland - **AN**: Bush Bay C94 (JRBT-). **AR**: Armagh H84 (WFJ-). **KC**: Tullamore N32 (NMI-). **ME**: Ladytown 017 (NMI-). **WX**: Wexford TO2 (NMI-). **NK**: Ardagh, Killarney V98 (EFB-); Cahirane, Killarney V98 (EFB-); Flesk, Killarney V98 (EFB-); Muckcross, Killarney V98 (EFB-).

***Atomaria (Anchicera) gutta* Newman**

Map 31

England - **BD**: Tempsford TL15 (GWN-). **BK**: Bradfield SU67 (JRBT-, NHJ-); Kennet Valley SU56 (HSJKD-); Theale SU67 (JRBT-, NHJ-); Windsor SU97 (AAA-). **CB**: Cambridge TL45 (CET-, DS-, GRC-, JAP-); Ely TL58 (CJ, HJT-); Ewell Fen, R. Great Ouse TL47 (CJ); Grantchester TL45 (CET-); Hermitage Marina, Earith TL37 (CJ); Upware TL57 (CET-); Wicken & Fen TL57 (ABD, AMM-, BSW-, CDD-, CJ, DS-, EAN-, ECB-, EME-, GBW-, GHA-, GWN-, JEB-, RGB, WCB-). **CI**: Guernsey, Catel dist. WV28 (EJP). **DT**: Dorchester SY69 (PH-); Herringston Marsh SY68 (THB-); Poole SZ09 (PH-, WHH-); Portland SY67 (WGB-); Rodden SY68 (AME); Wareham SY98 (RTB-); West Bay SY49 (CJ); West Bexington SY58 (JCr); Weymouth SY67 (EFB-). **EK**: Chatham dist. TQ76 (JJW-); Faversham TRO6 (AJC-); Herne Bay TR16 (DS-); Nagden, Faversham Creek TRO6 (CMKJ); Seasalter TRO6 (MGF-); Sheppyt TQ96 (JJW-); Whitstable TR16 (AJC-); Wye TRO4 (BSW-, PH-). **EN**: Catfield TG32 (ECB-); Chedgrave TM39 (MC); Hicking Broad TG42 (ABD, CJ); Horning & Fen TG31 (DS-, ECB-); Hoveton TG31 (HJT-); Ranworth TG31 (JAP-); Stalham TG32 (THB-); Surlingham TG30 (MC); Upton Broad TG31 (MC). **ES**: Aldeburgh TM45 (GWN-); Beccles TM49 (ECB-); Benacre & Broad TM58 (CJ, ECB-, EWA); Bungay TM38 (EWA); Covehithe Broad TM58 (HM); Dunbergh TM39 (EWA); Walberswick TM47 (EWA). **EX**: Ditchling TQ31 (HCD-); Milton Street TQ50 (RDD); Pevensey TQ60 (THB-); Wilmington TQ50 (RDD). **EY**: Scarborough TA08 (RL-). **GE**: Tewkesbury SO83 (AAA-). **HT**: Harpenden TL11 (PH-); St. Albans TL10 (PH-). **HU**: Holme Fen TL28 (AJC-, CET-); Wood Walton & Fen TL28 (ABD, CET-, CJ, IM, RGB). **IW**: Alverstone SZ58 (AMM-, CES-, THB-); Bembridge SZ68 (PJH); Newport, Medina Valley SZ59 (RGB); Sandown SZ58 (EAN-, ECB-). **LS**: Gedney Drove End TF42 (CJ). **MM**: Magor Marsh ST48 (WPIS). **MX**: Staines TQ07 (GCC-); Sunbury-on-Thames TQ16 (ECB-); Tottenham TQ39 (GCC-); Twickenham TQ17 (JAP-). **NE**: Clacton-on-Sea TM21 (ACW, EAN-); Colchester TM02 (WHH-); Henny TL83 (PH-). **NS**: Cheddar ST45 (MWe); Shapwick ST43 (CET-); Tadhams Moor ST44 (MWe). **SD**: Colyton SY29 (GHA-); Dawlish NX97 (PDLG-); Fleet Mill, Totnes SX85 (CJ); Seaton SY29 (CET-, GHA-); South Milton Ley SX64 (CJ); Stoke Woods, R. Exe SX99 (CJ). **SE**: Barking TQ48 (JAP-); Waltham Abbey TL30 (AAA-). **SH**: Christchurch SZ19 (CES-); Eastleigh SU41 (PH-); Farlington Marshes SU60 (DA); Hurn SZ19 (PH-); Keyhaven SZ39 (WDH-); New Forest SU20 (ECB-, JC-); Pitts Deep SZ39 (PH-). **SR**: Barnes TQ27 (DP-); Cobham TQ15 (AAA, JAO); Godalming SU94 (CES-); Putney TQ27 (EAN-, EAW-); Walton-on-Thames TQ16 (GCC-). **SS**: Bridgwater ST33 (CET-); Minehead SS94 (GCB-). **SW**: Amesbury SU14 (PS); Lower Woodford SU13 (DRN). **WC**: Gwithian SW54 (RTB-); Loe Pool SW62 (AWPC-); St. Erth SW53 (RTB). **WK**: Farningham TQ56 (SAW); Higham TQ27 (AEG, SAW); Lee TQ47 (GCC-). **WN**: Holme TF74 (MC). **WO**: Birlingham SO94 (PFW); Bredon's Hardwick SO93 (PFW); Little Comberton SO94 (PFW); Pershore SO94 (CET-); Worcester SO85 (GCB-). **WS**: Brandon TL78 (AJC-, CM-, JRBT-); Stallode TL68 (PMH); Sudbury TL84 (CM-); Tuddenham TL77 (CM-); Worlington TL67 (PMH). **WW**: Knowle SP17 (WGB-); Salford Priors SP05 (WGB-). **WX**: Arundel TQ00 (CET-, PH-); Lagness SZ89 (JCr).

Wales - **MN**: Caerdeen Reedbed SH61 (WPIS).

Ireland - **AN**: Lough Neagh J18 (NMI-, OWJ-); Shanes Castle J18 (JNH-).

***Atomaria (Anchicera) hislopi* Wollaston**

Map 32

England - **EY**: Scarborough TA08 (RL-). **ST**: Combes Valley SKO5 (MWe).

Wales - **CR**: Ro-Wen SH77 (JRBT-).

Scotland - **AS**: Braemar N019 (DS-); Glen Quoich N019 (CJ). **DN**: Garelochhead NS29 (DS-). **EI**: Glen Feshie NN89 (RCW). **LA**: Glasgow NS56 (JAP-). **PM**: Black Wood, Rannoch

NN55, NN65 (PDO); Rannoch NN55 (BSW-, DS-, ECB-, ECR-, JAP-, PH-, RH-, WHH-). RE: Garve NH36 (NHJ-). RW: Ben Eighe NH06 (RAC). SG: Falkirk NS88 (RH-).

***Atomaria (Anchicera) lewisi* Reitter**

Map 33

England - BK, BX, CB, CH, CI, DM, DT, DY, EK, EN, ES, EX, EY, GE, GW, HF, HT, HU, IM, IW, LN, LR, LS, ML, MM, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, NY, OX, SD, SE, SH, SL, SN, SP, SR, SS, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.

Wales - A, BR, CD, CM, CR, DB, FT, GM, MG, MN, PB, RA.

Scotland - AM, AS, B, CA, DF, DN, ED, EI, EL, HB, HD, KB, KF, LA, PM, RF, RW, RX, S, SG, SI, SK, WI, WT.

Ireland - AN, DO, ED, FE, LD, SK, SL, WD, WH.

***Atomaria (Anchicera) mesomela* (Herbst)**

Map 34

England - BK, BX, CB, CH, CI, CU, DT, DY, EC, EK, EN, ES, EX, EY, GE, GW, HF, HT, IM, IW, LR, ML, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, OX, SD, SE, SH, SL, SN, SP, SR, SS, ST, SW, SY, WC, WK, WO, WS, WW, WX, WY.

Wales - A, BR, CD, CM, CR, DB, GM, PB, RA.

Scotland - BW, ED, KB, RX.

Ireland - AN, AR, CW, DO, NK, SK, WC, WM, WX.

***Atomaria (Anchicera) morio* Kolenati**

Map 35

England - BK: Windsor Forest SU97 (DAL, HSJKD-, MDD). DY: Kedleston Park SK34 (DRN). HU: Monks Wood TL18 (RCW). LR: Stapleford SK81 (SOT-). NO: Bedford Purlieus TL09 (DAL); Hemington TL08 (RCW); Rockingham Castle Park SP89 (ABD). ST: Cannock Chase SJ91 (CES-). SY: Hornsea Mere TA14 (RHy).

***Atomaria (Anchicera) munda* Erichson**

Map 36

England - BK: Bradfield SU67 (AJC-, NHJ-); Newbury SU46 (PH-); Reading SU77 (JRBT-); Sandhurst SU86 (EME-); Silwood Park SU96 (CJ); Wellington College SU86 (NHJ-). BX: Burnham Beeches SU98 (PMH); Burnham, Britwell SU98 (EBBn-). CB: Aldreth TL47 (CET-); Cambridge TL45 (CET-, DS-); Chippenham Fen TL66 (AMM); Coton TL45 (CET-); Coveney TL48 (CET-); Quy Fen TL56 (GWN-); Thriplow TL44 (ACW); Wicken & Fen TL57 (CET-, CJ, GWN-, PH-). CH: Aldersey SJ45 (CJ); Bollington SH78 (JRB-); Broadbottom SJ99 (CJ); Delamere SJ57 (JRH-); Gatley SJ88 (WP-); Hargrave SJ46 (CJ); Timperley SJ78 (HRPC-); Warburton SJ68 (CJ). CU: Great Salkeld NY53 (HB-, FHD-); Wigton NY24 (JD). DY: Alport Dale SK19 (EJS); Bretby SK22 (CJ); Brough SK18 (CJ); Newhaven SK15 (CJ); Padfield SK09 (CJ). EK: Chatham dist. TQ76 (JJW-); Huntingfield TQ95 (AJC-); Lydd TRO2 (CET-); Queenborough TQ97 (ECB-, THB-); Seasalter TRO6 (MGF-); Sheppey TQ96 (EAN-, GCC-, JJW-). EN: Lopham Fen TM07 (MC). ES: Corton TM59 (ECB-); Swilland TM25 (DRN). EX: Barcombe TQ41 (CJS-); Litlington TQ50 (JAP-); Ringmer TQ41 (PJH); Rye TQ92 (TAM-). EY: Scarborough TA08 (RL-, TW-); Stonegate NZ70 (CJ). GE: Cheltenham SO92 (PDLG-). HF: West Malvern SO74 (JRBT-). HT: Bromley Common TL32 (CJ); Cheshunt TL30 (AAA-); Harpenden TL11 (BSW-, PH-); Wallington TL23 (CET-); Wheathampstead TL11 (CJ). IW: Sandown SZ58 (ECB-, PH-). LR: Castle Donington SK42 (IM); Kibworth SP69 (TC-); Quorn SK51 (DAL); Swinford SP57 (DAL). MX: Cricklewood TQ28 (JWA-); Hammersmith TQ27 (DS-); Holborn TW38 (AJC-, HCD-, HSJKD-); Southgate TQ39 (EAW-). MY: Chapel-le-Dale SD77 (MGLP-); Fountains Hall dist. SE26 (EAW-); Spa Gill Wood SE26 (EAW-). ND: Lundy SS14 (JRBT, NHJ-). NH: Liss SU72 (SA-). NM: South Leverton SK78 (AT-); West Burton SK78 (RJM). NO: East Carlton SP88 (ABD); Rockingham Castle Park SP89

(ABD). **NW**: Devizes ST96 (DRN). **OX**: Oxford dist. SP50 (JJW-); Water Eaton SP51 (JC-). **SD**: Plymouth Central Park SX45 (JHK-); Teignmouth SX97 (PDLG-). **SE**: Benfleet TQ78 (CET-); Creeksea TQ99 (CET-); West Ham SE48 (EPC-). **SH**: New Forest SU20 (JAP-). **SL**: Ashton Moss SJ99 (WP-); Birkdale SD31 (GWC-); Chadderton SD90 (EWA-); Chat Moss SJ79 (JRH-); Droylsden SJ89 (WP-); Glazebrook SJ69 (CJ); Holden Clough SD90 (CJ); Manchester SJ89 (HRPC-). **SP**: Maesbury SJ32 (JH-); Oswestry SJ22 (JH-). **SR**: Esher TQ16 (JAP-); Hankley SU84 (JAO); Headley Heath TQ25 (AME-). **SS**: Lower Coombes ST30 (GLF). **ST**: Madeley SJ74 (HWD-). **SW**: Grovely Wood SU03 (DRN); Shrewton SU04 (DRN); Wootton Rivers SU16 (DRN). **WC**: St. Mary's SV91 (CMKJ); Tresco SV81 (CMKJ). **WK**: Birling TQ66 (AMM-); Brasted TQ45 (PH-); Darenth & Wood TQ57 (CJ, DP-); East Malling TQ75 (AMM-); Eltham TQ47 (DS-); Higham TQ77 (AEG); Peckham TQ37 (AHM-); Shooters Hill TQ47 (AAA-); Tonbridge TQ54 (WGB-); Westerham TQ45 (PH-). **WL**: Witherslack SD48 (SB). **WN**: Wells-next-the-Sea TF94 (NHJ-). **WO**: Broadway SPO3 (PFW); Hartlebury SO87 (GHA-); Stourbridge SO88 (GWRB-). **WW**: Knowle SP17 (WGB-). **WX**: Lower Beeding TQ22 (HD-); Pulborough TQ01 (GWN-). **WY**: Greno Wood SK39 (CJ); Huddersfield SE11 (EWA); Langsett SE20 (CJ); Thorpe Audlin SE41 (CJ).

Wales - **CD**: Penrhiwpal SN34 (CJ); Tan-y-Groes SN24 (CJ). **CR**: Gorswen SH77 (CJ); Y Rhiw SH22 (CJ). **GM**: Crynant SN70 (JWA-).

Scotland - **ED**: Leigh NT27 (DKK-). **EI**: Knocknagael NH64 (GLF); Rothiemurchus, Dell NH81 (CJ, EWA). **HD**: Humble NT46 (JWB-); Tynninghame NT67 (RAC). **KF**: Craill NO60 (CJ). **LA**: Coatbridge NS76 (GB-). **PN**: Pitlochry NN95 (NHJ-). **S**: Rhum, Kinloch NM49 (EWA, WOS); Skye NG24 (MEB).

Ireland - **DU**: Glasnevin 013 (JNH-). **ED**: Donegal G97 (NMI-). **NK**: Cahimane, Killarney V98 (EFB-); Flesk, Killarney V98 (EFB-); Killarney V99 (EFB-). **WA**: Waterford S61 (JAP-).

Atomaria (Anchicera) nigripennis (Kugelann)

Map 37

England - **BK**: Bradfield SU67 (AJC-, NHJ-). **CH**: Birkenhead SJ38 (MAFF-); Broadbottom SJ99 (CJ); Delamere SJ57 (JRH-); Timperley SJ78 (HRPC-); Walker Barn SJ97 (GWRB-). **CU**: Great Salkeld NY53 (HB-, FHD-). **DM**: Edmondbyers NZ05 (GBW-, RSB-). **DY**: Tideswell SK17 (CJ). **EK**: Sheppey TQ96 (JJW-). **GE**: Gloucester SO81 (WGB-). **HF**: West Malvern SO74 (JRBT-). **MX**: Cowley TQ08 (JAP-); Highgate TQ28 (HEA-). **MY**: Fountains Hall dist. SE26 (EAW-); Ripon SE37 (EAW-). **NH**: East Woodhay SU46 (PH-). **OX**: Oxford dist. SP50 (JJW-); Stonor Park SU78 (P-). **SL**: Manchester SJ89 (JRBT-). **SN**: Newcastle NZ26 (TJB-). **SR**: Esher TQ16 (JAP-); Farnham SU84 (JAP-); Forest Hill TQ37 (EWJ-); Headley Lane TQ25 (CET-); Horsell SU95 (JAP-); Reigate TQ25 (CES-). **ST**: Burton-on-Trent SK22 (St-). **WK**: Otford TQ25 (PH-); Westerham TQ45 (PH-). **WO**: Mathon Lodge, Malvern SO74 (JRBT-). **WW**: Edgbaston SPO8 (WGB-); Knowle SP17 (WGB-). **WX**: Goodwood SU80 (PH-); Pulborough TQ01 (GWN-). **WY**: Greno Wood SK39 (CJ); Langsett SE20 (CJ).

Wales - **CR**: Beddgelert SH54 (SAW).

Scotland - **ED**: Dalmahoy NT16 (DKK-); Edinburgh, distillery NT27 (GU-); Haymarket NT27 (GU-). **EI**: Loch Garten NH91 (JAO). **LA**: Coatbridge NS76 (GB-, GU-). **S**: Rhum, Kinloch NM49 (EWA, WOS).

Atomaria (Anchicera) nitidula (Marsham)

Map 38

England - BD, BK, BX, CB, CH, CU, DM, DT, DY, EC, EK, EN, ES, EX, EY, HF, HT, HU, IM, IW, LN, LR, LS, ML, MX, MY, ND, NE, NH, NM, NN, NO, NY, OX, SD, SE, SH, SL, SN, SP, SR, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.

Wales - A, BR, CD, CR, DB, FT, GM, MN, PB, RA.

Scotland - AM, AS, AY, B, BW, CA, DF, DN, ED, EI, EL, FF, HB, HD, KB, KF, LA, LL, OI, PE, PM, RE, RF, RW, RX, S, SG, SI, WI.

Ireland - AN, AR, CL, DO, DU, LD, NG, NK, SK, SL, WA, WC, WG, WM, WX.

Atomaria (Anchicera) ornata* Heer*Map 39**

Scotland - EI: Garten Wood NH91 (JAO, MS); Loch Garten NH91 (JAO); Loch Moy NH73 (ST, ms); Naim NH95 (ST). SG: Abbey Craig NS89 (RAC).

Atomaria (Anchicera) peltata* Kraatz*Map 40**

England - BD: Sharpenhoe TL03 (PH-); Tempsford TL15 (GWN-). BK: Streatley SU58 (JRB-); Wellington College SU86 (JRB-). CB: Cambridge TL45 (CET-); Gamlingay TL25 (CET-). EK: Chattenend TQ77 (GCC-); Folkestone TR23 (JAP-); Folkestone- Sandgate TR23 (GRW-); Sheppey TQ96 (JJW-). ES: Raydon Woods TMO4 (CM-); Worlingham TM48 (EAW-). EX/WX: 'Sussex' TQ32 (EFB-). EY: Scarborough TA08 (RL-, TW-). HT: Finchampstead SU76 (HEA-); Hitchin TL12 (TVW-). IW: Newport SZ48 (RWA-). LN: Spridlington TF08 (TVW-). MX: Hampstead TQ28 (EAN-, EWJ-); Highgate TQ28 (GRW-). NE: Birdbrook TL74 (JAP-). NH: Burghclere SU46 (JRB-). NM: 'Nottinghamshire' SK54 (AT-). OX: Oxford dist. SP50 (JJW-); Water Eaton SP51 (JC-). SH: New Forest SU20 (JJW-). SR: Caterham TQ35 (GCC-); Crystal Palace TQ37 (GRW-); Mickleham TQ15 (GCC-). WK: Darenth Wood TQ57 (GRW-). WN: Ringstead Downs TF74 (CM-).

Scotland - BW: Cockburnspath NT77 (THB-). FF: Edzell NO56 (AHM-).

Ireland - ED: Co. Donegal G97 (CWB-).

Atomaria (Anchicera) pseudatra* Reitter*Map 41**

England - CB: near Cambridge TL45 (GRC-); Wicken Fen TL57, 4.1923 (ECB-), 2.8.1931 (EME-). EN: Horning TG31, 26.3.1921 (HJT-). EX: Viaduct Marshes, Bexhill TQ70, 27.3.1923 (CET-). [The Yamton and Wicken Fen records given by Allen (1968) must be referred to other species.]

Atomaria (Anchicera) pusilla* (Paykull)*Map 42**

England - BD, BK, BX, CB, CH, CI, CU, DM, DT, DY, EK, EN, ES, EX, EY, GE, HF, HT, IW, LN, LR, MX, MY, NE, NH, NM, NN, NO, NS, NY, OX, SD, SE, SH, SL, SN, SP, SR, SS, ST, SW, SY, WC, WK, WO, WS, WW, WX, WY.

Wales - BR, CD, DB, FT, GM, MN, PB, RA.

Scotland - AY, DF, DN, EL, HD, KB, KF, LA, PN, RF, SG.

Ireland - AN, AR, DU, KK, LH, LK, ME, NK, WI, WX.

Atomaria (Anchicera) rhenana* Kraatz*Map 43**

England - CI: Jersey: Crabbé St. Mary WV55 (ACW); Grouville Marsh WV65 (ACW); La Lande du Ouest WV54 (ACW); La Mielle de Morville WV55 (ACW); Le Ouaisné Common WV54 (ACW); Les Landes, St. Ouen WV55 (ACW); Rue de Pré, Longueville WV64 (ACW); St. Catherine's Valley WV65 (ACW); Trinity Valley WV65 (ACW). DT: Blandford ST80 (PH-); Studland SZ08 (AAA-); Swanage SZ07 (DM-). EK: Faversham TRO6 (GCC-); Isle of Grain TO87 (AAA-); Milton TQ98 (WW-); Pegwell Bay TR36 (SAW); Port Victoria TO87 (AAA-); Rainham TQ86 (DS-); Strood TQ76 (WWF-); Whitstable TR16 (MGF-). EN: Salthouse TG04 (DAL). ES: Aldeburgh TM45 (CJS-, GWN-); Blythburgh TM47 (CJ); Buss Creek TM47 (CM-); Easton TM57 (CM-); Gipping TM14 (CM-); Great Yarmouth TG50 (WW-); Harkstead, Stour TM13 (ACW); Hollesley Bay TM34 (HM); Oulton Broad TMS9 (CM-); Southwold TMS7 (CM-); Sutton TM24 (DRN); Walberswick TM47 (CJ, MJDB). EX: Barcombe & Mills TQ41 (CJS-); Brighton TQ30 (DS-, LGC-); Camber TQ91 (CET-, EPC-, ROSC); Chailey TQ31 (CJS-); Cuckmere Haven TV59 (JAO); Ditchling TQ31 (HCD-); Guestling TQ81 (JC-); Hastings TQ80 (AFD); Landport TQ41 (CHM-); Lewes TQ40 (CJS-); Malling TQ41 (CHM-); North Banks TQ40 (CHM-); Pevensey &

Bay TQ60 (CET-, JRBT-); Rye Harbour TQ91 (EGP, MC); Southeast TQ40 (PJH); Winchelsea TQ91 (EME-, JRBT-). **IW**: St. Helens SZ68 (EME-); Yarmouth SZ38 (AAA-, EAN-, ECR-). **LS**: Gibraltar Point TF55 (DAL). **NE**: Aresford Creek, Brightlingsea TM01 (ACW); Bramble Island TM22 (ACW); Bromans, Mersea Island TM01 (ACW); Colchester TMO2 (J-); Dovercourt TM23 (CE-); Langenhoe Point TM01 (ACW); Lawford TM03 (CJ); Skippers Island TM22 (ACW); St. Osyth TM11 (PH-); Walton-on-the-Naze TM22 (CJ); Wick Marsh, Langenhoe TM01 (ACW). **SE**: Brickhouse, Mundon TL80 (ACW); Canvey Point TQ88 (ACW); Foulness, Fisherman's House TR09 (ACW); Thorpe Bay TQ98 (CET-). **SH**: Christchurch SZ19 (SAW); Farlington Marshes SU60 (DA); Lymington SZ39 (DS-, PH-); Milton SZ29 (CET-); Mudeford SZ19 (CET-). **SY**: Spurn TA41 (MLD, RJM); Sunk Island TA21 (MLD, RJM). **WC**: St. Buryan SW42 (RTB-). **WK**: Cliffe Marshes TQ77 (WAE); East Malling TQ75 (AMM-); Gravesend TQ67 (GWN-, JAP-, SRA-); Westerham TQ45 (PH-). **WN**: Thornham TF74 (JAO); Wells-next-the-Sea TF94 (NHJ-). **WX**: Arundel TQ00 (AAA-, GCC-); Bosham SU80 (CET-); Chichester SU80 (CJ, PH-); Chichester Harbour SU70 (CET-); Dell Quay SU80 (CET-); Lancing TQ10 (CE-); Pagham Harbour SZ89 (JCr); Selsey SZ89 (CET-); Shoreham TQ20 (SGR-); Shoreham - Lancing TQ20 (DS-).

***Atomaria (Anchicera) rubella* Heer**

Map 44

England - BK, BX, CB, CH, CI, CU, DM, DT, DY, EC, EK, EN, ES, EX, EY, GE, GW, HF, HT, HU, IM, IW, LN, LR, LS, ML, MM, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, NY, OX, SD, SE, SH, SL, SN, SP, SR, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.

Wales - A, BR, CD, CM, CR, DB, FT, GM, MC, MN, PB, RA.

Scotland - AY, B, BW, CA, DF, DN, ED, EI, EL, HB, HD, KB, KF, LA, LL, PM, RE, RF, RW, RX, S, SI, SK, WI, WT.

Ireland - AN, DO, DU, LD, NK, SK, WC, WH, WM.

***Atomaria (Anchicera) rubida* Reitter**

Map 45

England - **BK**: Cothill SU49 (CJ); Godstow SP40 (JJW-); Reading SU77 (JRBT-, PH-); Theale SU67 (JRBT-, NHJ-); Tubney SU49 (JC-); Wellington College SU86 (JRBT-); Windsor Park SU97 (AAA-); Wytham SP40 (JC-). **BX**: Burnham Beeches SU98 (PMH); Chorleywood TQ09 (GWN-). **CU**: Castle Carrock Fell NY55 (JM-); Cumrew NY55 (HB-); Tarn Lodge NY55 (GBR-). **DY**: Chatsworth Park SK27 (DRN); Middleton Woods SK25 (CJ). **EC**: Mt. Edgcumbe SX45 (HSG-). **EK**: Chatham dist. TQ76 (JJW-); Herne Bay TR16 (DS-); Huntingfield TQ95 (AJC-); Tenterden TQ83 (JP); Womenswold TR25 (IMW); Wye TRO4 (HWD-). **EN**: Dunston Common TG20 (JE-); Wheat Fen TG30 (CJ). **ES**: Bloodmoor, Lowestoft TM59 (CM-); Shrubland TM15 (CJ). **EX**: Ashurstwood TQ43 (CRB-); Barcombe TQ41 (CJS-); Buxted Park TQ42 (PJH); East Grinstead TQ33 (CRB-). **EY**: Great Ayton NZ51 (GBW-). **GE**: Colesborne SP01 (JE-); Cotswold Hills SO90 (TVW-). **GW**: Dodington ST77 (AJC-); Tidenham Chase ST59 (JE-); Tortworth ST69 (RCW). **HF**: Great Doward SO51 (JRBT-); Hereford SO53 (AAA-). **HT**: Harpenden TL11 (PH-); Wheathampstead TL11 (CJ); Wigginton Bottom SP90 (CJ). **HU**: Great Gidding TL18 (CJ); Wood Walton Fen TL28 (CJ). **IW**: Luccombe SZ58 (SRA-). **LN**: Spridlington TF08 (TVW-). **MM**: Tintern SO50 (JAP-). **MX**: Copse Wood, Ruislip TQ08 (MEB); Hampstead TQ28 (DS-); Hanwell TQ17 (HH-); Sudbury TQ18 (HH-). **MY**: Ripon SE37 (EAW-). **ND**: Bow SS70 (HRL-); Thorne Moor SS41 (ACW). **NE**: Takeley TL52 (PH-). **NH**: Burghclere SU46 (JRBT-, NHJ-); Harewood SU34 (JRBT-). **NM**: Beeston SK53 (WER-); Nottingham SK54 (WER-). **NN**: Cheviots NT92 (DS-). **OX**: Cowley SP50 (AHH-); Oxford dist. SP50 (JJW-); Shillingford SU59 (AME-); Water Eaton SP51 (JC-); Yarmton SP41 (JC-). **SD**: Avonwick SX75 (CJ); Colyton SY29 (GHA-); Dunchideok SX88 (PDLG-); Ivybridge SX65 (JHK-); Littlehempston SX86 (CJ); Roborough Down SX56 (JHK-); Shute Park SY29 (GHA-). **SE**: Epping Forest TQ49 (HWF-); Hylands Park TL60 (PMH). **SH**: Awbridge SU32 (CMV); Mudeford SZ19 (CET-); New Forest SU20 (DS-, JJW-); River Rother SU72 (NHJ-); Troop, Bournemouth SZ19 (RGB). **SR**: Betchworth TQ24 (DS-); Buckland Hill TQ25 (HEC-); Coulsdon TQ35 (ECB-); Dumley Hill TQ15 (AME-); Mickleham TQ15 (AME-, GRW-); Oxshott

TO16 (CE-); Wimbledon & Common TQ27 (DS-, GRW-); Woking TQ05 (GWN-). **SS**: Luccombe SS94 (CJ). **ST**: Combes Valley SK05 (CJ, MWe); Manifold Valley SK15 (CJ). **WC**: Drift Resr., Sancreed SW42 (RTB); Shortlanesend SW84 (CJ). **WK**: Shooters Hill TQ47 (JAP-). **WL**: Roudsea Wood SD38 (EC). **WN**: Roydon Common TF62 (CJ); Walton Common TF71 (CJ). **WO**: Hartlebury SO87 (GHA-). **WS**: Glemsford TM84 (JRBT-). **WW**: Knowle SP17 (WGB-); Stratford-upon-Avon SP15 (EL); Wixford SP05 (CET-). **WY**: Worsborough Resr. SE30 (CJ).

Wales - **A**: Cors Bodeliio SH57 (WPIS); Cors Erddreiniog SH48 (WPIS); Cors Goch SH48 (MWe). **CD**: Aberporth SN25 (CJ); Cilcennin SN56 (CJ); Clettwr Fach SN44 (CJ); Cors Caranod SN56 (WPIS); Cwm Tydu SN35 (CJ); Llangeitho SN65 (CJ); Llanwnen SN54 (CJ); Penrhiwpal SN34 (CJ). **CM**: nr. Amroth SN10 (CJ); Cwm C ch SN23 (CJ); Porthyrhyd SN51 (CJ). **CR**: Cors Geirch SH33 (WPIS). **DB**: Bryn-y-Maen SH87 (CJ); Llanferres SJ16 (SB). **GM**: Llandaff ST17 (JRBT-); Penarth ST17 (HMH-). **MN**: Arthog Bog SH61 (WPIS); Barmouth SH61 (WGB-); Caerdeon Reedbed SH61 (WPIS); Trawsfynydd SH73 (WPIS).

Scotland - **AM**: Ledaig Marsh NH84 (FS). **DN**: Ardmore Point NS37 (RAC); Garelochhead NS29 (DS-). **KB**: Kirkconnell Moss shore NX96 (DS-). **PM**: Lochearnhead NN52 (ECPC-). **S**: Rhum, Kinloch NM49 (WOS). **WI**: Loch Arkaig NN18 (CJ).

***Atomaria (Anchicera) rubricollis* Brisout de Barneville**

Map 46

England - **BD**: Barton Hills TL03 (MGM). **BK**: Windsor Forest SU97 (AAA-). **CB**: Quy Fen TL56 (GWN-). **EK**: Folkestone TR23 (RCW); Shakespeare Cliff TR33 (RCW). **EX**: Barcombe TQ41 (CJS-); Ditchling TQ31 (HCD-). **EY**: Scarborough TA08 (RL-). **GE**: Stanton SP03 (PFW). **SD**: Dunchideok SX88 (SGR-); Yelverton SX56 (JHK-). **SR**: Banstead Common TQ25 (HRL-); Boxhill TQ15 (ECB-, MLL); Buckland & Hill TQ15, TQ16 (CES-). **SW**: Martin Down NNR SU01 (LJW).

Wales - **A**: Cors Erddreiniog SH48 (WPIS). **CD**: Elerch (JHS-). **GM**: Cwrt-yr-ala ST17 (HMH-).

Ireland - **AR**: Armagh H84 (NMI-, WFJ-). **CL**: Slaty Island, Lough Inchiquin R28 (JF). **ME**: Balrath N96 (GWN-). **NK**: Killarney V99 (EFB-).

***Atomaria (Anchicera) scutellaris* Motschulsky**

Map 47

England - **CI**: Jersey: La Mielle de Morville WV55 (ACW); Le Ouaisné Common WV54 (ACW); Les Blanchés Banques WV55 (ACW); Les Landes, St. Ouen WV55 (ACW); Queen's Valley WV65 (ACW); St. Catherine's Valley WV65 (ACW); St Ouen WV55 (ACW); Trinity Valley WV65 (ACW). **EX**: Beachy Head TV59 (RGB). **SR**: Beddington TQ26 (RGB). **WC**: Marazion SW53 (CJ); Mawgan SW72 (RTB); Penzance SW43 (RTB); Rosevear SV80 (CMKJ); Scilly Isles SV90 (KGB-); Tresco SV81 (CMKJ). **WX**: Bosham SU80 (JCr); Chichester SU80 (JAO); Houghton Forest SU91, TQ01 (JCr).

***Atomaria (Anchicera) testacea* Stephens**

Map 48

England - **BD, BK, BX, CB, CH, CI, CU, DM, DT, DY, EC, EK, EN, ES, EX, EY, GE, GW, HF, HT, HU, IM, IW, LN, LR, LS, ML, MM, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, NY, OX, SD, SE, SH, SL, SN, SP, SR, SS, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.**

Wales - **A, BR, CD, CM, CR, DB, FT, GM, MG, MN, PB, RA.**

Scotland - **AM, AS, AY, B, BW, DF, ED, EI, EL, FF, HB, HD, KB, KF, LA, PM, RE, RF, RW, RX.**

Ireland - **AN, AR, DO, DU, LD, NK, SK, WD, WM.**

***Atomaria (Anchicera) zetterstedti* (Zetterstedt)**

Map 49

England - **BK**: Windsor Forest SU97 (HSJKD-). **BX**: Hell Coppice SP61 (JC-). **EN**: Ringland TG11 (JE-); Stratton Strawless TG22 (JE-). **HU**: Earith TL37 (JAO). **MX**: Sunbury-on-Thames

TQ16 (AMM-, ECB-, HSJKD-, JLH-, NHJ-). **OX**: Oxford SP50 (HSJKD-); Play Hatch SU77 (AAA-); Weston-on-the-Green SP51 (JC-); Yarnton SP41 (HSJKD-, JC-, THE-); **SE**: Thorndon Park TQ69 (IM). **SR**: Walton TQ16 (HSJKD-). **WS**: Brandon TL78 (ECB-).

Ireland - **AN**: Lough Neagh J18 (OEJ-). **KK**: Thomastown S54 (NMI).

***Ootypus globosus* (Waltl)**

Map 50

England - **BK**: Bradfield SU67 (JRBT-, NHJ-); Cothill SU49 (CJ); River Kennet SU56 (NHJ-); Theale SU67 (NHJ-); Wellington College SU86 (JRBT-, PH-); Windsor SU97 (MC). **CH**: Bunbury SJ55 (CJ); Hollingworthhall Moor SJ99 (CJ). **CU**: Orton NY35 (FHD-); Petherill Valley NY45 (FHD-); R. Irthing NY56 (TJB-). **DT**: Parham SZ09 (PH-). **DY**: Bakewell SK26 (CJ); Chapel-en-le-Frith SK08 (CJ); Darley Dale SK26 (JRBT-); Glossop SK09 (CJ); Goyt Valley, East SK07 (CJ); Gratton Dale End SK26 (CJ); Leam SK27 (CJ); Markland Grips SK57 (ACW); Mellor SJ98 (CJ); New Mills SK08 (CJ, DRN). **EC**: Mt. Edgcombe SX45 (HSG-, OEJ-). **EK**: Chatham dist. TQ76 (JJW-); Newenden TQ82 (JP); Tenterden TQ83 (JP); Wye TR04 (BSW-, JJW-, PH-). **ES**: Shrubland TM15 (CJ). **EX**: Barcombe TQ41 (CHM-, CJS-); Chiddingly TQ51 (PJH); Ditchling TQ31 (GWN-); Hastings TQ80 (PBM-); Pett TQ81 (EAN-). **EY**: Scarborough TA08 (TW-); Sherburn SE97 (BSW-); Whitby NZ81 (ECH-). **HF**: Ross-on-Wye SO62 (RWL-); The Flits SO34 (MDD). **HT**: Frithsden TL00 (CJ); Gaddesden Row TLO1 (CJ); Harpenden TL11 (BSW-, PH-); St. Albans TL10 (BSW-); Wheathampstead TL11 (CJ); Wigginton Bottom SP90 (CJ). **HU**: Great Gidding TL18 (CJ). **LR**: Kirby Bellars SK71 (CJ); Quorndon SK51 (WGB-). **MM**: Magor Marsh ST48 (WPIS). **MX**: Kew TQ17 (ECB-). **MY**: Bashall Eaves SD64 (CJ). **ND**: Bude SS20 (PDLG-). **NE**: Weeley TM12 (CJ). **NS**: Tadhams Moor ST44 (MWe). **OX**: Oxford dist. SP50 (JJW-); Shillingford SU59 (AME-); Shotover Hill SP50 (HB-); Yarnton SP41 (JC-). **SD**: Alphington SX99 (GWN-); Avonwick SX75 (CJ); Cad Valley SX56 (JHK-); Colyton SY29 (GHA-); Dunchideok SX88 (SCR-); Littlehempston SX86 (CJ); Moretonhampstead SX78 (PDLG-); Plymouth & dist. SX45 (EAN-, JJW-); Shaugh Bridge SX56 (JHK-); South Brent SX66 (PDLG-). **SH**: Hum SZ19 (PH-); Lymington SZ39 (JWA-); New Forest SU20 (HH-, JJW-, JRBT-, PH-); Pitts Deep SZ39 (PH-); Totton SU31 (EAN-). **SL**: Ashton Moss SJ99 (WP-); Heaton Park SD80 (CJ). **SP**: Llanymynech S22 (JH-). **SR**: Bookham Common TQ15 (AME-); Cowley TQ08 (JAP-); Nutcombe Down SU83 (PSH). **SS**: Luccombe SS94 (VJ). **ST**: Armitage, R. Trent SK01 (HWD-); Burnt Wood SJ73 (MWe); Combes Valley SK05 (CJ, MWe); Loynton Moss SJ72 (MWe); Manifold Valley SK17 (CJ); Salt SJ92 (CJ). **SY**: Bubwith SE73 (BSW-, PH-, WJF-); Spurn TA41 (SS-). **WC**: Germoe, Boscrege SW53 (CJ); Helford Passage SW72 (CJ); Portreath SW64 (CJ); Shortlanesend SW84 (CJ). **WK**: Brasted TQ45 (PH-); Chatham TQ47 (JAP-); Darenth TQ57 (JAP-); Farningham TQ56 (AAA-); Lee TQ47 (JAP-). **WN**: Roydon Common TF62 (CJ); Walton Common TF71 (CJ). **WO**: River Teme SO77 (GHA-); Stanford Bridge SO76 (HWD-). **WW**: Knowle SP17 (WGB-). **WX**: Amberley TQ01 (PH-); Holm Bush TQ21 (JAP-); Pulborough TQ01 (GWN-). **WY**: Farnley Tyas SE11 (CJ); Thunder Bridge SE11 (EWA).

Wales - **BR**: Llanddewi'r Cwm SO04 (HM). **CD**: Aberporth SN25 (CJ); Cilcennin SN56 (CJ); Cwm Tydu SN35 (CJ); Gilfachreda SN45 (CJ); Llanwnen SN54 (CJ); Penrhiwpal SN34 (CJ); Tregaron SN66 (CJ). **CM**: Cwm Cŷh SN23 (CJ); Llanstephan SN31 (CJ); Porthyrhyd SN51 (CJ); Rhos Pwllgawnen SN23 (WPIS). **CR**: Cors Geirch SH33 (WPIS); Rhyddios SH13 (CJ). **DB**: Blaen y Wergloedd SH96 (WPIS). **GM**: Cefn Bryn SS59 (WPIS); Llangennith SS49 (PH-). **MG**: Carno SN99 (GWN-). **PB**: Crofts SN14 (CJ); Felindre Farchog SN13 (CJ); Sychpant SN03 (CJ).

Scotland - **DF**: Greta NY36 (JM-). **RF**: Bridge of Weir NS36 (HH-).

Ireland - **AR**: Armagh H84 (WFJ-). **CW**: Co. Carlow S77 (NMI-). **NK**: Killarney V99 (EFB-). **SK**: Kenmare V97 (EFB-, NMI-). **WM**: Clare Island L68 (NMI-).

***Ephistemus globulus* (Paykull)**

Map 51

England - BD, BK, BX, CB, CH, CI, CU, DM, DT, DY, EC, EK, EN, ES, EX, EY, GE, GW, HF, HT, HU, IM, IW, LN, LR, ML, MM, MX, MY, ND, NE, NH, NM, NN, NO, NS, NW, OX, SD, SE, SH, SL, SP, SR, SS, ST, SW, SY, WC, WK, WL, WN, WO, WS, WW, WX, WY.

Wales - A, CD, CM, CR, DB, FT, GM, MG, MN, PB, RA.

Scotland - AY, B, BW, DF, DN, ED, EI, EL, FF, HD, KB, KF, LA, PE, PM, RF, RW, S, SG, WT.

Ireland - AN, AR, CW, DO, DU, EC, ED, KC, LD, LK, NK, SK, WA, WD, WM, WX.

APPENDIX 1

Vice-county symbols and numbers

These are based on the typomap symbols of Balfour-Browne (1940). Exceptions are LX (Laois) and OF (Offaly) which are used in preference to the English names of QC (Queen's County) and KC (King's County) respectively. Watson/Praeger vice-county numbers are added for ease of reference.

ENGLAND

BD	Bedfordshire	30	SE	South Essex	18
BK	Berkshire	22	SH	South Hampshire	12
BX	Buckinghamshire	24	SL	South Lancashire	59
CB	Cambridgeshire	29	SN	South Northumberland	67
CH	Cheshire	58	SP	Shropshire	40
CI	Channel Islands	113	SR	Surrey	17
CU	Cumberland	70	SS	South Somerset	5
DM	Durham	66	ST	Staffordshire	39
DT	Dorset	9	SW	South Wiltshire	8
DY	Derbyshire	57	SY	South-east Yorkshire	61
EC	East Cornwall	2	WC	West Cornwall & Scilly	1
EK	East Kent	15	WK	West Kent	16
EN	East Norfolk	27	WL	Westmorland & North Lancashire	69
ES	East Suffolk	25	WN	West Norfolk	28
EX	East Sussex	14	WO	Worcestershire	37
EY	North-east Yorkshire	62	WS	West Suffolk	26
GE	East Gloucestershire	33	WW	Warwickshire	38
GW	West Gloucestershire	34	WX	West Sussex	13
HF	Herefordshire	36	WY	South-west Yorkshire	63
HT	Hertfordshire	20			
HU	Huntingdonshire	31			
IM	Isle of Man	71			
IW	Isle of Wight	10			
LN	North Lincolnshire	54			
LR	Leicestershire & Rutland	55			
LS	South Lincolnshire	53			
ML	Mid Lancashire	60			
MM	Monmouth	35			
MX	Middlesex	21			
MY	Mid-west Yorkshire	64			
ND	North Devon	4			
NE	North Essex	19			
NH	North Hampshire	12			
NM	Nottinghamshire	56			
NN	North Northumberland	68			
NO	Northamptonshire	32			
NS	North Somerset	6			
NW	North Wiltshire	7			
NY	North-west Yorkshire	65			
OX	Oxfordshire	23			
SD	South Devon	3			

WALES

A	Anglesey	52
BR	Brecon	42
CD	Cardigan	46
CM	Carmarthen	44
CR	Caernarvon	49
DB	Denbigh	50
FT	Flint	51
GM	Glamorgan	41
MG	Montgomery	47
MN	Merioneth	48
PB	Pembroke	45
RA	Radnor	43

SCOTLAND

AM	Argyll main	98
AN	North Aberdeenshire	93
AS	South Aberdeenshire	92
AY	Ayrshire	75
B	Bute & Clyde Isles	100
BF	Banffshire	94
BW	Berwickshire	81
CA	Caithness	109
CT	Cantire	101
DF	Dumfriesshire	72
DN	Dunbarton	99
ED	Edinburgh (Mid-Lothian)	83
EI	East Inverness-shire & Nairn	96
EL	Elgin (Moray)	95
FF	Forfar (Angus)	90
HB	Outer Hebrides	110
HD	Haddington (East-Lothian)	82
I	South Ebuades (Islay, etc)	102
KB	Kirkcudbright	73
KF	Kinross & Fife	85
KI	Kincardineshire	91
LA	Lanarkshire	77
LL	Linlithgow (West-Lothian)	84
M	Mid Ebuades (Mull, etc)	103
NS	North-west Sutherland	108
OI	Orkney Islands	111
PC	West Perthshire & Clackmannan	87
PE	Peebles	78
PM	Mid Perthshire	88
PN	North-east Perthshire	89
RE	Easter Ross & Cromarty	106
RF	Renfrewshire	76
RW	Wester Ross & Cromarty	105
RX	Roxburghshire	80
S	North Ebuades (Skye, etc)	104
SG	Stirlingshire	86
SI	Shetland Islands	112
SK	Selkirkshire	79
SS	South-east Sutherland	107
WI	West Inverness-shire	97
WT	Wigtown	74

IRELAND

AN	Antrim	H39
AR	Armagh	H37
CL	Clare	H9
CV	Cavan	H30
CW	Carlow	H13
DO	Down	H38
DU	Dublin	H21
EC	East Cork	H5
ED	East Donegal	H34
EM	East Mayo	H26
FE	Fermanagh	H33
KD	Kildare	H19
KK	Kilkenny	H11
LD	Londonderry	H40
LE	Leitrim	H29
LF	Longford	H24
LH	Louth	H31
LK	Limerick	H8
LX	Laois	H14
MC	Mid Cork	H4
ME	Meath	H22
MO	Monaghan	H32
NG	North-east Galway	H17
NK	North Kerry	H2
NT	North Tipperary	H10
OF	Offaly	H18
RO	Roscommon	H25
SG	South-east Galway	H15
SK	South Kerry	H2
SL	Sligo	H28
ST	South Tipperary	H7
TY	Tyrone	H36
WA	Waterford	H6
WC	West Cork	H3
WD	West Donegal	H35
WG	West Galway	H16
WH	Westmeath	H23
WI	Wicklow	H20
WM	West Mayo	H27
WX	Wexford	H12

APPENDIX 2

Collector abbreviations

A minus sign after the collector's name indicates a pre-1960 collector. A minus sign in brackets indicates pre- and post-1960 collectors. Post-1960 collectors have no sign.

AAA	A A Allen	(-)	DP	DuPré	-
ABD	A B Drane		DRN	D R Nash	
ACW	A C Warne		DS	D Sharp	-
AEG	A E Gardner				
AF	A Ferguson	-	EAB	E A Butler	-
AFd	A Ford	-	EAN	E A Newbery	-
AHH	A H Hamm	-	EAW	E A Waterhouse	-
AHM	A H May	-	EBB	E B Britton	-
AJC	A J Chitty	-	EBBn	E B Basden	-
AME	A M Easton	(-)	EC	E Crowson	-
AMM	A M Massee	(-)	ECB	E C Bedwell	-
AR	A Richards		ECH	E C Horrell	-
AT	A Thornley	-	ECPC	E C Pelham-Clinton	-
AVM	A V Morris	-	ECR	E C Rye	-
AWPC	A W Pickard-Cambridge	-	EFB	E F Bullock	-
			EGE	E G Elliman	-
B	Bancroft		EGP	E G Philp	
BL	B Levey		EJBS	E J Burgess-Sopp	-
BMNH	British Museum (Nat. Hist.)	-	EJP	E J Pearce	
BP	B Pitkin		EJS	E J Smith	
BSW	B S Williams	-	EL	E Lee	
CDD	C D Day	-	EME	E M Eustace	-
CE	C Engelhart	-	EOM	E O'Mahony	-
CES	C E Stott	-	EPC	E P Collett	-
CET	C E Tottenham	(-)	ET	E Taylor	-
CHM	C H Morris	-	EWA	E W Aubrook	(-)
CJ	C Johnson		EWJ	E W Janson	-
CJCP	C J C Pool	-			
CJS	C J Saunders	-	FC	F Cambridge	-
CM	C Morley	-	FCC	F C Crosoer	-
CMKJ	C MacKechnie-Jarvis		FHD	F H Day	-
CMV	C M Vardy		FJC	F J Coulson	-
CR	C Reid		FMR	F M Robinson	-
CRB	C R Billups	-			
CSB	C S Barham		GAL	G A Lohse	
CSE	C S Elton	-	GB	G Brown	-
CWB	C W Buckle	-	GBR	G B Routledge	-
			GBW	G B Walsh	-
D	Dale	-	GCB	G C Bartindale	-
DA	D Appleton		GCC	G C Champion	-
DAL	D A Lott		GEF	G E Frisby	-
DCT	D C Twinn		GEW	G E Woodroffe	-
DKK	D K Kevan	(-)	GHA	G H Ashe	-
DM	Doncaster Museum	-	GLF	G L Fewin	

GPV	G P Vickerman		JRBT	J R B Tomlin	-
GRC	G R Crotch	-	JRH	J R Hardy	-
GRW	G R Waterhouse	-	JS	J Sidebotham	-
GU	Glasgow University	-	JSW	J S White	-
GW	G Waterworth	-	JTH	J T Harris	-
GWC	G W Chaster	-	JTP	J T Palmer	-
GWN	G W Nicholson	-	JTS	J T Salmon	-
GWRB	G W R Bartindale	-	JWA	J W Allen	-
			JWB	J W Bowhill	-
H	Hewgill	-	JWE	J W Ellis	-
HB	H Britten	-			
HBj	H Britten Junior	-	KGB	K G Blair	-
HCD	H C Dollman	-	LGC	L G Cox	-
HEA	H E Andrewes	-	Lj	L Jessop	-
HEC	H E Cox	-	LjW	L Jones-Walters	-
HEJB	H E J Biggs	-	LUS	Loughborough University	-
HH	H Heasler	-		Survey	
HHC	H H Corbett	-	LWR	L W Rothschild	-
HJT	H J Thouless	-			
HM	H Mendel	-	MAFF	Ministry of Agriculture,	
HMH	H M Hallett	-		Fisheries & Food	
HRL	H R Last	(-)	MC	M Collier	-
HRPC	H R P Collett	-	MDD	M D Darby	-
HS	H Scott	-	MEB	M E Bacchus	-
HSG	H S Gorham	-	MCF	M G Fraser	-
HSJKD	H S J K Donisthorpe	-	MGLP	M G L Perkin	-
HWD	H W Daltry	-	MJDB	M J D Brendell	-
HWF	H W Forster	-	MLD	M L Denton	-
			MLL	M L Luff	-
IM	I McClenaghan	-	MLT	M L Thompson	-
IMW	I M White	-	MR	M Rhodes	-
			MS	M Sinclair	-
J	Jörger	-	MW	M Walker	-
JAO	J A Owen	-	MWe	M Waterhouse	-
JAP	J A Power	-	MY	M Young	-
JC	J Collins	-			
JCr	J Cooter	-	NH	N Holford	-
JD	J Dobson	-	NHJ	N H Joy	-
JE	J Edwards	-	NMI	National Museum of Ireland	-
JEB	J E Black	-			
JF	J Farradane	-	OEJ	O E Janson	-
JFd	J Field	-	OWR	O W Richards	-
JH	J Hignett	-			
JHB	J H Bailey	-	P	Perry	-
JHK	J H Keys	-	PBM	P B Mason	-
JHS	J H Salter	-	PDLG	P de la Garde	-
JJW	J J Walker	-	PDO	P D Orton	-
JKT	J K Taylor	-	PFW	P F Whitehead	-
JL	J Lee	-	PH	P Harwood	-
JLH	J L Henderson	-	Pha	Public Health Authority	-
JM	J Murray	-	PJH	P J Hodge	-
JNH	J N Halbert	-	PJO	P J Osborne	-
JP	J Parry	-	PM	P Maitland	-

PMH	P M Hammond		St	Scott	-
PS	P Skidmore		ST	S Taylor	
PSH	P S Hyman				
PW	P Wheeler		T	Tyrer	-
			TAM	T A ?	-
RAC	R A Crowson		TC	T Crutwell	-
RCW	R C Welch		THB	T H Beare	-
RDD	R D Dumbrell		TJB	T J Bold	-
RDP	R D Pope		TME	T M Eccles	
RGB	R G Booth		TVW	T V Wollaston	-
RH	R Hislop	-	TW	T Wilkinson	-
RHy	R Hawley				
RJM	R J Marsh		VDP	Van der Poll	-
RL	R Lawson	-			
RMD	R M Dobson		WAE	W A Ely	
RML	R M Lyszkowski		WAT	W A Thwaites	-
ROSC	R O S Clarke		WCH	W C Hey	-
RSB	R S Bagnall	-	WDH	W D Hincks	-
RSK	R S Key		WE	W Evans	-
RSM	Royal Scottish Museum	-	WER	W E Ryles	-
RTB	R T Bannister	(-)	WES	W E Sharp	-
RWRW	R Wilding	-	WFJ	W F Johnson	-
RWA	R W Attwood	-	WG	W Garneys	-
RWL	R W Lloyd	-	WGB	W G Blatch	-
			WHH	W H Harwood	-
SAW	S A Williams		WJF	W J Fordham	-
SB	S Bowestead		WOS	W O Steel	
SCR	S G Rendell	-	WP	W Potter	-
SK	S Kemp	-	WPIS	Welsh Peatlands Invertebrate Survey	
SOT	S O Taylor	-			
SRA	S R Ashby	-	WW	W West	-
SS	S Shaw	-	WWF	W W Fowler	

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BIBLIOGRAPHY

- Allen, A.A.** 1938. Two British species of *Atomaria* (Col. Cryptophagidae) new to the European List. *Entomologist's Monthly Magazine*, **74**, 82-83.
- Allen, A.A.** 1952. *Atomaria rubricollis* Bris. (Col., Cryptophagidae) recaptured in Britain. *Entomologist's Monthly Magazine*, **88**, 15.
- Allen, A.A.** 1968. Two additions to the British species of *Atomaria* Steph. (Col., Cryptophagidae), with notes on others of the genus in Britain. *Entomologist's Record and Journal of Variation*, **80**, 318-326.
- Allen, A.A.** 1971. British Coleoptera: corrections and supplementary notes, including the addition of *Axinotarsus marginalis* Lap. (Melyridae) to our list. *Entomologist's Record and Journal of Variation*, **83**, 46-51.
- Anon.** 1972. *Ordnance Survey gazetteer of Great Britain*. Southampton: Ordnance Survey.
- Balfour-Browne, F.** 1940. *British water beetles*, **1**. London: Ray Society.
- Champion, G.C.** 1918. *Atomaria zetterstedtii* Zett. (= *salicicola* Kraatz), a British insect. *Entomologist's Monthly Magazine*, **54**, 155.
- Crowson, R.A.** 1980. On amphipolar distribution patterns in some cool climate groups of Coleoptera. *Entomologia Generalis*, **6**, 281-292.
- Crowson, R.A.** 1988. Observations on *Caenoscelini* (Col. Cryptophagidae). *Entomologist's Monthly Magazine*, **124**, 72.
- Dandy, J.E.** 1969. *Watsonian vice-counties of Great Britain*. London: Ray Society.
- Donisthorpe, H. St. J.K.** 1929. *Atomaria morio* Kolenati, a species of Coleoptera new to Britain. *Entomologist's Monthly Magazine*, **64**, 30.
- Evans, M.E.G.** 1961a. The muscular and reproductive systems of "*Atomaria ruficornis*" Marsham (Coleoptera, Cryptophagidae). *Transactions of the Royal Society of Edinburgh*, **64** (14), 297-399.
- Evans, M.E.G.** 1961b. Notes on the habitat and activity of *Atomaria ruficornis* (Marsh.) (Col., Cryptophagidae). *Entomologist*, **94**, 167-170.
- Evans, M.E.G.** 1961c. The alimentary canal of *Atomaria ruficornis* (Marsham) (Col., Cryptophagidae). *Entomologist*, **94**, 263-273.
- Evans, M.E.G.** 1961d. The life history of *Atomaria ruficornis* (Marsh.) (Col. Cryptophagidae). *Transactions of the Society for British Entomology*, **14**, 207-222.
- Fowler, W.W.** 1889. *The Coleoptera of the British Islands*. **3**. London: Reeve.
- Johnson, C.** 1966a. *Caenoscelis subdeplanata* Bris. (Col., Cryptophagidae): a beetle new to Britain. *Entomologist*, **99**, 129-131.
- Johnson, C.** 1966b. *Atomaria clavigera* Ganglb. (Col., Cryptophagidae) new to Britain. *Entomologist*, **99**, 230-231.
- Johnson, C.** 1967. Additions and corrections to the British list of *Atomaria* s.str. (Col., Cryptophagidae), including a species new to science. *Entomologist*, **100**, 39-47.
- Johnson, C.** 1970. The status of *Atomaria rhenana* Kraatz and *A. godarti* Guillebeau (Col. Cryptophagidae). *Entomologische Blätter für Biologie und Systematik der Käfer*, **66**, 115-119.
- Johnson, C.** 1971. The forgotten genus *Curelius* Casey in relation to *Ephistemus* Stephens, with keys to the Palaearctic species (Col. Cryptophagidae). *Entomologische Blätter für Biologie und Systematik der Käfer*, **66**, 159-162.
- Johnson, C.** 1973. The *Atomaria gibbula* group of species (Coleoptera, Cryptophagidae). *Reichenbachia*, **14**, 125-141.
- Johnson, C.** 1976a. Synonymic and other notes on British Coleoptera. *Entomologist's Monthly Magazine*, **111**, 111-113.
- Johnson, C.** 1976b. Nine species of Coleoptera new to Britain. *Entomologist's Monthly Magazine*, **111**, 177-183.
- Johnson, C.** 1986. New synonymy and changes in the nomenclature of European Cryptophagidae (Coleoptera). *Entomologist's Gazette*, **37**, 129-132.
- Johnson, C.** 1992a. Further changes in the nomenclature of European *Atomaria* Stephens (Col., Cryptophagidae). *Entomologist's Gazette*, **43**, 145-146.
- Johnson, C.** 1992b. Additions and corrections to the British List of Coleoptera.

Entomologist's Record and Journal of Variation,
104, 305-310.

Johnson, C. 1992c. Cryptophagidae. In:
Lohse, G.A. & Lucht, W.H., *Die Käfer
Mitteleuropas 13*, (Supplement). Krefeld:
Goecke and Evers. In press.

Johnson C. & Strand, A. 1968. Notes on
some species of *Atomaria* s.str. (Col.,
Cryptophagidae), with descriptions of two
species new to science. *Norsk Entomologisk
Tidsskrift*, **15**, 93-96.

Joy, N.H. 1932. *A practical handbook of
British beetles*. 2 vols. London: Witherby.

Lohse, G.A. 1967. Cryptophagidae. In: *Die
Käfer Mitteleuropas, 7*, edited by H. Freude,
K.H. Harde, & G.A. Lohse, 110-158. Krefeld:
Goecke and Evers.

Lohse, G.A. 1975. Neue und seltene Käfer
des Niederelbegebietes und Schleswig-
Holsteins (Fortsetzung). *Bombus*, **2** (55), 220.

Newton, H.C.F. 1932. On *Atomaria linearis*
Stephens (Coleoptera,
Cryptophagidae) and its larval stages.
Annals of Applied Biology, **19**, 87-97.

Rye, E.C. 1876. Notes on British
Coleoptera, with descriptions of three new
species. *Entomologist's Monthly Magazine*,
12, 175-180.

Shirt, D.B. (editor) 1987. *British Red Data
Books, 2, Insects*. Peterborough: Nature
Conservancy Council.

Sjöberg, O. 1947. Die ergebnisse einer
genitaluntersuchung der nordischen
arten der gattung *Atomaria* Steph. (Col.
Cryptophagidae). *Entomologisk Tidsskrift*, **68**,
91-119.

Webb, D. 1980. The biological vice-counties
of Ireland. *Proceedings of the Royal Irish
Academy*, **80B**, 179-196.

SPECIES INDEX

Species	Map/account		Distribution records	
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	species per 10 km square	14	2	-
	records per 10 km square	15	3	-
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	<i>atra</i>	37	25	71
	<i>atricapilla</i>	38	26	71
	<i>basalis</i>	39	27	72
	<i>clavigera</i>	40	28	72
	<i>fuscata</i>	41	29	72
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	<i>gutta</i>	43	31	74
	<i>hislopi</i>	44	32	74
	<i>lewisi</i>	45	33	75
	<i>mesomela</i>	46	34	75
	<i>morio</i>	47	35	75
	<i>munda</i>	48	36	75
	<i>nigripennis</i>	49	37	76
	<i>nitidula</i>	50	38	76
	<i>ornata</i>	51	39	77
	<i>peltata</i>	52	40	77
	<i>pseudatra</i>	53	41	77
	<i>pusilla</i>	54	42	77
	<i>rhenana</i>	55	43	77
	<i>rubella</i>	56	44	78
	<i>rubida</i>	57	45	78
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	<i>barani</i>	20	8	66
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	<i>puncticollis</i>	31	19	69
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<i>Ootypus</i>	<i>globosus</i>	62	50	80

