

Cumbrian Ladybirds

Stephen Hewitt

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Cover illustration: 5-spot Ladybird © R.W.J. Read

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species accounts and distribution maps also published

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www.lakelandwildlife.co.uk

Introduction

Ladybirds are among the most recognisable and best-loved insects in Britain and, as predators of aphids, they are of considerable benefit to the gardener. For all their familiarity, there are many more different kinds of ladybirds than most of us probably realise. Most of the British species of ladybird have been found in Cumbria at some time or other and this guide aims to help identify them and to encourage their further study in the county. Tullie House Museum operates a local biological records centre and collects records of wildlife, including ladybirds, in Cumbria. The maps in this guide are based on the information collated by the Museum. Tullie House is continually updating its wildlife records and welcomes additional records of ladybirds and other wildlife in the county.

Acknowledgements

Many thanks to everyone who has contributed their ladybird records to the Museum's recording scheme. Special thanks are due to David Atty, John Read and Jim Thomas who have supplied a great deal of information from their own records. Also to Geoff Naylor and Tony Tipling who have processed much of the information supplied so far. I am also very grateful to Margaret and Jeremy Roberts, Dorothy Iveson, Jim Thomas and Geoff Naylor for proof reading and providing very helpful comments on a draft of this booklet.

The distribution maps are produced from records entered onto the RECORDER database developed by JNCC and mapped using DMAP software developed by Dr. Alan Morton.

Checklist of Cumbrian ladybirds

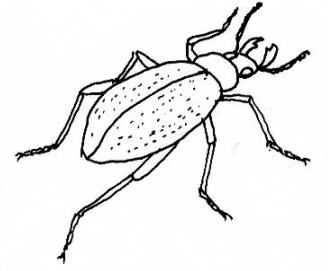
34 species of beetle in the Family Coccinellidae have been recorded in Cumbria. Of these, 23 are immediately apparent as looking like “ladybirds”. The other species are generally small and inconspicuous. The “ladybird” species are highlighted in **bold** in the list. The English names follow those given by Majerus and Kearns (1989). The national status of each species, as given on the RECORDER database developed by English Nature, is shown.

Species accounts are given with the distribution maps, except for the 13-spot Ladybird which is not mapped, having been recorded only once from Cumbria – at Rockcliffe (NY36) in the early 19th century.

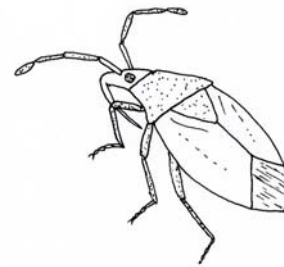
24-spot Ladybird	<i>Subcoccinella vigintiquatuorpunctata</i>	Common
a ladybird	<i>Coccidula rufa</i>	Common
a ladybird	<i>Rhyzobius litura</i>	Common
a ladybird	<i>Scymnus femoralis</i>	Notable/Nb
a ladybird	<i>Scymnus frontalis</i>	Common
a ladybird	<i>Scymnus nigrinus</i>	Local
a ladybird	<i>Scymnus auritus</i>	Local
a ladybird	<i>Scymnus haemorrhoidalis</i>	Common
a ladybird	<i>Scymnus limbatus</i>	Notable/Nb
a ladybird	<i>Scymnus suturalis</i>	Status unknown
a ladybird	<i>Nephus redtenbacheri</i>	Common
a ladybird	<i>Hyperaspis pseudopustulata</i>	Notable/Nb
Heather Ladybird	<i>Chilocorus bipustulatus</i>	Local
Kidney-spot Ladybird	<i>Chilocorus renipustulatus</i>	Common
Pine Ladybird	<i>Exochomus quadripustulatus</i>	Common
13-spot Ladybird	<i>Hippodamia tredecimpunctata</i>	pRDBK
Adonis' Ladybird	<i>Hippodamia variegata</i>	Notable/Nb
Water Ladybird	<i>Anisosticta novemdecimpunctata</i>	Local
Larch Ladybird	<i>Aphidecta obliterata</i>	Common
16-spot Ladybird	<i>Tytthaspis sedecimpunctata</i>	Local
2-spot Ladybird	<i>Adalia bipunctata</i>	Common
10-spot Ladybird	<i>Adalia decempunctata</i>	Common
Scarce 7-spot Ladybird	<i>Coccinella magnifica</i>	Notable/Na
Hieroglyphic Ladybird	<i>Coccinella hieroglyphica</i>	Local
5-spot Ladybird	<i>Coccinella quinquepunctata</i>	RDB3
7-spot Ladybird	<i>Coccinella septempunctata</i>	Common
11-spot Ladybird	<i>Coccinella undecimpunctata</i>	Local
Eyed Ladybird	<i>Anatis ocellata</i>	Common
18-spot Ladybird	<i>Myrrha octodecimguttata</i>	Local
Cream-spot Ladybird	<i>Calvia quattuordecimguttata</i>	Common
14-spot Ladybird	<i>Propylea quattuordecimpunctata</i>	Common
Striped Ladybird	<i>Myzia oblongoguttata</i>	Status unknown
Orange Ladybird	<i>Halysia sedecimguttata</i>	Local
22-spot Ladybird	<i>Psyllobora vigintiduopunctata</i>	Common

What is a ladybird?

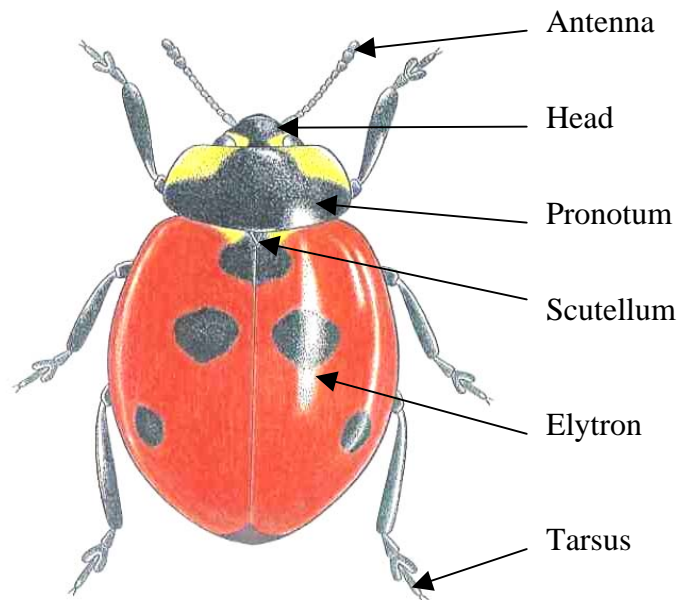
Ladybirds are beetles, which are distinguished from other Orders of insects by their biting jaws (**mandibles**) and by their fully hardened fore-wings (**elytra**) which protect the membranous hind wings, folded away beneath.



Other insects that might be confused with ladybirds include some of the Hemiptera or True Bugs, such as the shield-bugs. However, all Hemiptera have tubular mouthparts for piercing and sucking. Also, the tips of their fore-wings are membranous giving a distinct triangular shape to the back of the body when the wings are folded at rest.



Within the beetles, ladybirds all belong to the Family Coccinellidae. Members of this Family are typically between 1 – 10mm long; round or oval in shape; generally brightly coloured and often with spots or other markings on their **elytra**, which entirely cover the abdomen. The **pronotum** (hard shell covering the top of the thorax) is wider than long. The head is retractable beneath the pronotum. The antennae are shorter than the width of the pronotum and clubbed. The legs are short and retractable into grooves on the underside of the body. The **tarsi** (feet) consist of four segments, but the third tarsal segment is small and hard to see within the broadly lobed second segment. The **scutellum** is a triangular shaped plate at the inner basal corner of the elytra. The presence or absence of a black spot over the scutellum (**scutellary spot**) is frequently used to separate different species.



Key to Cumbrian Ladybirds

There are 42 British species of Coccinellidae. Of these 24 are obviously ladybird like (the others are much smaller and easily overlooked). 23 of the obvious British ladybirds have been found in Cumbria, but several of these are rare or extinct in the county.

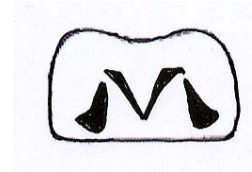
- 1 Upper side minutely hairy (use a hand lens). Red/orange-brown colour. Elytra with many black spots, often fused.
24-spot Ladybird 3.5-4mm.
Grassland. Mainly coastal. (page 9)

- Upper side not hairy ⇒ 2

2 Ground colour of elytra black ⇒ 21

- Ground colour of elytra not black 3

- 3 Pale brown. Elytra without distinct markings (there may be some darkening along the joint of the elytra and slight duskiness laterally and towards apex of elytra). Pronotum with a dark 'M'-shaped mark.



Larch Ladybird 3.8-5mm.
On conifers. Common. (page 12)

- Elytra with distinct markings ⇒ 4

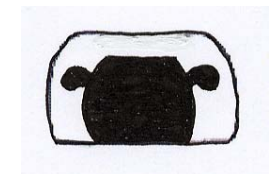
4 Markings on elytra darker than ground colour ⇒ 5

- Markings on elytra paler than ground colour ⇒ 18

5 Discrete black spot present over scutellum ⇒ 6

- No discrete black spot over scutellum ⇒ 15

- 6 More elongate, twice as long as wide. Pronotum with a characteristic pattern. Elytra red with 6 black spots on each plus scutellary spot.



13-spot Ladybird 5-6.5mm
Marshland. Extinct?

- Not twice as long as broad. Pronotum with a different pattern ⇒ 7

7 Pronotum black with whitish marks at front corners ⇒ 8

- Pronotum with a different pattern ⇒ 12



8 Elytra red/orange with 3 more or less round black spots on each elytron + scutellary spot ⇒ 9

- Elytra differently marked ⇒ 10

9 Just one pair of white spots on underside, beneath middle legs.

7-spot Ladybird 6.5-8mm.

Very common and widespread. (page 18)

- Two pairs of white spots on the underside, beneath middle and hind legs. Elytron with innermost black spot distinctly bigger than outer two spots.

Scarce 7-spot Ladybird 6.5-8mm

Associated with wood ants. Very rare. (page 18)

10 Elytra red/orange with 5 black spots on each + scutellary spot.

11-spot Ladybird 3.5-5mm.

Mainly coastal in Cumbria, also on river shingle. Common. (page 19)

- Elytra with a different number of spots ⇒ 11

11 Elytra red/orange with 2 black spots on each + scutellary spot. Innermost elytral spots much larger than the others.

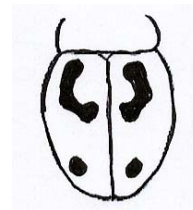
5-spot Ladybird 4-5mm

On river shingle. Very rare. (page 17)

- Elytra brown/orange. 3 spots on each elytron + scutellary spot. Foremost elytral spot elongate and often fused with second elytral spot.

Hieroglyphic Ladybird 3.5-4.5mm

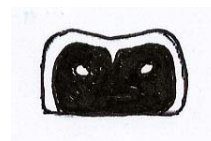
On heather. Local. (page 16)



12 Pronotum with 2 pale spots entirely enclosed within larger black marking. Elytra red/orange with variable number of black spots.

Adonis' Ladybird 4-5.5mm.

Sandy grassland, mainly coastal. Rare. (page 10)

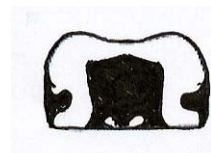


- Pronotum with a different pattern ⇒ 13

13 Large (at least 7mm). Elytra red/orange/brown, usually with black spots surrounded by pale rings. Pronotum with a distinctive pattern.

Eyed Ladybird 7-9mm.

On pine. Local. (page 25)



- Smaller. Pronotum with a different pattern ⇒ 14
- 14 Elytra orange/red with variable number of black spots.
Pronotum pale with 5 black spots, sometimes fused.

10-spot Ladybird 3.5-5mm
Common and widespread. (page 15)



- Yellowish. Somewhat elongate. Pronotum with 6 black spots. Elytra with 9 black spots on each + scutellary spot.

Water Ladybird 3.8-4.5mm.
In reedbeds. Rare. (page 11)

- 15 Elytra red/orange with one black spot on each elytron. Legs black. Pronotum with distinctive pattern.

2-spot Ladybird 4-5.5mm
Common and widespread. (page 14)

- Elytra and pronotum with different pattern. Legs pale ⇒ 16

- 16 Pronotum white with black markings. Elytra orange with variable number of black spots.

10-spot Ladybird 3.5-5mm
Common and widespread. (page 15)



- Pronotum yellow/orange with black markings. Elytra yellow or yellowish-orange with black spots ⇒ 17

- 17 With a black line running along the joint between the two elytra ⇒ 18

- Join of elytra without a black line. Yellow. 11 spots on each elytron

22-spot Ladybird 3.5-4.5mm.
Lush lowland grassland. Local. (page 24)

- 18 Yellow. Pronotum with distinctive markings. Squarish black spots on the elytra often fused.

14-spot Ladybird 3.5-5mm.
Scrub & grassland. Widespread and increasingly common. (page 22)



- Orange/yellow/pinkish. Pronotum with separate black spots. Elytra with 8 rounded spots on each, side ones often fused.

16-spot Ladybird 2.5-3.2mm.
Marshy grassland and saltmarsh. Rare. (page 13)

- 19 Large (7-8mm). Elytra brown with white/cream streaks.

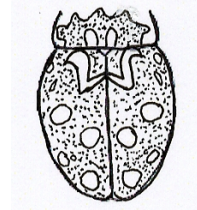
Striped Ladybird 7-8mm.
On conifers. Local. (page 26)

- Smaller (<7mm). Elytra with spots not streaks ⇒ 20

20 Elytra with distinctive 'W'-shaped mark at base in addition to other white/cream spots. Pale orange-brown.

18-spot Ladybird 4.5-5.5mm.

On pine. Local. (page 20)

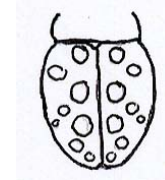


- Elytra without 'W'-shaped mark ⇒ 21

21 Elytra orange with 16 (occasionally 14) white spots not arranged in neat rows across the elytra.

Orange Ladybird 5-6.5mm.

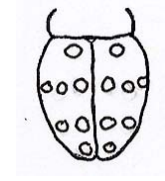
On deciduous trees. Increasingly common. (page 23)



- Elytra brown with 14 white spots arranged in neat rows across the elytra.

Cream-spot Ladybird 5-6.5mm.

Deciduous trees. Widespread and common. (page 21)



22 Elytra and pronotum turned out at edge, forming a distinct flange ⇒ 23

- Elytra and pronotum without a flange around the sides ⇒ 25



23 Elytra with 2 pairs of red marks towards the front and back.

Pine Ladybird 3.5-4mm

On conifers etc. Local. (page 29)

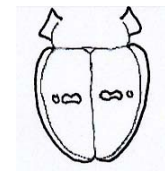


- Elytra with different pattern ⇒ 24

24 Red markings on elytra in a band or row of small spots across the middle of the elytra.

Heather Ladybird 3.5-4mm.

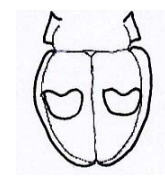
On heather and conifers. Local. (page 27)



- Single pair of large red marks on the elytra, often kidney-shaped.

Kidney-spot Ladybird 4.5-5mm.

On willow, birch etc. Local. (page 28)



25 Legs pale. Very variable pattern of orange marks on the elytra. Pronotum pattern variable.

10-spot Ladybird melanic forms. (page 15)

- Legs black ⇒ 26

26 Pronotum with large white/cream markings at front corners. Elytra (almost) entirely black.

Hieroglyphic Ladybird melanic form. (page 16)



- Pronotum entirely black but for a narrow pale margin at front corners. Elytra with 2 or 4 orange/red spots or entirely black.

2-spot Ladybird melanic forms. (page 14)



Distribution maps and species accounts

Distribution maps for 22 of the 24 larger ladybirds recorded for the county are reproduced. The smaller species of the family Coccinellidae (Ladybirds) are not included.

The maps are based on information from the Tullie House Museum collections, various literature sources (see references) and most importantly the local amateur naturalist community. Hectad (10km x 10km square) records from the Cambridge national ladybird survey report have been included in the database. The maps are far from complete and are intended as an aid to further investigation rather than as definitive statements of distribution. Please send any records of ladybirds in Cumbria to Stephen Hewitt at Tullie House Museum.

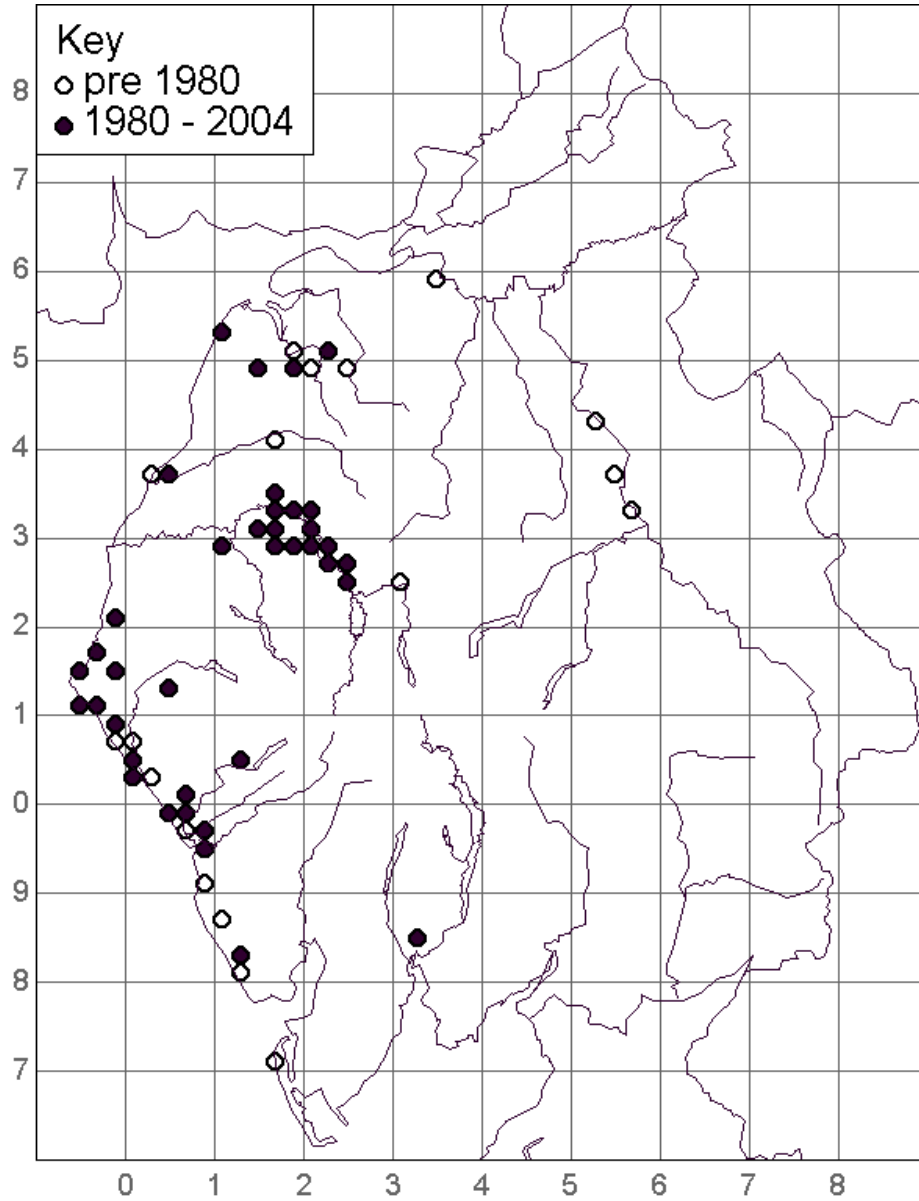
The species distribution maps generally indicate presence of the species for each tetrad (2km x 2km square) in the county, thus omitting records with more vague grid references. However, for Adonis' and Water Ladybirds such vague records make a significant difference to the picture of their Cumbrian distribution and so maps for these species include hectad records as dots in the central tetrad of the hectad.

Literature sources & further reading

- Birkett, N.L., 1997, A further note on the 14-spot Ladybird (*Propylea 14-punctata* (L.)), *Carlisle Naturalist* **Vol 5 (1)**
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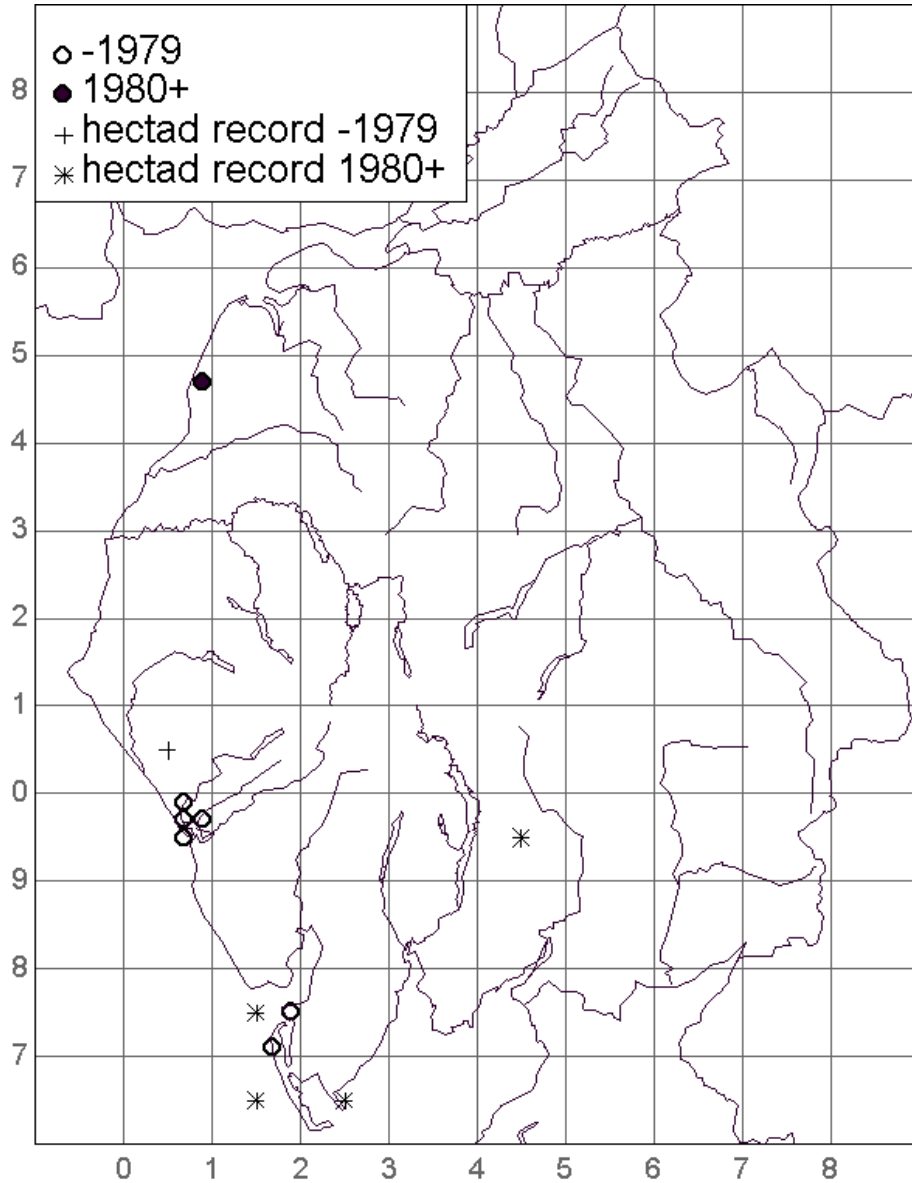
The following species accounts are based on information provided on the RECORDER biological records database developed by English Nature. Additional local information has been added.

24-spot Ladybird *Subcoccinella 24-punctata*



This small (3.5-4mm long) red and black ladybird is the only one with tiny hairs coating the elytra and pronotum. It is found in grassland and marshy places where it feeds on plants. It is widespread in southern England, becoming more local in the north. Mainly lowland in Cumbria; the density of records mapped for the Bassenthwaite area appears to reflect a genuine cluster within the county and not just the recording efforts of David Atty!

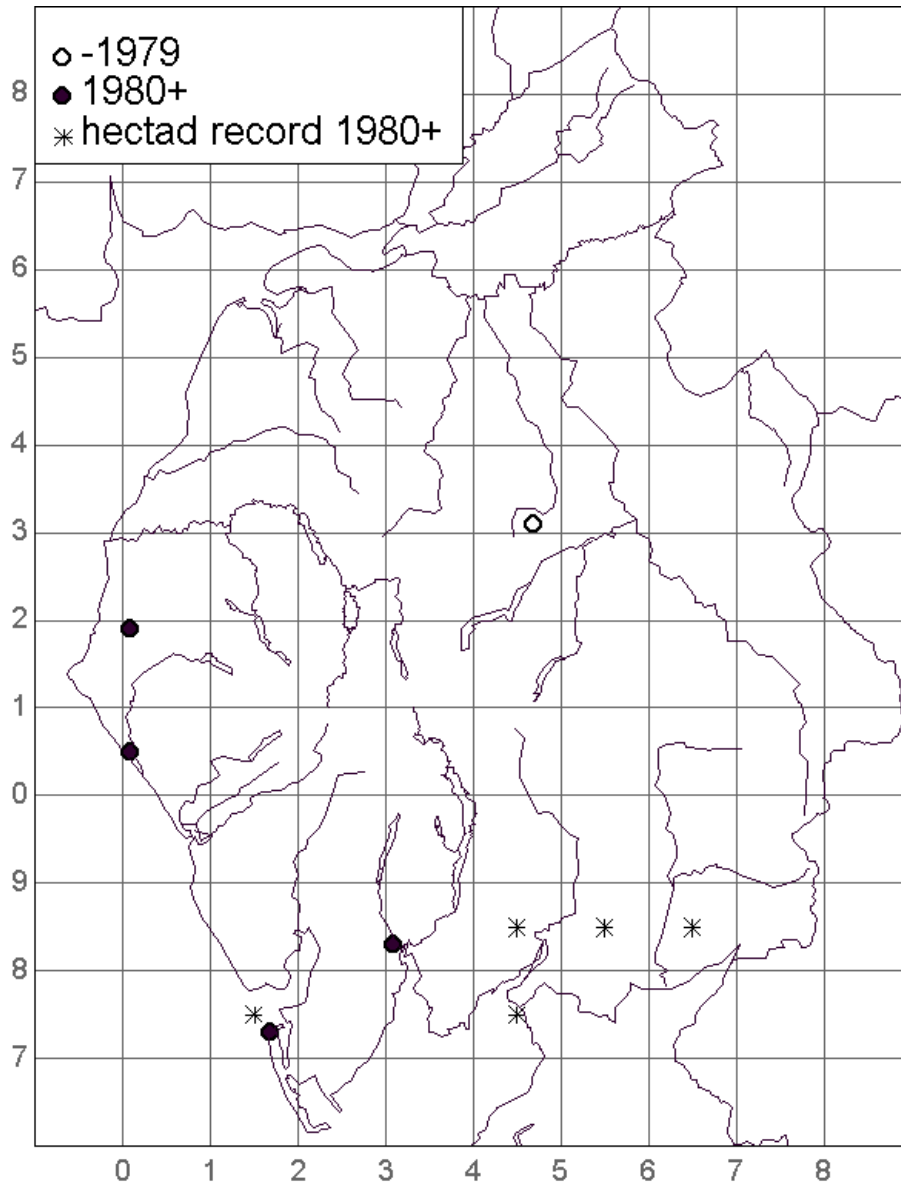
Adonis' Ladybird *Hippodamia variegata*



A red and black ladybird 4-5mm long. The black markings on the elytra are very variable, but the pattern on the pronotum is distinctive. This aphid predator is scarce and restricted mainly to dry sandy places, in particular to heathlands and the coast. Widespread scattered records around southern Britain but only frequent in the Thames area, in South Wales and in Staffordshire. All Cumbrian records for which we have habitat information are from coastal sand dune systems. Majerus (1995) also records the species inland from SD49.

Water Ladybird

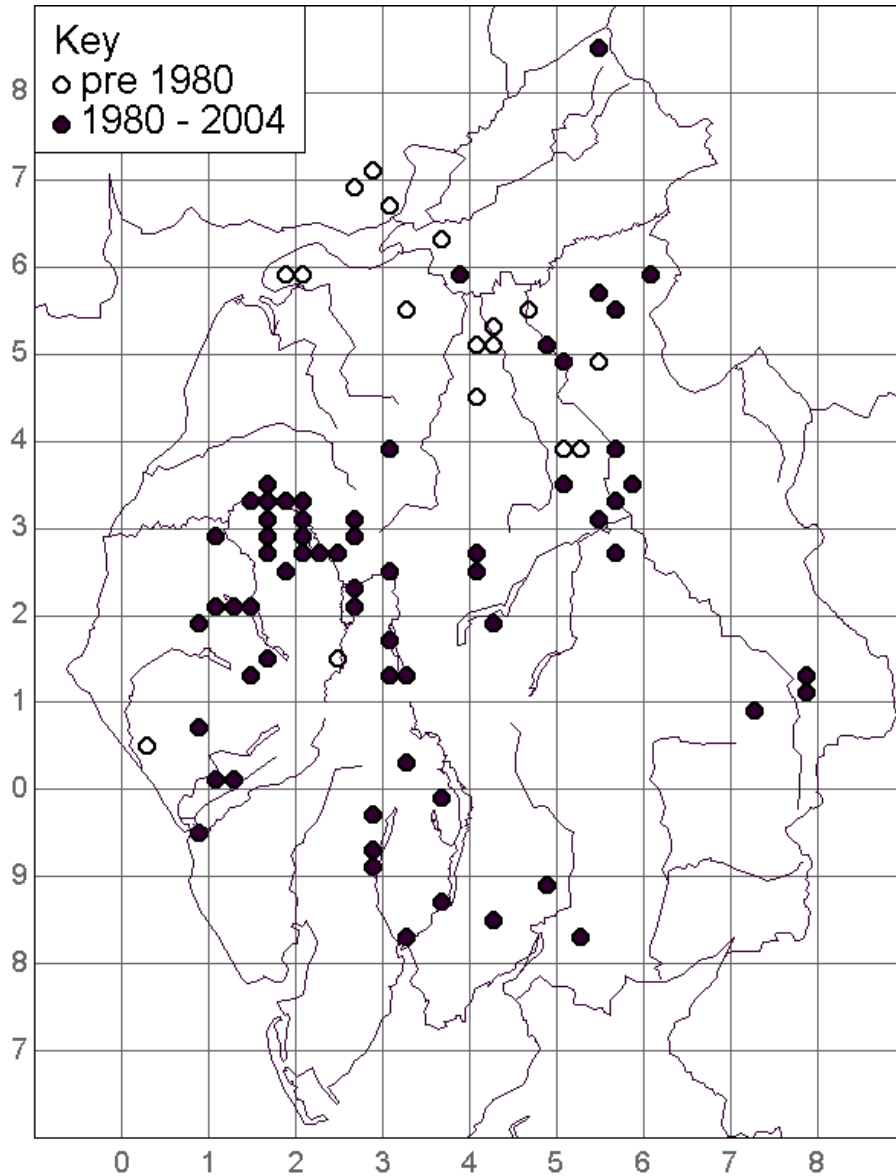
Anisosticta 19-punctata



A pale red or yellowish ladybird measuring 3.8-4.5mm with nineteen black spots on the elytra (and more on the pronotum). It is rather more slender than most ladybirds. It is found in fens and marshes where adults and larvae feed on aphids. It is particularly associated with Reedmace and Common Reed and the adults can be found hibernating in the stems of these plants. A rarity in Cumbria, found mostly in the south and west of the county.

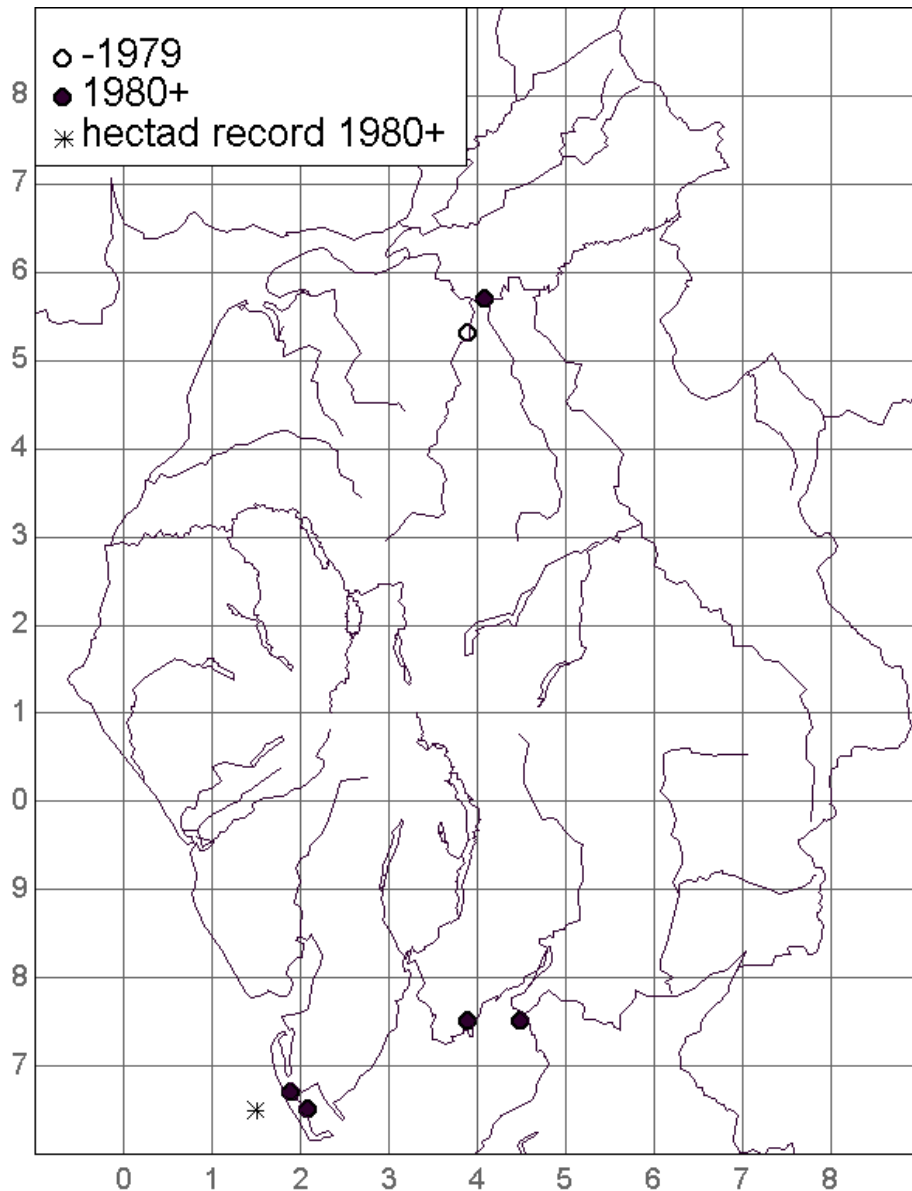
Larch Ladybird

Aphidecta obliterata



A small light brown ladybird with no spots on its elytra, but a dark ‘M’-shaped mark on the pronotum. A generally common aphid feeder, although not usually a garden or arable ground species. This species is widespread in the county, often found by beating conifers but by no means restricted to them.

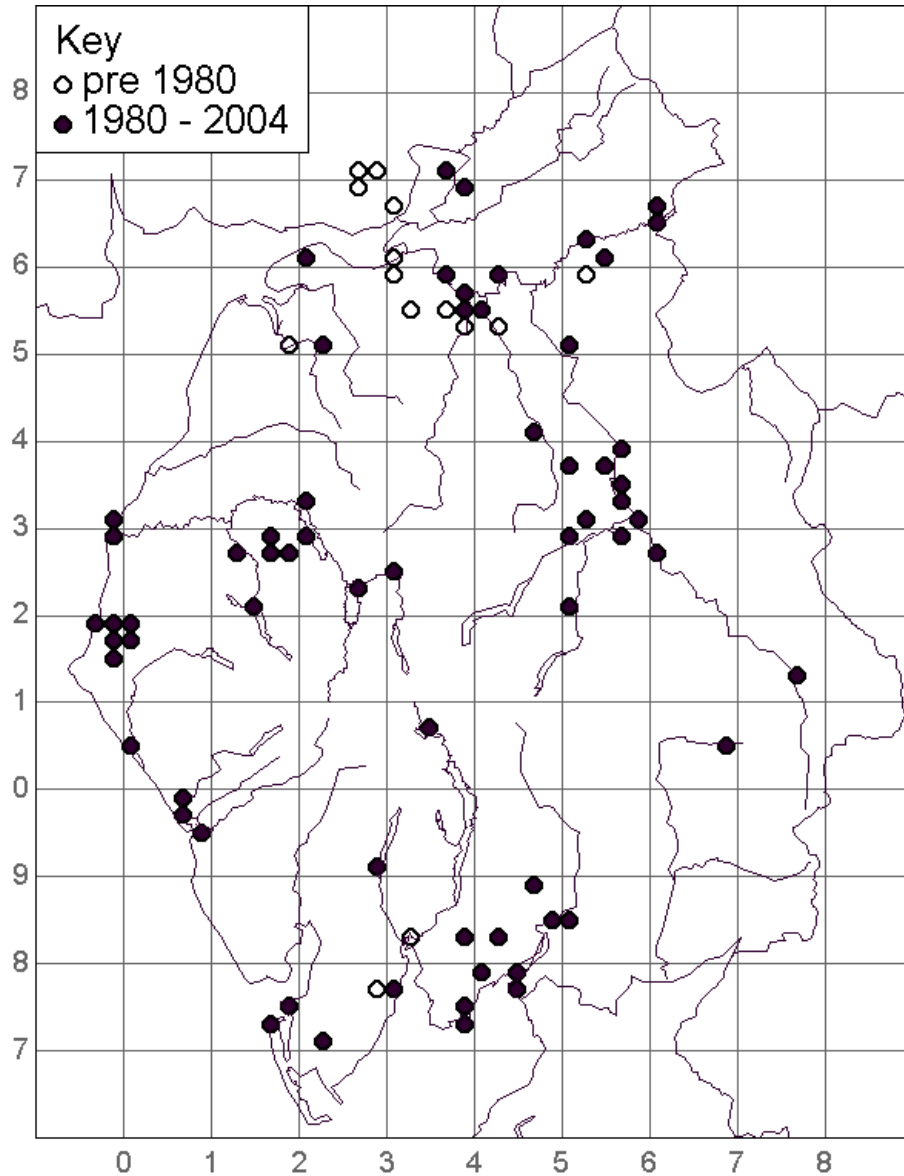
16-spot Ladybird *Tytthaspis 16-punctata*



A small yellow and black ladybird. It has a black line along the join of the two elytra. There are 8 black spots on each elytron, with those at the sides often fused. Local in marshy grassland, but can occur in other habitats. This species is rare in Cumbria and has recently been recorded only from the extreme south of the county, where it is mainly found on salt marshes.

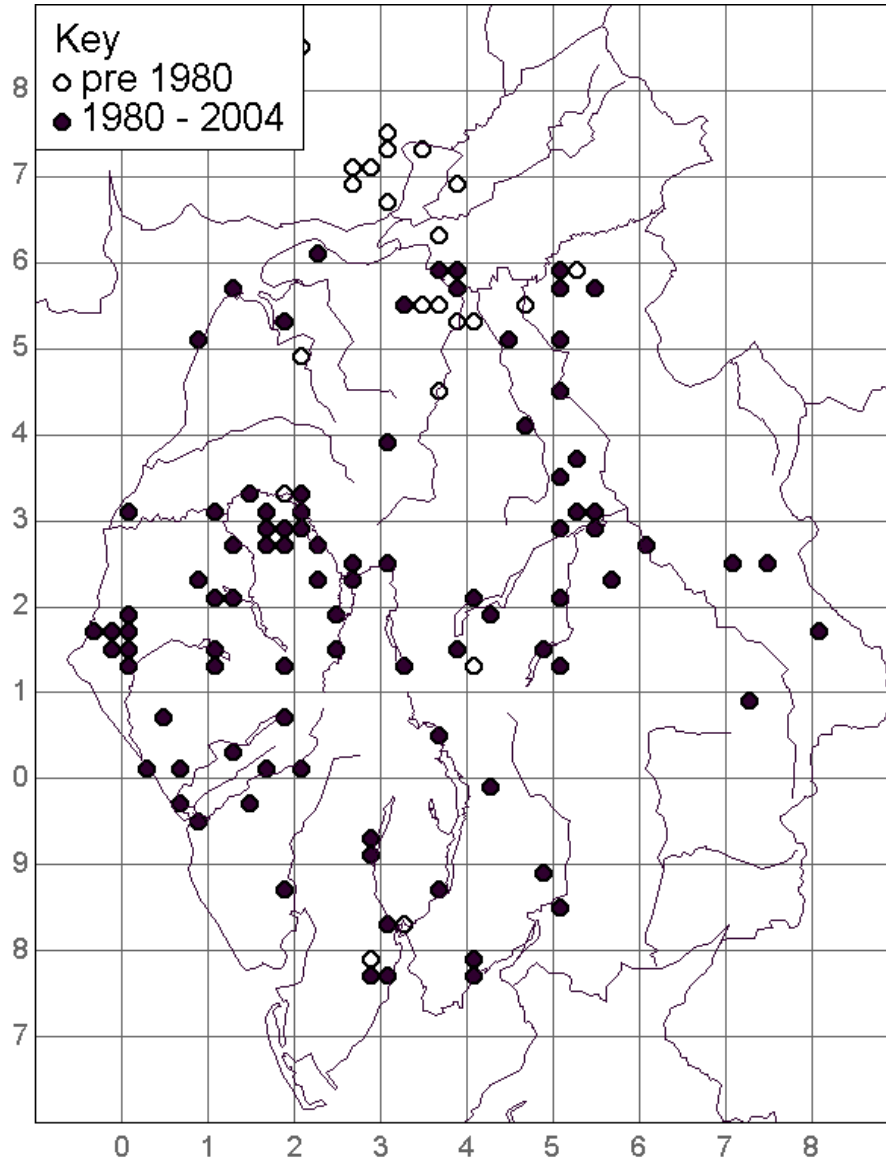
2-spot Ladybird

Adalia 2-punctata



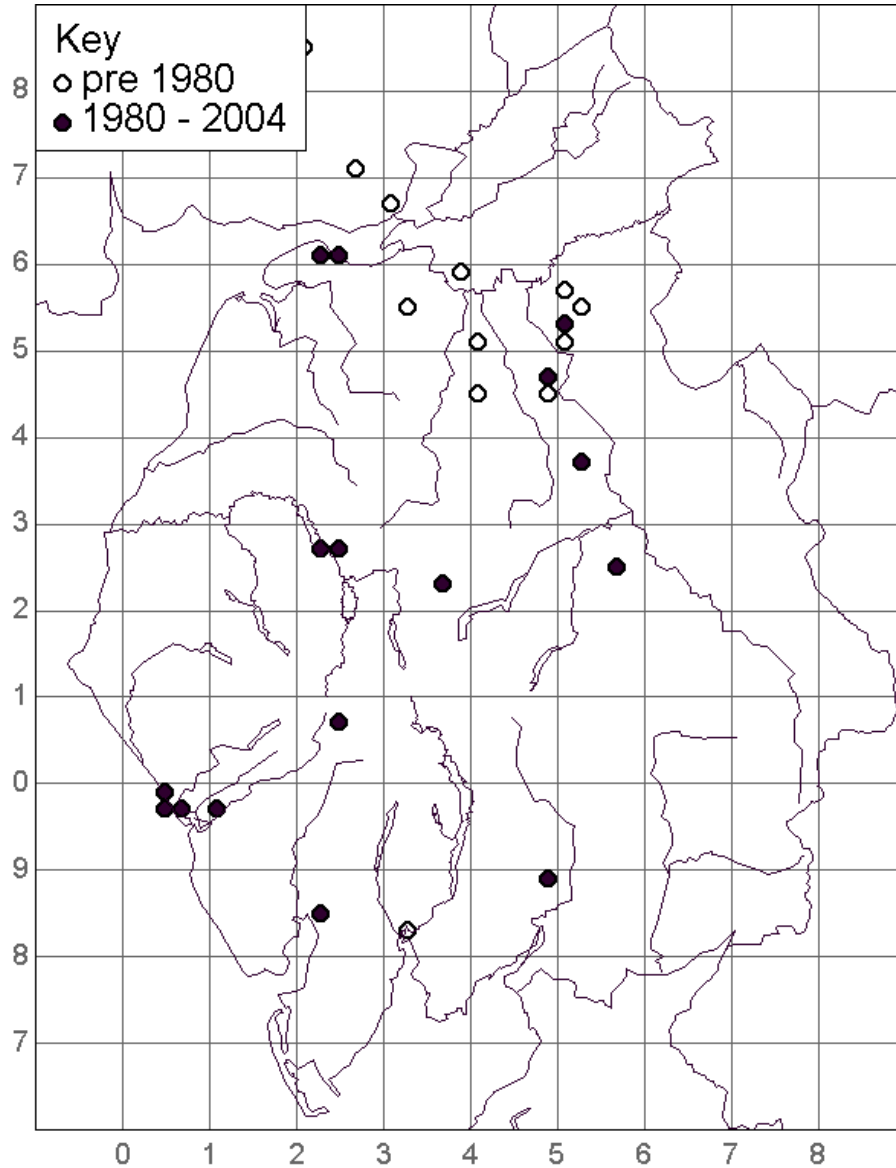
A 4-5.5mm long variably marked and coloured ladybird with black legs. The most common form is red with two black spots, melanic forms with red spots on black are also frequent. It occurs in most habitats feeding on aphids and often arrives in vast migrations from the continent. Common and widespread in Cumbria.

10-spot Ladybird *Adalia 10-punctata*



A small (5mm) ladybird. It is a very variable insect, the most common form being orange-yellow with black spots but there are also various melanic forms. It can be separated from similar forms of the 2-spot Ladybird by always having pale legs and a brown underside. The melanic chequered form of the 10-spot could be confused with a heavily marked 14-spot, which also has pale legs. However the apical antennal segment of the 14-spot is rounded at its tip, but is squared off in the 10-spot. Generally common in most habitats though it has a preference for trees and bushes in woods where the larvae feed on aphids. It is very common and widespread in Cumbria.

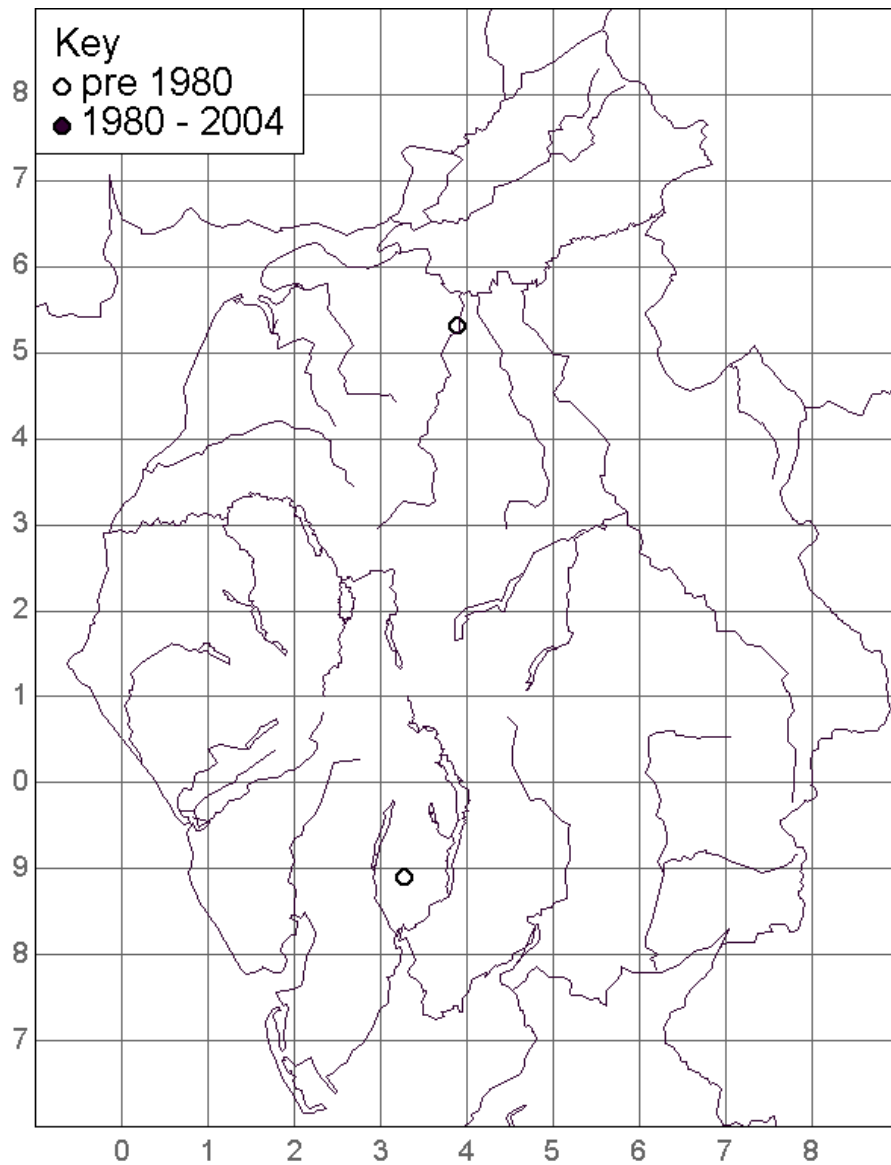
Hieroglyphic Ladybird *Coccinella hieroglyphica*



A variably marked ladybird. It generally has 3 black spots on each orange/brown elytron, as well as a black scutellary spot. The foremost elytral spot is elongate and often fused with the second spot. It inhabits moors and lowland heathland, feeding on Heather Beetle larvae. Widespread but possibly local. It has a thinly scattered distribution in Cumbria, generally in heathy areas.

5-spot Ladybird

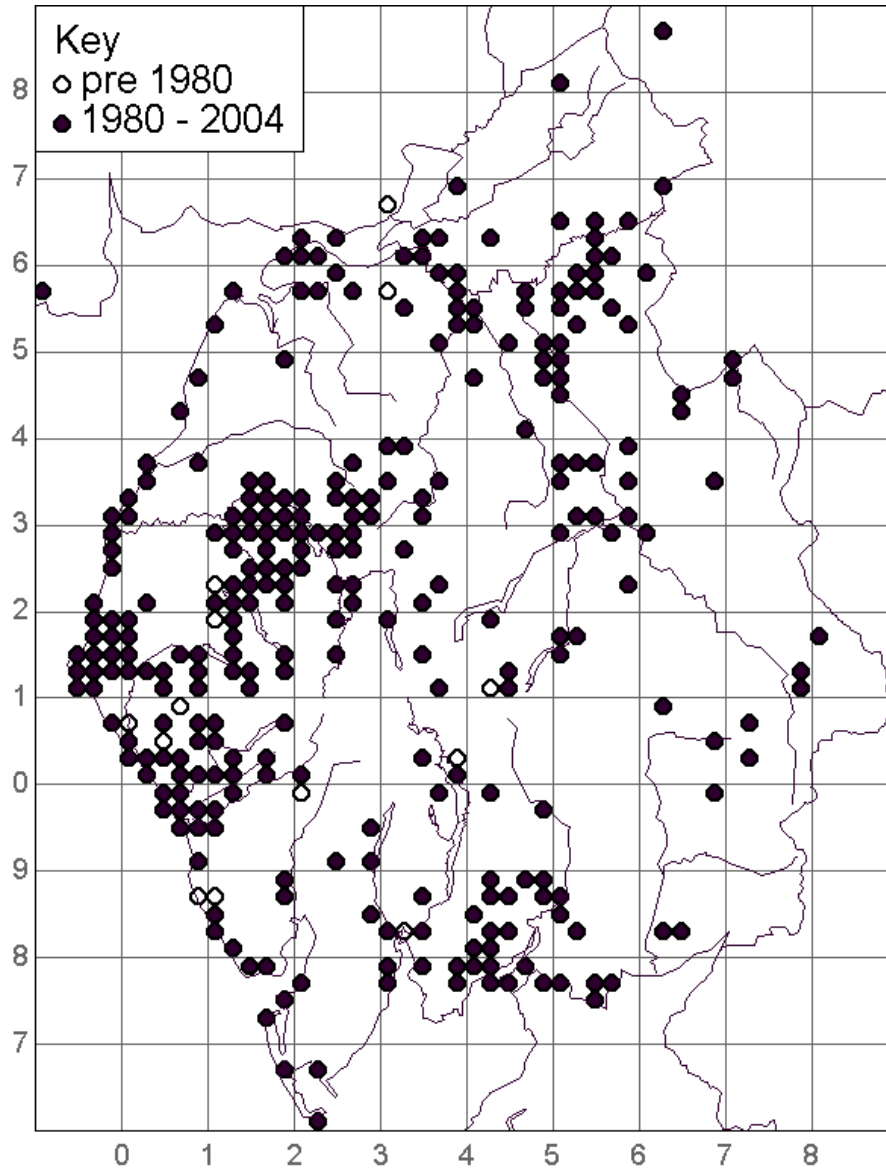
Coccinella 5-punctata



A small red and black ladybird, 4-5mm long. There is one large and one small black spot on each elytron in addition to a black scutellary spot. It is a rarity of river shingle banks in Devon, South Wales and N.E. Scotland. Only reported twice in Cumbria; from the River Caldew in 1922 and the Rusland Valley in 1973

7-spot Ladybird

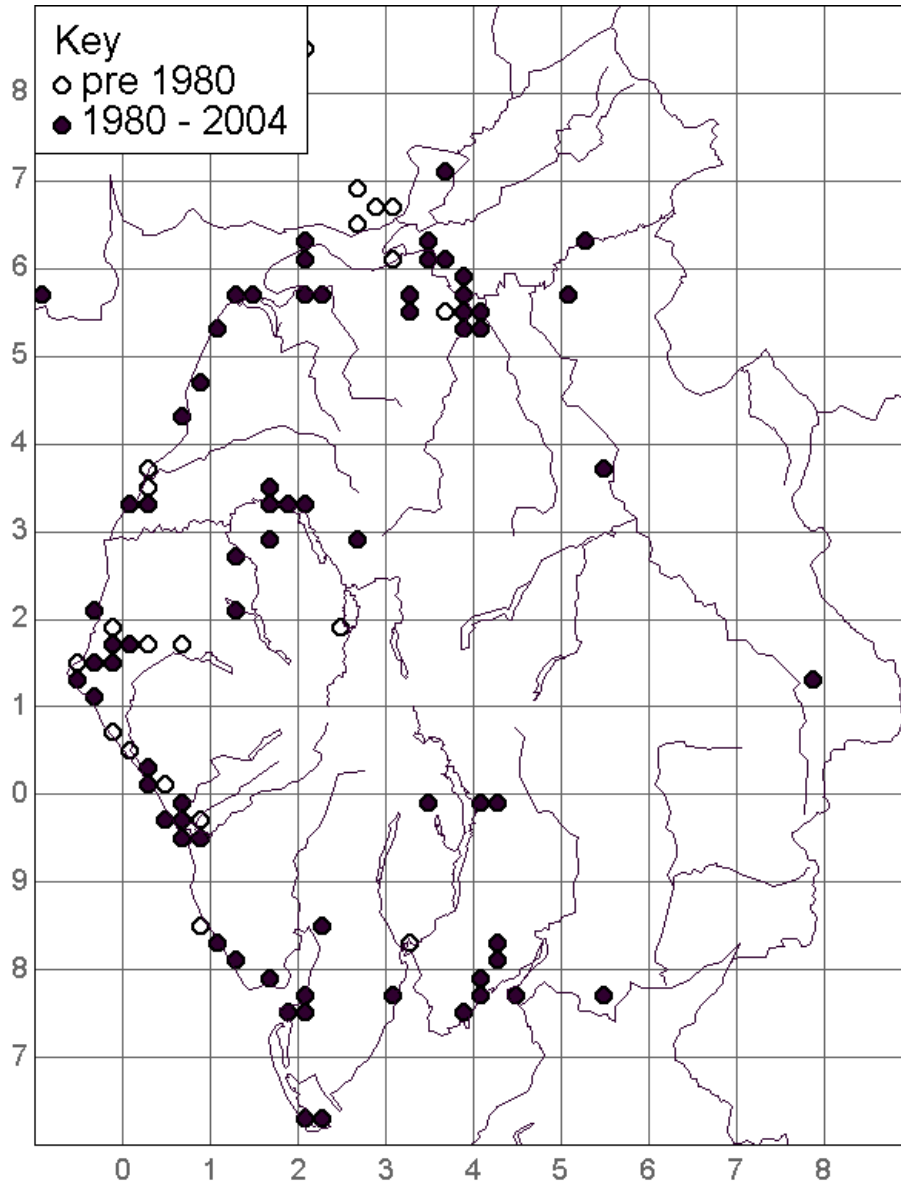
Coccinella 7-punctata



A 6.5-8mm long red ladybird with 7 black spots. Found in gardens, hedgerows etc. The larvae feed on aphids. Very common, often with vast immigrations from the continent.

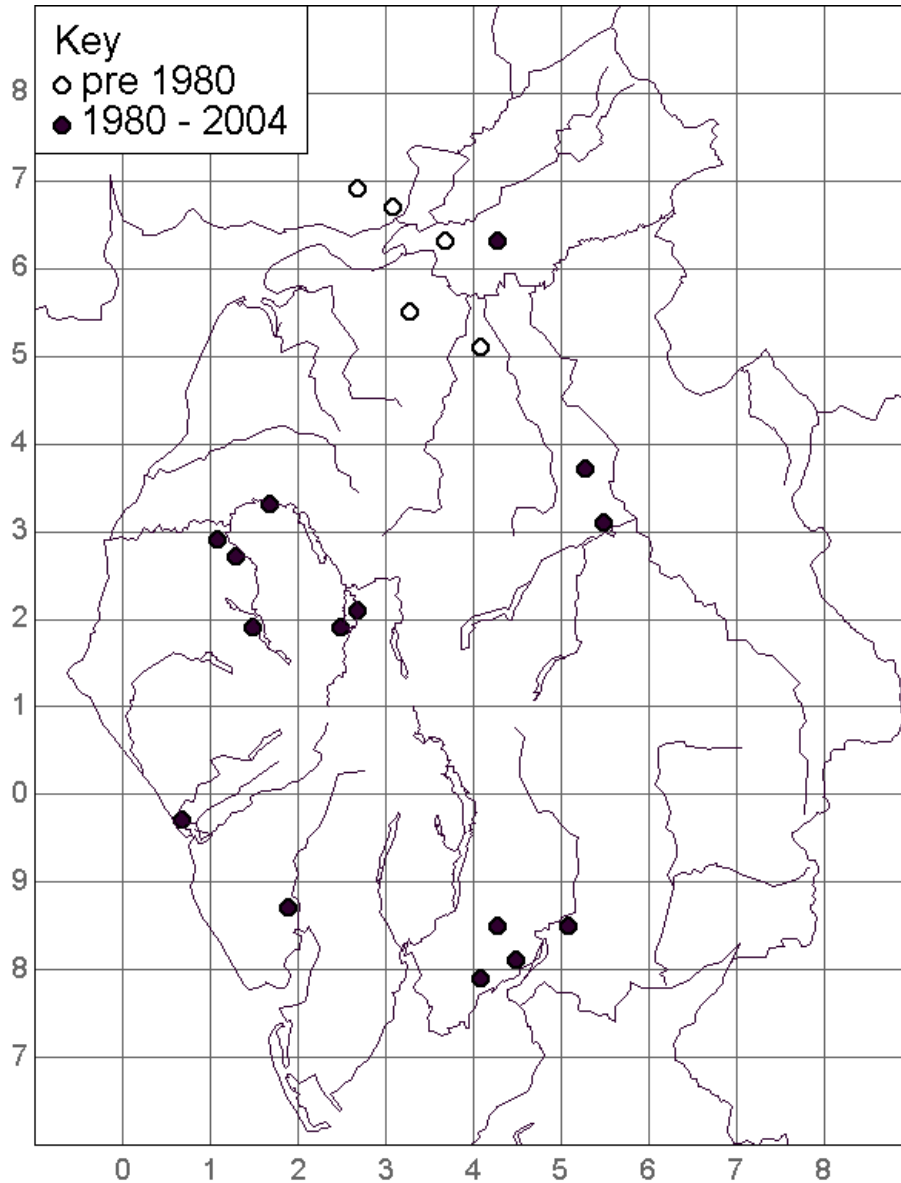
The Scarce 7-spot Ladybird is not mapped and has been recorded only once in Cumbria, from the Grange-over-Sands area in 1990. This rare species is associated with wood ants which are themselves decidedly scarce in Cumbria.

11-spot Ladybird *Coccinella 11-punctata*



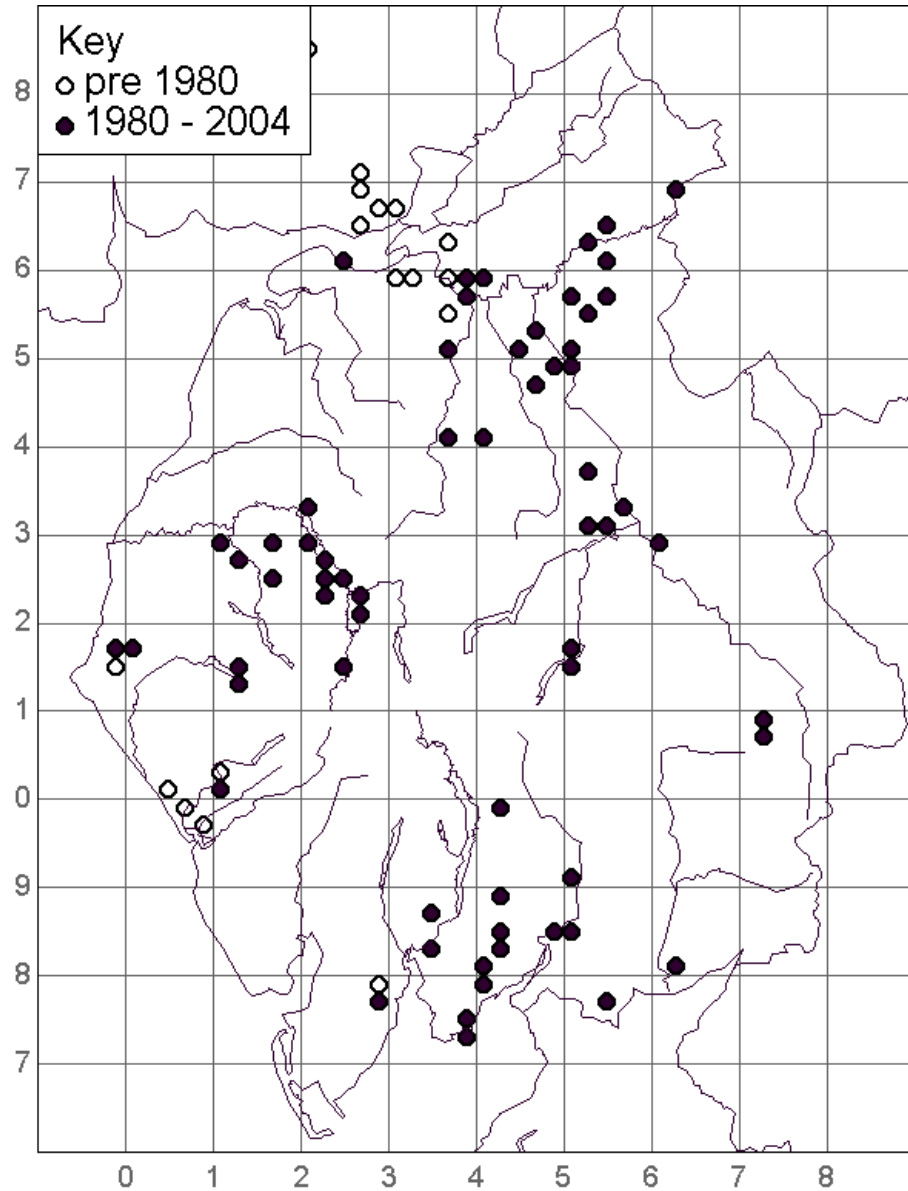
A 5mm long red ladybird with 11 black spots. Locally common in certain habitats, particularly on the coast and on heathland, but migratory so can occur well away from typical habitat. Mainly coastal in Cumbria, where it is common. Also occurs inland on river shingle banks etc.

18-spot Ladybird *Myrrha 18-guttata*



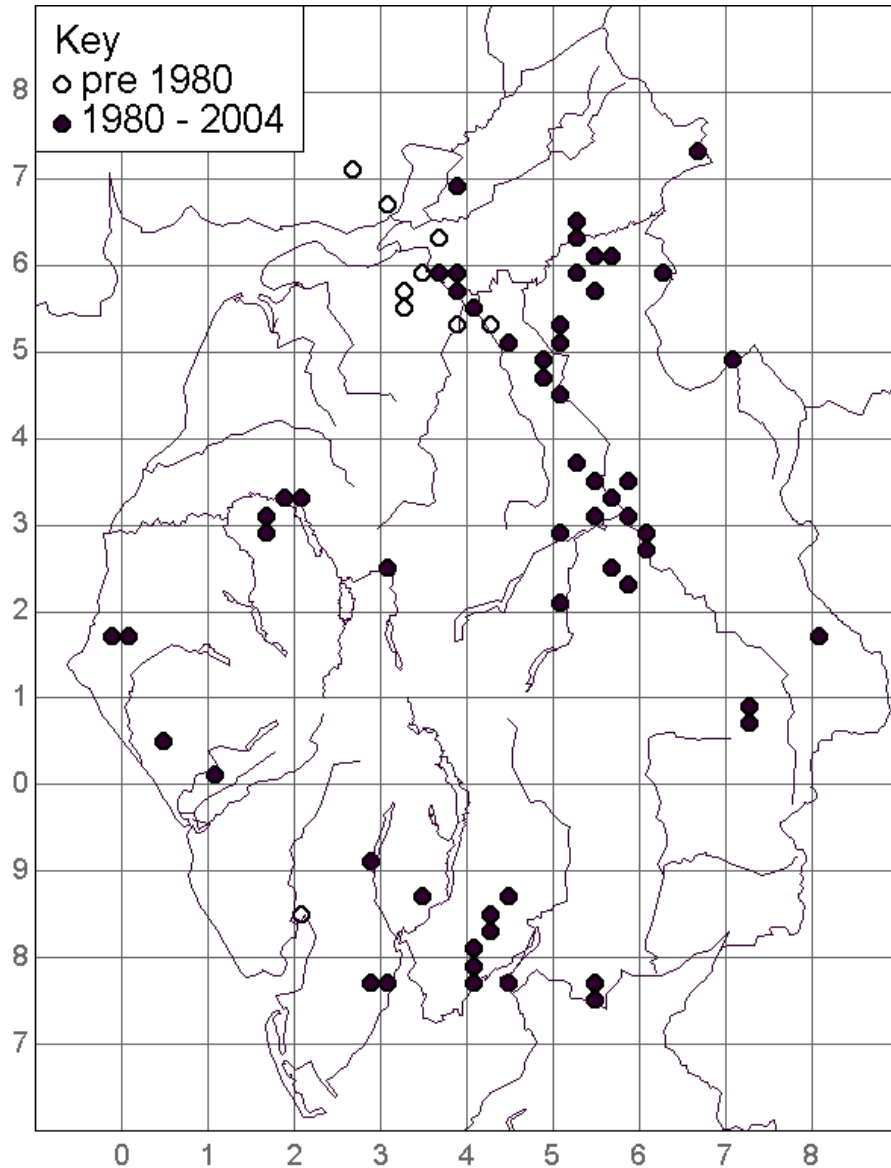
A white-spotted, orange/brown coloured ladybird with a distinctive ‘W’-shaped mark on the base of the elytra. It feeds on aphids in woodland, usually on conifers, including plantations. Very local nationally and in Cumbria.

Cream-spot Ladybird *Calvia 14-guttata*

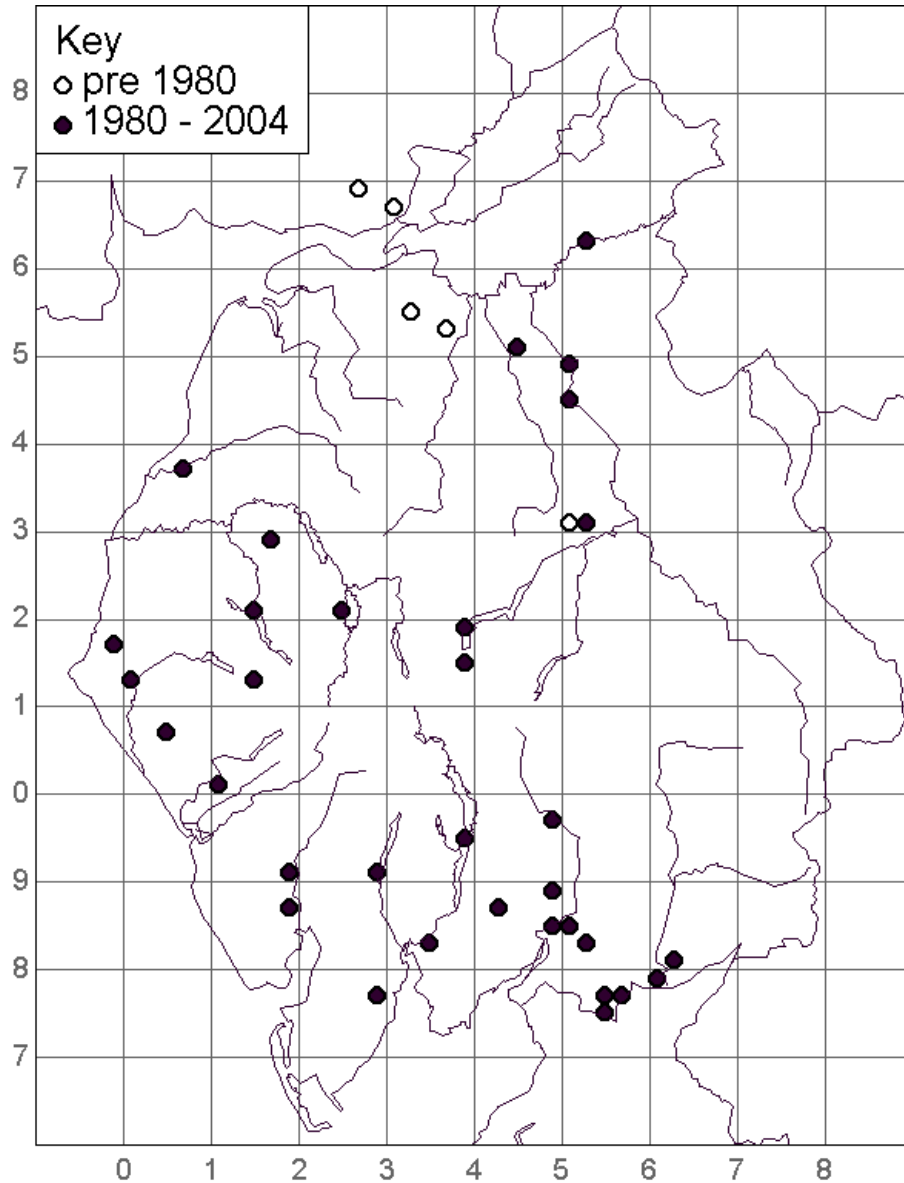


A 5mm long orange-brown ladybird with white spots arranged in neat rows across the elytra. The larvae feed on aphids. Locally common throughout Britain. Widespread and not uncommon in Cumbria.

14-spot Ladybird *Propylea 14-punctata*

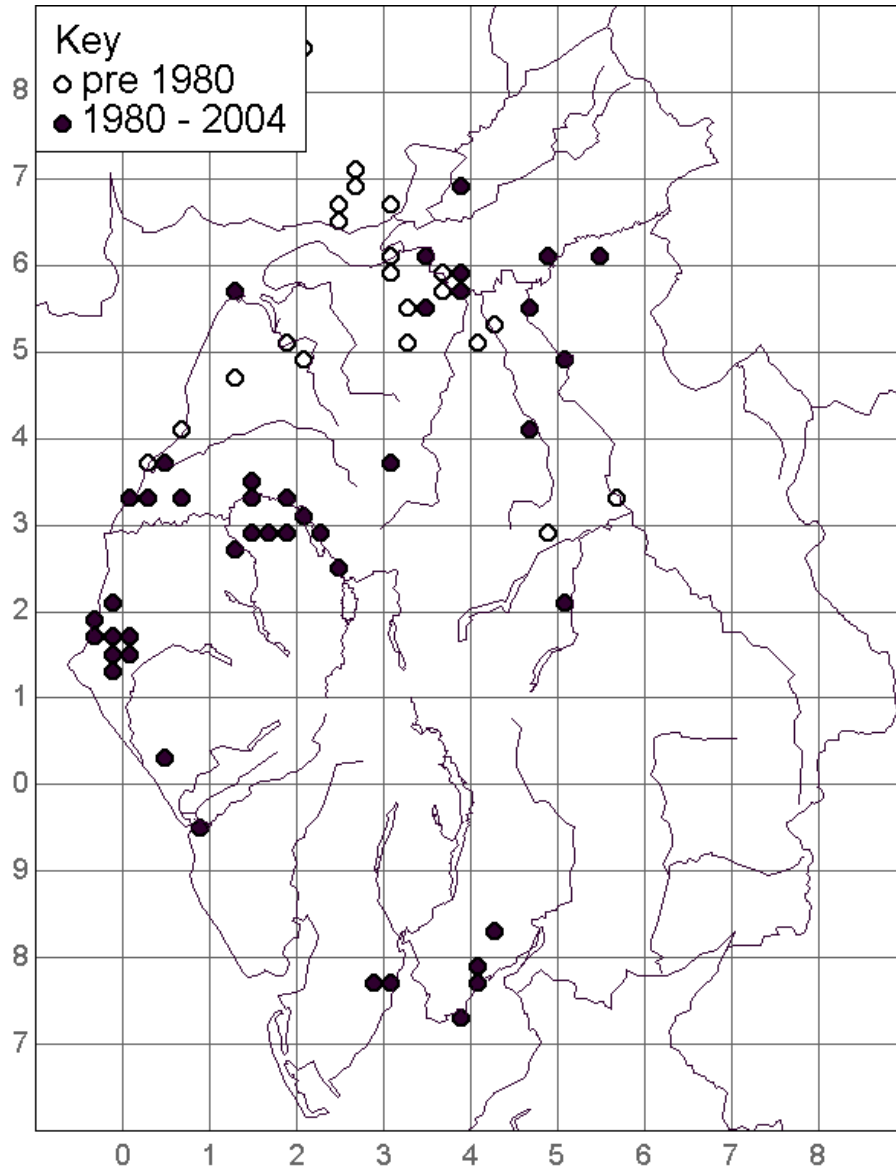


Orange Ladybird *Halysia 16-guttata*



An orange ladybird with white spots. Feeds on mildew in grassland, wood margins etc. Particularly favours Sycamore trees. Formerly very local in south west Britain, this species has increased in range and numbers in recent years and is becoming increasingly common in Cumbria.

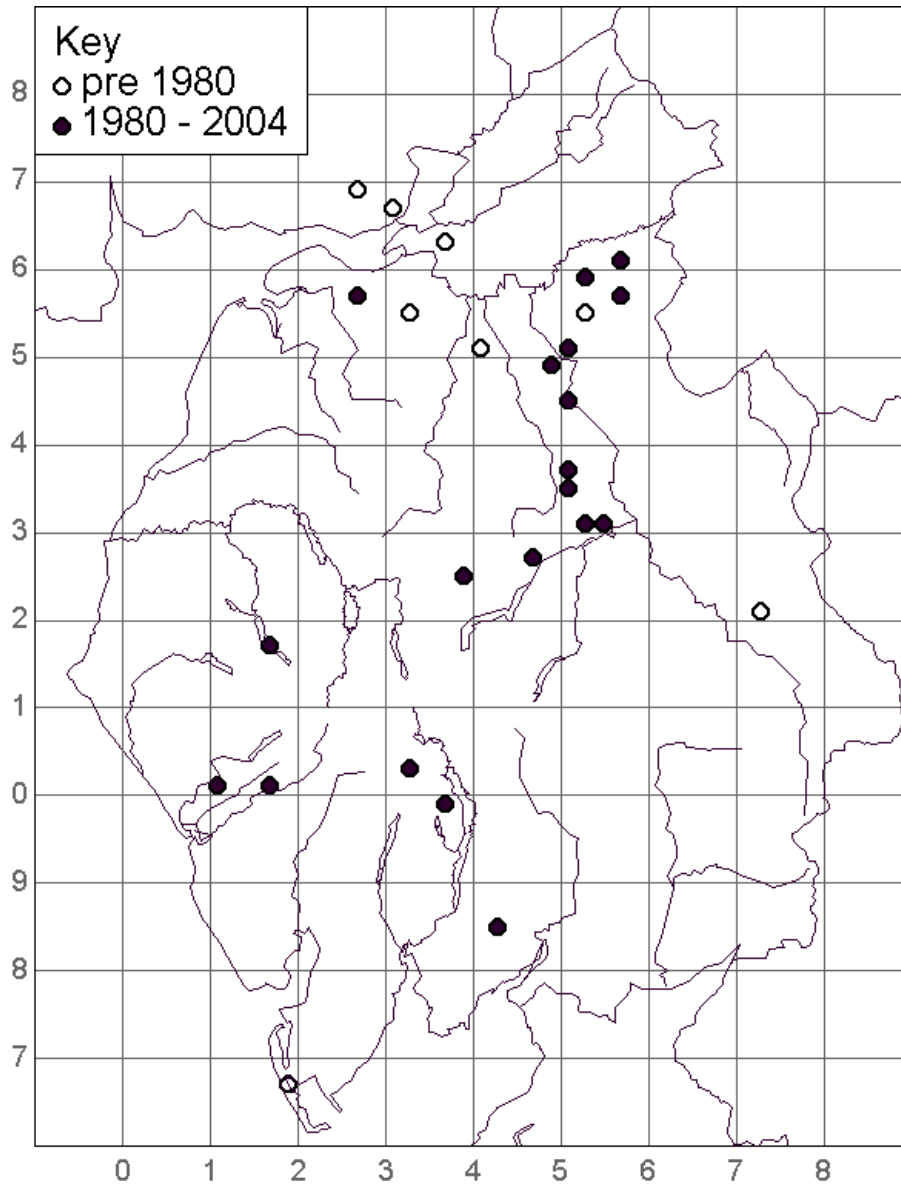
22-spot Ladybird *Psyllobora 22-punctata*



A small (3.5-4.5mm), yellow ladybird with 11 black spots on each elytron and no scutellary spot. Widely distributed and generally common on low vegetation in southern Britain. Both adults and larvae feed on mildews. Its colour pattern varies very little. It can be found from April until August. The species appears to be rather local in Cumbria where it is near the northern edge of its range.

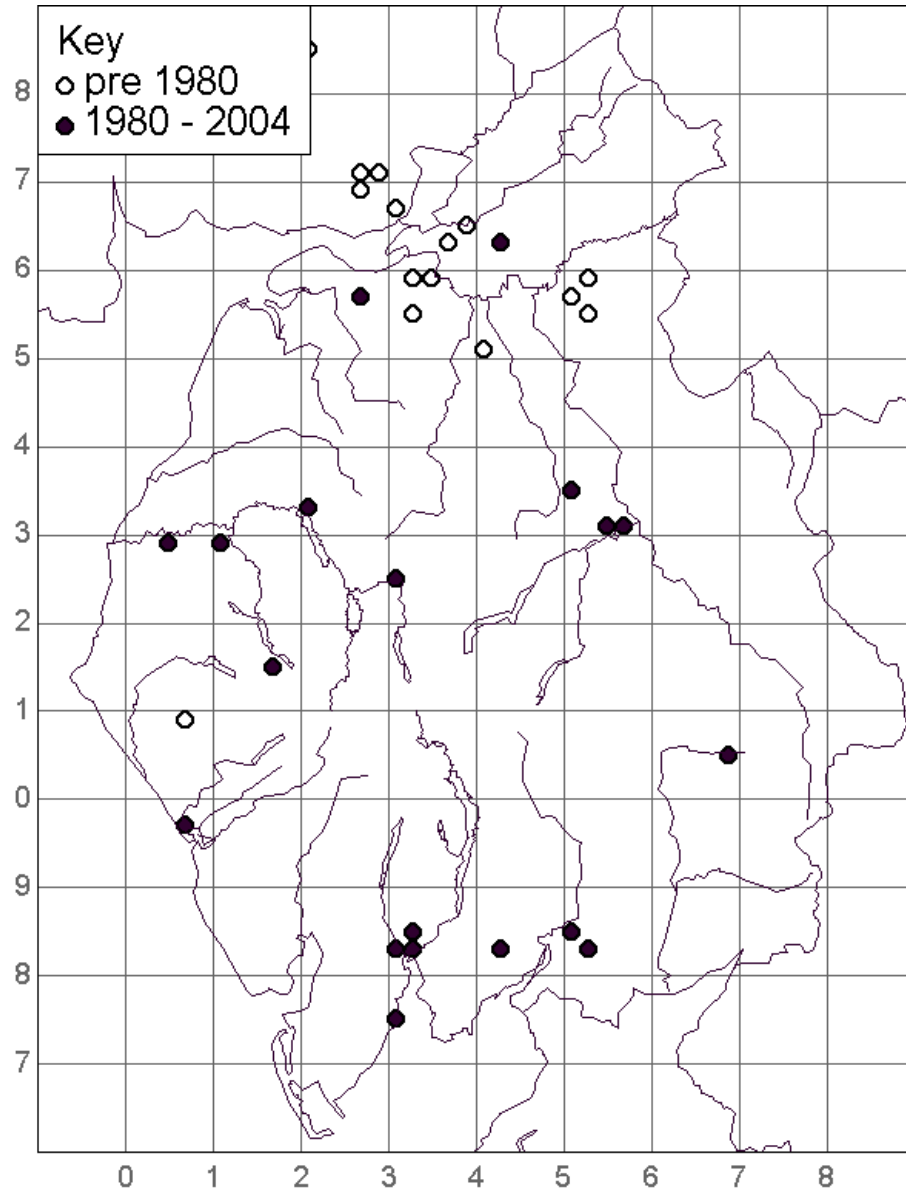
Eyed Ladybird

Anatis ocellata



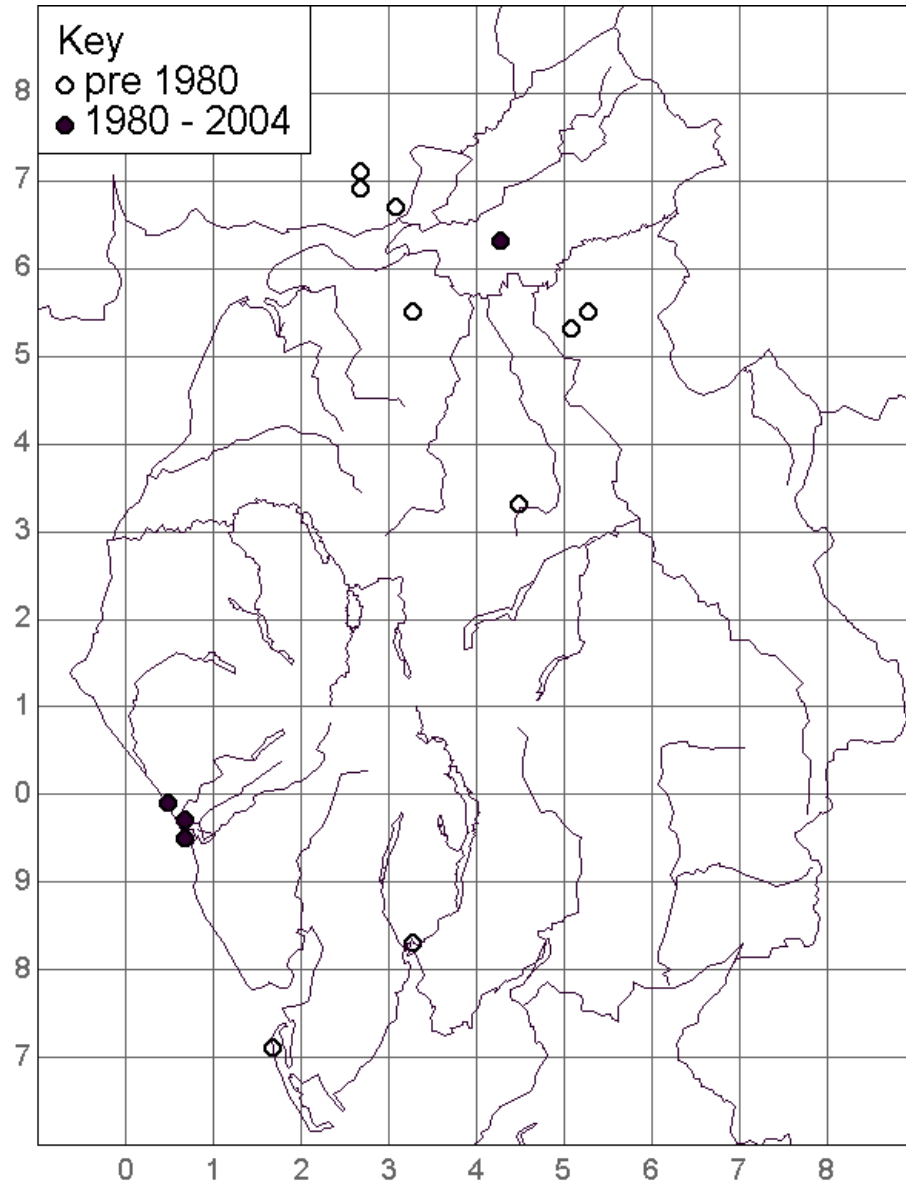
A large (7-9mm long) distinctive ladybird with characteristic black and white markings on the pronotum and usually with pale rings around dark spots on the reddish elytra. Associated with conifers but also found on other trees where it feeds on aphids. Scots Pine is the preferred tree species for this ladybird in Cumbria.

Striped Ladybird *Myzia oblongoguttata*



A large brown ladybird, 6.5-8mm long, with elongate pale marks. Associated with Scots Pine trees where it feeds on aphids. Widespread but somewhat local, both nationally and in Cumbria.

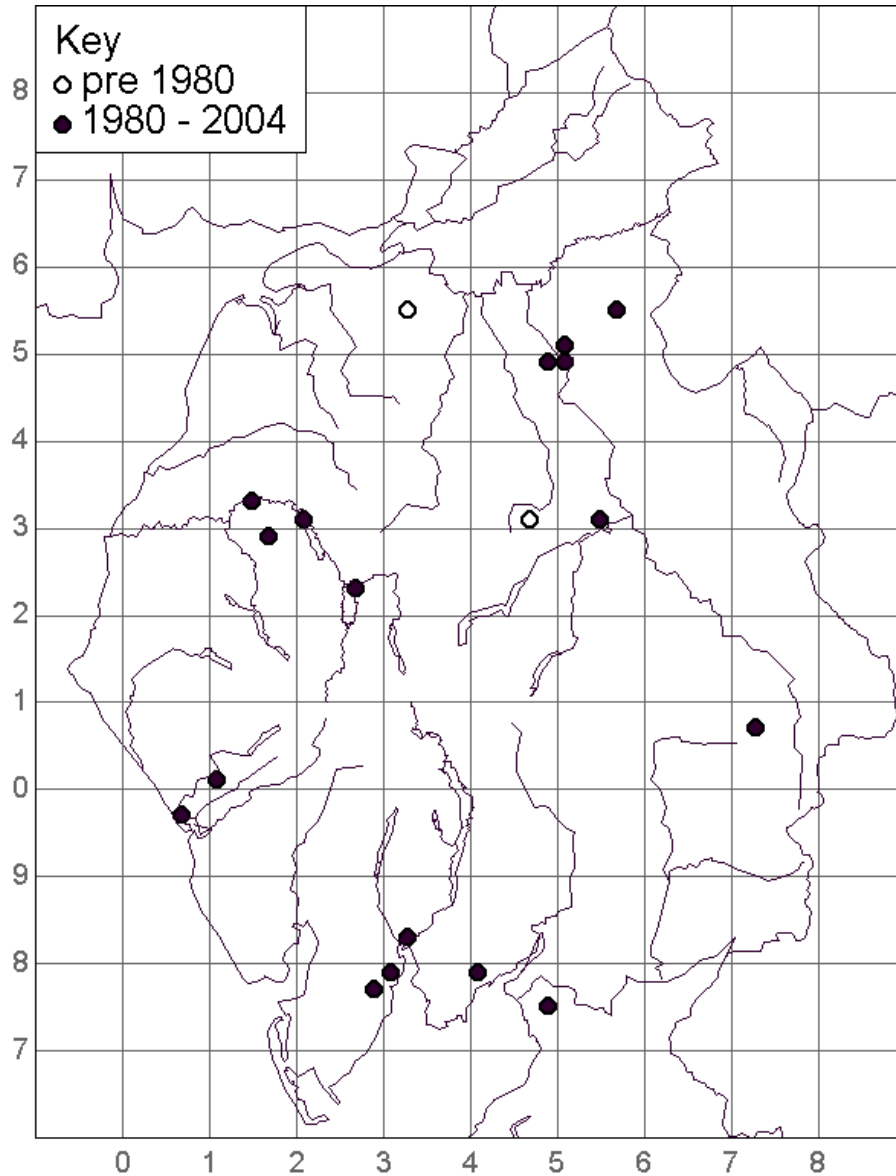
Heather Ladybird *Chilocorus bipustulatus*



A largely black ladybird with an expanded flange around the edge of the elytra and pronotum. Red markings on the elytra form a band or row of 2-3 small spots across the middle of the elytra. Found in dry heathy places and on conifers. Local in Cumbria.

Kidney-spot Ladybird

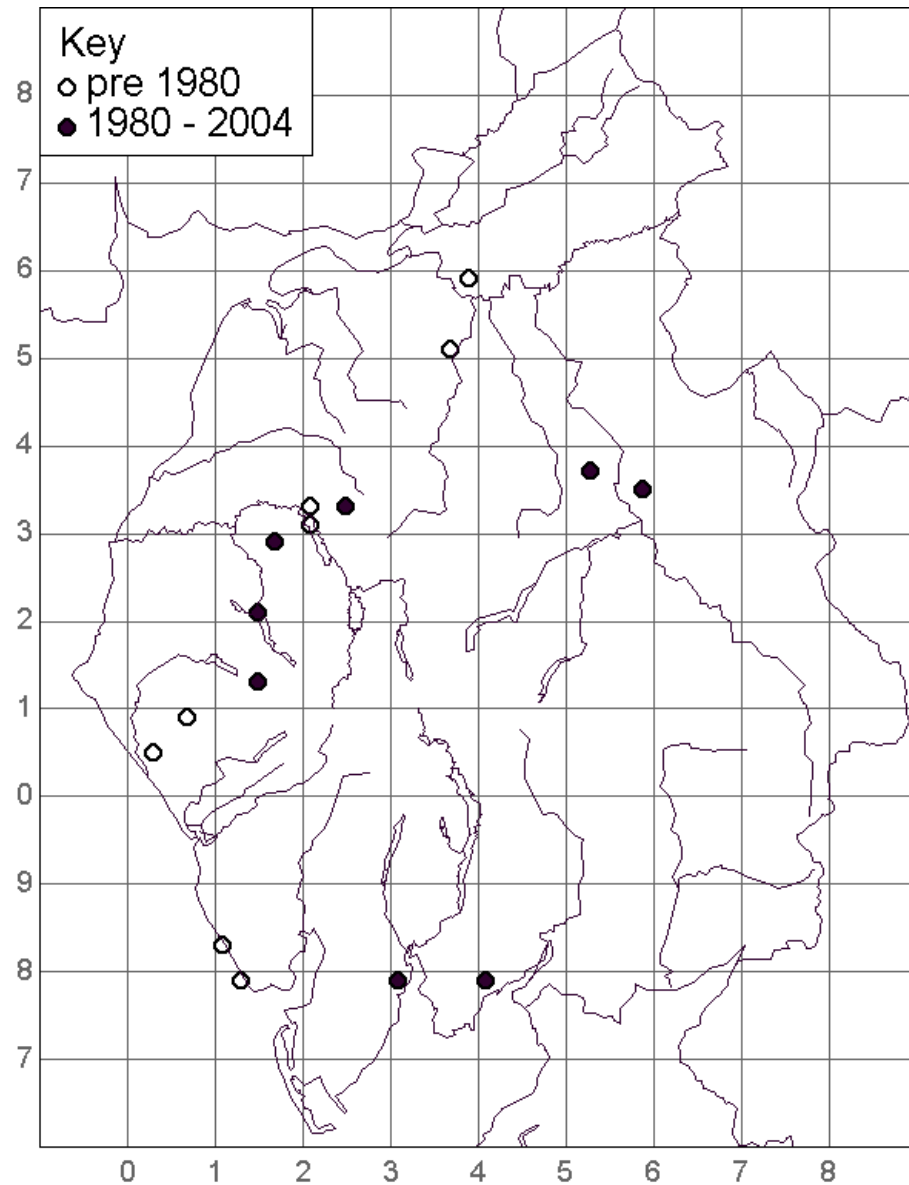
Chilocorus renipustulatus



A strongly domed shiny black ladybird with an expanded flange around the edge of the elytra and pronotum. 2 red spots on the elytra are often kidney-shaped. Feeds on aphids on trees, especially willows. Widespread and common nationally, most often in wet places. Apparently rather local in Cumbria.

Pine Ladybird

Exochomus quadripustulatus



A 5mm long strongly domed black ladybird with an expanded flange around the edge of the elytra and pronotum. An irregular shaped red spot at the front and back of each elytron. Feeds on aphids on conifers. Said to be common in plantations throughout Britain, but apparently local in Cumbria.

The Cumbria Biological Records Database at Tullie House Museum

Tullie House Museum operates a local biological records centre covering the county of Cumbria. Over 300,000 records of various wildlife groups, received from various sources, are stored on computer. The Museum aims to record and monitor the status and distribution of wildlife in Cumbria. The information is used to increase the knowledge of the wildlife of the county and to inform decisions affecting the wildlife and countryside of Cumbria.

The Museum welcomes information and records concerning the flora and fauna of Cumbria.

Please direct all correspondence to The Keeper of Natural Sciences, Tullie House Museum, Castle Street, Carlisle CA3 8TP.

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