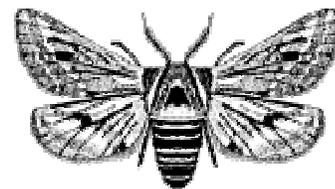


Lepidoptera in Cheshire in 2001

**A Report on the Micro-Moths,
Butterflies and Macro-Moths of VC58**

and a second update on the Cheshire Lepidoptera Atlas Project

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1. Introduction

Welcome to the 2001 report on lepidoptera in VC58 (Cheshire). Hopefully we are now on course to return to an annual report, with the 2002 report planned for the middle of this year. Plans for the 'Atlas of Lepidoptera in VC58' continue apace and hence we are again pleased to present a combined report covering micro-moths, macro-moths and butterflies, rather than separate reports on all three groups. Doubtless observers will again turn first to the group they are most interested in, but please take the time to read the other sections. Hopefully you will find something of interest.

Many thanks to all recorders who have already submitted records for 2001. Without your efforts this report would not be possible. Please keep the records coming!

2. Micro-Moths

A single tenanted mine of *Ectoedemia arcuatella* (H.-S.) was found by Adrian Wander at Ashton's Flash, Northwich SJ6674, on 9th September 2001. The larva was mining Creeping Cinquefoil *Potentilla reptans*, which was growing over one of the many anthills on the site. *E. arcuatella* is normally associated with both Wild & Barren Strawberry *Fragaria vesca*, *Potentilla sterilis*, although it has been found on Creeping Cinquefoil at a few sites recently. As this species is said to favour chalk downland, it was not one I had expected to see in Cheshire, although the lime waste deposits at Ashton's Flash are probably the nearest we will ever get to that type of habitat in the county.

During a visit to Carrington Moss SJ7491 with Kevin McCabe on 11th October 2001, we came across a single vacated mine of *Stigmella continuella* (Stt.), low down on a Downy Birch *Betula pubescens*, by the side of one of the tracks. This is an easily identified mine, the gallery being completely filled with green frass, which originates from a brown, circular blotch. I was therefore surprised to later find a couple of Downy Birch leaves, that I had collected at Lindow Common SJ8381 on 15th August 1999, which contained four vacated, and until now, unidentified mines of *S. continuella*.

Whilst on a visit to Tattenhall SJ4858 on 21st August 1999 with B.T.Shaw, we found a single larval mine of *Stigmella speciosa* (Frey) on lower leaves of a Sycamore *Acer pseudoplatanus*. I found a further three mines by the River Dee at Eccleston SJ4162 on 31st August 1999 and during the autumn 2000 also from Burton Village SJ3174, Sealand Road, Blacon SJ3766, the Bollinurst Valley, High Lane SJ9584, Puddington Lane, Puddington SJ3474, Marbury Country Park SJ6576 and Gibson Wood, Adlington SJ9080. A further four sites were found during 2001. At none of these sites could they be described as being common, with usually only one to three mines being present at each.

One species that has always eluded me in Cheshire has been *Stigmella paradoxa* (Frey). Having found it at a few sites in our neighbouring counties during recent years, I had searched in vain, until a visit to Sound Common SJ6247 on 21st July 2000, produced a mine in one of the roadside Hawthorns *Crataegus monogyna* near the car park. As is often the case, I soon discovered another mine on a field hedge at Bradley Common SJ5045 on a visit there on 18th August 2000.

Following the discovery of *Psychoides verhuella* Bru. larvae in the fronds of Hartstongue *Phyllitis scolopendrium* at Loggerheads Country Park SJ193632 on 2nd May 1998 and finds of both this and *P. filicivora* (Meyr.) at sites in North Wales and Shropshire, Ian Smith has now found *filicivora* in Cheshire. Ian had been checking Hartstongue ferns at a number of sites in the county since 1998 without success, until he came across ferns growing out of the pier of a dismantled railway bridge at Thurstaston SJ235836 on 27th February 2000. Adults were reared, emerging on 6th May 2000. Ian followed up his discovery with two further finds of larvae from Hartstongue ferns growing out of railway bridges along the Wirral Way SJ223849 & SJ219854 on 28th October 2000.

With the capture of four adults of *Bucculatrix thoracella* (Thunb.) in a light trap at Flixton, South Lancashire SJ741938 on 29th July 1999 (K.McCabe), I started to search for the larval mines in Cheshire. Upon arriving at Eccleston SJ4162, on 31st August 1999, I noticed a row of Limes *Tilia* sp. growing opposite the church. Crossing the road to investigate, I soon found a number of the small 'L' shaped mines on the leaves and the white cocoonets on the undersides. Subsequent searches of Lime trees during the next few months failed to find any further colonies away from the north of the county, where they were discovered from a number of sites. However I did find an adult on Lime at Poulton SJ3959 on 11th August 2000, followed by mines at Blacon SJ3867 and Puddington SJ3273 & SJ3474 during the next two months. During 2001, Limes containing colonies of *thoracella* were located at six sites along the Weaver Valley between Northwich & Winsford.

Several tenanted mines of *Parornix finitimella* (Zell.) were found on Blackthorn *Prunus spinosa*, along a roadside hedge, between Alsager and Day Green SJ7857 on 29th September 2001, during a visit with E. Kearns & B. T. Shaw. The larva is greyish with dark legs, which distinguishes it from the green larva of *Deltaornix torquillella* (Zell.), which also mines Blackthorn at this time of year and produces similar mines. Both species were present, with *finitimella* the commoner of the two. Several mines were found on a visit to Davenham SJ6570, with KM; BTS & AW on 13th October 2001, a few of which were still tenanted, as were a few mines at Warmingham SJ7162 & SJ7163 on 17th October 2001.

A few mines of *Phyllonorycter cerasicolella* (H.-S.) were found on Wild Cherry *Prunus avium* in Delamere Forest SJ5471 on 16th October 1999 (SHH; KM). Wild Cherry tends to drop its leaves earlier than many other trees. This may be one reason why *P. cerasicolella* has not been found previously. The lack of any heavy frost and strong winds during the 2001 autumn until late November, extended the leaf mining season and amongst many interesting finds, were a couple more sites for *cerasicolella*. On 13th October, mines were found in the Weaver Valley at Hartford SJ6470 (SHH; KM; BTS; A.Wander) and in Torkington Wood, Hazel Grove SJ9487 on 28th October (SHH).

After hearing of the discovery of *Phyllonorycter platanoidella* (Joannis) mines in Doncaster during autumn 1998 by Ian Heppenstall, I started to look for their presence in Cheshire. I eventually found a number of vacated larval mines on the underside leaves of Norway Maple *Acer platanoides*, not far from the visitor centre, at Sale Water Park on 6th August 1999. Norway Maples were subsequently checked whenever discovered during the following few months, until leaf fall and during October/November, tenanted mines were found at eight additional sites in the county by a number of individuals. At some of these sites the trees held an abundance of mines. At Plumley Village SJ7175 on 15th October, one of the sites where they were particularly abundant, a few mines were collected and adults were reared, emerging the following spring. Additional sites were checked during

subsequent autumns and several new colonies have been discovered, indicating a widespread distribution within Cheshire.

Ian Smith added *Acrolepia autumnitella* Curtis. to the Cheshire list after initially finding it in North Wales. Having found larvae mining the leaves of Bittersweet *Solanum dulcamara* at Llannerch-y-Mor, Greenfield SJ176792 on 26th August 2000, he discovered more larvae in a hedge base across the estuary at Denhall House, Ness SJ295751 on 2nd September 2000, from which adults emerged on 25th September 2000. Larvae have since been found in the Weaver Valley at Hartford SJ6471 on 13th October 2001, from which an adult was subsequently bred (SHH).

A female *Pammene obscurana* (Stephens) came to Sheila Blamire's MV light, in her garden at Mere SJ736813 during May 2001. This birch feeder is scarce throughout the country and should be considered when netting any drab looking tortrix flying around birches in May or June.

Pammene aurita Razo. (= *aurantiana*) started its colonisation of Britain at Kent in 1943, spreading slowly, until 2000, when it finally reached Cheshire (as well as Flintshire and Lancashire). The larvae feed in the seeds of Sycamore *Acer pseudoplatanus*. The adults flying high around the tops of the trees by day and coming later to light. Graham Jones caught the first in his garden light trap at Highfield Road, Birkenhead SJ329863 during August 2000. So far the only other record is across from the opposite side of the county, when one was attracted to a MV sheet trap, being operated by KM at Jackson's Brickwork's, Higher Poynton SJ9484 on 27.7.2001. I would suspect that it probably now occurs at many places in between.

During a walk along the Navigation Cop, Chester SJ3966 on 17th June 2000, Ian Smith netted an unfamiliar tortrix, later determined as *Dicrorampha sequana* (Hub.). This appears to be the most northerly British record, whose larvae feed in the rootstocks of Yarrow *Achillea millefolium* and Tansy *Tanacetum vulgare*. There are particularly large colonies of the latter plant at this site. Ian returned to the site on 5th June 2001 and again found the species to be present, although further along the embankment this time, at SJ3865.

All the species mentioned in this article are new to Cheshire. One of the most unexpected, was the Mung Moth *Muruca vitrata* (Fab.). This was attracted to a MV light trap being operated by Alan Kimber in his Congleton garden SJ8762 on 16th September 2000.

S.H.Hind, County Micro Moth Recorder

3. Butterflies

The year 2001 will long be remembered for the impact of the Foot & Mouth outbreak, which severely restricted conservation work and recording activity, especially in the first half of the year. Data gathered during the year, particularly for single brooded insects that emerged in the spring months (Dingy Skipper, Orange Tip and Green Hairstreak) showed a significant "artificial" decline due to a lack of access to much of the countryside. Despite these restrictions contributors continued to support the Cheshire Butterfly Recording Scheme enabling meaningful comparisons to be made with earlier years. It is, however, apparent that numbers of most species are considerably lower than those seen during the excellent weather conditions of the mid-1990s.

Small Skipper *Thymelicus sylvestris* (Poda) – It was another mediocre year for this insect. Sightings were still widespread, but few localities reported large numbers – 114 at Handforth on 16th July being the exception. At most sites peak counts were made later than normal from late July to early August, probably as a result of weather conditions. Earliest sighting at Heswall on 18th June; latest at Astbury Mere on 21st August.

Large Skipper *Ochlodes venata* (Bremner & Grey) - It was yet another poor year for this insect that appears to have declined rapidly since the mid-1990s. Throughout June numbers remained exceptionally low and it was not until early July that peak numbers were recorded. Even then the only double-figure counts were of 21 at Greasby on 2nd July and 18 at Handforth on the 4th. Earliest sighting at Thurstaston C.P. on 30th May; latest at Crewe Business Park and Arclid S.Q. on 15th August.

Dingy Skipper *Erynnis tages* (L.) – The exceptional wet conditions during 2000-01 winter meant that one of this species prime sites at Ashton’s Flash (Northwich) had largely been underwater for long periods. Fears for the survival of this insect were, however, unfounded as a maximum count of 28 butterflies on 22nd May equalled the highest count of the previous year. It was also encouraging that as a result of conservation work at the nearby Anderton Nature Park a small colony has now become established at this site. Earliest sighting at Thurstaston C.P. on 10th May; latest at Ashton’s Flash (Northwich), Anderton Nature Park and Thurstaston C.P. on 5th June.

Clouded Yellow *Colias croceus* (Geoff.) – It was a poor year for this migrant with only small numbers reaching coastal areas in southern counties. Not surprisingly, even fewer individuals reached Cheshire – Northwich on 2nd June, Great Sutton on 29th June, Moore in late July and Great Sutton on 28th August.

Brimstone *Gonepteryx rhamni* (L.) – No change of status noted during the year with 90% of reports emanating from the main breeding areas in the east of the county. Elsewhere there were an increasing number of sightings along the Mersey Valley, plus isolated reports from the Chester area. Earliest sighting at Nantwich on 30th March, but with warm weather on 1st April producing widespread reports from many localities. November sightings are unusual, but warm weather on the 1st resulted in a record from a garden in Somerford.

Large White *Pieris brassicae* (L.) – Only very small numbers were recorded during the first brood with no noticeable peak. The second emergence was more numerous, although still only appearing in average numbers at most sites – maximum count of 44 at Pickering’s Pasture on 30th July. Warm weather in October resulted in more reports than normal at this time of year and may have involved a partial third emergence. Earliest sighting at Bower’s Brook (Widnes) on 1st April, latest at Holmes Chapel on 27th October.

Small White *Pieris rapae* (L.) - Sightings throughout the year mirrored those of the Large White, with low numbers seen throughout the first brood and only a small peak noted in mid-May. During the second emergence numbers gradually increased during July with peak counts in August. Variations in markings are rare in this insect, but the “*immaculata*” form, lacking any dark markings, was recorded at Chester on 5th June. Earliest sighting at

Appleton on 21st April; latest at Greasby on 22nd October.

Green-veined White *Pieris napi* (L.) - This butterfly had another good year, probably aided by the damp weather conditions that it prefers. It was again the most widely distributed “white” in Cheshire, especially in the upland areas in the east of the county. As usual the second emergence was the most numerous, with distinct peaks in mid-July and mid-August. Earliest sighting at Caldby Nature Park on 7th April; latest at Neumann’s Flash (Northwich) and Marbury on 8th October – these latter reports possibly indicating a small third emergence.

Orange Tip *Anthocharis cardamines* (L.) – Limited access to the countryside during the main flight period meant that it was difficult to assess whether it was a good year for this butterfly. 2001 certainly began slowly due to poor weather conditions and there were hardly any sightings before late April, but a warm spell in early May then produced a large emergence throughout the county. During this period good numbers were recorded at Woolston Eyes, whilst at Vale Royal Locks on 11th May there were 30+ insects around a single patch of Large Bittercress where females were egg-laying. Earliest sighting at Stoak on 14th April; latest at Pott Shrigley on 25th June.

Green Hairstreak *Callophrys rubi* (L.) – Due to the Foot & Mouth restrictions the majority of breeding sites were not visited during the year, although numbers appeared fairly typical at localities where access was possible. Even though the Green Hairstreak is not normally found away from its breeding localities there is some evidence to suggest that a few individuals disperse from their breeding colonies – on 22nd May an individual was found on the edge of Delamere Forest in an area where its foodplants do not occur and two miles from the nearest known colony. Earliest sighting at Abbots Moss on 1st May; latest at Tegg’s Nose C.P. on 3rd June.

Purple Hairstreak *Quercusia quercus* (L.) - Due to its elusive habits it is quite likely that many casual recorders may never have seen this butterfly in Cheshire. Records show, however, that it is the most widespread species of hairstreak in the county. This year sightings from Styperson, Plumley Nature Reserve, Moss Wood (Moore), Lindow End and Elworth were from tetrads where the insect had not previously been recorded. Earliest sighting at Neston on 5th July; latest at Marbury C.P. on 29th August.

White-letter Hairstreak *Satyrrium w-album* (Knoch) – The status of this inconspicuous insect in Cheshire has always been regarded as either “rare” or “scarce”, but in the light of recent discoveries this assessment may need revising. In the past few years’ further colonies have regularly been found at new sites with 2001 continuing this pattern. This year there were sightings from 15 previously unrecorded localities on the Wirral and in the southwest of the county. The White-letter Hairstreak remains much scarcer in the east of Cheshire with just a single butterfly recorded this year at Bath Vale Meadow. Earliest sighting at Thurstaston C.P, Chorlton, Mollington and Lea-by-Backford on 1st July; latest at Wellfield Meadow on 14th August.

Small Copper *Lycaena phlaeas* (L.) – Since the mid-1990s there has been a dramatic decline in the abundance of this butterfly. The most likely explanation for this decline is that it is an insect that is particularly prone to extreme weather conditions, with cool wet summers producing a significant fall in numbers. There is, however, some evidence to suggest that numbers may now have stabilised, although at a much lower level than a few years ago. Highest count in 2001 was of 16 at Runcorn Hill on 22nd August. A few sightings in late September and October could have indicated a very small third brood. Earliest sighting at Ashton's Flash (Northwich) on 11th May; latest at Heswall on 23rd October.

Silver-studded Blue *Plebejus argus* (L.) – After four years of steadily decreasing numbers at the introduced colony at Thurstaston Common there was encouraging news this year. The earlier decimation of the heather caused by heather beetles appears to be over, with the result that there was a peak count of 34 insects on 12th July, compared to a maximum count of only four individuals in 2000. Sightings at this locality recorded from 26th June to 8th August.

Common Blue *Polyommatus icarus* (Rott.) – Loss of habitat by modern farming techniques is no doubt one of the main reasons why this butterfly is faring so badly in Cheshire. There was little encouraging news during 2001, although the Common Blue was seen on Hilbre Island – a locality from where there has been no information in the last few years. Largest counts of 40 at Leasowe on 5th June, 35 at Oakmere on 10th August and 56 at Pickering's Pasture on 27th August. Earliest sighting at Hilbre Island on 13th May; latest at Delamere Forest on 23rd October.

Holly Blue *Celastrina argiolus* (L.) – Numbers, especially during the spring brood, were again much lower compared with peak figures seen during 1998 and early 1999. Sightings this year were thinly spread across the county, but with the highest concentrations emanating from the Wirral. As expected, most reports were of butterflies seen around parks and gardens. Earliest sighting at Holmes Chapel on 23rd April; latest at Saltney, Greasby, Adlington, Macclesfield, Bollington and Croughton on 28th August.

Red Admiral *Vanessa atalanta* (L.) - This annual visitor from the Continent was relatively scarce in the first half of the year, although numbers were more typical later in the season. An exceptionally warm spell in October and early November resulted in far more late sightings than normal during this period. Observations of actual migration are rarely seen in Cheshire due to a restricted coastline, but 200+ passed Hilbre Island in ones and twos on 19th October with many more seen across the estuary. Earliest sighting at Macclesfield on 21st April; latest at Holmes Chapel on 30th November.

Painted Lady *Cynthia cardui* (L.) – It was a fairly poor year for this migrant with the majority of sightings confined to the month of August. Reports tended to be widespread, but the butterfly was invariably only found in ones and twos with no locality recording a count in double-figures. Earliest sighting at Anderton Nature Park on 22nd May; latest at Hilbre Island on 19th October.

Small Tortoiseshell *Aglais urticae* (L.) – There were very few sightings of this butterfly until early April when small numbers finally emerged. Breeding season records were conflicting, although most areas showed definite signs of recovery with reports from 62% of recorded tetrads, compared to 50% in 2000. This improvement was, however, not evenly spread across the county with some areas, especially the Wirral, showing no signs of any improvement. A count of 160 taking nectar from thistles at Old Pale Farm (Delamere) on 23rd July was by far the largest concentration. Earliest sighting at New Ferry on 13th February; latest at Quinta Arboretum on 6th November.

Peacock *Inachis io* (L.) – Only average numbers were seen in the early months. As in 2000 this single brooded insect produced a large emergence over a few days in mid-August when peak numbers were recorded in gardens throughout the county. Impressive counts during this period included 100 at Fiddler’s Ferry on 29th July, 72 at Hooksbank Wood (Bollin Valley) on 15th August and 50 at Frodsham Marshes on 22nd August. Earliest sighting at Thurstaston C.P. on 24th February; latest at Congleton on 9th December.

Comma *Polygonia c-album* (L.) – Relatively few insects were seen after hibernation until there was a small peak in early May. The emergence of the first brood, including the “*hutchinsoni*” form, commenced in early July, reaching maximum numbers later in the month – highest counts of 11 at Handforth Bridge (Dean Valley) on 12th July and 11 at Pickering’s Pasture on 26th July. In the following months individuals of the normal form appeared, with largest numbers recorded in two distinct peaks – mid-August and early October. Earliest sighting at New Ferry on 3rd March; latest at Astbury on 1st November.

Small Pearl-bordered Fritillary *Boloria selene* (D. & S.) – Several butterflies were present on 26th June at Cheshire’s only breeding site on private land at Bagmere. Due to access restrictions, caused by the Foot & Mouth epidemic, no detailed survey work was possible during 2001.

Dark Green Fritillary *Argynnis aglaja* (L.) - This butterfly has not bred in Cheshire since the 1940’s and any sightings nowadays refer to wanderers from colonies beyond our borders. 2001 was a fairly poor year with just a single sighting of one butterfly at Oversley Ford (Styal) on 22nd August.

Speckled Wood *Pararge aegeria* (L.) – Since the early 1990s this butterfly seems to have had continual good years in the county. Records show that in 2001 it was seen continuously in varying numbers throughout the breeding season. Due to the complicated emergence of overlapping broods it is difficult to discern any peaks or troughs in numbers, or whether the butterfly has only two or three breeds during the year. Earliest sighting at Nantwich on 16th April; latest at New Ferry on 1st November.

Wall *Lasiommata megera* (L.) – There are still no signs of any improvement in the fortunes of this insect, in fact it appears to have become scarcer than ever this year. Statistics show that in 1992 it was seen in 36% of recorded tetrads, whereas this year the figure has fallen to 14%. The Wall is still very thinly distributed from the Wirral coast to the Pennine hills, but it is scarce everywhere with not a single locality recording a double-figure count. The

first brood peaked in late May, whilst the second emergence was slightly larger with a peak in mid-August. Earliest sighting at Heswall on 9th May; latest at Bollington on 9th September.

Grayling *Hipparchia semele* (L.) – As usual the majority of sightings were from coastal localities on the Wirral, although no locality reported significant numbers. Cheshire's only inland breeding colony at Sandbach Flashes had another successful year with a maximum count of 17 butterflies on 27th July. Earliest sighting at Thurstaston on 4th July; latest at Inner Marsh Farm on 14th August.

Gatekeeper *Pyronia tithonus* (L.) – Although this butterfly is now widespread throughout the county it is still most numerous on the Wirral, where the highest count was of 1,000+ at Heswall on 28th July. At most localities the largest numbers of this single brooded insect were seen in mid-July. Earliest sighting at Bowers Brook (Widnes) on 28th June; latest at Denhall Lane (Wirral) was on an unusually late date of 28th September.

Meadow Brown *Maniola jurtina* (L.) - This butterfly was recorded in good numbers throughout Cheshire, with the highest counts at most localities recorded in mid-July. Largest counts were of 1,000+ at Dane-in-Shaw on 2nd July, 800 at Heswall on 5th July and 750+ at Handforth on 16th July. Earliest sighting at Hooksbank Wood (Bollin Valley) on 12th June; latest at Kerridge on 16th September.

Ringlet *Aphantopus hyperantus* (L.) – It was not possible to survey the breeding sites of the Ringlet during 2001 due to the Foot & Mouth restrictions. There is no reason, however, to doubt that the colonies discovered during 1997 in the Wych Valley are not continuing to thrive. Further survey work in the Valley and surrounding area will resume in 2002.

Small Heath *Coenonympha pamphilus* (L.) – Even compared with the early 1990s this butterfly has become much scarcer in Cheshire. This continued decline is all the more puzzling as the population of the Small Heath appears fairly stable in many other parts of the country. Largest counts this year included 23 at Thurstaston C.P. on 5th June and 35 at Leasowe on the same date. As usual the majority of sightings are now restricted to the Wirral coast, Pennine foothills and old industrial land around Northwich. Earliest sightings at Thurstaston and Greasby on 20th May; latest at Ashton's Flash (Northwich) on 10th September.

The database of the Cheshire Butterfly Recording Scheme now contains almost 120,000 records, which ensures we now have a far greater knowledge of the populations and distribution of butterflies in the county. Unfortunately, current data quickly becomes historical and it is important that the present momentum is maintained. Pressures on wildlife seem destined to increase in the foreseeable future and changes in distribution still need to be closely monitored. It would be appreciated if contributors would continue to send details of sightings to the County Recorder. All contributors will receive a free Annual Report.

Barry T Shaw, County Butterfly Recorder

4. Macro-Moths

The year 2001 was far better for both the quality and quantity of moths reported to us compared to the 2000 season. In total we have received reports of 394 species compared with 306 species in 2000. This also reflects an increase in submitted records with a total of 17131 records of 62131 individual moths being received so far compared to 9112 records of 21518 individuals in 2000. For 2002 we currently (January 2003) have 9470 records of 30107 individuals. If you have not yet submitted your records for 2002 please do so as soon as possible. If you have additional records for 2001 (or any other year!) which you have not yet submitted, please send them in to the Cheshire Moth Group Data Officer, Shane Farrell, 15 Westover, Romiley, Stockport, Cheshire SK6 3ER. Electronic submissions are preferred and can be sent to shane.farrell@ntlworld.com but submissions in any format are very welcome. With the current plans to publish an atlas of lepidoptera in Cheshire, *your records really do count and really are appreciated.*

4.1 The Commonest and Rarest Species in 2001

Several species broke through the 1000+ individual barrier with the commonest being shown in the following table. The species are ordered according to the individuals recorded with the corresponding numbers for 2000 shown in brackets. There were clear changes from the abundance of species in 2001, with Garden Carpet, *Xanthorhoe fluctuata*, Silver Y, *Autographa gamma* and Willow Beauty, *Peribatodes rhomboidaria* dropping down the list from 4th, 6th and 7th in 2000 to 12th, 13th and 9th with 816 (601), 774 (555) and 493 (977) records respectively.

Code	Taxon	Vernacular	Records	Individuals	2000 Position
2107	<i>Noctua pronuba</i>	Large Yellow Underwing	698 (402)	19657 (4527)	1
2343x	<i>Mesapamea secalis</i> agg.	Common Rustic agg.	310 (148)	2829 (597)	5
2089	<i>Agrotis exclamationis</i>	Heart and Dart	321 (239)	2788 (816)	3
2321	<i>Apamea monoglypha</i>	Dark Arches	359 (233)	1485 (1156)	2
2190	<i>Orthosia gothica</i>	Hebrew Character	259 (119)	1188 (349)	12
1713	<i>Idaea aversata</i>	Riband Wave	234 (185)	1061 (406)	10
2187	<i>Orthosia cerasi</i>	Common Quaker	186 (74)	1019 (375)	11

At the other end of the spectrum we have received only 1 record of the following species:

Code	Taxon	Vernacular
1828	<i>Eupithecia satyrata</i>	Satyr Pug
2035	<i>Thumatha senex</i>	Round-winged Muslin
2367	<i>Celaena haworthii</i>	Haworth's Minor
1804	<i>Perizoma bifaciata</i>	Barred Rivulet
1996	<i>Furcula bicuspis</i>	Alder Kitten
1709	<i>Idaea subsericeata</i>	Satin Wave
1815	<i>Eupithecia abietaria</i>	Cloaked Pug
1907	<i>Epione repandaria</i>	Bordered Beauty
1674	<i>Jodis lactearia</i>	Little Emerald
1667	<i>Comibaena bajularia</i>	Blotched Emerald
1658	<i>Cymatophorima diluta</i>	Oak Lutestring
1826	<i>Eupithecia trisignaria</i>	Triple-spotted Pug
1940	<i>Deileptenia ribeata</i>	Satin Beauty
2325	<i>Apamea oblonga</i>	Crescent Striped
1970	<i>Perconia strigillaria</i>	Grass Wave

2197	<i>Mythimna straminea</i>	Southern Wainscot
2485	<i>Hypenodes humidialis</i>	Marsh Oblique-barred
2484	<i>Schrankia costaestrigalis</i>	Pinion-streaked Snout
2473	<i>Laspeyria flexula</i>	Beautiful Hook-tip
2132	<i>Xestia castanea</i>	Neglected Rustic
2466	<i>Lygephila pastinum</i>	Blackneck
1885	<i>Abraxas sylvata</i>	Clouded Magpie
2300	<i>Mormo maura</i>	Old Lady
2082	<i>Euxoa nigricans</i>	Garden Dart
2044	<i>Eilema griseola</i>	Dingy Footman
2081	<i>Euxoa tritici</i>	White-line Dart
1720	<i>Orthonama obstipata</i>	Gem
2204	<i>Mythimna obsoleta</i>	Obscure Wainscot

Many of these are expected to be rare in the County. This list does highlight the fact that we are clearly under recording our coastal areas and reed beds. Hopefully this table should enable targeted recording of scarcer species next year.

4.2 Migrants during 2001

A number of interesting migrants were recorded during the season.

Code	Taxon	Vernacular	Records	Individuals
2441	<i>Autographa gamma</i>	Silver Y	389	816
2091	<i>Agrotis ipsilon</i>	Dark Sword-grass	21	24
1984	<i>Macroglossum stellatarum</i>	Humming-bird Hawk-moth	4	4
1716	<i>Rhodomestra sacraria</i>	Vestal	3	3
1720	<i>Orthonama obstipata</i>	Gem	1	1

Humming-bird Hawk Moths, *Macroglossum stellatarum*, were recorded in Higher Poynton, SJ9483, (SHi) on the 4th July, Heald Green, SJ8586, (BTS) on the 9th July, in Wilmslow, SJ8681, (AMB) on the 12th July and at Lynwode House, SJ8154, (MD) on the 25th July. The Gem, *Orthonama obstipata*, appeared in Cheadle Hulme, SJ8786, (GLi) on the 19th August and the Vestal, *Rhodomestra sacraria*, was seen at Marbury Country Park, SJ6576, (PMH) on the 29th September, at Lynwode House, SJ8154, (MD) on the 13th October and in Anderton, SJ6475, (AWa) on the 14th October. Dark Sword-grass, *Agrotis ipsilon*, records were well scattered with the moth being recorded between the 17th May and the 16th October. The majority of records fell in late September and early October.

4.3 Notable and RDB Species

For the second year running, the only RDB species recorded in Cheshire was Sandhill Rustic, *Luperina nickerlii*, (RDB2) recorded at its only Cheshire site on the Wirral in August. The National Notable species recorded were:

Code	Taxon	Vernacular	Records	Status	Grid
2248	<i>Dryobotodes eremita</i>	Brindled Green	30	Nr	See below
0373	<i>Synanthedon tipuliformis</i>	Currant Clearwing	1	Nb	SJ5370 (AW)
2325	<i>Apamea oblonga</i>	Crescent Striped	1	Nb	SJ4575 (SHo)
1996	<i>Furcula bicuspis</i>	Alder Kitten	1	Nb	SJ5785 (JCl)
2485	<i>Hypenodes humidialis</i>	Marsh Oblique-barred	1	Nb	SJ4575 (SHo)
1970	<i>Perconia strigillaria</i>	Grass Wave	1	Nb	SJ5865 (AW)

Records of Brindled Green, *Dryobotodes eremite*, were received from SJ3286, SJ4575, SJ4793, SJ5095, SJ5395, SJ6576, SJ7381, SJ8154, SJ8884, SJ9390, and SJ9483.

Belted Beauty, *Lycia zonaria*, was not recorded in 2001 as far as we are aware – presumably due to the access restrictions caused by the foot-and-mouth outbreak which curtailed so much early season recording.

4.4 Early Season

We continue to receive relatively few records of even quite common early season moths. Spring Usher, *Agriopis leucophaeria*, was recorded at only four sites this year (Romiley, SJ9390 (SFa), Moore, SJ5986 (JCI), Davenham, SJ6571 (AWa) and Mere, SJ7381 (SBI)) – up by one from last years records. This is probably due to a lack of recording effort at the relevant time of the year; this year's records were grouped in early February. You can really help with records simply by getting the garden trap out during late January and early February. Orange Underwing, *Archiearis parthenias*, was recorded at two sites; Caldy Hills, SJ2285 and Moore, SJ5986 (Both JCI). Early April also produced three records of Mottled Grey *Colostygia multistrigaria* from two sites; Mere, SJ7381, (SBI) and Higher Poynton, SJ9483, (SHi).

4.5 Late Spring and Early Summer

May produced a number of exciting records. Triple-spotted Pug, *Eupithecia trisignaria*, at Thurstaston, SJ2284, on the 11th May was only our third recent record (JCI). The 12th of May produced our only 2001 record of Grass Wave, *Perconia strigillaria*, from their strong hold at Little Budworth Country Park, SJ5865, (AW). The 22nd produced Burnet Companion, *Euclidia glyphica*, at Thurstaston, SJ2482 (JCI).

Towards the end of May, the 24th saw both Alder Kitten, *Fercula bicuspis*, and Alder Moth, *Acronicta alni*, at Moore, SJ5785, (JCI). The Alder Moth, *Acronicta alni*, was also found at Witton Lime Beds, SJ6675 (AW), and at Etherow Country Park, SJ9792 (SFa, PG) on the 27th. This trip to Etherow also produced a record of White-pinion Spotted. This is the first record in the eastern valleys of the County.

The 13th June produced the 17th VC58 record of Little Emerald, *Jodis lactearia*, at Higher Poynton SJ9483 (SHi). 14+ Currant Clearwings, *Synanthedon tipuliformis*, were seen in central Cheshire (Eddisbury Fruit Farm SJ5370) attracted to pheromone lures (AW) on the 22nd of June. This is a significant record of this seldom seen species. The 23rd produced our 4th recent VC58 record of Satin Wave, *Idaea subsericeata*, together with our 8th recent record of Satyr Pug, *Eupithecia satyrata*, at Caldy Hills, SJ2285 (JCI). The 29th produced a record of 9 Chimney Sweeper, *Odezia atrata*, at Hooksbank Wood, SJ8182 (BTS) and 20 Gold Swift, *Hepialus hecta*, at Marple Locks, SJ9689 (IS). These are our only records of these two species this year.

2001 also produced two records of the Seraphim, *Lobophora halterata* – Elton, SJ4575 on the 25th May (SHo), and Caldy Hills, SJ2285 on the 23rd June (JCI).

4.6 High Summer

Beautiful Carpet, *Mesoleuca albicillata*, was seen on the 30th June at Etherow Country Park, SJ9792 (SFa, SHi and PG) and on the 2nd July at Lynwode House, SJ8154 (MD). Emeralds were also prominent amongst the rare moths reported at the start of July with a record of Blotched Emerald, *Comibaena bajularia*, in Mouldsworth on the 4th (IL) and our third modern record of Small Emerald, *Hemiosstola chrysoprasaria*, at Congleton, SJ8762 (AK) on the 7th. We urgently need confirmation of this specie in VC58 and would be grateful if any future records could be photographed and/or retained. The delightful Scallop Shell, *Rheumaptera undulate*, was seen in Mere, SJ7381 (SBI) on the 5th and at Latchford Canal, SJ5785 on the 7th. This trip also produced a record of Double Dart, *Graphiphora augur*, (JCl, SHi, GC, GS). The 6th produced a record of Muslin Footman, *Nudaria mundane*, at Higher Poynton SJ9483 and the same site produced a record of Round-winged Muslin, *Thumatha senex*, on the 10th (both SHi). This later moth is the first record in VC58 away from the moss and commons of the central plain.

The currant feeding V-Moth, *Macaria wauaria*, was seen on three occasions between the 9th and the 19th July at Marple, SJ9589 (MS). The 17th produced our only record this year of Garden Dart, *Euxoa nigricans*, at Elton, SJ4575 (SHo). This is the second successive year in which only a single example of this species has been reported.

Five records of the Leopard Moth, *Zeuzera pyrina*, were received in July making 2001 the best ever year for this species in VC58. The moth was seen in SJ8154 (MD), SJ8681 (AMB), SJ8786 (GLi) and SJ7381 (SBI) between the 6th and 28th of the month.

Other good moths reported during July included a single record of Southern Wainscot, *Mythimna straminea*, from Mere, SJ7381, (SBI) on the 3rd. The same site also produced the third VC58 record of Obscure Wainscot, *Mythimna obsoleta*, on the 7th. The 15th saw a record of another scarce resident of wetland type habitats in the form of a Marsh Oblique-barred, *Hypenodes humidialis*, at Elton, SJ4575, (SHo). The 23rd July produced our only 2001 record of the Old Lady, *Mormo maura*, SJ9285, (RHo). This example was taken at MV light. Perhaps the scarcity of recent records reflects the decline in popularity of sugaring as the species is rarely attracted to light.

However, July will be remembered as an exceptional month for really rare species – including a number of additions to the VC58 list. The excitement started on the 6th with a Beautiful Hook-tip, *Laspeyria flexula*, being caught at Mouldsworth, SJ5170, (IL). The following day produced another addition to the VC58 list in the form of a Cloaked Pug, *Eupithecia abietaria*, at Cheadle Hulme, SJ8786, (GLi). The 20th also saw our first record of Lempke's Gold Spot, *Plusia putnami*, at Arnfield Reservoir, SJ0175 (SFa, SHi, PG, AW, PMH). There have been previous claims of this specie in the county which have not been confirmed. In this case, the specimen was retained and the identity was confirmed by genitalia examination.

Other extremely rare moths seen during the month included a Blackneck, *Lygephila pastinum*, at Wilmslow, SJ8681, on the 6th (AMB). This follows on from last years record and heralded the major influx into the region that occurred in 2002. A record of Scarce

Silver Y, *Syngrapha interrogationis*, at Arnfield Reservoir, SK0175, (SFa, SHi, PG, AW, PMH) was, at the time, thought to be the first VC58 record. A second specimen was taken nearby at Tintwistle, SK0297, on the 20th August (HEB, RFB). Subsequently a number of earlier records have been located dating back over 100 years! However, the current records do indicate that this specie is almost certainly resident in the hills in the extreme North East of the County. Having started the month's excitement with the Beautiful Hook-tip, *Laspeyria flexula*, the month closed with our first modern record of Dingy Footman, *Eilema griseola*, at the same site (Mouldsworth, SJ5170) on the 30th (IL).

4.7 Autumn and Winter

August began with the fourth VC58 record of Small White Wave, *Asthena albulata*, at Macclesfield, SJ9070, (JO) on the 4th. The 6th produced a record of Bordered Beauty, *Epione repandaria*, at Mouldsworth, SJ5170 (IL) and the Crescent Striped, *Apamea oblonga*, at Elton, SJ4575, (SHo). This specie is closely associated with estuarine habitats. The 16th produced a record of Barred Rivulet, *Perizoma bifaciata*, which is very local in the County, at Birkenhead, SJ3286, (GJo). The following day, the 17th, produced the first record of the Tissue, *Triphosa dubitata*, for the County since 1997 when one was caught at Higher Poynton, SJ9483 (SHi). A Clouded Magpie, *Abraxas sylvata*, caught at Arnfield, SJ0097, (HEB, RFB) on the 21st was a very good record for the County. This Elm feeding specie has always been scarce in VC58 and this is only the second record since the mid 1980's. The 25th saw a Satin Beauty, *Deileptenia ribeata*, at Higher Poynton, SJ9483, (SHi) and our only 2001 records of both White-line Dart, *Euxoa tritici*, and Sandhill Rustic, *Luperina nickerleii*, on the Wirral SJ2087, (GJo).

The 26th saw Neglected Rustic, *Xestia castanea*, being recorded at a new site and a new 10Km grid square when three were caught at Little Budworth Common, SJ5865, (AWa, PMH). This was a surprise find at this well worked location. August saw our only record of Fox Moth, *Macrothylacia rubi*, when larvae were found on a daylight session at the Pym Chair, SJ9976, on the 26th (SHi, AWa). This moth is generally scarce in the County but is common on the Eastern hills. This trip also produced a Small Autumnal Moth, *Epirrita filigrammaria*. A second example of this later species was caught at light at Goyt's Clough Quarry, SK0173 on the 7th of September (AWa, SHi et al). Much rarer was a record of *Oak Lutestring*, *Cymatophorima diluta*, at Mere, SJ7381 (SBI) a new ten kilometre grid square record, on the 28th.

September opened with a Pinion-streaked Snout, *Schrankia costaestrigalis*, at Mere, SJ7381, (SBI) on the 1st. Haworth's Minor, *Celaena haworthii*, was recorded at light on the 7th September at Goyt's Clough Quarry, SK0173 (AWa, SHi et al). This moth is again common in the eastern hills. The month ended with a Brown-spot Pinion, *Agrochola litura*, recorded at Lynwode House, SJ8154 (MD). A second example was caught on the 5th October at Anderton, SJ5865, (AWa). Late season trapping produced a number of records of Northern Winter Moth, *Operophtera fagata*, between late October and mid December. Most were taken at light, but a torch light session at Little Budworth, SJ5865, on the 25th November succeeded in locating rarely seen wingless female of the moth (AWa, PMH). This was located paired with a male at about head height on a birch tree.

2001 was a very exciting year for macro moths within VC58. A number of new species were added to the County list, and a number of very rare species were found, often at new sites and in new 10Km grid squares. Many thanks to everyone who has submitted records this year

Steve McWilliam, Adrian Wander and Shane Farrell.

Recorders: ACh – Andrew Charlton, AK – Alan Kimber, AMB - A.M.Broome, AWa – Adrian Wander, BTS – Barry Shaw, GC – G Cooke, GJo – Graham Jones, GLi – Geoff Lighfoot, GS – G. Stringer, HEB – H.E. Beaumont, IL – Ian Landucci, IS – Ian Smith, JCl – Jeff Clarke, JO – J. Oxenham, MD – Mike Dale, MS - Martyn Stanyer, PG – Paul Greenall, PMH- Paul Hill, RFB – R. F. Botterill, RHo – R. Holmes, SBl – Sheila Blamire, SFa – Shane Farrell, SHi – Steve Hind, SHo – S. Holmes

5. Appendix: Species Profile- Prominents and Thorns

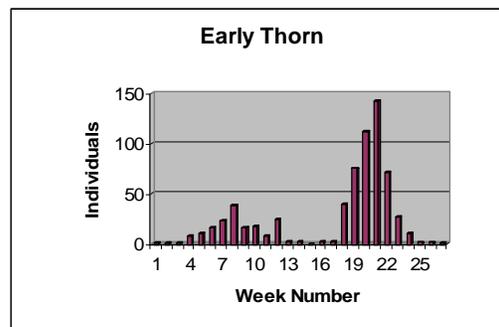
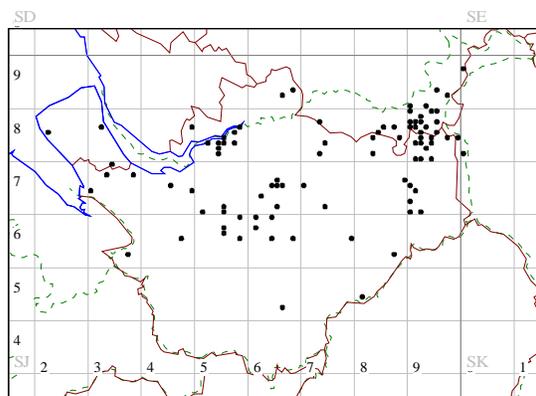
This year we present the first atlas update showing the range and flight period of two well known groups of moths: The Prominents and the Thorns. The data presented here is provisional and highlights the information we have available as of January 2003.

5.1 The Thorns

The thorns are a colourful group. Early, *Selenia dentaria*, and Purple Thorn, *Selenia tetralunaria*, are the harbingers of the spring season, while the appearance of Canary-shouldered, *Ennomos alniaria*, and Dusky Thorn, *Ennomos fuscabtaria*, in the trap usually alerts us to the onset of the autumn months. Within VC58 the species that concern us are;

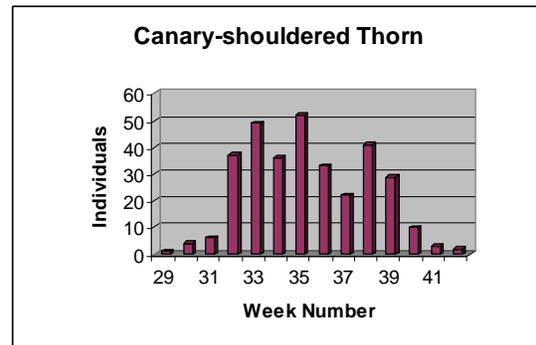
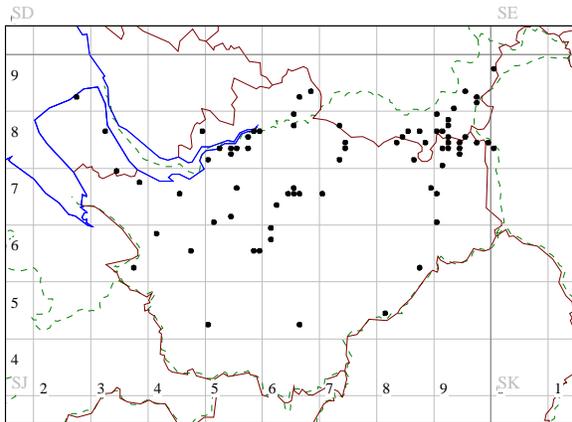
Species	Records	Individuals
Early Thorn	502	1302
Canary-shouldered Thorn	309	552
Purple Thorn	193	266
Dusky Thorn	168	201
September Thorn	119	174
August Thorn	9	6
Lunar Thorn	3	1

5.1.1 Early Thorn *Selenia dentaria*



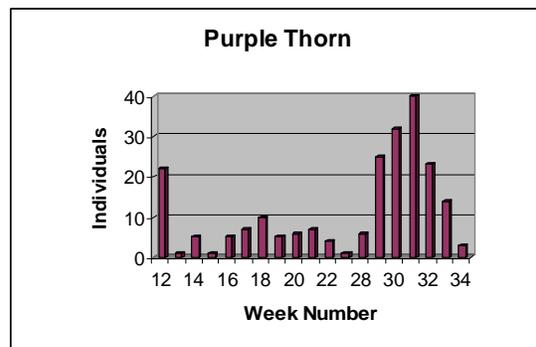
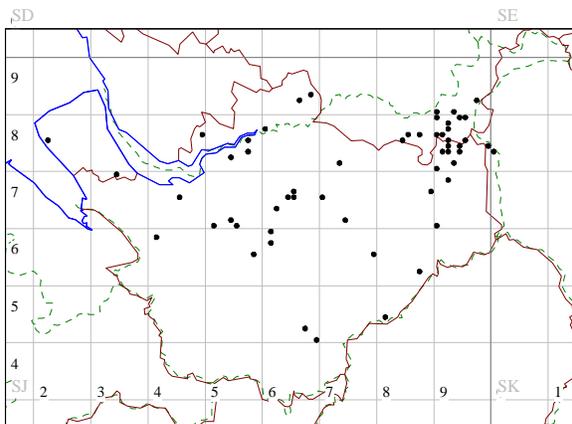
Clearly, records for this species are well scattered across the county. The species is double brooded with the summer generation being larger.

5.1.2 Canary-shouldered Thorn *Ennomos alniaria*



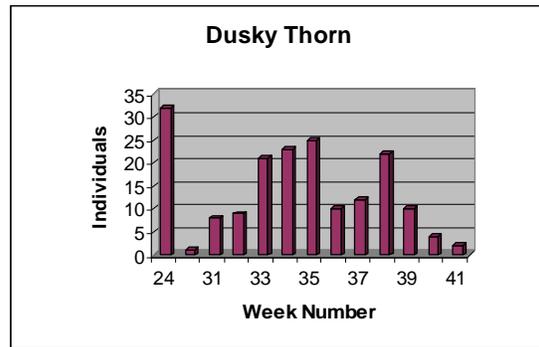
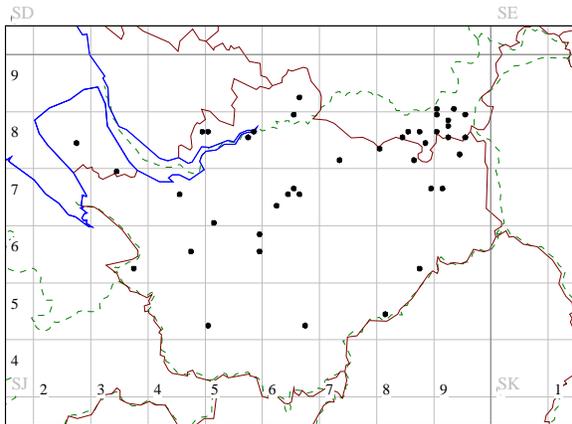
This species shows a similar scatter of records to the previous species. The species is single brooded and shows a relatively protracted emergence, less peaked than Early Thorn.

5.1.3 Purple Thorn *Selenia tetralunaria*



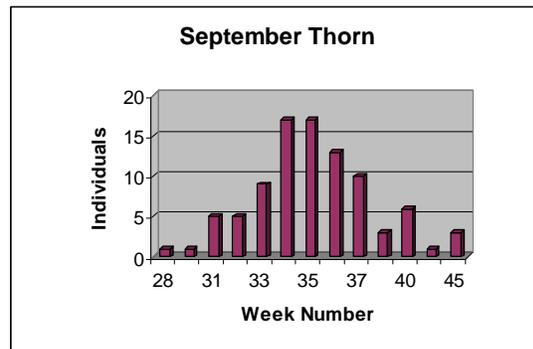
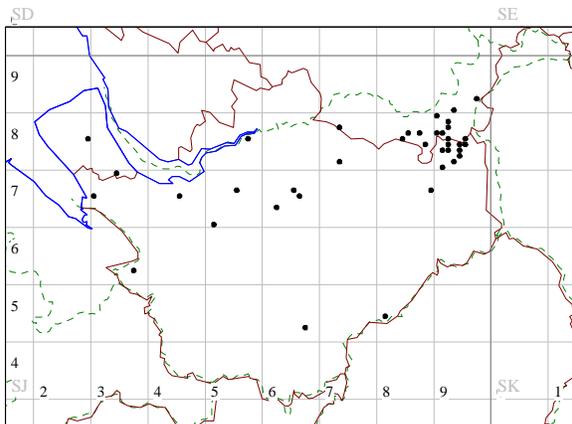
The distribution of this species is again well scattered across the county. The flight period appears to show a double brooded nature peaking in weeks 18 and 32. The large spike in week 12 is unusual and is probably an artifact. The majority of records in that period mark the first visits of AW to Little Budworth CP in the spring for the last few years. We are almost certainly missing earlier records of this specie which is less likely to occur in gardens than Early Thorn. Consequently, it is likely that the peak emergence time is actually earlier in the spring than current records indicate. Like all early season moths, our analysis is probably more sensitive to the emergence times of mothers from winter hibernation than of the moths! Clearly more work is needed to correctly determine the spring emergence period.

5.1.4 Dusky Thorn *Ennomos fuscabartaria*



Another well distributed species. The dip in weeks 36 and 37 is interesting, but the size of the dataset is too small to draw meaningful conclusions at this time. It appears that the species is single brooded peaking around week 35.

5.1.5 September Thorn *Ennomos erosaria*



The rarest of our 'common' Thorns. Records are again scattered across the County. The species is single brooded with a similar peak emergence time to Dusky and Canary-shouldered Thorn in week 35.

5.1.6 August Thorn *Ennomos quercinaria*

We have very few records of this insect; a series have been captured at Marbury County Park/Anderton, SJ6475, by P. M. Hill between the 20 September and 23 October and there are two records from Bromborough, SJ3479, by E. Samuels in early August and early September. The early August and late October records are surprising as the flight period is given by Skinner as mid-August to mid-September. Confirmation of future records by way of photographs and/or voucher specimens would be appreciated. More work is needed on the distribution and flight period of this moth in VC58.

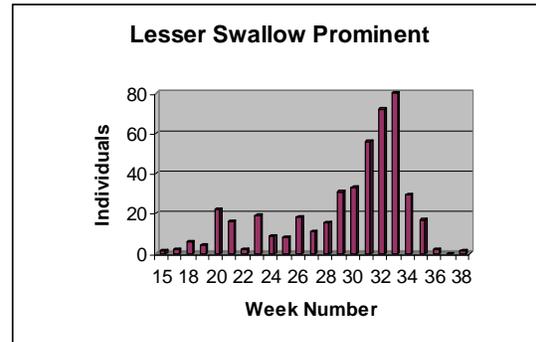
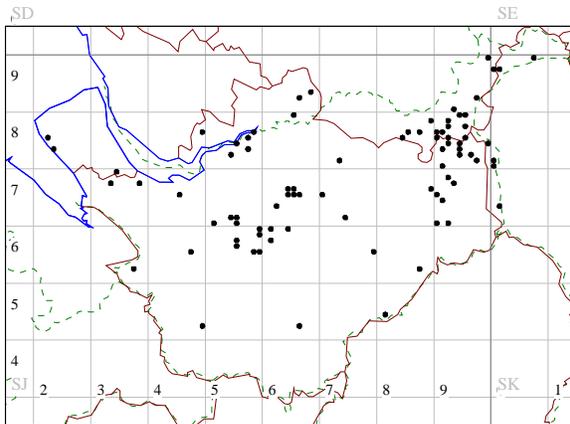
5.1.7 Lunar Thorn *Selenia lunularia*

We only have three records of this species in VC58. Two old records are dated 1952 by Alan Creaser in SJ37 and SJ38. The only modern record of this species from Elton, SJ4575, on 21st July 1995. Again, the usual flight period of this insect is given as May and June and this record seems rather late.

5.2 The Prominents

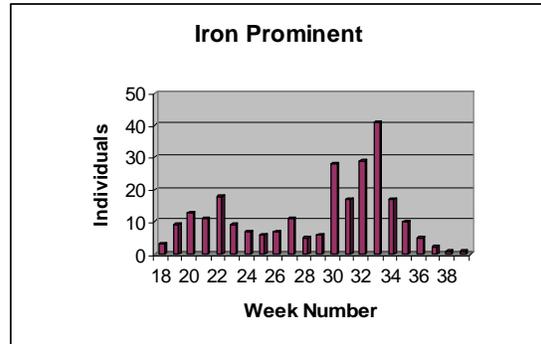
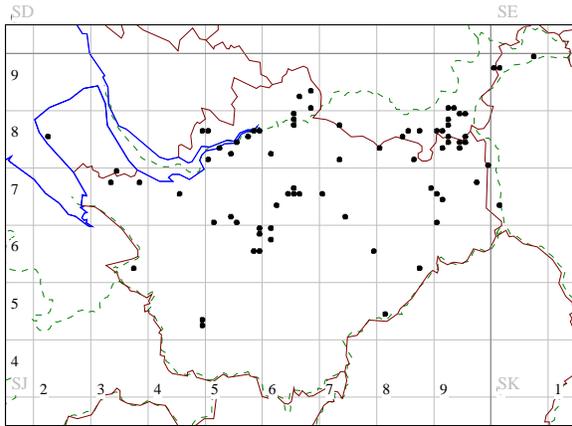
Species	Records	Individuals
Lesser Swallow Prominent	436	546
Iron Prominent	274	373
Coxcomb Prominent	263	315
Swallow Prominent	155	211
Pebble Prominent	108	105
Pale Prominent	74	71

5.2.1 Lesser Swallow Prominent



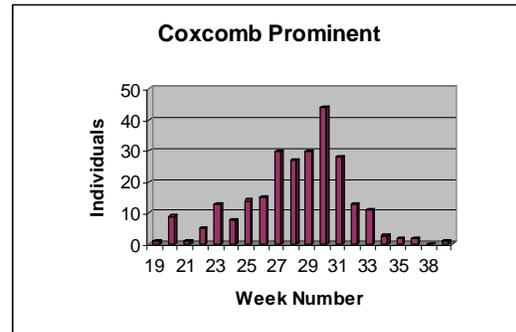
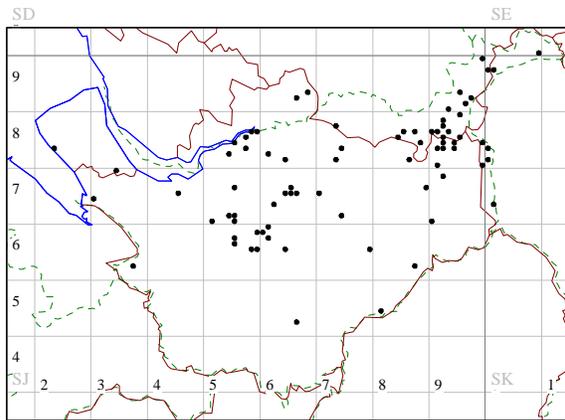
Records are well scattered but show a preference for Central Cheshire. The flight period shows a clear peak in week 33/34 but perhaps indicates a continuous emergence over a long time period rather than a classic two humped distribution we would expect for a double brooded species. More work is needed to accurately define the shape of the spring brood curve. As expected, given the large areas of Birch Woodland in the County, Lesser Swallow is commoner than Swallow Prominent.

5.2.2 Iron Prominent



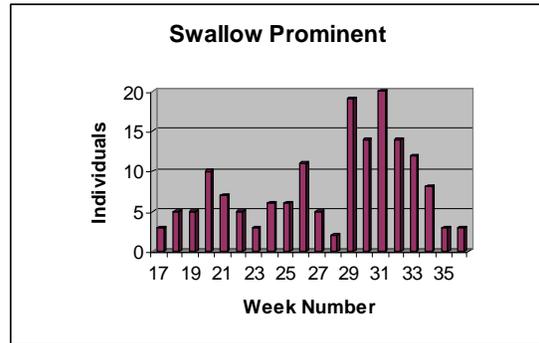
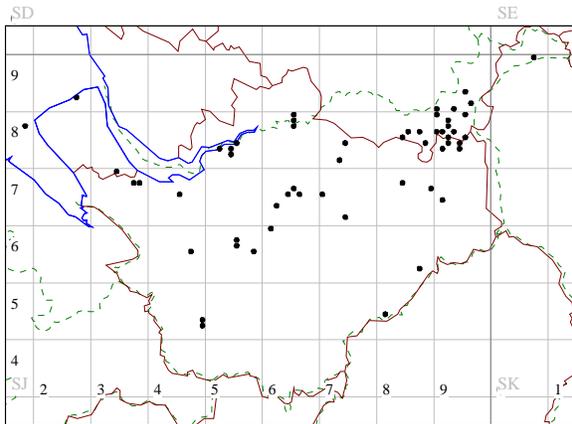
A clearly example of a double brooded emergence. Records are well scattered across VC58.

5.2.3 Coxcomb Prominent



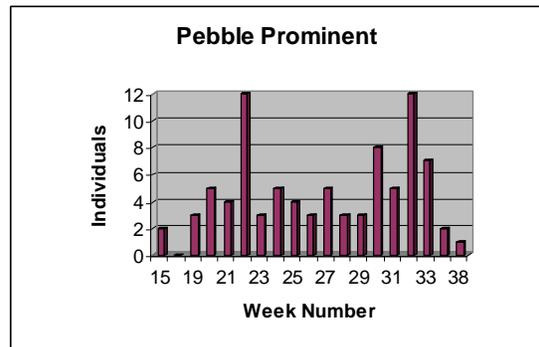
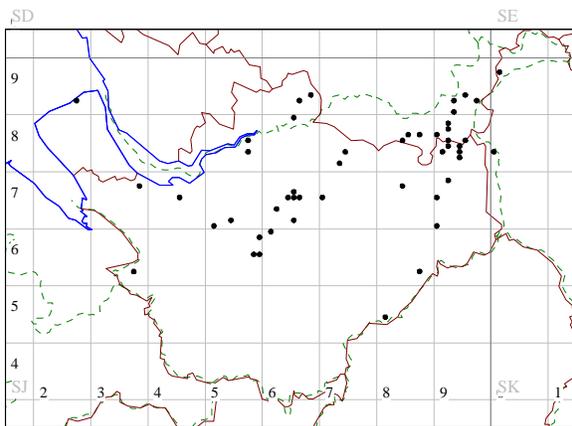
A well scattered species yet again. The flight period is intriguing. The specie should be double brooded flying in May/June and August/September. Although the peak in week 21 may be the spring emergence, the graph is more reminiscent of a single brooded species. Further data is needed on the emergence times of this moth.

5.2.4 Swallow Prominent



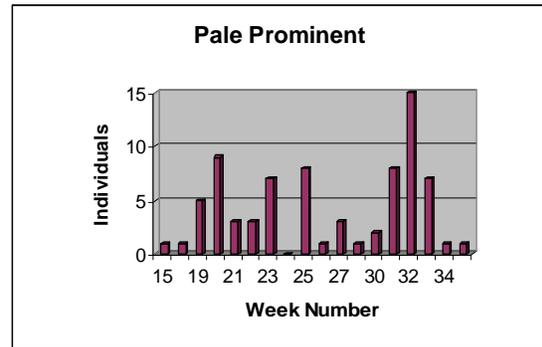
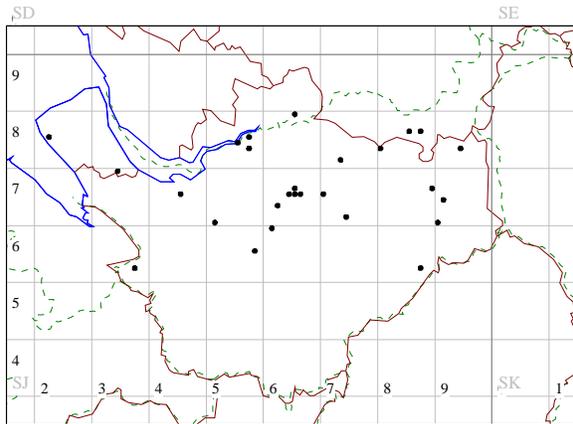
Another reasonably well spread species. The flight period shows a clear peak in week 32, with the Autumn brood being better defined than the rather protracted emergence of the Spring brood. However, this is a clearer example of a double brooded species than the graphs shown by Coxcomb and Lesser Swallow Prominents.

5.2.5 Pebble Prominent



Another well scattered species showing a double brooded flight period. The stated flight periods for this species are double brooded (May/June and August) in the South, and single brooded (June/July) in the North. Are we perhaps intermediate in VC58 with the majority of individuals being double brooded but some being single brooded and occurring during July? More work is needed on this species.

5.2.6 Pale Prominent



The rarest of our Prominents but still showing a good scatter of records across the county. The species appears to be double brooded.