



1998



WEST MIDLANDS BUTTERFLY AND MOTH ANNUAL REVIEW

First & Last Butterfly sightings 1998

ANNUAL REVIEW 1998

Name of Species	First Sighting	Last Sighting
Small Skipper	25/6 Old Hills C&HD (30/6/97)	23/9 Nr. Uffmoor Wood DWh (17/8/97)
Essex Skipper	21/6 Wyre Forest GB (20/7/97)	18/7 West Malvern C&HD (N/A)
Large Skipper	24/5 Downton Gorge RB (17/5/97)	12/8 Haugh Wood JA (12/8/97)
Dingy Skipper	8/5 Penny Hill Bank TJH/ID (30/4/97)	21/6 Wyre Forest PD, Cother Wood C&HD (4/6/97)
Grizzled Skipper	17/5 Wyre Forest F/T (2/5/97)	12/6 Checkley AN (30/5/97)
Wood White	28/4 Monkwood DWh (23/4/97)	15/8 Monkwood DWh (19/8/97)
Clouded Yellow	21/6 Bewdley PD, Droitwich PD, Knapp & Papermill via CG (27/8/97)	11/10 Lutley Gutter DWh (N/A)
Brimstone	9/1 Brotheridge Green RB (28/2/97)	23/10 Monkwood CET (26/10/97)
Large White	31/3 Perry Wood PAW, Wombourne K&WW (6/4/97)	1/10 Perry Wood PAW (24/10/97)
Small White	18/3 Areley Kings TJH (22/3/97)	25/9 Ryall Farm C&HD (25/10/97)
Green-veined White	31/3 Perry Wood PAW (29/3/97)	24/9 Perry Wood PAW, Monkwood DWh (18/10/97)
Orange Tip	31/3 Callow End DJW, Upton-on-Severn C&HD, Telford JJ (30/3/97)	31/5 West Malvern C&HD (5/6/97)
Green Hairstreak	2/5 Penny Hill Bank TJH (12/4/97)	21/6 Cother Wood C&HD (28/7/97)
Brown Hairstreak	18/8 Nr. Grafton Wood via RSt (12/8/97)	22/9 Grafton Wood TBu (10/9/97)
Purple Hairstreak	4/7 Perry Wood PAW (2/7/97)	23/9 Uffmoor Wood DWh (23/9/97)
White letter Hairstreak	3/7 Brotheridge Green RB (29/6/97)	15/8 Parkwood Quarry C&HD (10/8/97)
Small Copper	2/5 Monkwood Green DWh (30/4/97)	21/10 Ryall Farm C&HD (6/11/97)
Silver-studded Blue	N/A (15/6/97)	N/A (N/A)
Brown Argus	18/5 Ryall Farm C&HD (21/5/97)	1/10 Ryall Farm C&HD (23/10/97)
Northern Brown Argus	N/A (N/A)	N/A (13/7/97)
Common Blue	13/5 Penny Hill Bank TJH (14/5/97)	29/9 Ryall Farm C&HD (5/10/97)
Holly Blue	30/3 Worcester TBu (17/3/97)	30/9 Perry Wood PAW (12/10/97)
White Admiral	21/6 Grafton Wood TBu (17/6/97)	19/8 Uffmoor Wood DWh (9/8/97)
Red Admiral	13/2 Birmingham via PS (4/2/97)	11/11 Stourport TJH (8/11/97)
Painted Lady	19/5 Bredon Hill CW (31/3/97)	9/10 Perry Wood PAW (12/9/97)
Small Tortoiseshell	8/2 Lutley Gutter DWh (13/1/97)	10/10 Perry Wood PAW, Dinedor AN (12/11/97)
Peacock	8/1 Hindlip SRJB (28/2/97)	6/11 Ryall Farm C&HD (11/11/97)
Comma	13/2 Trench Wood KHT, Areley Wood TJH, Perry Wood PAW (28/2/97)	10/11 Halesowen DWh (25/10/97)
Small Pearl bordered Fritillary	23/5 Ewyas Harold F/T (18/5/97)	3/7 Wyre Forest EJW (11/7/97)
Pearl bordered Fritillary	6/5 Haugh Wood JA (23/4/97)	4/6 Haugh Wood JA (14/6/97)
High Brown Fritillary	28/6 Malvern DJW (15/6/97)	23/7 Bromyard TJH (28/7/97)
Dark Green Fritillary	N/A (15/6/97)	28/7 Bredon Hill CW (4/8/97)
Silver-washed Fritillary	3/7 Wyre Forest EJW (18/6/97)	30/8 Wyre Forest MJW (25/8/97)
Speckled Wood	19/3 Perry Wood PAW (30/3/97)	18/10 Perry Wood PAW, Hagley Wood DWh (28/10/97)
Wall Brown	23/5 Ewyas Harold AN/JA (24/5/97)	N/A (1/10/97)
Marbled White	19/6 Penny Hill Bank TJH (22/6/97)	10/8 Longdon C&HD (16/8/97)
Grayling	27/7 British Camp ID (7/7/97)	16/8 Tank Quarry C&HD (N/A)
Gatekeeper	3/7 Capler Wood JA (29/6/97)	17/9 Uffmoor Wood DWh (9/9/97)
Meadow Brown	28/5 Penny Hill Bank TJH (10/6/97)	25/9 Ryall Farm C&HD (10/9/97)
Ringlet	25/6 Perry Wood PAW, Brotheridge Green RB, Old Hills C&HD (15/6/97)	19/8 Uffmoor Wood DWh (26/8/97)
Small Heath	9/5 Ewyas Harold AN (2/5/97)	5/9 Larford TJH (1/10/97)
Large Heath	16/6 Whixall PB (29/5/97)	N/A (12/8/97)

West Midlands Top Ten (1997 position and totals in bracket)

1. Meadow Brown	(4)	7,662 (4,747)
2. Speckled Wood	(3)	6,620 (5,470)
3. Ringlet	(2)	6,122 (6,671)
4. Gatekeeper	(1)	6,114 (7,555)
5. Green-veined White	(5)	4,210 (3,061)
6. Peacock	(6)	2,161 (3,004)
7. Large White	(-)	2,050 (-)
8. Marbled White	(8)	1,838 (2,702)
9. Large Skipper	(9)	1,525 (1,639)
10. Brimstone	(-)	1,002 (-)

Butterfly of the Year awards

Butterfly of the Year: Holly Blue (Runner-up: Green-veined White)

Most improved performance: Meadow Brown

Wooden spoon: High Brown Fritillary (Runner-up: Small Skipper)

Migrant of the Year: Withheld

1998 Weather summary

Overall 1998 was a fairly average year for rainfall, sunshine and temperatures but as is often the case, these figures mask some wild anomalies at times.

January began the year with mild wet weather with average sunshine. **February** continued that trend with the mildest month this century. On the 13th of the month record highs were recorded. Despite the mild weather which sometimes means wet weather, conditions were dry and sunshine hours were high. There were several days when hibernating butterflies could have been woken up. Warm weather continued in to **March** with the warmest month this century, but it was dull and wet.

1998 ended a run of warm **April** months with cold spells mid month and some ground frost. Very wet weather led to flooding in some areas, particularly in the east and south midlands following heavy rain at Easter. Malvern had 50 mm on the 9th alone. Naturally with all that rain there was little sunshine to be enjoyed. **May** was warm despite a cool start with average amounts of sunshine but did make up for April by being somewhat dry. In some areas it was probably the driest May this century. **June** had average temperatures with slightly warmer nights and although not as wet as 1997, it was still the third wettest this century. Generally it was very dull and this made the second dismal June in a row which would not favour species that are on the wing that month. Unfortunately **July** brought cool conditions and ended a run of four warm July's. It was however dry and that may have made up for the previous months dampness. The first half of the month started dull but it brightened considerably later.

August had long dry spells, was quite sunny but very often cool and not many days above 25 degrees Celsius. **September** started warm and apart from the second week stayed warm. It was pretty wet though with heavy rain on the 4th, 26th and 29th. with all that rain the sun was not much in evidence. In summary for the summer months of April to September the temperatures were about average, sunshine was definitely on the low side and rainfall was also a bit low.

October had average temperatures and sunshine but it was very wet again and there was considerable flooding along the River Severn after heavy rain on the 27th. Toward the end of the year **November** was dry, sunny and mild with only a few light frosts. December ended the year on a mild note but there were long dull periods amongst the sunshine.

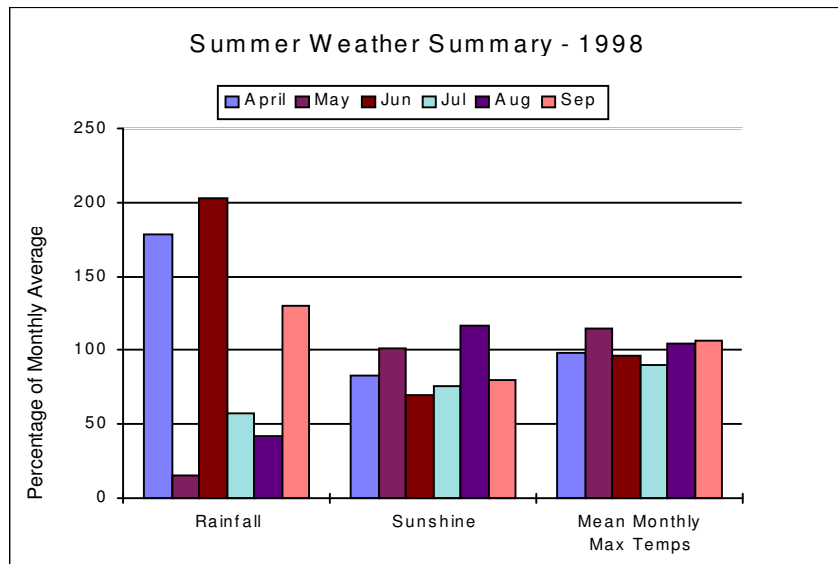
Looking back, 1998 was more like one of our normal British summers with thoughts of marvelous long hot sunny summers just a dim memory. Comparing the lower table with last years shows that there was one more butterfly flying day in 1998 than in 1997.

Table showing the number of Rainfall and Sunshine days as well as the number of Potential Adult Butterfly Flying Days - 1998 (WEST MIDLANDS)

	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Days with >1.0mm rainfall	10	19	2	20	9	5	11	16
Days with >1.0mm rainfall 10-1700 (BST)	7	9	0	14	1	1	4	6
Days with >1.0mm rainfall 10-1700- weekends	2	4	0	3	1	1	1	2
No of days with at least 1 hours sunshine	15	21	23	23	26	26	20	21
No of days with at least 1 hrs sunshine & 13 c or dull & 17 c (Potential adult flying days)	6	10	24	25	31	31	24	13

Weather Summary for the Summer 1998 (Values expressed as a percentage of monthly average)

	APR	MAY	JUN	JUL	AUG	SEP
Monthly Rainfall	178	15	203	57	42	130
Monthly Sunshine	83	101	70	76	117	79
Monthly Mean Maximum Temp	98	115	96	90	104	107



Ⓟ Mike Averill

Butterfly Round-up

Dismal is the word that about sums up 1998. As the weather summary shows, with the possible exception of May and part of August, the summer tended to be wet and pretty sunless. Rather like 1997 the butterfly season started reasonably well but then nose-dived from June onwards never really recovering. Of the hibernating species **Brimstone** was the star turn, actually getting in to the West Midlands Top Ten for the first time and at Perry Wood, for example, having its best year in 14 years of monitoring (PAW). Other spring species turned in pretty average performances, although the "whites" generally continued their recovery begun the previous year, **Green-veined White** being the most successful. **Holly Blue** surprised everyone by appearing in better than anticipated numbers and did OK in their second generation as well, unlike so many of the other double brooded species. **Dingy** and **Grizzled Skipper** fell back a little from 1997, although both were reported from a new site on the Abberley Hills (TBu, GHG) and continue to benefit from management work in Wyre Forest. The same is true of **Green Hairstreak** which was recorded again on the Wyre Forest east transect. This species was also recorded from two new areas on the Malverns (RB, C&HD) and also very encouragingly from Monkwood Green (CET). **Wood Whites** collapsed very badly at most Herefordshire sites (JA, JP, JR) but seemed to hold up rather better at Monkwood (CET, DWh). More encouragingly, there were a couple of reports from different areas of Wyre Forest (FL, GB) where the butterfly still seems to be maintaining a low presence, a first sighting in Shrawley Wood (TN), a record of egg-laying at Penny Hill Bank NR (TJH) and, from the same area, very good numbers from a site on the Abberley Hills (GHG, TBu, MJW). **Orange Tip** again emerged before the end of March but were nowhere numerous and

were generally over before the end of May. Knapp & Papermill NR remains the best transect site for this species by some margin (CG).

Woodland Fritillaries were on the whole disappointing with **Small Pearl bordered** in particular being badly effected by the June weather. Even so, there were new reports from both Staffordshire near Leek (PW) and in the Clun area (BD) which need following up this summer. **Pearl bordered** also fell back from their 1997 levels but this had been an exceptionally good year for this species. Very encouragingly, however, **Pearl bordered Fritillary** was reported from a new site in Herefordshire (MH) which was extremely welcome news in a year where good news stories for butterflies were hard to come by. **Silver-washed** were also well down at all their recorded sites and there were very few reports away from their known haunts.

High Brown Fritillary was an unmitigated disaster with sharp falls on all four transects (BP, TJH, DJW, LN). Numbers are now perilously low on both Malvern sites and also at Bromyard. The **High Brown** is in desperate need of a good June. A report from a new Shropshire location close to the Welsh border (via AN) requires further investigation. **Dark Green** fared perhaps a little better but again there were few records sent in, the most interesting being of a small colony on the edge of Ledbury (MH). It was not only, however, our rarer species that were in short supply, a lot of our common and widespread species also did very badly. **Small Tortoiseshells**, for example, did very poorly as did **Common Blue**, **Comma** and **Small Heath**. **Large Skipper** numbers were poor while **Small Skipper** was simply dreadful, which was particularly irritating in that 1998 was the year when recorders were asked to make a particular effort to separate out the very similar **Essex Skipper**, which appears to be spreading into the branch's area from both the south and east. A scattering of reports were nevertheless received (GB, CET, C&HD, SH et al) but no clear pattern emerged and we can only hope (again!) for better weather this year.

Another complete disaster was **Large Heath** which was only seen in very low numbers at Whixall and Fenn's Mosses (PB et al) and was not seen at all at Wem. While the weather conditions during 1998 will not have helped, although interestingly numbers were very good at some Welsh sites (via JJ), the underlying problem at Whixall NNR remains English Nature's management of the site which has caused extensive winter flooding to the detriment of overwintering larvae. Better news from Shropshire was the showing of **Silver-studded Blue** at Prees Heath where populations showed a marked improvement from 1997 (JJ). Recording remains a problem for **Northern Brown Argus** at its sites in north Staffordshire but encouragingly two new sites were identified in the Manifold Valley (MWA, MS). **Small Copper** was another species that fared poorly and **Brown Argus** seemed very hard to come by although it was seen again at Ryall Farm (C&HD) and also at a new site near Ledbury (MH). A major and welcome surprise in July was the reappearance of the **Small Blue** at its Worcs station (RW) after a gap of three years.

Nationally, there appeared some signs of a recovery in **Wall Brown** populations (via ITE) but this was certainly not borne out in the Midlands with only eight sightings in total from all transect sites. For the second year running none were reported from Windmill Hill NR (TDK). **Grayling** is another species to remain scarce, although numbers did appear to be slightly up on the Malverns (ID, DJW, C&HD). West Midlands species to do reasonably well were **Meadow Brown** and **Speckled Wood**, which along with **Large** and **Green-veined White** and **Brimstone**, were the only species to improve on the previous year's annual index for all transects. **Marbled White**, **Ringlet**, **Gatekeeper** and **Peacock** were slightly down on their 1997 performance but did not suffer the disappointing falls experienced by so many species. The former still appears to be colonising new sites in the north of its range and has now established itself on Monkwood Green (TJH, CET, DWh et al). An adventitious individual was even seen as far north as Stourton on the Worcs/Staffs border (RSw). The other species that did surprisingly well given the poor June was **White Admiral** which was present in good numbers at Butterfly Conservation's three woodland nature reserves in Worcs and continued its spread in Wyre Forest NNR. **Purple Hairstreak** also appeared to do well and was recorded in record numbers at Shelfeld Coppice (MT) and Perry Wood (PAW). **White letter Hairstreak** fared less well and will not have been helped by widespread new outbreaks of Dutch Elm disease. **Brown Hairstreak** proved particularly elusive although subsequent egg searches suggest a better season than the previous year. Management work has continued to improve the habitat conditions for the butterfly around Grafton Wood with the support of English Nature and local landowners and we are also grateful for the work carried out by Nick Williams and his team from Stourbridge College.

Migrants were generally very thin on the ground although all three of our main migrating species did

show an improvement on their 1997 performance which had been pretty appalling. There was a flurry of **Clouded Yellow** reports at the end of the third week in June (PD, via CG, via DJW) and this was followed by sporadic sightings of singletons for the rest of the summer over a wide area (MEW, TBU/TS, RSw, RMk et al). **Painted Ladies** were still pretty scarce, although better than 1997, and **Red Admiral**, despite a few early records (via PS, PAW, JJ, K&WW), did not really come into their own until the autumn.

In many ways 1998 was probably a fairly typical English summer with some pretty mixed weather and little to write home about in terms of temperatures or sunshine hours. We can only hope that this final year of the Millennium will treat us to a more memorable spell of weather in the months ahead.

♫ Mike Williams

County moth reports

Herefordshire

1998 started with mild weather in late winter and early spring but conditions deteriorated into a cold late spring and summer. Observations on moths throughout the summer were very poor and M/V light catches were reduced again.

However, in the spring several fairly interesting observations were made starting in the last few days of March when no less than four new sites situated in three new 10km squares were made for the very local **Light Orange Underwing**. One of the sites was discovered by Cherry Greenway and Bob Bishop. Because tall birch was mixed with tall aspen, it was necessary to capture one and release it after confirmation of its identity from the closely related **Orange Underwing**. Both species fly high and it is necessary to catch them in the daytime with a net on a fairly long pole. The knack I have used in the past, and also successfully in 1998, is to allow a moth to drift out into an open field bordering the aspens with the prevailing wind coming from the trees. Usually the moth allows itself to drift out and then loses some height on trying to return to the safety of the trees - the net on the long pole does the rest. However, it sometimes happens that derisive humorous comments come from the uninformed public who may be nearby! Nevertheless, the rewards were well worthwhile as I have more than doubled the number of records/sites for the county.

In late April and early May, I found a few larvae of the **Scarlet Tiger** on comfrey plants while driving along a sunken country lane in the south of the county. This is not a recommended technique of observation, it can be very dangerous! Although recorded from the Victoria County History for the last century, we have had no records for this beautiful moth this century apart from one isolated sighting in 1970 from Chase End Hill. Bob and Cherry found a further roadside colony less than one kilometre away and moths were seen in the daytime in July at both. Roger Gaunt, moth recorder for Gloucestershire, tells me that it may be becoming more common especially in or near the Forest of Dean. Time may tell us if this thermophilic species is responding to our warming climate.

The **Angle-striped Sallow** continues to be recorded more commonly within the county with single records for Ledbury, Birchwood (CG) and Queenswood, Dinmore. I suspect that these records are not migrants from the European continent but probably originate more locally. Records in the county go back to 1980 with more than one moth seen at a time.

The Pyrale, *Sitachroa palealis* was recorded from a single specimen seen on limestone grassland on the Great Doward on 18th July by Phyllis King and other Hereford Trust members. This is a new record for the county and I believe the most north-westerly extension of this local moth's range which is normally seen on the southern coast of Britain. The caterpillar feeds on wild carrot which was present at this site.

Other microlepidoptera seen this year included the local plume wing *Stenoptilia zophodactylus* from Stretton Sugwas (see Worcs). The larva can be found mining or free on common centuary and yellow-wort in early successional grassland and I now have several sites in the county. In October, I was pleased to see mines of *Phyllonorycter lincographella* for the first time in the town of Ledbury on the upper leaves of Pyrocantha. The species, first recorded from Essex in 1989, has spread very rapidly from its original site. At the moment, it is an urban species because most Pyrocantha bushes are planted in urban or suburban gardens. I expect that it will become common in Birmingham and surrounding towns in the very near future.

♫ Michael Harper

Shropshire

This year saw an increase in moth recording effort in the county with activities focused on five main centres: the Wyre Forest, the Stiperstones and neighbourhood, Bucknell and Hopton, Chelmarsh and Dudmaston and Preston Montford Field Centre. Each of these produced important county records but perhaps the most surprising of all came not from these surveys but from the discovery in a Priorslee garden of a pupa which yielded a female **Gypsy Moth**. Its origins can only be guessed at, but a chance import from the continent as ovum or larva on trees planted by Wrekin Council is a possible explanation. It was a new county record as were an **Obscure Wainscot** at Hopton Heath on 4th July and three **Square Spots** at Mytton Batch, Stiperstones on 28th June. Both these are generally scarce in the Midlands but the **Wainscot** is perhaps the less expected since its place of capture holds very little of its foodplant, common reed. Perhaps it is moving gradually westwards here as it has recently done in northern England.

Activities in the Wyre Forest continued to focus mainly on the Royal Ordnance compound at Postans Plain and a separate account of this survey work is given in the newsletter proper. Elsewhere in Wyre, visits were made to Withybed and Longdon Woods, where **Drab Loopers** appeared in good numbers, the misnamed **Common Fanfoot** occurred and three **Yellow-legged Clearwings** were seen flying around oak stumps. A specimen of the Psychid *Narycia monilifera* was the first record of the imago in Shropshire, this species having previously been encountered only as larval cases on Whixall Moss.

Work on the Stiperstones area yielded several species which are seldom found in Shropshire such as **Annulet**, **Satin Beauty**, **Galium Carpet**, **Square-spotted Clay** and **Pinion-streaked Snout**. The **Forester** was relocated at one of its few county colonies. Among the microlepidoptera species recorded no fewer than five appear to be county firsts: *Denisia subaquilea*, *Telechrysis tripuncta*, *Anarsia spartiella*, *Olethreutes mygindiana* and *Cydia lunulana*. Three of these are northern species, here at the southern end of their British range, indicating that Stiperstones NNR has some importance for this element in our moth fauna.

Besides the **Obscure Wainscot**, the Hopton/Bucknell area produced only the second **Butterbur** moth for Shropshire, together with uncommon species such as **Satin Wave**, **Satyr Pug** and **Dark Dagger**, the last identified from a larva beaten from oak. Many micros proved to be second or third county records including *Argyresthia mendica* and a few each of *Micropterix aruncella* and *Batrachedra praeangusta*.

Light trapping at Dudmaston this year produced a few **Lobster Moths**, a species almost unknown in the county outside Wyre Forest. Across the river at Chelmarsh, notable finds were the **Beautiful Hook-tip** (a Noctuid unrelated to the true Hook-tips), the leaf-miner *Phyllonorycter muelleriella* and the Pyralid *Eudonia angustea*, a widespread but largely coastal species in Britain, which also turned up this year on the Stiperstones. This account for 1998 concludes with results from the Rothamsted Insect Survey trap at Preston Montford which had one of its best years, producing a county first in **Yellow Belle** (a southern species rarely found far inland) plus two other Shropshire rarities namely **Red-necked Footman** and **Brown-veined Wainscot**.

Thanks to all those who submitted records this year: Jeremy Brown, Charles Derry, Alan Dolphin, Stephen Hind, John Jordan, Jenny Joy, Frank Lancaster, Adrian Miles, Adrian Riley, Mike Smith and Craig Yates.

p Godfrey Blunt

Staffordshire

This year has been absolutely deplorable due to the weather especially in June. Numbers have been very low and only four new arrivals were recorded in our Wombourne garden - **Early Thorn**, **Oak Hooktip**, **Common Swift** and finally **Northern Winter Moth** recorded on 8th December. This now brings the total of macro-moths recorded to 147 species in what is only a small garden. Due to inclement weather no moth trapping was carried out on other sites and day fliers were rarely encountered. Several other contacts in the county have had the same experience.

In early issues of the West Midlands Annual Review, the Staffordshire county report was always written by Richard Warren who as county recorder was the author of the Checklist of Butterflies and Moths published by the Stoke-on-Trent City Museum and Art Gallery. We use this booklet to see how rare or otherwise our findings are. Although we only met Richard a few times we did speak to him on the phone

occasionally and always found him helpful, kind and courteous. It is with great sadness that we have to report his death this January. He will be missed very much in Lepidoptera circles.

þ Wendy & Ken Wheatley

Worcestershire

1998 was another poor one with bad weather affecting insect numbers and very few interesting records reported. Migrants were few and, apart from three *Vestals* at the end of April and in early May in Malvern, Bransford and near Birmingham, there was nothing of note. Peter Holmes had a **Large Wainscot** at Malvern Wells in October, which is a typical date for this rarely recorded species usually found in the autumn well away from any reedbeds and these may be migrants.

I was asked by many recorders to produce a list of macrolepidoptera for Worcestershire, including dates of occurrence and status, to enable county recorders to assess their records so they would know more about what species to expect, and which were notable and might need more verification. I have therefore produced a "Guide to the status of the larger moths of Worcestershire" which I have sent to my more regular recorders and which will be available through the Biological Record Centre at the Wildlife Trust office at Smite and West Midlands Butterfly Conservation. I have already been getting some interesting feedback in the form of some older records of which I was previously unaware, for example it seems that the **Spinach** is not now quite as uncommon as I thought but beware of misidentifying similar species!

As regards the microlepidoptera, Kevin McGee photographed a '**longhorn**' moth on a teasel at Tiddesley Wood in July which was *Nemophora cupriacella*, which is the first post-war record for the county. I found two new species for Worcs in the plume *Stenoptilia zophodactylus* (also see Herefords) and the tortrix *Cydia lunulana*, both near Knightwick. I have also found the **Six-belted Clearwing**, which is included in the macro-moth guides, to be widespread on roadside verges. Look for a grassy, well-drained roadside verge with plenty of bird's foot trefoil growing on it and sweep it with a net in late morning or early afternoon in sunny weather between end-June and mid-July and look at any wasp like insect in the net.

I hope you all have an exciting and productive 1999.

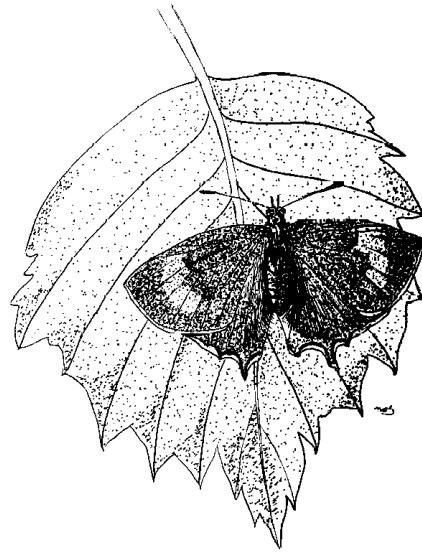
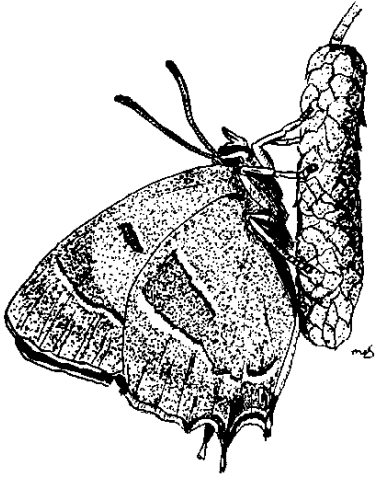
þ Tony Simpson

Acknowledgements

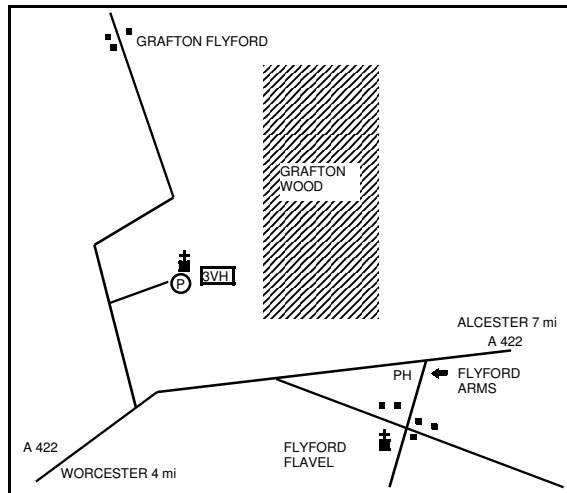
My thanks to all contributors to the 1998 Annual Review. A list of all those whose records are attributed appears below. Any omissions or errors are the responsibility of the author.

MJW

JA	Jeff Andrews	LN	Ledbury Naturalists
SRJB	Simon Barker	RMk	Roger Maskew
RB	Bob Bishop	AN	Andy Nicholls
PB	Peter Boardman	TN	Terry Norledge
GB	Godfrey Blunt	JP	John Pembridge
TBU	Trevor Bucknall	BP	Beryl Petters
PD	Peter Darch	JR	Jane Rea
BD	B. Davidson	PS	Peter Self
C&HD	Colin & Helen Dowling	CET	Claire Turner
ID	Ian Duncan	PW	Phil Wain
GHG	Harry Green	Mwa	Maurice Waterhouse
CG	Cherry Greenway	DWh	David White
MH	Michael Harper	EJW	Emma Williams
SH	Steve Harper	MJW	Mike Williams
TJH	Terry Higgins	PAW	Phil Williams
TDK	Terry Knight	DJW	Digby Wood
JJ	Jenny Joy	RW	Bob Woodroffe
FL	Frank Lancaster	RSw	Richard Southwell
CW	Charles Wright	MS	Malcolm Stanier
K&WW	Ken & Wendy Wheatley	RSt	Bob Steele
KHT	Ken Thomas	MT	Mike Taylor



Brown Hairstreak drawings
by Mike Southall



Grafton Wood Reserve was opened on May 2nd 1998