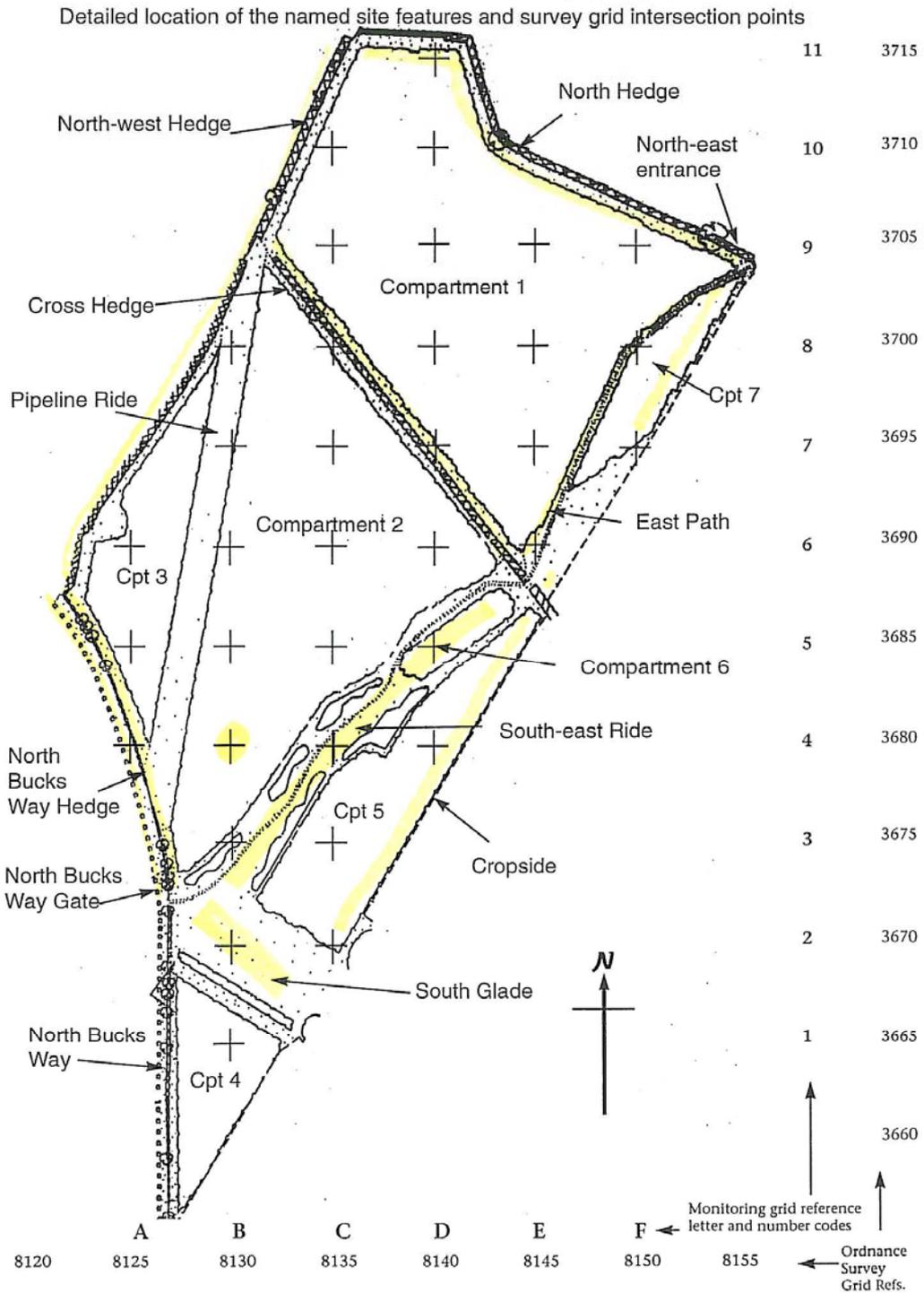


Map F.3.1 1995



## 6. ACKNOWLEDGEMENTS

My thanks to Clare for her valuable help in the field.

## 7. REFERENCES

Smith A J E (1978) - The Moss Flora of Britain & Ireland, Published by C.U.P.  
Hill M O, Preston C D, Smith A J E (1992) – Atlas of Bryophytes of Britain & Ireland, Vol. 2  
Harley Books

# 1996

## SUMMARY

In three visits almost all the grid intersection points were visited and surveyed. Casual records were also made.

## 8. INTRODUCTION

The sampling plan continued as intended. Tree growth caused the study areas to be more difficult to locate.

## 9. SURVEY METHODS

Bryophytes in the metre radius around 26 grid intersection posts shown in Map F.3.2 were studied. Plants were either identified in the field or taken as samples for microscopic examination.

## 10. SITE VISITS

Three visits with John Prince, who guided me through the trees, were made on March 16<sup>th</sup>, April 17<sup>th</sup> and 26<sup>th</sup>.

## 11. RESULTS AND DISCUSSION

Plants in the study areas were mostly in very poor condition, being muddy, weathered and strewn with rotting vegetation.

No survey at D7 as it mostly consisted of a water-filled ditch.

Specimens were taken to grow for future study. From these, hopefully, evidence may be gained hitherto unavailable in the field.

General observations were that good moss growth is evident in some tree rows especially at the grass edges. Large patches of *Pottia truncata* occur with a forest of brown capsules. *Ceratodon purpurens*, *Fissidens taxifolius* and *Barbula unguiculata* are also well established. In compartments 3 and 4 good wefts of *Eurhynchium praelongum* and *Brachythecium rutabulum* can be found. In compartment 1 *Eurhynchium swartzii* appears to grow well in damp hollows.

The checklist of species found appears as Table F.3.2.

## 12. CONCLUSION

The poor state of the study area plants made me decide not to carry out a survey in 1997. Casual records may be made. Hazeley Wood is still likely to make some valuable contributions to the Vice-County 24 species list.

## 13. ACKNOWLEDGEMENTS

My thanks to John Prince, without his help my progress would have been slow and few sites visited.

## 14. REFERENCES

Smith A J E (1978) - The Moss Flora of Britain & Ireland, Published by C.U.P.

# 1997

## SUMMARY

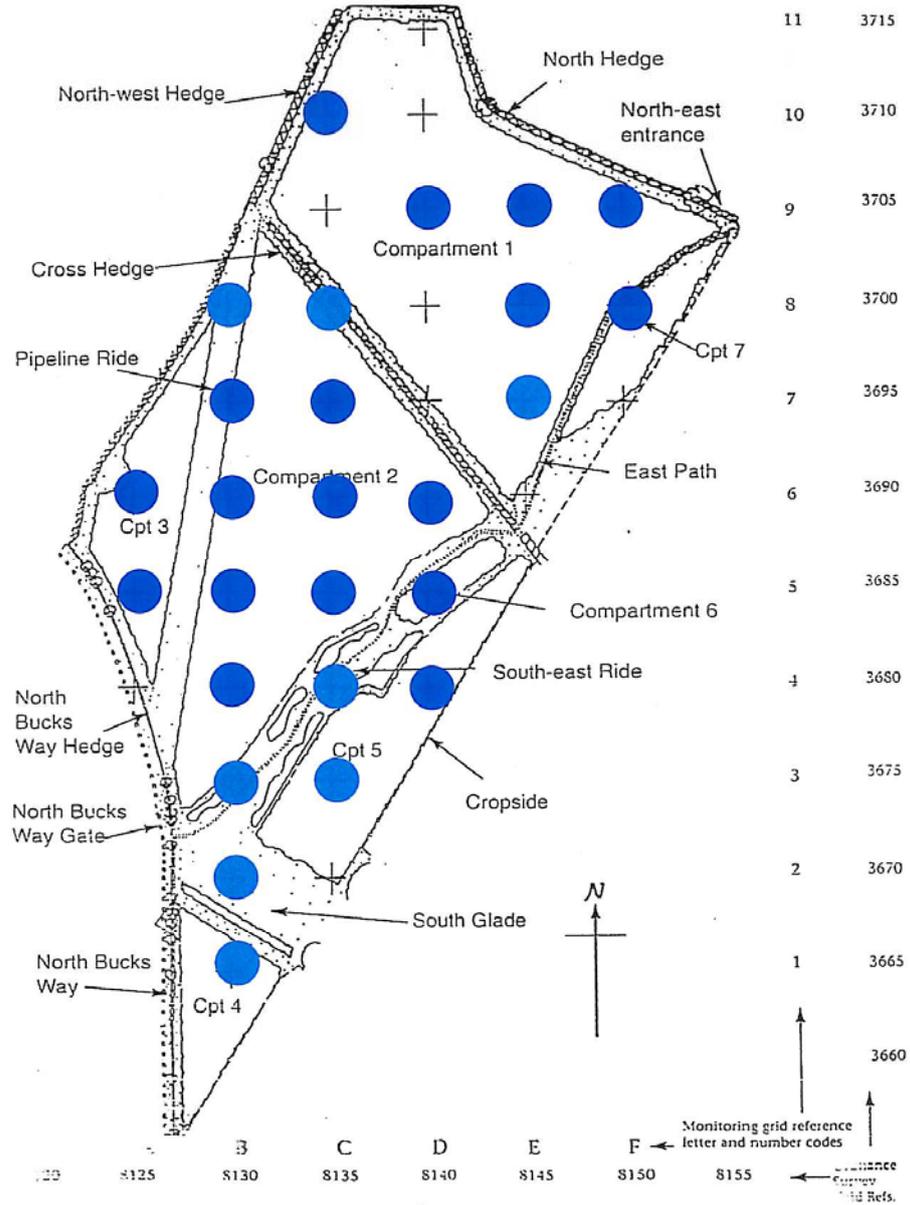
Results from growing specimens were nil. The plants did not develop to show the necessary features for determination.

A complete list of all species noted during the study so far is shown in Table F.3.3.

Plants sent to referees often take some time before being returned and therefore miss inclusion in the report at the time.

Map F.3.2 1996

Detailed location of site features showing also the position of the grid, together with the names adopted for the various rides, compartments and hedges.



HAZELEY WOOD STUDY GROUP

**Table F.3.2 – Results - 1996**

	A 5	A 6	B 1	B 2	B 3	B 4	B 5	B 6	B 7	C 3	C 4	C 5	C 6	D 4	D 5	D 9	E 8	E 9	F 8	C p t 1	C p t 2	C p t 3	C p t 4
<i>Amblystegium riparium</i>		*				*																	
<i>Barbula convoluta</i> var. <i>commutata</i>									*		*												
<i>Barbula unguiculata</i>							*		*		*	*	*		*								
<i>Barbula</i> spp.								*			*							*		*		*	*
<i>Brachythecium rutabulum</i>																						*	*
<i>Bryum argenteum</i>			*								*												
<i>B. bicolor</i>	*	*	*			*		*											*				
<i>B. dunense</i>	*	*																					
<i>B. rubens</i>						*														*			
<i>B. ruderale</i>		*																					
<i>Bryum</i> spp.								*	*		*	*	*	*			*					*	*
<i>Caliergon cuspidatum</i>																						*	
<i>Ceratodon purpureus</i>											*			*			*		*	*			
<i>Dicranella schreberana</i>			*																				
<i>D. staphylina</i>	*	*				*									*	*			*	*			
<i>Ephemerum serratum</i> var. <i>serratum</i>						*																	
<i>Eurhynchium praelongum</i> var. <i>praelongum</i>																						*	*
<i>E. swartzii</i> var. <i>swartzii</i>			*											*	*		*	*	*	*			
<i>Fissidens taxifolius</i> ssp. <i>taxifolius</i>			*			*												*		*			
<i>Funaria hygrometrica</i>					*						*												*
<i>Leptobryum pyriforme</i>			*		*	*	*	*	*	*	*	*			*								*
<i>Phascum cuspidatum</i> var. <i>cuspidatum</i>					*		*			*													
<i>Phascum cuspidatum</i> var. <i>schreberanum</i>							*																
<i>Pottia truncata</i>	*		*		*	*	*	*								*		*		*			
<i>Pottia</i> spp.							*	*	*		*	*	*	*			*		*			*	
<i>Weissia controversa</i> var. <i>controversa</i>			*						*														
<i>Weissia</i> spp.					*													*		*		*	
<i>W. sterilis</i>																*							

Cpt = Compartment

Table F.3.3 – Bryophytes found in Hazeley Wood 1993 – 1997

<b>Mosses</b>	<p> <i>Amblystegium riparium</i>  <i>A. serpens</i> var. <i>serpens</i>  <i>Aulacomnium androgynum</i>  <i>Barbula convoluta</i> var. <i>commutata</i>  <i>B. convoluta</i> var. <i>convoluta</i> – C4  <i>B. unguiculata</i>  <i>Brachythecium populeum</i> – North Hedge  <i>B. rutabulum</i>  <i>Bryum argenteum</i>  <i>B. bicolor</i>  <i>B. capillare</i>  <i>B. dunense</i>  <i>B. rubens</i>  <i>B. ruderale</i>  <i>Caliergon cuspidatum</i>  <i>Campylium stellatum</i> var. <i>stellatum</i> – Casual observation in compartment 3  <i>Ceratodon purpureus</i>  <i>Cratoneuron filicinum</i> var. <i>filicinum</i>  <i>Dicranella schreberana</i>  <i>D. staphylina</i>  <i>Dicranoweisia cirrata</i>  <i>Ephemerum serratum</i> var. <i>serratum</i>  <i>Eurhynchium praelongum</i>  <i>E. swartzii</i> var. <i>swartzii</i>  <i>Fissidens taxifolius</i> ssp. <i>taxifolius</i>  <i>Fissidens</i> sp. – plants with bordered leaves at C.10. Poor material  <i>Funaria hygrometrica</i>  <i>Hypnum cupressiforme</i> var. <i>cupressiforme</i>  <i>H. cup.</i> var. <i>lacunosum</i>  <i>H. cup.</i> var. <i>resupination</i>  <i>Leptobryum pyriforme</i>  <i>Orthodontium lineare</i>  <i>Phascum cuspidatum</i> var. <i>cuspidatum</i>  <i>P. cuspidatum</i> var. <i>schreberanum</i> – new record for Vc 24  <i>Pottia truncata</i>  <i>P. starkeana</i> ssp. <i>minutula</i>  <i>Pseudoscleropodium purum</i>  <i>Rhynchostegium confertum</i>  <i>Tortula muralis</i> var. <i>muralis</i>  <i>Weissia controversa</i> var. <i>controversa</i>  <i>W. longifolia</i> var. <i>angustifolia</i>  <i>W. longifolia</i> var. <i>longifolia</i> – new record for Vc 24  <i>W. microstoma</i> var. <i>brachycarpa</i>  <i>W. squarrosa</i> – nationally rare  <i>W. sterilis</i> – nationally rare                 </p>
<b>Liverwort</b>	<p> <i>Lophocolea heterophylla</i> </p>

## F.4 SPIDERS

1997

by

the late **Len Bourne**

### 1. INTRODUCTION

This is the author's first report and also the first in the study of arachnids, with no previous knowledge of the subject. This first survey was used as a means to get to know the subject better, not just identification but also the different habitats of the species. It is also hoped that one or two species will be kept in captivity for a closer study, especially in behaviour. With this in mind the author is now a member of the British Arachnological Society (BAS) to help with the study.

### 2. SURVEY SITES AND METHODS

The sub sites chosen are as follows:

- (i) Cross hedge
- (ii) Eastern edge of compartment 2 along the North Bucks Way
- (iii) North Bucks Way hedgerow
- (iv) Pipeline ride
- (v) Northern edge of compartment 1
- (vi) South east ride
- (vii) Compartment 3

The methods chosen are as follows:

- (i) Observation of the hedgerows chosen
- (ii) Beating the trees in compartments one and two
- (iii) Observation of the undergrowth and detritus of both compartments and the rides chosen
- (iv) Inspection of several selected growth tubes around the trees

Identification:

Various books were used to help not only in the identification but also the habitat and biology of the species. (See references). Because of the inexperience of the author, and also to some extent that males mature at different times of the year, specimens have not been identified to a specific gender.

### 3. SITE VISITS

February 21 <sup>st</sup>	Mild, breezy	Far south eastern edge of the cross hedge (E5.5)
March 9 <sup>th</sup>	Mild, windy	Western side of compartment 2 close to North Bucks Way hedge (B4)
April 20 <sup>th</sup>	Mild, cloudy	Southern edge of pipeline ride (A4)
May 27 <sup>th</sup>	Warm, slight breeze	North Bucks Way hedgerow (A5)
June 6 <sup>th</sup>	Warm, cloudless	Northern edge of pipeline ridge (B7)
July 27 <sup>th</sup>	Cloudy, breezy, warm	Southern edge of south east ride (B3)
August 21 <sup>st</sup>	Warm, cloudy, slight breeze	Compartment 1 (D9)
September 7 <sup>th</sup>	Cloudy, warm, still	Cross hedge (D7)
October 5 <sup>th</sup>	Mild, breezy	Compartment 3 (A6)

### 4. RESULTS

- (i) ***Liocranidae***  
*Agroeca proxima* (Op Cambridge 1871)
- (ii) ***Lycosidae***  
*Alopecosa pulverulenta* (Clerck 1757)  
*Pardosa amentata* (Clerck 1757)
- (iii) ***Linyphidae***  
*Linyphia triangularis* (Clerck 1757)
- (iv) ***Agelenidae***  
*Tegenaria duellica* (Simon 1875)
- (v) ***Pisauridae***  
*Pisaura mirabilis* (Clerck 1757)
- (vi) ***Araneidae***  
*Araneus diadematus* (Clerck 1757)

### 5. DISCUSSION

Inspection of selected growth tubes did not produce any specimens. This is mostly because the air temperature was too high, as the inspection was not carried out until May.

While the author has not adopted the more usual method of collection i.e. pitfall traps, the varied methods chosen have produced a wider variation in the species studied, it is hoped that as the author gains more experience in the subject, will result in a wider range of species. The author has not attempted to specify the numbers of the species identified, but to concentrate on the different species; this is also something that the author will gain with experience. (Regrettably, Len was unable to fulfill his expectations but our memories of a good naturalist stay with us.)

## 6. REFERENCES

- Foelix R F (1982) – Biology of Spiders  
Jones R – The Country Life Guide to Spiders of Britain & Northern Europe  
Preston-Matham K & R (1996) – The Natural History of Spiders  
Roberts M J (1993) – The Spiders of Great Britain & Ireland, Part 1 and Part 2  
Roberts M J (1995) – Spiders of Britain & Northern Europe (Field Guide)  
Savory T H (1926) – British Spiders (Their Haunts & Habits)  
Savory T H (1971) – Spiders (First Researchers Series)  
Walters L M (1989) – Keys to the Families of British Spiders (AIDGAP)

## F.5 GROUND BEETLES

1995

by

Ian Middlebrook

### SUMMARY

Monitoring of Ground Beetles by pit-fall trapping continued at Hazeley Wood in 1995. Twelve different species were identified, including two not found here previously. As before, the majority of beetles found are typical of cultivated land.

### 1. INTRODUCTION

This report details the second year of surveying for Carabidae at Hazeley Wood, and makes a brief comparison with the results obtained in the previous year.

### 2. SURVEY METHODS

The method of pit-fall trapping, with jam jars, was described fully in the 1994 report. As this had proved to be successful in catching a range of carabid species, it was decided that this method should be repeated. The same locations for trapping sites were also used.

Trap Site	Location
1	Compartment 2, 20m NW of C5
2	Compartment 1, 10m N of E8
3	Compartment 1, 20m NW of D9
4	Edge of pipeline ride, due E of A6
5	Compartment 5, 10m E of C3
6	East glade, 10m E of E6
7	Cross hedge, due E of C8
8	North Bucks way hedge, due W of B1

### 3. RESULTS

The pit-fall traps were sunk on the following dates for a period of 48 hours each time.

Traps	1, 3, 5 and 7	22 <sup>nd</sup> February, 30 <sup>th</sup> May, 30 <sup>th</sup> August
Traps	2, 4, 6 and 8	6 <sup>th</sup> March, 2 <sup>nd</sup> June, 25 <sup>th</sup> September

The ground beetles were identified with the use of keys in the books listed in the bibliography below.

A total of twelve different species were recorded including two, *Patrobis atrorufus* and *Trechus quadristriatus*, which had not been caught in 1994. This brings the total number of carabid species found at Hazeley Wood to fourteen. As with 1994, the species caught most frequently was *Harpalus rufipes*, which accounted for half of the individuals, collected.

The full list of species found at each trap site is given in Appendix F.5.1. A summary of the results split by habitat types is also shown, and is compared to the 1994 results.

### 4. DISCUSSION

The vast majority of carabid species recorded at Hazeley Wood are still characteristic of cultivated land. The main difference from 1994 was a threefold increase in the number of beetles trapped within the plantation areas. However, the bulk of this increase was accounted for by *Harpalus rufipes* and *Pterostichus cupreus* which are both indicative of agricultural land. The distribution of carabids within the plantation area was quite similar to the grassy areas. This may be a result of the more relaxed grass cutting between the rows of planted trees.

One promising sign was the record of *Pterostichus niger* in the middle of compartment 2. This is a woodland species which was only caught in the North Bucks Way hedge during 1994.

### 5. BIBLIOGRAPHY

- Forsythe T G (1987) – Common Ground Beetles. Richmond  
 Joy N H (1932) – A Practical Handbook of British Beetles. 2 Vols. E W Classey Ltd  
 Trautner N, Geigenmuller K (1987) – Tiger Beetles and Ground Beetles. Illustrated Key to the Cicindelidae and Carabidae of Europe. Margraf

**Appendix F.5.1**

**Ground Beetles caught in Hazeley Wood 1995**

Species	Pit-fall Traps								Total	Months caught					
	1	2	3	4	5	6	7	8		Fe	Mh	Ma	Jn	Au	Se
<i>Bembidion guttula</i>								1	1						#
<i>Clivina fossor</i>						1			1				#		
<i>Harpalus affinis</i>		1							1				#		
<i>Harpalus rufipes</i>	3	20		5	5	12		2	47			#	#	#	
<i>Nebria brevicollis</i>	3	3	2	3	3	5			19			#	#	#	
<i>Notiophilus biguttatus</i>	1								1			#			
<i>Patrobus atrorufus</i>						1			1				#		
<i>Pterostichus cupreus</i>	2	1	3	2	1	6			15			#	#	#	
<i>Pterostichus melanarius</i>	1	2						1	4				#	#	
<i>Pterostichus niger</i>	1								1					#	
<i>Pterostichus strenuus</i>	1			1				1	3	#		#	#		
<i>Trechus quadristriatus</i>								1	1	#					
<b>TOTAL</b>	<b>12</b>	<b>27</b>	<b>5</b>	<b>11</b>	<b>9</b>	<b>25</b>	<b>2</b>	<b>4</b>	<b>95</b>						

**Results split by habitat type (1994 results in brackets)**

Overall:	12 species (12)	95 individuals (59)
Plantation areas: (traps 1,2,3,5)	8 species (9)	53 individuals (18)
Grassy areas: (traps 4,6)	6 species (6)	36 individuals (31)
Hedgerows: (traps 7,8)	5 species (4)	6 individuals (10)

## F.6 SOLDIER BEETLES

1996

by

Ian Middlebrook

### SUMMARY

Monitoring of Soldier Beetles, by sweep-netting, began at Hazeley Wood in 1996. Four different common species were identified.

### 1. INTRODUCTION

The soldier beetles (*Cantharidae*) are a fairly well known, brightly coloured group of insects. There are 25 true species of soldier beetle (*Cantharinae*) which are relatively easy to identify, despite frequent variations in size and colour. There are also an indeterminate number of closely related species within the family, depending upon your choice of authority. Since I am using Joy (1932) to key out the different species, then I will go with this authority, for the time being, which includes a total of 61 species for the family.

### 2. SURVEY METHODS

Although soldier beetles are mainly carnivorous, they are frequently found on flowerbeds where they feed on nectar and prey on weaker insects. This means that they are readily captured by sweeping vegetation with a net.

This is the method I chose to employ, but this first year of monitoring was only treated as a preliminary experiment, in order to assess the likely efficiency of the technique of this site. I decided to sweep around the same locations I had used for pit-fall trapping ground beetles in previous years. These are outlined below, and are shown as Appendix F.6.2.

Trap Site	Location
1	Compartment 2, 20m NW of C5
2	Compartment 1, 10m N of E8
3	Compartment 1, 20m NW of D9
4	Edge of pipeline ride, due E of A6

- |   |                                    |
|---|------------------------------------|
| 5 | Compartment 5, 10m E of C3         |
| 6 | East glade, 10m E of E6            |
| 7 | Cross hedge, due E of C8           |
| 8 | North Bucks way hedge, due W of B1 |

The sweep-net used has a sturdy metal frame and handle. The net itself is about 24" deep with a 20" diameter opening. I was trying to develop a sweeping method which would be consistent between sites and repeatable on subsequent dates. At each location, I concentrated on an area of around 3m x 3m and made ten continuous sweeps across this area (i.e. left to right is one sweep, right to left is another sweep etc).

In the grassy areas (4 and 6) it was only necessary to sweep the net through the grass, just above the ground, taking in the flower and grass-heads. Within the compartments, grass was swept similarly, but the lower branches of the young trees, up to waist height, were also included in the sweep – hence the need for a sturdy frame. Because hedgerows are linear, a 3 x 3m square would be inappropriate so a slightly different sweep was used for sites 7 and 8. In these cases a length of about 6m was swept, taking in about 1m width of grass at the base of the hedge, and brushing the face of the hedge up to about chest height. This requires a hard wearing net since the hedge is mainly Hawthorn.

Once the sweep is complete the catch is emptied into a wide tray and any beetles are collected with a pooter. Most beetles were then identified with the key from Joy (1932), or a more simple tabular key obtained from English Nature and compiled by Keith Alexander in 1986. The more difficult species were transferred to a killing jar (containing ethyl acetate) and identified later under a microscope.

### 3. RESULTS

Each site was swept just once during the year, on 3<sup>rd</sup> July 1996.

Soldier beetles were caught at six of the eight locations, and four different species were identified. Three of these, from the genus *Cantharis*, are true soldier beetles. The fourth, *Malachius bipustulatus*, is included in the *Cantharidae* family in Joy (1932) but later authorities place it in *Melyridae*. Since it is brightly coloured and a similar shape to soldier beetles I thought it was reasonable to include this species in the survey. All the species found are relatively common. A full breakdown of the findings is shown in Appendix F.6.1.

This sweeping technique also proved to be fairly successful in catching ladybirds. In fact, a few more ladybirds were caught than soldier beetles. I have included these on the chart of Appendix F.6.1.

### 4. DISCUSSION

As a preliminary exercise, this method proved to be fairly efficient in finding the soldier beetles. A more comprehensive survey is planned for next year, and a more detailed look at the habitat requirements of each species will help in analysing the results.

The only drawback with this technique is that it can be quite destructive. Particularly during the spring, when a number of flowers may get decapitated in the process. For this reason I do not intend to sweep each location more than once before the middle of June, and I only intend to do this once every two years. This should give the areas plenty of time to recover. Whilst direct searching for the beetles may also produce good results, the success of such a method would be much more dependent upon the skill of the operator and is, therefore, less easily repeatable. Later in the year sweeping is not so much of a problem, and helps to disperse seeds!

## 5. BIBLIOGRAPHY

- Chinery M (1993) – Insects of Britain and Northern Europe. Collins  
 Cooter J (1991) – A Coleopterist's Handbook. Amateur Entomologists' Society  
 Joy N H (1932) – A Practical Handbook of British Beetles. 2 Vols. E W Classey Ltd

### Appendix F.6.1 Beetles caught in Hazeley Wood 1996

Species	Sweeping Sites								Total
	1	2	3	4	5	6	7	8	
<b>Cantharidae</b>									
<i>Cantharis lateralis</i>	2	2	1				2		7
<i>Cantharis rufa</i>			1						1
<i>Cantharis nigra (=fulvicollis)</i>				1			1		2
<i>Malachius bipustulatus</i>					1				1
<b>Coccinellidae</b>									
<i>Adalia 2-punctata</i>	1		1		1				3
<i>Coccinella 7-punctata</i>	1			1	1				3
<i>Tytthaspis 16-punctata</i>			1	4		3			8
<i>Propylea 14-punctata</i>								1	1

## F.7 BIRDS

1995 & 1996

by

Gerry Baker & John Day

### SUMMARY

Birds recorded in 1995 represented a similar picture to the previous year with 39 different species recorded of which 4 had not been seen previously.

The number recorded in 1996 followed this trend although the total was slightly lower at 35 species of which one, Redpoll (*Carduelis flammea*), being seen for the first time.

The total number of species now recorded at the site (1993-96) stands at 50.

### 1. INTRODUCTION

During 1995 a total of 9 counts took place between January and July. Most activity was confined to the site periphery with few sightings actually within the plantation area. Nesting boxes installed in established trees sited in the hedge lines were used by Blue Tits.

During 1996, there were similarly no significant changes in the birds recorded during 7 visits to the site at various times during the year. A total of 35 species were recorded with Redpoll (*Carduelis flammea*) being seen for the first time.

### 2. WEATHER CONDITIONS

#### 1995

Weather for the winter months counts were mainly overcast. Only 2 counts during May took place in more favourable conditions. Wind direction and strength was variable.

#### 1996

On survey days the weather was generally overcast with light winds averaging 8–12 mph.

### 3. SURVEY METHOD

The recording form introduced in March 1995 was used throughout the year and proved to be a simple but concise system for on site use. Two minor additions are to be incorporated for 1996 and these are a reference letter 'C' for calling and 'P' for perimeter (for detail see supplement to the 1993 report).

### 4. RESULTS

#### 1995

Although Skylarks were seen very infrequently, there was evidence of breeding within the site as a bird was seen on June 11<sup>th</sup> carrying food.

The most notable "first" sighting was that of a female Pied Flycatcher (*Ficedula hypoleuca*) on May 6<sup>th</sup>.

A total of 844 birds were counted in 1995 and the spread across the count points was as follows:

Point	1	2	3	4*	5	6	7**	8	9	10***
No. of birds	67	60	43	383	31	18	58	13	6	165
% per point	8.0	7.3	5.0	45.0	3.6	2.1	7.0	1.5	1.0	19.5

\* included c300 Woodpigeon flying over on January 22<sup>nd</sup>

\*\* included c34 Lapwing flying over on January 8<sup>th</sup>

\*\*\* included c150 woodpigeon flying over on January 22<sup>nd</sup>.

#### 1996

Redpolls were recorded for the first time but the species seen were otherwise as might be expected for developing woodland.

### 5. CONCLUSIONS

#### 1995

Overall, a total of 39 different species were recorded throughout the year as listed in Appendix F.7.1.

#### 1996

Overall, a total of 35 different species were recorded throughout the year as listed in Appendix F.7.2.

Appendix F.7.1 List of Birds species recorded at Hazeley Wood during 1995

Red-legged Partridge	<i>Alectoris rufa</i>
* Lapwing	<i>Vanellus vanellus</i>
Black-headed Gull	<i>Larus ridibundus</i>
Common Gull	<i>Larus canus</i>
Lesser Black-backed Gull	<i>Larus fuscus</i>
Herring Gull	<i>Larus argentatus</i>
Stock Dove	<i>Columba oenas</i>
Woodpigeon	<i>Columba palumbus</i>
Cuckoo	<i>Cuculus canorus</i>
Greater Spotted Woodpecker	<i>Dendrocopus major</i>
Skylark	<i>Alauda arvensis</i>
Swallow	<i>Hirundo rustica</i>
* Yellow Wagtail	<i>Motacilla flava</i>
Wren	<i>Troglodytes troglodytes</i>
Dunnock	<i>Prunella modularis</i>
Robin	<i>Erithacus rubecula</i>
Blackbird	<i>Turdus merula</i>
Fieldfare	<i>Turdus pilaris</i>
* Song Thrush	<i>Turdus philomelos</i>
Redwing	<i>Turdus iliacus</i>
Lesser Whitethroat	<i>Sylvia curruca</i>
Whitethroat	<i>Sylvia communis</i>
Blackcap	<i>Sylvia atricapilla</i>
Chiffchaff	<i>Phylloscopus collybita</i>
Willow Warbler	<i>Phylloscopus trochilus</i>
* Pied Flycatcher	<i>Ficedula hypoleuca</i>
Long-tailed Tit	<i>Aegithalos caudatus</i>
Blue Tit	<i>Parus caeruleus</i>
Great Tit	<i>Parus major</i>
Magpie	<i>Pica pica</i>
Rook	<i>Corvus frugilegus</i>
Carrion Crow	<i>Corvus corone corone</i>
Starling	<i>Sturnus vulgaris</i>
Chaffinch	<i>Fingilla coelebs</i>
Goldfinch	<i>Carduelis carduelis</i>
Greenfinch	<i>Carduelis chloris</i>
Linnet	<i>Carduelis cannabina</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>
Yellowhammer	<i>Emberiza citrinella</i>

\* new species seen during 1995

Appendix F.7.2 List of Birds species recorded at Hazeley Wood during 1996

Lapwing	<i>Vanellus vanellus</i>
Black-headed Gull	<i>Larus ridibundus</i>
Common Gull	<i>Larus canus</i>
Lesser Black-backed Gull	<i>Larus fuscus</i>
Herring Gull	<i>Larus argentatus</i>
Woodpigeon	<i>Columba palumbus</i>
Cuckoo	<i>Cuculus canorus</i>
Skylark	<i>Alauda arvensis</i>
Swallow	<i>Hirundo rustica</i>
Wren	<i>Troglodytes troglodytes</i>
Dunnock	<i>Prunella modularis</i>
Robin	<i>Erithacus rubecula</i>
Blackbird	<i>Turdus merula</i>
Fieldfare	<i>Turdus pilaris</i>
Song Thrush	<i>Turdus philomelos</i>
Redwing	<i>Turdus iliacus</i>
Whitethroat	<i>Sylvia communis</i>
Blackcap	<i>Sylvia atricapilla</i>
Chiffchaff	<i>Phylloscopus collybita</i>
Willow Warbler	<i>Phylloscopus trochilus</i>
Goldcrest	<i>Regulus regulus</i>
Long-tailed Tit	<i>Aegithalos caudatus</i>
Blue Tit	<i>Parus caeruleus</i>
Great Tit	<i>Parus major</i>
Magpie	<i>Pica pica</i>
Rook	<i>Corvus frugilegus</i>
Carrion Crow	<i>Corvus corone corone</i>
Starling	<i>Sturnus vulgaris</i>
Chaffinch	<i>Fingilla coelebs</i>
Goldfinch	<i>Carduelis carduelis</i>
Greenfinch	<i>Carduelis chloris</i>
Linnet	<i>Carduelis cannabina</i>
Redpoll	<i>Carduelis flammea</i>
Yellowhammer	<i>Emberiza citrinella</i>
Reed Bunting	<i>Emberiza schoeniclus</i>

## **F.8 BATS**

**1995**

**by Chris Coppock**

### **SUMMARY**

Observations were carried out on five occasions during 1995, using a Batbox III heterodyne detector without headphones and direct observation whilst walking one or other of two specific transects.

It was found that bats were as yet making little use of the site and only occasionally ventured into Hazeley from mature hedgerows and scrub, particularly from North Bucks Way and the North Hedge and North East entrance,

### **1. INTRODUCTION**

Although general surveys of fauna and flora had been conducted in the newly established Hazeley Wood during 1993 and 1994 and others were planned in future years, data on bats utilising the site had been sketchy and so another attempt was made in 1995, as reported here.

### **2. SURVEY METHODS**

The procedure used was adapted from Bristol University as specified by M. Street (1994), utilising a BATBOX III detector at 45 kHz.

Visits aimed to start within the prescribed 40 minutes of sunset, but that on 19/8/95 was 45 minutes after, and that on 9/10/95 was 52 minutes after. The visit on 9/10/95 was also one month after the recommended date.

With hindsight, the recorder believes that for a generic survey the 'prescribed start-time of 49 minutes after sunset' was far too late, for example Noctule and Pipstrelles may emerge at or even before sunset.

### **3. RESULTS**

NB. the detector 'incidents' are only "echoes" from bats, and do not necessarily indicate individual bats.

**19/06/95** The weather was fine and warm with many flying insects. Two incidents were recorded over mature hedgerows on N. Bucks Way i.e. just outside the study area.

**03/07/95** On a fine evening following a showery afternoon, again the only echoes were on the N. Bucks Way boundary, all were faint and sounded like Pipistrelles. At least one Pipistrelle was seen and heard using the ride outside the N. East entrance to the site.

**30/07/95** During a prolonged hot and humid spell, all echoes were faint, brief and associated with the periphery of the site.

**19/08/95** Weather was hot and sunny, very dry, no rain for weeks. Once again all incidents were associated with the more mature vegetation at the periphery of the site particularly along the N. Bucks Way and the North Hedge with the echoes being faint and transient. No more than one bat was seen simultaneously.

**09/10/95** At the end of 2 fine days following a severe depression on the 7<sup>th</sup>, there was intensive activity along the North and West margins of the site. The echoes were much stronger than on previous visits and several times bats were seen within the site boundary, sometimes coming from the surrounding mature trees and hedgerows.

No consistent attempt was made to identify species. Pipistrelles are certainly present, and a possible Noctule was seen on 30/7. The mature ash, etc. trees on the N and W boundaries may be suitable for Brown long-eared bat.

#### **4. DISCUSSION**

Bats are associated with mature trees and hedgerows on the North and West margins of the area, but as yet make little use of the new site. Except on 9/10, most sounds heard even on these boundaries were faint, suggesting that bats were outside the site, in particular utilising mature hedgerows or scrub along the adjacent North Bucks Way and North Hedge and North East entrance.

Bats, probably Pipistrelle, were however using the ride within the H4 grid-road plantation and making forays from this along the North edge of Hazeley Wood. This indicates the sort of age and habitat of the plantation is that at which the wood becomes acceptable to bats.

The remarkable increase in numbers at the belated visit of 9/10 suggests it is worthwhile continuing the survey beyond the previously determined 8th September deadline.

## **F.8 BATS**

**1996,1997,1998**

by

**Linda Piggott**

### **SUMMARY**

Observations were carried out on three occasions during 1996 and on one occasion each during 1997 and 1998, by walking a specific transect aided by a home-made bat detector to note any sounds emitted by bats. There was little evidence that bats were using the site as any sightings were usually near the boundaries where long established woodland/scrub was present. This follows the pattern of earlier surveys and the situation has only improved slightly in 2006 (see other Sections of this report).

### **INTRODUCTION**

Although earlier reports did not show any bats actively using the site, the hunt continued during 1996,1997 and 1998.

### **2. SURVEY METHODS**

In essence, the procedure was to walk a given transect (see below) using direct sight observation or a home-made bat detector at 45 kHz, to note the sound emitted by any bats present.

The survey route started at dusk, at the North-East entrance, followed an anticlockwise path around the perimeter as far as the Cross Hedge, then along Cross Hedge, Pipeline Ride, South-East Ride and along East Path back to the North-East entrance. This route was followed for all surveys (1996, 1997 & 1998).

Those present on various occasions were; Linda & Alan Piggott, Carol Watts, Paul Lund, John Prince, Steve Brady and Jenny Huggett.

### **3. RESULTS**

**17/05/96** No bats were seen or heard on this occasion. The low temperature 5°C may have contributed to this.

**06/06/96** On a fine evening, temperature 21°C, a bat was heard twice near the junction of the Pipeline Ride and North-west Hedge. It could have been the same individual.

**16/09/96** In fine weather, temperature 19°C, a bat was seen & heard twice near the junction of the Cross Hedge and North-west Hedge. It also could have been the same individual. Other bats were heard half-way along the Cropside boundary of Compartment 5 and in the south of Compartment 2 near the North Bucks Way Gate. At the North-west Hedge near the pylon in Compartment 3, a bat was heard and nearby two small bats were seen and heard (detector at 50 kHz frequency).

**08/09/97** On a single visit this year, in cloudy conditions and with temperature 15°C, no bats recorded.

**19/09/98** On a single visit this year, Pipistrelles were heard but not seen at three points along North Bucks Way Hedge and also along Pipeline Ride about 15m in from North Bucks Way Hedge. No feeding buzzes were heard.

#### **4. DISCUSSION**

Where bats were recorded, they were usually at or near mature parts of the site (e.g. the border of North Bucks Way and along the Cross hedge). This was not surprising, as most of the trees on site were immature and unlikely to be good insect-hunting territory. Very few bats were recorded.

## F.9 WEATHER RECORDS

1995 & 1996

by

John Wickham

### SUMMARY

Records made at the Milton Keynes Borough Weather Station in Central Milton Keynes are given as monthly summaries for Temperature, Pressure, Windspeed and Rainfall. Other records are available from Milton Keynes Council.

### 1. GENERAL

Weather recording was not possible on site at Hazeley Wood so to provide a general account of the climate throughout the years the records taken at the Milton Keynes Weather Station have been incorporated in this Report. This weather station is on the roof of the Council building (128m above mean sea level) at SP 85085 39052 which is about 4km (2.5 miles) North East of Hazeley Wood.

Measurements are recorded at the weather station automatically throughout 24 hours and stored on computer by the Environmental Health Department.

### 2. COMMENTS

#### 1995

The summer was particularly dry with over 22 days without rain during each of June, July, August and October. September was the only summer month to show significant rain (3.86 inches; with only 10 days without rain). August was particularly dry with 0.13 inches and 28 days without rain. July and August were hot showing mean temperatures of 19°C throughout and achieving maximum temperatures of 31°C in both months.

#### 1996

The summer of 1996 was similarly dry in that the total rainfall for June to October inclusive, was 6.8 inches (1995 7.2 inches) although this was spread out giving a mean 18 days without rain throughout the period. Generally speaking the mean temperatures and maximum temperatures were a degree or so below those of summer 1995.

### 3. ACKNOWLEDGEMENTS

We are pleased to acknowledge the help received from Mrs Linda Allen of Milton Keynes Council, Environmental Department in the preparation of these records.

**Table F.9.1 WEATHER SUMMARY - 1995**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>Jan</b>	Average	4.96		1,003.45		9.08	4.07				
	Maximum	12.50	on 31st; 11am	1,041.10	on 13th; 11am	45.20	20.20	on 19th; 2pm			
	Minimum	-3.70	on 3rd; 9am	977.10	on 22nd; 4pm						
	Total/Month								88.00	3.39	12 days without rain
	Max on 1day									0.60	on 20th

<b>Feb</b>	Average	6.07		1,003.04		8.17	3.67				
	Maximum	12.80	on 1st; 1pm	1,029.10	on 2nd; noon	45.90	20.50	on 16th; 10pm			
	Minimum	0.10	on 26th; 8am	977.10	on 11th; 6pm						
	Total/Month								69.40	2.66	6 days without rain
	Max on 1day									0.56	on 1st

<b>Mar</b>	Average	5.82		1,008.76		8.26	3.71				
	Maximum	15.90	on 23rd; 3pm	1,034.10	on 22nd; noon	45.90	22.30	on 17th; 3pm			
	Minimum	-4.10	on 4th; 3am	979.50	on 17th; 6am						
	Total/Month								45.60	1.76	16 days without rain
	Max on 1day									0.35	on 18th

<b>Apr</b>	Average	8.68		1,012.72		7.56	3.40				
	Maximum	18.10	on 6th; 5pm	1,035.10	on 13th; 10pm	35.80	16.00	on 7th; noon			
	Minimum	-0.50	on 19th; 5am	988.00	on 18th; 5am						
	Total/Month								18.6	0.71	21 days without rain
	Max on 1day									0.15	on 18th&22nd

HAZELEY WOOD STUDY GROUP

**Table F.9.2 WEATHER SUMMARY - 1995**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>May</b>	Average	11.43		1,011.79		6.16	3.75				
(9th-31st)	Maximum	20.80	on 23rd; 4pm	1,026.32	on 13th; 11am	31.40	14.00	on 17th; 1pm			
	Minimum	1.40	on 14th; 4am	??	on 22nd; 4pm						
	Total/Month								35.20	1.54	16 days without rain
	Max on 1day									0.44	on 18th

<b>Jun</b>	Average	14.30		1,017.30		7.74	3.45				
	Maximum	31.30	on 30th; 3pm	1,030.79	on 22nd; 10am	27.10	12.10	on 23rd; 2pm			
	Minimum	7.20	on 12th; 10pm	1,000.52	on 17th; 6pm						
	Total/Month								11.80	0.47	22 days without rain
	Max on 1day									0.25	on 4th

<b>Jul</b>	Average	19.33		1,012.00		8.26	3.71				
	Maximum	30.70	on 10th; 4pm	1,022.36	on 24th; 11am	45.90	22.30	on 17th; 3pm			
	Minimum	8.70	on 2nd; 4am	999.50	on 2nd; 6pm						
	Total/Month								46.20	1.82	22 days without rain
	Max on 1day									0.84	on 15th

<b>Aug</b>	Average	18.64		1,016.14		6.61	2.95				
	Maximum	31.90	on 1st; 5pm	1,025.31	on 30th; 8am	32.70	14.60	on 25th; 2pm			
	Minimum	8.50	on 30th; 6am	1,004.90	on 25th; 5am						
	Total/Month								3.2	0.13	28 days without rain
	Max on 1day									0.11	on 24th

HAZELEY WOOD STUDY GROUP

**Table F.9.3 WEATHER SUMMARY - 1995**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>Sept</b>	Average	12.96		1,008.83		6.67	2.98				
	Maximum	20.60	on 9th; 3pm	1,023.28	on 23rd; 11am	39.90	17.80	on 27th; 2pm			
	Minimum	5.10	on 28th; 7am	979.18							
	Total/Month								97.80	3.86	10 days without rain
	Max on 1day									0.67	on 11th

<b>Oct</b>	Average	12.58		1,012.53		6.73	3.00				
	Maximum	23.60	on 8th; 2pm	1,027.75	on 18th; 10am	41.20	18.40	on 2nd; 7pm			
	Minimum	3.50	on 21st; 7am	991.07							
	Total/Month								23.00	0.91	23 days without rain
	Max on 1day									0.27	on 7th

<b>Nov</b>	Average	8.05		1,009.66		6.77	3.02				
	Maximum	14.00	on 24th; 4pm	1,031.71	on 4th; 11pm	32.70	14.60	on 24th; 4pm			
	Minimum	-1.40	on 18th; 5am	985.07	on 16th; 4am						
	Total/Month								68.80	2.72	15 days without rain
	Max on 1day									1.18	on 27th

<b>Dec</b>	Average	1.38		1,008.77		6.45	2.88				
	Maximum	26.00	on 22nd; 1pm	1,037.20	on 11th; 9am	26.00	11.60	on 16th; 11am			
	Minimum	-8.40	on 29th; 9am	977.65							
	Total/Month								79.8	3.15	13 days without rain
	Max on 1day									0.80	on 20th

HAZELEY WOOD STUDY GROUP

**Table F.9.4 WEATHER SUMMARY - 1996**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>Jan</b>	Average	2.79		1,007.78		9.28	4.14				
	Maximum	11.40	on 8th; 5pm	1,034.76	on 17th; 10am	37.60	16.80	on 8th; 9pm			
	Minimum	-7.00	on 3rd; 9am	977.65	on 7th; 5am						
	Total/Month								34.60	1.37	15 days without rain
	Max on 1day									12.60	on 8th

<b>Feb</b>	Average	2.97		1,008.36		7.58	3.38				
	Maximum	11.70	on 16th; 2pm	1,041.67	on 19th; 6am	48.20	21.50	on 19th; 6am			
	Minimum	-4.50	on 20th; 4pm	980.09	on 12th; 5am						
	Total/Month								55.60	2.2	10 days without rain
	Max on 1day									12.60	on 11th

<b>Mar</b>	Average	4.12		1,012.70		7.06	3.15				
	Maximum	14.10	on 23rd; 2pm	1,029.27	on 1st; 5am	30.50	13.60	on 13th; 12am			
	Minimum	-3.80	on 11th; 8am	998.48	on 21st; 6am						
	Total/Month								28.20	1.12	18 days without rain
	Max on 1day									5.20	on 20th

<b>Apr</b>	Average	8.52		1,012.02		5.90	2.63				
	Maximum	21.70	on 20th; 3pm	1,051.12	on 5th; 9am	28.90	12.90	on 18th; 9am			
	Minimum	-8.90	on 4th; 6am	992.59	on 23rd; 9am						
	Total/Month								37.6	1.49	18 days without rain
	Max on 1day									20.00	on 22nd

HAZELEY WOOD STUDY GROUP

**Table F.9.5 WEATHER SUMMARY - 1996**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>May</b>	Average	9.54		1,009.97		8.37	3.73				
(9th-31 <sup>st</sup> )	Maximum	23.80	on 30th; 4pm	1,032.22	on 13th; 11am	40.10	17.90	on 19th; 2pm			
	Minimum	-5.80	on 4th; 5am	989.03	on 19th; 4am						
	Total/Month								26.00	1.03	21 days without rain
	Max on 1day									0.20	on 23rd

<b>Jun</b>	Average	14.86		1,016.93		5.78	2.58				
	Maximum	29.00	on 7th;4pm	1,035.16	on 13th; 3pm	29.30	13.10	on 29th; 5pm			
	Minimum	1.80	on 23rd; 5am	1,002.95	on 30th; midnight						
	Total/Month								23.80	0.94	22 days without rain
	Max on 1day									13.00	on 8th

<b>Jul</b>	Average	17.03		1,013.97		5.93	2.65				
	Maximum	29.80	on 22nd; 2pm	1,034.25	on 16th; 10am	29.30	13.10	on 4th; 3pm			
	Minimum	4.70	on 6th; 3am	994.52	on 3rd; 6pm						
	Total/Month								46.20	1.83	18 days without rain
	Max on 1day									0.47	on 23rd

<b>Aug</b>	Average	15.76		1,010.98		6.31	2.82				
	Maximum	29.40	on 19th;3 pm	1,026.32	on 31st; 10pm	29.10	13.00	on 29th; 2pm			
	Minimum	2.40	on 31st; 1am	996.55	on 11th; 5am						
	Total/Month								54.00	2.14	17 days without rain
	Max on 1day									0.54	on 22nd

HAZELEY WOOD STUDY GROUP

**Table F.9.6 WEATHER SUMMARY - 1996**

		TEMPERATURE		PRESSURE		WINDSPEED			RAINFALL		
		°C	Notes	mb	Notes	mph	m/s	Notes	mm	inches	Notes
<b>Sept</b>	Average	13.02		1,012.74		7.19	3.21				
	Maximum	21.80	on 15th; 4pm	1,027.24	on 1st; 11am	32.00	14.30	on 29th; 2pm			
	Minimum	-1.00	on 14th; 5am	1,000.01	on 26th; 10pm						
	Total/Month								12.40	0.49	18 days without rain
	Max on 1day									0.21	on 29th

<b>Oct</b>	Average	11.36		1,010.14		7.88	3.52				
	Maximum	19.40	on 23rd; 3pm	1,025.82	on 10th; 9pm	35.40	15.80	on 28th; 10pm			
	Minimum	-2.60	on 2nd; 7am	975.72	on 28th; 11pm						
	Total/Month								36.00	1.42	18 days without rain
	Max on 1day									0.25	on 18 <sup>th</sup> &27th

<b>Nov</b>	Average	4.73		1,005.60		6.99	3.36				
	Maximum	16.30	on 2nd; 3pm	1,025.82	on 14th; 9pm	37.90	16.90	on 6th; 5am			
	Minimum	-8.50	on 14 <sup>th</sup> :5am	963.73	on 19th; 6pm						
	Total/Month								68.60	2.49	15 days without rain
	Max on 1day									0.52	on 24th

<b>Dec</b>	Average	1.34		1,012.28		6.80	3.24				
	Maximum	12.20	on 3rd; noon	1,036.69	on 26th; 1pm	32.70	14.60	on 3rd; 11pm			
	Minimum	-11.60	on 31st; 7am	982.63	on 3rd; noon						
	Total/Month								29.8	1.07	17 days without rain
	Max on 1day									0.35	on 2nd