

## Field Craft Lesson 1: How to Find White Admiral Eggs

By Mike Slater

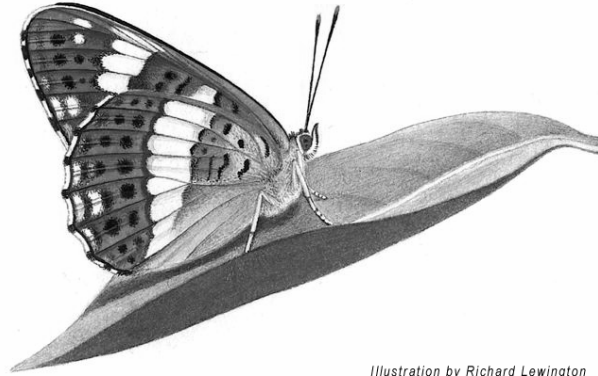


Illustration by Richard Lewington

Welcome to the Warwickshire Branch's first attempt in passing on field craft. The aim of these lessons is to make your butterfly watching more interesting in the typical British summer. We have all experienced that scenario, travelled miles to see our favourite butterfly when within 10 minutes a dark cloud appears and the butterflies disappear. The next thing you do is sit down and decide what to do next. Do you go home or do you wait an hour or so in the hope the dark cloud will pass over?

This is my attempt to get you to discover new and exciting butterfly experiences by searching for the immature stages of butterflies. How did I get started? I began by reading books by some of my butterfly heroes, Jeremy Thomas, Chris Thomas, Ernie Pollard and Martin Warren. Some of the quotes are infuriating such as the one by Jeremy Thomas from *The butterflies of Britain and Ireland*, "White Admiral Eggs have a curious cellular shell with projecting hairs and look rather like miniature sea urchins. THEY ARE FAIRLY EASY TO FIND, the young caterpillars are EVEN SIMPLER TO SPOT" ----- Yeah right, well thanks for that, Jeremy.

You are all going to hate me now but I have now found he was right although I do feel he forgot to give us all those important tips that help enthusiastic amateurs move towards becoming more expert. To be fair, the books he wrote probably didn't allow for a full explanation. Well, we all know things are never that simple and you need to get your eye in which you only achieve by experience and practice.

Here are my top ten tips for achieving success:

1. It may be obvious but choose your wood carefully. In Warwickshire choose Wolford in the South East (private access through Warwickshire BC conservation officer), Oversley in the South West (Forest Enterprise open access), Ryton or Wappenbury in mid Warwickshire (Warwickshire Wildlife Trust reserves) and Hartshill Hayes in the north (open access country park). All have relatively large populations of White Admiral.
2. Pick your year. If you can wait, pick a year following a very warm June. Pollard's ground breaking research into the White Admiral between 1972 and 1977 found that mean June temperatures were the key factor in determining adult numbers in July. In 2003 numbers of White Admirals were higher than the norm and June

was particularly warm. As a consequence eggs and caterpillars were also easier to find.

3. Pick the right time of year - approximately 2 to 3 weeks after the White Admirals have been flying. This is usually first or second week in July but this is not always the case. For example, in 2003 my search was later than normal. Despite that, on 20<sup>th</sup> July I searched 15 honeysuckle plants in close proximity and found 38 eggs and caterpillars within one and a half hours.
4. Pick the right type of ride. Never pick a very shaded ride, and probably not a very wide ride on your first attempt. Pick a ride that has a south facing aspect and that has long stretches of dappled shade. This is the sort of ride that has a strong Speckled Wood population. The normally correct shade conditions are those used year after year for male speckled woods setting up mate and locate territories.
5. Once you have found your right ride, find the caterpillar foodplant; honeysuckle *Lonicera periclymenum*. It is important to find the right type of honeysuckle as you need drapes. Those are the honeysuckles that trail down trees. In neglected coppices these can trail from the top of an oak tree to the floor but any bush such as Hazel or Silver Birch can provide these types of drapes. In further research in 1996, Jenny Joy, our regional Butterfly Conservation Officer, found that the White Admirals were using blooms in some Shropshire woods. Despite Jenny's discovery I would not recommend any first timer trying to find eggs on these types of growth until you are more experienced. For the record, blooms of honeysuckle are those tangle masses of honey suckle that form large clumps on the floor often in association with bramble.
6. On your first attempt I would chose a south facing ride (first find north and face in that direction. The ride edge you are looking at will be south facing). I would also ignore any honeysuckle drapes in full sun (these normally will be very healthy looking with very green leaves and no pale green or yellow leaves present.) For example, in my 1½ hour check of 15 honeysuckle plants the 3 honeysuckle drapes in full sun had no eggs or caterpillars. On the 6 north facing honeysuckle drapes 5 eggs and caterpillars were found. In contrast, the 6 honeysuckle drapes checked on the south side of the ride had 33 eggs and caterpillars or 87% of all those eggs and caterpillars I found in my quick search.
7. Have a system and have a magnifying glass (x10 magnification is fine) to check out anything you find. It's embarrassing to recall the number of times I found an aphid or just a leaf blemish when I first started but keep practising.

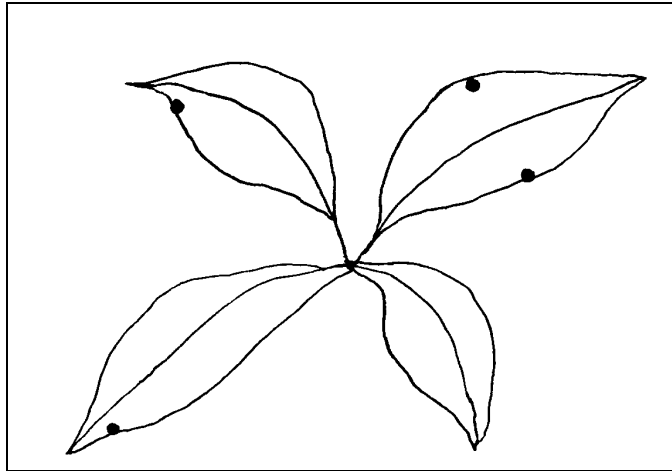


Diagram of leaf cluster with egg on upperside leaf edge

8. When looking for eggs, work around the upperside edge of the leaf (eggs are almost exclusively laid on the upper surface of the honeysuckle leaf near to the edge). Check out anything that looks out of place. You are looking for a whitish yellow spot type blemish that is symmetrical and the size of a large pin head. Start at the front of the bloom then work to the back. Have a system so you know you have checked each leaf cluster. When you are first starting only check the clusters from knee height to shoulder height (this is mainly for your comfort). Quickly scan the leaf but don't spend an age looking. You should be only spending a maximum of 10 minutes per plant. If unsuccessful on your first plant, move on to your next one or you will become dispirited.
  
9. When looking for caterpillars, many of the same principles apply. Pick a south facing ride edge and only check honeysuckle drapes in dappled sunlight. This time you don't at first look for the caterpillars; instead you look for the very characteristic feeding damage.

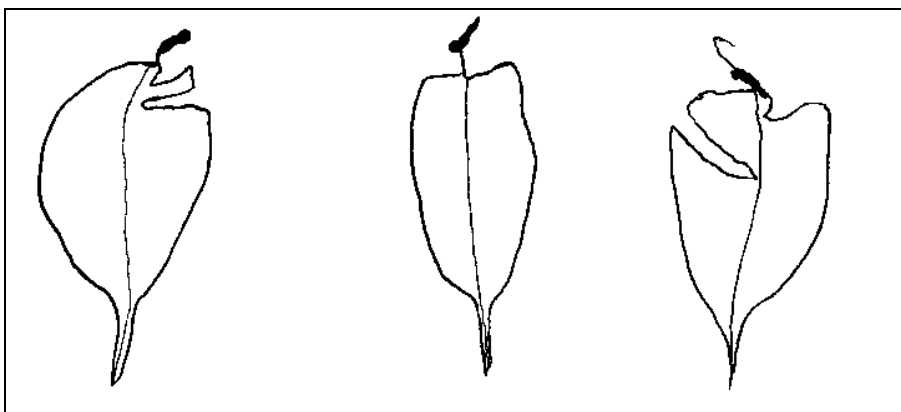


Diagram of leaf cluster showing characteristic feeding damage

Once you have found this type of feeding damage, check the exposed leaf rib with your magnifying glass. From my experience I would estimate that you have

a 50% chance of finding a very young caterpillar on the leaf's tip once you have found this characteristic damage.

10. Finally and probably the most important tip, whatever you do when you find your first egg or caterpillar, don't get that excited that you kick your coffee over - you may need it later. OK, I confess that's what I did.

Good Hunting!

For the record, below are the details of the caterpillars and eggs I found

**Glossary**

O = Ova or egg

L = Larvae or Caterpillar

height = The height the caterpillar or egg was found from the ground

In = The distance the caterpillar or egg was found from the front of the drape

**South facing honeysuckle drapes in full sun**

Bloom number 7 on Hazel                      Nil Found  
 Bloom number 13 on Oak                      Nil Found  
 Bloom number 14 on Silver Birch        Nil Found

One theory as to why the White Admiral does not choose honeysuckles growing in full sun is due to the plants producing increased amount of sticky solutions as a chemical defence against herbivores. The sticky secretion produced by the plants growing in full sun possibly makes the leaf more indigestible for the young caterpillar and may inhibit their growth.

**South facing Honeysuckle drapes in dappled shade**

**Drape 1 on Silver Birch**

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	O	135cm	3cm
2	O	135cm	5cm
3	L	91cm	49cm
4	L	75cm	5cm
5	O	154cm	30cm

**Drape 2 on Silver Birch**

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	O	25cm	20cm
2	L	80cm	22cm
3	O	80cm	28cm
4	O	88cm	42cm
5	O	96cm	69cm
6	O	Same leaf	Same Leaf

7	O	Same leaf	Same leaf
8	O	Same leaf	Same leaf
9	L	81cm	52cm
10	O	75cm	50cm
11	O	108cm	8cm
12	O	Same leaf	Same Leaf
13	O	110cm	8cm
14	O	136cm	30cm
15	O	149cm	0cm

Drape 5 on Silver Birch

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	L	89cm	20cm

Drape 6 on Silver Birch

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	O	191cm	20cm
2	L	194cm	7cm
3	O	178cm	128cm

Drape 9 on Hazel

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	L	119cm	19cm
2	O	119cm	4cm
3	O	122cm	17cm
4	O	157cm	2cm
5	L	170cm	30cm

Drape 10 on Broad Leaf Sallow

<b>Number</b>	<b>Stage</b>	<b>Height</b>	<b>In</b>
1	O	169cm	26cm
2	O	205cm	43cm
3	L	154cm	18cm
4	L	180cm	6cm

Though some honeysuckle drapes trailed all the way to the ground, most finished short of the ground. Only the part of the drapes from their lowest point to just above head height were searched.

Statistics from the 6 drapes searched in dappled sunshine

Total number of early stages found on the 6 drapes in dappled sunshine on the south facing ride side	33
Largest number of early stages found on an individual drape	15
Lowest number of early stages found on an individual drape	1
Average number of early stages found on each drape	5.5
Lowest early stage found on drape	25cm
Highest early stage found on drape	205cm
Average height early stage found on drape	122.8cm
Closest early stage found to the front of the drape	0cm
Furthest early stage found to the back of the drape	128cm
Average distance early stage found from the front of the drape	29cm

**North facing Honeysuckle drapes in dappled shade**

Drape 3 on Broad Leafed Sallow

<u>Number</u>	<u>Stage</u>	<u>Height</u>	<u>In</u>
1	O	123cm	120cm

Drape 4 on Hazel

Nil found

Drape 8 on Ash

Nil Found

Drape 11 on Silver Birch

<u>Number</u>	<u>Stage</u>	<u>Height</u>	<u>In</u>
1	L	82cm	8cm
2	O	83cm	10cm
3	L	125cm	130cm

Drape 12 on Hazel

Nil found

Drape 15 on Silver Birch

<u>Number</u>	<u>Stage</u>	<u>Height</u>	<u>In</u>
1	L	90cm	0cm

### Statistics from the 6 drapes searched in dappled sunshine (shade?)

Total number of early stages found on the 6 drapes in dappled sunshine on the north facing ride side	5
Largest number of early stages found on an individual drape	3
Lowest number of early stages found on an individual drape	0
Average number of early stages found on each drape	0.8
Lowest early stage found on drape	82cm
Highest early stage found on drape	125cm
Average height early stage found on drape	100.6cm
Closest early stage found to the front of the drape	0cm
Furthest early stage found to the back of the drape	130cm
Average distance early stage found from the front of the drape	53.6cm

### **Conclusions**

In Pollard's research (Monks Wood Cambridgeshire) the mean height eggs were found from ground level was 85cms. In other work by Fox (Hampshire/Wiltshire area) the mean height was between 140-160cm. Joy's research found mean height to be 171cm at Wyre Forest and 78.82cm at Dudmaston (both Shropshire). Therefore my mean heights of 122.8cm south facing ride side and 100.6cm north facing ride side are well within this range (though I didn't search above head height). I found far more immature stages on the south facing ride. Fox found all egg laying sites to be north facing; Joy found a preference for south facing. The White Admiral therefore might change its egg laying preference with latitude, picking more northern aspects in the south of the country and south facing in the north. This would be very consistent with other butterfly species.

Those species on the edge of their range tend to pick the warmest aspects for egg laying. Pollard and Fox never found eggs laid below 0.3m. Joy found 2 eggs below 20cm in her study. I also found one egg at 25cm in this short study. From previous observations I believe egg laying below 0.3m is not uncommon. It may be more associated with the fact that many drapes do not reach the ground during the White Admirals flight period (later on in the growing season this is more common). Joy also believes that this may be associated with light levels at ground level or possibly a defence against predication. More research is required in this area.

### **Mike Slater**

#### References

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2. "Atypical habitat choice by White Admiral butterflies *Ladoga camilla* at the edge of their range." J Joy 1999, Entomologist Gazette 50 pages 169-179
3. "Warwickshire Species Action Plan White Admiral *Ladoga camilla* 1996." M. J Slater Butterfly Conservation Warwickshire branch publication
4. "The Butterflies of Britain & Ireland" J Thomas 1991 National Trust