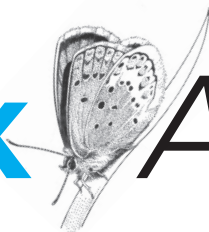




Butterfly
Conservation

Saving butterflies, moths and their habitats

The Suffolk Argus



The Newsletter of the **Suffolk** Branch of Butterfly Conservation

Purple Emperor at Broxbourne Wood, Herts by Laurence Drummond



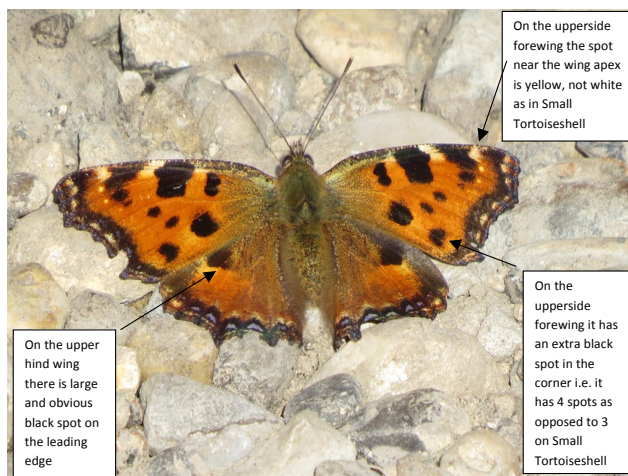
Large Tortoiseshell (*Nymphalis polychlorus*) field identification

Bill Stone

In March this year, Suffolk was lucky enough to play host to a rare butterfly in the form of a Large Tortoiseshell. It was found by Will Brame at Peewit Hill, Felixstowe on 10 March and remained until at least 13 March. Most records of Large Tortoiseshell in the UK appear in the early Spring, following hibernation or in July and August when fresh adults emerge. Given how close Peewit Hill is to the extensive Felixstowe docks complex it is felt likely that this particular individual arrived in freight from the near continent, perhaps hibernating in imported cargo.

During the 10 and 13 March the butterfly was at times elusive, but it regularly returned to a favoured area where it was seen to interact with other butterflies present such as Comma and Peacock. Here it was seen to fly strongly with powerful wing beats followed by long glides. The photograph below from Will Brame shows the butterfly basking on the pathway, something that it was observed doing on a number of occasions.

Using the photograph below the following key points may be of use when trying to confirm a putative Large Tortoiseshell in the field.



If you are able to see the underwing then the underside of the forewing is much more uniform in colour and importantly it lacks the obvious pale central area that Small Tortoiseshell has. If seen well, then there is also a central white spot on the hind wing underside.

It is a very powerful butterfly and will glide effortlessly as observed at Peewit Hill. It can also fly very quickly especially when disturbed and it will often fly up into tree tops. The larval food plant is elm although willow is often used. Post hibernating butterflies are often found fuelling up on willow blossom.

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Editorial

Peter Maddison

It won't have taken you a moment to realise that this edition of the newsletter is special - it has colour in the centre pages. Here you will find the maps and charts associated with the report 'The Purple Emperor in Suffolk in 2013'. Rob Parker introduces the report by Liz Goodyear and Andrew Middleton, who spent many hours conducting the survey in the woodlands particularly in the west of the county.

Whether you are thinking of searching out the Purple Emperor or not, Bill Stone's article on the fascinating behaviour of the butterfly and suggested survey methods, is intriguing and most useful.

Bill Stone together with Rob Parker have published Suffolk's Butterfly Report for 2013. The analysis of members' records of butterflies would indicate that many species did well and even those species that are encountered infrequently seemed to have maintained stable populations. However, the continuing demise of the Wall remains a concern.

There are plenty of opportunities for recording butterflies in 2014—it's what we're all encouraged to do to make our membership of BC count. Twm Wade gives an update on the few remaining vacant WCBS squares and he also requests help in recording the least surveyed areas, the 'black holes', of the county. Brimstones have been on the wing and Julian Dowding asks for both sightings and knowledge of how Buckthorns planted during the project of 2011/12 are fairing.

This year in my garden Orange-tips have been plentiful, but it's been good to see increased numbers of Peacock and Small Tortoiseshell too. They must have wintered well. Read about Richard Stewart's finding of hibernating butterflies in a WW2 pillbox.

All members are welcome to take part in our Events, and with the main season ahead let's hope for an abundance of butterflies that can be enjoyed, observed, photographed and recorded.

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Butterfly Conservation

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New Members and 2013 Membership Report

Susan Sidle, Branch Membership Secretary

We warmly welcome the following new members to Suffolk Branch and look forward to meeting you at our events this year.

Mr J Hunt	Halesworth	Mr M Cant	Ipswich
Mrs B Chesterman	Foxhall	Miss K Nocton	Whepstead
Mrs E Day	Haverhill	Mrs A & Mr A R Langan	Bury St Edmunds
Mrs P Fey	Bury St. Edmunds	Mr S Tunstill	Wickham Market
	All Saints South		
Mr J & Mrs P Davies	Elmham	Mr F Hanniffy	Ipswich
Mrs J L Paternoster	Ipswich	Mr J Smith	Blyford
Dr N Burton	Thetford	Mr D & Mrs L Norris	Halesworth
Mr S & Mrs K Read & Family	Sudbury	Miss J Turner & Mr C Upson	Hadleigh
Mrs D & Mr J Richards	Aldeburgh	Mr S & Mrs M Harris	Eye
Mrs J E & Mr T G Baker	Hitcham	Dr M & Mr G Wilson	Spexhall
Mrs N Hydes	Ipswich	Mr P Thurston	Lowestoft
Mr A Jessop	Linstead		

In addition to the Welcome Pack from Butterfly Conservation, you should also have received a branch Welcome Letter. (Please note that if you joined after March this year and you provided your email address, the branch Welcome letter would have been sent to you by email). If you have not received your branch Welcome Letter either by post or by email please let me know.

The membership data for the Suffolk Branch for the period to 1 November 2013 is reproduced below.

No of household members at			% Increase in Household members from Oct 12 to Nov 13	Total Household members recruited 01/10/12 to 1/11/13
01-Oct-11	01-Oct-12	01-Nov-13		
287	338	414	22%	92

We may be one of the smaller branches of Butterfly Conservation but over the last two years we have grown by 44%, 22% over each year. Last year this growth rate put us equal second when comparing the growth rates of all BC's branches (31 in all). So thank you very much for your support!

In an effort to reduce our branch expenditure on printing and postage we are now offering our members the option of receiving the Suffolk Argus newsletter electronically. Whenever the latest newsletter becomes available you would receive an email containing a link to the new newsletter. You will be able to opt back in to receive hard copies of the newsletter at any time. If you would like to receive future newsletters by email please let me know.

Contact Susan Sidle : susansidle361@gmail.com

2013 Butterfly Report

Bill Stone and Rob Parker

Summary

By way of a brief overview, 2013 was a wonderful year for the majority of butterfly species. It was a year of unexpected recovery with the fine long lasting summer weather allowing several species to rebuild their numbers after the disastrous butterfly year of 2012. Everyone will remember it as a great Clouded Yellow year and, hopefully, most of you will have spent some time watching this wonderful migrant butterfly. The Silver-washed Fritillary continued its range expansion and its numbers swelled in the key woodlands too. In addition, some incredible counts of Peacocks, Small Tortoiseshells and both Small and Large Whites were enjoyed during the summer. By contrast the Wall failed to show any signs of recovery and appears to be slipping slowly off the Suffolk butterfly list.

Overview of the UK weather in 2013

The annual statistics for the UK in 2013 were generally near average. However, many meteorological records were broken. A late winter and exceptionally cold spring, with unseasonably late snowfalls led into a long warm and sunny summer. October and

December saw Atlantic storms that brought rain and at times very high winds, causing widespread disruption. The UK mean temperature of 8.8 °C was 0.1 °C below the 1981-2010 average. This is identical to the 2012 value. March was the equal second coldest March for the UK on record. Both March and spring overall were the coldest since 1962. In contrast July was the third warmest in the series and it was the warmest summer since 2006. The July heat wave was in marked contrast to the run of recent poor summers from 2007 to 2012. The UK annual rainfall total of 1086 mm (94% of average) was drier than average but not exceptionally so. May, October, and December were the only months to record above average rainfall for the UK. In both October and December, some parts of the UK received over twice the normal amount of rainfall for the month, and it was the wettest December on record for Scotland.

Overall for the UK, it was a sunnier than average year (104 %), but again not exceptionally so. It was the sunniest July since 2006 and the third sunniest July in the series from 1929.

2013 Weather for East Anglia						
Season	Mean Temp	Anomaly	Sunshine	Anomaly	Rainfall	Anomaly
	Deg C	Deg C	hrs	%	mm	%
Winter 12/13	3.6	-0.8	161.5	87	175.9	119
Spring	7.2	-1.9	453.9	97	125.9	92
Summer	16.9	0.5	649.8	110	105	65
Autumn	11.2	0.3	321.1	99	194.6	108

Source: www.metoffice.gov.uk

Anomalies are measured against the 1981-2010 averages.

Residents - Winners & Losers

The 2013 season began typically with a hibernator in the form of a Small Tortoiseshell seen on 01 January. By the end of the February, several records for the other hibernating species of Peacock, Red Admiral and Brimstone had also been received. The very cold winter clearly had an impact on the traditional spring butterflies with the majority of the first Orange-tip and Green-veined White records being 2-3 weeks later than normal. This was a trend that seemed to be reflected across the UK. Speckled Wood also seemed to have been affected by the late spring and the year did not really allow for a full recovery for this species. Concerns were raised in 2012 regarding Common Blue, Brown Argus and Holly Blue. Both Common Blue and Brown Argus appear to have undergone a slight recovery with stronger later broods noted. Analysis of the records suggests that Holly Blue had a good spring brood but that the summer brood was poor. This clearly has implications for the species in 2014 and the position will need to be closely monitored. The long hot summer allowed the grass loving species to sustain their numbers and some exceptional counts of both Ringlet and Meadow Brown were received.

Early & Late

This year saw five species with new dates. Given the fantastic year for **Clouded Yellow** it seemed apt for this species to share in the changes with one seen flying on 23 April 2013. The previous earliest was 27 April 1997. A **Purple Hairstreak** was seen on 03 June 2013, beating the previous record of 13 June 2011 by well over a week. The **Orange-tip** enjoyed a slightly longer flight

season with several Suffolk records received well into July resulting in a new late record of 21 July 2013. Clearly, the long summer had a significant impact on this species. It is worth noting that at the 2014 BC Recorders' Meeting it was revealed that a number of southern counties recorded Orange-tip into late August and early September. Were these late emerging individuals or perhaps evidence of a rare second brood? The incredible weather also helped lengthen the flight season for **Silver-washed Fritillary** and the latest date was extended to 26 August 2013 from 18 August in 2012. Finally, a late **Meadow Brown** record of 08 October 2013 reinforced the impact that the summer had on our butterflies. The previous latest for this species was two days earlier on 06 October in 2005.

Migrants

The year saw some good records for **Painted Lady**. This species received 392 records and was recorded in 222 tetrads. The year also proved to be an excellent one for **Clouded Yellow** with 329 records received covering 131 tetrads. Several counts in excess of 20 were made at the coastal locations of Landguard, Bawdsey and East Lane. Double figure counts were also received from inland sites demonstrating that good numbers penetrated well into west Suffolk rather than just on the coast. However, in respect of true rarity value Suffolk was fortunate to have five records of **Long-tailed Blue** with singles at Dunwich (11 Aug) and East Lane (08 Oct) and then singles on three consecutive days at Landguard Bird Observatory (06, 07 and 08 Oct). The Suffolk records appear to reflect what had been seen elsewhere in England with true

migrants being recorded in August and their progeny being seen following emergence in late September and October.

Unusual Species

Exciting news was received when **Chalkhill Blue** was found in good numbers at a site (SSSI) in the west of the county in August. In addition, a single butterfly was seen flying along the railway embankment close to the A14 near Higham (20 Aug). It appears that the main site, albeit newly discovered, appears to be an established colony and on a suitable chalk habitat. In 2013, this species had a strong season and strayed far and wide. Significant dispersal was also noted in Cambridgeshire so it could be that this butterfly will appear at other suitable chalk land sites in west Suffolk in 2014.

Two records (03, 21 August) of **Marbled White** were received from the extreme west of the county. This species is known to be a strong flyer and one that will wander so the 2013 records could relate to Cambridgeshire individuals exploring new areas. The population in Landseer Park, Ipswich was still present and butterflies were seen on the wing between 08 July and 09 August. Although numbers were lower (max day count of 6) than last year, breeding was noted with several records of egg laying females being received. As in 2012, the population was spread over two tetrads in Landseer Park but this year a record was also received from a third tetrad adjacent to the park. Interestingly, a record of a single Marbled White was also received from a garden in Martlesham on 22 July.

Three records of **Swallowtail** were received during the year. One, presumably a wanderer from the east Norfolk population, was seen at Burgh Castle on 30 June. A second

was recorded in the vicinity of Orford Lighthouse on 06 August and based on a photograph was likely to have been a female of the European form *ssp gorganus*. Finally, a third of unknown origin was recorded in central Ipswich on 18 July.

Other species of interest

Exploratory work for **Purple Emperor** in Suffolk was undertaken in 2013 by Liz Goodyear and Andrew Middleton of the Hertfordshire and Middlesex Branch of Butterfly Conservation, with sightings made in July in woodland in TL65. Work already carried out in Cambridgeshire and Essex had confirmed this species moving closer to Suffolk. Away from the introduced population at Theberton Woods, another record was received for a single butterfly at Bradfield Woods and another not far from Halesworth. It is entirely feasible that the Purple Emperor can be found in any suitable mature woodland in Suffolk and it is hoped that through Liz and Andrew's work more records will be forthcoming in the future.

2013 was another great year for **Silver-washed Fritillary** with 88 records from 31 tetrads. This is opposed to 64 records from 24 tetrads in 2012. The hot July coincided with the flight period and some exceptional counts were made. As mentioned above a new latest date was also achieved extending the Suffolk flight season by 8 days. A number of observations were also made of Silver-washed Fritillary flying strongly over arable fields, along railway embankments and in gardens close to mature woodlands. These sightings suggested that the butterfly is on the move and continuing to expand its range.

Suffolk Biodiversity Action Plan Priority Species

Seven species of butterfly occurring in Suffolk are deemed as UK BAP priority species. These are listed below. See <http://www.suffolkbiodiversity.org/biodiversity-action-plans.aspx>

Dingy Skipper

The Dingy Skipper enjoyed a strong season in 2013. The main organised counts on the 15th and 16th of May were again too early. But, a count on the 26th May in the Kings Forest resulted in 83 Dingy Skippers being found and it was good to see that the butterfly had extended eastwards within the forest. Ride-widening work and a good spread of birds-foot trefoil also seemed to have helped the Dingy Skipper this year. It was found again on Thetford Heath and despite long-term absences it was also found again at RAF Barnham and within the Elveden Center Parcs complex.

Silver-studded Blue

The Silver-studded Blue was seen in 15 tetrads with 107 records being received. The organised count resulted in some excellent totals being achieved with 27 out of 45 count sites being visited. A total figure of 6184 butterflies was the reward. However, no Silver-studded Blues were recorded from Walberswick NNR. It is unknown why this colony has been lost as the Bell Heather remains in a suitable condition and with appropriate habitat management still in place. Good news, however, came from the trans-located colony at Blaxhall. Here, not only has the population survived, but it has been seen to have gone from strength to strength.

White-letter Hairstreak

Always a difficult butterfly to see this year saw a slight increase on 2012. Favourable weather conditions and hot temperatures allowed a number of observers to watch and photograph this species nectaring on brambles and thistles rather than the usual brief glimpses of males spiralling high in the tops of elms.

White Admiral

This species enjoyed another relatively stable year allowing it to establish itself further in known colonies. As with Silver-washed Fritillary a number of White Admirals were seen flying away from known sites and were also seen flying though gardens. It was found in four new tetrads and some very high counts enjoyed.

Grayling

This species showed a very slight increase in 2013 with it being seen in an additional 12 tetrads. Again, the majority of the records were split between the east coast Sandlings and the favoured Breckland areas. Of interest was a record of a single Grayling at Bradfield Woods on 11 August.

Wall

The Wall, in 2012 was seen to have its range reduced even further with the Suffolk population being squeezed into several pockets along a narrow strip on the east coast. Sadly, 2013 showed no real positive development in this situation. One key area remains the trinity of Bawdsey, East Lane and Shingle Street. However, in 2013 this area was subject to extensive work by the Environment Agency and contractors undertaking ground work for the landing of offshore wind farm cables. Despite a small

number of Walls being reported in the latter part of the season it will be left to records from 2014 to properly address the impact in the area.

Small Heath

Despite its name, the Small Heath is not confined to heath land. It is highly adaptive and can be found in a variety of grassy habitats including woodland rides but the key requirement is a short sward of fine grass species. During the year it was pleasing to hear that this species had appeared on a number of new conservation sites especially those being managed for Common Blue and Brown Argus. That said, it showed a very small decline against 2012 and it remains a species that requires close monitoring.

Recording and Geographic Coverage.

In 2013, over 19,000 records were received, recording 37 species of butterfly and covering 637 tetrads. Given that Suffolk has 1089 tetrads that meant that the records received related to almost 60% of Suffolk. Most years, we average just over 500 tetrads being visited so it looks like the good weather encouraged us all to explore a bit more.

As you may be aware, Butterfly Conservation (BC) operate a general recording scheme known as “Butterflies for the New Millennium” or BNM. This scheme operates over a five-year period for Britain and Ireland in order to assess change, inform conservation and stimulate research. The current BNM survey runs from 2010-2014, so 2013 represented the fourth year of the current five-year period. Over the last 4 years (2010-2013) a total of 946 Suffolk tetrads have been visited and butterflies recorded.

With 1089 tetrads in Suffolk that leaves 143 tetrads without any butterfly records being received over the last four years. These “black holes” are scattered across the county with the weakest area remaining the agricultural land in High Suffolk.

It is worth noting that over 4,000 records alone were received from the Big Butterfly Count which ran between 20 July and 11 August. Included within these records were sightings for several tetrads for which either no previous records or only minimal records existed. Other online recording schemes also provided valuable records and it was interesting to note how advances in social media and smart phone “apps” are beginning to impact on how individuals record and submit their sightings.

Species Maps.

Distribution Maps for individual species have been prepared for our 31 regular species, and these are available for reference as required. With the high number of tetrads visited in 2013 and the incredible number of records received, the average butterfly species per tetrad for 2013 increased to 10.9. This equates to the highest single year count in ten years. To put that into context the four-year period (2010-2013) of the current BNM survey period gives us an average of 13.1 species per tetrad.

Transects.

Analysis of transect results gives a sharp view of trends, and 2013 results have confirmed the general recovery from 2012, with most all-species transects recording better than average counts. The new transects at Knettishall Heath and Purdis Heath came on stream as planned, and were

joined by another at Sizewell Belts. This brought our total up to a new record – 22 full and 3 single-species transects. Thanks are due to the following, who put in dedicated monitoring effort at: North Warren (Dave Thurlow), Minsmere (Katy Smith), Bradfield Woods (Steve Hunt), Center Parcs (Graham Hersey-Green), Cavenham Heath (Michael Taylor), Walberswick (Will Russell), Spring Lane (Rob Parker), Ramsey/Hintlesham and Wolves Wood (Mark Nowers), Newsons Farm (Frances Bee), Upper Abbey Farm (Trudy Seagon), Alton Water (Simon Waters), Manor Farm (Brenda Hudson), Tythe Farm (Peter Vincent), Dunwich Forest 1&2 (Nick Mason), Arger Fen (Gordon

Kennett), Black Heath (Linda Hammond), Nowton Park (Fay Jones), Knettishall Heath (Samantha Gay) and Sizewell Belts (Dayne West). Single-species transects for Purple Hairstreak (Steve Hunt) and Silver-studded Blue (Terry Peake at Blaxhall Common and Helen Saunders at Purdis Heath) all produced useful contributions to the UK-wide results. In almost every case, additional volunteers (not named individually) assisted the lead walker.

A series of Annexes covering the BAP species will be published as part of the 2013 Butterfly Report in the next volume of Suffolk Natural History.

Butterfly Conservation by Recording Sightings

Twm Wade

I do find recording butterfly sightings (butterflying) surprisingly satisfying at a personal level. While it is ‘what, where, and when’, it is also a notebook of near-forgotten happy days. At the Suffolk BC Members’ Day on the 25th April I learned from Sharon Hearle how highly valued the Butterfly Conservation record of sightings is

held by scientists. The source of this data is you and me, the amateur scientist.

In the last edition of Suffolk Argus, I relaunched the Wider Countryside Butterfly Survey (WCBS) and the remaining available squares are shown below.

Wider Countryside Butterfly Survey in Suffolk

Squares Available to New Participants

Grid Ref	Town Parish of Grid	Post Code of Grid
TL7779	Eriswell	IP24 3TX
TL8381	Thetford (west)	IP24 3ST
TL8482	Thetford (west)	IP24 3QP
TL9859	Rattlesden	IP30 0RR
TM3183	St Margaret, South Elmham	IP20 0PJ
TM5195	Flixton, Lowestoft	NR32 5PB

Contact Twm Wade : twm.wade@yahoo.com

I want to highlight another objective of recording: to have recorded sightings for every tetrad (a square of four 1km grid squares) in Suffolk. To find the 'black hole map', which shows where we have no butterfly records, go to www.openrecorder.org.uk/osmaps/blackholemap.html; alternatively they are scheduled at www.suffolkbutterflies.org.uk/recording.html, a page worth visiting for many other reasons. I volunteered to help Bill Stone (County Recorder) to have every 'black hole' covered this year and in future.

This season is the fifth in a 5-year cycle of recording so it is better we do not duplicate effort. I have devised a system to achieve that aim but also to help anyone new to butterflying. There are only two rules: you visit the square and record butterflies and moths you recognise; you report your observations at the end of the year. The scheme is called "Adopt-a-Square" (AaS) and if you provide me with your post code I can provide a short list of nearby tetrads which no-one else is known to be covering, and you select which you visit. It is a system for organising casual recording of butterflies which can be done with children family and friends; you can stop to breathe in the view, feel the sun or smell the flowers; enjoy.

All the available squares have public paths across them; many adjoin areas where there are 10 or more species recorded. Butterflying is something to do on warm sunny days during a few ad hoc walks. The casual records you make and report will contribute to an overall picture; whatever you do will contribute. You do not have to restrict yourself to just 'your

square'; you can record sightings in your garden, at the bus stop or rail station, in the local park or on the flowers in the tubs round the shopping centre.

Butterfly Conservation has a good reputation for the records held for butterflies and moths, and all this starts as a sighting which is recorded saying what was seen, where and when. The casual recording supplements more scientifically robust, systematic records from transects and WCBS (for more see www.ukbms.org/wcbs.aspx). Casual recordings are the biggest proportion of the records and involve the greatest number of people.

I would be pleased to include you in the AaS scheme. Let me have your post code and I can find 2+ black holes near you. Meanwhile, I am happy to help you enjoy butterflying and get as much from it as you want.

twm.wade@yahoo.co.uk

Editorial copy date

Contributions for the Autumn edition of our newsletter are very welcome and should be sent to the Editor, Peter Maddison, no later than **Sunday 28th September, 2014**.

Any piece of writing considered to be of interest will be published and we also welcome line drawings, prints and photographs.

Contributions (preferably electronic) can be sent to the address on the Contacts page or by email to: prmaddison@yahoo.co.uk

Brimstones and Buckthorn update 2014

Julian Dowding

Following the successful distribution and planting of over 200 Buckthorn bushes, the larval host plant of Brimstone butterflies free of charge to members of the Suffolk public in the winter of 2011/2012, I thought it timely to provide a quick update and also to ask any branch members who have bushes to provide some feedback on how their Buckthorns are doing.

By now *most* bushes should be attaining a height and spread of around 4-5 feet or one and a half metres and this size should be suitable to support a reasonable number of caterpillars. As we are now well into the egg laying season, we would expect that if you have bushes of this size and haven't already received a visit from female Brimstones you should do very soon; if not this year, then hopefully next. If you've been lucky enough to have received a visit last year, you may also have seen the bright sulphur-yellow males patrolling your patch. These would be looking for females with which to mate since there is a good chance that any butterflies which utilised bushes last year will have stayed in your area and over - wintered in a sheltered spot, usually a thick hedge or dense ivy.

Egg - laying usually starts around late April or early May and continues into July. Much depends on weather conditions as the butterflies are more active in sunny conditions. If you have a free moment on a sunny day please take time to have a good look at your Buckthorn. It's worth pointing out that females can appear very much like a Large White butterfly, and are sometimes

mistaken as such, so if you have any 'white butterfly' activity near your bushes, have a very close look and if possible, see whether the butterfly is showing more than a passing interest in your bushes. When egg - laying, females are often quite preoccupied and allow close approach by humans that approach slowly and carefully. They usually spend about 5 seconds laying each egg, then fly off and come back to lay another. At close quarters, one can see the female resting on a Buckthorn leaf and curving her abdomen around to the underside leaf surface, where the egg is deposited, although sometimes, they will lay on the upper surface. The tiny milk bottle shaped eggs are greenish white when laid, but turn yellow after a day or two. They remain on the bush for a couple of weeks until hatching into very small yellowish - green caterpillars which then take up position on either the upperside or underside mid-rib of the leaf. After a while, the caterpillars turn green and these invariably choose to rest on the upperside midrib, where they are well camouflaged. From here they will wander off to nibble the leaf starting at the edge first, and then return to their central position. Each caterpillar undergoes several changes of skin (ecdysis) as it grows. To do so, it has to first secure its position on the leaf, which it does by spinning a silky pad onto which it clings until the moulting process is complete. These very fine pads are fairly easy to find on Buckthorn leaves since they shine light greyish white when seen from an angle and are usually accompanied by signs of eaten leaves.

If you have Buckthorns planted in your garden, please send us details on how the bushes are growing (how well or poorly they are growing and approximate height) and whether they are planted in sunlit or shady positions. Incidentally, if your bushes appear to be struggling, please try and give them a little extra care, by weeding around them and providing a mulch around them of,

for example, rotted manure/grass clippings or leaf mould. They are not the quickest of plants to establish when young but after a few years, generally take care of themselves. We would also like to know whether you have seen any Brimstones butterflies or egg-laying activity. Please email: brimstones@suffolkbutterflies.org.uk with details.

Summer 2014 some of our events

See the Branch website for details of all events www.suffolkbutterflies.org.uk/events.html

Wednesday 9th July & Wednesday 16th July

Silver-studded Blue Survey at RSPB Minsmere

Annual survey on two separate dates for Silver-studded Blue.

Meet: Park at warden's lodge just before RSPB car park. Please register in advance.

Map Ref: TM470671

Time: 10:00am (bring a packed lunch)

Leader: Rob Parker 01284 705476

Tuesday 15th July Kenton Hills

Meet: Meet in Kenton Hills Car Park

Map Ref: TM 453639 Time: 10.30am

Bring lunch

Contact: Peter Maddison 01473 736607

Sunday 20th July

Gardening for butterflies at Flatford Mill

A joint event with RSPB. There will be information & advice about gardening for butterflies and other wildlife.

Meet: Flatford Mill RSPB wildlife garden

Map Ref: TM077332 Time: 11:00–16:00

Contact: Bill Stone 07906 888603

Sunday 27th July

Wildlife Garden Open Day

An invitation from BC member Mrs Trudie Willis, to visit her 10 acre garden, including a Buddleia and Honeysuckle collection.

Meet: Meet & park at Prior's Oak, Leiston Road, Aldeburgh (B1122 Leiston to Aldeburgh Road)

Map Ref: TM452591 Time: 10:30am start

Contact: Peter Maddison 01473 736607

Wednesday 30th July

New Members Day at Holywells Park

An indoor training session in the morning at St Lukes Church Hall, Cliff Lane, Ipswich IP3 0PJ. A practical butterfly watching session will follow in the afternoon. A family wildlife themed event will be running at the same time in the Park, organised by Ipswich Borough Council.

Meet: Enrol in advance with Rob Parker

Map Ref: TM174432 - parking available in adjacent streets (none at church).

Time: 10:30 am start

Contact: Rob Parker 01284 705476

Sunday 3rd August Summer on Purdis Heath

A walk around the heath for Grayling and other summer butterflies & moths.

Map Ref: TM 213425

Time: 11am

Contact: Sharon Hearle 01638 731648

Saturday 23rd August

Late Summer Butterflies at Alton Water

A walk around the north part of Alton water for butterflies and dragonflies. Long walk possible.

Meet: Lemons Hill Bridge Car Park (South)

Map Ref: TM136373 Time: 10.30

Leader: Bill Stone 07906 888603

Saturday 27th September

A.G.M & members evening

Venue: Bucklesham Village Hall in Levington Lane

Map Ref: TM242419

Time: 6.00pm for 6.30pm

The A.G.M. will be followed by light refreshments and members' slides.

The Purple Emperor in Suffolk 2013

Introduction: Rob Parker

What follows is a report by Liz Goodyear and Andrew Middleton of the Herts & Middx Branch of Butterfly Conservation – two very experienced observers who have developed techniques for finding wild populations of *Apatura iris*, often in places where they have bred in low numbers and remained undetected. *A. iris* has been discovered in suitable woodland reaching from Hertfordshire north-eastwards into Essex and Cambridgeshire in recent years. However, Suffolk is not virgin territory, as John Quinn's unauthorized releases of the early 2000s established a colony at Theberton Woods. In 2012, it seemed appropriate to conduct a survey to discover whether the presence of *A.iris* across Essex and Cambridgeshire extended into Suffolk, and whether they were clinging on in low numbers at any of their former haunts. Liz and Andrew had already been on the case for 12 years, keen to understand the behaviour of wild populations of *iris*, and acutely disdainful of the existence of introduced colonies, so they asked Suffolk Branch for support to continue their work in our domain.

It is worth noting that the last sightings of wild *iris* acknowledged in *Butterflies of Suffolk*, Mendel & Piotrowski, 1986 were in 1946, 47 and finally in 1959. This may have led to a "head in sand" approach to subsequent sightings which were treated as unconfirmed.

In 2013, we invited observers to look out for *iris*, and a training day delivered by Liz and Andrew was attended by 20 keen recorders. It turned out to be a brilliant year for *iris* in its south of England haunts and some local extensions of range were noted. In Suffolk, in addition to Theberton Woods, they were seen at 3 locations, none by our keen recorders, at one site by Liz and Andrew, at Bradfield Woods by Mike Rae, and near Halesworth by a lucky young lady who had one settle on her! Perhaps 2014 will be another good year. Purple Emperor watchers can learn a lot from the report below.

Purple Emperor *Apatura iris* survey of Suffolk 2013

Authors: Liz Goodyear and Andrew Middleton

Apatura iris can move across a landscape to find mates ~ that's its strategy to survive, its ecology, its life ~ these are basic facts regarding the species which are still not widely understood.

1. Abstract

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4.2 Results, dates and chart

5. Our Eastern Region overview

5.1 Our study

5.2 Internet communication and digital photography

5.3 Climate

5.4 Habitat quality

5.5 Surveys and understanding

6. Project future

7. References and reading

Appendix I Notes on winter and spring survey visits

Appendix II Summer survey visits

1. Abstract

The authors were able to conduct a habitat survey and butterfly survey for Purple Emperor *Apatura iris* [*A.iris*] in Suffolk during 2013. The south Suffolk claylands, an historic area for *A.iris*, was found to be a well-wooded landscape, where several sallow-rich woods were identified. It compares favourably with inhabited contiguous landscapes in Essex, Cambridgeshire, Hertfordshire and Middlesex, and would seem well-able to support a low density *A.iris* population. A number of woods with good habitat are rather flat and do not lend themselves well to our survey technique.

The authors were able to find one *A.iris* colony in south-west Suffolk, within 10km of two Suffolk records from the 1800s, (and one in south-east Cambridgeshire) and two additional records came from central Suffolk. Unfortunately, our pre-arranged visits at times met with poor weather.

On the 20th April 2013, the authors gave a presentation of their work to members of the Suffolk Butterfly Conservation Branch and active recorders in the county. Approximately twenty people were present. In the afternoon, the group visited Old Hall Wood (see Appendix I).

2. Thanks

We would like to thank the Suffolk Branch of Butterfly Conservation, the Hertfordshire & Middlesex Branch of Butterfly Conservation, the Robert Kiln Trust and private sponsors. These organisations and individuals have supported our study by providing funding to enable us to visit Suffolk on numerous occasions during 2013. We would like to give personal thanks to Rob Parker for having faith in our belief that *A.iris* could be found in Suffolk.

3. Introduction and history

Our ongoing study has found *A.iris* to be present across rural Hertfordshire and Middlesex, and extending into north-west Essex (2011 and 2012). With the help of the EWT funding (2012), we extended our study to survey all known historic sites plus a good number of other woodland complexes for habitat quality and territorial potential, and identified numerous target woods. In 2012 we were delighted to locate *A.iris* populations in four 10km squares extending across north-west Essex from inhabited Hertfordshire landscapes, near the Suffolk border. Since 2000 a few single *A.iris* had also been reported from widespread locations in Essex, Suffolk and Norfolk, whilst a small number of sightings had been reported from the historic location of Epping Forest in Essex in recent years although they have eluded us.

As can be seen from our generated Google map, all sightings fall generally within defined National Character Areas in the Eastern Region. Having found *A.iris* across north-west Essex, we decided to survey this productive landscape into Suffolk (South Suffolk and North Essex Clayland) see link: http://www.naturalengland.org.uk/publications/nca/south_suffolk_and_north_essex_clayland.aspx Also mapped are some survey results, in particular showing woods and landscapes which in our experience could quite easily hold *A.iris* populations.

See Image 3.1 (Page 17) ~ Eastern region general map including Cambridgeshire, Hertfordshire and Middlesex records (all known records included)

See Image 3.2 (Page17) ~ Suffolk map (all known Suffolk records included and some Cambridgeshire and Essex records shown)

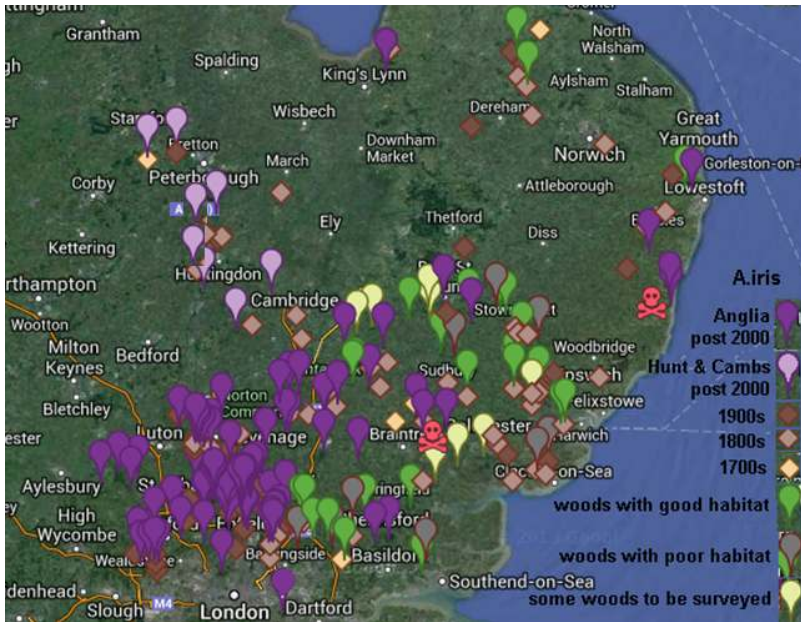


Image 3.1 ~ Eastern region general map including Cambridgeshire, Hertfordshire and Middlesex records (all known records included) (See page 16)



Image 3.2 ~ Suffolk map (all known Suffolk records included and some Cambridgeshire and Essex records shown) (See page 17)

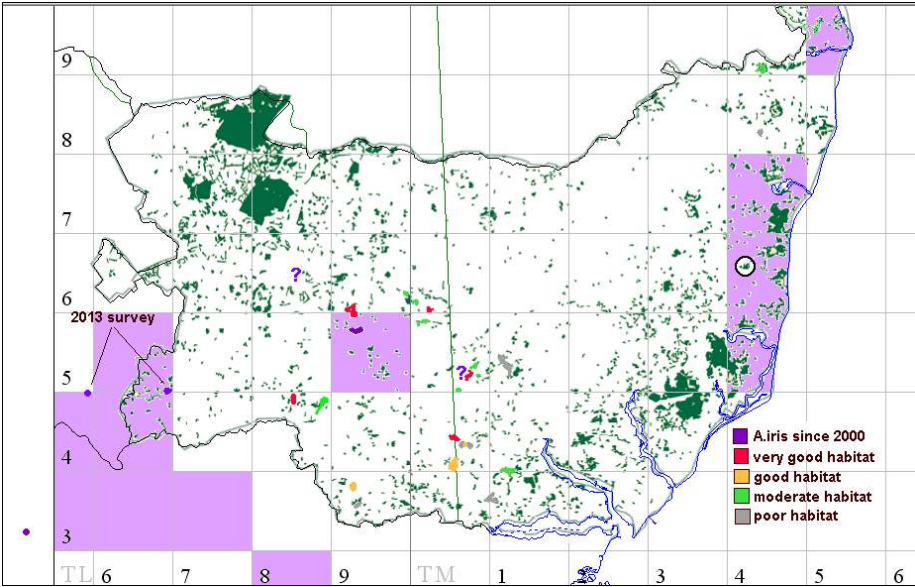


Image 4.1 ~ Suffolk region woodland map and survey results (See pages 21 & 24)

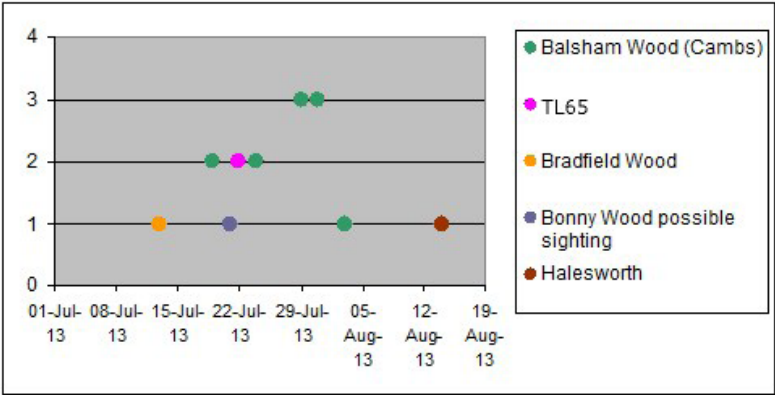


Image 4.2 ~ Flight Chart 2013 (See page 22)

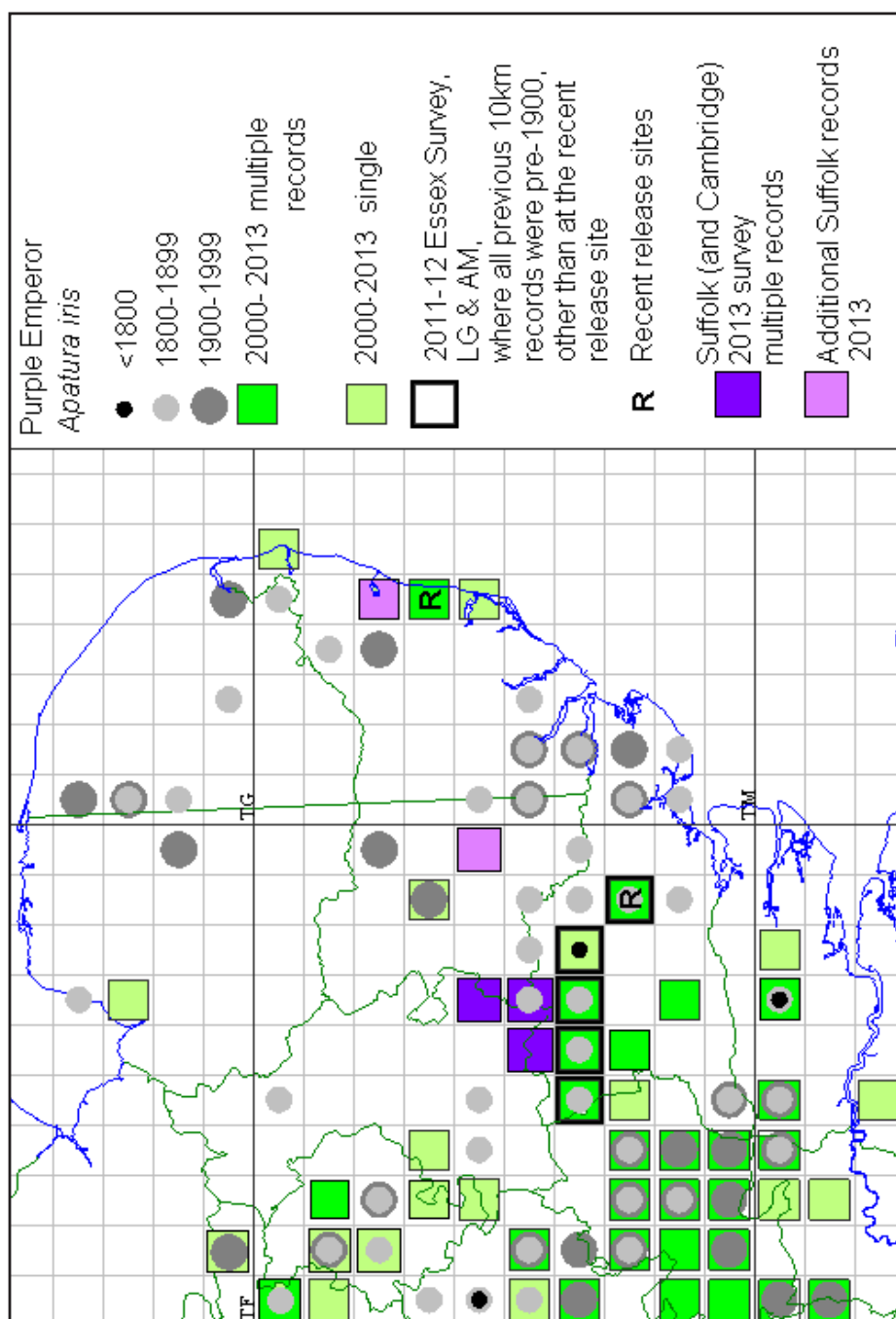


Image 5.1 ~ Eastern region map (all known records included) (See page 23)

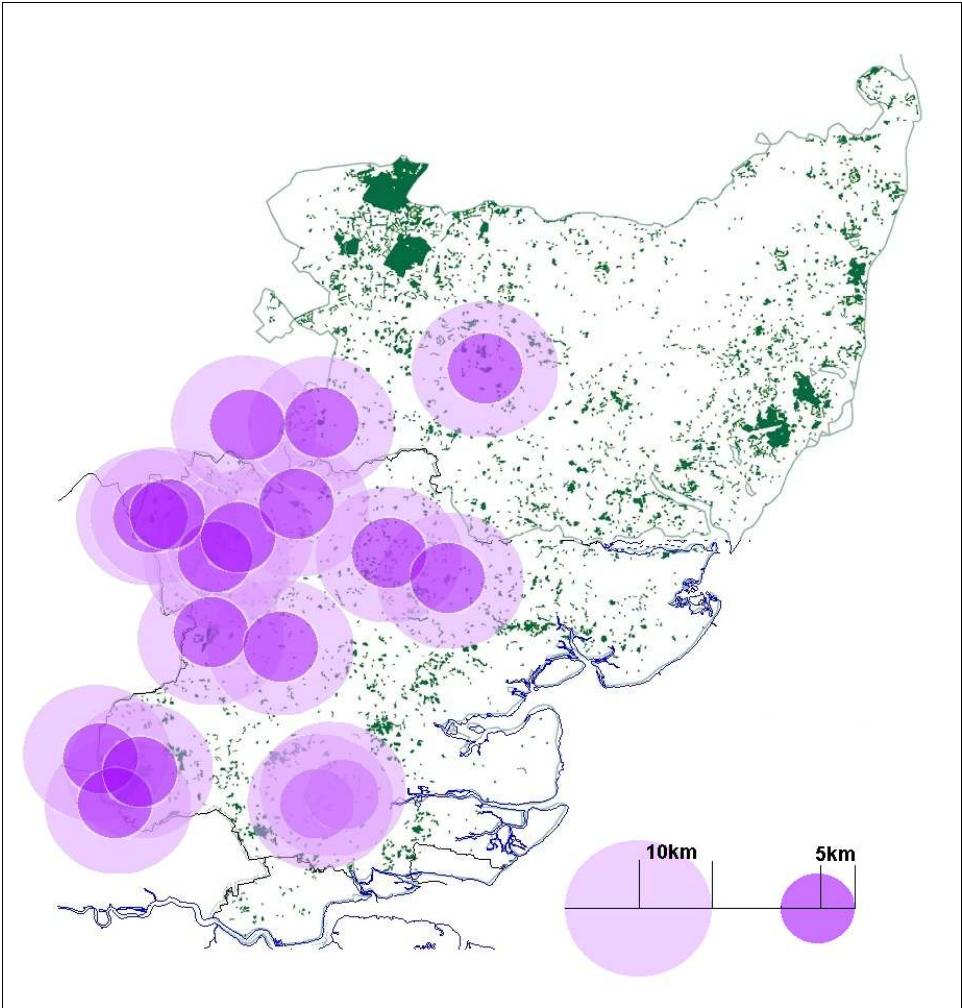


Image 5.2 ~ Essex and Suffolk (and south-west Cambridgeshire) linked population ~ records since 2000 ~ 5km and 10m radius circles (see page 23)

4. Results

4.1 Results overview ~ in 2013 due to the exceptional cold spring, emergence of the majority of butterfly species was running at around three weeks later than the norm. In Hertfordshire we would normally expect *A.iris* to emerge around the first week of July with on average male activity peaking through the second week of July. In 2013 the first emergence in north Middlesex was on the 8th July with limited activity until the 14th July, when most sites in Middlesex and the south of Hertfordshire were seeing males on territory. Our experience has led us to expect up to a week's delay in heightened activity in north Hertfordshire and north-west Essex. However in 2013, the sudden very hot weather brought out a mass emergence nationally with some sites seeing exceptional numbers of *A.iris* (see 'Climate' in 'Our Eastern Overview' below). As a result there were several sites in Essex where sightings were made (sites & landscapes we had identified as likely to hold the species) which would be unlikely to occur in a 'normal' year. The relative flight period dates in Suffolk are still not determined which makes our survey work more difficult, so by the time of the second week of surveying in Suffolk the weather had changed with a major thunder storm on the night after our sighting in SW Suffolk and subsequent visits to other woodlands were regrettably in frustratingly poor weather conditions.

See Image 4.1 (Page 18) ~ Suffolk region woodland map and survey results

We initially conducted a desk top survey using maps (including altitude that identified the high points in a woodland landscape) and images to select woods to survey for habitat quality. Individual woodland visits and habitat quality assessments, and adult survey visits, are listed below in Appendix I. From the list of woods visited in the spring we were able to prioritise the woods that we would visit in the summer, based on habitat and easily viewable high points. We found two colonies of *A.iris* in landscape extending from our positive results for north-west Essex in 2012.

4.2 Results, dates and chart

Balsham Wood (a private wood) in Cambridgeshire, 5km from the Suffolk border, was found to hold a strong colony of *A.iris*. We discovered two very active territories maybe 200m apart, by viewing the woodland canopy near the water tower from the public footpath at a distance of 150-200m. This activity was observed on several occasions viewing from a west to east viewpoint (19th July to 3rd August 2013).

We were delighted to observe one male conduct several territorial flights over privately-owned woodland in TL65 during a relatively calm moment, with the addition of one chase between two males over the canopy (22nd July 2013).

Initial observations were at a distance of c300m, however further observations were made at about 200m, and there was no doubt about the identity of the males ~ wild *A.iris* in Suffolk ~ which was the hoped for objective of the survey. Observations were made from the public road viewing south to south-west, and suitable parking was only to be found some distance away. Despite some very good July weather, we were inhibited on nearly all visits by wet and/or windy conditions at this site, and were unable to make further sightings here. However, we feel that there may well be a stronger assembly area elsewhere nearby in the wood which cannot be observed from available viewpoints. This may have been a temporary or secondary assembly area or the prevailing winds *etc.* may have meant any males remained out of view on subsequent visits, as we have observed at other sites when weather conditions have been unfavourable. Despite determined efforts by Rob Parker, Butterfly Conservation has been unable to get permission to survey the wood in 2014 for woodland butterflies and therefore all future sightings will have to be made from the roadside and will depend totally on prevailing weather conditions.

A male *A.iris* was seen by an experienced observer in Bradfield Woods, early in the season on 13th July 2013, however the habitat here is very rich. We perhaps spent too much time surveying this wood without luck, although we saw a multitude of White Admirals [*L.camilla*] and a good number of Silver-washed Fritillary [*A.paphia*]. The wood is large and so flat, that it does not lend itself well to our survey methods, however we really hoped for a sighting along the rides, so were slightly disappointed not to encounter *A.iris* here. It's worth noting we didn't encounter any other butterfly watchers here, or in any other wood during our surveys, other than one or two dog-walkers with a fair general knowledge of butterflies.

"Went to Bradfield Woods today, lots (too many to count) White Admirals, several (at least 6) Silver-washed Fritillaries and a first here for me one Purple Emperor..... Ground level but very mobile sitting on the track and going back into the wood, difficult to get closer than 3 metres. It was on the track to the firewood making shed from the car park (half way between the main drive and the wood sheds). We watched it for about 5 mins with binoculars"

Mike Rae ~ July 2013

Mike had another sighting in Suffolk years ago (not reported at the time).

"I remember, 1985 mid July, late morning, hot sunny day, I took a break from stacking Heston bales (big!) with a Teleporter tractor in the middle of the field. I saw a male PE sitting on the tractor, I saw it from a range of 1.5 metres but did not go closer in case I disturbed it. I watched it for at least a minute opening and closing its wings when it flew strongly in a westerly direction towards Rubbinghouse Spinney. (Euston Estate, near Thetford)"

Mike Rae ~ January 2014

There was also an encouraging report of a possible sighting from Bonny Wood, which has superb habitat and we visited several times, but once again it is still rather a flat wood for our survey method. The sighting was made by Julian Dowding late afternoon on the 21st July 2013, the same day that we recorded *A.iris* in TL65.

There was a sighting in a private garden near Halesworth of a female *A.iris* on 14th August 2013. Whilst it has been noted that this record '*was 3km from the home of John Quinn (the deceased releaser)*' (Rob Parker, 2013), we further note that the sighting is in an historical landscape for *A.iris*.

See Image 4.2 (Page 18) Flight Chart 2013

Overall, the survey work has resulted in the encouraging position for Suffolk, shown by the various maps, of widespread suitable habitat across historic areas in the South Suffolk claylands, with a sprinkling of recent records including one assembly area and definite colony. Comparing with our experience across Hertfordshire and Middlesex and Essex, this landscape looks fine for *A.iris*, whether or not the species is present already at low density and undetected, and/or is undergoing an expansion. It looks very positive, and as long as woodland management is favourable, *A.iris* should do well.

However, we have plenty of experience of habitat degradation under the management of various authorities and private landowners, all of whom have been fully informed of the presence and conservation needs of this species in the relevant woods. So full attention should be paid to encouraging all parties to become aware that this species has the potential to be present at least in woods across south

Suffolk, given favourable management.

5. Our Eastern overview

See Image 5.1 (Page 19) ~ Eastern region map (all known records included)

5.1 Our Study ~ has found that *A.iris* is present at low levels and was undetected in many areas. For example, it took us twelve years to locate *A.iris* in my (A.Middleton) nearest wood in Enfield, North London. This area has thousands of visits by the public every year. The wood where the territory is to be found does not itself hold any sallows, however Enfield Chase is generally well-wooded, with a good number of sallows and willows in the landscape, in particular along wooded river valleys.

From our perspective, having found over thirty new landscapes for the species, we can well believe that *A.iris* is likely to be present undetected at least somewhere in all the historic regions shown on the above map.

However, for anyone who hasn't found *A.iris* in a new landscape, a very different view may be held. When out and about in the study area, we can look from one wood to another. 5km between woods seems a hop, and these landscapes often have linking spinneys, wooded hedgerows, streams and roads, and generally look quite receptive for a female *A.iris* looking for egg-laying habitat and or for a male/female wishing to move to an assembly area. We have seen females dispersing across fields and encountered them prospecting sallows away from woods. One wood we know has a lovely assembly area and no sallows, hence the species must be flying in from the surrounding landscape. So 5km is a hop, 10km is a jump, and you are unlikely to encounter anyone looking for *A.iris* anywhere in between. Maybe *iris* will wander into a garden or bedroom, and maybe it will be seen, and maybe the records collator will be alerted, and maybe the record will not be dismissed. Anyway, for us the map below best illustrates our assessment of the known landscape distribution of the present-day *A.iris* population in the study area (since 2000) ~ a multitude of woods, most of which will never be worked for *A.iris*, and a pretty good linked-up landscape population. These landscapes, along with similar areas in Norfolk, and areas of the Norfolk and Suffolk Broads, look fine for supporting *A.iris* and we well believe the species is present here.

See Image 5.2 (Page 20) ~ Essex and Suffolk (& south-west Cambridgeshire) linked population ~ records since 2000 ~ 5km and 10km radius circles

There seem to be several factors to consider regarding this increase in records, and everyone will make their own conclusion as to where the balance is. We try to investigate every record in detail from the primary source, especially from 'new' areas and tend to believe what people say.

5.2 Internet communication and digital photography ~ undoubtedly internet communication and digital photography has increased the number of casual records generated. Any sighting may well be captured on a digital camera, and the information is now likely to be quickly disseminated and more readily accepted. We have found that there are many instances where records have been ignored, were not investigated, or were categorised as unconfirmed. We have followed up each record as far as possible and often find them to be very reliable. Therefore we find it very disappointing that some records are still being dismissed without further investigation and in some cases not being entered on a county data-base for mapping purposes.

5.3 Climate ~ Whilst *A.iris* is suited to cold winters, warmer summer temperatures would help this species, as in England it is at the climate restricted north-west limit of its European range. The very

cold late winter and spring of 2013, followed by a quick turn to high temperatures was more typical of a continental climate where *A.iris* can be more numerous, and this was accompanied by relatively high numbers of *A.iris* in England.

5.4 Habitat quality ~ it is quite evident from our Suffolk survey that Simon Leatherdale (Forestry Commission Officer retired) has had a very positive effect on retaining woodland sallows in Suffolk and north Essex at least. Game keeping activities can also be positive for sallow generation, whilst the generally low level of woodland activity has also allowed sallows to be abundant in some woods. Other areas, where woodland is 'well-managed' for woodland production or high canopy has developed, can be very low in sallows. Some woods don't have many or any mature oaks, which to us appear essential for strong populations, *A.iris* adoring this tree for its sap runs and territorial activities. One thing is certain to us ~ *A.iris* has the ability to colonise woods in a region when they become suitable, as its lifestyle appears to be to move across landscapes to mate and disperse. In the Eastern Region, improvements in woodland cover and a return to broadleaved woods over the last century have been significant. The recorded distribution of *L.camilla* in Suffolk is shown (Page 36) as its widening distribution might indicate potentially well-wooded districts which may also be suitable for *A.iris*.

See Image 5.4 (Page 36) ~ White Admiral *L. camilla* distribution in Suffolk 2005-2013

5.6 Surveys and understanding ~ our experience lends us to think that *A.iris* is present somewhere in all the historic areas of the Eastern region. Our work has been slow and painstaking, with maybe just a very few sites found each summer. Given some help from maybe warmer temperatures, and improved habitat quality, the species appears to be prospering and may continue to be encountered in more areas by casual observers.

6. Project future

Whilst this report identifies a number of suitable woods, this project aims to continue studying landscapes, especially historic locations and high quality habitats, for *A.iris*, and to continue following up all historic records and possible sightings.

The project also aims to continue to raise awareness regarding the landscape presence of *A.iris* and the need to retain sallows during woodland management, in all woods, rather than just those where *A.iris* has been recorded.

Appendix I ~ Notes on winter and spring survey visits

It should be noted that we had visited Assington Thicks (TL93) near Sudbury on several occasions during 2012.

Rating system

The rating system is a guide to habitat quality and the potential suitability of a wood for *A.iris*, as shown in 'Image 4.1' (page 18) ~ Suffolk region woodland map and survey results', the primary factor being sallow numbers, followed by any broadleaved element, in particular mature oak. Very good habitat would be a wood with probably several hundred sallows, including mature sallows and sallow thickets, plus a presence of mature oaks. Poor woodland would have very few sallows if any. Rarely have we found high numbers of sallows adjacent to veteran oaks, but this can provide excellent habitat.

A full survey of a wood to assess sallow numbers would take several days to complete, however these surveys are snapshots with the rating based on what was seen during our visits, from which general sallow numbers might be roughly estimated.

Red ~ very good habitat ~ abundant sallows, sallow thickets (100+, 100s)

Orange ~ good habitat ~ good numbers of sallows, maybe a willow thicket (estimated 50-100)

Green ~ moderate habitat ~ (a few tens of sallows encountered)

Grey ~ poor habitat ~ very few if any sallows

In regions where we have found *A.iris*, red and orange rated woods would be suitable for the species, whilst Green habitats might contribute to a landscape population.

However, our method of locating the species then involves identifying one or two distinct high spots which we can view. Unfortunately, we have found that several of the red-rated woods in Suffolk are rather flat and are not well-suited to our survey technique. The individual site reports give potential locations for assembly areas, however one could also visit the rides of red and orange rated woods in the hope of encountering *A.iris*.

Visit 1 ~ 3rd April 2013

Visits to woodland in TL54, TL64 and TL65, including Borley Wood and Balsham Wood near Linton in Cambridgeshire and TL84.

Much woodland in TL64 and TL65 is private but numerous sallows in the landscape were visible. **Red rating.**

Stanstead Great Wood TL8548/8549

Forestry Commission leased but no public access although appeared well used. Much in parts conifer but many sallows some mature and exceptionally large. Watching the high point could be difficult but at the key point west side some fairly mature oaks which can be viewed from outside of the wood. **Red rating.**

Lineage Wood TL8848/8948/8847

Parked by Lavenham Railway track as no public access into wood at entrance. Forestry Commission leased with habitat unfavourable.

Visit 2 ~ 10th April 2013

Visits to Raydon Great Wood, Hintlesham and Ramsay Wood and Wolves Wood

Raydon Great Wood TM0540/0440

Site of many historic records. The majority of the wood is private but with some public footpaths and parking at the start of railway walk which we walked along through wood. Railway starts level with wood but eventually ends up in a cutting and about 2/3rds down there is a bridge across with a footpath/track. On railway embankment/sides we counted several moderate to large sallows. We left railway and picked up the public footpath and walked along this until it left the wood. Along the public footpath we counted numerous large and very large sallows, it was willow rich! There was good age diversity with much willow regeneration behind mature sallows. Rather a flat wood ~ high spots would be difficult to get a good view. Rather flat wood with no distinct and easily viewed highpoints. **Orange rating**

Hintlesham TM0743/0742 and Ramsay Woods TM0643/0642

Both woods owned/leased by RSPB but signs very clear no entry and stick to public paths. Hintlesham and Ramsay fairly neglected. Parked in village and took footpath to Hintlesham Wood. Picked up public footpath that goes under pylons (cleared straight but willow lined) ~ this was the only area where any sallows were noted. Here a combination of regeneration and large sallows throughout length including some giant were noted. Ramsay Wood has little age diversity. Best place to look despite not being highpoint would be where pylons exit north side although only 69m. **Green rating.**

Wolves Wood TM0543/0544

Wolves Wood acquired by RSPB in 1972 and open to public. Clock-wise circular route followed with some areas fenced off. Wet wood in places with drainage dykes and very sallow-rich. Another rather flat wood lacking an easily visible and distinct highpoint, although good view from near car park of southern highpoint.

All woods visited are relatively flat. *Orange rating*

Visit 3 ~ 20th April 2013

Visits to Old Hall Wood, view Brockley Wood, Dodnash and Great Martin's Hill Wood

In the morning we gave a presentation to members of the Suffolk Butterfly Conservation branch and active recorders in the county. Approximately twenty people were present including Michael Bamford who lives adjacent to the wood and Colin Hawes, a local naturalist with an exceptional knowledge of the area. He accompanied us with Rob Parker to all the woods that day.

Old Hall Wood with Brockley Wood TM1139/1240/1239

Site of some historic records, and owned by the Owen family who had given permission for the group to visit. We parked in a paddock by Bentley Old Hall (along the drive was a very large elm). We entered the wood by the hall and walked north along the public footpath. At the top edge of the wood we surveyed the landscape for more sallows. Returning into the wood, we turned east and followed a path parallel to ditch line hidden at first by a conifer belt. Hidden behind the conifers and then amongst a plantation, there were large to giant sallows between the two footpaths.

From the footpath to the pond in the NE corner further sallows were noted including some that were fallen or 'derelict' sallows. Sallows surrounded the pond with various other willows. By the railway there were some willow/osier type bushes which had been coppiced under a power line. The high points are hard to define and not spectacular. A potential high point was on the SW corner of the wood, with conifer behind but mature oaks on the edge. Brockley Wood was not owned by the Owen family and we had no access. Structurally this wood looks more interesting with mature and tall oaks visible. No sallows could be seen. Driving along the A12 we passed Bentley Long Wood – a few sallows were visible from the roadside. **Orange rating** but in addition the surrounding landscape didn't contain much sallow.

Dodnash Wood TM1035/1036 Great Martin's Hill Wood TM0935/1035

With Rob Parker and Colin Hawes, we parked on the top edge of Dodnash Wood. We walked to the high point and into Great Martin's Hill Wood where no sallow was noted except beyond the stream at the south edge of the wood.

Unpromising because of the lack of sallow habitat, probably due to the wood being 'well-managed'. Some nice mature oaks at the high point along the roadside.

Visit 4 ~ 21st April 2013

Melfield Wood with Free Wood TL9259/9260/9160 2 x 10k squares!

Visited with Rob Parker having stayed overnight with Rob and Alex in Bury St Edmunds. The owner has granted permission for this visit and a further visit in summer. Rob has alerted him to the importance of sallows.

Parked by cottage at footpath crossing and took public footpath east and looked out across landscape ~ tall sallows in amongst conifers. High point with poplars and large oaks with veteran oaks just south of cottage along public footpath south. Honeysuckle noted throughout wood and some violets. New plantation of conifer/ash in rows became clear that it also held a great number of sallows – wood not

shown on maps. Walked rows and estimated 75/100 sallows. Went from an average wood to an *A.iris* wood! Walked into Free Wood ~ appears to be a permissive route in Free Wood marked with red arrows. Total sallows: at least 160 in a snapshot of wood. Nice landscape to hopefully find territorial males, as rises in areas and has mature/veteran oaks. **Red rating.**

Bradfield Woods Suffolk Wildlife Trust Reserve TL9358/TL9258

Walked the blue route anti-clockwise. The entire wood was willow rich but didn't hold a distinct highpoint with mature oaks/ashes etc. By carpark although not the high point there are good viewable mature oaks. Honeysuckle rich, wood anemones fantastic! No distinct highpoint. Sallows in landscape as well. **Red rating.**

Visit 5 ~ 30th April 2013

Visits to woods south of Bungay and Beccles and on the Suffolk/Norfolk Broadland marsh edge.

Drove via Bury St Edmunds and Diss and through Bungay, driving south along the A145, turning east to look at Stoven Wood TM4382, one willow observed and little in landscape and a difficult high point with a very neat wood. Didn't look at Redisham Wood but later realised that the Beccles sightings included Redisham. Drove around Sotterley Wood/Estate and little willow in landscape there either.

Drove back towards Beccles and took track beside Worlingham Wood TM4490. Mostly alder carr by marshes but wood goes to a definite high point with old oaks split by bypass. Wood was probably bigger some years ago. Little willow noted despite marshland and very heathy with gorse on verges.

Through Beccles took the A143 to Haddiscoe and St Olaves. Difficult to stop and look at landscape but some areas wooded. Stopped at Herringfleet Hills and noted a good highpoint with sallows nearby and old oaks at TG466987.

Drove down minor lane on SE side of Fritton Decoy. Superb highpoint near entrance to Herringfleet Hall with tall old oaks but little willow visible around the lake. Drove to end of lake and along A143 and took the north lane going to the Waveney Forest.

Walked around Waveney Forest TG4500/TG4600 and no sallows noted just coniferous plantation and honeysuckle. By marshes sallows seen beside wood edge on and off along edge. Also sallows noted beside Fritton Decoy as we drove back into St Olaves. Drove back to Herringfleet Hills and around site and down to Herringfleet Mill, base of cliff willow thicket with ancient oaks. Although oaks at base of hill TM467978, proximity to sallows might mean that the butterfly wouldn't fly up to high point. From the mill it was possible to see sallows at intervals along wood edge between St Olaves and Somerleyton.

Took B1074 to Somerleyton, parked at station and looked out across marshes and continued to see sallows at intervals. We then went to Flixton Decoy and walked along the Angles Way north towards Somerleyton along the edge of Blundeston Marshes, a mixture of alder, willow and then gradually picking up to huge numbers of sallows just on the marsh/field edge. There are also several pockets of mature oak as well. Having reached Wicker Well where there are some more wet areas we returned on the 'higher' track which would enable looking out across the oaks and sallows.

TM4996/TM4995/TM5095. **Green rating.**

Visit 6 ~ 7th May 2013

Visits to woods in the Needham Market and Stowmarket area.

Drove via Ipswich and first looked at area to the south west of Needham Market. These woods included Middle Wood TM0549/0649/0550/0650, Muckinger Wood TM0452/0552, Bonny Wood TM0651/0751/0752. Also in the area but not looked at were Ditch Wood and Swingen's Wood/Priestley Wood. Priestley Wood is a Woodland Trust Wood but lower than Bonny Wood. <http://www.>

woodlandtrust.org.uk/en/our-woods/Pages/wood-details.aspx?wood=4429#.UYoxAF9wYdU

Middle Wood was looked at by driving around the perimeter roads. It had a good structure, and on the right edge in TM0650 were about seven large sallows, also sallows in stream to east of road and willows were in landscape. No visits were made inside the wood but it probably contained more sallows. Muckinger Wood was also observed from the roadside, however this was a thin young wood, a line of poplars could be the high point, and although it could contain sallows wasn't visited.

We selected **Bonny Wood** for a thorough visit and drove along a track entered from a yellow road leading to Willisham Tye. We were able to park close to the wood. The wood has a good footpath network around the wood but little in the southern section of the wood which is private. The northern section is SWT Reserve with a footpath network throughout wood. <http://www.suffolkwildlifetrust.org/reserves/bonny-wood> Sallows were found on all edges and throughout the wood. Honeysuckle and violets were also present. Our route took us along the western side, into the reserve and to the top corner by the pylons, also heard from the direction of Priestly Wood was a nightingale. There is a good viewpoint of the top edge from the field and good oaks. Walking down the eastern side and into the wood midway we found many large sallows. More honeysuckle and violets noted. A dog walker commented she never saw anyone else walking in the woods. The high points at the southern end are harder to determine but good mature oaks visible. **Red rating.**

We then drove to Long Covert Wood east of the A414 and drove around the perimeter roads clockwise. Little sallow was noted although willow is in the landscape especially in river beds. Veteran oaks in landscape and top edge signs indicate military range!

In the afternoon we took a yellow road from Stowmarket beside the Rattlesden River, willow rich, alder and sallows roadside. High point on Chapel Hill has oaks in the field. Great Wood TL9960 near Borley Green visible and sallows on edge. There is little access to Woolpit Wood TL9961/Shelland Wood TM1061 beside the A414 so we drove around the perimeters and took a farmer's track to view the east edge of Shelland Wood and a further opportunity to view on the yellow road to Shelland. A sprinkling of sallow noted. Sallows visible behind Moorbridge Farm.

Northfield Wood TM0259/0260 near Onehouse is a Woodland Trust Wood and sallow rich. A route around the wood was taken and there was rarely a point when sallows weren't visible, some of the trees were giant trees, probably the most densely populated wood with mature sallow ever visited – minimum of 185 noted. Several areas with good oaks and the highpoints have good oaks visible and can be viewed from field in reason. Honeysuckle also present. **Red rating.**

Total combined spring visit mileage = 1138 miles

Appendix II ~ notes on summer survey visits

See Appendix I for grid references and locations.

Visit 1 ~ 17th July to 19th July 2013

17th July 2013

Mellfield Wood ~ walked public footpath through north end of wood. Recorded *L.camilla* and *A.paphia*. From public footpath along west side of wood watched through binoculars the key sallow thicket and high points at north end of wood from 11:05 to 14:10 left area and drove to Bradfield Woods.

Bradfield Woods ~ between 15:15 and 17:30 – walked main paths. Recorded over thirty five *L.camilla*.

18th July 2013

Bradfield Woods ~ arrived 08:00 and walked main rides hoping for a male grounding following the previous report on the 13th July reported by Mike Rae near the wood yard. Many *L.camilla* and several *A.paphia*. Visited most sections of the wood and watched the numerous 'high points' with no success. We became more aware that this is rather a flat wood with no obvious high point.

19th July 2013

Stanstead Great Wood ~ arrived 08:15 and watched key areas with access for potential groundings. We were very surprised not to record *L.camilla* nor *A.paphia*. Left wood at 14:30

TL65 ~ using binoculars watched a wood for thirty minutes from roadside (distance approx. 150m) but not in favourable conditions despite good sunshine. Wood was very windswept.

Balsham Wood (Cams) ~ arrived at 16:00 and using binoculars watched from track near entrance to water tower and within ten minutes we had observed two *A.iris*!

Visit 2 ~ 22nd July to 24th July 2013

22nd July 2013

Stanstead Great Wood ~ 08:45 to 11:30 again watched key areas but still negative and still no *L.camilla* nor *A.paphia*.

TL65 ~ in exceptionally high temperatures watched a woodland edge from roadside using binoculars from about 13:00. At 14:10, viewing from over 200m and during a moment of exceptional calm, AM saw at least two clear flights by *A.iris* over, near and around the highest part of the canopy. AM later saw a chase of two males briefly low over the canopy nearby. Walking back along the road to a slightly closer viewpoint, at 15:10 a single male was observed a couple of times through binoculars flying over the canopy by both AM and LG.

Bradfield Woods ~ arrived 16:30 and watched the 'high point' at the western side of the wood until 16:30, without any sightings.

23rd July 2013

Overnight the hot weather broke with heavy thunder storm during the night and early morning rain.

Wolves Wood ~ arrived 09:30 as rain started to clear but still very dull, muggy and the wood was a mosquito heaven. Despite cloudy conditions *L.camilla* were observed and between 12:45 and 13:30 watched high point beside the road and carpark. Further rain and we left at 14:20

Bonny Wood ~ some sunshine at 16:00 and we watched the top north edge near pylons with no success. We walked into the wood but no *L.camilla* was observed.

24th July 2013

Bradfield Woods ~ we returned early morning and watched the 'key butterfly' area but again with no success.

Mellfield Wood ~ between 14:15 and 16:15 we watched the key oaks on the north side but again with no success. Driving back we briefly looked at the visible high points at Haws Wood and Rushbottom Wood in TL85 and continued to TL65, where it was cloudy so we did not stop.

Balsham Wood ~ between 17:25 and 18:05 despite periods of cloud, in moments of sunshine two *A.iris* were observed on several occasions including one individual which flew up and around the water tower.

Visit 3 ~ 29th July to 31st July 2013

29th July 2013

TL65 ~ arrived at 13:00 when there was ten minutes of sun followed by rain and very breezy conditions.

We left and returned again at 14:35 and watched for twenty minutes. It was very breezy still and then further rain.

Balsham Wood ~ in a ten minute period of sunshine at 13:50 we observed two individuals chase, and a further individual in a new area to the right of the water tower. Another period of sunshine produced two clashing near the water tower.

Easter Wood TL7655 ~ this wood with a landscape high point was watched from 16:00 during poor weather conditions. Two large butterflies were seen to chase but hard to view and get a good appreciation of the size, probably were Red Admirals (*Vanessa atalanta*). A wood worth revisiting next year.

30th July 2013

Northfield Wood ~ another wet day with only a short window of 'brightness' in the morning followed by rain throughout the day. Returned late afternoon and with a short window of sunshine around 18:00 watched the 'high point' with only Purple Hairstreak (*Neozephyrus quercus*) flying.

See Image (Page 36) ~ Northfield Wood, an example of wood map style

31st July 2013

Northfield Wood ~ a morning visit followed by rain again. Between 13:00 and 14:00 watched 'high point' in weak sun with no activity. A lady reported seeing *L.camilla* recently in the wood.

Easter Wood ~ an afternoon visit with good periods of sun. Watched woodland edge from roadside but with no further activity. Visited adjacent Spring Wood, but it was very windy despite good sunshine. Some willows and elm were noted.

TL65 ~ 16:50 a brief stop but very windy and poor sun.

Balsham Wood (Cams) ~ at 17:30 cloud with blue sky on the horizon, forecast was not as predicted as good late afternoon periods of sun. At 17:45 two males clashing high up with a third individual joining in briefly. We left at 18:10 having observed several flights and clashes.

Visit 4 ~ 3rd and 4th August 2013 (AM only)

3rd August 2013

Stanstead Great Wood ~ no sightings

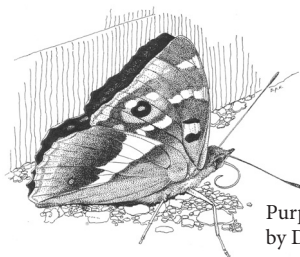
Easter Wood ~ no sightings

Balsham Wood (Cams) ~ late afternoon one single male *A.iris*.

4th August 2013

Northfield Wood ~ watched wood throughout day, one *L.camilla* observed. Rather cloudy weather.

Total combined summer survey visit mileage: 1497 miles



Purple Emperor
by Douglas Hammersley

The Purple Project

Bill Stone

Published in this issue of *The Suffolk Argus* is the report by Liz Goodyear and Andrew Middleton on their efforts to locate suitable woodlands for Purple Emperor in Suffolk. Ignoring introduced populations, I am a great believer that the Purple Emperor could exist, albeit in small numbers, much more widely in Suffolk than our records suggest. However, in order to find and accurately record this magnificent butterfly there is going to be a need for a significant amount of focussed surveying effort over a number of years. To try to provide some structure and coordination to this recording effort I would like to introduce the "Purple Project".

This recording scheme will initially focus on a number of woodlands which have been identified by Liz and Andrew in their report as having a Purple Emperor suitability rating as either "Red" (very good habitat - abundant willow, willow thickets (100+, 100s) or "Orange" (good habitat - good numbers of willow, maybe a willow thicket, 50-100). Other Suffolk woodlands can be added if the woodland is identified as being suitable and when records for Purple Emperor are received from new woodlands.

In short, the Purple Project will require recorders to visit identified woodlands as often as possible during the flight period and undertake observations both within the wood but perhaps more importantly from external view points.

The following woodlands are those rated by Liz and Andrew as "Red" and "Orange" and with reasonable public access:

Red

Mellfield Wood (TL9259/9260/9160)
SWT Bradfield Woods (TL9358/ 9258)
SWT Bonny Wood (TM0651/0751/0752)
Woodland Trust Northfield Wood (TM0259/0260)

Orange

Raydon Great Wood (TM0540/0440)
RSPB Wolves Wood (TM0543/0544)
Old Hall Wood (TM1139/ 1240/1239)

Habitat and adult behaviour

In order to look for the Purple Emperor it is perhaps important to have an understanding of habitat preferences and behaviour of the adult butterfly. In Suffolk, the Purple Emperor's main flight period is between mid-July and mid-August. It is often seen flying at the same time as both White Admiral and Silver-washed Fritillary and the three species share a love of mature deciduous woodland. However, for Purple Emperor it is important that the woodland should ideally contain or have close by, a good quantity of the primary larval food plant, Goat Willow (*Salix caprea*). Purple Emperors also prefer Oak rich woodland but they are known to fly between woodlands and suitable habitat.

In suitable woodlands male Purple Emperors can occasionally be seen feeding on the ground mid-morning (and again late afternoon) where they seek out sources of salt, moisture and other nutrients. It is believed that salt is essential for both the male and the female to assist in egg development and the male will pass some of his own salt reserves through his sperm during mating. Many sources for both salt and essential nutrients are utilised but especially from animal faeces.

After morning feeding, male Purple Emperors will slowly accumulate height and move up to a congregation area within or very close to the wood. These areas tend to feature the highest point of their habitat or particularly prominent trees, also referred to as master trees. These areas can also feature along the edge of the woodland. One favoured feature of a congregation area is where there is natural depression in the canopy in the shape of a half bowl and which attracts full sun. Favourite trees for congregation tend to be broad-leaved trees such as Oak, Beech and Ash as the leaves allow the butterfly to perch. Ideally, the leaf selected will allow the butterfly clear views of its territory and to orientate itself so that it can remain in full sun. Males will then use these particular leaves to watch from, leaving frequently to patrol their own territories and await the entry of an unmated female. They will also

continue to feed, favouring aphid honey dew and in particular sap runs from Oak. Purple Emperors rarely use flowers for nectar although in some woods they have been observed favouring Sweet Chestnut, blossoms and buddleja.

Female Purple Emperors normally become active towards 11.00am and will head to the male territories. If a fertile male is in residence then he will challenge the female and the female will lead him away to a high point to copulate. This could be a long distance away from the male territory and the female often utilises an Oak or Ash tree as her resting place. However, if a female who has already been mated enters a male territory then she will avoid his attentions by flying down to the ground. The male will eventually lose interest and return to his territorial perch. Egg laying will normally take place midday through to early afternoon and the female will look for sallow leaves that are shaded from full sun. This is to avoid the eggs and young larvae becoming exposed to extreme temperatures and suffering from desiccation. The egg is laid on the upper surface of the leaf and often near the edge.

Survey methods

The following points will, hopefully, assist in maximising recording opportunities for woodland visits for adult Purple Emperors.

Because a male Purple Emperor could settle on suitable ground anywhere in woodland it is best to look for their congregation areas and attempt to identify males on territory. As discussed above, the congregation areas tend to feature the highest point of the wood so it's best to look for this during an initial visit or utilise an Ordnance Survey map. You may need to stand at a distance away from the wood to achieve this.

Where no clear or accessible high point exists, explore the wood and look out for a woodland edge or ride which features an indentation in the canopy and importantly, offers exposure to sun.

Find a suitable point to watch from and start to look up for butterflies flying from their perches, scan regularly. Remember that most afternoon flights will be above the canopy.

Try and match your visit with good weather. The Purple Emperors will be at their most active from midday through to late afternoon, they prefer full sun and temperatures above 22 degrees Celsius.

Remember the Purple Emperor is a large butterfly; it can soar and glide powerfully and effortlessly. Purple Emperors will often chase each other or other butterflies and insects so look out for this aggressive behaviour and aerial pursuits.

Keep to footpaths and authorised routes

Importantly, use a good pair of binoculars and prepare yourself for a sore neck!

If you are interested in getting involved in the Purple Project then please let me know which of the woodlands listed above you can visit.

Details of all visits made are important, please record when you visited, the weather conditions, times and which parts of the woodland you were able to watch. Negative visits for Purple Emperor will also be very useful.

If you see Purple Emperor then please let me know as soon as possible. Ideally, a photograph or video footage would be of great use too.

Finally, if you know of any other suitable woodland then let me know.

Good luck!

Bill Stone Suffolk Butterfly Recorder

Variation of the Brown Argus in East Anglia

Rob Parker

A recent article in the Entomologists' Gazette by Professor David Newland on the variation of the Brown Argus (*Aricia agestis*) in South Cambridgeshire and Essex caught my eye at once. He was drawing attention to specimens with the fleck of white on the forewing which is normally associated with the northern Brown Argus – a separate species, and we have had a few white-spotted Brown Argus sightings in Suffolk in the past 2 years, from Trevor Goodfellow, seen where he lives at Green Farm, just outside Thurston near Bury St Edmunds. Trevor's photos appeared in the Autumn 2013 edition of Suffolk Argus (on p.2, with a short note on p.9).

This unusual form of our resident Brown Argus exhibits a vestigial white surround to the black discoidal spot on the forewing, and therefore looks just like a Northern Brown Argus, *Aricia artaxerxes*. Similar specimens have been named as form *snelleni* ter Haar, 1899 and as form *albiannulata* Harrison, 1906. A genuine Northern Brown Argus, photographed by Peter Maddison is illustrated on the back cover of the Autumn 2013 Suffolk Argus. Curiously, it has less white than the imposters!

On 3 Sep 2012, Trevor photographed a female exhibiting the white surround and drew it to my attention. I gave him some background information, and told him to look out for more in 2013. He duly photographed a first generation specimen on 16 June 2013, and then a second generation example on 6 Aug 2013. This latter specimen is a male, whereas the preponderance of this form appears

to be found in females. Interestingly, Green Farm hosts a healthy population of Brown Argus, but the specimens showing the white halo were found only in one small patch of meadow; the remainder of the grassland has produced only the normal form.

Observers are urged to report any further sightings. One reality, however, is that the butterfly generally sits wings closed, and needs to be seen close-up whilst basking before the white halo can be discerned. Good digital photography now opens the way to discovering more about the distribution of this subspecies, form, variation or aberration (It might be considered to be any of these).

It is worth adding that the definitive work on the butterflies of Suffolk (Mendel & Piotrowski, 1986) contains a photograph of such a female, along with a historic note on 3 specimens taken at Lakenheath Warren in the 1860s. Clearly, specimens with white halos have been around for some time, but as a small minority. Perhaps it is a normal variation within the *A. agestis* populations everywhere. After all, one of Richard Lewington's paintings in Thomas & Lewington 2010 does show this form.

References:

- Mendel & Piotrowski, 1986. The Butterflies of Suffolk, Suffolk Naturalists' Society p.68.
- Newland. D., 2014. Variation of *Aricia agestis* (Linnaeus, 1761). Ent Gaz Vol 65, p.26-29.
- Thomas & Lewington, 2010. The Butterflies of Britain & Ireland. BWP. p.125.

David Newland requests records of the Brown Argus with white halos on the forewings

The distribution of this form in East Anglia is only partially known. David recorded it in his Cambridgeshire garden in 2013 and, as reported in *The Suffolk Argus* Autumn 2013, Trevor Goodfellow photographed this form near Bury St Edmunds. Other sightings have been made in Essex and into the East Midlands, and David

would like to know more about the extent of the distribution.

Please send details of your sightings of the Brown Argus with white halos, preferably with a photograph, to: denewland@gmail.com.

Also, please inform Bill Stone, the Suffolk Recorder: butterflies@sns.org.uk

Hibernating Butterflies

Richard Stewart

For some years I have been aware of butterflies, particularly Peacocks, hibernating in the remaining 'pill boxes' constructed during the Second World War. On one trip along the North Downs such a site was investigated and several Peacocks discovered. Early in January 2014 my old friend Reg Snook, who is a local artist and writer of two books and regular articles about Christchurch Park's wildlife, contacted me about hibernating butterflies he had discovered in a 'pill box' just a few hundred yards from his studio at Grundisburgh. A photo was enclosed. I planned to cycle over but then came that dreadful and prolonged period of bad weather so I didn't get there until the second half of February.

A careful count by both of us produced forty, which were mainly Peacocks but also included six Small Tortoiseshells. A second 'pill box', about one hundred and fifty yards away, added

a further twenty, all Peacocks. We had to use a torch briefly but they didn't react-in some cases I could see the large multi-coloured rings through the darker closed wings. Peacocks, hibernating en masse, can deter predators by flashing their wings together and emitting an audible hiss. This was featured on a recent television programme.

The 'pill boxes' presumably offer ideal conditions for hibernating butterflies: an equable temperature, very dark corners and minimal light through narrow windows and door, plus little disturbance. There had been plenty of sunshine the previous day so I was pleased so many remained. Looking at Reg's original photo there were a few more so presumably those nearer the light had left. Except for the overwintering Monarchs in Mexico, this is my largest total at one site.

The Small Tortoiseshell in March 2014

Richard Stewart

During this month I recorded thirty seven of this species from seven different locations. To put this in perspective, in 2013 I recorded none in March and during the dreadful year of 2012 my first came on 12th July. On one memorable day, the 16th, six were recorded in Christchurch Park, Ipswich, one feeding on lady's smock in the wet meadow, the others using dandelions and red deadnettle at the northern end. On a short walk home to our house in Westerfield Road, a further eleven were seen in front gardens, feeding on aubretia, viburnum, elephant ear and hyacinth, i.e. a total of seven different nectar sources.

As I didn't visit any coastal sites in March I contacted Bill Stone about possible influxes from the continent. He replied that there had been reports of localised movements along the coast but 'I think that the ones we are seeing are, as you suggest, successful hibernators from last year and which are constantly emerging'.

This is certainly good news for a species that, in recent years, has been a considerable cause for concern at both local and national levels.

Variation of the Brown Argus in East Anglia



Photo: David Newland

female



Photo: Trevor Goodfellow

male

Brown Argus *Aricia agestis* form *snelleni* ter Harr

Hibernating Butterflies in a WW2 pillbox



Photo: Richard Stewart

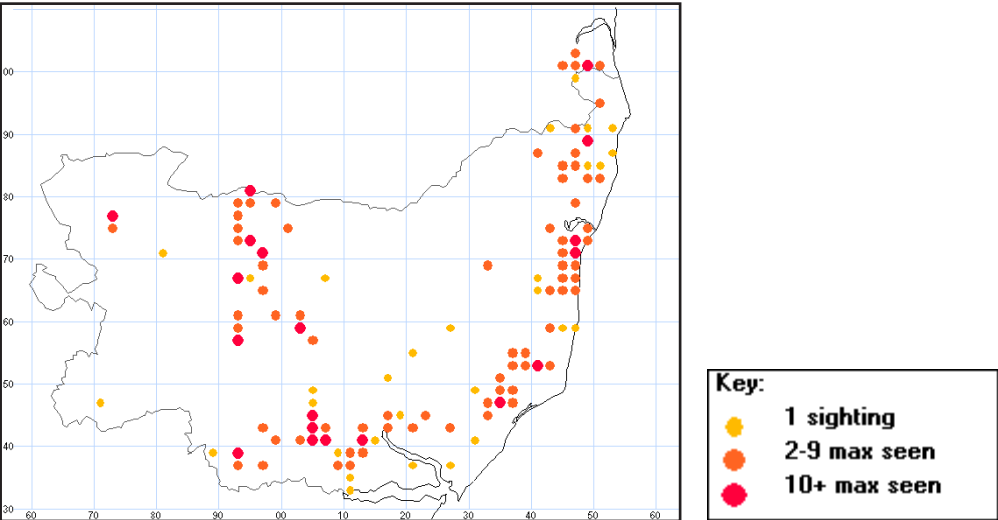


Image 5.4 ~ White Admiral *L. camilla* distribution in Suffolk 2005-2013 (see page 24)



Northfield Wood, an example of wood map style (see page 30)