

Purple Emperor (*Apatura iris*) flight period survey as part of the Hertfordshire Purple Emperor SAP 2011 with additional notes on Middlesex sightings

Flight period survey in Hertfordshire conducted by Andrew Middleton and Liz Goodyear - Joint species leads with assistance from Laurence Drummond and Malcolm Hull

In 2011, we received funding to cover our travel expenses in Hertfordshire – this enabled us to visit considerably more sites than has been achieved in recent years.

Funding

Travel expenses for the 2011 flight period survey (phase 2) were funded by the Hertfordshire Environmental Forum and the survey remit was based on a grant application submitted earlier in the year. Phase 1 had been a willow survey of woods in historic or potential area in Hertfordshire.

Summary

Phase 2 was split into two sections:

- to survey and monitor existing sites
- to visit new areas as identified in the **phase 1 willow survey** conducted earlier in the year.

Our funding application stated we would make several visits to existing sites and a set number of visits to new areas. Weather conditions and an extended and exciting flight period resulted in considerably more visits being made than anticipated and in particular to new areas. Further visits will be made to these new areas during the 2012 flight period as several sites remain unconfirmed.

Flight period

Nationally, the first sighting of Purple Emperor occurred on the 13th June 2011 in Surrey, the earliest 'modern' date on record. It wasn't until the 21st June that one was seen in Hertfordshire at Northaw Great Wood by Andrew Middleton (AM) and Liz Goodyear (LG) – this was also Hertfordshire's earliest known sighting. However, after a very dry and warm spring, weather conditions immediately deteriorated with little early activity at other sites and the flight period was dogged by rain, wind and continual cloud. Despite some days being quite mild the male Purple Emperor will not fly in cloudy conditions. It was sometimes necessary to remain at a site for several hours for just a few minutes sunshine which could be sufficient to encourage a male to fly at an assembly area. It was also noted that the further north in the county the site was the later emergence was, which we had not experienced in the past when monitoring the known south Hertfordshire sites. All these factors led to an increased number of visits being necessary. The last confirmed sighting was on the 15th July, but we continued watching new areas in the north-east of Hertfordshire and across the county border into Essex until the last week of July, where several sightings were made. The first sightings in Middlesex were on the 25th June at Ruislip (Park Wood) when Steve Pash had three sightings. Steve admitted he would have probably seen them sooner if he had been out looking. Sadly Steve Pash died on the 31st December 2011, a great loss to the Purple Emperor community.

EXISTING COMPLEXES

Known sites were monitored by Laurence Drummond (LD), Malcolm Hull (MH) and AM.

Broxbourne Woods Complex including Wormley Wood (TL30)

LD visited the Broxbourne Woods complex including Wormley Wood and the Black Fan Wood area on five occasions and confirmed presence in all the key territorial areas except Black Fan Wood and Claypits

Wood. Male activity was observed at Wormley Wood assembly area on the 27th June and Broxbourne Common on the 2nd July. LD did not visit the Bourne Wood assembly area and no other reports were received from this site. LD also looked at other potential assembly areas within the complex and areas where grounded males are often observed. The main ride at Broxbourne Wood NR is very popular with casual observers and regular reports were received throughout the flight period from this area. A field trip organised by Butterfly Conservation held on the 9th July was well attended.

TL20

Only two visits were made to the Mimms Wood complex (North Mymms area), the first on the 21st June by LG and AM, on the same day that the first sighting was made at Northaw Great Wood, but no Purple Emperors were seen. A second visit on 26th June, by AM and LD, confirmed territorial activity at North Mymms and again at Northaw Great Wood. On the 9th July as part of the BC field trip, observers were able to witness exciting territorial activity at Northaw Great Wood. No visits were made to the other assembly areas in the Mimms Wood complex nor to Hatfield Park. Of interest a casual record was received from TL266123 of a single individual male just north of the northern edge of the Hatfield Park complex. David Gompertz, the Reserve Warden at Fir & Pond Wood (TL277006), observed male activity on the 14th July at this site. The last visit to Northaw Great Wood was on the 31st July by AM but no Purple Emperors were seen.

TL10

The main woodland complex in TL10 is Bricket Wood Common which was monitored by MH. Four visits were made to Bricket Wood Common starting on the 2nd July. On three visits Purple Emperors were seen flying at the assembly area found in 2010, but no sightings were made on the 24th July 2011. MH also received two reports of grounded individuals and a second-hand report of another sighting. Further monitoring of this site is essential.

TL31

There is only one known site in TL31, at Balls Wood (TL3410). Several visits were made by AM, LD and LG as well as Andrew Wood, to try and locate a territorial area, but despite a great deal of searching this remains elusive. A probable male was seen by AM flying along the field edge close to a potential area but no repeat sightings were made. The site is monitored by Andrew Wood and is visited by several other casual recorders - Andrew Wood has confirmed he has received no reports of any other sightings this year.

Tring Park and surrounding woodlands in North West Hertfordshire

After several years with almost no reports from Tring Park, it was very encouraging to hear of several sightings from Phil Woodward. In view of these reports no visits were made by AM or LG. No reports were received from the Ashridge Estate in 2011.

SURVEYING NEW AREAS

As the flight period progressed we decided not to visit some of the planned survey areas, but concentrated on some different areas previously not identified as new reports were received.

North West Hertfordshire

The planned visits to the NW of Hertfordshire to tie in with visits to Tring Park and the Ashridge Estate were not made. Unfortunately, the County Wildlife Sites (CWS) officer was unable to make contact with the owners of Hoo Wood to permit us to visit potential territorial areas in this wood, and with activity

developing in the north and NE of Hertfordshire, we concentrated our visits on these parts of the county. We would hope to visit this area in 2012.

North Hertfordshire

Last year, assembly areas were found at Rusling End and Westbury Wood. The CWS Officer was unable to obtain permission for us to enter Westbury Wood, so no visit was made, but the landowner of Holl Lays Wood at Rusling End allowed us to look at this wood and some of the other woods in his large estate. We were able to confirm territorial activity again at Rusling Green on our second visit, and after a day's searching suitable locations confirmed that Purple Emperors were still present in the Hitch Wood area centred around Walk Wood on 6th July. The Hitch Wood area is a very important historic area with records dating back to the late 19th century. The CWS Officer contacted the landowner, who enjoyed seeing an active male at the location of the assembly area on the 14th July with AM. Purple Emperors were also reported from the Knebworth Woods complex centred on Watery Grove. Two visits were made by AM and LG but despite extensive searching of potential territorial locations, no assembly area could be identified, although the wood itself has no public access. Continued watching is required in 2012 – the woodland complex is large and there is plenty of scope.

On the 5th July, a single Purple Emperor was seen on a driveway in Harpenden some distance from any known sites, but in an area where woodlands had been identified as having potential. The key wood in this area is Symondshyde Wood close to Wheathampstead. On the 4th July, MH visited these woods and saw on 3 occasions a dark *nymphalidae* species flying over the oaks at a potential assembly area. AM & LG visited on 10th July and had a possible brief sighting. AM visited again on the 14th July and had multiple sightings very nearby, which he is convinced were a Purple Emperor, albeit seen from some distance. Unfortunately none of these almost certain Purple Emperor sightings could be confirmed by close-up views, as the wood is private and access into the wood close to these points isn't possible. We are not confident that permission to survey from within the wood would be granted, although we will ask the CWS Officer to write on our behalf. We are aware that willows are present in the landscape.

North East Hertfordshire (and the Essex border)

Several visits were made to NE Hertfordshire, but unfortunately, some were made either too early in the flight period or on days when the cloud cover didn't clear (despite weather forecasts stating the contrary). On the 1st July a female Purple Emperor was seen by several observers (sap-run feeding on oak) at the HMWT Patmore Heath Reserve (TL42). This was in an area not previously looked at by us and opened up a new landscape to concentrate on. In view of this sighting, AM and LD after visiting a large wood in TL43 on the 4th July (with no success), and at LD's suggestion, stopped at a SSSI wood in TL32. There is a very significant high area along two edges of wood, with views across south Hertfordshire and to London. Much of the wood has no access, but public footpaths give good views across to the canopy. Watching through binoculars, LD observed 2 large butterflies chasing over the canopy, probably Purple Emperors. On the 10th July, LD returned and saw similar activity, and on the 11th July AM was able to confirm that they were Purple Emperors. This is a 'new' woodland complex in a 10km square where there have been no records since the late 1800s, several kms away on the far west edge of the 10km square. Unlike other areas of Hertfordshire that we have researched, there are no historical reports from this area, which is very exciting. On the 11th July, AM also looked at woods in the Sacombe Green area, but later in the day and in cloudier conditions, with none seen.

On the 15th July on one of the few good sunny days, AM was able to confirm that Purple Emperors were present in TL43, having seen territorial activity over the woodland canopy. The wood is a comparatively young wood with no clear potential territorial area. However, with permission to visit the wood in its entirety, we had driven across one of the abandoned runways from a World War II airfield and looked across to the canopy and noted some slightly taller oaks. On closer inspection they were found to be growing on the top of a large mound of earth – this was where the Purple Emperors were seen flying to!

On the 14th July, the day before these sightings, LG has received a phone call from a respected Norfolk butterfly recorder informing her that his son had seen a Purple Emperor close to a wood just over the county border in Essex on 7th July, and relatively close to the Herts wood just mentioned. The woods in that area had been looked at by AM/LG in 2004 and were felt then to have potential, but hadn't been revisited. After the 15th July Herts sighting, AM drove to one of these sallow rich woodlands and from a public footpath observed a single male flying around a sheltered high point. Reports were also received from the Cambridgeshire & Essex Branch of Butterfly Conservation of sightings at Epping Forest and a wood near Dunmow. Unfortunately, Purple Emperors have been released into woods at Markshall near Coggeshall, so there are occasional doubts expressed that if an individual is seen it is simply the result of a release, rather than evidence of a naturally occurring low-level population. We are confident that all reports this year were far enough away from the Markshall release site, that they indicate naturally occurring insects. **We believe there is absolutely no need to release Purple Emperors, as they are without doubt already present in the landscape at very low levels, which are extremely difficult to detect even by experts given many years to search. Neither is the release of Purple Emperors supported by Butterfly Conservation.**
[Please see the 2012 report]

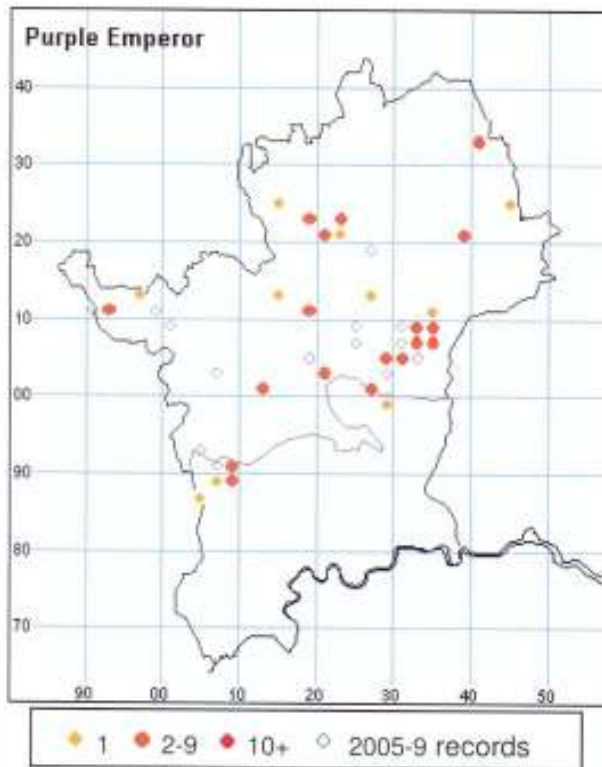
In view of these Essex records, we spent several days visiting woods in north Essex (*at our own expense*) which were all sallow rich. Unfortunately, this coincided with a very cloudy period and an influx of Red Admirals. Red Admirals can behave in a similar manner to Purple Emperors and will fly high up into the canopy, and sky, although we normally can eliminate these pretenders. A combination of many Red Admirals and extremely disappointing weather conditions meant that probable Purple Emperor sightings on two occasions of clashes and chases were not repeated and could not be confirmed. Final visits were made to TL43 on 24th and 25th July but no Purple Emperors were observed.

On the 23rd July, LG visited woods in the Patmore Heath/Albury area, selecting a sheltered corner of a wood close to the highest point with prominent trees which could be viewed from a public footpath across the adjacent field. Conditions were poor and windy but in a brief moment of sunshine a large butterfly was seen to fly away from the prominent point. AM had a similar experience the next day, with three convincing but distant male flights, including the pursuit of a seagull, however again in poor weather conditions. This is another area that will require further visits in 2012.

Middlesex sightings

Much of the survey work in Middlesex was conducted by Steve Pash and his death will leave a great void in records. Sightings from Ruislip and in particular the St Vincent's assembly area were received throughout the flight period. However, additional news came from nearby Bayhurst Park on 4th July 2011 of a grounded male, and Nick Furtek also reported a grounded male at Copse Wood on the 11th July 2011. These reports are all close to Ruislip and confirm that the butterfly is present throughout the landscape of the Ruislip Woods NNR. A very late report was received via the Guardian writer Patrick Barkham of a male at Denham Deep Lock just yards inside the Middlesex border "A chance meeting on Sunday led to this

gentleman alerting me to a rather splendid picture of a Purple Emperor he took on July 3rd 2011. Further inquiries and he recalls he found it at Denham Deep lock on the Grand Union Canal which is, I think, right near Uxbridge, inside the M25." The last report from Ruislip was on the 15th July 2011. No known visits were made to any other potential sites in the M25 / Middlesex corridor.



Distribution map end of season 2011
©: Butterfly Conservation
Hertfordshire & Middlesex Butterflies
2012 (covering 2011 records)

Further survey work

With such difficult weather conditions experienced in 2011, and so many new areas identified, all areas will require visits in 2012 and we hope that some funding may be available to continue our survey work*. Sallow surveys would be beneficial in the new areas and further flight period surveys will be essential. * Unfortunately no further funding was available

Thanks

We would like to thank the Hertfordshire Biodiversity Officer and the HEF Biodiversity Projects Fund for providing funding to help us conduct these surveys. We also would like to thank the landowners of private woodland for giving us permission to visit their woods and the CWS Officer for obtaining the permission on our behalf.

Liz Goodyear and Andrew Middleton
September 2011 and updated August 2012