



## WILDLIFE REPORT No. 27

Review of 2019





**TOP – EARLY BUMBLE BEE**

**BOTTOM – SWALLOWTAIL MOTH**

## Introduction

The end of 2019 is the appropriate moment to look closely at how this year has been for wildlife at Eric wall LTD. This will inform the business about what the site is achieving towards meeting the objectives of the LEAF organisation. There are highlights and moderate successes as well as some disappointments. In order to assess the situation a suite of indicators are used. The specific indicators are birds, butterflies, moths and orchids. All these groups of species are regularly monitored; the data is collected and stored. Information about other species including reptiles, mammals and other insects; especially bees is also collected as anecdotal observations. In excess of 5% of the nursery land holding can currently be managed for the benefit of wildlife and the quality of this management will also be examined in this report.



Rowan Tree planted in 2015

The United Kingdom government's Joint Nature Conservation Committee (JNCC) latest State of Nature report shows that the trends for wildlife numbers and distribution are more likely to be declining than expanding. For a business like Eric Wall LTD the fact that many rare and specialised species are declining is not relevant, these species have never been present here. The important statistics concern the general abundance of the commoner species. The report highlights that general species abundance has declined by 13% since the 1970s.

It is in this area that this business can do things that can help to arrest this decline; or equally carry out actions that reinforce this trend.

## Moths

The first key indicator to consider is moths. The moth population is sampled every two weeks across the whole year using a light trap. Almost invariably this is done at the week end using the day that is most suitable. The numbers of moths caught is very weather dependant so a good night one year may not mean it will repeat in subsequent years. However by sticking to a regular sequence we avoid boosting the results by deliberately selecting nights when big numbers are likely.

12.01.2019 _____	06.04.2019 Common Quaker 4 Hebrew Character 3	18.04.2019 Brindled Beauty 2 hebrew Character 2 Lunar M. Brown 1	01.06.2019 Trebles Lines 8 Vines 4 Heart and Dart 3 Straw Dot 2 P. Mottled 2 Shoulder S. Wainscot 2 Flame Shoulder 1 Shoulder middle barred 1 Poplar Grey 1 Iron Prominent 1	06.07.2019 Riband Wave 19 Small Magpie 1 Common Quaker 14 Cinnabar 1 Dark Arches 12 Brimstone 1 Elephant hawkmoth 10 Sycamore Moth 1 Privet Hawkmoth 1 Willow Beauty 5 Poplar grey 1 The Snout 1 Swallow tail 3 Scalloped Oak 1 Burnished Brass 1 Beautiful Hooktip 3 L. Yellow underwing Common 1 Hebrew Character Carpet 3 Shoulder S. Wainscot 3 S. Oak Beauty 1 Miller 2 Clay 1 Ruby Tiger 2 Early Thorn 1 Common Pug 2 Buff Ermine 1 July 2 Festoon 1 Highflyer 1 Coronet 1 Reddish L. Arches 1	21.07.2019 Common Quaker 6 poplar hawkmoth 1 Dark Arches 4 Poplar Grey 1 Common Footman 4 Ermine Buff 1 Pebble Hooktip 3 Deadwood Moth 1 Common Wainscot 3 Heart and Dart 1 Ruby Tiger 3 Rosy Footman 1 Cloaked Minor 2 Early Thorn 1 Prominent 1 hebrew Character 1	03.08.2019 Mother Of pearl 8 S. Ground Carpet 1 Pebble 5 Elephant Hawkmoth 1 Flame Shoulder 4 Grey Dagger 1 L. Yellow Underwing 4 Snout 1 Common Rustic 3 Ermine Buff 1 Straw Dot 3 B. B. Yellow Underwing 1 Rosy Footman 3 Drinker 1 Ruby Tiger 3 Common Footman 1 Hooktip 2 Iron Prominent 1 Brimstone 2 Swallow Prominent 1 Common Quaker 2 Gold Spot 1 Clouded Border 1 Poplar Hawkmoth 1 Common Wave 1	31.08.2019 S. Spot Rustic 14 Dusky Thorn 1 L. Yellow Underwing 3 Heart And Dart 1 Small White Point 1 Emerald S. Hebrew Character 3 Flame Shoulder 1 Common Wainscot 2 Burnished brass 1 Brimstone 1	19.10.2019 L. Yellow Underwing 2 Black Rustic 1	01.11.2019 Angle shades 1	17.11.2019 Merveille Du Jour 1 December Moth 1 Small Eggar 1	30.11.2019 _____	15.12.2019 December Moth 1	29.12.2019 December Moth 1	
26.01.2019 _____	09.02.2019 _____	05.05.2019 Iron Prominent 1 Flame Shoulder 1	15.06.2019 Heart and Dart 9 S. Magpie Moth Common 1 Trebles Lines 4 Common Wainscot Square 1 Quaker Spot 4 Buff T. Marbled Minor 2 Footman Poplar 1 Cinnabar 2 Hawkmoth B. B. Yellow Underwing 1 Marbled Minor 2	09.03.2019 Common Quaker 10 Clouded Drab 4 Hebrew Character Small Quaker 2 Early Grey 2 Heart and Dart 2 Iron Prominent 1 Brimstone Moth 1 Clouded Border 1	23.03.2019 Common Quaker 2	18.05.2019 Trebles Lines 2 Burnished Brass 2 Heart and Dart 2 Iron Prominent 1 Brimstone Moth 1 Clouded Border 1	14.09.2019 S. Spot Rustic 4 White Point 2 L. Yellow Underwing 3 Snout 2 Chestnut 2 Clouded Border 1 S. Hebrew Character 2 Brimstone 1	09.03.2019 _____	09.03.2019 _____	09.03.2019 _____	09.03.2019 _____	09.03.2019 _____	09.03.2019 _____	09.03.2019 _____

This year has not seen a record number of moths. The total is 369 individuals; down from 451 in 2018 and 436 in 2017. One years decrease may be no cause for concern as insect numbers always fluctuate widely from year to year. Even though there has been a decline in numbers there have been some notable highlights among our moths for this year

1. The Merveille Du Jour turned up again for the first time since 2015. This unusually coloured moth with its green ground colour is much loved by moth enthusiasts; hence the name, Du Jour.

2. The December Moth was caught once in November and twice in December. This is the first year this moth has been seen here. Catching this moth underlines the fact that it is worth using the trap even in less promising months. I have also wondered if it was the same moth that was caught on all three occasions!

3. 19 Riband Wave moths caught in one night. This is the biggest catch of a single species since trapping commenced in 2016.

4. Another year when there was a night with Elephant Hawk moths in double figures. Possibly the brightest of all the UK moths, having a trap full of brightly coloured insects cannot fail to impress when most of the moths are drab in colour.

5. There is as usual several species that are listed as Biodiversity Action Plan species for Sussex. This year they included; Dusky Thorn, White Ermine, Buff Ermine, Grey Dagger, Brindled Beauty and Shoulder Striped Wainscot.

6. The Six Spot Burnet moth was on the site again this year; for the first time in a couple years.

Artificial light may be a big driver of declines in moth abundance. Research is still ongoing into the negative effects of artificial light at night. The first evidence was from a Rothamsted study of 2004, which uncovered a long term decline in moth numbers which could be linked to ALAN. Since then further studies have reached similar conclusions. Our response to this data could be to ensure that all our lights have passive infra red activation. If this is the case the nursery will be completely dark except when lighting is needed.

Using a light trap to catch moths does not kill them they are all released the following morning

## Butterflies

The next key indicator is butterflies. Unlike the moths which are sampled across the whole year butterflies only really need counting from April to September. There are always a few insects flying outside of this period but those months cover the main flight period of the British butterflies. A butterfly survey is done every fortnight which is just about sufficient to get meaningful data (weekly would be better). The survey always follows the same route; which is a complete circuit of the nursery, mostly along the boundary line. The survey is almost always done on the weekend which does mean that results can be unexpectedly poor if the weather is inclement on both Saturday and Sunday.

2019 has been a good year for butterflies; the total number of insects seen was 675, a little down on 2018 but better than 2017 or 2016. Nineteen species were recorded on site which matches the record set in 2015.

The highlights of this year's butterfly surveying were



December moth



1. Marbled White butterflies were seen for the first time since 2015 during surveying. Two butterflies could be seen for several days in the field between glasshouse 14-17 and lake Lane.
2. There was a single Ringlet butterfly spotted once in June. This is the first one seen since 2013.
3. The large Skipper butterfly has been recorded now for two consecutive years after being absent from the record in 2016 and 2017.
4. There were no Clouded yellow butterflies recorded this year which is unusual. This continental butterfly usually migrates here late in the summer but not this year. If this species had turned up this year would have recorded the highest number of species on site ever in a single year.



Overall 2019 has been a good year for butterflies. Numbers are stable and the number of species flying is up from the low point of 2016. This run of results could extend into 2020. To do this we must do our best to maintain suitable habitat. Butterflies need nectar sources, shelter and food plants for their caterpillars. Avoiding destroying any of these things during the spring and summer months gives butterflies space to thrive. Conversely take them away and they will leave or die.

## **Birds**

These are our bird survey results for the last four years.





The data set is looking pretty flat now. There have been no additions to the species list this year so that stays on 57. The total number of species seen is 46 this year which is about the number expected based on previous years. I would expect that this list will now grow slowly; the rate will be mainly driven by the amount of time devoted to looking for birds. To get this list to grow more time would need to be spent looking for them.

However our birds need more than just someone looking see how many species can be spotted. We are doing some of those things.



Great Spotted Woodpecker on a fat ball feeder

The bird feeding area is being maintained on a weekly or twice weekly basis and continues to be very popular. There is almost always some activity at the feeders. This is confirmed by the annual Farmland Bird Count when for an hour everything seen is recorded for a nationwide survey. The count has always been done from a position where the feeders can be seen and they are definitely busy. The nest boxes; of which we have four for hole nesting birds and one with an open front were all used last year. It seems that only three were successful. All the boxes have been emptied and cleaned ready for the 2020 season.

## Orchids

The orchids have had a poor year. While it seems that the insects have been very content with the low level of site habitat management the orchids have not.

The only Early Purple Orchid did alright this year and flowered well.

The Pyramidal orchids of which there were four colonies are now reduced to three.

Neither of the southern marsh orchids came up this year. This was disappointing but has happened before so they may be OK.



The Spotted Orchids which are the most common species are located mainly on the nursery boundary. Here they are getting covered over by encroaching scrub; mainly bramble and they are struggling to grow through it.

Time will need to be made to locate these plants and make sure they are given some space to thrive.

## Bees

The four bee hotels have been a great success since they were installed in 2015. They are looking very tired now but the Red Mason Bees that use them don't seem too bothered. There are plenty of tubes containing overwintering pupae at present. The hotels are going to be supplemented with new ones soon so that the



bees can move into new accommodation. How the bees take to the new hotels will be discovered during spring of 2020. The old hotels will have to stay in place but as they decay I think they will become less desirable to the nesting females.

While most of the bees using the hotel are Red Mason Bees there are other species using them in small numbers. One hotel has three cells sealed up by leaf cutter bees of from the *Megachilidae* family. There are also possibly cells being used by the Blue Mason Bee. They are seen at the hotels but have never been confirmed as nesting in them.

Apart from the hotels which are there to cater for specific bees there are other more general actions we do to make things suitable for bees. We try to provide suitable hibernation habitat. This is long tufty grassland and there is plenty of this around the perimeters of the nursery. The perimeter strip in many places would well exceed the 2 metre widths required for the LEAF audit. Providing flowers early in the season when there is not much available is another key provision. We are fortunate that there is a lot of the early flowering Ground Ivy on the site. This common plant is very popular with the first insects flying in the spring. It is not just bees either; Lots of insects appreciate it including butterflies, hover flies and bee flies.

## Site management to improve habitat for wildlife.



The photograph above shows a double row of apparently empty wire cages. They do actually all contain a seedling hazel tree. This was in February 2018. By moving forward fifteen months to the picture below the same hazel trees look rather different in May 2019. This small group of trees have now outgrown their wire guards. They have been replaced with wider examples in December and those pictured have been moved on to another group of hazel trees that were planted this winter.

The gains from this line of hazel trees will be increased shelter from the wind creating a warmer and generally more hospitable area for insects. The trees as they increase in size will provide a food resource for moth caterpillars, over 40 species of macro moth are known to use hazel. All those caterpillars will be potential food for birds feeding their broods of nestlings.

Over time this will be a smart improvement in the nursery environment.



Across the site there are now about 150 trees and shrubs growing in secluded corners that have been planted in the last seven years. Most are hazel, Hawthorn and Guelder Rose with smaller numbers of Birch, Holly and Oak.

This is perhaps the most significant of the nursery improvements in recent years. All these trees will over time contribute massively to the biodiversity of the site.

Planting trees and looking after them is relatively easy, there is not much to do once they are planted. An occasional visual check and a little removal of competing grasses when they are small is all that is required.

The difficult part of looking after the site is achieving appropriate grassland maintenance and the prevention of scrub encroachment.

Firstly grass cutting.

The ideal scenario is that grass areas are cut either once a year in late summer or alternatively given an additional cut in early spring. This sort of regime allows the plants to flower and gives shelter to everything that may want to live in the grass. This could be small mammals, grass eating caterpillars, foraging bees, grasshopper etc. Almost everything will prefer this to continuously cut grass. The down sides of doing this are twofold. Through the season noxious weeds are able to take advantage of this regime. Quite quickly; because the land here has been well fertilised when it was agricultural fields, docks and thistles could take over. Controlling these weeds is slow; spot treatments with herbicide are the most common method but is still time consuming. Then at the end of summer everything needs mowing and the grass clippings all need removing. This action takes away some of the excess



nutrition and removes the layer of rotting hay that if left in situ favours the growth of the very plants that were the target of the spot weed killing.

At present a proportion of our grassland is managed in this manner and is therefore completely fulfilling the requirements of the LEAF audit and also providing a much improved habitat compared to the close mown grass which preceded this regime. More of our site could be brought into this type of regime if there was more time available to do the required work, particularly in those busy weeks when all the grass must be cleared. That time is dictated by when a dry weather window occurs.

Scrub encroachment is the part of nursery land management that is most behind.

In some places we are losing a diverse habitat under a blanket of bramble. There are orchids disappearing in a couple of places and the primrose bank could be lost in two years if nothing is done. Bramble; the main culprit is not without its merits. The flowers are very desirable to pollinating insects and butterflies. An example of this is the bramble that is always growing over the boundary from the railway line behind A-D. In 2017 a butterfly count along this section had numerous butterflies utilising the flowers. By the following survey that had all been cut down and the number of butterflies had plummeted. Hidden from view are the bird nests in bramble thickets. Birds love bramble as a nest site, it is secure from most predators but not the hedge cutter or strimmer.

## Conclusions

I am often told that Eric Wall does much more than most horticultural concerns to avoid damaging biodiversity and also more to improve biodiversity on its holding. That is probably true and as a business we should be proud of that. The general manager of one of the biggest local glasshouse businesses said to me when he was walking round the outside of our site that they “have nothing like this”. He was exceedingly complimentary of our efforts for our local wildlife.

Going forward, there are solid achievements for wildlife that can be expanded upon in the next couple of years. As a business we decide whether we are achieving enough or if we should do more. The loss of wildlife abundance mentioned at the beginning of the report is the responsibility of everyone and Eric Wall LTD can play a bigger part in preventing this from happening.