## Adastra Report 2023

January was cold and mostly dull, and unsurprisingly there were very few butterfly records. The year started brightly enough with plenty of sunshine on the 2<sup>nd</sup> and with the sun's warming rays there were five records of Red Admiral, and a single Peacock. For the rest of the month there was very little sunshine to encourage insects out of their torpor, and the only other record of note, was a Brimstone on the 11<sup>th</sup>.

Odd weather events have become a regular feature of recent years and 2023 was proving no different, with February the driest in England for 30 years. After the prolonged heatwave and drought of last summer, this was not especially welcome in Sussex, as we live in a relatively dry County, and we need substantial amounts of autumn and winter rain to saturate the soil and replenish our aquifers. The slow start to the butterfly year continued until the 7<sup>th</sup>, when there was a Small Tortoiseshell and a very early Speckled Wood (average first-sighting for this species in the 2010-2014 survey was March 1<sup>st</sup>). A Comma at The Burgh nr Burpham on the 13<sup>th</sup> was very welcome as was an early Humming-bird Hawk-moth in a Lancing garden on the 14<sup>th</sup>. As this species regularly lays eggs in this garden (on both Lady's bedstraw and Hedge Bedstraw), it is reasonable to assume that this winter individual was born locally, and also hibernated locally.

As February was very dry, so March was very wet, and by the end of the month it was the wettest March, in England, for 40 years! The first half of March was too cold for butterflies, but on the 16<sup>th</sup>, with a balmy 12° C, there were 3 Peacocks, 2 Brimstones and 1 Small Tortoiseshell, in North Lancing. In the following days there were three more over-wintering Humming-bird Hawk-moths; one in Lancing on the 18<sup>th</sup>, another in Horsham on the 19<sup>th</sup> and a third at Plumpton on the 20<sup>th</sup>. Otherwise, there was a Small White in a Worthing allotment on the 19<sup>th</sup> and a Large Tortoiseshell in Houghton Forest on the 25<sup>th</sup>. The 27<sup>th</sup> was a rare sunny day and this encouraged 5-6 Brimstones to venture forth, in the St Leonard's Forest and Horsham area. There were two more over-wintering Humming-bird Hawk-moths, one at Worthing on the 25<sup>th</sup> and another at Eastbourne on the 30<sup>th</sup>.

Overall, the month of April was very cold, and often too windy for butterflies. On the 2<sup>nd</sup> there were 3 Large Tortoiseshells in East Sussex, close to where a larval web had been found in 2022. On the 3<sup>rd</sup> there was an Orange-tip at Burgess Hill, and a Large White at Pulborough Brooks. There was a Large Tortoiseshell at Perry Hill, nr Burpham on the 4<sup>th</sup> and another on Eastbourne downland on the 6<sup>th</sup>. In the Amberley/North Stoke area there were significant numbers of butterflies on the 7<sup>th</sup> with 32 Brimstones, 27 Peacocks, 7 Small Tortoiseshells, 2 Commas, 1 Small White and 1 Orange-tip. Also, on the 7<sup>th</sup> the first Holly Blue of the season was seen in a Storrington garden. More Large Tortoiseshells were reported, with singles at Abbotts Wood, Ringmer and Horseshoe Plantation on the 7<sup>th</sup>, and another in a Woodingdean garden on the 9<sup>th</sup>. There was a Green-veined White in the Shoreham area on the 11<sup>th</sup>, a Green Hairstreak on East Sussex downland on the 13<sup>th</sup>, and a hill-topping Painted Lady at Lancing Ring on the 16<sup>th</sup>. A male Wall Brown put in a brief appearance at High and Over on the 20<sup>th</sup> and at the same location there was a Clouded Yellow on the 22<sup>nd</sup>. At Malling Down on the 25<sup>th</sup> there were at least 5 Small Coppers. On the 29<sup>th</sup> the first Grizzled Skipper of the year was recorded at Kithurst Meadow and Chantry Hill (and not Mill Hill, the usual location for early spring skippers). To finish off the month, there was a Small Heath (a

national first) at Ovingdean on the 29<sup>th</sup>, another Large Tortoiseshell at Hollingbury, Brighton on the same day and 2 Dingy Skippers at Mill Hill on the 30<sup>th</sup>.

There was a flurry of activity in early May, with Duke-of-Burgundy at Kithurst Meadow on the 2<sup>nd</sup> and Pearl-bordered Fritillary at Rewell Wood on the 3<sup>rd</sup>. On the same day, in the Cissbury Ring area, there were 40 Brimstones (27 males and 13 females). On the 4<sup>th</sup> there was the beginning of a significant influx of Red Admirals, Painted Ladies and Silver-Y moths. A Common Blue was reported at Mill Hill on the 7<sup>th</sup>, a Brown Argus (a national first) at Malling Down on the 10<sup>th</sup>, whilst in the Horsham area, there "seemed to be Holly Blues on every hedge and every tree-line". The first Small Blue was seen at Kithurst meadow on the 11<sup>th</sup> and in the far north-west of the county there was a male Wood White on the 13<sup>th</sup>. In Sussex, the butterfly season is usually in "full flow" by mid-May but the poor start to the year continued, and at Chantry Hill, the butterfly count was reduced to 15-20% of an average year. However, bucking the trend, some species such as Green Hairstreak, Duke-of-Burgundy, and Holly Blue, were having a very good season. Reports of first-brood "urban" Wall Brown(s) at Polegate on the 16<sup>th</sup>, 19<sup>th</sup> and 24<sup>th</sup> were very interesting, as very few Wall Browns have been recorded in Sussex towns, in recent years. Adonis Blue finally appeared at Mill Hill on the 20<sup>th</sup> (that was 20 days later than last year) and further west on the Amberley Downs there was a mass emergence of Common Blues, with a count of 104 on a single downland slope. At West Combe, Chantry Hill on the 24<sup>th</sup> the news was rather better with 14 species seen, including 25+ Dingy Skipper and 25+ Brown Argus, but of concern was the complete absence of Small Heath (usually one of the commonest species on Chantry Hill). Also on the 14<sup>th</sup>, Lindsay Morris was having his "best butterfly day of the year, by far" at Castle Hill, with 18 butterfly species, which included 58 Small Heaths! Towards the end of the month there was a male Large Skipper in a Hailsham garden on the 28<sup>th</sup>, and a Meadow Brown at Thorney Deeps on the 29<sup>th</sup>. In late May it became a lot warmer, and this late spring/early summer "heatwave" lasted for around a month.

At Mill Hill, on June 1<sup>st</sup>, there were five species of blue butterflies, Adonis Blue, Common Blue, Holly Blue, Small Blue and Brown Argus (which is a blue butterfly species, despite its name). A very welcome Small Pearl-bordered Fritillary was seen at Park Corner Heath on the 3<sup>rd</sup>, with a peak count of 5 Small Pearls recorded at Rowland Wood on the 6<sup>th</sup>. Also on the 6<sup>th</sup>, there were Silver-studded Blues at Stedham and Iping Commons, and a few days later there was a Marbled White at Mill Hill on the 10<sup>th</sup>. There were 3 male Silver-studded Blues at Ashdown Forest on the 12<sup>th</sup>. The next day there were several Black Hairstreaks at Ditchling Common, 2 Dark Green Fritillaries at Cissbury Ring, a single DGF at Friston Forest, and 156 Meadow Browns at St Leonards Forest. A fresh Large Tortoiseshell was seen in a garden in Middleton Common, East Sussex, on the 16<sup>th</sup>. At North Seaford, on the 17<sup>th</sup>, there was a very late Grizzled Skipper and many, very fresh Small Skippers (a national first). On the same day there were 3 White Admirals in Marlpost Wood, Southwater and a Purple Hairstreak in a Rudgwick garden. The record of Purple Hairstreak took us to the 40<sup>th</sup> butterfly species "milestone", for the year. On the 18<sup>th</sup>, there were 2 Silver-washed Fritillaries in Knowlands Wood, nr Barcombe, and a Gatekeeper at Selsey. A Purple Emperor (a national first) was recorded at Knepp on the 19<sup>th</sup>. On the same date, at Lancing Ring, there were 5 very fresh "Hutchinsoni Commas", and also a Humming-bird Hawk-moth. As for the weather, the heatwave of the previous four weeks ended with some much-needed rain. At Ditchling Common, there was a Ringlet on the 20<sup>th</sup>. White-letter Hairstreaks were

spotted on a "street Elm" in Brighton on the 23<sup>rd</sup> (the observer spotted them whilst having breakfast!) and many others were seen at Littlehampton Golf Course on the same day (and as some of these butterflies were "very worn", the emergence date at this location, was probably 5-7 days earlier). Also, on the 23<sup>rd</sup> there were 3 Essex Skippers at Lancing Ring, and a Humming-bird Hawk-moth was laying eggs on Lady's Bedstraw in a North Lancing garden. At Ditchling Common there were 18 butterfly species, on the 24<sup>th</sup>, including an egglaying Black Hairstreak. Small Tortoiseshells appeared to be having a reasonable season with 15-20 seen in the Seaford area on the 25<sup>th</sup>, "and good numbers, seen elsewhere". One member reported a "million Meadow Browns" at Abbot's Wood on the 25th (but did acknowledge that this figure was an approximation!). In the Chantry Hill area, there were 19 butterfly species, including "late first-brood" Dingy Skippers, Common Blues and Brown Argus. White-letter Hairstreaks appeared to be having a good season, with 20+ in the canopy of mature Elms in Brighton, on the 28<sup>th</sup>. Some of these hairstreaks descended to feed on Wild Privet, and this allowed a rare opportunity for close-up photography. In a Storrington garden, on the 28<sup>th</sup>, there was the following post: "standing in the middle of my wildflower meadows, today, I was surrounded by butterflies. Not large numbers but they were always in my eyeline, whichever way I looked. Without trying too hard, I recorded 12 butterfly species". It took until June 28<sup>th</sup> to make this statement, but it did happen, eventually! Also, on the 28<sup>th</sup>, the first of the summer's Long-tailed Blues was seen in a Storrington garden (but not mine!). On the 30<sup>th</sup> there was a White Admiral at Herstmonceux Castle gardens, which was an unusual record for this location.

July was mostly cool, with temperatures often 4-6 degrees lower than average, and by month-end it became one of the wettest Julys on record. At Ashdown Forest, there were 17 Silver-studded Blues on the 2<sup>nd</sup>. In early July there were many reports of Red Admirals, and it soon became clear that a significant influx was taking place, with counts of 50+ at Thorney Island and 200+ at Wolstonbury, on the 2<sup>nd</sup>, 500+ at Lancing Ring on the 3<sup>rd</sup>, and 100+ at Rowland Wood on the 5<sup>th</sup>. On the following day, Marlpost Wood, Southwater was full of butterflies including 35+ Silver-washed Fritillaries, 40 White Admirals, 100s of Meadow Browns and meadow skippers, 30-40 Ringlets, 30-40 Gatekeepers and many more, besides. Blackcap and Ashcombe Bottom were also "awash with butterflies" with 100s of Meadow Browns and Marbled Whites, 200+ Red Admirals and plenty of Commas, Silver-washed Fritillaries, and a few Painted Ladies. The first record of a Silver-spotted Skipper, on the 6<sup>th</sup>, was rather unusual, as it was seen in the observer's garden, in Glynde, East Sussex. The next day, Castle Hill "was frantic with butterflies", notably 100s each of Marbled Whites, Meadow Browns, and meadow skippers, 35 Dark Green Fritillaries, 25 Ringlets and 9 Small Blues. On the 7<sup>th</sup>, in the North Lancing area, there were 24 butterfly species and a Humming-bird Hawk-moth. Also on the 7<sup>th</sup>, a Continental Swallowtail visited a seaside garden at Lancing and laid two eggs on Fennel. On the 8th there was the following Longtailed Blue "alert": "There are good numbers of LTB eggs in a number of private gardens in an East Sussex locality. Several are already hatched, and I would guess these were laid very late June to very early July". There was a male Chalk Hill Blue at Castle Hill on the 8<sup>th</sup>, another Swallowtail, hill-topping at Cissbury Ring on the 10<sup>th</sup>, and a Large Tortoiseshell visiting a garden in Felpham, on the 11<sup>th</sup>. There were 6 Graylings at Deep Dean, on the 12<sup>th</sup>, and on the same day there were many 1000s of Red Admirals at West Harting Down. On the 17<sup>th</sup> there was a Swallowtail, hill-topping at Heyshott Down, and on the same day a Longtailed Blue was egg-laying on Wisteria, in a Felpham garden. On the 18<sup>th</sup> there were 26

butterfly species and 3 Humming-bird Hawk-moths at Lancing Ring, and 43 Graylings (32m & 11f) at Deep Dean. Also on the 18<sup>th</sup>, a Swallowtail was egg-laying on a steep, chalky bank in Brighton, and at Burgess Hill there was a very smart aberrant male Brown Hairstreak, ab. spinosae. At Wells Bottom nr Firle, on the 20<sup>th</sup>, there was a Clouded Yellow amongst the 19 butterfly species recorded, whilst at Thorney Island, on the same day, there were 4 Painted Ladies. On the 21<sup>st</sup> at Windover Hill and Lullington Heath there were 23 butterfly species. In a Storrington garden there were second-brood Holly Blues "everywhere I looked, so maybe eight, altogether". On the 23<sup>rd</sup> there was a very unusual record of a Small Blue in a garden in Old Town, Hastings. On the following day, in the Frog Firle area, there was an estimated 1000 Brown Argus! In a Storrington garden, on the 25<sup>th</sup>, there were 10 Brimstones nectaring on Everlasting Pea. At Polegate, a second-brood "urban Wall Brown" was seen on the 28<sup>th</sup>.

On August 3<sup>rd</sup>, in a Storrington garden, a Humming-bird Hawk-moth was egg-laying on Hedge Bedstraw. On the 6<sup>th</sup>, a remarkable tally of 19 butterfly species were recorded in a Peacehaven garden, including a Silver-washed Fritillary, which was a new species for the garden. Also on the 6<sup>th</sup>, there were 11 second-brood Wood Whites at Ashpark Wood. Another egg-laying Humming-bird Hawk-moth was seen at Sovereign Park, Eastbourne, and this one was using Red Valerian as a larval food plant. Chalk Hill Blues were widespread and plentiful, including Malling Down where "masses were seen", on the 9<sup>th</sup>. A Long-tailed Blue lek was discovered at Lancing Ring on the 10<sup>th</sup>, and in the weeks that followed, many scores of enthusiasts from all over the UK came to watch "the sky-high dogfights and follow the high-speed escapades of these tiny dynamos". Long-tailed Blue records north of the South Downs are fairly uncommon, but a single was seen in a Burgess Hill garden on the 15<sup>th</sup>. For the third consecutive year a Brown Hairstreak was seen in a West Worthing garden, and it seems increasingly likely that there is an "urban colony" of Brown Hairstreaks, in that residential area, using Plum Cherry as the principal larval foodplant. A post from Thorney Island, on the 21<sup>st</sup>, reminded us that Clouded Yellows had been few in number, so far, this season: "At long last we had our first Clouded Yellow of the year, nectaring on fleabane on the southern end of the Island". There was a second-brood Dingy Skipper at Kithurst Meadow on the 21<sup>st</sup>, and a Grayling at High and Over on the 22<sup>nd</sup> (the first record at this location since 2015). At Anchor Bottom on the 23<sup>rd</sup> there were around 10 Clouded Yellows and "the Adonis Blue numbers were building up nicely". Many enthusiasts continued to visit Lancing Ring for the Long-tailed Blue bonanza, but one lucky member didn't have to travel far, as there was one amongst the wild pea, in her Blackstone garden. A Brown Hairstreak egg was found around 4 km due east of Haywards Heath (providing more evidence that this species is gradually expanding its range, further into East Sussex). At the end of the month, there were at least 3 Brown Hairstreaks at Whitehawk Hill, Brighton.

On September 2<sup>nd</sup>, there was a female Brown Hairstreak at Horseshoe Plantation (an unusual, "easterly" location for this species). In the Cissbury Ring area there were 16 species, on the 5<sup>th</sup>, including "256 Meadow Brown, 223 Small Heath, 42 Speckled Wood, 35 Small Copper and 21 Common Blue". The Long-tailed Blue "fest" continued, with reports from Eastbourne seafront and a Seaford garden; whilst at Lancing Ring there were 4 males and 1 female, on the 11<sup>th</sup>. In the second week of September there were many Small Whites and Large Whites at Goring-by-Sea, as well as "numerous Humming-bird Hawk-moths and Small Coppers, for around 4 weeks". At Butts brow, Eastbourne, on the 14<sup>th</sup> there were 44 Small Coppers, which was a Sussex record for 2023. Brown Hairstreaks continued to feature strongly, and at Lancing Ring there were several reported on the 15<sup>th</sup>. A White Admiral at Ebernoe Common on the 22<sup>nd</sup> was around 4 weeks later than "an average last sighting date", which rather suggests a second-brood individual (a very uncommon record for Sussex). A count of third-brood Wall Browns at High and Over, on the 25<sup>th</sup>, produced a total of 23 individuals, which was "a little underwhelming, after several really big years". The 29<sup>th</sup> was sunny and 18 degrees and in a Storrington garden the Michaelmas Daisies proved irresistible with seven species of butterflies all busily feeding: Peacocks, Red Admirals, Large Whites, Small Whites, Painted Lady, Small Copper, and Comma. Also, on the 29<sup>th</sup> there were the first reports of "reverse migration" of Red Admirals, at Gatwick Airport and Crawley, with the butterflies heading south or south-east. In the Beachy Head area there was a late Chalk Hill Blue on the 30<sup>th</sup>. Also, on the last day of the month there were 10 butterfly species in the Lancing Ring area, which included 20 Red Admirals, 18 Speckled Woods and 7 Long-tailed Blues.

On October 1<sup>st</sup> there were 4 Painted Ladies at Lancing Seafront, presumably waiting for favourable conditions, before "reverse migrating" across the Channel. On the 3<sup>rd</sup> there were 4 Humming-bird Hawk-moths "hill-topping" on Truleigh Hill, 12+ Long-tailed Blues at Lancing Ring and another 8+ Long-tailed Blues at Whitehawk Hill, Brighton. At Lancing Seafront there was a male Long-tailed blue, on the 5<sup>th</sup>. In a Storrington garden, on the 6<sup>th</sup>, there was a "first-ever", third-brood female Holly Blue and on a neighbour's hedge there was a different female Holly Blue egg-laying on Holly (in late summer/early autumn this species usually lays its eggs on Ivy). On the same day a Long-tailed Blue was egg-laying on Broom in the Newhaven area (if Broom and Gorse are regularly used by this species it will help extend its UK breeding season, into late autumn). There was a male LTB in a garden in Billingshurst on the 7<sup>th</sup> and two more were found a half-mile away, the following day. Also on the 7<sup>th</sup>, there were 11 butterfly species on the Amberley Downs, including 6 Clouded Yellows, with one egg-laying on Birdsfoot Trefoil. On the 11<sup>th</sup> at Whitehawk Hill there were 4+ Long-tailed Blues and a Burnet moth, which had five spots. The moth was difficult to identify with certainty, with Five-spotted, Narrow-bordered Five-spotted, and Six-spotted (some Six-spotted only have 5 spots!) all possibilities. This author thought it was most likely a Narrow-bordered Burnet moth, which would make it a second-brood individual and the first time this has been recorded in the UK. Whatever the species of Burnet moth, this was a very rare record for October, and hopefully will encourage more fieldwork at this site, next year. On the 8<sup>th</sup>, Vince Massimo observed Red Admiral reverse migration at Lancing and Shoreham and over a 3-hour period counted 84 flying south-west (across the Channel) into a light prevailing wind. South-west from these locations suggests landfall at Cherbourg, some 150 kilometres distant, and approximately 5-6 hours flying time. Also on the 8<sup>th</sup>, at Stansted Forest, there was a count of 118 Red Admirals flying south, "straight for the coast". On the same day at Lancing Ring, there was a county record (and a UK record) of 22+ Longtailed Blues, with a further 10-15 seen at White-hawk Hill on the same day. At Bexhill undercliff on the 9<sup>th</sup> there were at least 4 Long-tailed Blues, a faded Common Blue and a fresh-looking Holly Blue. A small "lek" of Long-tailed Blues was discovered at South Cliff, Eastbourne, with 4 seen on the 10<sup>th</sup>. A third-brood Small Copper was seen at Herstmonceux Castle gardens on the 13<sup>th</sup>. The small colony of Clouded Yellows at Amberley Downs was revisited on the 14<sup>th</sup> and on this occasion there was egg-laying on both Birdsfoot Trefoil and Horseshoe Vetch, (the larval foodplants for Clouded Yellows are usually Lucerne and Clovers but if this species regularly uses Birdsfoot Trefoil and Horseshoe Vetch, this should

significantly increase the likelihood of it becoming a regular breeding species in Sussex). A Long-tailed Blue was feeding on Verbena Bonariensis in a Seaford garden on the 14<sup>th</sup> and on the same day 15+ Red Admirals were seen to "come in off the sea" at Goring, and so whilst 99% of Red Admirals in Sussex were heading south, some were still migrating north (this is not a new observation for Sussex, but it does seem somewhat counterintuitive that migration may occur in diametrically opposite directions, on the same day). In the North Lancing area on the 15<sup>th</sup>, "butterflies were plentiful", with "27 Red Admirals, 11 Speckled Woods, 10 male Long-tailed Blues, 5 Walls, 4 Small Whites, 2 Holly Blues, Comma, Common Blue (fresh male), 3 Humming-bird hawk-moths and a Silver-Y moth". On the 17<sup>th</sup> a Longtailed Blue was seen amongst the Gorse at Newhaven Heights. On the 20<sup>th</sup>, in a North Lancing garden, there were 8 butterfly species, a Humming-bird Hawk-moth, 2 Silver-Y moths and a very late Volucella zonaria (a giant hoverfly species). There was another female third-brood Holly Blue in a Storrington garden on the 20<sup>th</sup> (north of the South Downs, third-brood Holly Blues are very uncommon). On the 22<sup>nd</sup> in the Herstmonceux Castle gardens there were 2 Small Tortoiseshells, 2 Painted Ladies, 2 Humming-bird Hawkmoths and "a battered Small Copper". On the 24<sup>th</sup> there was a Humming-bird Hawk-moth in a Storrington garden feeding on Buddleia (this record was 6 weeks later than the previous "latest sighting" of this Hawk-moth, for this garden). Also, on the 24<sup>th</sup>, at North Lancing, there was a single "old male LTB" but also a very late mating-pair of Speckled Woods. A Humming-bird Hawk-moth visited an East Grinstead garden on many occasions in late October, and was last seen on the 27<sup>th</sup>, a late date for this species.

On November 2<sup>nd</sup>, there was a Humming-bird Hawk-moth at Sussex University and another in North Lancing on the 3<sup>rd</sup> (all November sightings of this moth are unusual). At Durrington on the 5<sup>th</sup> there were 10 Red Admirals, 6 Speckled Woods and a Brimstone. On the Amberley Downs on the 7<sup>th</sup> there were 15 Red Admirals, 2 Clouded Yellows and a Peacock. In the first half of November, there were several reports of egg-laying Red Admirals. At Rye Hbr nature reserve, on the 11<sup>th</sup>, there was a very surprising record of a Large Tortoiseshell, which was "in perfect undamaged condition". At Mannings Heath, on the 13<sup>th</sup>, there was a Brimstone. There were several late sightings of Humming-bird Hawk-moths, with one in a Lancing garden and another one at Sussex University, both on the 17<sup>th</sup>, one at Polegate, on the 18<sup>th</sup> and finally, one at High Salvington on the 20<sup>th</sup>. There was a Wall Brown larva at High and Over on the 22nd (the earliest-ever found by Bob Eade). Red Admirals continued to feature strongly with sightings more-or-less every day in November.

The first week of December was too cold for butterflies but on the 8<sup>th</sup> there were a couple of records of Red Admirals basking in the winter sunshine, and two Peacock sightings, one on downland nr Storrington and another in a garden at Ferring-by-Sea. On the 11<sup>th</sup> there was a Red Admiral at Kithurst Hill, a Brimstone at Pulborough Brooks, and at West Dean Woods "there was an active female Brimstone and a Red Admiral sunning itself, in the pleasant mid-day sunshine". The rest of the month was either too cold, too wet, or too windy, but a few hours of sunshine on the 29<sup>th</sup> produced a Red Admiral at Whitehawk Hill allotments, Brighton, and a female Brimstone in a garden at Ferring-by-sea.

The narrative above is a very brief synopsis of the butterfly records in 2023. Reflecting on the butterfly season as a whole, how did it compare to recent years? Were there any interesting developments? What did we learn?

The vagaries of British weather often has a significant impact on those butterfly species that emerge in the early part of the season. The spring of 2023 was largely cold and wet, and we had to wait until May 20<sup>th</sup> before warm, sunny conditions prevailed. As a result, most spring species emerged 10-14 days later than an average year, and most had below-average breeding seasons. Spring skippers were noticeably, very late, with Grizzled Skipper and Dingy Skipper not seen until April 29<sup>th</sup> and April 30<sup>th</sup>, respectively. Butterfly numbers were generally very low and as an example, by mid-May the numbers on Chantry Hill were approximately 15-20%, compared to an average year. The poor spring weather affected iconic species such as Pearl-bordered Fritillary with had rather low peak counts of 169 at Rewell Wood, 31 at Stansted Forest and 15 at Rowland Wood/Park Corner Heath. Only three early-species had an above-average season, and they were Green Hairstreak, Duke-of-Burgundy, and Holly Blue.

The latter part of May and the first three weeks of June were very warm and very dry. The UK did not experience the extreme heatwave of mainland Europe, but none-the-less it was un-seasonally warm, and there was no rain. The grass on lawns turned brown and the ground was baked hard, which was more reminiscent of mid-August (after a heatwave), and not early summer. The warm, dry conditions encouraged rapid caterpillar growth, and the butterfly species that emerged in June, July and August appeared to be unaffected by the cold spring and most had average or above-average breeding seasons. Species such as White Admirals, Silver-washed Fritillaries, and all the hairstreak species had good seasons. Purple Emperors, at Knepp, had a very satisfactory season, with a peak count of 169 on May 20<sup>th</sup>.

Long-tailed Blues dominated the news in the latter part of the butterfly season. These migrants were mostly recorded within 3-4 kilometres of the coast, and the lek at Lancing Ring, discovered by Lindsay Morris, on August 10<sup>th</sup>, proved to be the best location to watch these blue butterflies. They were intensively studied in the Lower Ouse valley by Dave Harris and others. Four distinct waves of immigration were identified and approximately 100 adults were seen in this part of East Sussex. Egg-laying by the small "first wave" took place around June 29<sup>th</sup> and the first-brood emerged between July 31<sup>st</sup> and mid-August. This first brood completed a second breeding cycle with the second-brood emerging on September 15<sup>th</sup>. This successful emergence of a second-brood is thought to be the first-time this has occurred, in the UK. A larger "second wave" of immigration took place between August 15<sup>th</sup>-27<sup>th</sup> and their progeny emerged between September 23<sup>rd</sup> until October 9<sup>th</sup>. The main "third wave" of immigration arrived August 29<sup>th</sup> until mid-September and their progeny emerged from October 12<sup>th</sup>, onwards. A small "fourth wave" of immigration arrived October 6<sup>th</sup>-9<sup>th</sup> and with mild weather we would expect to see their progeny in early December (but in 2023 it was just too cold).

With so many Long-tailed Blues and a huge influx of Red Admirals, we might have expected other migrant species such Clouded Yellows and Painted Ladies to be plentiful, but from a Sussex perspective, both species had a poor year.

Large Tortoiseshell rather kept under the radar, but it had what will probably prove to be a pivotal year. It is no longer just a migrant species in Sussex. Any sighting in March or April is likely to be an over-wintering individual, and in 2023 there were around twenty recorded, in

at least ten different localities. It seems to be gradually colonising the Sussex countryside, almost by stealth, as small colonies are so difficult to find and study. One such study involved the Ouse Valley, where Dave Harris and others searched in the spring for the presence of adults, and then a couple of months later, repeated the search for their larval webs. A total of 9 adults were found in early April. Subsequently, four webs were found in different locations, with three webs on English Elm and two webs on a Bullace. Six adults were recorded in the summer, with the first one seen on June 25<sup>th</sup>.

There were some interesting new developments regarding Brown Hairstreak. They clearly had a very good season and the records over the past couple of years strongly suggests they are gradually expanding their range eastwards, further into East Sussex. There is good evidence of colonisation of the Polegate/Abbot's Wood area and quite possibly the Eastbourne downland, as well. Unless these are isolated populations (possible, but unlikely) it follows that there are several small colonies in the area between Barcombe and Polegate, that have yet to be discovered.

The breeding season for Brown Argus proved interesting and gave us a reminder of just how resilient butterflies can be. As for most other early-emerging species, the first-brood was very poor, but somewhat surprisingly, the second-brood was abundant, and in some localities such as Frog Firle was nothing short of spectacular, with a 1000+ count in a single colony. The larval foodplants must have been plentiful! On downland this is Common Rockrose, but elsewhere a variety of wild geraniums are used, including Cut-leaved Cranesbill, the principal larval foodplant in my Storrington wildlife garden. In truth it's a rather boring wildflower, but I leave it alone, and have a thriving Brown Argus colony, as a result.

No annual report would be complete without mentioning Climate Change. The extreme heatwaves on mainland Europe, in recent years, must surely be one of the principal driving forces affecting insect migration. Whether avoiding extreme heat or finding edible larval food plants, there is a strong likelihood that insects will head north, to find slightly cooler climes. The English Channel does provide a considerable natural barrier, but once negotiated the southern counties of England are wide open to colonisation. For many insect species there would seem to be a "natural progression" from "occasional migrant" to "regular migrant", to "full residency". Long-tailed Blue is now categorised by many as a "regular migrant", but how long will it be before this species is a "full resident"? Probably, not long. As for which other butterfly species are likely to follow this pathway, then Continental Swallowtail and Queen of Spain Fritillary are both very good candidates, as both species have already made breeding attempts, in Sussex, in recent years.

How will 2023 be remembered? It was clearly a year of two halves. The first half was quite woeful with very few butterflies, but much of the second half was delightful and memorable. The Sussex species count was 49, down from 51 species last year, for we "missed out" on the migrant rarities, Queen of Spain Fritillary and Camberwell Beauty.

I think 2023 will mostly be remembered for the Long-tailed Blues that gave so many members, so much pleasure. On that happy note, I will end this report.

Martin Kalaher 13/01/2024