

Sussex butterfly season 2020

The extreme weather in 2020 had a significant impact on many of our butterfly species. February was the wettest on record, with the wind and rain continuing until the last week of March. A mild wet winter, extending into early spring, did not bode well for butterflies that over-winter as adults, and all five species appeared to have had a poor breeding season. At the tail-end of March the sun appeared, and it continued to shine more-or-less every day until the end of May. Another weather record was broken with April the sunniest since records began and to cap it all April and May were the driest-ever, with just 2mm of rainfall for the whole of May. These exceptional conditions must have triggered an early start to the breeding cycle of many species as first-emergence dates were 10-14 days earlier than usual. With the entire breeding season brought forward by around two weeks there was enough time for some species to embark on additional partial-broods, with some fascinating outcomes.

With the constraints imposed in 2020 there was a paucity of data for the first half of the butterfly season and therefore I have had to rely on observations made in my own garden. Located on the southern border of Storrington, and therefore close to both Chantry Hill and Kithurst Hill, the garden has attracted 35 butterfly species, of which 27 species have bred. During 2020, I walked a transect in the garden, several times every day, and this provided me with a good insight as to what was happening to the common butterfly species in my part of West Sussex.

There were no butterflies in the garden until March 16th when 2-3 male Brimstones made an appearance, followed by a single Peacock on the 24th. None of the five UK species that over-winter as adults (Brimstone, Red Admiral, Small Tortoiseshell, Peacock and Comma) were much in evidence in early spring, and with few sightings throughout the summer it appears that they all had a disappointing season. In late summer/early autumn there were plenty of Red Admirals, but these were much more likely to be fresh immigrants, rather than the progeny of local breeding.

With the exceptional weather of April and May, many earliest-date garden records were broken, as for example Brown Argus which emerged on May 12th, which has a 10-year rolling average of May 20th. In the wider countryside, some spring species were having a bumper year, as Neil Hulme writes: "Pearl-bordered Fritillary had a fantastic spring, with very large numbers at Rewell Wood and a strong showing at Abbot's Wood and on less well-known sites. Recent reintroductions at Stansted Forest and on the BC reserves appear to be going well, while it remains too early to say on other sites. Monitoring was obviously hampered by the Covid lockdown. The same constraints applied to monitoring of the Duke of Burgundy, but the general picture remains rosy".

June was mostly cool and wet but with a warm spring behind them, many species continued to emerge much earlier than usual with garden Marbled Whites on the 16th (10-year average, June 29th) and Small Skippers on the 18th (10-year average, June 28th). This poor weather in June had a profound effect on Purple Emperors, as Neil Hulme confirms: "Purple Emperor suffered an appalling year, and a slump in its population is likely to impact next year's crop of butterflies. A number of factors conspired to unseat the emperor from his throne. The warm spring, which accelerated larval growth, collapsed at the start of June, just as the species was entering the pupal state - it's most vulnerable moment. Then, just as the adult emergence started to peak, and the females appeared in good numbers, they were hit by a prolonged period of summer gales; they were literally shredded, with numbers being decimated almost overnight. This resulted in a poor egg-lay. More bad news followed. Severe drought conditions caused many sallows to brown-off and drop their leaves".

July is arguably the most important month for butterfly enthusiasts and with the Sussex BC website up-and-running (courtesy of Bob Foreman) here are just a few of the memorable highlights. Twenty butterfly species were recorded in a North Lancing garden (Lindsay Morris) on the 17th, which was an amazing record for a garden. In the second half of July there were reports of second-generation Dingy Skippers on ten or more downland sites, including six skippers seen at Chantry Hill on July 30th. For comparison, in 2019, there were records at just three locations. Grayling had a very good season at Deep Dean with 44 recorded on July 26th (Neil Hulme and Richard Bickers) and 43 on July 30th (Patrick Moore). Also, on July 30th there was a count of 28 butterfly species at Chantry Hill, which is a site record (Martin Kalaher and Barry & Maureen Sketchley).

Most of August was very warm and sunny and there were many interesting records. On the 1st there were six male Brown Hairstreaks in an Ash tree at Malthouse Meadows (David Cook) and on the following day the first Long-tailed Blue was seen in a Lancing garden (Nick Skinner). A Monarch was seen at Beachy Head on the 10th (SOS record) and there were 16 Clouded yellows at Thorney Island on the 12th (Barry and Margaret Collin). Beachy Head was clearly the place to be for rare immigrants, with a Swallowtail on the 17th (David Waterhouse). Silver-spotted Skippers were recorded from dozens of different locations on the South Downs, and on the 31st there were still 16 butterfly species to be found at Lancing Ring and Steep Down (Lindsay Morris).

The fine weather continued into September. The first of the third-brood Wall Browns was found by Lindsay Morris at Lancing Ring/Steep Down on the 4th, with numbers increasing to 37 by the 11th and 124 on the 29th. Records for this species were sent in for dozens of locations, and not just downland. Peter Farrant's observations on his postal round in Polegate were of particular interest with records of eight "urban Wall butterflies" from September 12th until October 5th, including a female "in egg-laying mode along the base of a wall" on September 28th.

In September, immigrant species such as Clouded Yellows and Long-tailed Blues featured prominently (in contrast to Painted Ladies, which had a very poor year). At Seven Sisters Country Park, on the 16th, there were 30+ Clouded Yellows (Tim Squire). On the 22nd there was an interesting record of a steady stream of 22 Clouded Yellows at Levin Down. All were migrating north, which suggests that these were fresh-arrivals (Robert Watson). Neil Hulme provided a short summary for Long-tailed Blues: "They again arrived in good numbers, although their landfall was very much focused to the west of our region this year; Newhaven almost missed out entirely. Whitehawk Hill was the most visited site but, as always, the majority of arrivals and their offspring will have gone unnoticed elsewhere. More than 20 adults from the Sussex emergence (the progeny of migrants arriving in August) were seen flying at Whitehawk Hill at peak, with at least eight mating pairs being observed. All of the gravid females seemed to disappear before the following afternoon, suggesting that they fuelled up and then headed south. The males hung around and toughed it out". Enthusiasts came from all parts of the UK to see these rare blue butterflies.

The most astonishing record for September (and perhaps, the entire season) was a second-brood Pearl-bordered Fritillary, seen in Abbots Wood on the 28th and 29th (Stuart Sutton and Mike Mullis). Second-brood Pearl-bordered Fritillaries are exceptionally rare, with just six records in the county archives, all of them in East Sussex locations. There were four records in the years 1926-1934, with a further two sightings in 1974 and 1995. The majority were seen between early August and early September, with the latest-ever record, October 10th, 1934.

In October there were still plenty of Wall Browns to be found, with a dozen or so seen at the Steyning Downland Scheme on the 10th (Alan Salter). In the North Lancing area on the 15th there was a fresh third-brood male Holly Blue, a fresh third-brood Small Heath, 4 Clouded Yellows, 10 Common

Blues, 3 Walls, 4 Speckled Woods and a Red Admiral (Lindsay Morris). My comments as a sightings page editor were prescient, "In the 2010-2014 county survey the average last sighting for Small Heath was October 3rd and for Holly Blue, October 12th. Assuming that fresh specimens have another 10 days or so of life in them we could end up with some very late dates this year." Also, on the 15th there was a nice variety of butterflies on Thorney Island, including 19 Clouded Yellows, which were no doubt waiting for a favourable wind to help them on their way back across the Channel (Barry and Margaret Collins). At Mill Hill, on the 19th, there was a very fresh female Meadow Brown (wings still soft from emergence) and the very valid question was raised (Paul Atkin) "could this be a second brood"? The conventional wisdom is that this species is single-brooded, with a very long flight period. Referring to the 2010-2014 county survey the average last-sighting was October 11th and yet here was a Meadow Brown just emerging on the 19th. With so many species having additional partial broods in 2020, it might be reasonable to challenge convention and say that this was more-likely-than-not, a second-brood Meadow Brown. On the 22nd, there were seven butterfly species at Lancing Ring: 3 Clouded Yellows, Brimstone, 3 Red Admirals, 2 Common Blues, 3 Speckled Woods, a Wall, and a slightly tatty third-brood male Holly Blue (Lindsay Morris)

November was mostly mild, and in the sunshine, there were still plenty of butterflies to be found, with 11 species recorded. Holly Blue was the star of the month, beginning on the 4th when there were at least 7 (including a mating pair) seen from the tow path, in front of Shoreham Power Station (David Cook and Paul Atkin). There was another female at the same location on the 12th (Trevor Rapley), a fresh male at Lancing extra mural cemetery on the 13th, another at the same location on the 18th (both records, Lindsay Morris) and finally a female at Shoreham Port on the 28th (John & Val Heys). A Holly Blue partial third-brood does occur every few years, but the flight period is mostly in October with just a few historic records for the first half of November. There are no November records on the Sussex BC website between 2006 and 2015, but since then one or more has been seen, annually. This year's record on the 28th is the latest-ever autumn date for this species.

The narrative above is a very brief synopsis of some of the records in 2020, but what about the butterfly season, as a whole? Based on a careful review of my garden records, information gleaned from several BC members and the data held on the BC website from July 1st, my belief is that it was a good year for Sussex butterflies. Every year there will be winners and losers but overall, I would say, above average with some great success stories, much of it courtesy of the conservation work that is carried out by bodies such as SDNPA and private estates, such as the Norfolk Estate, and of course, the army of BC volunteers that "give it their all" through fine-weather and foul.

Walking through my garden several times a day, every day of the butterfly season, provides me with some idea as to the well-being of the local butterflies. There were 31 species recorded this year (one fewer than last year) and the only species that gave me cause for concern were the five over-wintering species plus Green-veined White and Speckled Wood. Garden numbers peaked on July 22nd (11 days earlier compared to 2019) with 17 species and a total of 87 butterflies. The numbers fell precipitously over the next 10-14 days; largely, I suspect, due to the heat and drought.

Major success stories included, Pearl-bordered Fritillary (which I believe had its best year in living memory), Wall Brown, Grayling and Silver-spotted Skipper. Purple Emperor had a terrible season but will bounce back within the next 3-4 years but as for Small Tortoiseshell, if it continues its dramatic decline, we may lose it as a Sussex breeding species. For me, the most fascinating aspect of this season was the number of species that continued their breeding season with an additional partial-brood, the two stand-out examples being Pearl-bordered Fritillary and Holly Blue.

Martin Kalaher 22/12/2020