

PN BUTTERFLY TRANSECT 2018

Weather conditions were suitable for butterflies in 21 of the 26 weeks available from 1 April to 30 September. April started with very poor weather and a very hot spell just after the beginning of May soon ended, truncating spring activity. From the beginning of June, however, we had a long hot dry spell that remained unbroken until late July. Most of August was dry and warm, but by then many butterflies had finished their life-cycles and numbers declined from there on. Transect walkers were *Virginia Deradour, Paul Heath, J Horwood, Howard Judge, Chris Lee, George Lewis, Sue Longman, Tony Marshall, John Obee, David Page, Phillip Pratt, Sue Reynders, Colin Tyler, and MJ Webster*. One suitable week in August was not walked due to an oversight on my part, for which I apologise. If this week had been covered the total figure would have been higher by about 100.

Overall numbers

The total of individuals seen flying was 2617, the fourth highest total since we began. The number of different species was the second highest we have had. Numbers of early species were fairly low, from a combination of a late and indifferent spring and a knock-on effect from previous years. Summer species enjoyed the long spell of hot weather, but this meant that they could get through mating and egg-laying more quickly and their flight periods were truncated, lowering frequencies in August-September. They should have produced good broods for next year and the same goes for the spring species like common blue that had large second broods, despite low numbers early on.

There were very few butterflies in April, the most common being over-wintering Peacocks, but they failed to produce much of a brood and none were seen after 9 July. In May the Whites and Orange-tip (which overwinter as pupae) predominated. Both Large and Small White produced good second broods, the former slightly below average over the year, but the latter well above, the third highest total we have had for them. Both were particularly common through July.

Common blues emerged at the beginning of June in moderate numbers (after several disappointing years) but must have got very busy, as there was a large second brood from the middle of July to late August, so that overall numbers were well above average, the third highest total of our 13-year-old transect (and it would certainly have been the second highest if I had not missed my walk in August).

The first summer species, Meadow Brown and Ringlet, began emerging in earnest after the first week of June, a very early date, so that their flight seasons were over early as well (few ringlets after 19 July, meadow browns still abundant 24 July, but declining markedly in August). Marbled whites emerged after the middle of June and, like the ringlets, were not seen after 19 July. All three species achieved higher than average totals despite their early disappearance. Last to emerge were the Gatekeepers or Hedge Browns, not until 9 July and then in rather disappointing numbers, well below average, in fact our third lowest total. Unlike the other three common "browns" they were obviously not so pleased with the hot dry conditions. Like Speckled Wood, which was also slightly below average, they prefer somewhat shady conditions.

The brightly-coloured "nymphalids" - Painted Lady, Red Admiral, Small Tortoiseshell and Peacock - all had a very poor year and were not reinforced by the usual numbers of immigrants. No Clouded Yellows arrived at all.

As to our rarer species, results were mixed. All the Skippers and Small Heath were down and no Hairstreaks or Dark Green Fritillaries were seen at all. On the other hand, Small Copper and Brown Argus had a better than average year, while we picked up several Silver-washed Fritillaries when we had only ever had one in all twelve previous years, and even saw our first Purple Emperor (along Stonygreen Lane).

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Individuals	3191	730	1327	2020	2263	1679	1008	2353	2812	2858	1426	2004	2617
Species	25	21	22	24	24	27	20	23	25	22	22	24	25

Numbers seen on any one walk varied from 3 (15 September) to 614 (30 June), but only seven weeks yielded over 100 (second week of June to the beginning of August).

As always, the most numerous species was Meadow Brown with 881, but it was less dominating than usual, with only a third of total numbers. If one takes that species away, the total of all other species was greater this year than it has ever been! Given the number that did not do all that well, this is quite remarkable, and due to the particularly good results for small white, common blue, marbled white and ringlet.

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Meadow brown % of total	54.5%	39.6%	50.1%	37.9%	30.9%	33.9%	57.6%	34.3%	39.1%	44.7%	33.1%	50.8%	33.7%
Nos. of meadow brown	1,739	289	665	766	700	570	581	808	1,099	1,277	472	1,018	881
Nos. of other species	1,452	441	662	1,254	1,563	1,109	427	1,545	1,713	1,581	954	986	1,736

Differences between sections of the transect

As usual Meadsgarden Field north of the Picnic Site had by far the highest total of individuals (767) and also the highest number (17) per 100m (to allow for the different lengths of transect sections). It was closely followed in the latter respect by the other chalk grassland sites - Stonygreen Bank (16) and the Picnic Site (nearly 13) - the only sections to have more than ten butterflies per 100m averaged over all the weeks. In terms of numbers of different species, most sections did better than usual this year, perhaps because the good weather encouraged them to travel more widely and even, at times, seek the shelter of wooded areas where they are rarely seen. As usual, the highest number of species was seen at the Picnic Site (20), with Stonygreen Bank not far behind at 18. The Picnic Site was the only section where Dingy Skipper was seen. It is usually the only section for Brown Argus, but this year it turned up at Stonygreen Bank and the field on Denner Hill opposite the Picnic Site as well.

Butterfly of the Year

Each year we celebrate a butterfly that has done exceptionally well in the past year, with its best showing so far. This year there was one clear stand-out winner, and probably not one that would have been predicted. 2018 saw by far the highest number of Ringlets that we have ever had - 457 against the previous maximum of 367 in 2014.



Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	AVE
Small/Essex skipper	86*	7	19	19	17	27	4	66*	80*	77*	31	9	24	36
Large skipper	3	6	13*	8*	30*	11*	0	3	11*	4	0	3	4	7
Dingy skipper	5*	0	3	2	10*	4	1	3	10*	4	2	3	3	4
Grizzled skipper	0	0	0	0	0	1?*	0	0	0	0	0	0	0	0
Clouded yellow	0	0	0	0	0	0	0	1*	0	0	1*	0	0	0
Brimstone	20	29	15	36	55*	45*	20	11	90*	83*	52*	33	33	40
Large white	292*	50	131	191*	135	177*	41	325*	60	122	133	81	126	143
Small/Green-veined white	222*	47	62	175*	231*	318*	34	312*	99	54	97	37	275*	151
Orange-tip	19	12	9	23	46*	68*	14	24	56*	15	23	39*	40*	30
Green hairstreak	0	0	0	0	0	1*	0	1*	1*	0	1*	1*	0	0
Purple hairstreak	0	0	0	0	0	0	0	0	0	0	0	1*	0	0
White-letter hairstreak	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown hairstreak	0	0	0	0	0	2*	0	0	1*	0	0	0	0	0
Small copper	11*	3	7	11*	29*	14*	3	14*	6	3	0	16*	15*	10
Brown argus	1	0	0	2*	0	2*	0	2*	1	0	0	0	4*	1
Common blue	97	12	47	105	401*	96	20	92	298*	66	29	90	293*	127
Holly blue	9*	10*	8*	1	18*	6	2	0	2	9*	5	5	6	6
Duke of burgundy	3*	0	0	0	2*	3*	0	0	0	0	0	0	0	1
Red admiral	30*	23*	8	5	7	19*	12*	0	12*	2	6	15*	6	11
Painted lady	16*	0	0	12*	0	0	0	1	0	9*	2	4*	1	3
Small tortoiseshell	14	5	4	15	8	18	0	22*	83*	63*	10	19	4	20
Peacock	30	81*	45*	76*	70*	12	19	27	90*	47*	6	30	23	43
Comma	24*	8	11	34*	20*	30*	1	7	10	7	4	12	12	14
Dark green fritillary	0	0	0	0	1?*	3?*	0	0	0	0	0	0	0	0
Purple emperor	0	0	0	0	0	0	0	0	0	0	0	0	1*	0
Silver-washed fritillary	0	0	0	0	0	0	0	0	1*	0	0	0	5*	0
Speckled wood	62	22	57	115*	54	79*	39	21	67*	70*	92*	73*	59	62
Marbled white	119	29	28	44	36	20	19	81	193*	507*	161*	184*	251*	129
Hedge brown/gatekeeper	269*	29	121	120	175*	66	94	165*	168*	180*	97	160*	90	133
Meadow brown	1739*	289	665	766	700	570	581	804	1099*	1277*	472	1018*	881*	835
Ringlet	97	64	64	224*	215*	77	92	361*	362*	242*	195	163	457*	201
Small heath	23*	4	5	36*	3	10	7	10	11	17*	7	8	4	11
TOTAL	3191*	730	1327	2020	2263*	1679	1008	2353*	2812*	2858*	1426	2004	2617*	2022
TOTAL NO. SPECIES	25*	21	22	24*	24*	26*	18	22	25*	22	22	24*	25*	23
Above average species*	13	3	3	11	14	15	1	10	19	12	4	10	10	

Bold = best year yet for that species