

Butterfly Report 2019

Andy Brazil

The numbers in parentheses are the comparable figures for 2018.

We received 22,253 records (25,774) covering 764 tetrads (732) and representing 7,735 site reports (7,792). As usual I have not included the data from the Big Butterfly Count in these totals, as it would prevent results being comparable to previous years. However, I again include the records from iRecord, (www.brc.ac.uk/irecord/) and the Garden Butterfly Survey (www.gardenbutterflysurvey.org).

In total 65 tetrads were visited for the first time this year, bringing surveyed tetrads to 1,374 for the 2011-2019 period. (There were actually four other tetrads surveyed in the year, but no butterflies were seen in them!) The first butterfly was seen on 22 January, the last on 30 December. (1 Jan – 26 Dec). Butterflies were seen in every month of the year, with regular sightings from February. In total reports of adults were received for 263 days of the year (270).

It was a year of surprises, with the return of the Small Blue - a species last recorded in 1993, and the spectacular expansion of the Purple Emperor - another recent arrival, but the clear winner of the year was the Painted Lady, which had its best year since 2010, with many reports of hundreds being seen at a time. Overall it was another good year for butterflies, with 13 species recording significantly increased counts and only 5 declining.

Weather

Globally it was the second warmest year ever recorded, with the last five years all being over 1°C warmer than baseline. In the UK it was the 11th warmest, but did record a new record highest temperature in July. Mean global CO₂ levels reached 411ppm.

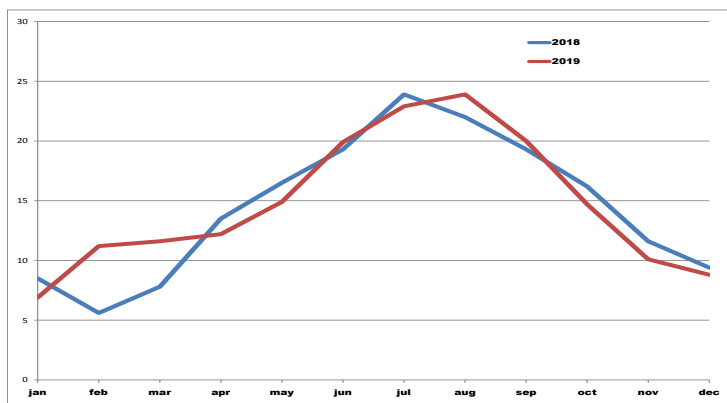


Fig 1: Max monthly temp at Lowestoft 2019

Compared to last year, 2019 started warmer, but was mostly slightly cooler. This noticeably advanced emergence dates for spring species, with an average first report 14.8 days earlier for species emerging in April and May. (Although hibernating species mostly had later first dates because of 2018's mini heatwave in the first week of January).

It was also wetter overall – although spring was drier and most additional rain fell in the autumn. There was certainly no draught this June, and despite my dire predictions, it seems last year's had little effect on most species, although flight times lasted a bit longer in late summer species.

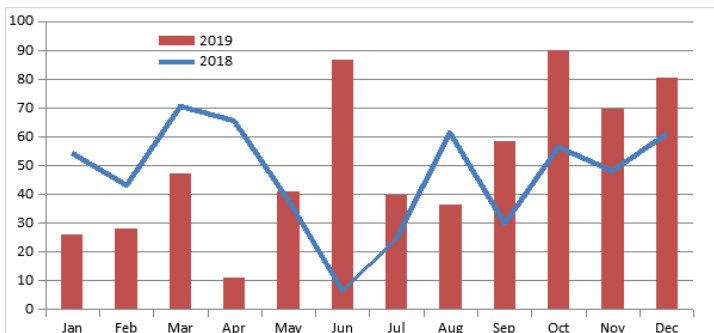


Fig 2: Rainfall in East Anglia

Species Reports

Grizzled Skipper (*Pyrgus malvae*)

Recorded from 6 tetrads (3), representing 3(2) sites – Foulden Common and the Cut-off Channel as usual, but also a single report of an individual in TF71, at a site where they were last seen in 2012! This holds out hope that they may cling on at other sites where we thought they were lost. Perhaps just in time as worryingly only three people managed sightings at the Cut-off Channel (and lots more people failed to find it). Fortunately numbers at Foulden remain stable. Highest count was 12 (15). First sighting 18 April [AC](7 May). Last 6 June [KL](6 June).

Dingy Skipper (*Erynnis tages*)

Recorded from 10 tetrads (15) representing 7 sites – interestingly a report from Courtyard Farm is the first ever from TF74. Sightings also came from Narborough, Lynford, TF72, Cranwich, and West Tofts as well as the Cut-Off Channel and Foulden. The reduction of sites simply reflects that several were not visited this year – I suspect that targeted recording would re-find this species at several former sites, particularly in TL79. Earliest sighting 11 May[BC field trip] (15 May), last 9 June [GN,KSC](9 June). Transect counts were up at Foulden but down at Lynford.

Large Skipper (*Ochlodes sylvanus*)

First seen on 25 May[RG] (25 May), last 8 Sept [NM](30 Aug) was exceptional, other sightings ended 8 Aug. Recorded from 114 tetrads (149). Numbers on Norfolk transects were stable.

Small Skipper (*Thymelicus sylvestris*)

Recorded from 120 tetrads (166). First sighting 16 June [AT](13 June) then regularly till 28 Aug[MPF](19 Aug). Transect counts were up.

Essex Skipper (*Thymelicus lineola*)

Recorded from 64 tetrads (78). First sighting 6 June[HB,RJJ] (24 June) was exceptional,

regular reports started 29 June until 12 Aug [LB,JL] (30 Aug). A distinct shift in flight times here I think, but these are difficult species to analyse – much data gets lost under a catch all ‘Small/Essex’ report.

Swallowtail (*Papilio machaon*)

First seen 2 May [PJH] (15 May), then regularly until 4 Aug then a single 17 Aug [PC] (10 Sept). There are simply too few reports to see a second brood – they just run into each other – something other observers commented on this year. Recorded from 27 tetrads (21). Something strange happened here: reports from sites far from the broads. Sea Palling (15 June) is unusual but not unheard of, but Bluebell South allotments in Norwich (29 June), Edingthorpe (5 July), Taverham (21 July) and Costessey (17 Aug) are exceptional – I have to go back to 1996 for another Norwich record. Normally sightings like these are wandering males who have emerged late and are seeking mates – but there shouldn’t have been a shortage of females for most of these, and in any case they don’t usually go this far. Transect counts were either stable or up at all sites so I’m at a loss to explain this except that it does appear to have been a year for many species to go wandering. (Of course there’s always the cynical explanation of releases to be considered).

Brimstone (*Gonepteryx rhamni*)

First seen 22 Jan[JL], but this, and 6 Feb were outliers: mass emergence was 13 Feb (11 Mar). This is a full month before the traditional ‘Ides of March’ emergence and shows how early a spring it was. Last was 25 Dec[CR] (16 Nov). Recorded from 286 tetrads (250) and up on transect counts, but 86% of sightings were before 1 July, compared to 71% in 2018, which makes me a little worried for next year.

Large White (*Pieris brassicae*)

After last year’s exceptional abundance we would expect a fall in numbers and it recorded a 28% drop on transect. First seen on 17 Mar [MC] (4 April), last 22 Oct[MR] (17 Nov), recorded from 322 tetrads (375). Very few reports of migration.

Small White (*Pieris rapae*)

Surprisingly transect numbers held up compared to last year. First seen 20 Mar [SS] (1 April) until 17 Oct [JL] (5 Nov). Recorded from 375 tetrads (393).

Green-veined White (*Pieris napi*)

Recorded from 234 (318) tetrads. The first on 24 March [BYA] (16 April) then regularly until 28 Sept [TM] (12 Oct). This dropped nearly a third on transects – looking at the data there’s no difference in broods, there were just fewer of them throughout.

Orange Tip (*Anocharis cardamines*)

First reported on 21 Mar [CS] (5 April), it was then regular until 9 June [Many] (24 June). There were no second brood records this year. Recorded from 299 tetrads (259) and up 66% on transect, so a good year for them.

Small Copper (*Lycaena phlaeas*)

Recorded from 140 tetrads (178). First 5 Mar [MPG] (8 March) was exceptional, main flight started 21 Mar, last was 6 Nov [AK] (19 Nov). Although transect counts were up by 19%, casual sightings were fewer than usual, about 5% below what I would expect, suggesting it might have struggled in marginal habitats.

Common Blue (*Polyommatus icarus*)

First 18 Apr[JW] and another 19 Apr were outliers, main flight began 11 May(6 May). The last 20 Sept[PT] was a more conventional end than last year's 31 Oct. Recorded from 152 tetrads (208). I was surprised to note 10 people had it on their garden survey – now that's a garden tick!

Holly Blue (*Celastrina argiolus*)

Recorded from 255 tetrads (245). First 24 Feb[TS] and 26 Feb were exceptional, main sightings started 28 Mar (1 April). Last seen 21 Sept [CM] (24 Oct). Up 30% on transect – it's stunning to think that 150 years ago there had been more Camberwell Beautys recorded in Norfolk than this now ubiquitous species.

Chalkhill Blue (*Polyommatus coridon*)

The BC annual count at Warham this year was 283, a troubling drop from last year's 570 – but it is possible that we hadn't quite caught the peak this year. I only received 10 reports of visits that saw Chalkhill, spanning the period 22 July[PMG] to 30 Aug[MP] (18 July to 18 Aug). That last record was an outlier, previous sighting was 19 Aug, but with so few records it's difficult to say what the true flight period is.

Silver-studded Blue (*Plebejus argus*)

First reported 6 June[SA] (11 June), last 19 July[JH] (17 July). Numbers were down at all four sites: Kelling Heath, Buxton Heath, East Ruston and Cawston Heath. That last produced one sighting of a single male, while East Ruston dropped c75% from last year. This was not a good year for them.

Brown Argus (*Aricia agestis*)

First seen 21 April[AB1] (7 May), then regular to 25 Sept, with a final late sighting on 5 Oct[JL] (28 Oct). Recorded from 80 tetrads (73). Numbers were stable on transect. Nearly a hundred were recorded from the cut-off channel on a visit 23 May – but that was counted over both banks on a long walk through TL6795. Definately the best place to see this species though, several other counts in double figures from shorter visits.

Green Hairstreak (*Callophrys rubi*)

The first sighting was 13 April[AB2] (21 April) then regularly until 15 June[AR](22 June). Recorded from 48 tetrads (49) but this is an under-recorded species – there are lots of apparently suitable sites that just haven't been visited at the right time. Plus this is a species you can just walk past without seeing. A sighting from Catton Park in Norwich this year was the first for that site since 2011 for example, but it was probably there throughout. Transect counts were broadly similar to last year – but that was a good year and so it seems this was too.

Purple Hairstreak (*Favonius quercus*)

Another hard to spot species that's under-recorded. Seen in 57 tetrads (104) and transect counts were down 72% from last year (but that was up 88% on 2017) - so numbers were down, and it does seem that it's hard to spot when populations are low. But it's still there – it's just that the top spots are high up the tree, and it's only when competition forces the losers down lower that they become visible. First 25 June[PJH](19 June) until 25 Aug (28 Aug), but then a late 18 Sept [JH].

White-letter Hairstreak (*Satyrium w-album*)

While the other Hairstreaks can be hard to see, this remains the most difficult. Beeston

Common recorded the most sightings, and this corner of Norfolk is a hotspot, with records from Sheringham, Cromer, Northrepps and Mundesley also received. Recorded from 37 tetrads (43), but most records were eggs. First seen 23 June [NS](18 June) last 7 Aug[MCI] (30 Aug).

White Admiral (*Limenitis camilla*)

Recorded from 46 tetrads (58) of which 16(12) were new. First 22 June [Many] (17 June), main sightings ended 12 Aug(6 Aug), then a flurry of September sightings between 22 and last 30 Sept[PT] (15 Sept). This is now recorded from 48 10km squares, at the end of the last recording period it had only been recorded from 40. And yet I suspect it's still under-recorded. It must surely be present in TF73 for example – it's been seen in all the surrounding squares.

Red Admiral (*Vanessa atalanta*)

A very good year – fuelled mostly by migration - it was up over 500% on transect. Recorded from 406 tetrads (317) First seen 14 Feb[Many] (5 Jan) last sighting was on 30 Dec [Many](3 Dec). I received over 2,200 reports this year compared to just over 1,440 last year. The graph below shows the sudden surge of sightings in June 2019, producing offspring in August while 2018 shows a more gradual climb: a small population in June producing a larger brood in August, with a smaller third brood in October. The relative scarcity of sightings in October 2019 suggests that either that brood failed, or they didn't gather at the coast and return to the continent.

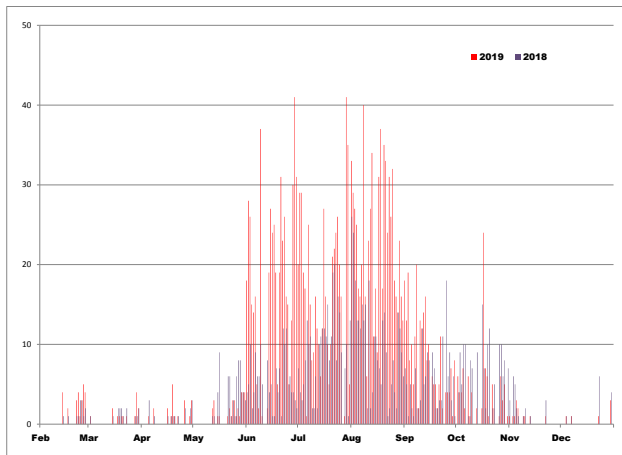


Fig 3: Number of reports per day of Red Admiral 2019 v 2018

Small Tortoiseshell (*Aglais urticae*)

Oh dear. Down a third on transect, from an already low number (it was down two thirds last year). It was recorded from 273 tetrads (267), with around the same number of sightings – but in 2018 recorders reported an average of 2 torts on site visits where they saw it, and this year they averaged 1.7. First 14 Feb[Many] (25 Jan) and then regularly until the end of October. Then a late flurry at the end of November and a final last 30 Dec[HW](17 Dec).

Peacock (*Aglais io*)

In contrast, this species did really well – up over 150% on transect, and recorded from 355 tetrads (250). First 1 Feb[KSC] (1 Jan), Last 27 Dec [KS](26 Dec). A sighting of larvae on 15 Sept suggest an attempted second brood – unusual in this species.

Painted Lady (*Vanessa cardui*)

A significant increase in migration made this the best year since 2010. Recorded from 436 tetrads (157) in over 2,000 records (425), this was up nearly 1,400% on transect. I had 26 reports with estimates of more than 100 being seen – these were nearly all from coastal sites, with the highest being c500 seen both at Holkham 1 Aug and Choseley 3 Aug. The first sighting was 21 Feb[PS] (21 April). Last 23 Oct[Cley] (25 Oct). Main migration started mid-June, a second brood – bolstered with more immigration – started 29 July. The Big Butterfly Count (19 July - 11 August 2019) reported over 400,000 individuals – up 2,500% on the previous year!

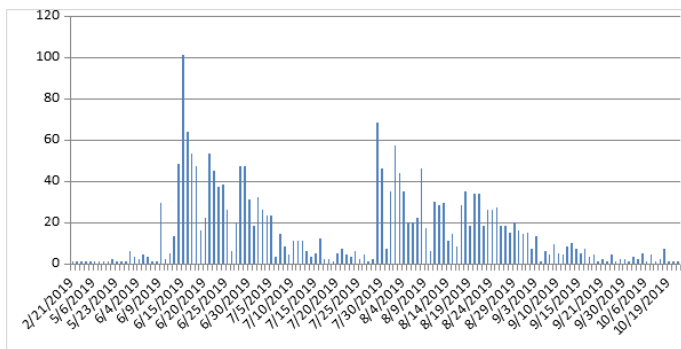


Fig 4: Reports per day of Painted Lady 2019

Comma (*Polytonia c-album*)

Up 66% on transect – but it was down 62% last year so just a return to normal. Reported from 266 tetrads (265). First 22 Feb[Many] (1 Jan), but main emergence from hibernation started 15 Mar (16 Mar). These ended 1 Jun (26 May), first new brood then started 14 Jun (11 Jun). Continuous then as second brood merged into first until end of October. Final sighting 9 Nov[PCa] (18 Nov).

Dark Green Fritillary (*Argynnis aglaja*)

Recorded from 10 tetrads (16) I received a report from a garden in TF80 that I couldn't formally accept given no other records nearby and it being a garden – but if it was DGF it would indicate further movement through the Brecks. What was new was Syderstone Common, which recorded the first record for TF83. Transect numbers were stable, and all other records this year were coastal: Horsey/Winterton and Holkham/Wells. First seen 17 June[PT] (18 June), last 30 Aug[PT] (15 Aug).

Silver-washed Fritillary (*Argynnis paphia*)

Recorded from 47 tetrads (72). First seen 2 Jun[MG] (26 May), but then not again until 21 Jun. last seen 26 Aug[SC](2 Sept). There were first records from TG41, TM09, TM39 and TM28 as it continues its spread across the county. It remains unrecorded from TF81

and TF90 – but given it's in all the surrounding squares it must be there somewhere! (If I had to guess: Litcham Common and Saham Wood respectively if anyone fancies exploring). Valezina again reported from Holt and Foxley.

Speckled Wood (*Pararge aegeria*)

Recorded from 288 tetrads (345). First sighting 24 March [AB1](17 April), last 27 Oct [PT] (25 Oct). Down on transect and on number of records received by about 10%.

Wall Brown (*Lasiommata megera*)

Recorded from 70 tetrads (82). First records this period received from TF71, TG00 and TM39 suggesting that it's recolonising areas it had disappeared from. It was up 16% on transect but I got 18% fewer records. First seen 30 March [BM] but not then until 26 April(22 April): Last 20 Oct[HL] (25 Oct).

Grayling (*Hipparchia semele*)

First 9 July[SP] (1 July), last 4 Sept [PT](28 Sept). Recorded from 17 tetrads (24). First record from TG30 this period (Strumpshaw Fen). Up 29% on transect from last year (which was itself up 38% from 2017) so a good year – but I only got 36 records from 22 recorders so it's still a scarce butterfly.

Gatekeeper (*Pyronia tithonus*)

First 23 May [BP] was exceptional, next was 15 June(3 June), last 25 Oct [T] was also an outlier previous was 22 Sept(9 Sept). Recorded from 264 tetrads (296). Norfolk transect counts were similar to last year – which was up 10%.

Meadow Brown (*Maniola jurtina*)

First 23 May[IH] (11 May) was an outlier (but see Gatekeeper), next was 2 June, last 14 Sept[JL] (11 Sept) also an outlier – all others over by 1 Sept. Recorded from 344 tetrads (356). Up 42% on transect – but it fell by half last year so not a complete recovery.

Ringlet (*Aphantopus hyperantus*)

First 18 June[RG] (3 June), last 20 Aug[HW] (19 Aug). Recorded from 225 tetrads (295). Up a third on transects, it did much better this year than last.

Small Heath (*Coenonympha pamphilus*)

First report 23 April[MGr] (8 April) then regularly to final 21 Sept[RG](31 Oct). Recorded from 72 tetrads (69), including first record from TF92.

Incidentals and Migrants

Clouded Yellow (*Colias croceus*)

I received 16 reports (17) covering 11 tetrads (13). The first was 6 June[PT](7 July), last 17 Oct[PT] (5 Nov). Once again Warham Camp and Horsey produced most sightings (3 & 4 respectively) and 11 of the 16 sightings were in August. Probably under-recorded.

Purple Emperor (*Apatura iris*)

Well this exploded! Records were received from Sheringham Park, Holt CP and Beeston Common as in previous years but also from Foxley Wood, Northrepps, Swanton Novers, Ashwellthorpe Lower Wood and TF91. Most new records were from the dynamic duo Liz Goodyear and Andrew Middleton who systematically searched the county. Foxley produced spectacular views – mostly from the entrance track that runs down the western edge of the wood. First sighting was 15 July [AM,LG], (18 July) last 7 Aug [Many]. (27 July). There is video on Youtube of Norfolk Emperors by Andrew Middleton.

Camberwell Beauty (*Nymphalis antiopa*)

One seen at Sandringham on 30 March probably overwintered. [CMA].

Queen of Spain (*Issoria lathonia*)

One photographed at BTO headquarters in Thetford 8 Aug [IHe].

Marbled White (*Melanargia galathea*)

Reports from Pentney Heath 3 June, Cranwich 7 July and Gorleston 6 Aug. Cranwich produced 3 individuals. There were many reports from East Suffolk and East Cambs this year, and Big Butterfly Count was 2.5x higher so it is a species expanding into the eastern region. However, the Cranwich record is slightly suspect because of the following.

Small Blue (*Cupido minimus*)

At least two were present between 2 June[LG] and 22 June[TC] at Cranwich Camp. There are colonies in Cambs and this year it turned up in Ipswich (7 males, but at the same site that has had releases of various species in previous years) and in South Essex (single male). On the one hand it is capable of dispersing some distance, on the other hand it could be released. It's certainly not a species I was expecting – although it did used to be present, it was known from chalk sites in the North-West of the county, not the Brecks. However, there's a lot of Kidney Vetch (the foodplant) on site and the plant's not uncommon in the Brecks so colonisation is certainly a possibility.

I should point out that the crucial point about the Small Blue is that its upper wings are a very, very deep blue and appears black. If you see a small blue butterfly it isn't a Small Blue – it's a small Common or Holly Blue. They fly low, have no orange on the underwing and often puddle for salts, particularly on droppings. Those who want to “get their eye in” on this species are recommended to visit Bedfordshire – there is an excellent colony at Totternhoe Old Quarry (SP979220).

And so we end the 2011-19 recording period. So far we have received 171,521 records covering 1,374 tetrads – 95% of the county. It just remains for me to thank all the recorders who submitted data this year and in previous years. Their records will now go forward to the national database, to be used in research, conservation and the production of the next national and local atlas. Without their time and effort none of this would be possible.



Small Blue at Cranwich Camp. Photo: Liz Goodyear

Records were received from:

A Abercrombie, S Albert, R Aldis, L Alton, B&Y Anderson[BYA], S Anderson[SA], D Andrews, S Andrews, N Anne, A Archer, N Armitage, D Arthur, V Ashton, R Atkins, T Atkins, B Atkinson, J Attiwell, D Austen, T Austin, B Bacon, D Balcolme, A Balls, H Bannister[HB], D Barnard, J&H Barrett, J Bartlett, H Barton, C Batchelor, M Batt, M Bean, A Beard, S Bedford, D&G Beecroft, C Bell, J Bennet, A Bennett, M Bergin, A Bimpson, S Biss, B Black, I Black, J Bloomfield, J Blumire, T Blumire, P Boardman, T Bolderstone, P Bonham, I Boston, L Bovey[LB], S Boyce, E Braden, D Bradley, N Brand, A Brenchley, D Brice, R Briscombe, T Britton, M Brockington, H Brooks, Andrew Brown[AB1], Andy Brown[AB2], S Bryan, S Buck, J Bull, K Bull, K Burgess, C Burke, B Burrage, R Burrough, M Busby, C Butcher, L Butcher, H Butler, C Butterfill, A Cameron, A Carroll, K Carson, S Carter, P Cartlidge[PCa], T Catt, N Chadwick, K Chambers, K Chaplin, S Chapman, J Chase, T Cheadle, P Cheall, D Cheer, P Chester-Kadwell, V Chew, DL Cheyne, S Chidwick, A Chilvers, J Chilvers, H Clark, M Clark, N Clark, A Clarke, K&M Claydon, M Clements[MCI], J Clifton, S Clough, K Coan, P Coghlan[PC], R Cole, R Coleman, R Comont, C Cook, P Coombs, L Cooper, S Cornish, T Court[TC], R Cowen, H Crane, J Crane, S Crawley, M Crewe, M Cross[MC], S Crowdy[SC], A Culshaw, A Curl[AC], P Curson, V Curtis, I Dale, R Daplyn, P Daunter, P Davidson, L Davis-Sinclair, J Dawes, A Dawson, J Day, T Day, R De Marigny, M Dean, R Dean, R Dean, G Deane, T Dent, L Did-Dell, M Digby, V Dollman, P Donovan, P Douch, P Douch, C Doward, B Downey, G Drown, A&A Duff, J&G Dunmore, C Dunsdon, C Durham, S Dye, L Dyer, J Dyson, P Eale, M East, S Easter, S Eastley, R Edmunds, A Edwards, M Eeles, E Ellis, V Ellis-Samson, J Emerson, O Emerson, C Ender, D Esterson, P Evans, S Evans, C Eve, C Farrar, FJL Farrow, M Farthing, T Fawcett, D Fell, R Fisher, S Fisher, D Fitches, G Fletcher, J Fletcher, M&P Fogden[MPF], D Ford, P Ford, Z Ford, D Foster, J Fowler, R Fox, S Fox, A Franco, L Frary, T Frost, E Fulcher, N Fuller, J Furse, T Gallant, C Gambrell, S Gann, M Gasson, N Gates, S Gay, J Gearty, S Gee, J&J Geeson, W George, H Gervasio, M Ghullam[MG], A Gibson, V Gilson, M&P Gluth[MPG], R Godfrey[RG], J Golding, S Golding, T Goodfellow, A Goodman, R Goodrick, E Goodyear[LG], N Grandy, D Grant, S Gray, A Greenizan, M Greenland[MGr], K Gregson, L Hague, K & S Hale, S Hale, S Hall, E Hallett, J Halls, J Halls, P Hampson, M Harcup, T Harden, E Harding, I Harding[IH], M Hare, R Harley, J Harris, P Harrison, S Harrop, M Harrow, R Harvey, L Hatcher, S Hathaway, V Haynes, S Heal, S Heal, S Hearle, PJ Heath[PJH], B Hedley, E Henderson, I Henderson[IHe], J Henfrey, K Henry, Dr. R Heselden, R Heselden, J Hewitt, K Hewitt, G Hibberd, A Hick, K Hickman, S Higgins, S Hoare, T Hodge, D Hodgkinson, R Hoe, R Hoe, J Hogg, M Hoit, K Holbeck, N Holmes, T Holt, H Homsey, M Hooper, G Hooton, S Hooton, J Hopes[JH], J Hopkins, M Hopkins, D Howdon, L Howell, P Howland, D Hudson, L Humphrey, I Hurst, C Inskipp, C Inskipp, H Insley, I Iosson, R Irvine, S Irvine, D Jakeways, P James, R James, R Jaques, B Jones, C Jones, D Jones, M Jones, R Jones, R&J Jones[RJ], J Jordan, G Judd, S Judges, A Jupp, J Keeble, J Kelf, A Kelly, N Kennedy, J Kenny, A Kerr, K Kerr, A Kerridge[AK], I Kershaw, S Kiln, L Kindleysides, C King, J Kinsley, R Kirby, D Knight, J Knightbridge, M Kox, J Lamb, R Lamb, L Lambert, C Lamsdell, S Lancaster, T Lantaff, L Lawes, L Lawes, P Lee, D Leech, D Leet, J Lerpiniere, E Lewis, H Lewis[HL], S Lightbody, K Limb[KL], J Lines[JL], C Littlewood, D Longe, L&S Lonsdale, I Losson, T Loudwell, J Lowe, B Lund, D Lyness, C Mabbett[CMA], B Macey, C Macey, C Macgregor, B Madden[BM], P Maddison, A Madeley, A Maguire, G Manly, J Mann, S Manners, M Manson, S Mantell, A Marriott, T Marshall, K Martin, M Maslyn, RF Mason, P Mathews, V Mathews, J Matthews, B Mayes, R Mayes, S Mayson, S Mcavoy, J Mccarron, N Mccoan-Thornhill, A Mcelwee, S Mcgee, N Mckenna[NM], C Melhuish, A Merritt, J Metcalf, A Middleton[AM], L Middleton, L Mitchell, G Moates, T Money[TM], C Moore, D Moore, H Moore, K Morgan, H Morris, I Morrison, S Mortley, T Moverley, CA Murray[CM], D Murrell, A Musgrove, B Musson, A&C Naden, W Nash, R Nebbett-Blades, T Needham, C Newbery, P Newport, A Newton, L Nicholson, G Nobbs[GN], P Nobbs, M Noble, P Norfolk, S Offord, D Ogilvie, E O'Hara, LE Oliver, A Overson, N Owens, R Page-Davies, B Palmer[BP], C Palmer, R Parker, T Parker, L Parkerson, W Parkhouse, M Parnell, H Parsons, K Patchett, J Pearson, T Pearson, H Peeling, S Pennell[SP], I Perkins, The Perks Family, J Perry, G Phillips, G Phillips, L Phillips, E Pollard, B Poole, J Powley, D Prince, C Pritchard, I Pritchard, J Prochera, S Prowse, M Pygott[MP], K Radley, I Radu-Mihai, D Raffle, G Rawcliffe, K Redhead, P Redmond, A Reeve, E Reeve, J Relf, G Revill, M Rhodes, A Richards, M Riches, DI Richmond, R Richmond, A Riley[AR], D Roberts, DR Roberts, Mr C Robertson, Ms C Robinson[CR], C Robson, R Roche, M Rooney[MR], C Rowe, L Rudd, R Rudland, A Russell, G Russell, W Sadler, N Sainsbury[NS], S Salmon, M Sarton, K Saul[KS], D Savory, C Sayer[CS], A Scott, B Seager, I Senior, C Sharpe, M Shaw, D Sheen, E Shepherd-Wells, D Shilland, C Shute, J Simmonds, C

Butterfly Conservation. Norfolk Branch Spring 2020

Sims, C Sinclair, C Small, A Smith, A Smith, B Smith, DR A Smith, E Smith, K Smith, M Smith, G Smy, G Soames, L Soudan, R Southwood, J Speed-Andrews, T Speller, J Spencer, C Spinks, M Steer, I Stemp, S Stephenson[SS], P Stevens[PS], T Stevens[TS], I Stewart, R Stewart, W Stewart, D Stiles, J Stockdale, D Stone, D Storey, T Stowe, K Stuart-Clarke[KSC], E Stubbings, J Stubbington, M Sullivan, M Surridge, T Sutton, F Tanya, C Taylor, M Taylor, P Taylor[PT], A Tegala, H Terry, J Thompson, A Thorpe, J Tierney, P Tilley, MS A Tipper[AT], MR A Tipper, S Tipper, D Tomlinson, M Toms, W Tucker, A Tufts, J Turnbull, J Turner, M Twinn, S Van Mesdag, H Veale, H Wade, P Wakefield, A Wakeham, G Walker, J Walters, P Walton, A Wan, C Ward, P Ward, K Warner, S Warrington, J Wasiak[JW], N Wass, I Watkinson, D Weaver, M Webster, I Wedge, S Weeks, S Weeks, C Wetherill, A White, S White, C Whiting, S Wigglesworth, S Williams, FM Wilkins-Jones, A Wilkinson, M Wilkinson, T Will, I Williams, C Willmoth, L Wilshaw, J Wilson, N Winnall, S Witham, H Wix[HW], B Wood, C Woodley, A Woodrow, J Woods, P Woolnough, E Wright, K Wright, P Wright, L Wymer, E Yacomen, D Yeomans, P Young, K Yuko

Records were also received from Cley NWT reserve Log books [Cley], Gissing Wildlife Group , Juniper Hall Field Centre, NBIS, Norwich Environmental Weekenders, and via Twitter[T]