

Report on the 2023 Butterfly Surveys for Wadhurst Park

Paul Johnson, 25th October 2023

1 Summary

In 2023, spring and summer butterfly surveys were completed in essentially good weather at Chittinghurst, Pigstrood and Mayfield College on behalf of Wadhurst Park. This was the sixth consecutive year of surveying at these sites. Sharnden was visited too in 2023 but both the spring and summer surveys were adversely affected by weather conditions in what was the fifth year of butterfly recording here for Wadhurst Park. An additional visit was made to Sharnden in early June to resurvey part of the butterfly transect, whilst informal recording was conducted at Mayfield in mid-June and on two occasions in August.

The 2023 surveys came against a backdrop of an exceptionally hot and dry summer in 2022 (that likely desiccated many of the foodplants relied upon for the successful development of butterfly larvae), prolonged periods of wet weather over winter, and a cool early spring period that held back the emergence of adult insects.

Twenty-seven species were identified in total across all four sites over the formal and informal survey visits and these represented most of the butterflies that would be realistically expected for this part of Sussex, the habitats covered, the time of year and survey methodology. This total included the Small White which, despite being a common butterfly, wasn't positively identified during any of the 2022 visits. Four species that have been recorded in recent years weren't encountered in 2023; these being White-letter Hairstreak, Purple Emperor, Clouded Yellow and Chalk Hill Blue. However, the first two species are elusive insects of the treetops, the Clouded Yellow a variable migrant, and the Chalk Hill an entirely unexpected discovery at Mayfield College in 2022.

The highest species counts in 2023 were at Mayfield College with 26 (although this included two species only seen during the informal visits) and Sharnden with 20. These totals probably reflected the size and greater diversity of habitats at these sites. At the smaller Pigstrood and Chittinghurst grassland sites, the butterfly diversity was lower, with species counts of 18 and 17 respectively. The species totals at all the sites were lower than in 2022 although not dramatically so.

Two Biodiversity Action Plan (BAP) priority species were recorded during the surveys, namely Dingy Skipper and Grizzled Skipper. Both are high priority species in the High Weald in Butterfly Conservation's (BC) Regional Action Plan for South East England 2016-2025. Additionally, both species are classified as Vulnerable on the latest Red List compiled by BC and the Joint Nature Conservation Committee.

At Mayfield College, the Dingy Skipper maintained its spring presence although it wasn't seen as widely or abundantly as in previous years. Promisingly, it was found in two new areas on the south-western side of the Sharnden site although these gains were tempered by an apparent decline in and around its traditional Prison Field stronghold on the eastern boundary. Surprisingly, a second-brood Dingy Skipper was seen at Sharnden during the survey in late July. For the second consecutive year, two Dingy Skippers were recorded at Pigstrood where there is a small population of this butterfly. Unfortunately, this species appears to have been lost from Chittinghurst where it was last observed in 2019. As in all previous survey years, the Grizzled Skipper was recorded solely at Mayfield College and Sharnden in 2023. At the former location only two butterflies were observed (across two visits), but at Sharnden the situation was more encouraging with the discovery of three individuals in Prison Field during the early June resurvey.

The Small Heath has been a regular feature of the spring surveys at all four sites but continued to decline in 2023, and for the first time since 2018 it wasn't recorded at Chittinghurst. The informal visits to Mayfield College in mid-June and August also indicated a poor season for another grassland species, the Common Blue. However, a male Green Hairstreak was found at Mayfield College in mid-June, this being the first occasion when it's been recorded here in consecutive years.

The summer visits to Chittinghurst, Pigstrood and Mayfield College all showed encouraging increases in the numbers of 'golden' skippers (Small and/or Essex) and Meadow Browns after a nadir in 2022. However, counts at Sharnden didn't follow this pattern, with these species being present in lower numbers than in 2022. The Marbled White was present at Sharnden but only in very low numbers in two areas of the site, and this was evident too at Pigstrood. Encouragingly though, this butterfly appears to be establishing itself at Chittinghurst where it was recorded for the second consecutive year, whilst at Mayfield College it essentially held steady in abundance and distribution compared to 2022.

At Mayfield College, the Gatekeeper was again prevalent in places and appears to be thriving at this location. However, here and at the other three sites surveyed, Ringlets and Silver-washed Fritillaries were at low ebb. In Sussex in 2023, the Red Admiral and Holly Blue had exceptional years and were duly recorded at all four sites surveyed, with the latter species being recorded widely at Mayfield College during an informal visit on August 6th. This day was memorable too for the 37 Peacock butterflies found nectaring in readiness for hibernation.

2 Survey Methods and Species Coverage

At a pre-recording meeting in 2018, it was agreed that the survey method would follow that used by the established UK Butterfly Monitoring Scheme; accordingly, the butterflies seen within five metres either side of (and above) a fixed transect route would be recorded at each site. In turn, each transect would be subdivided into different sections. The routes would be walked at a slow but steady pace, without waiting for butterflies to appear at favoured nectaring locations or, in the case of arboreal species, to fly out of the treetops.

The transect routes were subsequently provided by Angela Brennan, whilst the start and end points of each section were then determined in the field by the surveyor, primarily based on changes in habitat. At the Sharnden site, the transect sections were also provided by Angela. Please note that at Mayfield College, oak and bramble growth continued to affect parts of the site in 2023 and it simply wasn't possible to keep faithfully to the exact transect route at Eleven Acres and Great Forge Field (sections 11 and 12 respectively) due to scrub encroachment. At Banky Field Plantation (Section 7), scrub also made it difficult to follow the agreed route. On all these sections, the transect was adhered to as closely as possible though.

At the pre-recording meeting, it was agreed too that any unidentified 'golden' skippers would be recorded as Small / Essex Skipper and, similarly, that any unidentified 'small' whites would be logged as Green-veined White / Small White. Furthermore, any notable butterflies observed more than 5 metres from the transect route would be recorded separately from the main records.

In 2023, Chittinghurst, Pigstrood, Mayfield College and Sharnden were all formally surveyed twice completely. However, as described below in 3.4, transect sections 1 to 5 at Sharnden were resurveyed using the agreed recording methodology on June 3rd after the first visit on May 25th was compromised by poor weather. Additional informal visits were made to parts of the Mayfield College site on June 11th, August 6th and August 28th for general interest, with the main findings discussed in section 3.3 below.

The formal complete spring surveys took place between May 14th and May 27th to coincide with the anticipated peak emergence of Dingy and Grizzled Skippers, and then between July 7th and July 25th to record high summer species before the sites were cut for hay. Although the surveys were timed to coincide with the peak emergence of as many butterflies as possible, some species were inevitably under-recorded. These included the Gatekeeper which wasn't fully underway at Chittinghurst when the summer survey took place and the Large Skipper which had probably already peaked in late June at all four sites. The Small Tortoiseshell had two summer broods but these essentially fell on either side of the July transect walks. Similarly, the surveys didn't synchronise all that well with the two broods of the Common Blue, their spring emergence probably peaking after the May visits, with a similar scenario in summer.

3 Site Reports

3.1 Chittinghurst

The 2023 surveys started on May 14th with an afternoon visit to Chittinghurst in fine weather. As is typically the case at this site in spring, the number of butterflies on the wing was modest, with only 14 being clearly identified. More positively, eight species were recorded, these being equally distributed between post-hibernation butterflies and what might be considered early emerging generalists. In the former category, a Comma was observed egg-laying on nettles at Six-acre Hop Garden (Section 2) whilst in the latter, Orange-tip proved to be the most abundant butterfly of the day (although the count of five included three males seen more than 5 metres from the transect line).

For the first time since the current survey programme began in 2018, no specialist grassland butterflies were recorded at Chittinghurst in spring. This was not a surprise for the Dingy Skipper, which hasn't been seen here since 2019 and does, sadly, appear to have been lost from the site. By contrast, the Small Heath has been a constant feature of the spring surveys although its abundance and distribution have both been in decline since 2020 when it was recorded across the whole site. Hopefully it can recover its population here in the coming years.

Chittinghurst was next visited in ideal surveying weather on the morning of July 7th. A species count of 10 was rather low for the time of year and only two more than that from the spring survey. Of the summer butterflies, 'golden' skippers (Small and/or Essex) weaved their way amongst the grasses on every transect section of the site, peaking on Six-acre Hop Garden (Section 2) where 32 were seen. The total site count of 'golden' skippers was 113, this being just over twice the number recorded in 2022 when only 54 were logged. However, the 2023 total was down on what has been recorded at Chittinghurst historically. In the warm sunshine, only four skippers settled long enough to be identified, these all being Small.

The Meadow Brown was by far the most prolific Chittinghurst summer species, with at least 50 noted on each section of the transect. On six of the 10 sections, their numbers exceeded 100 and were greatest on the



Marbled White

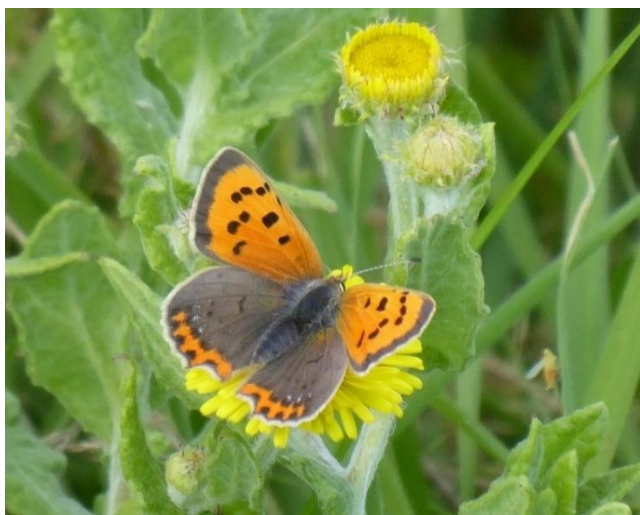
eastern side of House Field (Section 8) where 161 were recorded. Following the pattern evident in the 'golden' skipper counts, Meadow Brown abundance broadly doubled between 2022 and 2023, the transect totals being 680 and 1,135 respectively. Ringlets and Gatekeepers were present too but in much lower numbers, the former species appearing to be at rather low ebb in the High Weald whilst the flight season of the latter was just beginning. In 2022, a single Marbled White was recorded at Chittinghurst and it was very encouraging to observe this species again in 2023 – two being counted in Barley Field (Section 1) although this was

likely the same butterfly seen twice. The Marbled White has been colonising Wealden grassland sites in recent years and it now appears to be establishing itself at Chittinghurst.

In contrast to the Marbled White, the Small Tortoiseshell – a once common and widespread species – is becoming very scarce and variable locally. A single tortoiseshell was observed nectaring on Creeping Thistle on the public footpath that runs through Chittinghurst by the entrance gate to Nine Acres (Section 4). This was the only representative of this species recorded during any of the 2023 surveys, formal and informal alike.

3.2 Pigstrood

The spring survey at Pigstrood took place on the rather breezy morning of May 27th. Butterflies were present across the whole site except for Great Brook (Section 3) but in low numbers. The three characteristic grassland species of Pigstrood in spring were all recorded, namely Dingy Skipper, Small Heath and Small Copper. Pigstrood Meadow (Section 9) returned the morning's only Dingy Skippers (a male and female



Female Small Copper

observed in courtship behaviour), whilst Small Heaths were recorded much more widely, being found on six of the nine transect sections. However, Small Heath numbers continued to decline, just 11 being counted in 2023 compared with 16 in 2022 and 48 in 2021. This was consistent with the trend evident at Chittinghurst. Of the three Small Coppers counted, two were males in Further Five Acres (Section 5) and one an egg-laying female in Great Meadow (Section 8).

Great Meadow (Section 8) also harboured a Peacock – the only post-hibernation butterfly of the survey – and two male Orange-tips. These were encountered as well in Alder Brook (Section 2) and Pigstrood Meadow (Section 9), the latter area also revealing

the transect's third Green-veined White, another species associated with damp grassland habitats; earlier, Green-veined White had been recorded on Boggy Brook (Section 4) and Further Five Acres (Section 5). A Large White in Lime Field (Section 6) gave a species total of seven for the spring survey.

When Pigstrood was next surveyed two months later on the morning of July 20th, butterfly diversity and abundance had increased markedly as expected with a change in season from late spring to mid-summer. A summer species count of 16 was a good return for Pigstrood, encompassing butterflies from all the taxonomic families that occur on the High Weald. However, White-letter Hairstreak and Silver-washed Fritillary, two species that have been recorded periodically at Pigstrood, were not encountered in 2023. The former is a rather obtuse butterfly at the best of times, the larval foodplant of which has been badly affected by Dutch-elm Disease at Pigstrood. It's possible though that it is clinging on here, either about the hedge-line between Upper Brook and Alder Brook or at the western boundary of Pigstrood Meadow where there's also some hedgerow elm. Neither area was thoroughly investigated in 2023 for this butterfly due to time constraints. The Silver-washed Fritillary had a poor year at the other three surveyed sites (which all offer better habitat for it) and it should occur again at Pigstrood when its wider populations recover to promote dispersal.

In contrast, the Meadow Brown was recorded across the whole Pigstrood site and was by far the most numerous summer butterfly. However, it was not uniformly abundant such that 495 of the 831 Meadow Browns counted occurred on just two sections of the transect: Further Five Acres (Section 5) and Lime Field (Section 6) on the southern side of the site. On the northerly transect sections, counts were markedly lower. 'Golden' skippers (Small and/or Essex) were also recorded on every section and showed a more even pattern in terms of abundance over the site. The peak count was 23 on Pigstrood Meadow (Section 9), including the only confirmed Essex Skipper of the survey. A total count of 123 'golden' skippers in 2023 represented a marked improvement on 2022 when only 53 were observed.

Pigstrood Meadow (Section 9) also held one of only two Marbled Whites found in 2023, the other being in the adjacent Great Meadow (Section 8). This species appears to be at rather low ebb at Pigstrood, with 2022 a similarly poor season. In 2020, it was recorded more widely and abundantly over the site, being found on six of the transect's nine sections. Red Admirals were though in evidence over much of Pigstrood in 2023 (an

exceptional year for them in Sussex), whilst it was pleasing to find newly emerged Painted Ladies on three sections, including three on Lime Field (Section 6). In the neighbouring Further Five Acres (Section 5), the survey returned a noteworthy count of six Small Coppers for this is a species typically only seen in ones and twos here.

3.3 Mayfield College

The sunny, but rather windy, afternoon of May 20th presented an opportunity to conduct the spring survey at Mayfield College. The industrious Dingy Skipper is always an anticipated spring butterfly here and it was duly encountered along four sections of the transect. The peak counts were eight in the grassland compartment to the north-east of Heronry Wood (Section 3) and seven by the western edge of Pit Wood (Section 50), which is an extra part of the transect walked in spring specifically for early skippers. However, only one was found at Eleven Acres (Section 11), a traditional local stronghold that returned a count of 12 in 2022. The 2023 formal survey suggested a possible contraction in the range of the Dingy Skipper as it wasn't recorded on the grassland east of Heronry Wood (Section 2), to the north-west of Pit Wood (Section 6), Banky Field Plantation (Section 7) and Great Forge Field (Section 12) where it is ordinarily seen. The keen northerly wind during the survey probably accounted though for its absence on Section 2, whilst scrub encroachment was possibly a factor on Banky Field Plantation. More positively, a Dingy Skipper was recorded on Great Forge Field during an informal visit on June 11th, whilst the recent clearance of young oaks on Eleven Acres should much benefit this butterfly (and its allied species of warm grassland) in opening up the habitat.

One such grassland ally is the Grizzled Skipper, which has been consistently recorded at Mayfield College although invariably in low numbers in just a few areas. In 2023, a single Grizzled Skipper (probably a *taras* aberration) was seen briefly on Banky Field Plantation (Section 7). However, it wasn't encountered to the north-east of Heronry Wood (Section 3), another of its local centres. Banky Field Plantation also held two other grassland species, the Small Copper and Small Heath. The latter has historically been well distributed across Mayfield College's grasslands but was only recorded on four sections of the transect in 2023 and in low numbers. In 2022, it was found on just four sections too, albeit different ones.

Away from open grassland, a good range of species more associated with wood edges, hedgerows and margins was recorded. These included post-hibernation Peacocks in five areas and Orange-tips in three. The sheltered meadow to the east of Furnace Wood (Section 13) was particularly productive, having the aforementioned butterflies plus Holly Blue, Green-veined White and a female Brimstone. In all, 10 species were noted during the May 20th survey.

The middle weekends of June can often be a quiet time for butterflies, marking the transition between spring and summer species. However, this wasn't the case when some parts of Mayfield College were walked during an informal visit on June 11th. Highlights included a male Green Hairstreak fidgeting about a sheltered scrubby edge at Eleven Acres (Section 11) and male Common Blues in six parts of the site, neither species having been



Male Large Skipper

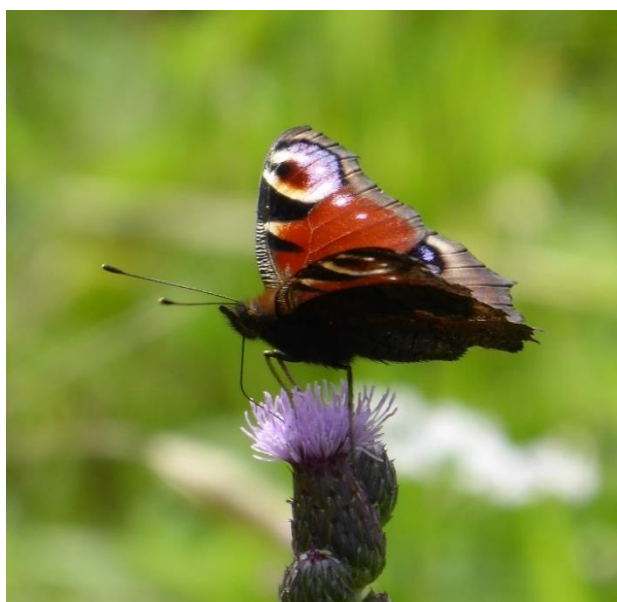
recorded on May 20th. Three skipper species were present: a fresh male Grizzled Skipper was found nectaring on buttercups along the western edge of Pit Wood (Section 50), Dingy Skippers whirred low over the turf in five areas, whilst newly emerged male Large Skippers were robustly defending their scrub-edge territories at Eleven Acres and on the western edge of Upper Old Place Farm (Section 15). The irrepressible Meadow Brown was building in number across the whole site whilst Speckled Woods were present in four transect sections, including the eastern part of Pit Wood (Section 8) where butterflies are rarely encountered.

The formal summer survey at Mayfield College took place on the warm, still but intermittently cloudy morning of July 18th. The first five sections of the transect over open grassland habitat all returned at least 50 Meadow Browns, numbers peaking on the western side of Further Longman where 169 were duly logged. After Section 5, Meadow Browns were less numerous, but this probably related in part to the more wooded and scrubby nature of the route on leaving Further Longman. In all, 694 Meadow Browns were recorded in 2023 compared with 449 in 2022 – as such, the increase in numbers at Chittinghurst and Pigstrood was evident too at Mayfield College, although all three sites were down on historical abundance.

Of Mayfield College's other grassland species, the Gatekeeper returned some very strong counts. These included 111 to the north-east of Heronry Wood (Section 3) where they positively teemed over the sward, 72 at Banky Field Plantation (Section 7) and 52 at Eleven Acres (Section 11) – at the first two locations, Gatekeepers, in an unusual occurrence, outnumbered Meadow Browns. Section 3 also returned the survey's peak count of Marbled Whites, 11 being recorded here in the sheltered compartment to the north-east of Heronry Wood. The 2023 total of 28 Marbled Whites was broadly comparable to 2022's 34, with the distribution being very similar too. It remains somewhat puzzling though that this mobile butterfly species isn't generally seen more widely over Mayfield College's grassland areas and tends instead to have distinct population centres. Amongst the site's damper margins, Ringlets remained at low population levels such that the highest tally was a mere seven at Banky Field Plantation where this butterfly has traditionally been much more prolific. Returning to more open situations, numbers of 'golden' skippers (Small and/or Essex) were generally rather low and varied considerably by section. On the positive side, 54 were counted at Banky Field Plantation along with 42 on Eleven Acres and these contributed to a site total of 220; this a modest increase in abundance from 2022. Seven 'golden' skippers were positively identified in 2023, with six confirmed as Small and one as Essex.

Mayfield College's diverse habitats typically support a variety of butterflies and this held in 2023, with a species count of 17 for the summer survey. Amongst these, 27 Red Admirals were seen over 12 of the transect's 15 sections along with six Painted Ladies across four areas. However, just a single Comma was encountered in the meadow to the east of Furnace Wood (Section 13). Large Whites were well distributed, being found on nine parts of the route. Whilst traversing Great Forge Field (Section 12), a female Purple Hairstreak investigating egg-laying opportunities on a very small, isolated oak tree growing in open grassland caught the eye and stood out as an unusual sighting.

An informal walk at Mayfield College on August 6th returned a highly creditable species count, the 19 recorded being two more than during the formal summer survey in July. It was most enjoyable to linger in the meadow to the east of Furnace Wood (Section 13) where the dense drifts of purple knapweed flowers were attracting a range of species. These included Green-veined White, Speckled Wood (a butterfly that seldom visits blossom), at least three Silver-washed Fritillaries drawn in from the woodland edge and a minimum of seven Peacocks. The count here of Silver-washed Fritillaries equalled that of the entire formal summer survey, whilst it was likely that many more Peacocks were present in the meadow. Further notable counts of Peacocks – all earnestly taking on nectar in readiness for hibernation – occurred about Common Fleabane to the north-east of Heronry Wood (Section 3) and Creeping Thistle in Coleman's Croft (Section 10) and Eleven Acres (Section 11). In total, 37 Peacocks were recorded on August 6th at Mayfield College.



Peacock nectaring on Creeping Thistle

In 2022, two male Chalk Hill Blues were discovered in Eleven Acres (Section 11), many miles from their usual habitat on the South Downs. A thorough search in and around Eleven Acres did not reveal any Chalk Hill Blues in 2023 and the status of this unexpected arrival at Mayfield College is unclear. The August 6th visit also highlighted the contrasting fortunes in 2023 of two other species of blue. Remarkably, the Holly Blue was recorded in 10 of the 11 areas visited, with the three observed in the meadow to the east of Furnace Wood (Section 13) a noteworthy small-area count for what is essentially a nomadic butterfly. In contrast, only two Common Blues were found during the whole visit – a very low return at what should have been around peak emergence for the second brood at a location that offers large areas of suitable habitat for this species.

A final informal visit to Mayfield College took place on August 28th. With the 2023 butterfly season starting to run on its ebb tide, the range of species was limited to eight. However, Meadow Browns and Gatekeepers were still on the wing, whilst another high summer butterfly, the Purple Hairstreak, was observed fleetingly amongst oaks at Great Forge Field (Section 12) and the western side of Pit Wood (Section 50). In Coleman's Croft (Section 10), three Small Heaths were present flying alongside two male Common Blues and an effervescent Small Copper.

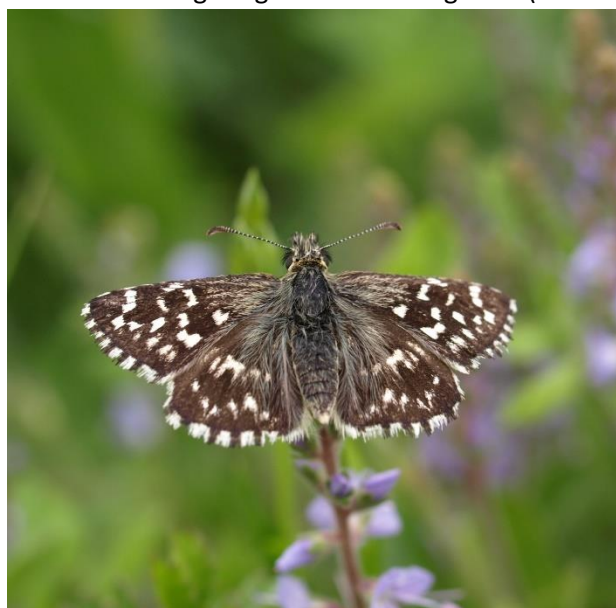
3.4 Sharnden

The spring survey at Sharnden on May 25th – which was walked in reverse section order – began encouragingly in fair recording weather. Accordingly, six unidentified whites were seen in Hop Field (Section 13) alongside four species that were positively identified. These included a Dingy Skipper, and this species was then encountered (again singly) in Six Acres (Section 12) and Hollow Field (Section 11). These observations suggested a continued expansion of this butterfly's distribution at Sharnden, it not having been recorded previously in Hop Field or Six Acres and only once before in Hollow Field. On the debit side, it wasn't found in Pig Field (Section 14) where it was seen in 2021 and 2022.

Unfortunately, the weather deteriorated unexpectedly after Hollow Field (Section 11) and sections 10 to 1 were surveyed under quite thick cloud cover and a strengthening breeze. Only a few butterflies were therefore recorded beyond Hollow Field, although Prison Field (Section 3) did return another Dingy Skipper along with two Small Heaths. The latter species was found too in very low numbers in the adjacent Flat Field (Section 4) and Long Field (Section 2).

Given the poor weather on May 25th, an opportunity was taken to resurvey (using agreed transect methodology) Sections 1 to 5 at Sharnden in sunshine on the afternoon of June 3rd. Even with better surveying conditions, butterfly numbers remained rather low and there were no sightings on either Long Field (Section 2) or Kiln Field (Section 5) where the habitat appeared well suited to grassland species. More positively, a male Dingy Skipper was recorded on Flat Field (Section 4), with three male Common Blues and a male Orange-tip adding colour. A further Dingy Skipper was added in the adjacent Prison Field (Section 3) although this species appears to be declining here in what was very much the centre of its Sharnden population in the first two survey years at this site. By contrast, it was very pleasing to record three Grizzled Skippers (including a possible *intermedia* aberration) in Prison Field, this representing the best count since the start of the surveys in 2019. The Grizzled Skipper is a fast-flying and rather elusive insect and it's possible that it has dispersed undetected into other parts of Sharnden.

Rather marginal weather unfortunately affected the summer survey at Sharnden on July 25th although



Grizzled Skipper

conditions were good enough to record 17 species, this eclipsing the 2022 total of 16 when the site was visited in very warm, sunny conditions. The butterflies encountered in 2023 encompassed species of open grassland and those more associated with woodland edge and hedgerow habitats; amongst the former, a male Common Blue was recorded in Pig Field (Section 14), whilst the discovery of a second-brood Dingy Skipper in a lekking area often frequented by Small Heaths at the bottom of Mill Field (Section 1) was completely unexpected after a late spring and unsettled weather for much of July. Even in favourable conditions, finding a second-brood Dingy Skipper is unusual on the High Weald. The Silver-washed Fritillary wasn't seen at Sharnden in 2023 in what was a poor year for it more widely, although the overcast weather would not have encouraged it into flight.

Of the commoner generalist species, numbers of Meadow Brown were rather low although Prison Field (Section 3), Flat Field (Section 4) and Grubby Field / Ox Pasture (Section 6) did return counts of over 50. The total transect count of 395 was well down though on 2022's aggregated tally of 867, this running contrary to the increases at Chittinghurst, Pigstrood and Mayfield College in 2023. The 'golden' skippers (Small and/or Essex) sadly showed an even more dramatic decrease in abundance at Sharnden in 2023 compared to 2022, with total counts of 38 and 251 respectively (this trend again differing from that at the other three sites). A small positive, however, was the confirmation of two Essex Skippers in Flat Field (Section 4), this species not having been positively identified at Sharnden in 2022. Unfortunately, the 2023 survey also indicated a continued decline in the Marbled White's abundance and range at Sharnden; just three of these attractive insects were seen in total over two parts of the transect, namely Long Field (Section 2) and Kiln Field (Section 5). It was notably absent from Prison Field (Section 3) where it had invariably been recorded since 2019. As mentioned though, survey conditions were not ideal when Sharnden was visited in summer and it is to be hoped that 2024 will present better weather and a corresponding revival in butterfly numbers here.
