

## **2013 Dorset Butterfly Report**

**2. Adonis Swarms seen by many in late August on Ballard Down but was this characteristic of 2013?**

**3. The UKBMS Report for 2012, which was not available until after our recorder meetings, demonstrated that 2013 would have to be very good indeed if butterflies were to stage a recovery. Would the weather in 2013 be good enough? Was the Adonis swarm just a one off?**

**4. In 2012 only in March was the temperature above the Fontmell Magna weather station 33 year average. In 2013 only July achieved above the new 34 year average. Would this be enough to bring about an improved butterfly season?**

**5. In 2012 only March & May had above the 17 year average sunshine. In 2013 only July enjoyed a higher than average sunshine level. Would this make any difference to the 2013 butterfly walk results?**

**6. In the record worst year of 2012 only February, March & May had rainfall below the 33 year Fontmell Magna average. In 2013 February, April, June, July & August had lower than average rain. Would this dryer weather make a difference & help a recovery in 2013?**

**7. Statistical Indicator 1: The number of missed walks for 2013 was the second lowest since 2006. Only 2011 had a better record though of course other factors besides the weather can play a part.**

**8. Indicator 2: 2013 had the highest total count of butterflies of all walks between 2006 & 2013.**

**9. Indicator 3: Most sites have marginal species which appear & disappear from walks from year to year. If it is a 'good' butterfly year the total of all species on sites which 'reappear' from 0 in the previous year should be high & the numbers of those which 'disappear to 0 should be lower. On this criterion 2013 was a good year.**

**10. Indicator 4: When over 50% of sites show a clear trend of over 50% up or down for a species we can be certain that there is a definite trend. 2013 stands out as one of the best years between 2006 & 2013 because it had the highest number of species [23] which were over 50% up on either the previous year or their annual averages. However it did less well on numbers of declining species with 11 compared to only 3 in 2011, 8 in 2009 & 5 in 2006. But still a year which showed surprising powers of recovery given only a fine July & a less rainy summer.**

**11. There were 6 winning species where over half the sites showed increases of over 50% not just on 2012 [not hard!] but on their all time annual average counts. 4 of the species [3 Whites & Brown Argus] were double brooded . They had also been among the worst performers in 2012 & had staged a miraculous recovery. The two Fritillaries are only single brooded. The Dark Green Fritillary was in the good performer category for the 4<sup>th</sup> year running. Statistically the Small White seems the best performer with 90% of its sites well above 2012 & their annual averages. But does it deserve the Butterfly of the Year in Dorset title?**

**12. All three common 'white' species improved from being poorest performers in 2012 to best in 2013. Small White had the most impressive results with 90% of its walks up by over 50% on 2012 & 75% even over 50% up on annual averages. Both Small & Green-veined White had record total counts but Large White was below 2009. Small White looks to qualify as Dorset Butterfly of the year!**

**13. Why did Small Whites do well? The very warm & sunny July enabled the very poor 1st brood in May [walk weeks 5-9] to be transformed into very large 2<sup>nd</sup> & 3<sup>rd</sup> broods peaking in July [week17], August [week 20] & September [week 23]. There is no convincing evidence that there was a migration in August-September. No reports of masses on coast. The web site received huge off walk counts of 100 from Hod Hill on July 20<sup>th</sup>, 85 from Durlston on Aug 18<sup>th</sup> & 100 from Hambledon on 14<sup>th</sup> September which could be attributed to the natural tendency for the species to accumulate at key points.**

**14. Small White is One of our few species which has not declined. Females usually mate three times & males' sperm includes 'nuptial ingredients'. Eggs are eaten by Sparrows & up to two thirds of caterpillars are devoured in two days by beetles & harvestmen. Insecticides do more damage to these than to the caterpillars. Surviving caterpillars are eaten by Tits & thrushes & parasitized by cotesia wasps. In wet summers viruses take their toll. The pupae, in green & brown forms, are eaten by birds & are not protected by mustard poisons like the Large White. In spite of all this they can survive & can fly over 160kms in a lifetime. In 1939 it took them less than 3 years to reach the west coast 3,000kms from Melbourne where they had been introduced. In the end could be our only butterfly so we must learn to love it!**

**15. Like the three Whites, with two broods, the Brown Argus recovers but its total count & number of sites with at least 1 counted don't get back to 2010 levels. Dorset's leading Brown Argus walk, Ballard Down, shows how the warm July creates a record 2<sup>nd</sup> brood. Recent work has shown that the Brown Argus can show a lot more blue than used to be thought. This makes the lack of a lower forewing underside spot & the hind-wing colons a final diagnostic to make sure it is not a Common Blue female.**

**16. Dark Green Fritillary This was a record count on the Transect Walks & the 4<sup>th</sup> year in succession attaining the status of 'Winning Species'. As a one brood species it is not obvious how it did so well when the early Spring was cool & sunless. Perhaps the dry April may have enabled the post hibernation caterpillars to move & feed up more effectively. North Dorset did especially well with Fontmell Down having the highest count [443] for the first time ever with Melbury Down [255] & nearby Clubmens Down [43]. In the South, Ballard Down [37] had its best total since 1980. An unusual number of butterflies were recorded in gardens & wandering far from their usual sites.**

**17. Silver-Washed Fritillary made a strong recovery though still below its walk totals for 2010 or 2006. It was frequently seen on buddleias in gardens.**

**18. Silver Studded Blues on east Dorset walks [Sopley, Upton , Mannington & Slop Bog] & south [Studland, Ferry Road & Tadnoll] improved on their annual averages. On Portland however, although Tout improved on 2012, all sites remained below or little better than their annual averages**

**19. White Letter Hairstreak showed up well on the walks but this was only because Milldown & Wimborne St Giles [photo] had first ever sightings. The real situation is that with only 1 year left before the 2010-14 atlas only 6kms have been recorded compared to 42 in the 1995-2009 atlas. Lists of sites which could be surveyed can be collected. The experts believe that late June is the time to look at Elm trees at the places recorded; the males will be assembling on their territories & cannot be mistaken that early for Purple Hairstreaks.**

**20. Of the 15 species on over half the walks which increased on 2012 7 made a very quick recovery as they had been among the worst losers in 2012. 3 of these species [Common Blue, Small Tortoiseshells & Small Coppers] have more than one brood so had a good chance for recovery with the warm July. Peacocks & Brimstones hibernate over the winter but their caterpillars may have benefited from the warm July. The caterpillars of Large & Small Skippers overwinter so must have done well to survive the very cold March.**

**21. Small Tortoiseshells had their highest numbers on the walks since their peak year of 2003. Was this due to a magnificent build up in their later summer broods or could there have been a migration?**

**22. The butterfly walk data with Badbury Rings as the top scoring example suggests a massive response to the warm July with the caterpillars feeding up & turning into adult butterflies very rapidly. Of course migrations cannot be ruled out especially as when they occur it is usually via a steady flight of one at a time. Sudden accumulations are much more likely however as the species fly 1-2 kms per day honing in on good egg laying sites.**

23. An alternative data source to the Transect Walks is the now popular Dorset web site. Although the recording is uncontrolled it does cover the whole year. The small peak in numbers in April could show the effects of the cold March which held more butterflies back in hibernation. There is an impressive build up to the peak in August.

24. The White Admiral improved considerably on its all time low in 2012 but remained struggling with 80% of its sites well below their annual average count. Walls achieved their best Dorset count in the last 14 years but 56% of the sites were still below average. Both species are in the category 'improving but still good do better!'

25. The worst loser in 2013 was the Wood White on Powerstock with none counted on any of the walks & only 1 off walk reported on the web site.

26. In spite of the great improvements on 2012 there were still 9 species where over half of their walks remained over 50% below their annual averages. 4 species have now spent their 2<sup>nd</sup> year as losers. All except the Holly Blue were singled brooded species which found it hard to benefit from the better weather in July.

27. Red Admiral was one of the losers in 2013 with 61% of sites over 50% below annual averages.

28. In spite of butterflies seen in the first week of January Painted Lady had another poor year on the walks. The best at Tout Quarry only had a count of 10.

29. 5th best year after 2000, 2006, 1996 & 2003. Durlston West had highest count in Purbeck with 20, Southfield for the west with 15 & Hengistbury for the east with 13.

30. The web data supplements the walks by giving a general picture of the whole year besides April-September. Interesting points – more Painted Ladies seen in January than Red Admirals. June peaks for PL & CY might be migrants; August peaks for all three but especially CY. Warm July may have created a second [native] brood. Red Admiral best month was October & also did well in November.

31. The 2013 data seem to show an excellent year for rare migrants. However even when confident that these were correct identifications is it possible to be equally sure that they were genuine migrants? The Julia Heliconian, also known as the Flame, was seen by Rob Hope when walking around the base of Langdon Hill west of Chideock. It was well away before the camera could be used. The species is a native of Brazil & occurs further north to Florida & south Texas. It is a great favourite with breeding houses because it is big, a day flyer & long lived. Had it crossed Atlantic or escaped? Scarce Swallowtail briefly glimpsed at Ham Lake & ID uncertain. Last in Dorset 2009. Sovell.

32. The Long Tailed Blue was discovered in Cath Walker's kitchen & photographed. Had it hatched from vegetables brought into the house; in one case back in 1998-9 the butterflies emerged from packets of mange-tout peas from Kenya! The Black-veined White flew rapidly through the PBO garden & could not be photographed.

33. Identification of Clouded /Pale/Berger's/Helice is extremely hard not least because they don't readily open their wings. Plain black borders with no spotting = male Clouded Yellow. Spotted borders on both wings = female Clouded Yellow. Spotted borders on both wings but with white basic colour instead of orange = Helice. Female Pale/Berger's = white but hardly any black edging on hind-wings. Lemon yellow as opposed to Orange with little black edging on hind-wings = Male Pale/Bergers. Look at caterpillars & foodplants for Pale v Bergers!

34. Although unable to photograph their Large Tortoiseshells both Hugh Clark & Lorraine Lambeth were confident that this was what they had seen. The best year since 2008 or just releases from a breeder?

35. 2011 August were previous best sightings Swallowtails<sup>2</sup>

36. We know that one Monarch escaped from a 'breeding cage' in the New Milton area & that Butterfly Weddings have been arranged at Highcliffe Castle. A sighting near New Milton [Hants] on 8<sup>th</sup> July & on 13<sup>th</sup> July could well relate to this. Other sightings in Poole [9<sup>th</sup> August] & Ensbury Park [30-31<sup>st</sup> August] may also have come from

**this source. The west Dorset records at Burton Bradstock & Abbotsbury [2] are more difficult. One of the Abbotsbury sightings did appear to come in over the cliffs. There was actually a funeral anniversary release reported in the 3<sup>rd</sup> week of October beneath the cliffs at Burton Bradstock including both Monarchs & Painted Ladies. There is no known release which could connect to the Winspit record on 12<sup>th</sup> August. It must be noted that August is not the usual month for 'natural' transatlantic Monarch migrations. The Large Tortoiseshell records all came not far from Highcliffe & New Milton. IT is known that Swallowtails were released by a private breeder in the Poole area in June which could account for many of the records in the Poole/Bournemouth area but probably not for the sighting at Durlston. Altogether it is now becoming too complicated to decide which sightings are releases & which genuine migrants.**

**37. We know that a Monarch escaped from a breeding cage in the New Milton area in early June & that Painted Ladies & Monarchs were released as part of a funeral anniversary below the cliff at Burton Bradstock in the 3<sup>rd</sup> week of October. It is unusual for cross Atlantic migrant Monarchs to arrive before September. Swallowtails were released by a breeder in the Poole area in early June. These could be the source of most of the Swallowtails in Poole/Bournemouth but possibly not the one at Durlston. The Large Tortoiseshells & some of the Monarchs were all seen suspiciously close to Highcliffe Castle which arranges Butterfly Weddings. It is now impossible to sort out genuine migrants from releases.**

**38. A suitable end to a report which shows that all three species of Whites had a spectacular 2013. Mud puddling is very much a male only pursuit because they need the sodium & other salts to replace the minerals they lost during mating**