



NEWSLETTER AUGUST 2008

(A letter to the Members of the Trust from the Trustees/Directors)

Following our comments regarding the possibility of climate change and its consequences in the previous Newsletter, what are we to make of the recent weather pattern? Summer seemed never to start, just two weeks ago mid-day temperatures struggled to get to 20°C and the threat of rain seemed ever present; then the temperatures soared to 30°C and plants started to show signs of drought stress.

Although such events have a very immediate impact upon our consciousness and colour our perception of changes, it is quite clear, if we look at longer-term averages and trends, that years are getting warmer. Indeed, one of the main forecasts of climate change is that extremes of weather conditions will get more frequent.

In the midst of the inevitable changes the actions of individuals and small bodies like the Murray Downland Trust in the conservation of wider ecosystems may seem insignificant. However, we must never lose sight of the fact that ecosystems are made up of many small parts, each of which is changing in its own right, but which, together, provide the varied components needed to make the whole system function. A small patch of downland here, a sunny bank there and a less intensively cultivated section of a garden somewhere else all contribute to the living web. The more small parts there are, the more robust the system is overall as failure of one is mitigated by the persistence of other similar components.

SUMMER AND AUTUMN ACTIVITIES AND EVENTS

Saturday, 16th August: Kingley Vale 10.30 a.m.

Of immediate interest is the visit to Kingley Vale Nature Reserve, to be led by Richard Williamson, one time warden of the site and well known contributor to one local newspaper. We will meet at 10.30 at the West Stoke car park (SU825088). From Mid-Lavant church, north of Chichester on the A286 road towards Midhurst, take the minor road leading westwards to West Stoke. Pass West Stoke House on the right, turn right at the T junction and into the car park on the right.

Please assume a walk of 3 or 4 miles and bring a packed lunch.

Car sharing should be possible for this event: please contact Gerry Ryan on 01730 813971.

Thursday, 16th October: Murray Downland Trust Annual General Meeting. West Dean College.

The business meeting will start at 6.30 p.m. This will be followed by a talk by Paul Toynton entitled *Tadpoles and Tank Tracks*; an enigmatic title which fits Paul's role as the first Conservation Officer working for the Ministry of Defence. His major domain in this role was the 30-plus square miles of Salisbury Plain Training area, the largest single area of unimproved calcareous grassland in Europe.

Refreshments will be available at the College Bar from 6.00 p.m. The security guard at the main door will direct you to the allocated room.

Working parties Autumn - Winter 2008/9:

Buriton Down working parties will commence the winter season on Tuesday, 30th September and following Tuesdays, 09.30 to 12.30. Please contact Arthur Stride (01730) 264314 for details.

Heyshott Down working parties will be on 6th November (Underhill path maintenance); 20th November (Camel's Humps clearance); 4th December (Camel's Humps clearance) and 15th January (Management for Duke of Burgundy - clearance of scrub, including rooting out, on Cpt. 13.

RECENT EVENTS

The season started with a very successful indoor event - on what was probably the best day of the early spring - when actress **Juliet Stevenson presented an entertaining and thought provoking afternoon of readings at West Dean on the 10th of February**. This event was held in conjunction with the Edward James Foundation and was a sell-out. Juliet's selection was based on a collection of writing concerned with the human journey through life which she had put together for her father shortly before he died. We were very privileged to hear her perform this very personal selection with such panache and sensitivity.

The visit to Heyshott Escarpment with Neil Hulme on May 11th was extremely well attended, with over 30 people. The weather was excellent, part of a good period of settled weather and we managed to find examples of all the specialist butterflies we were looking for: Duke of Burgundy, Grizzled Skipper, Dingy Skipper and Green Hairstreak. In fact we found more Duke of Burgundy than had been seen for a long while; these were flying over several parts of the hill. Please see the article later in this newsletter for more information concerning this butterfly at Heyshott.

Unfortunately the visit to **Old Winchester Hill on the 9th July** was not so blessed, with torrential rain causing us to cancel. We have been offered the opportunity to visit again in 2009 and details will follow in a later newsletter.

The West Dean Garden event on the 21st and 22nd June saw a new MDT display concerning Heyshott Down, put together by John Murray. The event was well attended, especially considering the weather conditions, which were more conducive to a duck race than a garden event, although it brightened up on the Sunday. Maintaining a presence at West Dean is an important part of supporting the local profile of the Murray Downland Trust and we are extremely grateful to all the members who gave up their valuable time to man the stall.

The Plant and Produce sales between the 3rd and 7th of May were blessed with the same spell of good weather as the Heyshott visit. These sales have grown steadily year by year and this time we banked over £1,000 for the Trust, so you can see that they make a useful contribution to income as well as to a growing sociality. Thanks are due to many - our hosts; growers of plants; bakers of cakes and makers of preserves; raffle ticket holders and coffee providers; transporters; sellers and 'clearers up' - but essentially to buyers, on whom success depends.

Two intractable problems in small scale selling of plants are fashion and flowering. Fashion can derive from TV programmes, sometimes broadcast long after seed-sowing time. Flowering needs a touch of imagination - not much is in flower in early May - so we try to underpin the sale with photographs, often borrowed from a catalogue. We have to hope that buyers will be amply rewarded for their foresight later in the season (or even next year). As a regular planter of unsold items I am always pleasantly surprised - this year from Kale 'Red Feather', which has been a delight.

We have continued to offer strawberry and a variety of tomato plants and hope to go on doing so, but ideas for new offerings would also be welcome. We are going to try one major change in 2009 by moving the Heyshott sale to the Sunday afternoon, between the Bepton and Cocking sales. The whole exercise will be more intensive but hopefully more rewarding. Next year's sales will begin at Bepton on Saturday 2nd May - please make an advance note. And do let me know if you can help with plants or sowing seed ((01730) 813971). It seems a long way off but it comes round quickly enough!

Gerard Ryan

Midhurst Primary School Wildlife Club visited Heyshott Escarpment on 28th June. The leaders for the visit were Jacqui and Bruce Middleton and four families attended. We had fine weather and had a picnic on the Camel's Humps where we saw a variety of butterflies including Marbled White. There is a large colony of Adder's Tongue at the base of the Humps which everyone enjoyed seeing. We then went into the woods and the children made some dens and looked for beetles and other bugs under the dead wood. We then proceeded onto the reserve and enjoyed seeing the views as well as the large variety of flowers and insects including Marsh Fragrant Orchid, Musk Orchid, and Pyramidal Orchid. All the families were new to the site and were very keen to visit again next year. All agreed that we had a very enjoyable day.



Photo 1. Fragrant Orchid, Heyshott Down 2008.

MANAGEMENT or NOT?

This is one of a series of articles looking at general and specific management issues on Murray Downland Trust Reserves.

The Problem of The Duke of Burgundy.

This small butterfly (photos 2, 3) is currently declining nationally at an alarming rate, despite having, apparently, made a significant change concerning the habitat where it thrived over the past 100 years. Heyshott Escarpment is one of the few places in West Sussex where it may still be found, although not many individuals are seen on the down each year.



Photos 2, 3. The Duke of Burgundy Butterfly, photos Neil Hulme

The change in habitat noted above concerns the main food-plant of the caterpillar and where this food plant grows. If you were interested in finding the Duke of Burgundy in the 1800s you would have looked in coppiced woodland with standard trees. Under these conditions of spring light and summer shade the Primrose *Primula vulgaris* thrives and the female butterflies would lay their eggs on the plump leaves which develop shortly after flowering. With the changes in woodland management, including the coniferisation of many woodlands, after World War 1 the numbers of primroses growing in suitable conditions declined enormously and the butterfly died out in the more shady woodlands which resulted.

At the same time the level of grazing was declining on open downland where an alternative food-plant, Cowslip *Primula veris* (photo 4), grows. Whilst there had been regular heavy grazing on these downlands it is likely that few areas had suitably leafy plants for the butterfly caterpillars to develop and this was by far the less important habitat. However, the reduction in grazing and the accompanying increase in sward height encouraged the Cowslip plants to become more leafy than previously, thus providing sufficient food for the caterpillars to complete their development and downland became the major habitat for the Duke of Burgundy through the 1900s.

Even on downland, not all areas proved to be very suitable as the plants on south-facing slopes still dried up before the caterpillars had finished growing, and the butterfly therefore became associated with north or west-facing slopes. This association with the damper north faces will become even more marked as the general climate becomes hotter and drier in future summers.

This change to downland habitats has not been an unqualified success story. The same conditions which encouraged the development of taller swards in the first place, the reduction in grazing pressure, also allowed the small bushes and trees in the grassland to grow; slowly changing the grassland into woodland; gradually, but inexorably, destroying the new habitat



Photo 4. The leaves of Cowslip are now the most important food plant for the caterpillars of the Duke of Burgundy butterfly

for the butterfly. This trend has led to the modern crisis for the Duke of Burgundy on most of its downland sites.

As explained in the first article of this series Heyshott Escarpment has been seriously affected by this process. The natural processes of vegetation and soil successions are leading to the development of woodland where a hundred years ago there was bare chalk. Part of this succession provides the required stages of taller vegetation and cowslips growing in relatively damp conditions, but it is essentially a transitional stage.

One of the major management aims on the Reserve is to provide a continuity of suitable habitat for the butterfly to breed. In order to do this we need to know where it is breeding at the moment and what other conditions are required to provide for its complete life-cycle.

One feature which has been identified for some time is the need for shelter for the adult insects; if you are small and need to fly about, you can do so much more easily if the local environment is warm. It is the male Duke of Burgundy which is most easily seen as it sits about on low scrub where this creates warm pockets in the sun. Past management advice has centred on the need to maintain this sheltered environment and considerable efforts have been made over the years to keep the scrub low in areas where males have been seen. However, very little has been discovered about the rest of the life-cycle on the down, and, without this information, it is very unlikely that successful management strategies can be developed.

There is plenty of scrub growth on Heyshott Escarpment and beyond ensuring that sufficient scrub structure is retained to maintain local hot-spots for sunning males, no further creation/maintenance of established scrub is required - very much the opposite. We need to reduce the overall dominance of scrub over the grassland areas and to improve the structural diversity of it. We have too much tall scrub and developing trees, too little open grassland and too little patchy scrub. In addition we need to understand what conditions lead to the establishment of Cowslip plants in the sort of areas where the butterfly lays its eggs.

Searches during July 2008 have found evidence of larval feeding on Cowslip leaves on the Reserve (photo 5). Significantly, no evidence of feeding has been found in the two areas where male butterflies have traditionally been seen, but these larval feeding areas were within the parts of the Down where flying butterflies were also seen during the visit of May 11th this year. This research needs to be developed further to refine our understanding of how the butterfly uses the Reserve, but we are starting to get somewhere with this problem.

So how does this knowledge affect the way in which we manage the area? As outlined in the previous article, just cutting the scrub down, even regularly, does not create the sort of conditions required, although it may be part of the answer, and is certainly too expensive to be a long-term, widely applied solution. We need to consider how the use of appropriate grazing animals to remove a part of each year's new growth, grassland and scrub, can help realise our aims and the Trustees are currently doing just this.

If we are to use any sort of animal on our Reserves, two essential requirements are already obvious. Firstly, we need a supply of water on each of them and work is currently in hand to establish water troughs on each one. Secondly, one of the typical trees of this part of the South Downs is a major problem in its own right, as it is poisonous to grazing stock. We refer to the Yew tree *Taxus baccata*.

We need to decide on areas which are going to be allowed to develop into yew woodland and those areas which are to be kept available to grazing stock. Ideally, over long spans of time and large areas, sections of grassland should be allowed to develop into yew woodland and areas of yew woodland should be returned to grassland. However, at the moment, we are getting increasingly short of the desirable grassland component due to the expansion of the woodland component and the Trustees have taken the decision to limit, or reverse, this expansion of yew on the Reserves. To this end several larger yew trees have already been removed from The Devil's Jumps and from the Heyshott Down Reserve. We now need to tackle the much larger problem on the Heyshott Escarpment Reserve.

Next article: Yews, Junipers and the MDT Reserves, how do they get there?



Photo 5. Signs of feeding on Cowslip leaves by Duke of Burgundy caterpillars