

MEDLOCK & TAME VALLEY CONSERVATION ASSOCIATION

Summer 2012



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Registered Charity No. 504558

MEDLOCK & TAME VALLEY CONSERVATION ASSOCIATION

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MEMBERSHIP FEES 2012

Individual Adult: £10.00 per annum

Family: £15 per annum

Concessionary: £7.50 per annum

Welcome to the Summer edition of our newsletter 2012 and I hope you like the new format. I began working on this edition during May – THE week when it was really hot and sunny; consistent with summer!

A walk around the grounds of Burlinson House shows the herb tablet flourishing, the fruit trees showing their flowers, the pond's surface covered in duck weed with the water iris well up to about a metre; all of our trees now in full leaf, the wildflower meadows standing at 6-8" and the bees in full flight bringing in nectar and pollen to the hives. The signs of life are still in abundance! Summer has come around again, in spite of us looking out at a lot of heavy rain.

IN & AROUND OUR H.Q.

The scaffolding to the gable wall at the back of Burlinson House has now been removed and the area cleared of rubble from the deteriorating brick work. The damp course has been completed, the walls re-pointed, re-plastered, and re-painted, the kitchen gutted and partially re-plastered, ready to be re-furbished. "RE"-newal has been the operative word in the MTVCA's projects this year so far and now, in summer, it is the re-birth and re-growth of everything! The next step – Re-decoration of the main reception and committee room!

BUTTERFLIES

We begin our new series on common butterflies in the UK in this season's newsletter. If you have a favourite butterfly you would like researched, please let me know.

- Kingdom: Animalia
- Subkingdom: Eumetazoa
- Phylum: Arthropoda
- Subphylum: Hexapoda
- Class: Insecta
- Order: Lepidoptera

Almost three quarters of UK butterfly species have decreased in population during the last decade. More specifically, the findings by Butterfly Conservation and the Centre for Ecology and Hydrology (CEH) show that 72% of species declined in abundance over ten years and distributions of 54% of butterflies fell, many sharply. The report comes from data gathered by two long-running citizen science projects - the Butterflies for the New Millennium (BNM) recording scheme and the UK Butterfly Monitoring Scheme. (*Source: The publication of Butterfly Conservation's The State of the UK's Butterflies 2011.*)

<http://www.ukbutterflies.co.uk>



The Peacock butterfly is probably the most common butterfly we see in our own woodland garden and is a familiar sight in gardens across the country. It has spectacular 'eyes' on the upper side of the hind wings that give this butterfly its name. These eyes must appear very threatening to predators, such as mice, that confront this butterfly head-on, because the body forms a "beak", as shown in the image below.



The underside is a different matter altogether, being almost black, providing perfect camouflage when the butterfly is at rest on a tree trunk, or when hibernating. In addition to camouflage and large 'eyes', the butterfly is able to make a hissing sound by rubbing its wings together that is audible to human ears. All in all, this butterfly must appear very threatening to any predator that might come across it.

Distribution

This is a highly mobile butterfly that occurs throughout the British Isles, including the Orkneys and Shetlands, although it is not found in parts of northern Scotland. However, its range does seem to be increasing, with sightings from new areas being recorded every year. It is a particular common visitor to the garden of Burlinson House and we have many photographs of it on the Buddleia at the side of the house.

This butterfly is generally single-brooded. However, in good years, a small second brood may appear. Adults may be seen at any time of the year, with warm weather waking them from hibernation. The majority emerge from hibernation at the end of March and beginning of April. These mate and ultimately give rise to the next generation that emerges at the end of July.

Habitat

This butterfly can turn up almost anywhere, given its broad distribution and is often encountered while hibernating in outbuildings, such as a garage, shed or barn, where they are often in the company of other individuals. Other hibernation sites include hollow trees and wood piles, where their dark undersides provide excellent camouflage.

The primary larval foodplant is Common Nettle (*Urtica dioica*). Hop (*Humulus lupulus*) and Small Nettle (*Urtica urens*) are also used.

Adults feed primarily on Thistles, Bluebell, Cuckooflower, Dandelion, Devil's-bit Scabious, Fleabane, Hawkweed, Hemp, Honeydew / Sap, Marjora, Ragwort, Teasel, Water Mint and Yarrow.

The adults spend most of the morning gathering nectar. Males set up territories around midday, often on the sunny side of a wood, where they wait for a passing female. Males will fly up at any dark object, which is one way of sexing this species since the two sexes are very difficult to tell apart, being almost identical in appearance. When a female is found she flies off, trying to escape the male that is in

pursuit. If he succeeds in staying with her then the pair mate. Females subsequently take great care when egg-laying, selecting food plants that are in full sun.

Adults emerging in summer nectar on a variety of flowers, building up essential body fats before overwintering.

'EXTINCT' SHORT-HAIRED BUMBLEBEE RETURNS TO UK



A species of bee not seen in the UK for a quarter of a century is being reintroduced to the countryside. The short-haired bumblebee was once widespread across the south of England but it vanished in 1988.

However, after a healthy stock of the bees was found in Sweden, conservationists were able to collect some to seed a new UK colony. About

50 queen bumblebees are being released at the RSPB's Dungeness reserve in Kent.

Nikki Gammans, from the Short-haired Bumblebee Project, said: "Normally, extinction means a species is gone forever. But it is magnificent that we can bring back this bee species and give it a second chance here in the UK."

The loss of the short-haired bumblebee (*Bombus subterraneus*) was caused by the dramatic decline of wildflower meadows that occurred after World War II as agriculture intensified to feed the growing population.

It is estimated that 97% of Britain's flower-rich grasslands, which the bees needed to forage and thrive, has vanished over the past 70 years. But in southern Sweden, the species is doing much better as fewer people live there and farming practices are more bee-friendly.

Dr Gammans said: "The bee population in Sweden is expanding and growing whereas for everywhere else in Europe it has been contracting - it is either rare, threatened, or extinct like in the UK. So Sweden was really the only place we could go to collect the bees." A team of conservationists, with the permission of the Swedish authorities, captured nearly 100 spring queens to bring back to the UK. Before the release, the bees were put in quarantine for two weeks at Royal Holloway, University of London. Dr Mark Brown, from the university's school of biological sciences, said: "We've screened for four different parasite species, which can all damage bees in different ways. "The key reason why we are looking for them is we don't want to introduce populations of these parasites from Sweden into the UK. Those with the parasites haven't been released."

The preparations for the bees' arrival in Kent have also been extensive.

Martin Randall of the RSPB, states "The most important thing we've had to do to get this ready for the bees is to encourage wild flowers, like clovers and vetches. "So the

first thing we did was to collect locally grown clover seed and spread it across the grasslands at a local reserve and then we followed it up by grazing it sensitively with cattle and sheep."

Local farmers have also been involved in the project, which has been funded by Natural England, the RSPB, Hymettus and the Bumblebee Conservation Trust. By leaving margins unfarmed at the edges of their fields, flower-rich, green "corridors" are created, which will help the bees to spread out across the area. So if you know any farmers....

Plight of the bumblebee

This is the second attempt to release the short-haired bumblebee in the UK. In 2009, Dr Gammans collected bees from New Zealand, which had been introduced there from the UK in 1895 to pollinate red clover.



But DNA tests found the colony lacked genetic diversity and many of the queens did not survive their hibernation once in the UK.

"This is about the usual survival rate for queens. After that, we want to add further reintroductions to increase the genetic diversity and increase their chances," she explained. The team hopes the return of this species could give a boost to bee conservation.

Over the past few decades, bumblebees have been in serious decline. As well as the loss of the short-haired bumblebee, another bee species - the Cullem's bumblebee (*Bombus cullumanus*) - has also been declared extinct in the UK and others species are at risk of vanishing from the UK. Conservationists warn that the loss of the bees and other insect pollinators would be disastrous. With about 80% of Britain's plants reliant on insects for pollination, it has been estimated that these creatures contribute more than £400m a year to the UK economy. Dr Pete Brotherton, head of biodiversity at Natural England, said: "We depend upon nature in so many ways, yet across England many species and habitats are in decline. "These losses can be stopped - today is a fantastic example of what conservation organisations, the government and farmers can achieve when we work together. Exciting projects like this one are vital in helping to turn the tide on biodiversity loss."

(BBC News "Science & Environment" May 2012)

FUNDING

We have recently secured funding from the Duchy of Lancaster Fund which has allowed us to purchase the following equipment which will aid us in our Autumn/Winter programme this year.

- Infra-red motion camera to enable us to see our garden at night and what creatures frequent it. This will be a brilliant piece of equipment for us as we do all wonder if badgers venture into the garden. Some foxes have been seen but we do want to capture some actual pictures as evidence and so this will

be exciting. At the end of last summer, Lee and Susan stayed overnight in the Hide in the hope of seeing some activity but as you can guess, it was pitch black when it struck midnight. Whilst disappointed, the dawn chorus was truly amazing and most of the songbirds in England must have made a visit to make up the choir!

- Strimmer – a much needed piece of equipment at this time of the year!
- Bat detector. Another lovely piece of equipment. We have Pipistrelles in the area and we detected these last year at our bat evening. This Autumn we hope to repeat the experience as we have a few bat houses in our bottom (wild) part of the garden - see our list of programmes below.

AUTUMN/WINTER PROGRAMME 2012/2013

Because of extensive work to the house, inside and outside, we were not able to host a public events programme in the evenings during autumn/winter last year. Our first programme this year was a pond dip which turned out a couple of new families and a lot of 'hands-on' experiences. An enjoyable and encouraging day.

Honeybees and a trip to the hives – Sunday 19 August – 11.00 am
Paul Lythgoe (Please wear long sleeves, trousers and sturdy shoes. Do not wear perfumed sprays. Suits will be provided. Trip to the hive is optional).

Going Bats – Monday 17 September at 7.15 pm – Presentation and then some bat detecting with our new equipment- MTVCA Committee

AGM - Saturday 8 September - 2 pm in Burlinson House. Refreshments served.

Wildflowers - Monday 15th October– 7.15 pm - Jean Lythgoe

Moths – Monday 12th November – 7.15 pm – (a humane moth trap will be set in our garden the night before and we can have a look at what it holds!) Bryan Stringer

December 2012/January 2013– Winter walk – date to be confirmed

Spot the Ladybird – Monday 11 February 2013 – 7.15 pm - Susan Stewart

The Kitchen Herb Garden –Monday 11 March 2013 – 7.15 pm - Judith Wood and Katie Caine

Ponds and Pondlife (including a pond dip) – Saturday 18th May 2013 – 2pm

Please ensure if you are coming to the events by car that you park at the Oldham Road End of Oaken Clough, as parking is strictly limited. Alternatively, a bus from Ashton bus station (409 or 419) runs regularly and stops almost at the end of Oaken Clough and is the GREEN alternative!

Conservation – DID YOU KNOW?

The number of species world wide has been variously estimated to be anywhere between 2 - 100 million species. 1.4 million species have actually been named and described. Britain has its own fair share of this wealth of wildlife. For example, there are more than 20,000 insect species in Britain, of which 2,500 are butterflies and moths and approximately 4000 are beetles. There are 69 species of native wild mammals and around 1500 flowering plants.

CLOUDS (continuing our series)

Why is the sky blue?

Which of us has never been asked this question or thought of it ourselves! If you were to travel 20 miles or so above the Earth's surface, the sky would appear black. What happens during light's descent to Earth that makes the sky take on a wonderful azure hue? "White" sunlight passes through our atmosphere, and molecules in the air, primarily nitrogen, are just the right size to scatter light from the blue end of the visible spectrum. The other colours travel to the ground with little interference. The blue light is scattered from molecule to molecule in the sky, until the light seems to be coming from every direction.

Why are clouds white?

The water droplets that make up clouds are much larger than the molecules that scatter blue light. The clouds scatter and reflect all the visible colours of light that strike them. Hence, we have white clouds. But if the cloud is thick enough, light does not penetrate completely through the cloud, resulting in dark, heavy-looking cloud bottoms.

Why do clouds form?

Clouds are nothing more than water vapour that condenses and accretes into a visible form. The usual mechanism is for moisture-laden air near the Earth's surface to be raised higher into the atmosphere either by an encroaching air mass or the heat of the sun. As the air is lifted, the pressure drops and the air is subsequently cooled. The combination of the two causes water vapour to condense.

CIRRUS CLOUDS

Cirrus clouds are wispy, thread like cloud, often drawn out across the sky by high winds. These formations indicate the presence of moisture at high levels of the atmosphere. At these levels the temperature is normally below freezing, and any air mass that cools to saturation will produce ice rather than water, therefore these clouds consist of ice crystals which are blown about by upper levels winds, producing the characteristic white streaks. These clouds may form in isolated patches or cover a wide area of sky, depending on the distribution of moisture and may be the result of local thunderstorm activity.

Cirrus Uncinus

Cirrus Uncinus are the same as normal cirrus clouds but with a distinctive hooked tip. They are formed in the same way as cirrus clouds however its distinctive pattern of filaments is the result of a high speed wind below the level at which the crystals form. As the crystals descend under the influence of gravity, this wind rapidly smears them across the sky forming the distinctive hooked shape.

Like other cirrus clouds they are a result of high level moisture and it is therefore associated with the approach of a frontal system. They do not produce any significant weather on the ground although snow showers may be visible immediately above cloud level. These usually evaporate well before reaching the ground.



Cirrostratus

These are even layers of cirrus that covers a wide area of the sky and as with other cirrus formations they are formed when a moist air mass is lifted to a level where it cools to saturation and forms ice crystals. In the case of Cirrostratus this lifting occurs on a large scale. Meteorologists distinguish many types of Cirrostratus:

Fibratus consists of long thin filaments known as striations that spread evenly across the sky. The texture of this formation results from the ice crystals being blown by strong, steady, high level winds.

Nebulosis – the uplift that gives rise to the cloud is very gentle, and the resulting ice crystal layer is extremely thin, with vague edges that are difficult to discern and lack the texture common to other cirrus clouds. Quite often the only sign of a cloud formation will be a slight diminution of the intensity of the sunlight.

Occasionally, snow showers fall from cirrostratus formations, but these usually evaporate before reaching the ground.



Cirrus Kelvin-Helmholtz

These clouds are named after a German physicist who first described this form of instability in liquids in the late nineteenth century. They appear as a slender, horizontal spiral of cloud and are the most distinctive of the sort. However they tend to dissipate after only a few minutes after forming, so therefore are rarely observed.

The shape of this kind of cirrus is a result of a particular type of wind shear. In general, wind shear occurs when one layer of air slides across another layer moving at a different speed or in a different direction. This gives rise to vertical eddies that produce a regular pattern of air waves. In most cases wind shear creates a series of gently undulating cloud formations along the top of the waves. In the case of Cirrus Kelvin-Helmholtz the eddies are more powerful, and carry the cloud over the peak and down the other side, so that the waves break in the manner of ocean waves. As these waves complete a circulation, they create a distinctive corkscrew pattern.

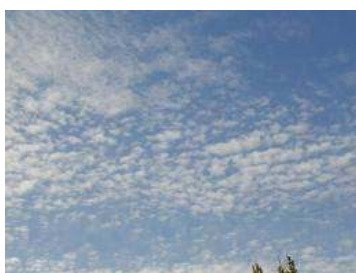
Cirrus Kelvin-Helmholtz are quite common in the upper troposphere, but generally there is insufficient moisture present to generate cloud and render the visible pattern. Their pattern indicates a degree of wind shear that is likely to produce moderate to severe turbulence at cloud level.



Cirrocumulus

Cirrocumuluses are seen as a milky veil of high level cloud that may stretch for hundreds of miles across the sky. They occur when a large area of moist air at a high level of the atmosphere reaches saturation and forms ice crystals. The difference between cirrocumulus and cirrocumulus is the presence of instability at cloud level. This gives the cloud its cumuliform appearance.

By itself this formation does not have ant great significance however if there is a steady increase in this cloud over a period of time, it may indicate the approach of a frontal system.



It is hoped that a weather station can be purchased by MTVCA which will be kept at Burlinson House. A digital recording and digital storage of the local weather will be kept and a database made for years to come. A log will also be kept as to how this impacts upon wildlife and the natural environment. This will be one of our projects for next year, if we can secure sufficient funding.

REMINDER – Our AGM will be held on Saturday 8 September at 2 pm in Burlinson House. A review of the work for the past year will be given via an audio visual presentation and refreshments will be served afterward.

Do please try to join us for this very important event in the life of MTVCA.