Teme heading east and the Severn flowing south? The starting point is 500,000 years ago, before the last ice age, when none of these rivers headed in those directions! Oversimplifying for brevity, the Leigh Brook was probably a larger river flowing the opposite way in a high shallow valley. After meeting up with another tributary, it flowed south past the west side of the Malvern Hills. Local glaciers caused a large lake to form in the Mathon area, and the waters from this overflowed into, and rapidly deepened, the existing valley, causing the Leigh Brook to reverse its course to meet the newly diverted Teme.

Erosion still continues apace – look for the trees growing out of the Brook in the gorge area. 12 years ago this was the river bank! No glaciers now but regular floods!

Moths of Malvern

Alan Uren

In their gardens, most people are familiar with daytime butterfly visitors, but what about their far more numerous cousins, the moths? There are about 2,500 species of British moth, compared to only 70 species of butterfly.

In my early teens, I attended an open day at the Knapp and Papermill Reserve, which sparked an interest that has now sustained me through more than a decade of 'mothing'. A moth trap had been run the night before, and resting on the egg boxes were beauties such as the Elephant Hawk Moth, Garden Tiger and Buff Tip – the latter being indistinguishable from a small broken-off twig of birch. Apart from the striking beauty and obvious size of some moths, it is their wonderfully descriptive names that can also inspire the imagination. Green-brindled Crescent, Merveille du Jour and Scorched Wing are as evocative in life as they sound.

Moths are found everywhere, and even in my garden in the centre of Malvern I have recorded over 200 species. It is easy enough to see them, even if you don't own a moth trap, as they can be attracted to an illuminated white sheet. Moths start emerging in numbers from their overwintering stages in March, but keep an eye out all year round too as, even in the coldest months, the male Winter Moth can be found flitting into our houses. Interestingly, the female of this species is merely a flightless bag of eggs. There are also many day flying species: a particular favourite of mine is the jewel-like Six-spot Burnet which can be found around Peachfield Common on sunny summer days.

If you would like to know more, or learn how to get involved in moth recording, please have a look at the Worcestershire Moth Website.

DATES FOR YOUR DIARY Indoor Meetings

Indoor meetings are held at 7.30 pm on the first Thursday in the month at the Chase High School Sixth Form Annexe, Geraldine Close, off Geraldine Road, Barnards Green, Malvern, WR14 3PF. Adults £2, children free, refreshments included. Non-Trust members welcome.

THURS 29th MAR (NOT 5th April): 'Wetlands Creation and Conservation' by Rob Allen, WWT Reserves Officer.

THURS 3rd MAY: 'On the Wildside: from Downing Street to our Local High Street' by Iain Green, wildlife photographer.

THURS 6th SEPT: 'The Magic of Moths' by Patrick Clement.

Outdoor Meetings

If you are joining us for the first time – welcome! If you need a lift or more information, please phone Pauline on 01905 352423 or Brian Bradford on 01684 565994. Always wear suitable clothing and footwear. Donations to the WWT appreciated.

SAT 14th APR: Birds, flowers and butterflies – a guided walk at Grafton Wood led by James Hitchcock. Meet at 10am at the Three Parishes Hall in Grafton Flyford (GR962557) for a 3-hour walk. Please wear stout shoes. Numbers limited, so please book with Pauline or Brian.

FRI 11th MAY: Bluebell walk on the Malverns around Midsummer Hill led by Brian Iles. Meet at 10am at Hollybush car park (GR759369) for a 2-3 hour walk. Will include some steep hills.

TUES 12th JUNE: Evening walk at Longdon Marsh led by Rob Allen. Meet at 6.30pm at the car park on the A4104 Welland Road in Upton on Severn (GR851403) for car share. Parking limited at start of walk. Numbers limited so please book with Pauline or Brian.

SUN 15th JULY: Minibus trip to Newport Wetlands for a wildflower walk led by Cherry Greenway. Meet at the Splash Car Park at 9am. Cost ~£10. Nos. limited. Please book with Brian or Pauline.

TUES 14th AUG: Coach trip to Rhayader for a walk in the Elan Valley and a visit to the Kite Centre. Meet at the Splash Car Park at 8am. Cost. ~£20. Please book with Brian or Pauline.

SUN 2nd SEPT: 'Water Power at the Knapp' – a cocktail of ice, floods and mills – plus a bit of geology (see article above). A walk and talk following Leigh Brook through the reserve and back again – only 1.5 miles with gentle slopes, taking about 2 hours. Meet Jim Handley at 10am at the entrance to the Knapp and Papermill near Alfrick Pound (GR752522).

FRI 21st SEPT: Afternoon / evening coach trip to Woodchester Park and Mansion. Meet at the Splash Car Park at 1pm. Afternoon in the park with tour of the Mansion, and bat hibernacular in the evening. Cost \sim £17. Please book with Brian or Pauline.

MAY / **JUNE:** Coach trip to Highgrove House. Date to be arranged. Information from Brian.

Don't forget to check our website for other meetings.

Open Day at the Knapp and Papermill Sunday 15th April 11.00am - 5.00pm

Expect lots of family fun, pig roast, delicious homemade refreshments, music, and wildlife experts on hand for your questions. Set in the orchard, it's an experience you won't find at any other time! Try a guided walk at 12.00 or 3.00 to find out more about what there is to see at one of the Trust's most prestigious, flagship reserves. Adults £3.00, children £1.50. For details, contact the

wardens, Fergus and Tina, on 01886 832065.

Contributions

Please send ideas or contributions for future Newsletters to Brian Dawkins (01684 573562) email *db.dawkins@hotmail.co.uk*

> **Committee Contact** Margaret Vernon (01684 565079)



Local News & Events

Worcestershire

Wildlife Trust

www.malverngroup.btck.co.uk *malverngroup*(*a*)*live.co.uk*



NEWS AND VIEWS

April 2012

The birds are singing so spring can't be far away, (this was written in late January), and your committee has been working hard organising events for you to enjoy in the months ahead. However, if anyone has any wildlife experiences or knowledge which they would like to share, please write a short article about it for this Newsletter. I'm sure that, with over 1200 members in our group, some of you have had interesting experiences you can share. So don't keep it to yourself, send me a report, 3 - 400words would be fine. In this edition of the Newsletter there is a study on the geology of the Knapp and a report on moths in Malvern.

Our Malvern Group continues to thrive, thanks to numerous people who willingly give time and effort in many different capacities. Last year, we welcomed 2 new committee members: Richard Owen (our Minute Secretary) and Sally Sines. Also, Alison Uren is now responsible for the stock and sales. It is good to have new people on board, and we are all already benefiting from working with them. Other tasks need your help too (what a surprise you say!), so if you would like a specific responsibility, then please just have a word with me. Co-ordination of the few outside events that we are involved in each year, when we provide a stall, would be one such role.

Fundraising for the Wildlife Trust

Our annual collection this year will again be in the comparative warmth of the protected entrance of Morrisons in Malvern on Fri 29th and Sat 30th June. It would be a real asset to have our 2-manned hourly rota completed asap. If you can give an hour or so of your time, please phone Dave Cook (01684 564603), or sign the rota at our indoor meeting.

Knapp Open Day 15th April 11am – 5pm

Our group is 'manning' the Refreshment Stall (selling drinks and cakes). Please sign up on our rota, or ring Margaret Vernon (01684 565079) to book a slot. Your reward - free entrance to the Day!

Other News from the Knapp

The new building is now complete and looks very nice, both inside and out. There are steps leading up to it, an attractive deck area all along the front, and the working parties have a large secure room to store tools. Have a look at it when you come to the Open Day - I'm sure you'll be impressed.

Jim Handley has decided to step down from leading the mid-week working party at the end of the season after 15 years service. Fortunately, he will continue to work with the party, so his wide knowledge and

experience will continue to be utilised. We are greatly indebted to Jim for all his hard work in making the Knapp one of the premier reserves in Worcestershire. Organising the maintenance tasks that keep the reserve looking attractive and safe for visitors, including many school parties, has been crucial to the success of the Knapp.

Eyes Down

Jim Handley Fauna and flora relate to the soil and rocks in their habitat. So back to basics for a nature reserve is very much a case of what lies beneath one's feet. The Knapp and Papermill has quite a geological wealth to explore, as a quick look at its different rocks and processes will show.

The car park by the entrance takes you back about 225 million years ago. The red sandstone cliff is from sand dunes formed in desert conditions of the Triassic period. This rock underlies much of the Worcestershire basin, yet here only a few metres are exposed. Down the drive towards the orchard you see on your right a rock composed of angular stones cemented together. On the right of the steps at the bottom you can see a mini cliff face which extends back behind the fallen tree. This is Haffield (from the estate near Ledbury) breccia, which probably originated as a scree at the base of a mountain range to the west (think Death Valley in the USA).

Quite famous geologically is the East Malvern Fault line, where the Worcester basin has slipped downwards by up to 3 kilometres relative to older rocks to the west. That fault line comes through the Reserve between the breccia and the older limestones and sandstones which make up most of the Reserve. These deposits were laid down in varying marine and terrestial conditions in Silurian times over 400 million years ago.

Tectonic plates have been, and certainly still are, moving the landmasses of the world around at about the speed your fingernails grow. At least two continental collisions, such as those that formed the Alps, have impacted in this area, causing the level strata to buckle significantly. This is obvious when looking north-west from the Malverns, where weathering in the last 100 million years has created the lines of hills from the harder rocks and valleys from the softer material. The Knapp is part of one anticline (a convex fold) with the rocks along the river bank showing different angles of dip caused by the pressure.

Why do Cradley and then Leigh Brook flow north from their source to the west of the Malvern Hills to pass through a gorge at the Knapp before joining the