Title **Life in the Mesolithic. WYAC visit to the Wyre Forest**

Venue Wyre Forest Visitor Centre, Callow Hill, Kidderminster;

Date Sunday 18th October 2009

Introduction,

The WYAC members congregated at the Forestry Commission's Wyre Forest discovery centre and after the head health and safety assessment were introduced to Steven Crouver who was to be the guide for the day.

Mr Steve Crowther set the scene: -

Time period:
The Mesolithic or "Middle Stone Age" is a period of prehistory that as its name suggests, lay between the Palaeolithic ("Old Stone Age") and the Neolithic, or "New Stone Age".

Time Line.

	Palaeolithic	Mesolithic	Neolithic
Years ago	2m-10,000	10,000-5,000	5,000-2000

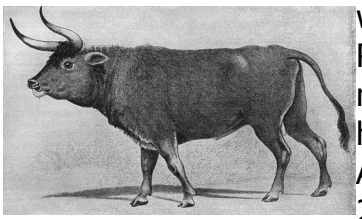
Landscape
The Mesolithic was a time of change in climate and landscape. The last ice age had peaked and the ice retreated resulting in the British landscape changing from polar desert to arctic tundra to grassland and by the start of the Mesolithic around 10.000 years ago the first true forests were begining to be established. The first trees to arrive after the ice were probably birches followed by Scots pine producing forests similar to those of the Highlands and northern Scotland today. Other tree species such as Hazel, ash, English and sessile oak, Alder and many other trees now considered native to Britain followed.

Sea Level
The melting ice caused an increase in sea level and during the Mesolithic, the land, known as "dogger land" (or alternatively the North Sea Plain), that had been inhabited for perhaps several thousand years was flooded, burial mounds, settlements, artefacts and cave paintings now lie beneath the North Sea and during this period Britain was cut off from mainland Europe. Other coastal areas were also flooded and the English Channel formed. Remnants of forests can be seen at low tide in several coastal regions, e.g. at Amroth in Pembrokeshire.

Animals.
Just as the plants changed and the landscape were transformed, so the

animals changed from arctic species, reindeer, wolverines and arctic fox, to more familiar temperate species like badgers and foxes. In the Mesolithic the forest would have been home to newcomers like Red Deer, Roe Deer, Pine Marten, Wild Cat and Brown Bear. Two probably less familiar extinct animals are the Auroch or wild ox and the Trarpan or Wild Horse.

Aurochs were massive creatures, the bulls weighing around 600 to 1000kg, which is close to the weights of today's White Rhinoceros. In addition to their 1.72 ton weight they measured up to 2meters at the shoulder, and had horns up to 80cm in length, with sharp black tips. Aurochs went extinct in Britain in the Bronze Age, 2500BC and in Europe the last one was shot in 1627. Being the ancestors of domesticated cattle some of today's breeds, (e.g. the Spanish and Camargue fighting bulls) still resemble their ancestral relatives.



Another animal now extinct is the Tarpan or Wild Horse that is thought may have survived in Britain up to the Roman occupation. The Tarpan was much smaller than the Aurocks, and may be an ancestor of our native ponies.

(The Exmoor pony is an ancient pony breed with a history possibly stretching back to the Ice Age). Clues to the antiquity of the Exmoor pony are its wide forehead, dark back stripe and hairs that grow over the base of its tail allowing rain water to drain of its back - all features typical of wild ponies. In addition there is archaeological evidence for ponies living on Exmoor going back to 60,000BC. Leg and jaw bones have been found that are identical to those of modern Exmoor ponies'.

Changes to life style.

The Mesolithic hunter gatherers would have had to adapt to the changes in the landscape, animals and plants on which they relied for their livelihoods. It is in this period that we see the first evidence for the use of bows and arrows. A ????guard bow dating to the Mesolithic period in 9000BC has been found in Scandinavia. It is thought that this change in hunting technique is a direct result of the encroaching woodland. Microliths (tiny flint blades used for arrow heads and other cutting applications) dating back to this time have also been found. People also started keeping domesticated dogs, most likely to help in hunting and tracking down prey animals. Remains of Norwegian Elk hounds have been found in caves dating back to 6000BC! They were kept later by the Vikings and when out hunting the dog would track down the animal and then bark and tease the animal to hold it in one place so that the hunter could come and kill it. When hunting with a bow and arrow the hunter would track his victim down and once the animal was in sight he (or they, depending on what it was) would fire up to three arrows into it and if the animal fled they would follow, waiting for it to bleed to death. Once the animal had died it would have been skinned and butchered, the tendons used for sewing, tying and binding,

and the bones used for harpoon points (hunting and fishing), or for making needles and many other things. Even the brain was used to tan the animals hide after any fat had been removed with flint scrapers. The animal fat was used as insulation during the winter when it was rubbed on to the skin.

Water fowl and other birds, fish, eels, crayfish and muscles were also important food sources. Fishing was done from the river bank or from dug-out canoes with harpoons.

Hunter-gatherers has the name suggests also "gathered" - plants, nuts, berries, roots, tubers and probably fungi too would have formed a large part of the diet. In fact at these times people ate a much greater variety of fruit, vegetables, seeds and nuts than we do with the mono-culture farming of today. Plants used in the Mesolithic would include many thought of as weeds today, such as dandelions, chickweed, brambles and nettles, as well as the ancestors of cultivated vegetables like wild parsnips and sea beet - the ancestor of beetroot, and ramsons (wild garlic) and many others. Nettles not only had edible leaves when cooked, but until the importation of cotton the fibres inside the stems were spun to make sheets and may have been used similarly during the Mesolithic.

WYAC Hunter-Gatherers.
Shelter Building.

Following the fascinating introduction to the Mesolithic period the group was divided into four smaller groups and in a fenced-off area of woodland each group was given the task of constructing their own hunting shelter. These shelters would have been for over-night protection against animals and weather and constructed as required by small hunting parties. The basic form would have been open at the front (fire used for protection here) and just large enough, but no larger, for two or three hunters to sleep. See figures.

From diagrams provided and using only the materials they could find around them, plus a (Mesolithic) tarpaulin to carry leaves and branches to their chosen site of construction. The four groups set of in search of suitable leaves and branches. One of the requirements was that no cord must be used unless absolutely necessary. Once completed the sheltered were judged and the group that built the best shelter was rewarded with a (valuable) prize.

See Pics

Following lunch the groups were set the task of

1) making birch tar,
2) making char cloth and

3) smoking a deer hide.

The first task was to collect dead wood from the forest floor to build and light the fires.

Fires would most likely have been started using flint and the mineral iron pyrite by striking the iron pyrite with the flint and creating a spark. It takes practice and experience to be able to light a fire this way, as the spark has to land in the right place. Early flintlock muskets and pistols work on the same principles with the flint striking the iron creating a spark and lighting the gunpowder.

Birch tar Production.

Birch tar has been found at Mesolithic sites, it is a resin used, painted onto boats and ropes as a preservative. Birch bark glue also has a long history being used to hold arrow and spear points in place in the Mesolithic.
The actual production method is not known, we used two biscuit tins, one large and one small, (to date no biscuit tins have been found at Mesolithic sites). The large tin, had a central hole in its base was placed was on top of the smaller one to form a two chamber oven, see diagram,

To make the birch tar or birch bark glue, a hole was dug beneath were the fire was to be built, the small tin put in and soil packed around it. The larger tin with the hole in the centre of its base was placed squarely on top of it. Strips of birch bark were tightly rolled, periodically tied to keep the coil tight until the coil was the width of the tin. The coiled bark was then put into the large tin and the lid was put on. The tin was then surrounded and covered by burning wood from the adjacent fire. The fire was kept burning well for two hours to extract the tar from the bark and allow it to drip into the small tin beneath. The tar was then turned into glue by simmering it next to the fire. Using the split end of a stick over its rim the tin was kept stable, another unsplit stick was used to dip into the reducing tar and when it set on the stick the tar was ready, it had turned into birch bark glue, and the tin was away from the fire to cool down.

Before using the tar it must be re-heated and applied hot as it cools down it re-hardens.
While birch tar was being made beneath the fire, char-cloth was being made on top of it. Char-cloth is material that is carbonized by placing it in a fireproof and airtight container, and heating it to drive out any moisture - in a way very similar to charcoal burning.

Char-Cloth.

Char-cloth was first used by mountain men in America as an aid to fire lighting. It is a cotton cloth heated in a very low oxygen atmosphere to form thin strips of carbon which is ideal for initial fire starting tinder. A similar tinder was used in the Mesolithic but again the production method is not known.

To make our tinder pieces of linen were cut into 5cm squares and put into a

small biscuit tin. A hole was punched in the lid, central, using a hammer and nail to allow all the moisture to escape out of the tin when it is heated. The tin was placed onto one of the fires and allowed to heat up when the material was hot enough it changed to black carbon in a process called 'carbonization'. Initially when the cloth was hot enough it dense smoke issued from the hole in the lid This continued for quite some time. Eventually the amount of smoke become noticeably less - that was the signal that the cloth was fully 'charred' and the tin was removed from the fire and the hole plugged with a piece of wood. This was to keep air out of the tin because the cloth contains no moisture and is superheated, making it very flammable. After it had completely cooled we removed the material which was now completely black and felt very light.

Smoking a deer hide.

In the Mesolithic every part of a hunted animal had a use. The hide would have been made into leather, the meat consumed and the remains fed to the dogs. the tendons would be used for sewing, tying and binding. The bones carved into sewing needles, harpoon points and broken after for bone marrow. The warm blood may have been drunk fresh, and bladders used to make balls, as pigs' bladders were in later periods. Even the brain would have been used at the beginning of the leather making process after any fat had been scraped off for other purposes. The brain would first be boiled then mashed up and spread on the skin. Interestingly every animal has enough brain to tan its own hide. After several days the brain was washed off before the skin was tanned by smoking it over a fire.
Initially the skin would have been removed soon after the animal had been killed as at this stage it is more easily removed.

For our tanning, (we weren't allowed to kill and skin a deer), we used chamois leather cloths stapled together to simulate a deer full skin.
A fire was built a pit 1ft wide and 6in deep with a channel leading out of it. A tripod was constructed by tying three approximately 4 foot poles together at the top. This was then stood over the fire, ready for the skin to be put on top. Once he fire was well alight dry-rotted wood, green wood and twigs were put on top to cool the flame and produce lots of smoke. The skin which had been stapled to form a bag with a flap to direct the smoke into it thus ensuring as much smoke as possible reached the skin. The flap helped to direct the smoke in to the skin and sticks were used to help keep it as open as possible. When the inside of the bag was smoked (colour much darker) it was turned inside-out for the other side to smoke. When it is completely smoked the skin would be a fully-tanned hide and ready to use.