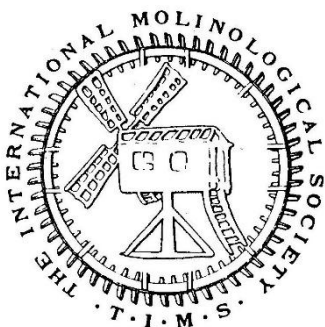


Peter Hill whose talk was “**From Needles to Putty, Forging to Flour**”.



Peter started by saying that TIMS (The International Molinological Society) hold a symposium every four years in a different country when mills of the area are visited and learned papers given; between these symposiums a mid-term excursion is held, again in a different country, but in this case just the mills are visited and there are no lectures. In 2017 this took place in the Midlands of England when a total of 30 mills were visited during the week. (*Editor: 'Midlands' was a rather elastic geographical description!*)

His talk took us on a lightning tour of 17 watermills and 5 windmills. A selection are mentioned below.

Thwaite Mill, near Leeds, last produced linseed oil putty. It has two internal waterwheels driving edge runner stones to crush chalk; this was then mixed with water and the resulting slurry evaporated, using hot air from furnaces to produce whiting. It was mixed



with linseed oil from Canada to produce putty for timber-framed windows, with a rubber compound added if it was to be used for metal frames.

Redditch Needle Mill demonstrated a very laborious and complicated process. Briefly, pre-heated wires were drawn out to the required thickness, cut into lengths, and straightened by heating and rolling; at this point they became known as 'stiffs'. The most perilous part of the process now took place. An operator put 100 'stiffs' between the palms of his hands and held them against a fast revolving stone until sharpened.



Slivers of steel might become embedded in his eye and metal and stone dust filled the air; life expectancy was 28 to 35 years. A further process to harden and glaze the needles took place before final packaging and distribution around the world.

Shirley's Bone & Flint Mill, Etruria, was powered – unusually – by a beam engine. Flint and bone (previously boiled) were calcined in kilns at high temperature, transferred to grinding pans, mixed with water, and tumbled round the pans by one-ton chert blocks until in suspension. This was run off to settle in 'arks' on the floor below when, finally, the resultant

'slop' was barrelled up and sent off to customers to make bone china crockery.

On this trip Peter also visited several corn mills. One with an unusual bit of history was **New Hall Mill**, Sutton Coldfield, where, in 1899, on a single day flour was ground and a loaf of bread baked and sent to Queen Victoria for her golden jubilee – and the same was done for Queen Elizabeth's silver and golden jubilees.



Ashford Bone & Bobbin Mill

(where access to the inside was not possible) had originally been a saw and wood-turning mill which made bobbins for the textile industry before eventually making self-assembly carts and wheelbarrows. The bone crushing mill was not for the pottery industry but for producing bone-meal fertiliser.

Shepherd Wheel Grinding Mill, Sheffield. Edging, sharpening, and polishing of tools took place here with no less than 18 grindstones of various dimensions being driven from line shafting. The grinder sat astride wooden horsing and from the age of 9 his son could become an apprentice, sitting behind him. It was a hazardous job, the air was filled with sandstone and metal dust; life expectancy was 35 to 40 years

His final two water-powered mills were two huge commercial mills.

Belper North Cotton Mill was built in 1803 using cast iron beams and supports following a fire which destroyed the previous mill. This enormous and impressive building now stands more or less empty next to the equally impressive partner, the East Mill. On the same site adjacent is the Belper Hydro Electric Station, restored and feeding power into the grid.

Quarry Bank Cotton Mill, Styal, of 1784 expanded over many years with additional waterwheels and then two turbines to drive the cotton spinning machinery – this is a very well-known mill and is probably familiar to most members. Demonstrations of the early methods of spinning and weaving are provided daily.

Peter also showed slides of five windmills visited on this tour, all corn mills, ranging from the post mill from **Danzey Green** (*below left*) at the Avoncroft Museum, to the six-sailed stone tower mill at **Heage**, Derbyshire, which is in full working order.



His final slide was an amazing view of **Chesterton Windmill**, Warwickshire, (*right*) caught by a shaft of light from the setting sun.



The members present thanked Peter for once again coming to talk to HMG and for interesting and entertaining us so well.



Daniels Mill near Bridgnorth

Editor. Peter included this restored corn mill in his talk, although it is not mentioned in Alison's report. I have added it here as it shows the backshot suspension wheel with its unusual water supply.