

**EXMOOR'S NATIVE SHEEP**  
**and**  
**THEIR WOOL, PAST and PRESENT**



**Lindy Head, September 2022**

## **FOREWARD**

This monograph came into being as a result of collecting an enormous amount of background information during research for an article entitled Exmoor's Woolly Past published in the winter '22 edition of the Exmoor Magazine. The text here includes material I felt too fascinating to waste.

Using AGM and annual dinner reports from 1906 onwards, as well as statistical information garnered from the Exmoor Horn Sheep Breeders' Society flock books, this account endeavours to pull together disparate strands of our local ovine history. It can never be exhaustive or tell the whole story because each moorland family has its own narrative, whether it be grandad's tales or old photographs.

Such things as descriptions of rare inland lime kilns or of driving cattle across country to an Allotment deserve recording, so in time, when this booklet is digitised and becomes part of the Society's website, I hope families will make oral or written additions to it before the memories are forgotten and disappear.

Whilst the majority of readers will be EHSBS members, I would like to think it will not be exclusively so, and that others with an interest in wool may find something pleasing too.

## THE PLACE OF EXMOOR HORN SHEEP AND THEIR WOOL IN THE STORY OF EXMOOR

When the Exmoor Horn Sheep Breeders' Society met formally for the first time on 28th July 1906 at the Carnarvon Arms Hotel, Dulverton, their gathering was in keeping with the spirit of the times. Formal definition of distinctive breed characteristics, maintenance of breed purity, and promotion of the breed, were the objectives of cattle and sheep stockmen of the era.

The founding members brought with them an older history and a good number recalled the flocks of their grandfathers. Amongst these are many familiar place and family names:- R S Westcott at Zeal, Hawkrige, flock established 1846; John Tucker at Stetfold Rocks (originally at Cutthorne), 1846; Fred Yendell at Nadrid, South Molton 1850; D N Purchase at Bowchurch, Molland (originally at South Radworthy) 1866; William Winzer at Wellshead, 1860; John Pring, at Withycombe 1836; S E Thorne at Great Bradley, Withypool 1830; W J Haydon (related to the original Jones family) at Caffyns Heanton, Lynton in 1798; G M Hayes at Pitsworthy, Exford 1873; and John Gregory at Farley Farm 1879 for example.

At the time of the society's formation, the average breeding ewe flock size was 68, so it was a tremendous achievement on the part of the secretary Mr D J Tapp of Highercombe, his assistant Mr Dicker, and the four teams of branders, to brand 25,000 sheep in the first two years of the society's existence.

### Fulling

But this is not the beginning of the story of the breed. Much of Exmoor's history is inextricably tied to water and the Domesday Book of 1086 records around 50 mills in the West Somerset area. Woollen (fulling) mills, as opposed to grist mills or tanneries, became the mainstay of the local economy following the development of water powered fulling stocks in 1185, and remained so until their gradual decline in the early 18th century. Fulling mills are recorded in South Molton in the 12th century; also three in Dulverton between 1638 and 1654; four in Dunster between 1279 and the 15th century; two in Luccombe 1559 and later; two in Porlock, late Tudor and 1604; one in Exton 1676; one in Kilve 1666; one in Nether / Over Stowey 1456 and so on. Under Edward the Black Prince (1330 - 1376, the first Duke of Cornwall) the cloth made of our local wool was deemed good enough to be taxable at the rate of 4s (shillings) per hundredweight.

The purpose of fulling is to soften and thicken the fibres of the woven cloth so that they mesh together to form a thicker, stronger, smoother fabric than the original open weave. Fulling stocks, usually in pairs, were effectively large wooden mallets held within a wooden frame driven by water powered gearing, and were used to beat the moving cloth.



Single fulling stock

The first stage in the fulling process is to scour (cleanse) the cloth to remove dirt, grease or lanolin in the wool if it had not already been washed. Foot fulling or tramping (hence the name Walker) was used for more delicate fabrics. If the yarn used in the weaving were coloured, the scouring phase would have already been done since dye cannot adhere properly in the presence of grease. Fuller's clay, hot water and stale urine (later, soap or soda) were employed at this preliminary stage, with successive troughs of water and Fuller's Earth for thickening the cloth while passing under the fulling stocks. The use of fermented human urine for fulling persisted for hundreds of years, and is the origin of the rather derogatory epithet "piss poor". It was collected in sig carts from public houses and private dwellings and continued in one place until the middle of the 20th century despite frequent complaints from the inhabitants.

It was not until patented in 1834 that a rotary fulling machine invented by John Dyer in Trowbridge started to take over from fulling stocks. It worked by forcing the cloth with its end sewn together, through rollers and a spout in the presence of soapy water, thus effecting the necessary felting and shrinking.



Rotary fulling machine, Trowbridge

It is useful to explain how wools differ, their felting properties vary, and how this can be used. In general the longer staple wools are combed using a metal comb to make worsted, a harder, stronger yarn which can be beaten in the loom to make a solid cloth, and was never fullled. Shorter staple wools carded to make softer, hairier woollen spun yarn have better felting properties but need the fulling process to make the cloth denser, warmer and more serviceable. Until the 19th century most references to the use of wool are woven cloth, not knitted fabric. Exmoor Horn fleece, which has a medium length robust staple, can be spun both worsted, where its strength makes it good for warp (vertical) threads, and woollen, due to its felting ability, for weft (horizontal) threads. The Tucker family at Stetfold Rocks have records of their fleeces being used to make billiard table baize.

### **The Economic Significance of Wool**

To give some context to the place of wool in the English economy, in the late Middle Ages exported wool was taxed at 33.3% and exported cloth at 5%. Broadcloth exports, for which the South West was particularly well known, increased from 15 to 40 thousand cloths between 1350 and 1400. These were usually white and undyed for finishing by Flemish merchants via the port of Antwerp. Being a plain weave, but heavily fullled, broadcloth's great virtue especially when used for coats and cloaks, was that it could be cut and used without the need for hemming. John Greenway (1460 – 1529) from Tiverton made his fortune from kersey, a 2/2 twill fabric narrower and lighter than broadcloth, brushed on one surface for skin contact.

## The Movement of Goods from Exmoor to Tiverton and Exeter

The heyday of the Devon cloth industry was in Tudor times. Exeter Canal, the oldest surviving UK ship canal, enabled woollen goods to be loaded in the city instead of Topsham. Tiverton and Cullompton used this export route for their cloth trades. St Peter's church in Tiverton records the achievements of John Greenway which are carved in the Greenway Chapel, and church porch built in 1517. The carvings depict several vessels: a ship with three large sails and seven oarsmen; a ship with one large and two small sails and a helmsman; and another more barge-like with five oarsmen. At St Andrew's church in Cullompton, an early 15th century chapel funded by John Lane, cloth merchant, also has emblems which include ships, and the angels in the aisle hold other symbols of his trade such as cloth shears or teasel frames. Similar images can be seen at St Mary's Kentisbeare in the chapel funded by John Whiting. Wool wealth enabled merchants such as Peter Blundell (1520 – 1601) to endow the Chilcott School for 100 boys in Tiverton.



John Whiting's 16<sup>th</sup> century woolmark and ship, Kentisbeare

Tiverton Museum has a wonderful collection of lead seals embossed with the merchant's name and symbol, which were applied to bolts of cloth to verify that they had been inspected as compliant with legal standards, and that tax had been paid. As the cloth was unloaded, the lead seals were discarded. The earliest seal found on the Algarve coast in Portugal belonged to John Greenway, who also exported to France, Holland and Spain. Eighteenth century seals from Samuel Burrige of Tiverton have been found on the island of Schermer, Eyland in Holland.

## Cloth Types

In a 1552 statute, 40 different types of cloth were defined. From 1560 many "new draperies" appeared including the serge (worsted warp and woollen weft) for which Exeter and Taunton became famous. A 1601 Act classified Dunsters, Bridgwaters and Tauntons as cloth between 12 and 13 yards long, 1¾ yards wide and weighing 30lb. As the types of cloth expanded, with more types of weaving pattern (novel twills or with different mixes of warp and weft), or with new methods of finishing, the cloth regulations were finally eased in 1699. Although Spanish Merino fleece had been imported in the 16th century, when it was cheaper than English, the situation was reversed in the 17th as shown by the price comparison in 1680 when superfine Segovia cost 3s per lb and Ryeland cost 1/5d per lb. This change had been brought about by developments in Leiden in the 1630s whereby short-fibred Merino yarn could be worked to make warp, such that the cloth was half the weight. Changing fashions favoured layers of lighter garments, though the south west kept its pre-eminence with serge.

From 1688 – 1715 serge manufactured on the Devon Somerset border was the most important section of British textiles, worth £850,000 out of £3 million exports. Compared with the rest of Somerset, West Somerset had 40% of wool industry location and 45% of the workforce, thus making Taunton the county's most prosperous town. Serge exports to Holland which had been 425,000 cloths in 1710, declined to 147,000 in 1721 and after 1750 there was said to be "trade but no profit" in Exeter.

Martin Dunsford's History of Tiverton 1790 stated that in 1720 there were about 1,500 looms in daily use, with 700 woolcombers constantly employed, serving 56 fulling stocks. Clothiers with a presence on Fore Street often had a courtyard behind the premises enclosing a handful of cottages where woolcombers and weavers lived.

### **Movement of Goods via North Exmoor Ports**

The north-facing ports of Minehead and Dunster (until it silted up) received Welsh wool (local supplies of wool having reputedly run out for the kersey trade) in the late 16th century, not only for their own clothiers, but for forwarding inland, for example to Milverton. Porlock also took wool from Pembrokeshire to supply its own fulling mills. Serge making was probably invented in Taunton by Benedict Webb around 1583, which accounts for the increase in Irish wool coming into Bridgwater later in the 17th century. Merchants in Minehead supplying Taunton offered better prices for Irish wool in comparison with those in Barnstaple supplying Devon.

On the export side, during the 1540s the woollen cloths exported from Bridgwater (which included Minehead and Watchet) were mainly kerses destined for Ireland and broadcloth to Spain. As the type and variety of cloth changed with time, so did the destinations, with suppliers from as far away as Bampton and Wiveliscombe making up cargoes for Cork, Waterford or Youghal in addition to France and Spain. Later, cloth shipments went to Boston (1651), and Pennsylvania (1684) via Bristol; then to Jamaica with serge and fustian from Bridgwater (1699); and to Barbados from Minehead in 1700.

### **Changing Times**

The migration of manufacturing to Yorkshire in the late 18th century was not wholesale removal of wool processing from Exmoor, but rather a patchy decline in which Exmoor fared better than other areas simply because new inventions such as the flying shuttle for weaving, invented by John Kay in 1733, and James Hargreaves' spinning jenny invented in 1764 were late to arrive here. At the end of the 18th century "manufactories" were set up at Dulverton and Heasley Mill.

Dulverton produced serge and coarse woollen blankets at the Tangier Mill, demolished and rebuilt in 1825 as what we now know as Dulverton Laundry on the same footprint as Tangier. It had a breastshot 10hp waterwheel. It was successively a crape manufactory, then a lace factory (1840), then a silk mill until 1871, before it became the laundry in 1903.

Heasley Mill was a four-storey factory with two overshot waterwheels. It produced a type of serge solely for the East India Company which used the cloth as exchange in its monopoly trade with China.

As a consequence, when this monopoly was broken by Act of Parliament in 1834, Heasley Mill lost its only customer and it declined rapidly.

The partnership of Bawden, Cresswell and Bawden opened the first mechanised factory in South Molton in 1800, producing serges for export. Bawden is still a familiar Exmoor name. By 1822/3, South Molton was described as manufacturing not only serges, but longells (an 18" wide type of upholstery fabric), baize, flannels and druggetts. Unfortunately, a new lace and woollen factory which opened in 1824 was destroyed by a fire seen 20 miles away, but was rebuilt in 1828. In 1844 there were three local woollen manufacturers, in 1851 two.

In the north of England, water driven machinery had been overtaken by steam and the woollen industry in the south west found it difficult to compete, without the coal supply that was necessary for steam production. The movement of wool processing to Yorkshire hastened the decline in South Molton, and in 1866, the Higher and Lower Mole Mills were sold and many jobs were lost before final closure in 1886. The Lower Mill became a corn mill in 1890, and the Higher was taken over by the South Molton Shirt and Collar Company which continued operational until 1950.

Dunster declined for a different reason. In addition to the fulling mills already mentioned, two workshops and two fulling mills built by John Burnoll in 1682 were reported in 1830 to be ruined and in a state of decay respectively. George Luttrell, who owned Dunster Castle and became the MP for Minehead in 1584 paid for improvements to Minehead Harbour to facilitate the import of fleece from Ireland. In 1609 he commissioned the building of Dunster Yarn Market, a substantial octagonal building which offered shelter to traders and their wares and became famous for its trading success. However, Tudor and Stuart prosperity could not last without taking advantage of the changes in wool industry technology, which Dunster's clothiers did not, thus losing market share. In contrast, the mills of the nearby Fox family at Wellington embraced new water-powered machinery. For example, Thomas Fox bought land and water rights in 1797 to establish Coldharbour Mill at Uffculme as a spinning mill.



Breastshot water wheel, Uffculme

Eventually there were mills or factories at Cullompton, Culmstock and Chipping Camden too. The factory in Wellington specialised in flannel and that in Cullompton was operational from 1890 to as late as 1977. During World War 1, Fox Bros produced 8,000 miles of khaki cloth for uniforms, and 70,000 pairs of puttees a week.

### **The Woollen Outworker System for Spinning and Weaving**

Prior to mediaeval times, spinning was done in the grease in the homesteads and farmhouses of Exmoor and the hinterland of Exeter by women and children, using the easily-transportable distaff and spindle.



Replica Great Wheel at Dunster Yarn Market, built by Trevor Mills, his wife Tracey doing the spinning.

In the 12th century, the invention of the Great Wheel as a spinning machine (at which the spinner stood), increased productivity, improving still further around 1555 with the introduction of the Saxony wheel where a treadle with flyers and bobbins enabled the spinster to sit. Because of the price differential between washed and unwashed fleece, many farmers undertook the annual laborious task of washing the sheep, a practice which did not totally die out until full mechanisation in 1960. (Just think of the number of farm or field place names on Exmoor with "Sheepwash" in them). Shearing followed when the fleece was dry. Many mills had washing facilities consisting of wooden bridges extending out into the river or leat that enabled the unwashed fleece in baskets or perforated metal containers to undergo preliminary cleansing before proceeding onto a drying house.

### Spinning

To produce an even yarn the spinner needed to card the raw fleece, that is, to disentangle it and make a continuous sliver. Originally teazels (the ones with the straight spines, not the ones with hooked spines used for raising the nap of cloth) were used for this, but later "hands", fine wires set in a leather or wooden backing, became more commonplace. Yarn produced this way from short to medium length fleece also contained some short fibres and so was suitable for weft. Disentangling longer staple fleeces to render the fibres parallel suitable for warp was tough, men's work using metal combs, and needed a little oil to avoid breaking the wool. Sometimes disputes arose between brokers and spinners concerning theft or short-reeling which resulted in a prosecution. Several 17th century pieces of legislation dealt with the problem. Between 1612 and 1615 two women from Bishops Lydeard, one from Hawkridge, one from Dunster and two from Minehead appeared in court.

### Weaving

In general it took several spinners to supply one weaver. Weaving took place at homes in the villages such as Brushford (where in 1621 a man's will showed that he owned a loom and in 1626 another owned two looms), and Exebridge (where there was a weaver's shop) as well as in larger towns. This system of spinners and weavers as outworkers persisted from late mediaeval times until its decline in the early 18th century and disappearance at the beginning of the 19th under the increased pressure of mechanisation as part of the Industrial Revolution. The transition from homeworking to factory working proceeded at a more rapid pace for spinners than weavers. As late as 1705, the work of spinning was to be provided for poor people in South Molton, subsequent to which the Bluecoat Charity School was founded, the name referring to the colour of their uniform. Two parish looms were provided in West Buckland in 1687 for the use of poor unmarried mothers. Surprisingly, the 1921 census shows that for women, the fourth most common occupation was still weaving.



Replica 14th Century dressed loom at Morwellham, built by John Weddon

### How Goods Moved around Exmoor

The interdependence of wool and water for processing on Exmoor has been amply illustrated, but what about the movement of goods? For any holding which kept sheep, their raw material was easily to hand, but for many who were commoners, cottagers or landless, spinning and weaving were how they made a living. Woolmen or staplers, sometimes known as broggers (brokers) travelled in rural areas bringing fleece which had been sorted and prepared for spinning, and collected the yarn when the job was done. Until about 1830, there was little cart traffic around the hillier parts of Exmoor. The majority of hauling jobs were done by pack horse, whether wool, hay or manure. A census of horses in the parish of Molland taken in the Napoleonic Wars 1803 – 1815 gives a total of 87, 80 of which

were pack horses, and only 7 cart horses. Two types of harness were used: panniers (baskets) for dung or peat, with a trap door to allow the loose contents to drop out; or crooks (cradles) made of willow like a yoke sat on a pack saddle, for hay, sheaves or faggots laid lengthways and roped down. 240lb was the average weight of a pack that a horse was expected to carry. Packhorse bridges are still in evidence at Bury, Horner and many other places on Exmoor.



Bury pack horse bridge.

Without John Knight's road building across Exmoor in the 19th century, making what had previously been tracks into serviceable communication routes, the two-wheeled harvest carts would not have become common, nor the ensuing larger 4 wheeled wagons with lades fore and aft such as owned by the Quartlys of Champson, Molland.

### Dyeing

Dyeing either took place at an early stage, (hence the expression "dyed in the wool"), or after spinning in a hank or skein if weaving were to be of a medley, or when the cloth had been finished.

Although woad (*isatis tinctoria*), a very widely used dye plant giving blue, was grown in Somerset (half an acre is recorded as being grown in Selworthy by William Westcott), Lincolnshire and East Anglia, there was not nearly enough of it to meet demand in the dyeing of wool, so imports came from Bordeaux, Bayonne and Portugal, via Minehead and Bridgwater to dyers in Taunton. During the seventeenth century indigo was introduced in England by the Dutch East India Company, and by the end of the nineteenth century that was in its turn supplanted by the newly discovered synthetic indigo. Although indigo was cheaper and gave brighter, clearer blues it was not as colour fast as woad, and so woad was still used in a recipe to dye police uniforms up to 1932. Unfortunately both blue dyeing processes suffered from the undesirable side-effect of being highly odiferous since they used fermented urine. Woad, in conjunction with other plants such as weld (*reseda luteola*), which gives a yellow, gave a range of colours including several greens such as Saxon, Lincoln or Kendal, depending on which was used as the top or bottom dye. Woad also yields other colours such as pink when the exhaust (i.e. that which remains when the blue has been used up) is used with the mordant alum.

Madder (*rubia tinctorum*) roots, which give a red dye, were also imported via Bridgwater for the same Taunton merchant. The discovery of the chemically fixative properties of alum in the late 16th century expanded the available colour palette, especially when deposits of alum were found on the coast of Yorkshire.

The only remaining vestige of historical dyeing on Exmoor is at Dyehouse Cottage in Bury (c. 1755). An Ordnance Survey map of 1904 shows a leat there which would have made it a more controllable water source for washing and rinsing than the River Haddeo whence it came.

## Tentering, Raising the Nap and Cloth Shearing

After fulling, the cloth would have shrunk considerably, so it was stretched and dried on a tentering frame to ensure that the cloth was evenly tensioned to given dimensions. The tentering frame had the appearance of a long length of post-and-rail fencing in that it consisted of upright posts joined together by a fixed top rail. The bottom parallel rail could be moved up or down according to the width of the bolt of cloth being dried. Every three or four inches there were L-shaped iron tenterhooks pointed at both ends, the top ones being pointed upwards and the bottom ones downwards. The frames, or racks, were often in a field adjoining the fulling mill, giving rise to names such as "Rack Lane" in Exeter.

In Dunster, there were tenter frames on Grabbist Hill and on the side of the castle tor. In Dulverton, where tenterhooks may still occasionally be found on the ground, they were at Weir Cleeve atop the hill facing west.

Following on from drying, the cloth had its nap raised using an array of teazel heads and was then shorn off, the purpose being to produce a fine smooth surface on the cloth. Teazels (*dipsacus fullonum*, though there is some debate about this name) are tall herbaceous biennial plants which have stiff-headed spiny flowers with tiny hooks at the end of each bristle, which, when dried, raise the nap without tearing the fabric as metal would do. In the 17th century teazels were grown in the area between Taunton and Langport, particularly around West Hatch and Stoke Gregory. Using the teazel heads in a wooden frame called a handle and with the cloth hung vertically, work started with well worn teazels, proceeding later to new ones. Depending on the type of cloth the whole process could be repeated several times damp or dry, including on the reverse side. The handles were cleaned by children and put to dry in the handle house as in the photograph from Trowbridge.



Handle House, Trowbridge

Gig mills were a more mechanised way of raising the nap and despite earlier legislation preventing their adoption, they came to the south west in the early 19th century. In a gig mill, teazel heads were lined up in a long narrow wooden frame fitted to the side of a drum. The cloth moved through a series of drums thus reducing the time spent on raising the nap, but the resulting unemployment caused considerable social unrest. Typically, cloth which had required 100 hours of work previously could now be done by a man and a boy in twelve hours.



Gig Mill, Trowbridge

It was then the expert job of the shearer to trim the nap to make a smooth cloth using very sharp shears, which could weigh up to 31 pounds. Shearmen were the aristocrats of wool workers and were generally independent and self-employed. The shears were laid across the cloth with the lower blade flat upon it and the upper blade, to which it was joined with a flexible steel bow, inclined at an angle of 45 degrees. Trimming was usually done over a curved table surface.



Cloth Shears

By the late 18th century, machines called Harmer frames had been invented to replicate and mechanise the work of hand shearing. Their introduction a few years later caused as much rioting as gig mills had, nearly to the point of civil war in some areas when factories were burned. Handshears had almost disappeared by 1830.



Tuckers' Hall escutcheon showing the tools of the Guild members:  
teazel hand; shuttles and bobbins; shears.

Though invented by an American (Samuel Dore), a circular cutting machine was patented in England in 1794. It had far wider importance than working woollen cloth when its use was transformed into the circular modern lawn mower. In due course, when the rotary cutters eventually replaced the Harmer frames the inclusion into the factory system which shearers had resisted for so long became inevitable.

### **The Place of Wethers in the Story of Wool**

Today we consider that the commercial value of sheep lies in their ability to produce lamb rather than wool, whereas in the past the balance was skewed differently. Wethers (castrated male sheep) were kept on the moor, shorn annually, and fattened until two and a half or three years old when according to Charles Vancouver in 1808, they would yield "12 to 15 lbs per quarter of delicious mutton and 4 to 5 ½ lbs of wool at shearing valued at 9d /lb in the yoak (yolk, viz unwashed) or 13d /lb washed". At that time, rough fat and kidney fat also had value. For a contemporaneous price comparison, on August 22nd 1811, Mr Robert Lyddon of Edbrooke, Winsford, records that he bought 10 Horn ewes for £11, and a ram for £2. Almost 100 years later on August 20th 1907 at the Winsford registered show and sale the average price of 1,200 ewes was 42s, and that of 47 rams was £6. In 1909 Mr Lethbridge's fat wethers at the Plymouth Christmas show reached 30lb a quarter, and his first prize pen of 3 fetched £10 10s.



Wethers 1908, property of Mr John Robins, Lydcott Hall, at Barnstaple Junction railway station.

Winning at the Smithfield Market of December 5th 1938 in the various breeds carcase competition in a class of 20 entries, Miss Pelly of Lanacre's wethers took first and second prizes. Mrs Scrutton won first and second in the Three Best Exmoor Horn Wether Lambs class, quite an achievement for two Exmoor ladies. Wethers continued to have a strong place in Exmoor's ovine economy until meat-eating habits changed and the last large flock of them belonging to Dave Pile at Yenworthy was sold in the 1970s.

### 120 Years of Society Records

Returning now to the story of wool itself as seen through the lens of the Exmoor Horn Sheep Breeders' Society's (EHSBS) annual flock books, records show that members put considerable effort into showing in the breeding stock, wool and meat classes of not only local shows such Somerset County, Devon County and Bath and West, but also the Royal Show which at that time travelled round the country.

### Movement of Exmoor Horns at Home and Abroad

Exmoor Horns were exported worldwide. In 1906 shearlings were sent to South Africa for crossing with Merino ewes; four ewes and a ram went to Argentina in 1910; and the 1935 Flock Book has a picture of Exmoor Horn ewes in Belgium.

### American Exports

But perhaps the largest number exported was a group of 140 in 1911, the property of Alan Young Esq., of Watergate, Bulford, Wilts, flock no. 102. These were destined for the flock of F S Peabody, of Hinsdale, near Chicago who founded the Exmoor Association of America amidst a great press fanfare. George Cavan, who had been the first man to import the Hornies, and J D Evans of Sugar Grove, Illinois, were both enthusiastic about not only the hardiness of the breed, but also the deliciousness of the mutton.

In 1912 it was agreed that A C Young would take a further six ewes and six ewe lambs at his own expense, to represent the breed at the International Exhibition in Chicago in November 1913. A prize-winning ram, bred by H. Kingsford Lethbridge, and a ram lamb from the same flock were bought by the Society here to accompany the ewes. Ten guineas were also given to provide for three cups for Exmoors in Chicago, one of which was won by A C Young.



Chicago cups 1913

Photograph (following page) courtesy the Peabody Mayslake Estate, shows some fine specimens with lambs at foot.



Exmoor Horn sheep, Illinois, circa 1912

Mr Cavan had also purchased another 140 sheep in July 1914 for export to America, along with an additional 40 from A C Young ( 20 sired by Broford no.24, reg. No.443 and 20 sired by Bulford no. 7, reg. no. 420), though the outbreak of World War 1 leaves uncertainty whether they actually arrived. It seems that the hostilities put paid to further exports. Eventually the cups were returned and the Association disappeared.

At the 1913 Royal Show in Bristol D J Tapp won first prize in the Mountain and Moorland class with 3 fleeces from yearling ewes.

During WW1 farmers continued to provide food for the nation as well as clothing. In 1916 a letter to T D Acland Esq, Parliamentary Secretary to the Board of Agriculture, the Society solicited his assistance in making representation to the War Office regarding the poor sale price of wool, but eventually the wool was commandeered anyway at 3d per lb below market price with an extra deduction of 2lb in the hundredweight made by the buyers.

An unusual type of export came in 1919 when the generosity of all members enabled 50 ewes and a shearing ram to be sent to Serbia, whose civilian population had suffered dreadfully as a collective punishment for the assassination of the Archduke Franz Ferdinand.

### **Wool Research**

In 1923 the Royal Agricultural Society asked for fleece, skin and 100lb of wool in the yolk to be sent to Professor Barker at Leeds University for research purposes. T. Burnell's wool was selected, and its properties evaluated along with 26 other wools from British pedigree sheep. The results were reported in the 1924 Flock Book. By way of explanation – a “quality” is the number of single ply hanks measuring 560 yards capable of being worsted spun from one pound of tops, so the higher the number, the finer the wool. The woolled skin was judged to be 20% quality 50, 35% quality 35, 35% quality 40 and 10% quality 36, with average diameter 1/700 of an inch, equating to 36 microns nowadays. Prof Barber commented that Exmoor was the strongest of all the pedigree wools and concluded that it was one of the best, most promising wools for which he predicted a good demand.

### **Expansion in the 1920s**

Active membership of EHSBS rose considerably in the 1920s and peaked in 1926 at 192, with the average flock size of breeding ewes increasing to around 130. Exhibiting Exmoor Horns at national level raised the profile of the breed and led to enquiries from breeders further afield such as Gloucestershire and Sussex in addition to those already in Wiltshire.

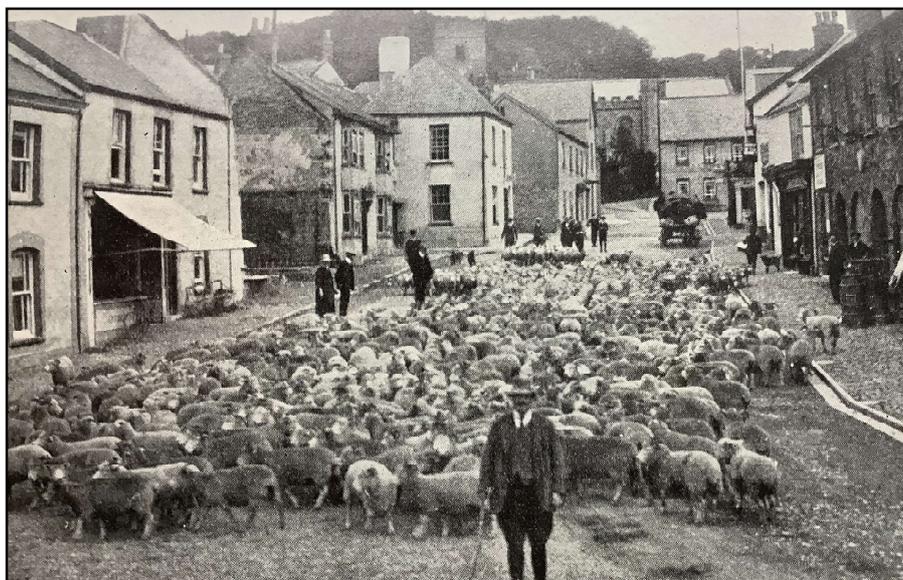


Prize winning ram, DCS and B&W,  
belonging to Mrs Shopee, Hollam. 1927



Prize winning shearling ewes, B&W,  
belonging to OT and AF Robins, Lydcott, 1927

Until Beeching wielded his axe on 30% of the railway system in the 1960s, and the cessation of 145 years of livestock transport by rail in 1975, live sheep from Exmoor had been moved around the country by rail. The Taunton (Norton Fitzwarren) to Barnstaple line had lairage facilities at such stations as Bampton, Dulverton, East Anstey, Molland, South Molton and by extension via the narrow gauge railway to Lynton, at Blackmoor Gate. Sheep were herded along droving routes to the station.



Exmoor Horns on their way through Dulverton to Salisbury, 1925

The railway system enabled large numbers of stock for breeding or fattening to travel from Exmoor to the Wiltshire Downs where the Amesbury and Military Camp light railway had a single track extension to a goods terminus just past Bulford. The fertility of the thin downland turf there benefited from what was called the Golden Hoof (i.e. sheep), using a folding system.

### **An unusual flock**

Of particular interest is flock no. 192, started in 1922, owned by Mr J H Torre Torr of Shoreham, Sussex, who often accompanied his flock returns with a letter containing interesting observations, such as that in 1929 “that the flock withstood the severe winter of 1928 on the poor hills of Sussex wonderfully well”. The drought of summer 1933 resulted in the death of many ewes on Exmoor in the following winter, probably as a result of fluke when it eventually rained, hence fewer yearlings for branding the ensuing spring. In contrast, J H Torre Torr reported very few doubles as a result of the dry summer, but that the “flock wintered well, better than for a long time”. His flock grew to a stable 600 until the intensive incendiary bombing of the South Downs during WW2 forced him to move to Crediton with a reduced flock.

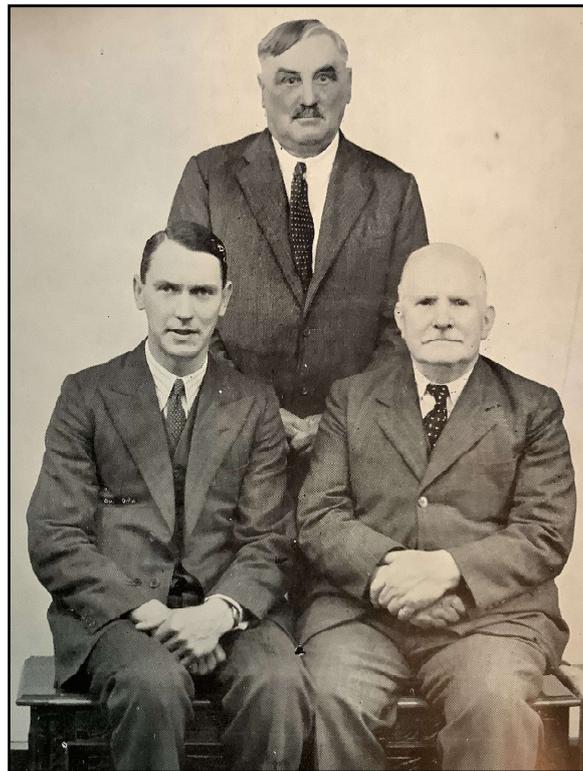
### Devon and Somerset Woolgrowers.

Prices for breeding stock declined steeply in 1931 and continued low for the following two years. Co-operation with the Devon Closewool Society, (founded in 1924), resulted in the creation in 1934 of Devon and Somerset Woolgrowers Ltd whose principal objective was the better marketing of wool. Wool was to be paid for according to grading, and sold to the most appropriate market, with members (entry fee 2/6d) receiving part payment on delivery and the balance on completion of sale, with a share in the profits at year end. The outline of this system stayed the same until disrupted by the Covid-19 pandemic in 2020. Shares were taken up at a rate of £1 per 100 fleeces and 1936 saw record prices achieved for wool, with a 42% increase in membership over two years. For their wool, farmers received

| Breed                       | Greasy/lb | Washed/lb |
|-----------------------------|-----------|-----------|
| Exmoor                      | 9½d       | 13¼d      |
| Closewool                   | 9d        | 12¾d      |
| Devon Longwool and Dartmoor | 6½d       | 7½d       |

Overhead charges were at 1d/lb with the expectation that these would be reduced by an increase in bulk to something closer to 5/8d as in Kent.

Changes to the Society's administrative arrangements came in 1938 when Mr Tapp's exemplary, hardworking assistant secretary Mr Dicker retired, and his place taken by Mr Yendell.



The EHSBS secretary Mr. D. J. Tapp (standing) with his retiring assistant W Dicker (right) and joining assistant W. E. Yendell (left) 1928

Reduced attendance at Society meetings during WW2 resulted from petrol restrictions. Despite debate about whether the Hill Sheep subsidy would be better as a headage payment or 2d per lb on wool, there was general optimism about the post war demand for breeding ewes, given that the national flock had declined by about a third, and recognition that sheep would be needed on the ground to restore soil fertility in the future. The Somerset War Committee had set up a flock at Combe, Exford 1942 – 1948, and Exford became a venue for a show and sale in lieu of Withypool, as Molland did instead of South Molton in 1945.

## The Post-WW2 Period

A warning came in 1945 when the NFU Livestock Committee was addressed by a major buyer of British wool expressing concern over the use of dyes in dipping and drenching. These had such a detrimental effect on the keeping quality of wool that he warned unless the practice stopped, he would be “forced to buy from the colonies”. One of the undesired side effects of a drench called phenothiazine was that it turned fleece pink or purple. Such drugs were in their infancy, their side-effects not always foreseen. Fly powders were similarly criticised though the use of bloom dips for Hornies had long since ceased. Later in 1949 there was a similar plea to reduce the use of tar at shearing time which would increase the price by 2d per lb.



Vintage sheep drench bottle, capacity one fluid ounce, used when the drench had been mixed with water.

## Grids and Gates Delineating the Commons

An aspect of transportation by road nowadays taken totally for granted on Exmoor is the provision of grids and gates. In the post WW2 recovery period, Tom Williams in the Labour government proposed that £4 million be spent as part of the Hill Farming Act of 1947. It included a grant for ploughing up, a lime subsidy and a contribution of up to half for buildings (re-roofing etc). Part of this was to be put towards grids and gates so that stock could go back on the moor and stop the nuisance of invading ponies. Anxiety over competition between Exmoor and Dartmoor for access to the grids and gates funding continued for years due to the slow roll-out of implementation, such that some farmers made a contribution towards the costs and still nothing happened, due to Devon County Council only enclosing one common at a time. Somerset farmers however got the grids without having to pay. To demonstrate the success of the grids, in 1949 Withypool Common had only 400 sheep, but in 1950 had 1,460 sheep, 110 cattle and 60 ponies. It was not until 1952 that grids were installed on the Anstey and Molland side of Exmoor.

Following WW2, Britain was hit by the worst snow storms for 300 years during the winter of 1947–48, which took a heavy toll of livestock, with an estimated 25% of hill sheep flocks lost nationwide. Mr Fulford, a principal of Bideford auctioneers Messrs Fulford, Philips Ltd, and incoming Society president for 1948, said he expected the number of packs (240lb) of wool to be considerably fewer in the coming season. Though absent from the annual dinner due to ill health at age 87, Mr Tapp's courtesy, tact and efficiency were fondly recalled.

## The creation of the British Wool Marketing Board

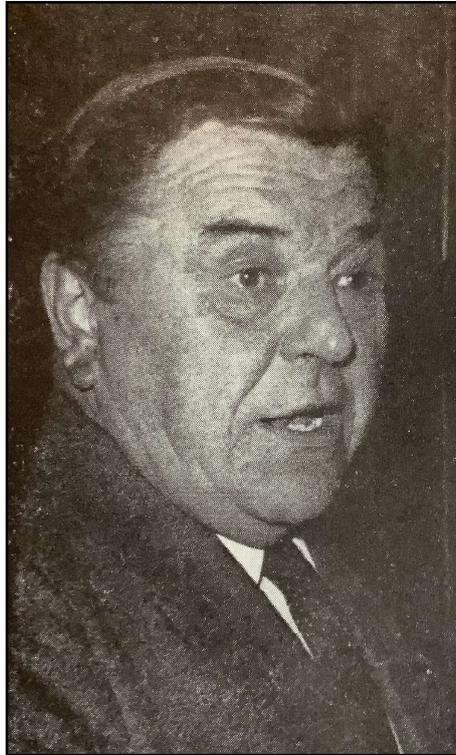
Wool had a landmark year in 1950 when Clement Attlee's Labour government set up the British Wool Marketing Board. By statute it was duty bound to accept all wool offered irrespective of breed, whatever the quantity or quality, and that obligation exists still today. Grading of wool had hitherto been done on farm by a merchant but would now take place at the grading depot. Wool continued to have a base price (effectively a subsidy in order to stabilise the market) until it was abolished by Labour in 1992. By then wool as a fibre was in decline in comparison with synthetic fibres. The first depot in the area was at Wheddon Cross, but due to access problems, and as a consequence of larger and heavier lorries, in 1973 the depot moved to its current site at South Molton.

The Festival of Britain 1951 embodied feelings of hope and renewal. Sir Robert Whaley-Cohen, whose Honey mead flock had numbered 827 in '44 (and expanded still further to 1,220 in 1965), exhibited his sheep there.

Social change was truly in evidence when ladies were invited to the annual Society dinner for the first time in 1952. Under discussion at the time was the need to bear wool quality in mind when choosing a ram, whilst keeping the breed pure. Another topic was cross-breeding to increase lambing percentages and / or wool quality, a drive which

had been pushed by the Ministry since 1940. This same subject surfaced again in the 1960s with Colbreds, Cheviots in the 70s, Frieslands in the 80s and Merinos in the 90s until the Exmoor Mule (Blue Faced Leicester X Exmoor Horn ewe) became, and remains, the stabilised favourite cross-bred ewe used with a terminal sire for meat production. Sheepmeat nowadays consists almost entirely of lamb rather than mutton.

Dartmoor membership of the Society rose during the 1950s and peaked around 29 – 30 in the 60s, staying roughly the same for another decade, such that members had their own Okehampton social event and dinner as well as joining Exmoor meetings. Much of this increase can be attributed to the hard work in the area by Tom Rook.



Tom Rook 1989

A thoroughly Exmoor man, he was an auctioneer with James Phillips and Sons and held the post of secretary to the Society from 1959 until 1990, overseeing many fluctuations in the fortunes of the area's farmers. At its peak, the total flock size of Exmoor Horn breeding ewes was 27,000 in 1981 (of which 8.7% were on Dartmoor) and the average flock size around 250. Since then the total flock size has decreased gradually to around 10,000 and the average number per member has dropped to below one hundred, as recorded in 2020.

### **Flock statistics and the rising importance of breed data**

The two graphs at the end demonstrate geographic distribution and size of flocks. For consistency in collating the raw data that formed the basis of the graph entries, the following criteria apply:

- An active member of the EHSBS is one who is fully paid up and makes a flock return for that year
- The number of sheep is taken from the number of breeding ewes, thus does not include shearling ewes or rams.
- "Away" members are those outside the Greater Exmoor or Dartmoor areas.

The reason for excluding those who haven't made a return is that in years when returns are low (e.g. 34% missing in 2002) the average flock size would have been disproportionately skewed.



Harton Farm wool loft above the cider house with heavy wooden wainscot mortared to inside wall, and west facing wall rendered

### **Science and the Society**

Towards the end of the 20th century there had been increasing interest in minority breeds of all sorts of livestock animals, spurred on by RBST campaigns. In this vein, the Society had been contacted by Dr Kate Byrne of the London Institute of Zoology concerning the collection of DNA hair samples for a study. Fifty six samples representing a diverse geographical dispersion were collected in September 1997 from George Richards at Skilgate, Alan Collins at Withypool, Graham Leeves at Simonsbath, Lindy Head at Oakford (mostly Molland bloodlines), David Ridd at Challacombe, Dave Westcott at Porlock and Carol Burge at Oare. According to comments made by Professor Mike Bruford of Cardiff University, the results showed that the Exmoor Horn harboured the greatest diversity of all UK sheep breeds, and many of the hill breeds, than had hitherto been measured. The data also informed an academic paper published in 2006 called Genetic Diversity and Sub-division of 57 European and Middle Eastern Sheep Breeds.

When the government launched its National Scrapie Plan in an effort to remove this incurable TSE disease from the national flock in the early 2000s, there was even more interest in genetics. Eight members volunteered 11 rams which were going to slaughter anyway, from which 1,452 semen straws were collected, unfortunately with minimal documentation. It coincided with considerable concern over the vulnerability of minority breeds should there ever be another catastrophic disease outbreak such as Foot and Mouth in 2001 which had decimated Herdwicks. F&M focused attention on the need to be able to rebuild a breed from stored genetics in the same way that Kew Gardens stores plant material.

### **The F&M disaster**

Tremendous challenges to all livestock farmers came with the new millennium, but especially for sheep farmers in the South West and Cumbria. By good fortune, although North Devon and other outlying areas suffered greatly from F&M and the contiguous culls, the central grazing area and commons did not. Many accounts tell of political ineptitude; ministerial dishonesty; MAFF (a predecessor of DEFRA) veterinary incompetence; lack of foresight; inability of civil servants to understand conditions on the ground; absence of organisational capability – all of these failings contributed to a sense of fear amongst farmers whether their stock was culled or not. The closing of markets with subsequent derisory payments made by slaughterhouses, plus the severity and ever-varying and unpredictable movement restrictions instilled a deep worry for future livelihoods. As some farms waited weeks for their culled stock to be collected, the SW wished for the pragmatic problem solving of the army and its own version of Lakeland's Brigadier Birtwhistle. Anthony Gibson's daily NFU news briefing on television was a lifeline for many and was the only reliable source of information. The experiences of a serious outbreak of F&M in 1967 seemed to have been forgotten.

## **Promotional Funding**

In 2005 the Sustainable Development Fund was launched by government with EU money. Using the good offices of Ian Rigby, a marketing consultant, the Society made a bid for some of this money and was awarded a grant of £42,000 over three years from 2006. Its remit was to promote the Exmoor Horn breed by a variety of methods which included the provision of a trailer complete with hurdles and show stand (display screens, furniture, lighting, flooring etc) for use at large events such as DCS and NSA gatherings when Richmond Harding would drive it. Other promotional tools included the development of a website; printing of leaflets and a glossy brochure; publication of a 24 page children's colouring book telling the story of Exmoor farming designed and written by Chris and Tortie Eveleigh; financial assistance for members at large shows, and the test-marketing of Exmoor Horn meat at four quality restaurants.

At the end of the SDF project in 2009 it was reported that the objectives had been achieved inasmuch as the Society had gained 22 new members with mostly small flocks, and the number of ewes had increased from 11,728 to 13,730.

Meanwhile, Ian Rigby's work continued when Rural enterprise Gateway offered £1,500 for him to organise a Pioneer Meat Group of 6 -8 members who would work on quality standards for lamb and how to sell direct to restaurants and customers. A meeting in February 2010 confirmed that if members put in work to the value of £2,900, the Society contributed £2,000 and so did the Exmoor Society, it would secure funding of £20,700 from SDF, REG and North Devon & Torrridge Leader 4, to be spent on training for slaughter and butchering demonstrations and equipping members with basic skills in sales and marketing. However, low member participation, due to time pressures on already busy farming lives, meant that the insufficient response resulted in withdrawal of the application.

As part of the breed promotional effort, the Exmoor National Park information centre in Dulverton offered the use of their exhibition space for two years from 2010 to display all things Exmoor Horn free to the viewing public. At the end of it John Tucker, then President, received an award on behalf of the Society "in recognition of its contribution to ensuring the continued existence and viability of locally distinctive breeds of livestock through ongoing work to promote their wellbeing".

Wool had come to prominence again in 1999 when David and Sally Basford (for E A Westcott and Sons) became runners up in British Wool's Golden Fleece Award for Southern England. Later, Exmoor Blueface was the name adopted by British Wool for the fleece of what was known in livestock circles as the Exmoor Mule viz. Blueface Leicester on an Exmoor Horn ewe. This was the start of a new era for our wool.

## **A 21st century resurgence in small scale woollen activity on Exmoor**

High street wool shops had largely disappeared by the end of the 20th century. The use of wool had been slowly diminishing since the 1970s, due mainly to the convenience of synthetic fibres. It took nearly 50 years before the polluting aspects of polyester, nylon and acrylic became obvious.

### **Fox Brothers.**

However, one bastion of the south west woollen industry still extant was Fox Brothers' Tonedale Works at Wellington. The company had won a second Queen's Award in 2006 in recognition of their manufacturing of the world's lightest weight wool and cashmere flannel. Using a new version of one of the 1782 pattern flannels, and in their tradition of utilising heritage to inspire the future, they had created an all-British wool fabric for their autumn / winter 2007 collection. Subsequently, some of this cloth was used to make a traditional three-piece suit for Harry Parker of Stourton, Wilts.. Harry's suit had been bespoke tailored by Anderson and Sheppard and he still wears it with pride when judging cattle. In 2010 Harry took some of his flock (no. 192) to Savile Row, which had been grassed over for the day, with the help of Ben Blackmore and his dogs. The sheep were brought to London in the same way that the annual sheep drive crosses London Bridge toll-free when the Freeman (and Women) of the city of London exercise their right to do so.

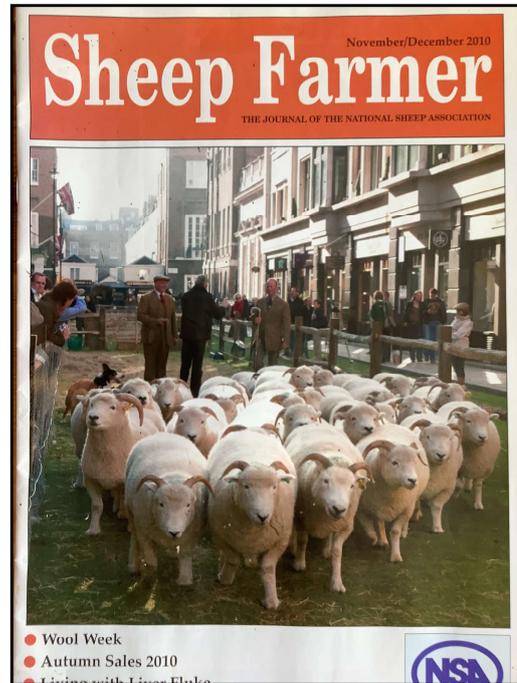
The photographs show Harry, Ben and Deborah Meaden, who along with Douglas Cordeaux had taken over Fox Brothers in November 2009, with the Exmoor Horns.

In 2012 Fox Bros requested 500-1,000kg of 2T Exmoor Horn wool for their West of England cloth. Members with larger flocks who were approached at a meeting felt that the reward for the extra work involved in separating shearling from older fleeces was inadequate, so the partnership never came to fruition.

Hornies again went to London in 2016.



Harry and Deborah Meaden,  
Savile Row



National coverage of Savile Row



Weaving suit cloth at Fox Bros

In the early years of the 21st century, John Arbon's Fibre Harvest spinning company came from Uffculme to South Molton where he established his worsted spinning mill using vintage machinery. When, in 2013 the Exmoor Horn Sheep Breeders' Society held a vote on whether to contribute funding to setting up its own woollen products company, Exmoor Horn Wool (EHWL), it was John who spun the first batches of Exmoor Horn fleece. The company's original ten shareholders, of which the society was one at £5,000, were helped with initial costs by a grant of £11,000 from the Exmoor National Park Authority.

It is that journey of producing goods from Exmoor's most valuable commodity which has made a contribution not only to preserving a national historic industry, but also to safeguarding the continued existence of our precious special sheep, which we now record.

## TWENTY FIRST CENTURY WOOL PROCESSING AS EXPERIENCED BY EXMOOR HORN WOOL - OUR STORY

For consistency and reliability at the spinning stage where a weak staple might lead to yarn breakage in the machinery, EHWL bought wool which had been rigorously graded at the BW South Molton depot. Effectively this meant buying back from members' pooled production, but ensured uniformity. Grade 674, Exmoor Horn no.1, constitutes 70% of its DK knitting wool, with the remaining 30% at first Exmoor Blueface (Blueface Leicester X Exmoor Horn), later Fine Blueface Cross (grade 555) thus giving a slightly softer handle. Cushions, pullovers and throws used this same later blend.

Sock yarn uses a ratio of 60:25 with added 15% nylon for extra durability.

Graded fleeces are compressed into bales of around 350kg and grouped into lots of 8 tonnes for sale at auction. Initially, using an agency buyer we were able to buy just one tonne, though later, when the system changed, we were able to purchase just one bale. Here are some of David Bawden's fleeces being graded by Aaron Chilcott in 2019.

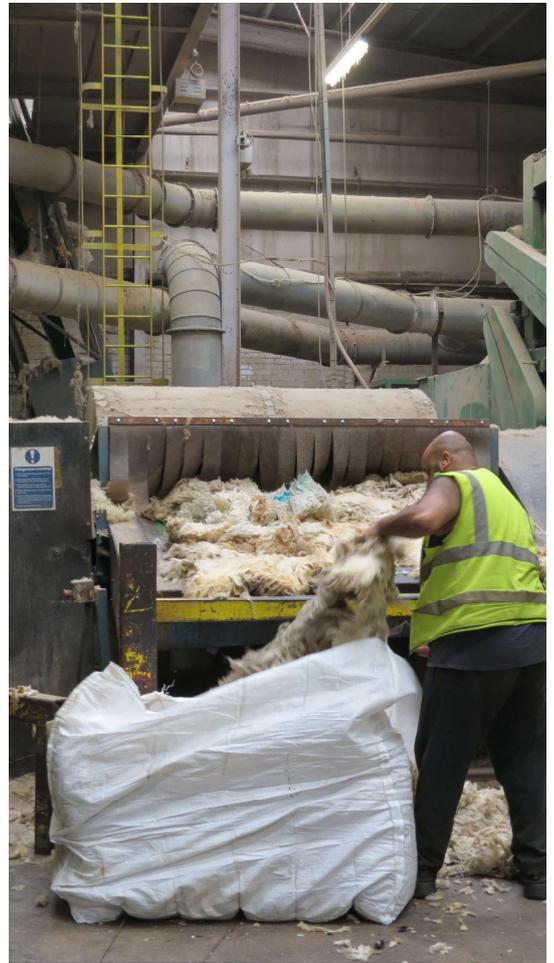


Grading at South Molton

Next came scouring to remove dirt, (especially that which is held in the tip of the lock), impurities and extraneous matter, its purpose unchanged over the centuries. Ours was done at Chadwick's, though these photographs illustrating scouring were taken at Curtis Wool's Howarth plant. The Samson machine breaks open a bale at a time releasing the dirt which is collected for use as cabbage fertiliser. The Piranha is even tougher and rips open cotty (matted) fleeces. These machines deliver to a mixing chamber, layering backwards and forwards to get uniformity before sections are taken out for scouring.



The Samson machine



The piranha



Cabbage fertiliser

There are four gigantic baths of descending temperature. The ascent to the first bath, which is at 65°C minimum, is shown below. After the first bath the fleece is squeezed, the sludge being used as rhubarb fertiliser, before proceeding to the second where detergent is added. Rinsing takes place in further baths, and bleach (which works best at 41°C) is added where necessary in the fourth bath.



The ascent to the first scouring bath

Inevitably one of the by-products of scouring is lanolin. From fine white wool this will be of sufficiently good quality to be incorporated into cosmetics. Brown lanolin is not wasted however, since it is high in protein, and is exported to the Far East for incorporation in prawn feed.

Following on from scouring comes drying. Finer wool such as merino needs lower heat than a coarser wool like Welsh mountain.



The dryers



Dried Egyptian wool for insulation

The dried Egyptian wool shown above will be used in either thermal or acoustic insulation.

The principles of the large scale factory-based operations were replicated on a micro scale at Harton Farm in EHWL's attempt to shortcut a very long lead time for spinning in 2016. 30 blended fleeces in batches of 5 at a time, one in each of the baths below, took many hours to process, and then up to 14 days to dry on wire trays. It was an excellent demonstration of how mechanisation saves effort and how industrialisation copes with volume and scale.

The yarn from this farm experiment was woollen spun by Paul Crookes at Halifax Spinning. It eventually became our 4ply 50 gramme doughnut balls in 5 colours, our only yarn that was not worsted spun. A picture of woollen spinning at Paul's follows later.



Domestic-scale scouring



Domestic-scale drying.  
The nearer fluffier ones are drier

## Worsted spinning

Carding, which disentangles fleece and aligns it all in one direction producing a sliver, is a common first stage to both woollen and worsted spinning. Worsted spinning has another stage, combing, which renders all the fibres parallel, with no short fibres, thus making tops.



Carding machine for woollen



Slivers

The following photographs are an amalgamation of pictures from John Arbon's artisan mill using vintage machinery in 2015, from Curtis wools and from Laxtons newly relocated Guisley mill in 2017 and 2019.



Blending tops (gilling) to get a consistent end product



Combing



Making tops, first noil up

During the combing process, the short fibres are removed. The “waste” that goes up the tube is 1st noil, and can be recombined and used in woollen spinning; what goes down is 2nd noil which goes to make felt. In the resulting tops there is still no twist. The width of the tops needs to be reduced so immediately prior to spinning the drawing (first roving) and second rovings do this. Twist is introduced during spinning.



Drawing / making the first roving



Making the second roving, still no twist



Checking rovings for faults

What has been spun is a single thread, but usually a yarn is made up of several threads, so now these must all be plied (or folded) together. Our DK (double knit) yarn specification is described as 3/7nm, which means that it is 3 strands of a quality where 1 kilo would roll out to 7 kilometres. Our sock wool is described as 1/8.5nm, and our pullover / throw wool is 2/8.5nm. The limit of what our particular blend is capable of is 8.5.



## Woollen spinning

Part of the woollen spinning process and our 4ply balls. Woollen spun yarn has more “loft”.



Unspun fibre, no twist yet



4 ply donut balls

The specification for our 4 ply handknit is 2/14, where 14 is the Bradford count, an older way of describing yarn.

## Dyeing

Dyeing is part science, part alchemy. EHWL uses synthetic dyes because they have greater reliability over a large batch – they are more consistent, more colourfast and have better lightfast qualities than natural plant-based dyes which can vary from day to day and according to the seasons. From year to year even the colour of the base material, fleece, can change slightly, so small adjustments are made by eye.

Most of our dyeing has been done by Etrick Yarn Dyers, Hawick, Scotland, though some also by Paintbox in Liversedge. There are photographs from both.

A dyebath rises by a degree a minute up to about 80°C, except when dyeing Nomex, a racing drivers’ fire protective fabric which needs 140°C. There are about 100 basic colours, formerly by-products of the pharmaceutical industry, from which an infinite number of shades can be created. A spectrometer works out the proportions of colour needed for a recipe, calculates the concentration and time required for dyeing, then if any adjustments have to be made after checking by eye and under different lighting conditions, it reports if the new formula might be beyond the realm of the feasible.

In the photograph of the empty dye vat you can see where steam or water enters at the base. The water flow then pushes and pulls to ensure an even colour distribution throughout the cones. Each cone is a perforated plastic tube wound with about a kilo of yarn. Chunkier yarn can be dyed in hanks



Empty dye vat



Yarn on cones ready for dyeing



Chunkier yarn in hanks

The next pictures illustrate how a yarn picks up dye, and then absorbs the contents of the bath almost entirely. Wool and silk are very efficient at using up the dye, but cotton absorbs only 50%.



Green dye bath



Green dye exhaust

EHWL started with only six colours named after landscape shades: heather purple, dark skies blue, fern green, gorse yellow, earth red and natural. In 2018 the palette was expanded with pastels that took the colours around Bossington as their theme; sea mist, sea green, pebble, barley, bracken and hedgerow. The thirteenth colour, whortleberry was added in 2019.

After dyeing, handknit undergoes steaming and conditioning at Edward Hill's Hollings mill to restore its natural handle. Here also the final stage of balling into 100g balls and attaching the ball bands printed for us in Porlock takes place.

### Sock making

At EHWL's launch on October 27th 2015 in Dunster, knee length woollen shooting socks were on display along with the DK knitting wool. The names of the two tone colour combinations (plain rib knit leg, with contrasting colour in toe, heel and as a patterned band in the turnover cuff) were chosen to link with the landscape and the names of the shoots in that area. Traditional packaging was designed in house to be adaptable to show off the first four colourways, and a further five added later.

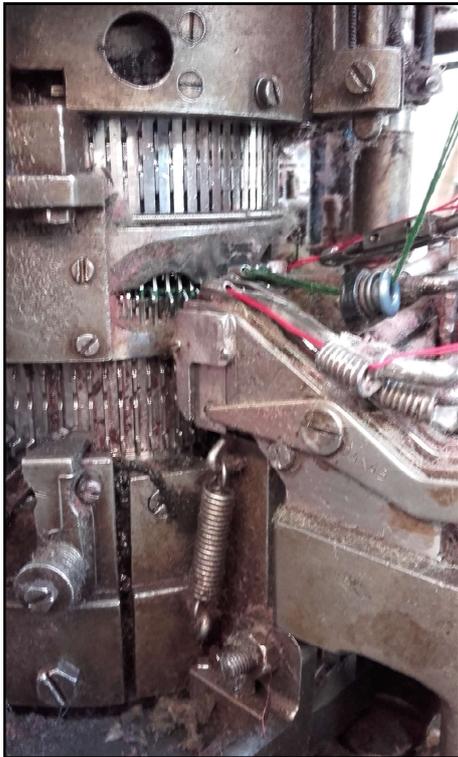
For Christmas 2016, EHWL ran an advertising campaign promoting the shooting / welly socks.

Ricky and Sarah wear the Porlock and Exford colourways.



Ricky and Sarah Atkins at Wellshead

The majority of our socks have been made by the J Alex Swift company at Loughborough, where the photographs were taken. Basically socks are made as a long ribbed tube with stitching decreases and increases to form the heel, with the cuff as an integral part. The standard knee-length socks were 96 stitches round with rib width for the smaller sizes narrower than for the larger. Any models with a cushion-foot sole (loop knit inside for added comfort) such as the Luxborough used 84 stitches. There are two ways of creating a sealed toe – by machine sewing across the width of the foot, or by hand linking where each individual stitch is picked up. Hand linking is an immensely skilled and labour-intensive task.



Sock knitting process,  
needles forming the tube



Sock making machine



Machining across sock toes



Hand linking of sock toes

## 2016, a good year for Exmoor Horn fleece

As well as appearing in the sock campaign, Ricky Atkins, farm manager for Henry Rawson at the Wellshead estate, submitted an Exmoor Horn entry in a British Wool nationwide inter-breed fleece competition, where it came second. Pictured here with the Reserve Champion accreditation are Brian Boundy (L), South Molton senior grader, Ricky, and Steven Spencer (R), BW Bradford.

As ever, the Dunster Show in August always has a good number of entries. The record was 69 in 2016. Below Aaron Chilcott is being tutored by Steven Spencer in 2019.



Wellshead fleece Reserve National Champion



Steven Spencer and Aaron Chilcott  
judging at Dunster 2019

## More socks

In 2016, House of Cheviot, a specialist upmarket sock maker in Hawick, Scotland agreed to trial our yarn to make an exclusively designed shooting sock. The inspiration for the unique Fair Isle pattern on the cuff ( in purple, green and pink) came from an abandoned poacher's hat found at Harton Farm. The cuff is knitted separately from the shank of the sock and sewn on later, so the stitching is effectively at right angles to the leg. The Filleigh and Challacombe socks, with two different arrangements of the three colours, came on stream in 2017. To complete the traditional theme, House of Cheviot also produced purple knitted garter ties for us.



Filleigh and Challacombe socks

Another sock development came to fruition in April 2019 with the arrival of the “Quantocks” Walker socks (other Exmoor-specific names having been taken). These have wider appeal than the knee length socks and were designed as calf length with a cushion foot and lightly elasticated cuff. They were again knitted by Neil Swift. With a different market in mind, the packaging was redesigned with a new logo, the sheep’s head slightly to one side, commissioned from First Design Print in Porlock.

A cost analysis revealed that only 1% of the sock production costs could be attributed to raw material purchase. Processing such as spinning accounted for the majority of costs, an illustration of the penalties of small-scale manufacturing.



Quantock Walker socks, the complete range

### **Pullovers**

Early in 2016, a collaboration developed between EHWL and British Alpaca Fashion. Based on Exmoor near Dulverton, they had great expertise in producing alpaca yarn for machine knitting and eventually purchased their own machine rather than buying time slots and knitting capacity on upcountry machinery. By working with them and Phil from Two Rivers Mill in Dorset we were able to ascertain that a 100% Exmoor Horn wool pullover was not feasible, thus confirming the need for the 30% addition of Blueface Cross fleece.

In conjunction with BAF and having chosen three designs, water ripple (green and purple), falling leaves (green and blue) and snowflake (red and white), samples were made using factories in the Midlands. However, by 2018 it was becoming obvious not only that our yarn wasn’t suited to the Preston’s knitting machine, but that neither could any garments commissioned elsewhere be finished to an appropriate standard. We needed seams to be linked not oversewn, so eventually the project was abandoned.

Almost at the same time, in 2016/17 we had also designed knitted woollen cushion covers using our DK natural wool. Five patterns went to the sample making stage satisfactorily, but a time-consuming search of knitting companies, even of universities with textile departments, did not readily find anyone willing to accept small orders. Eventually we discovered Chris Bingley at Crystal Knitwear, a fan and supporter of British wool, who agreed small runs of the “Oakford” cushion cover design, plus another smaller cushion cover using popcorn stitch.

It was Crystal Knitwear who finally brought EHWL pullovers into production. The dark blue v-neck one was followed by pink, red and pale blue round neck ones in 2018. Using waffle stitch, the pullovers are heavyweight, warm and robust with a high quality of finishing.



Three prototype pullovers,  
development later discontinued



Two of the cushion designs  
that went forward to production



Pullovers knitted by Crystal

**Fair Isle pullovers**

Following an approach from a designer at Woolfest , and using as a starting point the Poacher’s Hat pattern, EHWL commissioned Linda Moss to create a traditional Fair Isle DK knitting pattern in two colourways, with EHWL holding the copyright. These were then knitted by a professional knitter who had worked on several display samples previously, and after a few adjustments were made the patterns were released in early 2020 just as the Covid-19 pandemic was gathering pace. Matching hat patterns in kit form for both the Porlock Bay and Exmoor Flora colourways were launched in 2021. Four other different colour schemes for the pullovers (Earth, Berry, Pasture and Hedgerow) followed in 2022 after customer feedback.



Porlock Bay Fair Isle pullover knitted by customer Debbie Conway



Fair Isle hat in Exmoor Flora colourway to match pullover, knitted from a hat kit

**Weaving**

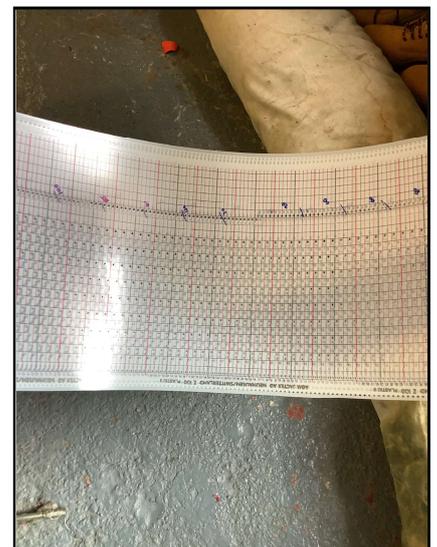
Holding around 60kg of grey, green and purple 2/8.5nm pullover wool still in store, EHWL decided in 2021 to investigate the possibility of weaving this into throws. During the pandemic, with movements often at a standstill under lockdown, we were able to establish remote contact with Bristol Weaving Mill. They provided us with three possible designs, using the proportions of wool we had at our disposal, from which we chose one to go into production called “mirror” on account of its grey centrepiece. A plain 4 4 twill featured in a hand-woven sample, but this was changed to 2 2 twill at production time, with a washed finish, not brushed , there not being much point in brushing a worsted fabric. The story of weaving in spring 2022 is told in the pictures below.



Warp roller behind loom



Punched card loop which tells the loom what to do for the entire 177 x 200cm design



Close up of the punched card loop



The machine that makes the holes that create the instructions on the loop



Selvedge edge keeping the cloth tension, later cut off



Weft shuttles, one each coming from right and left, which meet in the middle

The selvedge edge is shown on the left. It remains on the cloth until after washing and drying so that the cloth can be properly reshaped, then it is cut off. To the immediate left of the woven cloth is an almost invisible line of stitching which keeps the weft threads in place so that the edge of the throw will not fray.

Weft shuttles pull the weft thread across. Amongst the warp threads are two silvery shuttles which look like two metal "beaks". The left hand one delivers the weft thread halfway from left to right, then the right hand one takes it over and moves left to right to complete the transverse action. When the left hand shuttle returns to the left, the thread is cut, and this is visible beyond the selvedge. The header strip is not part of the pattern, but comes halfway through the weaving and enables the cloth roller to be moved before it gets too heavy to lift, which it would be if it were totally full. The header strip is cut across at mid point and stitched together again (rejoined) later because the finishing processes require all the throws to be in one continuous loop.



An extra piece of cloth which can be cut across so that the cloth roller can be unloaded before it becomes too heavy



Heddles are wires that can raise the upper sheet of the warp



Heddles from a different angle

Heddles are pieces of wire with a small loop in them through which the warp yarn is threaded, attached to a frame. The frame is programmed to lift according to the pattern so that the weft can pass through, thus a particular design could have many different frames.



Warp winder



Cones holding weft yarn

### Wool Shows

Over the years EHWL has participated in many shows – everything from a village event to the large wool-focused shows such as Wonderwool in Wales, Woolfest in Cockermouth, Cumbria and Yarnale in Skipton, Yorkshire, at the last two exhibiting livestock as well. But by far the most important since 2018 has been Dunster Yarn Market on the first Sundays in the month from June through to September. EHWL displays its goods on the same ledges as used for wool 400 years ago, though today the onlookers are more drawn by Julian Branfield’s shearing demonstrations, where he uses both electric and blade shears, than the goods. Together with a commentary by Brian Buckingham, members of the public can ask questions about sheep in an informal and light-hearted way that builds goodwill.



Julian Branfield’s blade shearing demonstration at Dunster Yarn Market



Hector standing up behind the display at Woolfest, Cockermouth, Cumbria

## The association with Vispring

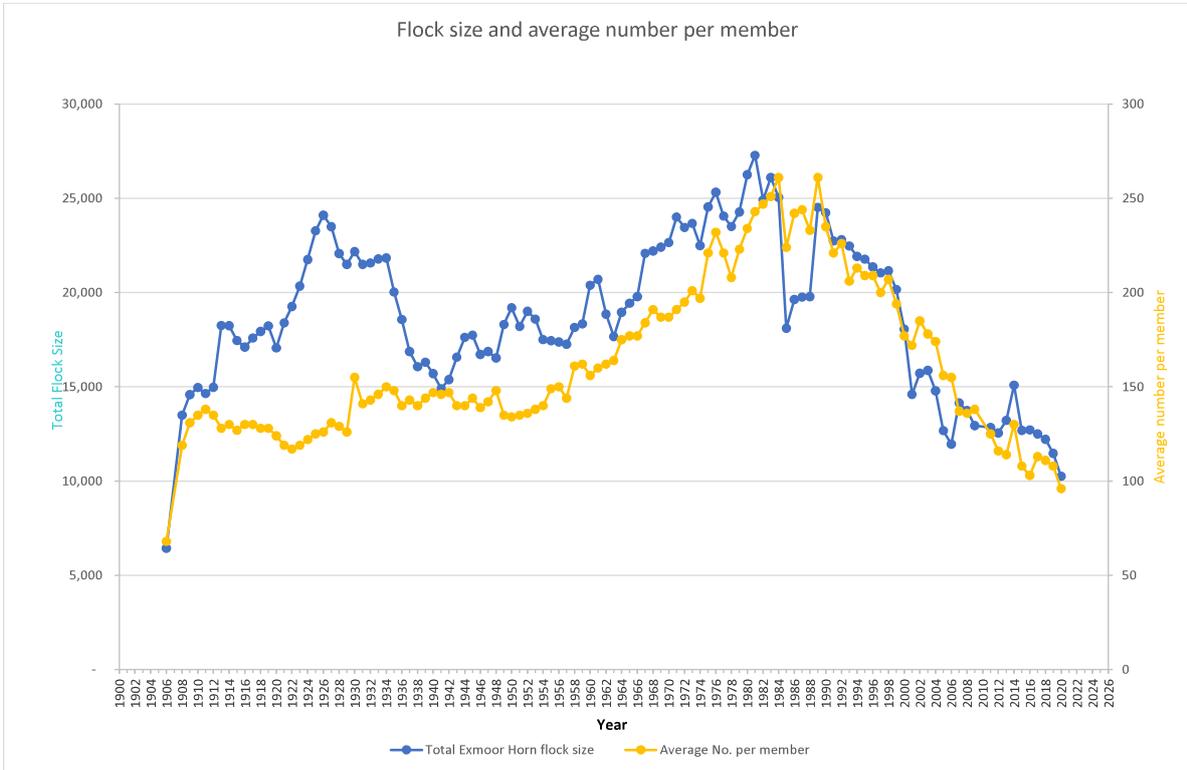
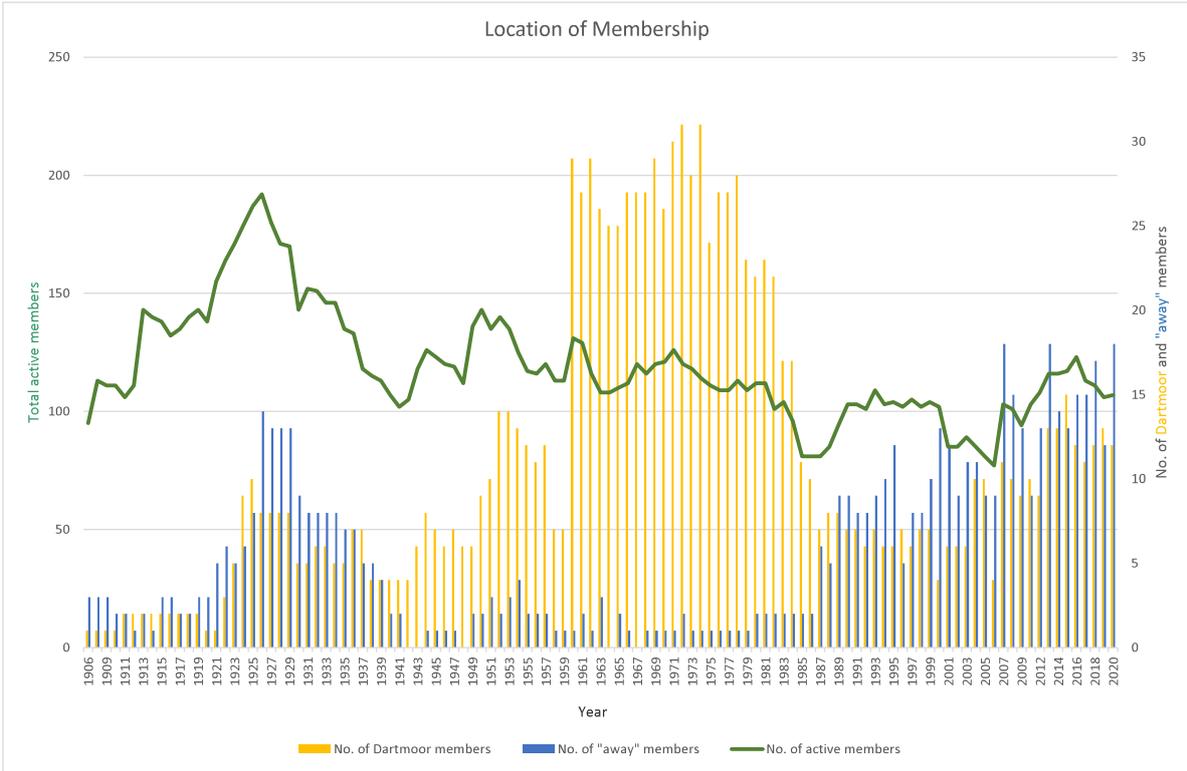
During the pandemic in 2020 and 2021 social activity, especially indoors, was severely restricted or even forbidden. The impact of this on the wool trade was not generally understood, but given that 60% of British wool goes into carpets, it is obvious that if hotels, cruise ships, casinos and the like are closed, then the demand for new carpets is non-existent. However, furlough schemes and working from home meant that people were spending longer in bed, and so appreciation of the beneficial qualities of natural fibres in bedding grew. A luxury bedding manufacturer in Plymouth, Vispring, approached EHWL with a proposal for supporting Exmoor Horn farmers through the pandemic. When they launched “Lana”, their new limited edition range of beds with Exmoor Horn fleece in the mattress covering, they pledged to donate an extra 50p per kilo for every tonne they used into a central pot, to be distributed in March 2022 amongst Exmoor Horn farmers in proportion to the percentage contribution they (the farmers) had made to the total clip of 674 in 2021. EHWL in conjunction with British Wool was pleased to be involved in the delivery of the scheme.



Society members in the Vispring showroom on a factory visit September 2022



The rosettes for fleece won by David Butt's Rupert in 2022



## Acknowledgements for photographs

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Socks: pictures Lindy Head with thanks to J Alex Swift

Morwellham dressed loom: courtesy Anne Young

Exmoor Horns near Chicago: courtesy Forest Preserve District of DuPage County

Porlock Bay Fair Isle pullover: courtesy Debbie Conway

Weaving: pictures Lindy Head with thanks to Bristol Weaving Mill

Rupert's rosettes: courtesy David Butt

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