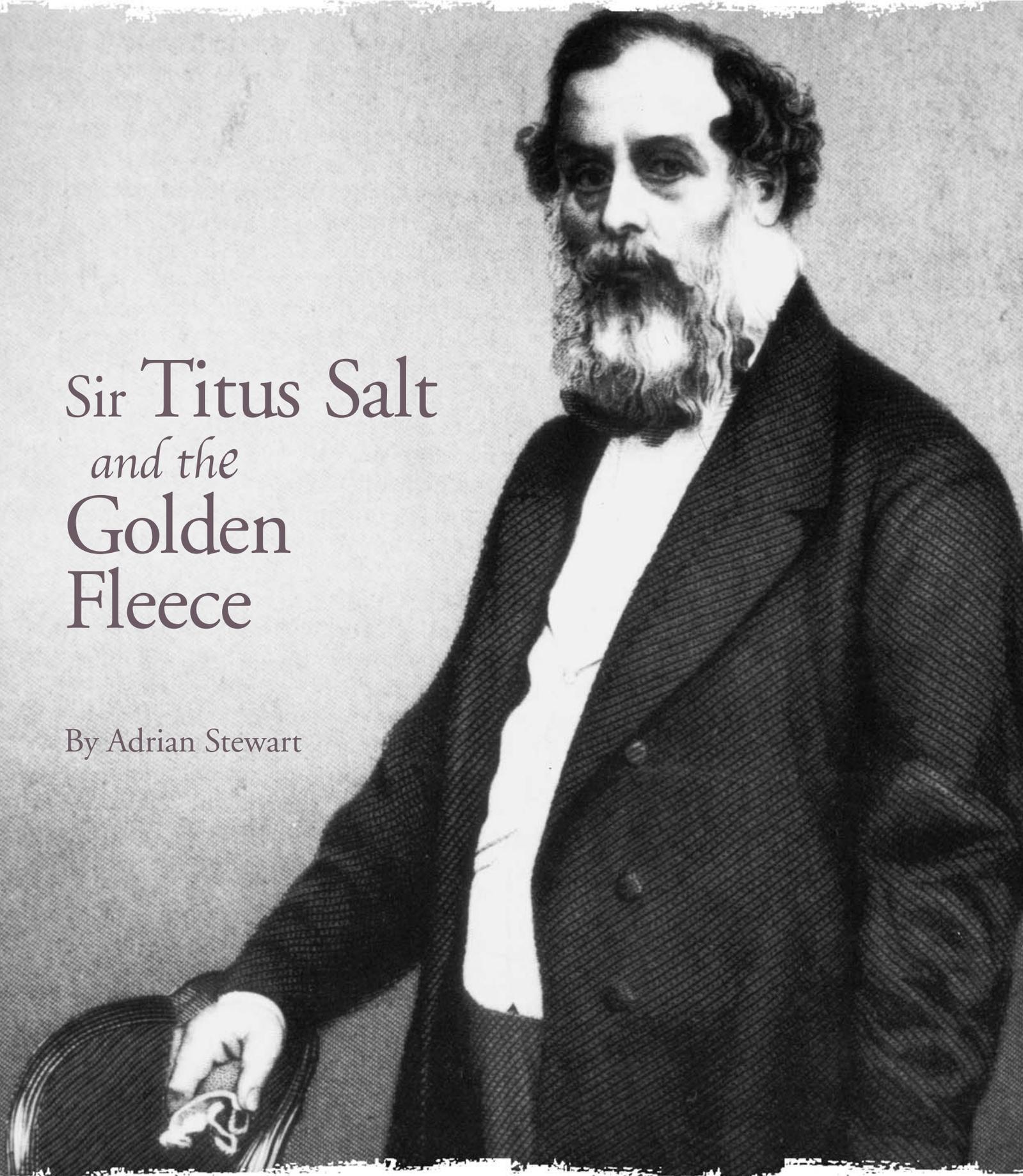


Sir Titus Salt  
*and the*  
Golden  
Fleece

By Adrian Stewart



**I**n 1844, Queen Victoria despatched two alpaca fleeces from Windsor Castle to the Salt's Mill in Bradford and was delighted with the fine, light, lustrous material into which Titus Salt's spinning machines and power looms transformed them. This was the beginning of what can only be described as a revolutionary turning point in the history of alpaca fibre, and is the point in time that alpaca changed from being a utilitarian fibre of the native Andean people, the Quechuas and Aymaras, to being a luxury fibre enjoyed by millions around the globe.

Some of you may already have heard something of Sir Titus Salt and his wonderful adventure with alpaca fibre in the 1800's but I suspect none of you will have heard what I might call the full story. I hope you enjoy reading it as much as I enjoyed piecing it together.

Titus Salt is something of an enigma. He was one of England's most prominent businessmen and enjoyed a great reputation for philanthropy, having donated money to educational, religious, and medical charities. Yet despite his widespread fame, Titus was a withdrawn, reticent, intensely private man. He found public speaking excruciatingly difficult and was, by general agreement, not very good at it. He was also an unenthusiastic letter writer. Very little survives of either his private correspondence or the records of his magnificent business.

Titus was born at the Old Manor House, Morley, on the 20th of September 1803 and, according to the record in the family Bible at "four o'clock in the morning." Titus was to be the first of a large family consisting of three sons and five daughters. As soon as he was ready, Titus went to school and learned to read. At the age of about nine, he went to school in Batley six miles away. Titus walked to and from school with his friends each day, the journey taking them about an hour or so in each direction, longer when it snowed. His lunch consisted of an oatcake which his mother baked and milk, which he had taken from the family cow before leaving home in the morning. At home, Sir Titus was taught by his mother to read the Bible each morning and evening. As a young boy, he was given a pocket Bible, in which his father wrote the following:

*"May this best volume ever lie,  
close to thy heart and near thine eye;  
Till life's last hour thy soul engage,  
and be thy chosen heritage."*

Later, as a father himself, Titus would present each of his 11 children with a pocket Bible and write the same lines in each, just as his own father had done.

In 1813, Titus's father, Daniel, decided to speculate in food, as prices were high, owing to the demand caused by the Napoleonic wars. As a result of this new business venture, the family moved from Morley to a farm at Crofton near Wakefield. Titus and his sister, Sarah, were sent to a good school and rode there each day on a donkey, which was stabled at the Nag's Head public house.

At school, Titus was described by his headmaster as "never a bright pupil. He was steady, very attentive, especially to any particular study into which he put his heart. He was a fine, pure boy; stout, tall for his age, and with a remarkable, intelligent eye".



**Something of an enigma, Titus Salt was one of England's most prominent businessmen. Yet despite his widespread fame, very little survives of his history or the records of his magnificent fiber empire.**

In the summer of 1815, Napoleon was defeated at the battle of Waterloo and shortly after food prices fell and Daniel Salt started to lose money on the farm.



The manor house where Titus Salt was born in September 1803, the first of eight children.

## An Introduction to Woolstapling

By the age of seventeen, the question about what Titus would do in life had to be settled. He had no family fortune to fall back upon. His father was not affluent by any means and the farm did not pay now that the war was over. Eventually, it was decided that Titus should enter the medical profession. However, fate had other ideas, and one day while cutting a piece of wood with a sharp knife Titus slipped and cut a deep wound in his hand. As the blood began to flow Titus promptly fainted. His father (who had witnessed the accident), revived the poor boy and told him in no uncertain terms “Titus, my lad, thou wilt never be a doctor!”

Thus, it was decided that Titus would be placed with a Mr. Jackson of Wakefield to learn the woolstapling business (woolstapling being the buying and selling of wool).

By 1822, the family farm continued to lose money and nothing remained for Titus’ father but to look for a new source of income. By now, he had lost his appetite for farming. Business in nearby Bradford was booming, and therefore the whole Salt family moved to Bradford and Titus happily gave up his position with Mr Jackson, having spent most of his time doing bookkeeping.

Titus then entered the Bradford firm of Messrs. Rouse and Son, where his wool education came under the expert hands of two brothers, John and James Hammond. Here, he worked for two years and applied himself methodically to understanding the whole process of wool sorting, washing, combing, slivering, spinning, and weaving. The Rouse family had the maxim “Those who have helped us get money, shall help us to enjoy it” – a maxim Titus would adopt when he became an employer.

Let us imagine, if we can, what Titus did in those early years. A tall man with a “brat” or loose blouse worn over his clothes to keep them clean, he would stand at the sorting-board. With the fleece of wool unrolled and spread out on the board, Titus learned to sort wool by feel and by sight. This skill alone would have ensured him a successful career in the woolstapling business. However, we know Titus was committed to understanding every part of the process, not just the sorting. The next process he learnt was washing with alkali or soap and water, a skill Titus would put to good use when conducting his experiments with alpaca many years later. When he learnt combing, it was still done by hand. The slivers of combed wool were then passed between rollers to produce rovings. Later, the rovings were spun into yarn, which in turn was woven into fabric.

Titus learnt each of these processes in detail and in 1824 he left Messrs. Rouse and Co. and joined his father, who had by now established a wool stapling business. Together they traded as Daniel Salt and Son (Woolstaplers). Titus was the driving force behind the business and attended public wool sales in London and Liverpool on a regular basis. He would also travel to the counties of Norfolk and Lincolnshire where he would buy direct from the farmers after the clipping.

Bradford was booming during this period. When Titus was born, the population was less than 13,000, yet it would quickly reach 100,000. Bradford was being transformed from a collec-

**The Rouse family had the maxim “Those who have helped us get money, shall help us to enjoy it” – a maxim Titus would adopt when he became an employer.**

tion of small weaving villages into an industrial town. Indeed, it was the fastest growing industrial town in England in this period. This tremendous growth was fuelled by the manufacture of worsted cloth.

Worsted had been made in Bradford since the late 1700’s, but the industry was transformed as one by one the processes that converted raw wool into cloth were mechanised and driven by steam power. This period of time came to be known as the Industrial Revolution. Mechanisation resulted in cheaper prices and huge increases in production capacity. The single biggest use for worsted cloth from Bradford was women’s dresses. Women wore Bradford worsteds not only in England but also in the United States, and in many countries in continental Europe. With the help of Titus Salt, Bradford would become the world centre for worsted production.

## Boom Times in Bradford

This growth attracted not just Daniel Salt and his family, but also tens of thousands of workers, mainly from Yorkshire and adjacent counties, but some from as far away as Ireland. Work in the worsted trade was hard and at times dangerous. The hours in the factories (which employed mainly women and children) were long, often twelve hours a day for six days a week.

The town was ill prepared to cope with this explosive growth of immigrants and the families they raised. Roads, sewers, and other public facili-



## Planning on Visiting Saltaire?

These sites will help you plan your trip to Saltaire and Titus' mill complex, as well as the surrounding area:

[www.visitbradford.com](http://www.visitbradford.com) (Official Tourist Info Center)

[www.saltaire.yorks.com](http://www.saltaire.yorks.com)

[www.saltsmill.org.uk](http://www.saltsmill.org.uk)

A canal boat passes by the side of one of the mill buildings. Located almost in the exact center of England, Sir Titus Salt's mill complex is now a UNESCO World Heritage Site.

ties were completely inadequate. The two waterways that ran through the town were little more than open sewers full of domestic and industrial effluent. The small river was known locally as "River Stink." A survey of wool combers (one of the most impoverished trades in the industry) revealed that many families were living eight or even twelve people in two small rooms. People slept four or five to a bed. Conditions were nothing short of appalling. Life expectancy in Bradford was barely twenty years. Even discounting infant deaths, one was fortunate to live beyond one's mid-forties. Smallpox and tuberculosis were rampant and of course, there were no antibiotics. Wool sorters were often exposed to anthrax when sorting fleeces from overseas, particularly Russia, where the disease was endemic.

As a result of these bleak conditions, Bradford became a centre for social and political unrest. To many workers, the vast fortunes accumulated by the local "millocrats" were done so at the expense of the workers, the mills poured soot into the skies and waste into the streams.

In 1825, there was a strike among woolcombers that lasted six months and produced great stress and alarm. The following year, matters became

much worse and workers attacked Horsfall's Mill. Titus Salt was twenty-three years of age and walked through the assembled mob talking with them, by all accounts trying his utmost to get them to disperse. It must have taken a great deal of courage to even try to calm such an angry mob. Eventually, the military were called and the Riot Act was read. During this event, Titus ran from house to house, urging people to stay inside. The mob eventually did disperse, but not until twenty or so shots had been fired into the crowd and two boys, one aged 13 and one 18, lay dead. What is evident from this short story is that from an early age, Titus was determined to play a proactive life in the industrial affairs of Bradford and its people.

The tale of how Titus met his wife is an interesting one. On the east coast of England lies Grimsby (in the county of Lincolnshire), a fishing port and home to the Whitlam family who farmed sheep. Mr Whitlam had a very large herd of sheep and a large herd of children, 18 in all. In 1820, a woolstapler from Bradford called George Haigh married Amelia Whitlam. I imagine that Titus heard from George of both the sheep and the girls and decided to visit the Whitlam farm. He duly fell in love with Caroline, the youngest

Whitlam girl, who was just 16 years old when they met.

### Making Lemonade from Lemons

At about this time, an event occurred that would have far-reaching consequences. Titus speculatively purchased a large consignment of Donskoi wool which had arrived from Russia. Although it was coarse and tangled, Titus realised it had possibilities. When he tried to sell it to his usual clients, none would have anything to do with it. The generally held opinion was that it was impossible to spin. Titus knew better and, no doubt somewhat embarrassed by this large purchase that no one wanted, set about making a good deal out of what might become a bad one.

Titus was convinced that the wool could be spun and so he rented Thompson's Mill and having installed suitable machinery set about spinning the Donskoi wool with wonderful results. So it was that Daniel Salt and son entered the spinning business. His intention was always to spin the wool, then sell the yarn to Fison and Co. This he did for some time until a misunderstanding between the two firms led Titus to resolve to not only spin his own yarn, but also weave his own

fabric. The experience Titus had gathered under John Hammond at Rouse and Co. proved invaluable. Not only had Titus proved himself a successful businessman but also he had introduced a new staple to the Bradford worsted trade.

By now, Caroline Whitlam was 18 and Titus 26. They married in Grimsby Parish Church on August 21st, 1830. Three years later, Charles Turner (yet another woolstapler from Bradford) married Lucy Whitlam. This is how three sisters from Grimsby came to live close to each other in the town of Bradford.

Titus and Caroline lived not far from Daniel Salt, who was by now quite proud of his son and loved to speak of "Our Titus." Little did he know that Titus was merely at the beginning of his distinguished career and that the loving phrase "Our Titus" would eventually come to be adopted by the whole community.

Titus was now very busy turning Donskoi wool into fabric. This success no doubt gave him a great deal of confidence and was to lead to a greater discovery that would become the *magnum opus* of his life and the basis of his fame and fortune.

Titus always had an open mind to new ideas. One example of this came about during the cotton famine in Lancashire, when the mills were silent because the supply of cotton staple was all but cut off by the American Civil War. A letter appeared in the *London Times* that suggested alternatives to cotton might exist in vast quantities all along the east coast of England.

Titus decided to visit the town of Scarborough on the east coast and see for himself. Once the tide went out, he spent the day collecting and analysing seaweed samples. At the end of the day, when asked what he had been doing, he replied "I have been trying to decide whether this stuff could be manufac-

ture, but it won't do."

It was in the year 1836 that the wool of the alpaca first came to his attention. Titus was now the father of three children and happened to be in Liverpool to attend one of the public wool sales, when as he was passing through one of the dock warehouses he noticed a pile of dirty-looking bales. Some of the bales were torn and their contents exposed. What happened next is so pivotal to the story of Titus Salt that Charles Dickens wrote an amusing article entitled "The Great Yorkshire Llama" some years later, which was published in *Household Words*, a weekly journal. The Liverpool brokers that owned the bales were Messrs. Hegan and Co. (In his story, Charles Dickens renamed them C.W. & F. Fozzle and Co.).

It appears that Hegan and Co. took a consignment of about 300 bales of alpaca wool, in the hope that some enterprising Yorkshire mill owner might be inclined to buy it. The bales had been in the warehouse some considerable time and Messrs Hegan and Co. had decided to return the bales to Peru if a buyer was not found soon.

Something about the unwanted bales attracted Titus and he pulled out a handful of alpaca wool, which he examined with the trained eye of a woolstapler. He said nothing to Messrs. Hegan and Co. and went about his business as usual. Some time later, he again found himself in Liverpool on business and visited the warehouse where the alpaca wool was stored. His examination this time was more thorough and eventually he pulled out a large handful of wool from a torn bale and wrapped it in his handkerchief. Clearly, he had been thinking about this strange wool and had plans to take a sample back to Bradford where he would study it in more detail.

When he returned to Bradford, Titus locked himself away with his sample of alpaca and spoke to no one about his intentions. We know from records that he scoured and combed the wool himself by hand, skills he had acquired while at Rouse and Co. Whether he



A dress of cream alpaca trimmed with blue silk. The dress is typical of those made from cloth manufactured at Saltaire, Titus Salt's mill.

spun the fibre into thread, we do not know. He also tested its strength and measured the staple length. What Titus saw before him was a long glossy staple that he knew would be perfect for the production of the light fancy fabrics, which were then in great demand. It is worth remembering that Titus was comparing alpaca to the coarse sheep's wool of the day, not to the very fine merino wools that we have now.

Around this time, Titus met with his old friend and mentor John Hammond, whom he tried to interest in the new staple. According to folklore, Titus said to him, "John, I have been to Liverpool and seen some alpaca wool; I think it might be brought into use." But John could offer Titus no encouragement. Furthermore, Daniel Salt advised his son "to have nothing to do with the nasty stuff." However, Titus was not inclined to listen to either John Hammond or his father.

So it was that Titus returned to Liverpool and approached Messrs. Hegan and Co. and made an offer of 18d (15 cents) a pound for the whole consignment.

This is how Charles Dickens takes up the story in his amusing article:

*"When he asked that portion of the house if he would accept eighteen pennies per pound for the entire contents of the three hundred and odd frowsy, dirty bags of nondescript wool, the authority interrogated felt so confounded that he could not have told if he were the head or the tail of the firm. At first, he fancied our friend had come for the express purpose of quizzing him, and then that he was an escaped lunatic, and thought seriously of calling for the police, but eventually it ended in his making over in consideration of the price offered. It was quite an event in the dark little office of C. W. and F. Fozzle and Co. which had its supply of light from the old grim graveyard. All the establishment stole a peep at the buyer of the "South American Stuff." The*

*chief clerk had the curiosity to speak to him and hear the reply. The cashier touched his coat tails. The bookkeeper, a thin man in spectacles, examined his hat and gloves. The porter openly grinned at him. When the quiet purchaser had departed C. W. and F. Fozzle and Co. shut themselves up, and gave all their clerks a holiday."*

With that, Titus purchased his first consignment of alpaca wool. Titus was still keen to involve his mentor John Hammond in his alpaca adventure if possible, and so a meeting was arranged between John and Titus at Garraway's coffee house in London. Titus would have travelled by horse-drawn carriage and the journey although only a little over 200 miles would have taken 26 hours. Later, the new railway would reduce this journey to just a few hours. At the meeting, Titus invited John Hammond to become his partner in



Garraway's coffee house in London. Here, Titus Salt met with John Hammond to hopefully begin his new fiber processing venture.

the new venture. We can only guess that Titus felt the need of John's expertise when it came to developing the machinery to process this new fibre. Whatever his motivations for asking, John respectfully declined on the grounds that the Rouse family had always treated both John and his brother James Hammond with kindness and generosity and that he intended to stay with them for the remainder of his working life. Titus was disappointed, but remained determined and told

John "Well, John I am going into this alpaca affair right and left, and I'll either make myself a man or a mouse."

Loyalty such as John Hammond's might appear strange to us in this day and age. Nevertheless, John was well rewarded for his loyalty, eventually becoming a partner in the firm of Rouse and Co. When eventually old Mr Rouse passed away, John and James Hammond were both beneficiaries in his will.

## Adapting the Machinery

Titus now set about the task of designing and building the machinery to process this new staple into fine worsted cloth. Along with a small team of trusted assistants, Titus had been working in great secrecy for 18 months on the problems which alpaca presented. Their alpaca wool wasn't quite what you might expect. In those days, due to superstitious beliefs among the native peoples, alpaca fleeces in South America were shorn only once every couple of years. Thus, some of the staples were 20 to 30 inches in length and the longest measured 36 inches!

By adapting the machinery available, they did between them overcome the many difficulties of spinning the fibre into a true and even thread. Salt and his secret team had the idea of binding alpaca weft with cotton or silk warps<sup>1</sup>; and this gave the characteristic lustre which made it such an attractive cloth, and produced at the same time a durable, relatively light, and reasonably-priced cloth which was well suited to the fashions of the day.

We can only imagine the delight Titus felt when he successfully transformed the unsightly material he had found in Liverpool into a beautiful fabric. This was a huge achievement and required substantial investment in men and machinery, so I have to believe that Titus was not planning to process just the 300 bales. Undoubtedly, Titus must have already been seeking to secure further supplies of alpaca wool.

1 Warp is the lengthways threads in a fabric, weft are the horizontal yarns that interlace at right angles with the vertical warp threads.

New wealth and political reform benefited the middle classes in particular at this point in time, and fashion seemed to reflect this new confidence and the demand for consumer goods. Women's clothes were more opulent, making use of new materials such as alpaca; skirts continued to expand, their width exaggerated by tiered flounces and crinoline petticoats.

The quantity of alpaca wool imported from 1836, when Titus made his first purchase, to 1840, averaged 560,800 lbs. per annum. By 1852, the annual import had reached 2,186,480 lbs. in weight. Assuming a clip of 5 lbs. per animal, that equates to an annual clip of over 437,000 alpacas. During that same time period, the price had risen from 10d (8 cents) per lb. in 1836, to 2s. 6d. (25 cents) per lb. in 1852. Most of this alpaca fibre arrived in the West Riding of Yorkshire by travelling along the new Leeds - Liverpool canal in horse drawn barges.

For about a quarter of a century from 1840, bright alpaca mixed-fabrics took the world by storm. Fashion was also affected by technological advances such as the invention of the sewing machine, paper patterns for home dressmaking, new chemical or "aniline" dyes, and the mass production of clothes. With a wider range of goods produced at cheaper prices, fashionable items came within the reach of the less well-off. Shopping patterns started to change and the first department stores opened. Inexpensive travel on the new London Underground made shops more accessible. As industry and trade expanded, the country's prosperity increased.

To handle this explosive growth, Titus now operated five separate mills for spinning and weaving. In addition, he put work out to hand loom weavers and hand woolcombers. Alpaca fibre allowed Titus to outperform all the other manufacturers. However, he knew his processes would one day be copied and his skilled technicians lured away by higher wages. The only way to maintain this advantage was to control the supply of fibre. The difficulty of

obtaining and controlling supplies of alpaca from South America (and mohair from Turkey, as well) provided the opportunity for Titus and two other manufacturers to operate a secret cartel, buying up all available stocks as they arrived in Liverpool.

By this means, they excluded other manufacturers from the trade without driving up their own costs. In the fullness of time, Titus opened an office in Peru and communicated with his agent there by means of a cipher so that no one could read his telegrams. In this way, he learned first hand about market conditions and amounts and quality of fleeces bound for Liverpool long before they arrived. In doing so, he assured himself a lucrative semi-monopoly. In addition, alpaca fabrics sold to wealthier customers who were less affected by economic downturns. This combination of factors helped make Titus Salt a very wealthy man.

Titus was now approaching the period in life when he hoped to relinquish business, and enjoy in retirement the vast fortune he had accumulated through his own endeavours. The time he had set for his retirement was his fiftieth birthday. Then, he imagined he would sell his various mills, buy a country estate and settle down to farming. As American Harper's *New Magazine* was to observe: "By his 45th year, he was a very rich man, and might have retired with lordly income, established himself in some fertile and umbrageous domain, deserted by a

spend thrift noble, among the merchant princes of Yorkshire..."

*However, Titus had other ideas... big ideas.*

## A Grand Scheme

Titus enjoyed a formidable reputation as a model employer. In Bradford in the 1830's and 1840's, many factory owners were regarded with hatred by large sections of the town's working population. Nevertheless, many working class political leaders were prepared to admit that some employers were good and not all were bad. Titus was regularly cited as being "one of the best masters in town" and an example of how factory owners should behave.

The care and benevolence that Titus demonstrated for his workforce was not simply the result of his own strongly held religious and moral beliefs. Titus was able to take care of his workers because he was making a fortune from alpaca while other manufacturers were competing on price.

By this time, Bradford was truly a desperate place to live as a mill worker. Georg Weerth, a young German poet working in Bradford describes his feelings for the town:

*"I wouldn't have felt any different if I had been taken straight to Hell. Every other factory town in England is a paradise in comparison to this hole. In Manchester, the air lies like lead upon you; in Birmingham, it is just as if you are sitting with your nose in a stove pipe. In Leeds, you have to cough with the dust*



In the summer of 1844, Titus Salt and his family moved to Crow Nest, a large mansion seven miles west of Bradford near the village of Lightcliffe.

*and the stink as if you swallowed a pound of Cayenne pepper at one go – but you can still put up with all of that. In Bradford, however, you think you have lodged with the devil incarnate... if anyone wants to feel how a poor sinner is tormented in Purgatory, let him travel to Bradford.”*

In 1843, Titus’ father, Daniel Salt, died at age 62. By now, Titus himself was the father of seven children; five boys and two girls. It was partly because of his growing family that in the summer of 1844, Titus Salt and his family moved to Crow Nest, a large mansion seven miles west of Bradford near the village of Lightcliffe.

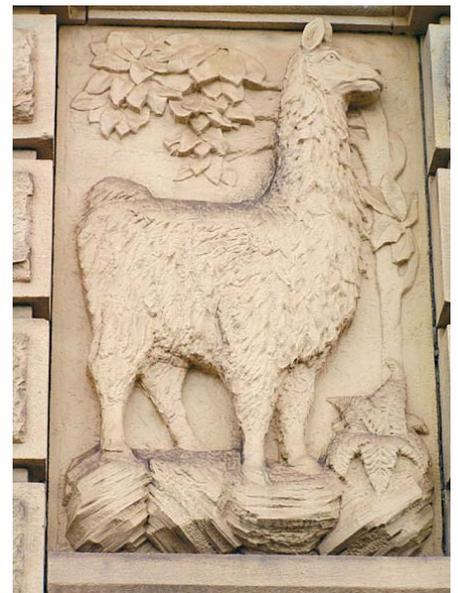
In 1848, Titus was elected Mayor of Bradford. While mayor, he continued to control his textile business. This was a very demanding time for Titus. At home, two newborn infants had died and in 1849, cholera broke out in the town of Bradford. It was during this

turbulent period that Titus created a vision, which he believed was his God-given duty to turn into reality.

On a chilly November evening in 1849, Titus walked into the comfortable fire-lit chambers of the architects Lockwood and Mawson. Once seated, Titus produced a sketch and outlined his vision. He wanted the firm to design the most advanced, fully integrated mill in the world. It would be quite simply the most gigantic worsted mill the world had ever seen.

The preliminary drawings produced by Lockwood and Mawson did not impress Titus. He wanted something larger and with a façade like Osborn House, Queen Victoria’s favourite residence on the Isle of White. Lockwood told him such a building would cost £100,000 without machinery or fittings. (\$15 million in today’s terms).

Titus was not moved by this information and instructed his architects to think big and design on a grand scale.



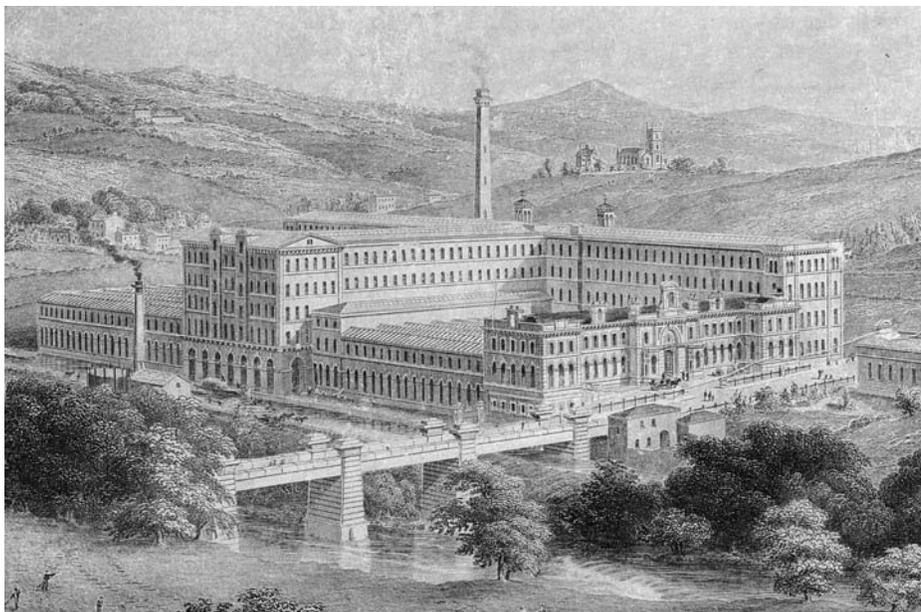
A carving on one of the mill buildings, depicting the source not only of the fiber being produced at Saltaire, but also the source of Titus Salt’s fortune.

The site, which Titus had already acquired, was in open countryside next to the river Aire, the Leeds-Liverpool canal, and soon the railway. Titus named his new mill “Saltaire.”

Built between 1851 and 1853, Saltaire was the marvel of its age. Local Yorkshire stone was used to build the mill, which was in an Italianate style. Six stories high, it had floor space of over 800,000 square feet. Over 3,200 people worked in the mill; the weaving shed housed 1,200 looms and produced 18 miles of alpaca fabric each day – which, as someone noted at the time, “is almost 6,000 miles each year, which as the crow flies, would reach over land and sea to Peru and the native mountains of the alpaca.”

A large proportion of the workforce were children under 16 or young women. These people had the unskilled production jobs of tending the spinning and weaving machines. Adult men filled the skilled jobs and the positions

In 1849, Titus outlined his vision of one of the largest, most advanced, fully integrated mills in the world. Built between 1851 and 1853, Titus’ vision became reality.



**The care and benevolence that Titus demonstrated for his workforce was not simply the result of his own strongly held religious and moral beliefs. Titus was able to take care of his workers because he was making a fortune from alpaca while other manufacturers were competing on price.**

of authority. The managers, foremen, and overlookers were overwhelmingly men, as were the wool sorters, mechanics, finishers, and office staff.

Work at the mill was arduous. The mill started at 6 a.m. each day and ran for 12 hours, with short breaks for breakfast and lunch. Children started work in the mill at the age of eight, although they were only allowed to work part time until they were 13, when they could work fulltime. The time not working was to be spent in school. The mill had a dining hall and offered good-value food to the workers.

In designing the mill, many problems of 19th century textile mills were solved. Fire and accidents with the belting that ran the looms were the main problems, so Titus used fireproof brick, stone, and cast iron. Where machinery caused friction and heat, there was no wood. Many a young weaver had lost limbs in the belting, so Titus had the belt's drive shafts, located under the floor away from the weavers. The temperature was kept constant by an rudimentary air conditioning system. Everything was driven by pulleys and belts, which in turn were powered by two enormous steam engines. There were 14

boilers, which consumed 50 tons of coal each day to generate the steam. The smoke went up a beautifully ornate chimney 250 feet high. The workers even had toilets.

Titus was also proud that during the construction of his mill, only one life was lost, a remarkable feat at the time.

When it came to the formal opening of the mill, Titus decided to celebrate three things at once: his 50th birthday, his eldest son's coming of age, and the official opening of Saltaire Mill. This was to be the first of many large celebrations that Titus would stage during his life.

On his 50th birthday, Tuesday September 20th 1853, 2,440 of his Bradford workers marched in procession to the Bradford railway station, where special trains were awaiting them. On arrival at Saltaire, they were greeted with the pealing of church bells and the discharge of rifle shots. Eventually, 3,750 guests sat down for a banquet inside the combing shed. Salt laid on a gargantuan feast consisting of beef, mutton, lamb, ham, pigeon, chicken, grouse, partridge, and duck, followed by plum puddings, jellies, grapes, melons, peaches, pineapples, nectarines, and apricots. This was all food which most ordinary people would never see in a lifetime, let alone taste. A band played during the meal and afterwards in the meadows, and at 6 p.m., the trains took the assembled party back to Bradford for a music concert in St George's Hall. No one had ever witnessed such an occasion. The illustrated *London News* described it as "probably the biggest dinner party ever set down under one roof at one time".

Alpaca wool was now arriving in large quantities and not always at the right time, so a separate warehouse was constructed to store 12,000 bales of wool.

Here is a contemporary account of work in Saltaire Mill:

*"The alpaca wool came via canal and on the railway, it arrived in what are called ballots or small bales, each weigh-*

*ing 125lbs. The bales consist of fleeces that have been sorted into ten different qualities, each adapted for a different grade of processing. The primary processes were sorting, washing, drying, plucking, combing, drawing, roving, spinning, weaving, dyeing, pressing, finishing, and folding – 13 in all – excluding reeling, sizing, and warping – common to all worsted manufacture.*

*After leaving weaving, the fabric is examined by the "taker-in," who looks for defects in the weaving. Then it is folded up into what are called "pieces" to be sent to the dyer. The white cloth is sent to the dyer to receive various colours, while the self colours pass immediately into the finishers' hands, who puts them through the process of steaming, singeing, crabbing, dyeing, and pressing - these imparting to the cloth its glossy quality and preventing it from shrinking.*

*When the manufacturer or merchant receives the goods duly dyed and finished, they are measured, made up, and folded in paper ready for delivery to the draper or for export."*

Marvellous though the mill was, it was only a part of the vision that Titus had in his mind. Only in 1854, once the mill was at work, did Titus turn his attention to the construction of his model village. The mill was the economic engine that generated the wealth necessary for Titus to realise his vision of social and moral improvement of the working classes. Building the village took the best part of the next twenty years. During that time, he spent the equivalent of \$60 million building homes for his workers and all the necessary amenities, which he considered essential for a healthy life.

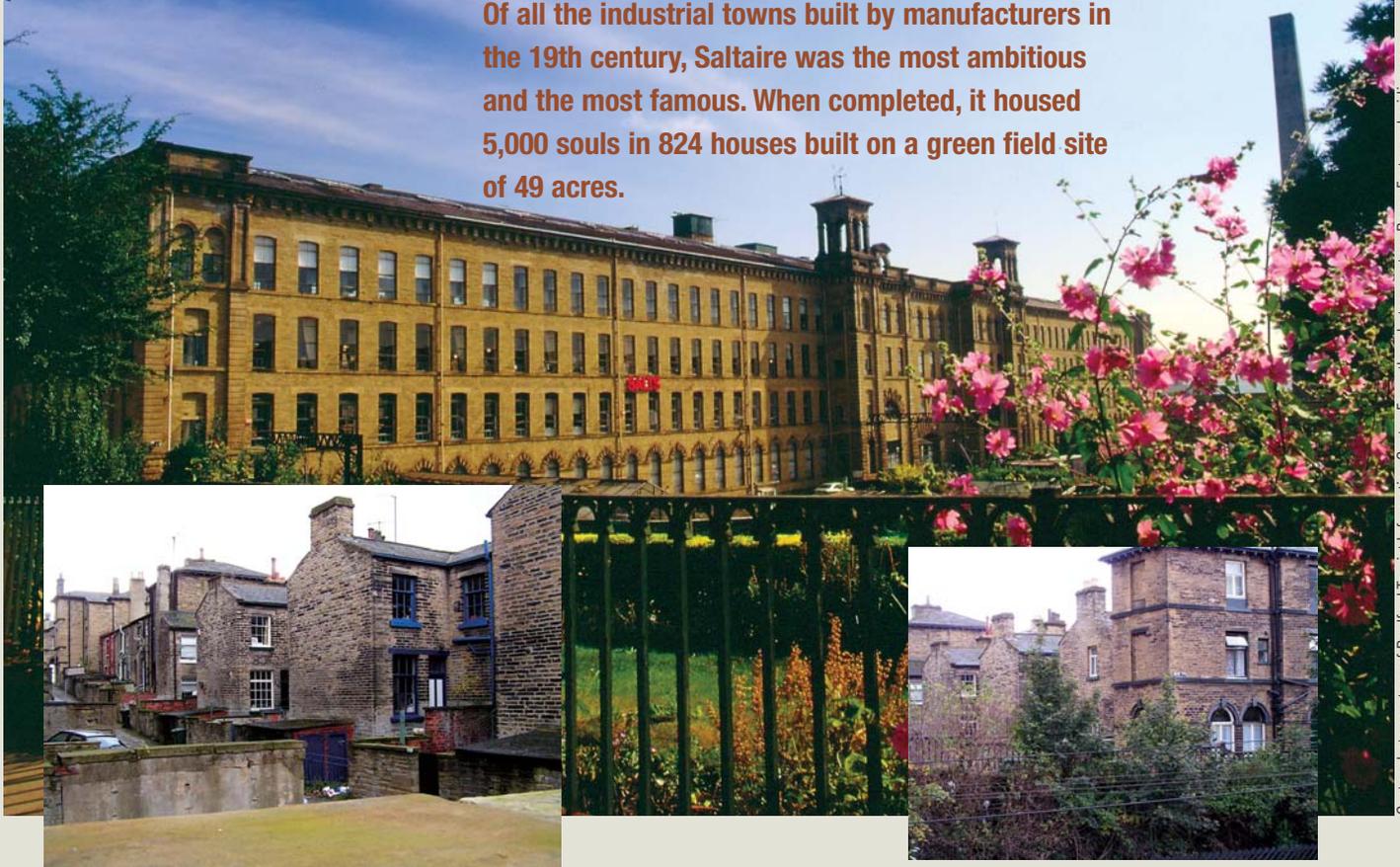
Of all the industrial towns built by manufacturers in the 19th century, Saltaire was the most ambitious and the most famous. When completed, it housed 5,000 souls in 824 houses built on a green field site of 49 acres. It had a bath and wash house with machines to wash clothes, a hospital with three wards, and next to the hospital, 45 almshouses with their own chapel, where up to 60 pensioners



Titus built a high school for boys and girls and an institute (shown here), where adults could attend classes in the evenings.



**Of all the industrial towns built by manufacturers in the 19th century, Saltaire was the most ambitious and the most famous. When completed, it housed 5,000 souls in 824 houses built on a green field site of 49 acres.**



Center photo courtesy of Bradford Tourist Information Center. Four other photos courtesy Roger Foster and erinding.com.

Center: One of the mill buildings. The other photos show various mill worker's homes. The photo at top left is the Saltaire hospital.

lived. Each pensioner received a weekly allowance and paid no rent. Additionally, Titus Salt built a high school for boys and girls and an institute where adults could attend classes in the evenings.

Titus would not allow any public houses (taverns) to be built in the village, but there was an off-licence, where workers could buy drink to consume at home. Titus named many of the roads after his children. The final part of the village was the 14-acre, landscaped park that offered

workers a wide range of recreational opportunities. Titus did not pay his workers more than other mill owners or give them a soft life. However, over time, he attracted the very best workers, the most highly skilled, and they were mostly very loyal. This highly skilled and stable workforce was essential to the successful working of his vast mill.

At about this time, a poem was printed and circulated in Bradford and the surrounding areas. Here is the final verse:

*From Peru, he has brought the alpaca,  
From Asia's plains the mohair;  
With skill has wrought both into  
beauty,  
Prized much by the wealthy and fair,  
He has Velvets, and Camlets, and  
Lustres;  
With them there is none can compare;  
Then off with your bonnets,  
And hurrah for the Lord of Saltaire.*

Many of the buildings in Saltaire are decorated with carvings of alpacas and as Titus never went to Peru, you may



Visitors at the David Hockney art gallery. The gallery occupies part of the old Saltaire Mill.

## Saltaire Today

Saltaire Mill and the model village are still there, frozen in time. The Mill is now home to The 1853 Gallery, a collection of art by David Hockney. Nearly all the other mills in the area have since been pulled down or destroyed by fire. In 2001, the whole site was designated a World Heritage site by UNESCO (United Nations Educational, Scientific, and Cultural Organization). For tourists, there is now a Visitor Centre. My family supplies the centre with alpaca wool, which is given to the many schoolchildren who visit Saltaire to learn of Sir Titus and the mighty alpaca, with its golden fleece.

wonder if he ever saw an alpaca? Or what the stonemasons used for reference when carving the images? Well, the answer is that Titus had quite a large “flock of alpacas,” as he called it. He purchased the animals from the Earl of Derby who had them in his zoological collection at Knowsley, near Liverpool. They flourished for a while, but Titus eventually concluded that they did not like the Yorkshire weather, which he felt was too wet for them. Some were shipped to Australia and some to South Africa, both part of the British Empire at that time. I do not know what became of them. The remainder lived out their lives in Yorkshire. By the time Titus himself died, there was only one remaining.

On his 53rd birthday in 1856, the workers of Saltaire presented Titus with a marble bust of himself. Titus in return threw a party at his home, Crow Nest, with 3,000 accepted invitations to attend. On arriving at Crow Nest, guests were greeted by herds of alpacas, llamas, and angora goats. A marquee had been erected that could hold 5,000 people. Again, Titus laid on the most extraordinary feast for his workers and their families.

The Paris Exhibition took place in 1867, and Titus was invited to submit his model village, Saltaire, for consideration by the Imperial Commissioners. Initially, Titus politely declined.

Eventually, he was persuaded on the understanding that he would not be judged nor accept any prize money for what he had done. Saltaire made the most profound impression and various

medical reports substantiated the benefits to his workers of their clean environment. So impressed was the French Exhibition that France conferred on Titus the Legion of Honour. This is the highest award given by the French Republic for outstanding service to France.

On September 9th, 1869 The Prime Minister, Mr. Gladstone, wrote to Titus to inform him that Her Majesty Queen Victoria had proposed that he should receive a Baronetcy. A Baronetcy is a hereditary title descending through the male line, bestowing a knighthood on the recipient. Titus accepted and henceforth was known as Sir Titus Salt Bart.

On his birthday in 1873, Sir Titus threw his biggest party ever at Crow Nest and again entertained 4,200 of his workers in style. Not long after this, his health started to deteriorate.

Sir Titus died on December 29th, 1876 surrounded by his family. Wrote one witness: “There was no physical suffering, and his breath died away like a soft summer breeze.” His 73 years constituted a long life in those days. He had known 3 different monarchs and 18 prime ministers. He had been married 46 years and had 11 children.

Sir Titus left Crow Nest for the last time; four sable Belgian horses pulled the hearse away from the mansion shortly after 9 a.m. The Bradford Borough Police provided an escort as Salt had at one time been Bradford’s Chief Constable, as well as Mayor and for two years its Member of Parliament. Over 100,000 people lined

the route. The procession passed the marble statue of Sir Titus, which had been built three years earlier from donations made by the people of Bradford. Seventy more carriages joined the procession at this point, which was now more than a mile long as it began its decent into Saltaire.

The procession eventually arrived at the Saltaire Congregational Church, which Sir Titus had built in 1859. In the vestibule of the church stands a very symbolic statue of Sir Titus presented to him by his workers in 1856. The bust is of purest Carrara marble, standing on a plinth of Sicilian marble. The plinth is supported by an alpaca and an angora goat. At their feet is a fleece with a “Horn-of-plenty,” from which is pouring forth a flow of rich fruit. One foot of the alpaca rests on a wreath of olives representing peace. One foot of the goat rests on the fleece representing abundance for the employer and the employed.

Thus, Sir Titus – and later, his family – came to be buried in the mausoleum at Saltaire Congregational Church.





*Adrian Stewart*

## *About the Author*

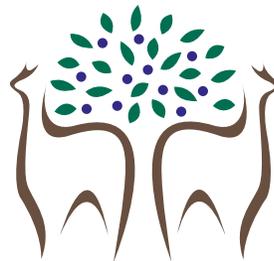
The author Adrian Stewart grew up in the market town of Skipton, in the west riding of Yorkshire, England. The sheep farms of the Yorkshire Dales made famous by James Herriot lay to the north and to the south the woollen mill towns, including Saltaire the model Victorian town created by Sir Titus Salt. Adrian spent most of his working life in investment banking in the City of London, while there he took an active role in promoting the City as a centre for commerce and in 1995, he received the Freedom of the City. An alpaca hobby farmer for several years in the UK he moved to Oregon with his wife, Jo, and their three children in the summer of 2004.

Together they now operate Mulberry Alpacas, based just outside Ashland. Adrian is President of the State of Jefferson Alpaca Association; he is also editor of The Ideal Alpaca Community Newsletter and writes a column, Letter from America, which is published in the UK Alpaca Magazine.

Adrian can be contacted at [adrian@mulberryalpacas.com](mailto:adrian@mulberryalpacas.com)



MULBERRY ALPACAS LLC  
1332 East Nevada, Ashland,  
Oregon 97520, USA  
Telephone: 541-552-0607  
[www.mulberryalpacas.com](http://www.mulberryalpacas.com)



## Mulberry Alpacas