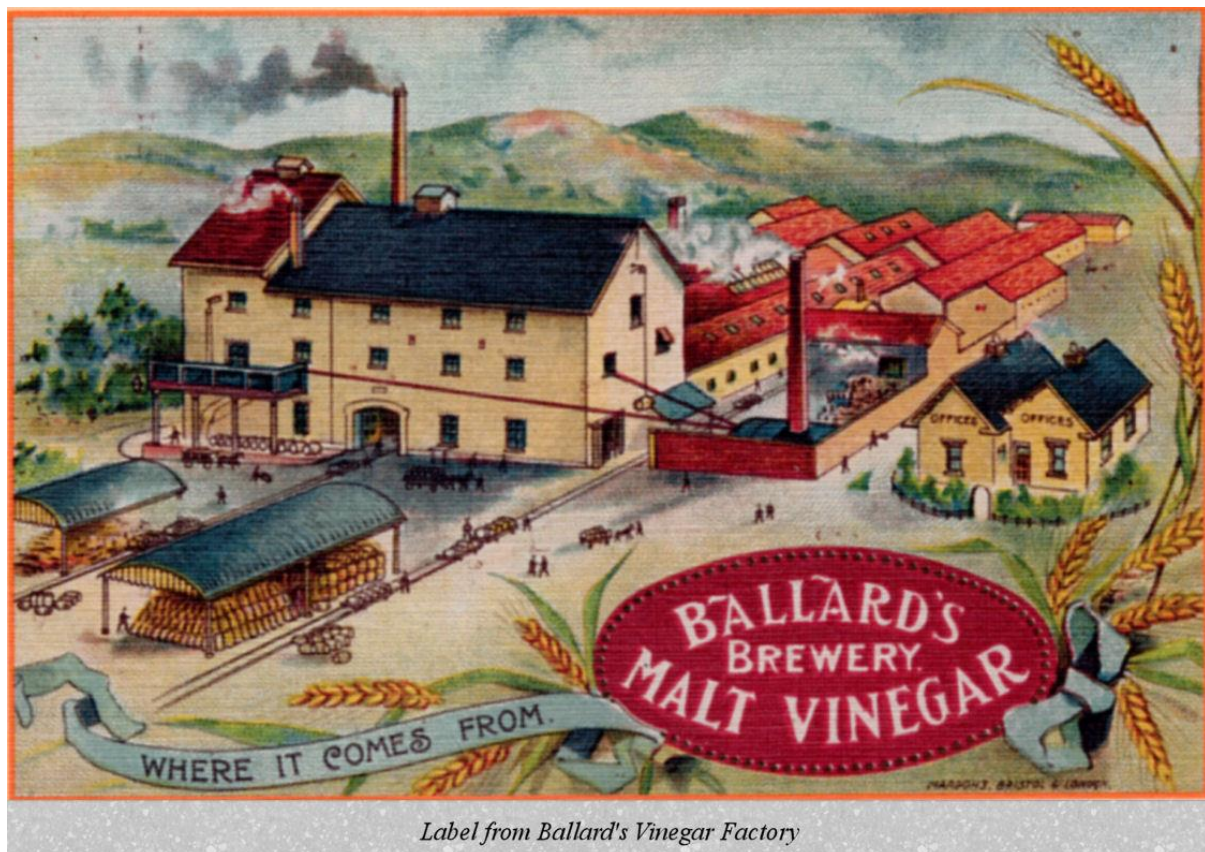


The Ballard Malt Vinegar Works – Andy Ball



Label from Ballard's Vinegar Factory

For around 30 years from 1884 until 1914 Colwall had its own malt vinegar brewery, located in Stone Drive, and was a national supplier of vinegar and other related products, gaining accolades and winning several prizes at prestigious trade exhibitions.

In 1882 Stephen Ballard I (1804-1890) acquired a small vinegar brewery in Ledbury.ⁱ From 'Littlebury's Directory and Gazetteer of Herefordshire' dated 1876-7 the only Vinegar Maker listed in Ledbury was Edwards & Son of Bye Street so this may possibly have been the business.ⁱⁱ However, it is more likely to have been another business located in the High Street. An advert from the 'Hereford Times' dated Saturday 16th September 1882 contained the following details of a forthcoming property auction.

"BY MR. TOM HODGES. LEDBURY, HEREFORDSHIRE. FREEHOLD DWELLING-HOUSE, SHOP, with large Malting or Warehouse, and Premises, situate High-street; Ledbury, in the most commanding position for business in the town, in the occupation of Mr John Clarke, Draper, etc, which MR. TOM HODGES will SELL by AUCTION, at the Feathers' Hotel, Ledbury, THURSDAY the 21st day of SEPTEMBER 1882, At five for six o'clock, subject to conditions to be then produced. Particulars in due course, and in the meantime of Mr Jesse Garrood, Solicitor, Ledbury, and of the Auctioneer, Ledbury. 5198" ⁱⁱⁱ

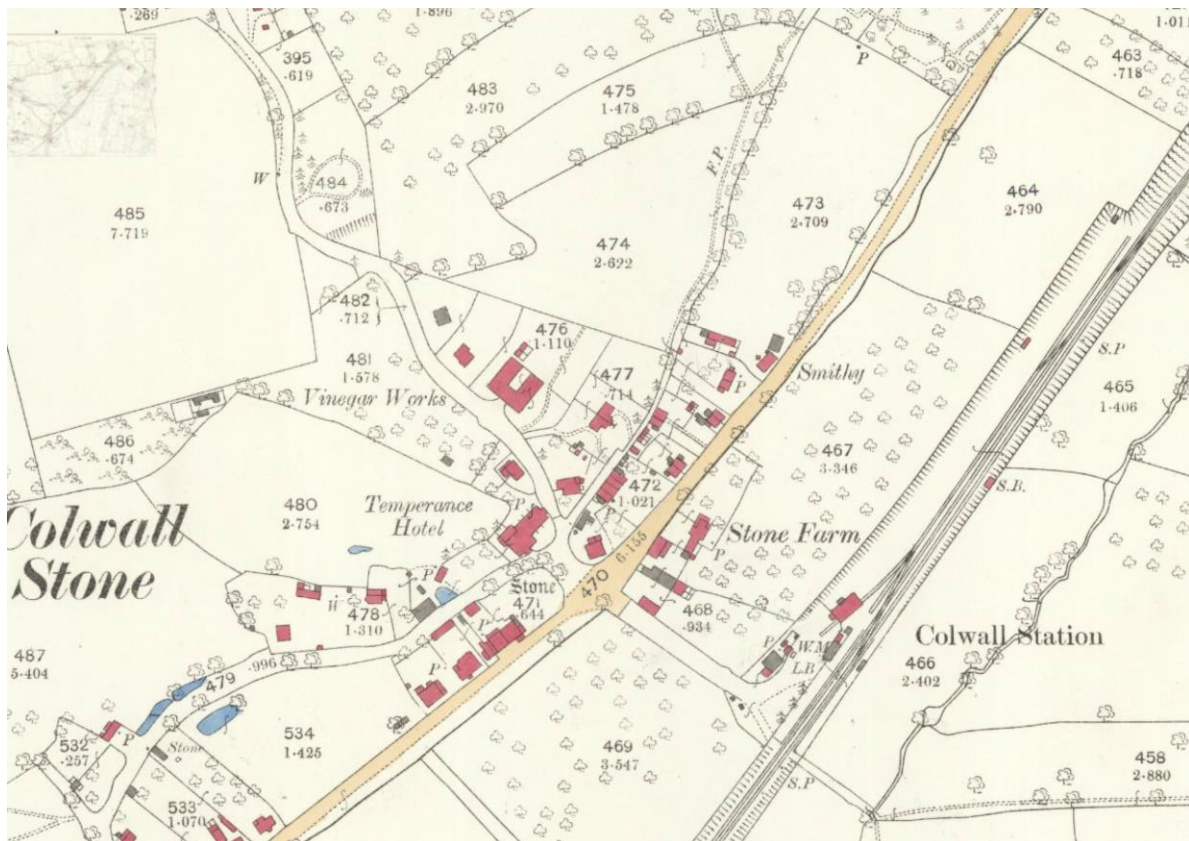
Stephen appointed his son Stephen Ballard II (b.1866) to work there and to learn the trade.

At the same time Stephen Ballard I started construction of a new malt vinegar brewery in Stone Drive in Colwall.^{iv} This was initially a two-storey, concrete construction building with a pitched roof. The factory stood at the northeast side of Stone Drive on a site slightly to the

left and front of the existing Colwall G.P. Surgery. As the vinegar brewery was nearing completion in 1885 a new house was built adjacent on Stone Drive - 'Grovesend Cottage' - with a date-stone marked S.B. (Stephen Ballard) and 1885. To the left of that a former Ballard temporary railway building, originally from the construction of the Worcester and Hereford Railway in the 1850s and early 1860s, was also re-erected. This is now the dwelling called 'Cott's View'.

By about 1885 the vinegar brewery building was completed (the date stone on the front elevation of the works recorded the construction date of 1884) and some of the fittings and equipment from the Ledbury malt vinegar works were collected and brought to Colwall so that production could start.^v

On the 1887 Twenty-Five Inch to One Mile Ordnance Survey Map of Colwall all three of the newly erected buildings are present.



From this map, and from a photograph attributed to circa 1883, included in the publication 'Colwall Collection' the vinegar works was a building with a two storey frontage to Stone Drive and two separate single storey wings running towards the rear of the building. To the northernmost wing a separate ancillary rectangular structure was located directly to the rear.

At this date the land opposite the brewery, to the other side of Stone Drive, was used as an orchard. Opposite the Temperance Hotel, at the entrance to Stone Drive near Colwall Stone, the single storey building was to become offices for the brewery.

The source of water used in the production of malt vinegar in Colwall was the Glenwood Spring located in Chase Road, Colwall on land owned by the Ballard family. *'The British Trade Journal'* recorded that *"the vinegar itself is guaranteed to be purely of malt, the brewery being supplied exclusively with the celebrated Malvern water, whose qualities are world-renowned."* ^{vi}



During the early years of production at the vinegar works the Malvern Spring Water Works were being built in Colwall on a site adjoining the railway station. In 1890 an agreement was entered into between the Ballard family and Schweppes to supply water to the new spring water plant. The arrangement was to use water from the Glenwood Spring and the lease ran for 21 years at a cost of £220 per annum. ^{vii}

Schweppes initially had their water bottled at the Ballard Malt Vinegar works for 18 months until their newly completed factory building in Walwyn Road came into full production. The Malvern water was marketed as 'Glenwood Spring'.

Production of malt vinegar is essentially a process of double fermentation. The alcoholic fermentation process converts the sugars present in barley into alcohol and gas. The acetic fermentation process converts ethanol into acetic acid which is then diluted in water to make a circa 5% solution.

An article from the *'Hereford Times'* dated Saturday September 6th 1902 described a visit of Herefordshire Fruit Growers to the Grovesend Plantation in Colwall, a trip hosted by Stephen and Earnest Ballard which included a visit to the Ballard Malt Vinegar Works. The article provides a description of the brewery and the production process.

"Mr Stephen Ballard was kind enough to invite the visitors to inspect the vinegar brewery. They were very favourably impressed with the thorough cleanliness and efficiency of the whole establishment—with the acetifying and fermenting rooms, and the storage vats of over a quarter million gallons capacity. A cluster of barley is Ballard's trademark, and here may be seen the fine barley corn converted into malt and subsequently into malt-vinegar. Malvern water, celebrated for its extreme purity, is conducted in closed pipes from the spring in the Malvern Hills to the brewery, and does not see light until it has been boiled and mixed with the malt in the mash tun. The liquor or 'wort' (as it is now called) is then drawn off, and after cooling undergoes the "vinous fermentation" which is produced by the admixture of yeast. When the vinous fermentation has ceased, the liquor is passed into large vats known as "acetifiers" in which the "acetous fermentation" is carried on by exposure to the

atmosphere, which is effected by the constant pumping of the wort over a bed of birch twigs through which a current of air circulates—the time required for this process varying from three to five weeks. When finished, the liquor, which has now become vinegar, should be bright and sparkling. After leaving the acetifiers the vinegar is stored in large vats, where, with age, it acquires the full flavour and aroma for which this malt vinegar is celebrated. The fermentations are conducted with currents of pure air, not obtainable in many large towns, and this undoubtedly contributes to excellence.”^{viii}



Ballard's Malt Vinegar quickly gained a reputation for its quality and won awards at the Exposition Universelle in Paris in 1889 (trade stand pictured), in Edinburgh in 1890 and at the Exposition Internationale in Brussels in 1897.^{ix} The winning of a silver medal at the Paris exhibition was noteworthy since this was a major event attended by over 32 million people and featured the opening of the Eiffel Tower.

In 'Jakeman & Carvers Directory & Gazetteer of Herefordshire' for 1890 there is a proud entry for "BALLARD STEPHEN, Malt Vinegar Brewer, Silver Medal Paris Exhibition, 1889. The only award for Pure Malt Vinegar".^x

The 'Hereford Times' article of Saturday September 6th 1902 describes the exhibition displays used by the Ballards to promote their products. "Everybody who

has visited the Wolverhampton Industrial Exhibition will have admired Messrs Ballard's artistic show stand, decorated in art colours, and exhibiting within glass-panels a full view of bottles, large and small, containing vinegar, as clear and bright as wine, and of the tiny vats and service-casks which are reduced facsimiles of those actually used in the brewing.”^{xi}

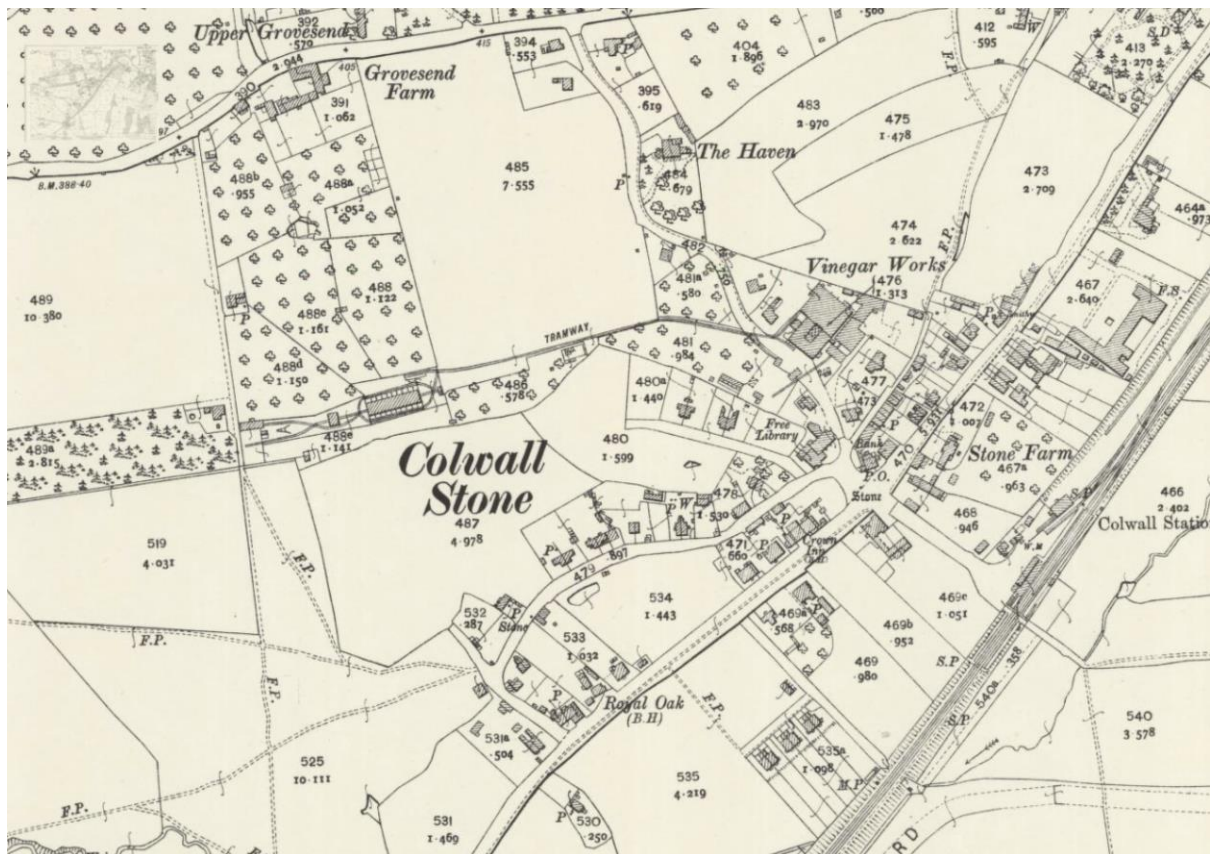
In the 'Colwall Collection' book Stephen Ballard III describes how by the late 1890s Stephen Ballard II's younger brother Earnest had taken a brewing course at Mason's College in Birmingham and had become a partner in the business. From the building known as 'Laboratory Cottage', in Silver Street just off Stone Drive, he ran a chemistry laboratory for the business. He also introduced a method of using green malt instead of dried malt. Whilst this saved money it required the building of a malt shed to the west side of Stone Drive. This building was originally 200 feet long and 40 feet wide, subsequently enlarged to 60 feet.^{xii}

Stephen Ballard III described how "Production rose dramatically from 25,000 gallons a year in Ledbury to 2,000 gallons a day at Colwall. The number of vats rose to 40, the largest

holding 37,000 gallons. All this vinegar was sent away by train in oak barrels carrying from 12.5 to 50 gallons, made in the cooper's shop, presided over by Mr Poole who lived in Grovesend Cottage and had three assistants." ^{xiii}

Expansion of production at the works meant that additional buildings were required. The 1905 Ordnance Survey twenty-five inches to one mile map shows how the vinegar brewery building had been substantially extended to the rear and to one side. These new buildings included an extensive sawmill complex and the cooper's workshop. By this time vinegar was packaged not only in wooden barrels, but also in bottles for which wooden cases were made. Timber came from trees on the, by now, extensive Ballard estate, and also from timber offcuts sourced from the sawmills at Gloucester Docks. Additional sheds were also constructed in Stone Drive to store timber that was being seasoned before processing. Sometime around 1900 the main vinegar brewery building was also extended upwards with a new storey being added. During this work Stephen Ballard II was injured – falling from scaffolding and breaking three ribs.^{xiv}

From the 1905 Ordnance Survey Map, and from an intriguing sketch of the works from advertising label of the time (pictured at the start of this article), an extensive series of tramways served the factory.



One ran from inside the cooper's shed to the east of the main building southwest across Stone Drive to the sheds opposite. Another more extensive tramway ran from the main building west across Stone Drive to a model piggery complex. The *'Hereford Times'* article

from Saturday 6th September described the arrangements for the piggery and surrounding land.

“For the purpose of eating the offal from their vinegar brewery Messrs S. and E. Ballard keep a number of pigs (at present the total is 280), and to utilise the manure from these they started their fruit farm which at present comprises about 33 acres of standards and six acres of bushes. The latter plantation was previously allotment land, and as such was a great failure; it has been planted up during the last eight years, as the tenants have tired of it, and is really experimental, being planted with apples on paradise and free stock, pears on quince and free stock, currants, strawberries, gooseberries, cherries and plums. One side of this field is traversed by the tram line, which conveys the food from the vinegar brewery to the pigs’ cot, and is useful for bringing manure to that position of it. Every bush in the field can be reached by a hose from iron pipes laid on the surface.”^{xv}

A photograph, likely to date from around 1900 or earlier, shows the tramway between the malt vinegar works and the model piggery buildings. The large building to the rear on the left-hand side is likely to be the brewery.



In an article originally published in the Industrial Railway Society's publication *'The Industrial Railway Record'*, volume 6, issue number 66, published in June 1976 M Christensen described the arrangements for the tramway following his visit to the site in 1974.

"When the malting barley had served its purpose, the dross was taken in wagons down a 2ft gauge line to the piggery. The railway was also used to take muck away from the piggery, and the track was extended past the piggery on to a tip. The motive power is uncertain. Some say that manpower was all that was used. There is, however, a noticeable rise towards the vinegar works which lends support to the storey that a capstan was used. When the works stopped making vinegar the lower portion of the line was retained to help with muck removal and remains so today. Another short length of 2ft gauge rail remains embedded in the road outside the vinegar works. The wagon at present use on the line is not an original item of rolling stock. It is of Hudson manufacture and came from an unknown waterworks. Little is known of the original wagons, but there survives one pair of wheels which came from an example with inside axle bearings. The diameter of those wheels is a mere six inches." ^{xvi}

The pigs were a valuable commodity and were collectively sold on a regular basis as an advertisement from the *'Hereford Times'* dated Saturday 13th September 1902 demonstrates.

"BY MESSRS W MANTON AND CO. PIG SALE. MESSRS. W. MANTON and Co, of Ledbury, have received instructions from the Messrs. Ballard to SELL at the GROVESEND FARM, COLWALL, On TUESDAY, the 23rd day of SEPTEMBER, 1902, At 2p.m. 281 valuable PIGS, comprising a large number of strong STORES, 100 PORKS, small BACONS, &c. Catalogues on application to the Auctioneers, or to Messrs. Ballard, Colwall Malvern. 5561." ^{xvii}

At one time consideration was given by the Ballards to expand the vinegar brewery tramway two ways. To the west the proposal was to extend the tramway across land owned by the Ballards to the Colwall village gasworks sited close to the existing dwelling called 'Kimberley House' in Old Church Road. To the southeast it was planned to extend the tramway system from the brewery site across Walwyn Road to Colwall railway station. Neither of these proposals came to fruition and instead The Memorial Hall (now the Colwall Community Church) was later built by the Ballards on part of the proposed route through to the railway station. ^{xviii}

The Worcester and Hereford railway was key to the Colwall malt vinegar brewery providing a means for both raw materials and packaging materials to come to the brewery and for finished products to be transported to markets across the country. The malt vinegar was sent out from the factory in casks and bottles for transport by rail. Care was needed to ensure that the glass bottles did not break during transit and in their advertising material the Ballards described the process of packaging the bottles.

"Each bottle is wrapped in special transparent paper, enclosed in a straw envelope, and packed firmly in an iron bound case. The advantages are: NO BREAKAGE IN TRANSIT. NO WASTE ROOM AND EXTRA FREIGHT. NO DUST WHEN UNPACKED. EACH BOTTLE IS RECEIVED READY PACKED FOR RE-DELIVERY. All Cases and Packing free."

Ballard's Malt Vinegar was available widely across the country. An advertisement from the *'Liverpool Echo'* dated Friday 17th January 1913 advertised arrangements for the wholesale purchase of Ballard Malt Vinegar.

"BALLARD'S PURE MALT VINEGAR. Casks or Bottles. Wholesale agents: HUGH and JOHN EDWARDS. 6-8 King-street, Liverpool."^{xix}

In the *'Colwall Collection'* Stephen Ballard III described how the Colwall business struggled during the first years of the 20th century. Competition increased, and there was less demand for malt vinegar with the increased use of acetic acid rather than pure vinegar.

An indication of the decline in the malt vinegar brewery and the keenness of the competition can be gleaned from speeches made by Ernest and Stephen Ballard to their workers at a workmans' dinner held in the Temperance Hotel in March 1907 and reported upon in Berrow's Worcester Journal.

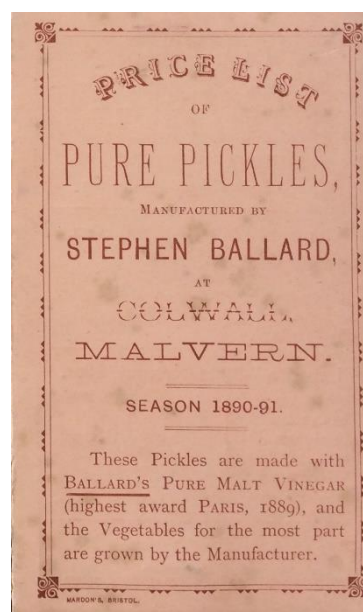
"Mr. E. Ballard said that in England - there were more men than there was work for, and it behoved every man to the best of his ability to assist his master in the severe competition in trade, especially in vinegar brewing. Mr. S. Ballard said he had the sour branch of the vinegar trade to look after, and he supposed that he was often thought to be sour by his men, but although he agreed with his brother as regards the keenness of competition, he still believed there was work for all in Old England, if the people would only put their best ability into their work."^{xx}

The Ballards responded by diversification, producing other products alongside their Ballard's Pure Malt Vinegar. In the early 1900s their product range also included Ballard's Pure Spiced Vinegar, Ballard's Fruit Chutney, Ballard's Chutney Sauce, Ballard's Curry Powder, Ballard's Olive Oil, Ballard's Parisian Essence, Ballard's Browning, Ballard's Pickling Sauces, and Ballard's Genuine Ground Mixed Spice.

In doing this they expanded on a business model started in the 1890s which combined use of fruit and vegetables, many of which were grown locally, and preserved using vinegar.

However, such diversification was insufficient to save the business which had become unprofitable partly because of dishonesty on the part of a salesman which had led to the unexplained loss of 20,000 gallons of vinegar.^{xxi}

In 1914 the business was wound up and sold to Fardons of Birmingham, one of the Ballard's competitors. The buildings and some of the vats and boiler and steam engine remained and the brewery site in Stone Drive was to have a further fifty years of operation as a fresh fruit, and fruit bottling and cannery business.^{xxii}



ⁱ Bowen J P, and Craven A, with Comber J (2020) *The Victoria History of Herefordshire – Colwall*. London: University of London Press.

ⁱⁱ Littlebury's Directory and Gazetteer of Herefordshire 1876-77.

ⁱⁱⁱ Unknown (1882) 'By Mr. Tom Hodges. Ledbury, Herefordshire.', *Hereford Times*, Saturday 16th September 1882 p.1.

^{iv} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^v Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{vi} Osborne B and Weaver C (2012) *Springs, Spouts, Fountains and Holy Wells of the Malvern Hills. Site Information – Ballards Spring*. Available at <https://www.malvernwaters.com/nationalparks.asp?search=yes&p=7&id=251> (Accessed: 01/11/23)

^{vii} Osborne B and Weaver C (2012) *Springs, Spouts, Fountains and Holy Wells of the Malvern Hills. Site Information – Ballards Spring*. Available at <https://www.malvernwaters.com/nationalparks.asp?search=yes&p=7&id=251> (Accessed: 01/11/23)

^{viii} Unknown (1902) 'Herefordshire Fruit Growers Field Day at Colwall and Madresfield Court', *Hereford Times*, Saturday 6th September 1902 p.2.

^{ix} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^x *Jakeman & Carvers Directory and Gazetteer of Herefordshire, 1890*

^{xi} Unknown (1902) 'Herefordshire Fruit Growers Field Day at Colwall and Madresfield Court', *Hereford Times*, Saturday 6th September 1902 p.2.

^{xii} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{xiii} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{xiv} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{xv} Unknown (1902) 'Herefordshire Fruit Growers Field Day at Colwall and Madresfield Court', *Hereford Times*, Saturday 6th September 1902 p.2.

^{xvi} Christensen, M (2013) *Narrow Gauge Railways In The Malvern Hills – Ballard's Malt Vinegar Works*. Available at <http://www.miac.org.uk/hills.html> (Accessed 01/11/23)

^{xvii} Unknown (1902) 'By Messrs Manton & Co. Pig Sale', *Hereford Times*, Saturday 13th September 1902 p.1.

^{xviii} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{xix} Unknown (1913) 'Ballard's Pure Malt Vinegar', *Liverpool Echo*, Friday 17th January 1913 p.3.

^{xx} Unknown (1907) 'Colwall: Dinner To Workmen', *Berrow's Worcester Journal*, Saturday 16th March 1907 p.4.

^{xxi} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver

^{xxii} Ballard, S (1999) *Colwall Collection*. Malvern: Cora Weaver