The Falkirk Tartan

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The oldest known tartan from Scotland shows the fragile Roman Empire in decline and subsidising the big man in Falkirk with silver bullion which could be turned into Celtic art.

Introductory Film: The Falkirk Tartan

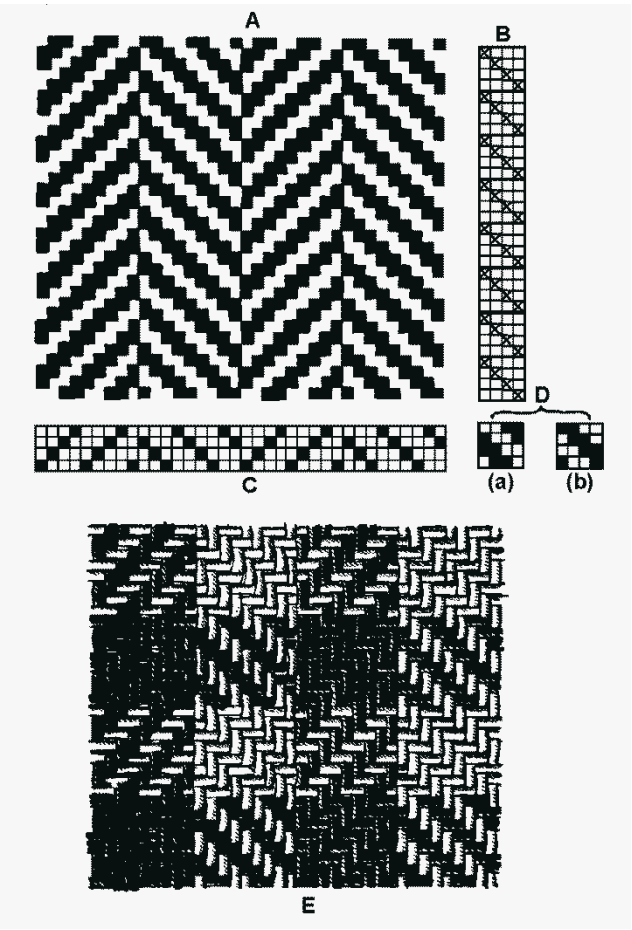
The Falkirk tartan came to light in 1933 when some council workmen were digging sand from a large quarry adjacent to Bell's Meadow in Falkirk. At a depth of 7ft one of them hit a ceramic pot with his spade and several Roman silver coins cascaded out of it. The cloth, it would seem, had been used to seal the mouth of the jar to keep the sand out. It was preserved in the corrosion products of the coins which sterilised the area stopping the bacteria from digesting the organic material.

Illus 1: **The Falkirk tartan (NMS).**

The Falkirk tartan is what is known as a 2-over-2 weft-chevron twill. For 2-over-2 twill each weft-thread passes over and under two warp threads at a time and the passage of each weft-thread is staggered consistently to the left or right of its predecessor. This increases the stability of twill cloth and more than compensates for the extra work involved. Twill is the ideal weave for woollen fabrics as it exploits the felting properties of the material. It occurs in the pre-Roman Iron Age and is far more common in the West than in the East where linen was more prevalent. Plain twill is the basis of several types of pattern-weave, the most common of which is herringbone twill. The herringbone strip can occur in either weft or warp. When it reverses in slope on an axis parallel to the weft it is known as weft-chevron; and when parallel to the warp as warp-chevron. To weave weft chevron twill the weaver simply reverses the order in which the heddle rods on the loom are lifted, reversing on a point or with displacement. The Falkirk tartan is reversed with displacement, this being emphasised by a change in the colour of the weft. It would have required careful planning of the loom, with a set number of threads of each colour in each stripe.

In the Roman world it was normal to dye the wool in the fleece before spinning. However, the Falkirk tartan used undyed yarns in two ranges of natural colours. This had the advantage of being colour-fast in water – either as a result of washing or of heavy rain! A slightly more complex tartan from the legionary fortress at Mainz, Germany, also appears to have used undyed woollen yards and is of a similar date. A more recent find comes from Vindolanda just south of Hadrian's Wall. Like the Falkirk tartan it is a simple check, now showing as dark and light wool yarns, though it once had a touch of lichen purple too (Wild 2002, 18).

The following technical description of the Falkirk tartan was written by Grace Crowfoot:
System (1) warp (?), c6-7 per cm, strong Z-spun, max. length 6cm. Contains 2 yarns: (1) light yellowish brown, (2) dark chocolate brown. The colour-change comes after 8 warp-threads.
System (2) weft (?), c6-7 per cm, strong Z-spun. Some two yarns; change in direction of slope of twill and colour come together after 9 shots of weft; max. length c.7cm.



***Illus 2:* The Falkirk tartan.**
A – plan of weave;
B – pedalling or order of lifting plan of weave;
C – Entry or thread-up weave;
D - tie-up or lifting plan (a) lower heddle, (b) raise heddles;
E – The check pattern. (Black squares in plan of weave = weft, white = warp.)

JP Wild added a note:
The yarns are both of uneven quality. There are remains of five colour-changes in the warp, six in the weft; both colours are found as natural pigments in the wool of the Soay sheep. The resulting check squares measure c1.5cm by 1.5cm. There is no means of verifying which is warp, but the scheme adopted here is suggested by the Icelandic method of knitting heddles recorded by Marta Hoffman (fig 54).

ML Ryder reported on three types of yarn:

a) No pigment, 10-30 micron diameters (mean 16.7); symmetrical distribution; classed as short or fine (white) wool.

b) Pigmented, 10-36 micron diameters with 1 hair 80 micron (mean 18.2); skewed to fine distribution; classed as hairy medium-fine wool.
c) Pigmented, 12-34 micron diameters (mean 17.8); skewed to fine distribution; generalised medium-fine wool.

According to Diodorus Siculus the Gauls were fond of multi-coloured checks, but the Romans in Italy regarded tartans with suspicion. Pliny goes further and states that it was actually the Gauls who invented them (Diodorus, V.30.I; Pliny, N.H.VIII.196). Woollen tartans were called *scutulata* in Latin.

The main body-garment of Roman Britain was the 'Gallic coat', a wide-fitting tunic with or without short wide sleeves (Wild 2002, 23). It reached to calf level on men, and to the ankles on women. Surviving examples from northern Europe indicate that it was made from wool woven in one piece on a loom. Over this tunic the men wore a large hooded cape (in plan forming a segment of a circle) and women a simple rectangular cloak. Soldiers too had rectangular cloaks, draped around the shoulders and fastened on the right shoulder with a brooch. These, along with several other garments, are mentioned on the Vindolanda tablets. It was probably a piece from such an old cloak that was used to protect the Bellsmeadow coin hoard, though we cannot be sure.

There is reason to believe that the Falkirk tartan was not made locally. Ryder's analyses of the fibres noted the presence of fine (white) wool which would have come from the type of grey animals thought to have been introduced by the Romans. These were similar to the Soay sheep which would have been present in Scotland, but had an improved fleece. Sheep were certainly present in Falkirk at the time and the hoof prints of a sheep were found on a Roman tile from the fort at Camelon. A sheep is one of the three animals sacrificed at the *souvetaurilia* ceremony that probably marked the completion of the construction of the Antonine Wall and which is depicted on the Bridgeness Tablet.

Illus 3: **Cast of sheep hoof prints on a Roman tile from Camelon. (NMS).**

The circumstances of the find & the Falkirk hoard

By the end of the 20th century the town of Falkirk was bursting at the seams with extensive ribbon development to the north and south. In the late 1920s and well into the 1930s the Town Council pushed forward a scheme to improve the area to the east of the urban limit at Callendar Riggs. Much of Callendar Riggs and the adjacent grounds had been subjected to large-scale sand extraction and the two large mansions at Rosepark and Bellmont with their associated fields were ripe for development. A large swathe of land lay between Belmont and the East Burn and was known for some time simply as the Meadow and more lately as Bell's Meadow. In the 1920s an architecturally impressive bus station was established with new shops fronting Callendar Riggs designed by JG Callendar. This featured a short arcade to connect the passengers to the town and was Falkirk's first 'out-of-town' shopping centre. As part of this scheme Falkirk Council started pushing a new road eastwards between the bus station and the Market Square and this became Meadow Street. On its north side a labour exchange was opened. Dunn and Wilson had acquired the land to the side of this where they erected a bindery and so land was acquired from Christ Church to provide access from the east end of Meadow Street northward up the hill to Kerse Lane. Belmont was used by the Falkirk Mail newspaper (and later by the Water Board) as offices. In August 1933 John Doak opened a new dance hall beside the bus station.

All this time sand continued to be extracted in vast quantities in Bell's Meadow in a deliberate attempt to level the area and to expand the facilities for buses. On Wednesday 9th August 1933 several council workmen were cutting into the slowly advancing working face of the sand quarry to widen Meadow Street opposite to the Labour Exchange when one of them, Robert Wallace, hit something solid with his spade. *"At first I thought it was a stone I had struck," said Mr Wallace later, "but when I hit it again with the spade it seemed to me as if it was a piece of lead. Having had experience in Greece during the war of treasure being dug up, I threw away my spade and scraped away the sand with my hands. Then I saw protruding the top of a vase. Hurriedly I pulled it out, and as I laid it on my jacket it split and fell apart, revealing hundreds of small round objects stuck firmly together. When I looked closer at these objects and scraped off some of the verdigris adhering to them, I saw that they were silver coins. Several of my mates made a rush for the coins which broke away from the main cluster, but I wrapped my jacket over them and carried them to a tool shed, where I put them under lock and key*." News of the discovery spread fast and children from all corners came to join in the general search for more finds. Some folk thought that it had been a hoax. The Town Clerk was summoned and that afternoon he took the find into custody. The following morning he handed it on to Mr JG

Morrison, the Procurator Fiscal, who alerted the Queen and Lord Treasurer's Remembrancer and the coins, pot and cloth were classed as treasure trove. On Saturday 12th August a photograph appeared in the Falkirk Herald showing Wallace holding the base of the pot with the coins in it in front of the sand face of the quarry.

Sam Smith of Mumrills, a keen and respected Roman observer who was responsible for archaeological discoveries on his family farm, visited the site of the find so that he could pass on his comments to the experts from Edinburgh. The find spot was marked by the Ordnance Survey on future map just to the south of Meadow Street and quite close to what is now Bellevue Street. However, Sam Smith, whose judgement should not readily be dismissed, considered the true site to be further to the west. This would certainly accord better with the earlier topography of the area, placing it closer to Wormit Hill, the only remaining part of which is occupied by what had been Doak's dance hall (later encompassed by the bus station). It was probably his information that Macdonald used when he promptly published the find in the following year: "*The cavity dug for its reception would seem to have been at the bottom of what was then a natural hollow or, possibly, a ditch. The jar was resting at a depth as much as 7 feet below the modern surface, while above it was a pocket of 'free' sand, which gradually expanded upwards until it was 9 feet broad*" (Macdonald 1934, 33). The photograph of Wallace is informative here. The shadow under his chin shows that it was taken when the sun was high around mid-day. His legs cast a slight shadow to the photographer's right, suggesting that the working scarp faced north-east. Behind him there is a distinct dark band, around 30-40cm thick. He is crouching on what must have been the working level of the quarry and where the pot was found. On balance it appears that the hoard was dug into the bottom of an existing ditch which would have been around 6ft deep and 9ft wide at the top. This was probably one of several ditches surrounding Wormit Hill which is believed to have been the centre for a native leader (Bailey 2017). This belief is reinforced by the

Illus 4: **Robert Wallace with his find of Roman coins (FH 12 August 1933).**

find in 1957 of a fourth century copper alloy coin from below the level of the plough soil in another part of Bell's Meadow (Robertson 1961, 149). From its material it was clearly not part of the hoard and it demonstrates the continued occupation of the site by the indigenous population.

The coins were despatched to the National Museum of Antiquities in Edinburgh where Sir George Macdonald studied them upon his return from holiday in Switzerland. It was soon noted that there were 1930 coins in all. With an average weight of around 2.0g the whole collection would have been in the region of 3.860kg. Wallace employed a local solicitor, Thomas Cassells, to claim a reward through the Treasure Trove system. Initially he was offered £25, but appealed for more. His legal advisors contended that their client was entitled to bullion value in respect of the coins and it was emphasised that on the intrinsic value of the reward the coins were being valued at only about 3d each. Some of the local population were appalled that any reward should be paid and letters were sent into the local newspapers on the subject. Meanwhile another local storm arose from the fact that some of Wallace's workmates had managed to obtain individual coins as souvenirs. It was pointed out that this was illegal and on 3rd October D.K. Paterson, the Honorary Curator of the Falkirk Museum in Dollar Park, appealed for them to be handed in to that institution. He had an agreement with the Remembrancer that any such coins could be retained by Falkirk Museum and that no prosecutions would ensue. The appeal only produced 3 coins from Robert Wallace himself and one from an anonymous source. In 1963 another one was added.

The cloth that was found with the coins is only mentioned in passing in these early reports. However, it is the hoard that provides us with a date for the Falkirk tartan. The latest coin was minted for Alexander Severus in 230AD and as it was worn through circulation before being deposited then a date shortly after 240 would be appropriate. The hoard also provides us with a context and it is now widely accepted that the coins were issued by the Roman authorities as a 'subsidy' (ie bribe) to a local leader in return for cooperation.

Given the emphasis on the coins and the manner in which the pot collapsed upon removal, we are fortunate that the tartan survives. Although there were a lot of coins it is evident that they only half-filled the pot in which they were found. The cloth must have been place on top of the coins and was presumably originally much larger; the bulk of it having decayed after the hoard was placed in the ground. Alternatively, it is possible that only a small piece had been laid flat over the coins to separate them from the sandy backfill of the pit. One of the two ceramic vessels of a more recently discovered hoard of a similar date at Birnie in Moray was found to contain two leather pouches of coins. This raises the possibility of multiple payments over time. The second vessel also had

traces of leather from a pouch, and of a lining of bracken. At both of these sites there is no suggestion of a more solid lid for the pots.

The obvious question is why were these coin hoards abandoned? There has been much speculation. At Birnie the pots were placed in pits relatively close to contemporary round houses. Nothing indicates that these burials were for sacred reasons. Warfare, ending in the deaths of those aware of the secret hiding places, is the most probable reason, though their deaths could equally have been due to epidemics.

Despite earlier statements it is unlikely that the proximity to the Antonine Wall is significant. Macdonald was the first to suggest that the re-entrant angle taken by the Wall at the East Burn would have provided an easily recognised visible landmark from which to measure the location of the concealed hoard. However, he was assuming that the landscape to the north of the Wall was featureless. This was evidently not the case and even the nearby East Burn would have provided a better marker. If the pit was dug into an outer ditch of a defended hilltop enclosure there would have been identifiable man-made features, and it is possible that there was a track between the enclosure and the water. As at Birnie, the Falkirk hoard would have been placed close to the owner's residence. The Antonine Wall had been abandoned for 80 or more years by the time that the hoard was planted.

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