

SETT STICKS – FACT OR FICTION?

Introduction

It is not uncommon to be told, or to read, that the ancient method of recording and preserving traditional tartan was by means of a sett¹ or pattern stick on which the exact number of threads for each colour were wound to record the pattern (Fig 1).

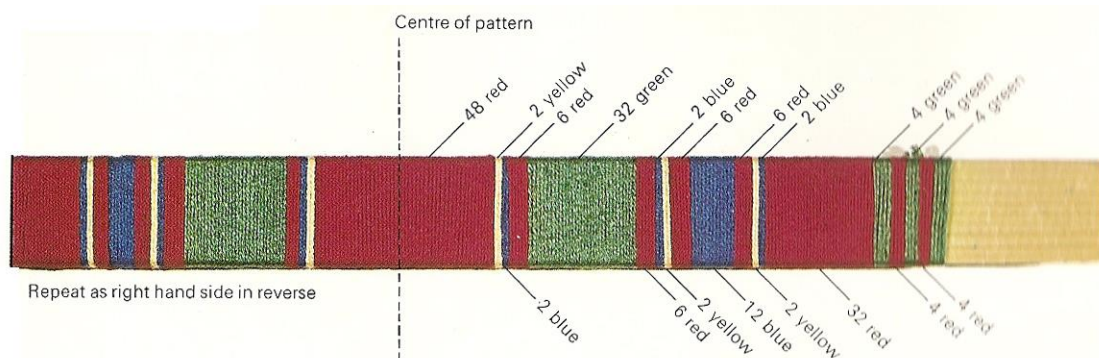


Fig 1. Reconstruction of a Sett Stick by R. W. Munro. Photo Credit – R. W. Munro¹

At first sight, this concept of recording tartans may seem as valid as many of the other traditions that surround tartan and Highland Dress but what is the truth behind this practice?

The Tradition

The first record we have of these pattern sticks is in the early 18th century and a reference by Martin Martinⁱ. Writing of tartan he says "*There is a great deal of ingenuity required in sorting the colours, so as to be agreeable to the nicest fancy. For this reason the women are at much pains, first to give an exact pattern of the plaid upon a small rod, having the number of every thread of the stripe on it.*" (my emphasis).

Martin was a native of Skye and this, combined with the early date, led later writers to the conclusion that such sett sticks, sometimes called a must have existed. Martin may have been a Highlander and have reported accurately what he saw, but that does not mean that he necessarily understood it. Based on Martin's assertion, the use of pattern sticks has been blindly repeated as fact in many subsequent works including Loganⁱⁱⁱ, and MacKay^{iv} who introduced readers to the term *maide dealbh*². His reference is worth quoting in full as at first glance it would seem to offer definitive proof of the existence of pattern sticks.

"The writer recollects seeing three such sticks, in the possession of an old weaveress in Lochalsh over sixty years ago. They represented the tartans of MacKenzie, MacLennan, and MacRae. She kept them rolled up in a linen cloth and considered them a most precious heirloom, they having been in the custody of her family for at least three generations".

¹ The term used to describe the particular pattern of stripes in a tartan.

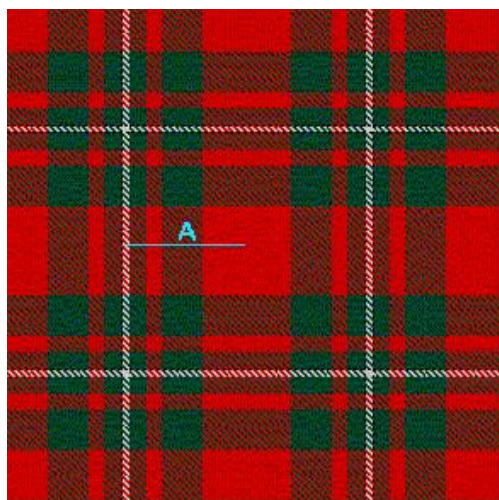
² The stick referred to by Martin was called the *Maide Dealbh*, the warping or pattern stick.....'

Given that MacKay was born in 1869 his claim (pub. 1924) to have seen three pattern sticks ‘over sixty years ago’ cannot have been correct and throws into doubt the accuracy of his writing on pattern sticks. Even had he seen what he claimed, he is unlikely to have done so much before his late teens at the earliest, say c1890, meaning that the old woman’s pattern sticks were unlikely to date much before c1840. MacKay makes a number of historical claims in his book which are not borne out by the facts and this one is particularly troublesome. It’s perhaps significant that the three tartans supposedly preserved by the old woman in Lochalsh were all for clans from that immediate area and this could be an example of MacKay manipulating the evidence to support his view of the historical existence of clan tartans which is discussed elsewhere in his book.

Similarly, Dunbar’s comment^v that very few of these sticks remain (c1955) is curious because it suggests that he thought some sett sticks survived, although he never collected or photographed an example. Nor is the term *maide dealbh* included in Dwelly’s fulsome work which allegedly contained every Gaelic word and phrase^{vi}. This lack of any actual evidence, together with my knowledge as a tartan weaver, caused me to reconsider whether Sett Sticks ever actually existed.

How tartans are recorded

In considering whether pattern sticks did in fact ever exist, one needs first to understand their supposed role and, therefore, the need for them. Martin et al state that the exact number of threads of each colour were wound on sticks in the order of the colours so as to preserve a record of each tartan. For those with no knowledge of weaving this might seem a logical way to preserve a design and the concept could have worked admirably for a simple tartan. However, as some of the more complex traditional designs were the full width of the loom this would have meant that some pattern sticks would have had to have been 26-28 inches wide. The practicalities of storing a range of pattern sticks in a small cottage where they could be accidentally damaged, eaten by moth lava or spiders, or in some other way spoilt can easily be imagined.




For most tartans a weaver simply needs access to a half repeat of the design in order to replicate it. For example, in the MacGregor tartan (Fig 2), details of the section shown by line A are all that would be needed in order to weave the design. The threadcount³ W/2 K2 G8 R8 G16 R/20 represents this section  of the tartan which called a half sett or half repeat. When repeated this makes the whole pattern in the warp or long-ways threads on the loom.

Fig 2. Line ‘A’ is the portion of the pattern required to reweave the tartan. © The Author

³ This is a standard weaving threadcount taken to the centre of each pivot.

As there was no standard size to a particular pattern the exact number of threads can be varied so long as the overall proportions are maintained. A weaver therefore needs to be numerate in order to fit the design to the width of the loom based on the density (quality) of the yarn and the width of the cloth combined with the desired number of repeats of the tartan across the warp. This process is more complex where the design includes a selvedge pattern⁴. If a weaver has to be numerate then it follows that all that was needed in order to preserve a tartan was to write down the threadcount. However, if for some reason one wanted to keep an accurate record of a particular version, including the specific rather than generic colours, then it is simplicity itself to store away a small off-cut of a previous weaving such as this 18th century fragment (Fig 3) rather than undertake the time consuming and unnecessary winding of threads on a stick.



Fig 3. Tullibardine fragment c1750 measuring 1" x 16" showing the full repeat and selvedge. © The Author

It is therefore clear that there is no benefit in using pattern sticks and so the question arises of what could have lead Martin to state that such sticks were used in order to preserve the individual tartan designs? There are a number of stages of the weaving process where the



warp threads are arranged on sticks and pegs that Martin could easily have misinterpreted as the use of pattern sticks. Firstly, there is the winding of the warp, the process by which the warp for the desired length of the material is measured out on a series of pegs on a 'warping board'; in Gaelic this is called a *dealbh* or *dealbh ard*. This term, and the structure of a warping board, may have been the source of the term *maide dealbh*. The width of the warp is compressed to a series of stripes wound around each peg and at one end of the length the threads are crossed around three narrowly spaced pegs to form a cross with half the number of threads running each side of the central peg (Fig 4). So it is possible that Martin mistook the warping process as the method of recording the pattern.

Fig 4. Warp wound on the warping board.

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⁴ Selvedge patterns and selvedge marks are discussed in this [companion paper](#).

Secondly, there is the procedure where the warp, having been transferred to the warp beam⁵, is threaded through the heddles⁶. Generally a new warp is simply tied onto the end of the previous one and then drawn through the eye of each heddle like a form of self-threading. However, when a loom is re-set for whatever reason then the heddles have to be threaded from scratch. In either process the warp cross, the figure of eight where the threads had run in alternate pairs either side of the central peg, must be maintained in order for the threads to remain untangled. To achieve this, two sticks (known as lease sticks) are inserted between the cross to keep the threads separated. These sticks are somewhat longer than the full width of the warp that appears to be wound around them. Whilst technically unnecessary, some weavers keep the lease sticks in the warp throughout the actual weaving process tying them to (Fig 5) the back of the loom. Could this be the process that Martin was describing?



Fig 5. Tying in a new warp. The threads are kept in order using lease-sticks (Martin's *Pattern Sticks*?).
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Conclusion

It is easy to understand how either the warping process or dressing the loom could have been misinterpreted by Martin as a record of the pattern being kept on a stick. It is unlikely that we will ever know what the source of Martin's information was and so can only speculate. However, it is possible to do so in an informed way. The fact that no sett/pattern stick has ever been found but that full loom width off-cuts from the 18th century do survive, must give rise to serious doubts that such sticks ever existed. I have described various stages of the weaving process where the threads are arranged on pegs and sticks and believe that it is much more likely the Martin either saw, or heard about these and misunderstood the process. Given the

⁵ The roller at the back of the loom that acts as a yarn reservoir.

⁶ A heddle is an integral part of a loom. Each thread in the warp passes through a heddle, which is used to separate the warp threads for the passage of the weft. The heddle is made of cord or wire, and is suspended on a shaft of a loom. Source [Wikipedia](https://en.wikipedia.org/wiki/Heddle)

need for a weaver to be numerate I do not give any credence to the tradition of sett sticks and believe that Martin's misinterpretation of either the use of the warping board or lees sticks offers the best explanation for the myth of pattern sticks use to preserve a record of each tartan.

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ⁱ MUNRO R.W. 1977 *Highland Clans & Tartans*. Octopus Books., London

ⁱⁱ MARTIN M. 1720 *Description of the Western Isles of Scotland*

ⁱⁱⁱ LOGAN J. 1831 *The Scottish Gael*. Smith, Eldar & Co., London

^{iv} MACKAY J. G. 1924 *The Romantic Story of Highland Garb*. Aneas MacKay, Stirling

^v DUNBAR J.T. 1962 *The History of Highland Dress*. Oliver & Boyd., Edinburgh

^{vi} DWELLY E. 1911 *The Illustrated Gaelic-English Dictionary*. 9th Edition. Gairm Publications, Glasgow