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CAULKING MALLET

Over the last few months, Donald Brown, Vaul, has given An Iodhlann a number of boat building tools from his family's workshop. Among them is this substantial wooden caulking mallet, along with a bag of oakum (hemp soaked in tar), three caulking irons, an adze, a wooden block plane and a spokeshave. Taken together, these beautiful tools, smoothed by years of use, shine a flickering light on an often-forgotten Tiree craft.

In the nineteenth century, many islanders had a boat but were relatively slow to adopt industrial fishing of the waters around Tiree. The Duke of Argyll had tried hard to encourage matters, letting a croft in Scarinish to a 'boat carpenter' as early as 1802 and crofts in Mannal to prospective fishermen. But the lack of a half-decent harbour meant that all island boats had to be dragged up the beach to safety every evening, limiting their size. Smaller boats took longer to sail out to the fishing grounds, could carry fewer lines and were less safe in the huge seas around Skerryvore. The minister reported in 1845: 'Though almost all are occasional fishers, yet few follow it steadily as a profession. Out of ninety-four fishing skiffs which the parish contains, only ten are regularly employed.' Six years later, however, census officials identified 127 'fishermen' on Tiree, and seven boat building workshops sprang up to service this suddenly booming industry.

The classic Tiree skiff, built for the long line white fishery, was an open, double-ended boat between twenty and twenty-six feet long, with a single mast and rigged as a dipping lug. The dipping lug rig remained popular in the Tiree fleet far longer than it did in other ports. It was popular because it is very efficient without a mast at its leading edge; it has a low centre of gravity, which means there is less tipping and less need of a keel for balance; the mast can be shorter and does not need to be braced with halyards; and the sail tends to lift the bow over the waves. The disadvantage – and it's a big one – is that going about from one tack to another is time-consuming and needs great skill, particularly in a sea. The Tiree fishing banks were up to twelve miles offshore, however, and so tacking was relatively infrequent. The Shetland sixareen was similarly rigged, although its sail was attached a foot or so behind the bow rather than to the point of the bow itself.

Towards the end of the nineteenth century, island fishermen returning from the east coast herring fishery brought second-hand versions of new boat designs with them: skaffies, fifies and zulus. Some of these were partly decked; some had an extra, smaller mizzenmast at the stern; a few even had a jib and bowsprit. Eventually,

however, larger and more efficient boats from the mainland started working the fishing grounds around Tiree. Island boats could not compete, and eventually the spawning grounds were damaged so that catches fell all round. By 1901 there were just thirty-four fishermen and a single boat builder still working on Tiree. John MacKinnon, Vaul, died in 1917, with the last boat coming out of his shed being the *Joan*, last owned by Lachie 'Doan' MacArthur, Mannal. Part of the solution was a switch from the 1860s to an inshore lobster fishery; Tiree boat builders began to make shorter, beamier vessels to accommodate the creels.

An important job in any clinker-built boat was sealing the gaps between the timber strakes. To do this, caulk or oakum was hammered in place using a mallet like this one and a set of caulking irons of different sizes. Boat builders used whatever was to hand. Prehistoric boats were often caulked with moss. Viking boat builders preferred sheep's wool. Partly with an eye on providing oakum, John Walker from Edinburgh recommended to the Duke of Argyll in 1764 that hemp (*Cannabis sativa*) should be sown on Tiree, following an experiment in Lewis where plants grew to a height of four feet. Nothing came of this. When coir rope, made from coconuts, arrived in the Tiree shops at the end of the nineteenth century, this was used as well. The cheapest source of oakum was old rope. This had to be unravelled, however: tedious, slow work, sore on the thumbs, and usually given to sailors as a punishment, to people living in workhouses, and to prisoners. Those sentenced to hard labour in Coldbath Fields Prison in London, for example, had to fill a six pound bag of oakum a day.

To make the oakum completely watertight, it was smeared with either tallow or tar. The advantage of tallow was that it could be made on Tiree. Fat from any slaughtered animal, particularly that from around the kidneys, was cleaned, diced and boiled carefully for four to six hours before being strained through a cloth and left to set. The disadvantage of tallow is that it is quite soft. Better was Stockholm tar, made, as the name suggest, in Scandinavia. Wood from resin-rich wood like pine was burned under a turf capping in a conical ground pit with a pottery container at its base to collect the tar. Oakum soaked in tar became sticky and watertight, and hardened over time. The tar industry grew massively at the start of the Viking Age and was a key reason that their longships were such a successful boat. It has been estimated that one longship would have needed 500 litres of tar during construction.

Natural caulking is rarely used today. Epoxy, silicone and fibreglass have taken its place. But this worn mallet reminds us of the skills that were once found in many workshops on the island, keeping boats watertight as they battled the huge waves around Skerryvore lighthouse.

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