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An Ethnography of Shetland's Oldest Boat, the Sixareen *Mary* LK 981

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ABSTRACT

The *Mary* LK 981 is the oldest surviving Shetland-built boat. Detailed recording of surviving examples of Shetland's boats has been rare, and where undertaken, has focused on analysing overall boat form rather than their biographies. However, previous work has been critiqued as too narrowly focused on hull form and the direct connection between Shetland's small boats and their Norwegian (or even Norse) antecedents. This paper presents new recording and analysis of the *Mary*'s surviving remains taking an archaeological approach combined with historical and archival providing a more complete biography of the *Mary*. We argue that the *Mary* is a unique survival of Shetland's vernacular boatbuilding tradition and her biography parallels important transitions in Shetland's 19th century maritime economy. This work has dramatically cast into relief areas for future research into Shetland's vernacular boatbuilding and wider maritime history.

Key words: Sixareen, Shetland, far haaf, vernacular boat, nineteenth century, nautical archaeology, boat recording, boatbuilding

Vernacular small boatbuilding traditions are remarkably under-studied in northern Britain compared to other north-west European regions. In particular, the detailed recording and analysis of smaller boats is rare.[1] The Shetland Islands, an archipelago located 160 km north of the Scottish mainland at the confluence of the North Atlantic and North Sea, is no exception. Detailed recording of the physical remains of surviving examples of Shetland-built boats has been rare, and where undertaken, has been almost

[1] Meide and Sikes, The Achill Yawl; Christiansen, Boats of the North a History of Boatbuilding in Norway.

strictly focused on understanding the original form of the vessel rather than their biographies.[2] Previous work concentrating on categorisation and vessel types in the study of Shetland boats has also recently been critiqued as too narrowly focused on the direct connection between Shetland's small boats and their Norwegian (or even Norse) origins, favouring instead a view that Shetland saw a distinct and unique boatbuilding tradition in its own right.[3] This paper documents the oldest surviving Shetland-built boat, the *Mary*, registered in Lerwick as LK 981, and built in the 1860s. Using an archaeological approach, a new programme of detailed recording of the *Mary*'s physical remains, undertaken in autumn 2016, has allowed description and analysis of her construction and repairs through her life. Coupled with documentary and contextual evidence, a compelling biography for this exceptional piece of maritime history can now be presented. This artefact biography has revealed information on the boat which has both complemented historic records and added new insights into her use history, as well as cast into relief areas for future research into Shetland's vernacular boatbuilding and wider maritime history. We suggest that the *Mary*'s history, as revealed through the now more complete biographical narrative and detailed recording, mirrors the fortunes of Shetland's maritime economy through the late nineteenth century and to the present day – from a time when small traditionally built craft were vital to everyday life on this sub-arctic archipelago, until today, when they have fallen nearly completely out of use.

The Shetland *Sixareen*

[2] Osler, The Shetland Boat: South Mainland and Fair Isle; Morrison, Aspects of Viking Small Craft in the Light of Shetland Practice; Morrison, Traditionalism and Innovation in the Maritime Technology of Shetland and Other North Atlantic Communities.

[3] Chivers, *A similar but different boat tradition: the import of boats from Norway to Shetland 1700-1872*; Chivers, *Shetland Vernacular Boats, 1500-2000*

The *Mary* is a type of commercial fishing vessel called a *sixareen* (figure 1). These craft fished mainly for ling using long ground lines between the months of May and August and are defined, as the name suggests, by the six oars that they used. They are open, clinker constructed and double-ended, and despite being defined by their rowing capacity, were sailed more often than not. Their sailing capabilities have been routinely praised.[4] Originally these craft were square sail rigged, but by the mid-nineteenth century the square sail had largely fallen out of use, superseded by the dipping-lug.[5] The origin of Shetland's boatbuilding tradition was west Norwegian, and the nomenclature of these boats followed the same naming convention as that found in the Hordaland region. Boats here were also defined by the number of oars that they used, for example *seksæring*, a six-oared boat, which is where the term *sixareen* derives.[6] Shetland's boat nomenclature is mostly in Norn, the vernacular language of Shetland, which developed from Old Norse and dates to the Medieval period (AD 1100-1600) (table 1).[7]

[Figure 1 near here]

[Table 1 near here]

Until c.1769 the boats used in Shetland for commercial fishing were imported west Norwegian *færing* (four-oared) or *seksæring* types. Shetland has never had a substantial timber resource, and virtually no woodland has been present in the archipelago for the last 1000 years necessitating the import of boatbuilding materials

[4] Halcrow, The sail Fishermen of Shetland, and their Norse and Dutch Forerunners, 66

[5] Chivers, Shetland Vernacular Boats 1500-2000, 1.

[6] Thowsen, The Norwegian Export of Boats to Shetland, and its Influence on Shetland Boatbuilding and Usage, 166.

[7] Jakobsen, An Etymological Dictionary of the Norn Language in Shetland, 197, 747.

from western Norway (figure 2).[8] Shetland had until 1469 been part of Norway, and this historic timber and boat import trade link persisted until the nineteenth century.[9] In the majority of cases, boats in the eighteenth century were smuggled to Shetland in their component parts.[10] The late eighteenth century saw west Norwegian boats begin to be purpose-built for use in Shetland as a consequence of changes in fishing practice.[11] Longer distances to fishing grounds resulted in importing deeper keeled boats with a double garboard (in Norway called a *kjølrenne*). Boats were already being heightened by Shetland boat carpenters by the addition of a *reebing* (sheer) strake,[12] and from the 1780s there was an approximate 60-year transition period when Shetland boat builders developed unique vernacular four and six-oared fishing boats; epitomised in later years by the deep-sea fishing boat, the *sixareen*.[13]

[Figure 2 near here]

[Figure 3 near here]

The Shetland Museum holds a unique collection in Scotland of a range of examples of a single region's vernacular boatbuilding tradition. Housed, conserved and displayed here are various nineteenth and early twentieth century boats, three of which are classed as *sixareens* (table 2). Importantly, the *Mary* is the only surviving *sixareen* typical of those used at the peak of the *haaf* fishery. A key discovery of the Shetland Museum's programme of collection and conservation was that many of these older boats had seen major alterations in the course of their commercial life, often resulting in

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[8] Edwards and Whittington, 'Landscape and environment in prehistoric West Mainland, Shetland'; Edwards, Whittington, Robinson and Richter, 'Palaeoenvironments, the archaeological record and cereal pollen detection at Clickimin, Shetland, Scotland.

[9] Smith, H. The Scandinavian Influence in the Making of Modern Shetland

[10] Chivers, Shetland Vernacular boats 1500-2000, 9

[11] Chivers, Shetland Vernacular boats 1500-2000, 165

[12] Chivers, Shetland Verancualar boats 1500-2000, 199

[13] Chivers, Shetland Vernacular boats 1500-2000, 210

very little of the original boat remaining. Commercial fishing boats were subject to heavy strains on the timber and fastenings, leading to slackening of the hull structure, and splits in strakes that required re-nailing or replacement. Boats in Shetland, unlike those in Norway or Faroe, were invariably stored outdoors biasing boat survival towards the rare examples housed in sheds. The *Mary* is even rarer for having not been stored indoors, rather she was used as a shed roof for much of the twentieth century. Of the very few surviving boats known to date from the 1880s or earlier, most have seen substantial alterations in the twentieth century. Again, the *Mary* is unique in representing a surviving *sixareen* which has no twentieth century sailing adaptations, and the majority of the hull is original timber. Her transformation into a the rooves of two sheds involved the boat being sawn in half amidships which did not fundamentally change her constructional qualities. On the *Mary* and other boats surviving from the nineteenth and early twentieth centuries, modifications or major rebuilding was not documented, and remnants of the original boat only survive, as physical, isolated archaeological features. It is beyond the scope of this paper to provide a more detailed analysis of each individual Shetland vernacular boat type.

[Table 2 near here]

The history of the *Mary*

The *Mary* was built by Hay & Co., Freefield, Lerwick, under the superintendence of the firm's foreman boat builder, Davie Leask, in the 1860s. Hay & Co. was a merchant business, and were major timber importers during this period. Boatbuilding was one of their main business interests along with fish curing and fish export. In the 1860s there was huge demand for boats because of a burgeoning fishery aimed mostly at long-line caught whitefish. The exact year the *Mary* was built at Freefield in Lerwick is unknown,

but the boat was listed in the newly-introduced Customs fishing vessel register in 1869 and therefore must predate that year.[14] The *Mary* was registered to William Anderson from Sandwick, on the island of Whalsay (figure 3). Hay & Co. had a dominant trading presence on the island, with both a shop and a sizeable whitefish station.[15]

During the second half of the nineteenth century, there was a tacit agreement made between landlords and their tenants to fish exclusively for certain merchants, such as Hay & Co. These merchants had a monopoly, and the tenant fishermen and their families were obliged to obtain the goods they needed on credit from the company shop. This system was known as 'Truck' and fish landings and credit accounts were settled annually, often leaving the fishermen and their families in debt.[16] It had been previously believed that most fishermen during this period rented their boats from the merchant for whom they fished. However, new evidence has shown that in most cases it was only the largest *sixareens* that were rented. This made economic sense, as the burden of ownership fell to the merchant, and not the fishermen, who only used these large 30-34 foot (9.14m -10.4m) specialist fishing boats between the months of May and August each year.[17] In 1869 on Whalsay the average sixareen was approximately 29 feet (8.8m) long overall, and in contrast to most of the rest of Shetland, here it was the norm for fisherman to own their boats in the nineteenth century. The *Mary* belonged to a partnership headed by Willie Anderson who had ordered the boat. The new boat was named after Mary Anderson (born 1852), the daughter of Willie's brother John, another

[14] H.M. Customs 1869-1886.
[15] Irvine, Interview regarding Whalsay fishing station
[16] Smith, Shetland Life and Trade 1550-1914, 127-130
[17] Chivers, Shetland Vernacular Fishing boats 1500-2000, 279.

of the boat's shareholders.[18] In the Customs register the *Mary* was listed as having six crew (four men and two boys) which was normal for these craft.

There are no detailed records of how the *Mary* fared during the fishery boom in the 1860s and 1870s, but we can illustrate the kind of working life she probably had. *Sixareens* were purpose-built for fishing at the *haaf*, and were operated out of fishing stations located across the islands, especially in the north (e.g. Fethaland, North Mavine).[19] The *far haaf* referred to the off shore fishing grounds around Shetland, c. 30 miles away from the nearest shore.[20] Fishing stations usually comprised a suitable pebble beach where the fish were landed, washed, then salted in vats before being laid out to dry on the beach. During the season, fishing crews lived at the station in huts known as lodges and there was usually another larger building which was used as a store.[21] Whalsay, where the *Mary* spent her working life, was a major centre for the fishery, but the geography was somewhat different to the norm. While many boats and crews operated from Symbister (the largest town on the island), demand and competition saw a distant station develop on East Linga and Grøfskerry, small islets east of Whalsay (figure 3). These distant stations allowed the crews to be nearer the fishing grounds, reducing rowing or sailing time. The crews stayed in lodges on Grøfskerry. Although the isle is only a quarter of a mile long, it saw the construction of eighteen lodges, each accommodating a separate boat's crew of six. At times during the boom, three further lodges were located on Rimbel, a tiny islet no more than 400 metres across.[22] The *sixareen* crews landed their catch at East Linga where processing

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[18] H.M. Customs
[19] Withrington, and Sinclair, The Statistical Account of Scotland, 457
[20] Bruce, More About the Sixerns, 319.
[21] Pløyen, *Reminiscenes of a Voyage to Shetland*, 38-40
[22] Irvine, *Interview*; Bruce 1946

occurred. An account from the 1874 or 1875 fishing season, when the *Mary* was amongst the boats fishing there, states;

> It was the day when the boats came in from the fishing, and a busy scene presented itself. The place was full of bustle and activity. Some boats had arrived. Part of the crews were busy landing the fish and getting them weighed. Others were variously engaged in making preparations for cooking a hot meal before catching a few hours' sleep. After being forty hours at sea without a wink of sleep, and with hard work all the time, I have no doubt the food and rest at the lodge were enjoyed with a zest unknown in the luxury of a palace.[23]

The boom was not to last. The *far haaf* fishery was in terminal decline by the early 1880s. Bruce cites a gale in 1881, which saw 10 boats and 58 men lost, as one of the final blows to a declining industry.[24] The East Linga and Grøfskerry station were last used in the 1882 season.[25] There was in the 1880s a concomitant rise of herring fishing, but crucially these employed larger decked vessels, and as such, *sixareens* began to fall out of use.[26] In the waning years of the *far haaf*, we know the *Mary* continued to be used, not least, as she was involved in a daring rescue at the Fleashens of Sandwick of a wrecked Danish barque, the *Alba* in 1884.[27] Her first skipper, Willie Anderson, would die in 1885, and it was probably clear at this time to the then owners, John Anderson Jr., Willie Bruce, and John Stewart, that the *Mary* was no longer economical as a

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[23] Russell, Three Years in Shetland, 114-5.
[24] Bruce, More about the Sixerns, 318.
[25] Russell, *Three Years in Shetland*, 115; Irvine 'Interview'.
[26] Coull, The Shaping of Shetland: An Archipelago's Landscape History, 86-87.
[27] See Chivers, Stratigos and Tait, 'The Mary LK 981', for further details.

commercial fishing boat. Her fishing registry was cancelled in January 1886, recorded as 'Boat useless'.[28]

However, it is clear this was not the last time the *Mary* put to sea. Deregistered boats were uniformly put to other purposes. Smaller craft were often used for subsistence fishing, but the larger *sixareens* had limited further uses. A common secondary use for a *sixareen*, was as a flitboat, referring to a vessel used for carrying cargo between islands and from off-lying vessels to shore which could not dock at small harbours or jetties.[29] Flitboats typically belonged to the merchant in each port of call, and in Whalsay, Hay & Co. had their own *sixareen* flitboat. As there was no need for another, the *Mary* remained in Sandwick redundant, but apparently still sea worthy. We know this because, as reported in this journal in 1946, a journey aboard the *Mary* was recalled;

> I made a run in Decr. 1891 from Sandwick, Whalsay, to Lerwick in the haaf-boat 'Mary' of Sandwick. We had a single reef and a following wind, and I think we got to Hay's Docks in an hour and 30 or 40 minutes. The 'Mary' was thought to be a fine boat on a wind, but not a good runner, but she ran well enough for me! It was more like flying when she lifted on a sea, and she scudded on the back of a roller - I enjoyed that run, I can tell you.[30]

This account by Bruce, made five years after the *Mary* ceased commercial fishing, suggests that this boat was used like many other retired *sixareens* to flit or ferry cargo and passengers; in this instance between Whalsay and Lerwick. At some point after

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[28] H.M. Customs 1869-1886.

[29] O'Dell, The Historical Geography of the Shetland Islands, 181; Taylor, A Shetland Parish Doctor, 17

[30] Bruce, R. Account of trip from Whalsay to Lerwick 1891

December 1891, the decision was made that the *Mary* would not put to sea again: she was hauled inland and sawn in half amidships to become a roof for two outhouses (figure 4). The stern half of the boat was destroyed in the 1960s when this shed was dismantled; no trace of that half of the *Mary* survives. The forward half survived as a shed roof until 1993 when one of the present authors (I.T.), during analysis of vernacular Shetland architecture, noticed the features of older boat construction.[31] The owner was aware of *Mary's* antiquity, and donated her to the Shetland Museum where she remained in storage until 2011.

[Figure 4 near here]

In 2011, the *Mary* underwent an intensive conservation programme to ready her for permanent display in the new-built Shetland Museum at Hay's Dock. This was undertaken by boatbuilders Robbie Tait and Jack Duncan under the direction of the Shetland Museum curator (I.T). Effort was made to retain as much as possible of the original boat, and notes were taken to record the process. The methods used during this conservation were faithful to nineteenth century technique (although some modern tools were used). New wood was used only where original elements had rotted. Rot was most severe at the gunwales, the cut ends of the planks where they lay on the outhouse gables, and around the treenail holes in the planking. The keel had been completely removed, so a replacement was reinstated. Where the upper edge of the boards eroded at the gunwales, a new part-width piece was glued-in, retaining the original fastenings in the lower edge. Wherever planking was reinstated, iron roves were matched with new hand-made ones (in two styles, diamond and round, see below). Without a stem it was not possible to fit replacement gunwales that would provide sufficient strength to

[31] Tait, Shetland *Vernacular Buildings: 1600-1900*, 155-156, 276, 278, 346, 354-355, 452, 508

maintain the *Mary's hull*-form. A compromise therefore had to be made, and instead of replacing like with like, laminated gunwales were constructed and fitted thus stabilizing the hull's form. Conservation now complete the boat was placed on display in the museum in 2011 in the manner of a "boatie hoose" (*i.e.* upside-down, so that visitors view her from inside, above their heads) (figure 5). She remains on display near the spot at Hay's Dock where she was built in the 1860s.

[Figure 5 near here]

Recording

Method

Proudly displayed in the Shetland Museum, the *Mary* was a challenge to survey and record due to her being exhibited inverted as the roof of a Shetland vernacular boatie house (figure 5). This boatie house structure is a public walkway connecting two parts of the museum, this meant that recording could only take place when the museum was closed. Although notes were made on her conservation, a single authoritative document detailing every alteration was not produced either before or after the conservation programme.[32] Indeed, no lines plans will have been produced during the period when she was constructed as the common practice in Shetland was to build boats 'by-eye'.

The boat was surveyed in autumn 2016. The vessels dimensions were recorded by means of an offset datum survey and the profile, plan, and half breadths views were then hand drawn at a 1:10 scale (figure 6). Photographs of constructional details were taken across the vessel to supplement the drawings, and enabled the following analysis.

[Figure 6 near here]

[32] Christiansen, Some thoughts on boats as museum objects, 351.

Analysis

Hull form

Only the forward half of the boat, minus the stem, survives and consequently the exact profile form of the sheer, and that of the forward stem, is not precisely discernible (figure 7). However, we know from the Customs Register in 1869 that the *Mary* had a keel length of 19 ft (5.8 m), constraining her overall length to approximately 29 ft (8.8 m).[33] Full reconstruction and consideration of her original form falls outside the scope of this paper, but some important performance-related details can be drawn out at this stage. The *Mary'*s length (29 ft (8.8 m)) to beam (7.5 ft (2.3 m)) ratio is 3.8; this just falls into the slender beam category.[34] Similarly, her beam to mid *band* depth (3 ft (917 mm)) ratio is 2.5, not particularly deep, nor shallow.[35] The length to beam, and beam to depth ratios suggest that the *Mary* had an easily driven hull, and will have been fast when either sailed or rowed as confirmed by the above quote by Bruce. The comment made by Bruce that the *Mary* was not regarded as a good runner requires explanation. There may be various reasons for this; a lack of volume aft will have caused the stern to dip as she ran before waves, the cut of the sail, and the way she was rigged may have been better suited for upwind sailing, and the way the planking lines ran aft may have adversely affected downwind performance. Sadly, without the physical evidence of the stern section this remains speculative. However, a comparison between the *Mary* and Shetland Museum's 2010 constructed operational *sixareen Vaila Mae* is possible. *Vaila Mae* is slightly larger (with a length to beam ratio of 3.5) than the *Mary*. And those who

[33] H.M. Customs 1869
[34] McKee, Working Boats of Britain: their shape and purpose, 81.
[35] Ibid.

regularly sail *Vaila Mae* testify that she handles like a very large well-behaved sailing dinghy. No doubt the *Mary* performed in a very similar manner and this might explain Bruce's exuberant description.

[Figure 7 near here]

[Figure 8 near here]

[Figure 9 near here]

We know from the H.M. Customs Register that the *Mary* was square sail rigged.[36] The original mast step does not survive in the vessel today, but it would have been located at the mid-ships *band* which does survive in the vessel. In the mid-ships *fastiband*, there is a rabbet for the mast (figure 8). Evidence for other sailing qualities are lacking on the surviving portions of the *Mary* having been lost to adoption or rot during her time as shed roof. However, the replacement strakes and repaired splits probably relate to stresses from sailing. These splits, along with more general loosening of the fastenings of the boat, are likely in part responsible for the asymmetry identified in the recording (figure 9). The significant asymmetry recorded is probably the result of decades spent as a shed roof. However, given the significant number of repairs noted, some asymmetry may have formed during the *Mary*'s initial construction or use, her sailing performance would have been significantly reduced through increased and differential drag (port to starboard). So while the *Mary* would have been a relatively nimble boat, the wear and tear of *haaf* sailing probably reduced her performance abilities.

[36] H.M. Customs 1869

Fastenings

The *Mary* is constructed from nine strakes fastened by ferrous diamond roves symmetrically distributed both bow to aft and port to starboard. Examination of the evidence indicates that the original diamond roves were all hand-forged. This now appears was not the case universally as careful examination of some original fastenings revealed evidence of galvanization suggesting that the roves, or the metal used to make the roves, were in fact industrially manufactured galvanized items (figure 10). One of the authors (I.T.) had previously found physical evidence for the use of galvanized diamond roves in the remains of a boat thought to have been the *Hope* LK 352 built in Out Skerries in 1899. This find suggests that manufactured nails and roves were being used earlier than previously thought, as it was previously believed that manufactured round iron nails and roves were in use from c. 1880.[37] No evidence has so far been found regarding the purchase of mass-produced galvanized nails and diamond roves, and it is not known where nor who manufactured these fastenings.

[Figure 10 near here]

At the forward end of both the port and starboard garboard strakes, near to where the stem begins, the first three nails either side, have been hammered from the inside of the boat out, and the roves fastened on the outside of the hull. This may have been a builder's solution to minimize potential plank end splitting during a period of heavy seas or when hauling out onto a beach which was customary for sixerns. Doubtless the nail was driven from the inside and clenched on the outside, in reversal of normal

[37] Chivers, Vernacular Boats of Shetland 1500-2000, 302-303.

boatbuilding practice, because the space inside the vessel was too constricted to peen in the usual fashion. [38]

This hypothesis may be a valid explanation, and Osler has observed a similar practice of applying a thin protective wrap around sheath of copper on Northumberland cobles.[39] This conjecture requires further investigation, and other explanations might be required to explain the reverse arrangement of these forward roves on the garboard strakes.

Other important fastening details can be found on the *bands* which are connected to the strakes using trenails secured in place by means of a wooden wedge inserted into a cut made at 90 degrees across the grain on the inboard end, which was finished by being trimmed flush with the *band*.[40] Later 19th century Shetland-built boats do not have this feature, but it can be found on a smaller contemporary to the *Mary* on the cod boat *Ann* LK 126 built in c. 1860 by Malcolm Laurenson, in Scalloway. The use of *trenels* to fasten the *bands* to the strakes, but not to the keel, was a common boatbuilding practice in western Norway in the mid nineteenth century as observed in the *Oselvar båt*.[41] The existence of this practice in a vernacular boat of that era, when Shetland's boatbuilding traditions were diverging away from Norway, indicates a continuance of an earlier custom.

The **snikk**

Perhaps the most overt west Norwegian boatbuilding tradition found in the *Mary* was the use of a moulding on the plank edges called the *snikk*.[42] The *snikk* on most of the

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[38] Osler, personal correspondence, April 2018.
[39] Osler, The Curious Case of the Grace Darling Coble: it's appraisal and context, 204.
[40] Jakobsen, the Norn Language in Shetland, 962.
[41] Økland, Oslevar den Levande Båten, 420.
[42] Jakobsen, the Norn Language in Shetland, 853.

original surviving boards of the *Mary* is shallow and worn or covered in pitch making it difficult to discern. This feature is commonly found on other nineteenth century constructed Shetland boats (figure 10). On the *Mary* the *snikk* is also found on the original *fastiband*. The same type of *snikk* has been in continual use in western Norway since c. AD 1000. In Norwegian, this moulding is called *staffering,* and the tool used to make the moulding is called a *staffhøvel*.[43] The same type of tool was also used in Shetland to make the *snikk,* and here it is called the *strek høvel* (strake plane) (figure 12). The continuance of these elements of the west Norwegian boatbuilding tradition in Shetland extended long after Shetland began to develop its own boatbuilding tradition around 1780. Unlike the wedged *trenel,* which is no longer employed in Shetland boatbuilding the *snikk* has since survived even today, and builders such as Tommy Isbister and Alan Moncrieff incorporate the *snikk* into their boats.[44]

[Figure 11 near here]

[Figure 12 near here]

Replacement and repair

There is clear evidence that the *Mary* saw damaged or rotten strakes replaced during her working life. One repair survives that was made with diamond roves, suggesting it is the earliest repair, while the replacements were fastened using industrially manufactured round roves. Round roves are also found along the split repairs. Since the majority of repairs on the vessel were made with round galvanized roves, we know that these repairs took place after their introduction c. 1880.[45] We have reasonable confidence that multiple board replacements did not take place before round

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[43] Chivers, Shetland Vernacular boats 1500-2000, 300-301; Økland, Oselvar den Levande Båten, 81

[44] Chivers, *Shetland Vernacular boats 1500-2000*, 165-169, 200-202, 298-302

[45] Chivers, Shetland Vernacular Boats 1500-2000, 302-303.

roves were introduced due to another detail recorded. It was observed that in renewing a strake the old nail holes were not reused; instead these were plugged with wooden dowels and new holes were bored for fastenings either side of the original (figure 13). Once the new strake was fastened in place the imprint of the old diamond fastening remained. Undoubtedly, this is related to the introduction of the different type of fastening. The newer nails used with the round roves are smaller in diameter (10mm) while the original nails used with the diamond roves were 12mm. It was not possible to re-use the original fastening holes as they were 2mm too large hence the boards retain evidence of their originality with the imprint of the diamond rove retained in their fabric (figure 13). It is not possible at this point to determine how atypical or commonplace this type of repair was due to the paucity of evidence, but should further examples be found might point to changes in .

[Figure 13 near here]

This evidence on the *Mary* suggests repairs were mostly undertaken sometime after 1880, when the demise of the *haaf* was imminent.[46] This raises the question as to why such expense was made in the face of an industry in decline. We propose three possible reasons to explain the nature and timing of these repairs. First, that the repairs were made periodically from the introduction of galvanised round roves in c. 1880 until the *Mary* was de-registered in January 1886 in order to keep her in usable condition in hope that the economic conditions of the fishery out of Whalsay would improve. Second, that the 1881 gale may have been responsible for all or most of the damage which required the repairs. The *Mary*, if out in that gale that saw 10 boats lost, would presumably have suffered structural damage in such heavy weather. Third, that

[46] See above.

following de-registration, the *Mary* was thoroughly repaired in preparation for a different purpose, but one which went unrecorded, for example, subsistence fishing or personal transport. Some combination of these three reasons for repair are possible, but the authors feel the likelihood rests with the first hypothesis. It is easy to look backwards, like Bruce, and see specific turning points in the economic fortunes of the *haaf*, however, for the people who lived through these times and whose livelihoods depended on the fishing industry, there may have been little choice but to accept dwindling returns from their catch and hope things would improve.

Conclusion: Moving forward on Shetland's boatbuilding past

The *Mary* is an exceptionally important survival of Shetland's maritime history, and as such, better documenting her physical remains has been a crucial step towards developing the understanding of Shetland's vernacular boatbuilding and what that can tell us about wider contemporary trends and conditions. The importance of recording boats in the way presented here will be understood by readers of *The Mariner's Mirror*,[47] and for Shetland this represents a significant step forward as the first complete documentation of a Shetland-built boat since Osler's study in the 1970s.[48] Alongside a recently completed PhD thesis on the topic,[49] detailed recording of the *Mary* has brought Shetland boatbuilding in the second half of the nineteenth century into greater focus through a combination of documentation and archival research. However, there is still wide scope to address questions with future research

[47] McGrail, Boats, ships and wrecks, 41-42.
[48] Osler, The Shetland Boat.
[49] Chivers, Shetland Vernacular boats 1500-2000.

Future research of Shetland's boatbuilding traditions should prioritise investigating the economic maritime connections which made any boatbuilding in Shetland possible and which was paralleled (or not) by identity and social life in these maritime communities. Our study of the *Mary* has highlighted questions about where the raw materials for her construction and repairs came from. One key aspect of this is the import of timber which was still being imported from Norway in the 19th century, but also began regularly arriving from British mainland ports and North America.[50] This was driven increasing adoption of reliable steam-powered ships regular ferry service from 1875,[51] a date which broadly corresponds to the introduction of manufactured round roves. Economic trends in the second half of the nineteenth century could be usefully contrasted against identity in Shetland as expressed in boatbuilding and wider society. This includes physical manifestations such as the continued use in the late nineteenth century (and indeed up to today) of the west Norwegian *snikk* as seen on the *Mary* as well as less tangible aspects of maritime life, such as retention of Norn vocabulary for boat parts and other fishing related objects and activities.[52]

Recording the *Mary* has also thrown into stark relief the need to search for evidence for earlier boatbuilding in Shetland. The preservation of Shetland boats is poor which has left a gap in our understanding of Shetland boatbuilding from before c. 1860. To date, this gap has been filled with uncritical assertions that Shetland boats were simply Norse descendants, but this can no longer stand uncritically.[53] Direct evidence for what was a west Norwegian building tradition and how it developed into a unique Shetland vernacular is missing. Further archival research provides one avenue to

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[50] Hay & Co. 1818
[51] Robson, Saga of the Earls, 3
[52] Knooihuizen, *Fishing for words*, 107-108.
[53] Chivers, Shetland Vernacular boats 1500-2000, 287-377

overcome elements of this question, especially regarding where boatbuilding materials originated. Further detailed recording of surviving nineteenth century boats would also be highly informative. The potential to provide new evidence from archaeological fieldwork aimed at fishing stations and *noosts* (boat storage structures) is high but will undoubtedly be fragmentary. Barring the discovery of privately held nineteenth century vessels, the dearth of evidence will continue to be a major challenge for future research of Shetland vernacular boatbuilding, underlining the importance of the *Mary* and the work presented here.

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Table 1. Comparison of boat nomenclature between Norn, English and Old Norse/Norsk (Jakobsen 1928: 194, 753; Towsen 1969: 170-171)

Norn (English)	***Old Norse***	***Norsk***
Forehead (English)	Hals or Stafn or Skutr	
Forrum (English)	Fyrirrúm	Framrom
Midrrum (Ballast room)	Miðskip	Midtrom
Austroom (Owesroom)	Austrrúm	Ausrom
Shott (Waderoom/run)	Skutr	Bakskut

Norn	***English***
Band	Timber or frame
Fastiband, Hadiband, or Beck	A cross beam affixed to the band which supports the taft (thwart)
First Garbbuird	Garboard strake
Second Garbbuird	Next strake from garboard
Halsins	Fore and aft strake sections joined in the middle by a board called the slot. Commonly the second strake run up from the keel, although this does vary regionally.
Hinnispot	Breasthook
Homliband, humlaband, or humliband	A grommet made originally of raw hide for fixing the oar to the thole pin, keb, or kabe
Kabe or keb	Thole pin
Rae	The yard
Rakkie	Curved piece of hardwood or cow horn which acts to hold the rae (yard) against the stong (mast).
Ribin or neebeen	The sheer strake
Rimwol	The rubbing strake of the gunwale

Ruth	A piece of wood upon which the oar rests and pivots against the keb.
Snikk	Bead moulding
Soolbuird or Sulbuird	The strakes above the waterline
Stamron or stammering	The bands nearest the bow and the stern
Stong	Mast
Tilfer	Sole board
Taft	Thwart

Table 2. Shetland Museum & Archives *Sixareen* collection.

Name	***Date***	***Fishing Number***	***Constructed***	***Builder***	***Originally based***
Vaila Mae	2008	None	Shetland Museum & Archives	Jack Duncan & Robbie Tait	Lerwick
Industry	1891	LK 718	Scalloway	Malcolm & Adam Laurenson	Walls
Mary	Pre-1869	LK 981	Hay & Co. Hay's Dock Lerwick	Foreman builder Davie Leask	Whalsay

Figure 1 – Sixareen Industry racing under dipping-lug sail at Walls about 1890 Photograph 02473 ©Shetland Museum & Archives)

Figure 2 Shetland is a sub-arctic archipelago at the meeting of the North Sea and the North Atlantic, approximately midway between western Norway and mainland Scotland. It has not had a substantial woodland resource for at least the last 1,000 years. (Photograph Michael J. Stratigos)

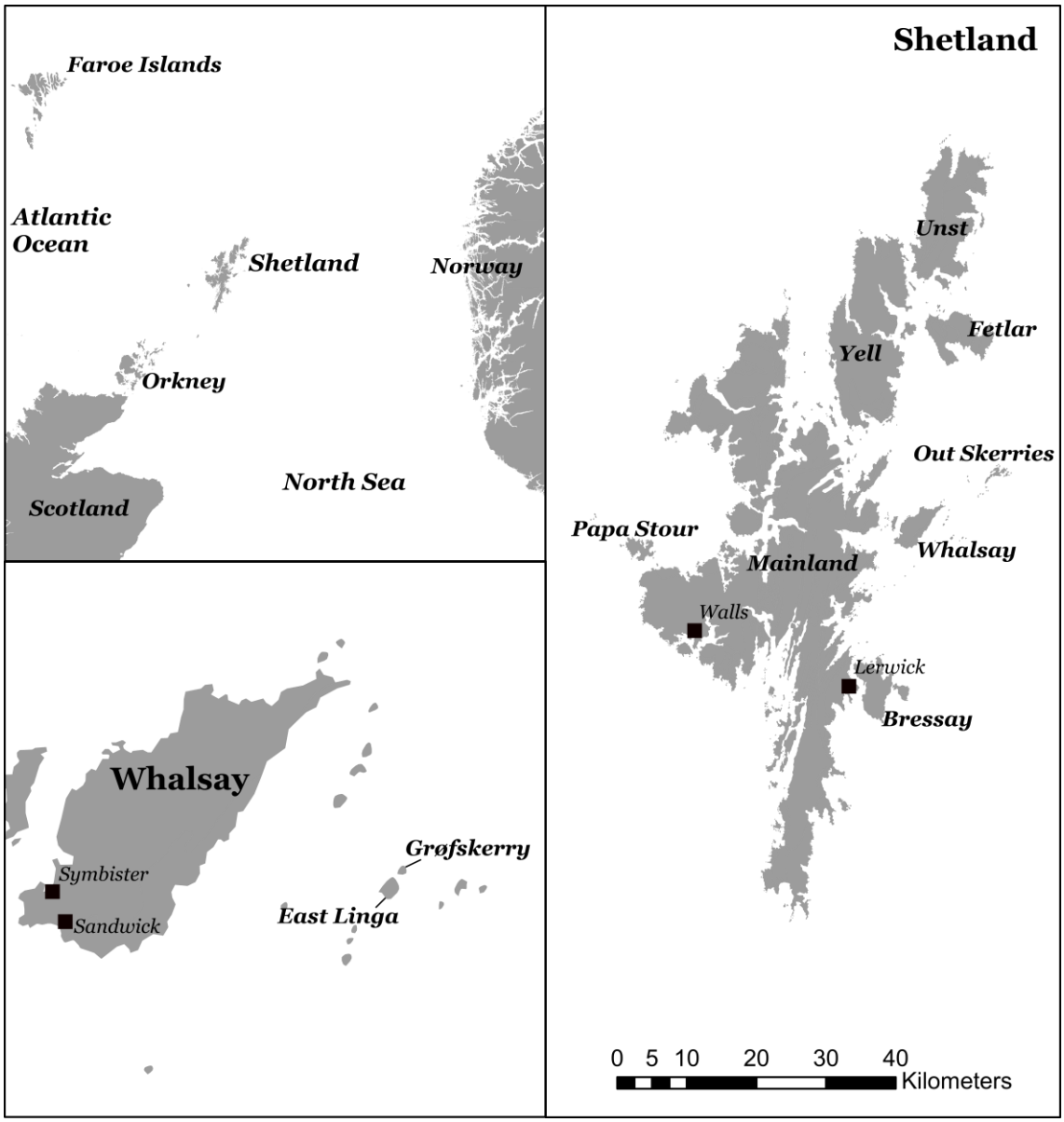

Figure 3 Map of Shetland with major towns and islands identified (Drawing author, Michael J. Stratigos)

Figure 4 The 'Mary' in Sandwick, Whalsay in 1993 before being removed to Shetland Museum and Archives, Lerwick (Photograph John Jamieson)

Figure 5 – Mary on display as a Boatie House. (Shetland Museum & Archives FIS 2011.54).

Figure 6 - Michael Stratigos and Ian Tait recording the Mary with the help of Sally Evans (Archaeology Shetland). Photograph Claire Christie.

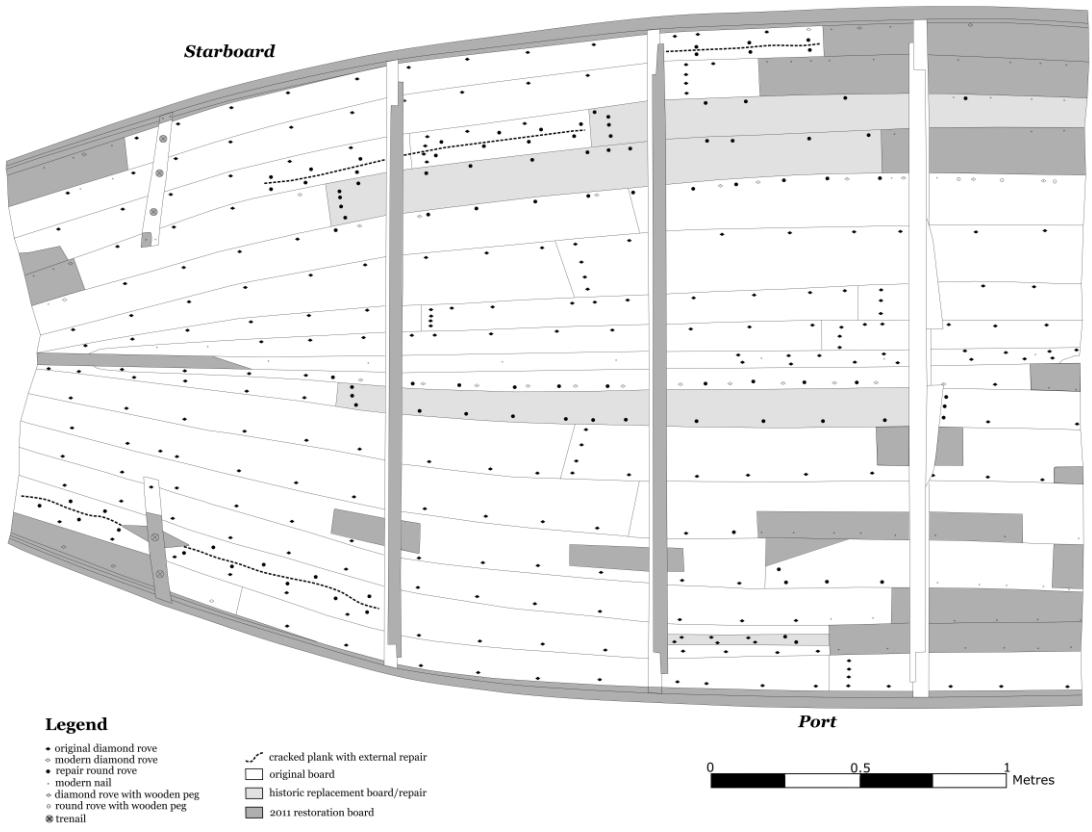

Figure 7 – Plan of the Mary. (Drawing author, Michael J Stratigos).

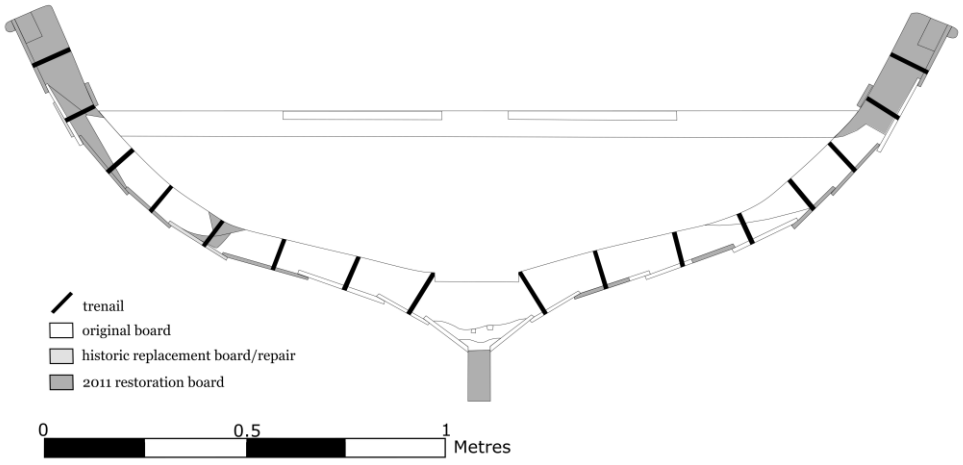

Figure 8 – Cross-section at midships of the Mary. (Drawing author, Michael J. Stratigos).

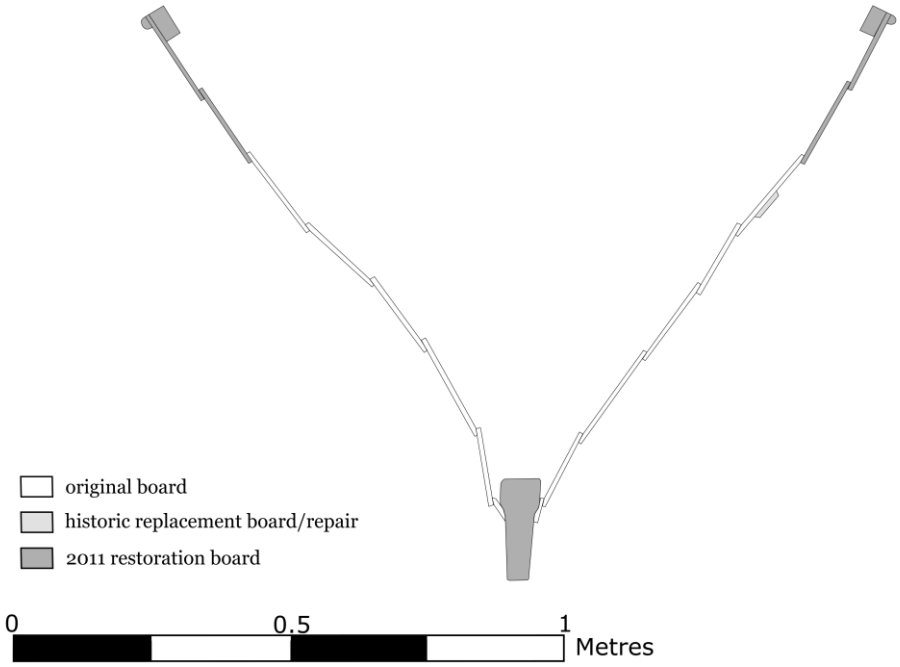

Figure 9 – Cross-section near bow illustrating hull-form asymmetry. (Drawing author, Michael J. Stratigos).

Figure 10 – Evidence of original galvanized fastenings. (Photograph author, Marc Chivers).

Figure 11 – The snikk on a four-oared boat built by John Laurenson c.1880. (Photograph author, Marc Chivers)

Figure 12 – Strek høvel that belonged to Jack Shewan., Whalsay. Owned by Robbie Simpson, Vevoe, Whalsay. (Photograph author, Marc Chivers).

Figure 13 – Replaced planking fastened with round roves. Note the imprints of the original diamond rove fastenings with the nail holes plugged. (Photograph author, Marc Chivers).