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A fish trap at Millport, Great Cumbrae, Scotland

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The consumption of fish was critical to the diet of settlements around the Firth of Clyde (Rorke, 2005). One method of catching fish was through the use of boulder enclosures, or yairs, which were designed to trap fish on receding tides in the intertidal zone. Such fish traps are recorded at numerous localities in south-west Scotland, i.e. the Clyde estuary, and in the adjacent part of Northern Ireland. Focused studies of fish traps have reported multiple traps on the North Ayrshire coast (Patterson, 1989) and the Isle of Bute (Ferrier, 1969). Patterson (1989) measured 35 boulder alignments interpreted as fish traps along 14 km of North Ayrshire coastline. Boulder fish traps are conjectured to date variably back to the Mesolithic, but in many cases the time of use is unknown. This report documents a boulder-based fish trap at Millport on the adjacent island of Great Cumbrae and constraints on the timing of its use.

A fish trap was built across the mouth of the bay known as Foul Port (National Grid Reference NS157545), about 300 m west of Millport Pier, and can be surmised from bay dimensions to be up to 80 m long (Fig. 1). It consisted of "a great dyke of huge boulders", when observed in the late 18th century (Lytteil, 1877, 1886). Today it is represented by a residue of smaller boulders and stones, which form a prominent row at higher tides (Fig. 2). Boulders were readily available at coastal sites in south-west Scotland. The region was in a southward pathway for debris during Quaternary glaciation, which was a source of boulders for fish traps at least as far south as Wales (Bannerman & Jones, 1999). In the Firth of Clyde, the result is an abundance of rounded boulders (many >1 m), particularly including granites and gneisses derived from a basement of Precambrian rocks (Dalradian metasediments) and Caledonian granites which outcrop to the north. This part of the Firth of Clyde is characterised by large boulders perched on ice-plucked sandstone shelves (Patterson, 1989). On Great Cumbrae, an island which constitutes a hill above the sea floor, boulders accumulated on the lee (sheltered) side where the town of Millport was established, so the raw material for constructing fish traps was readily available. However, the boulders were both the origin of the Foul Port fish trap and the reason for its demise.

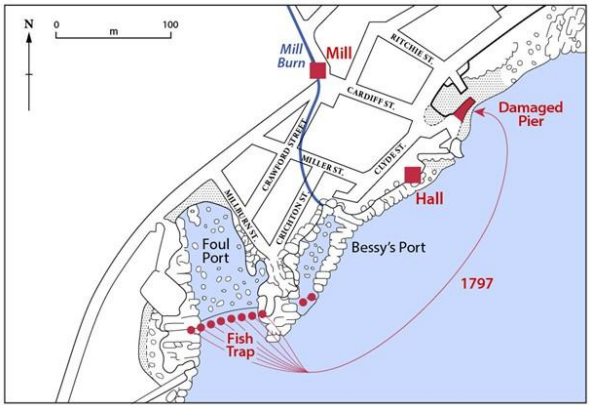

Fig. 1. Map of area west of Millport Pier, Great Cumbrae, Scotland, showing location of fish trap at Foul Port (red filled circles), which was dismantled to repair the pier in 1797. Barrier to create tidal pool at Bessy's Port also shown. "Hall" is site of Sheriff's Auld Ha', a probable site of administration. (Cartography: J. Bowie)

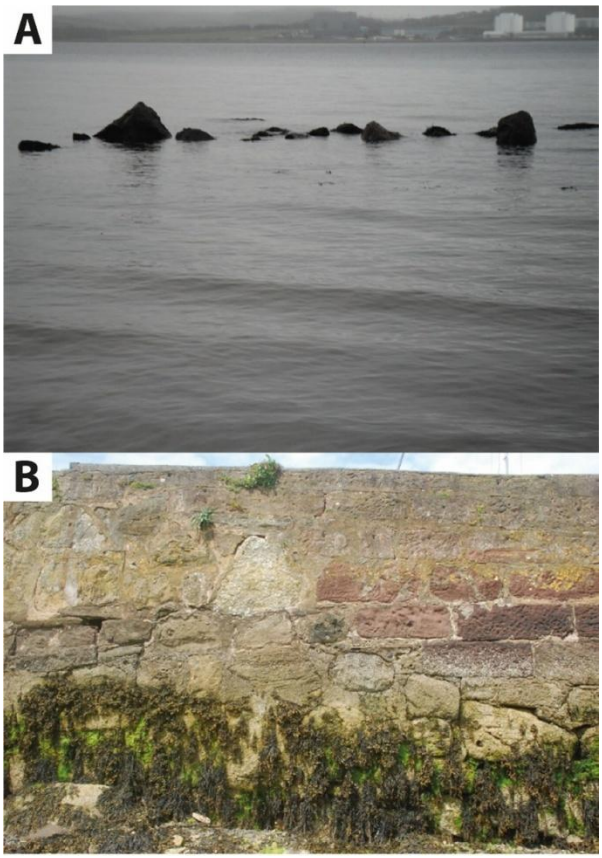

Fig. 2. Stonework at Millport, Great Cumbrae, Scotland. (A) Surviving row of small boulders and stones in sea at mouth of Foul Port, representing remains of fish trap. Background shows mainland shoreline at Hunterston, where fish traps have been discovered. (B) Outer (southern) wall of inner harbour at Millport Pier, showing boundary between (left) irregular residual boulders built up in 1797 from dismantled fish trap, and (right) red sandstone dressed slabs added subsequently. (Photo: I. Murray)

The Foul Port trap is reputably at a site of Viking settlement (Lytteil, 1877; Campbell, 2003). Carved stonework, the "Millport lintel", found nearby, may have a Viking origin, dating from about the 10th century (Buchanan, 2012). The Viking presence in western Scotland and Ireland lasted several centuries until the Battle of Largs in 1263 (Graham-Campbell & Batey, 1998). As most Vikings lived in coastal communities, fish would have been a key part of their diet. Salmon was especially valuable as a source of fat and protein, and had the additional advantage that it could be preserved by burial, as in the preparation of gravlax (gravadlax). Salmon consumption by Vikings is so far proven in Norway (Ramstad *et al.*, 2011). Fish would have been a major resource in the Firth of Clyde, including salmon, for which the Firth is a major pathway between breeding rivers and the open ocean (Mackay & Doughty, 1986; Lilly *et al.*, 2022). In pre-Viking Scotland the inhabitants presumably caught small fish from the shore, then Viking settlers increased the consumption of fish, including the application of fish traps (Barrett *et al.*, 2004; Williamson, 2004). A well-resourced Viking community would have contributed to the power-house that they established in Strathclyde (Clarkson, 2014). In the immediate vicinity, between Foul Port and the pier, a site on Clyde Street known as Sheriff's Auld Ha', a residence of the Sheriff of Bute, could have been a centre for hunting etc. (Lytteil, 1886). Several fish traps elsewhere are linked to administrative centres, i.e. they were "owned" or "controlled" by ecclesiastical or landowner institutions (e.g. Hale, 2004; Montgomery *et al.*, 2015). Two date constraints for use of the Foul Port trap are discussed below, related to the history of Millport Pier.

An early, 18th century phase of Millport Pier's history had involved the quarrying of freestone (sandstone slabs) for the stonework of Portpatrick Harbour, Dumfries and Galloway, at the same time extending the harbour space at Millport. The plans for Portpatrick Harbour are dated 1770 (Smeaton, 1812), and the completion of the work using Millport stone is reported in the Old Statistical Account (Graham, 1794), which constrains the date of the quarrying. The evidence given to the Tidal Harbours Commission of 1846 specifies that the only pre-1820 building of a pier at Portpatrick following Smeaton's planning was in the 1770s, although it was subsequently washed away (Graham, 2015). This must be the pier which used Millport stone. The date of completion is given as 1774 by Ayton & Daniell (1818), and the Tidal Harbours Commission (1847). Workmen quarrying stone at Millport for Portpatrick in the late 18th century apparently mended breaches in the boulder barrier at Foul Port and were able to catch salmon (Anonymous, 1856). Therefore, the 1770s quarrying dates the period when the fish trap was in place.

The barrier of "great boulders" was dismantled to repair nearby Millport Pier, in 1796/1797, under the direction of James Crawford, captain of the revenue cutter for south-west Scotland (Reid, 1864). The outer part of the harbour had partially collapsed, very probably due to abnormally stormy conditions which characterised the winter of 1796/1797 and extended from the British Isles to France. A Napoleonic invasion fleet sent to assault Ireland and Wales in 1796 was overwhelmed (Breen & Forsythe, 2007), and three of the largest stone slabs at Stonehenge including the lintel were toppled (Maton, 1800). London recorded a temperature of -21°C on Christmas Eve 1796 and the Thames froze. Conditions in Ayrshire were equally severe, and in between gales heaps of broken ice in the harbour at Ayr reached several metres above river level (Young & Close, 2022). The collapse of, and need to mend, Millport Pier with something substantial is not surprising. This was undertaken by 1797 according to an engraved pier abutment (Reid, 1864). The phase of pier building using irregular rounded boulders is evident on the southern (seaward) side of the inner harbour (Fig. 2) where the original stonework would have been most exposed to storms. The boulders in the pier include basalt, granite and schist, all occurring in surviving fish traps on the Ayrshire mainland coast (Patterson, 1989), which corroborates the use of the Foul Port fish trap to mend the pier. The granite and schist are derived from the glacial deposits transported from further north.

Millport developed where the Mill Burn, the main water course on the island, entered the sea (Fig. 1). At the western limit of Millport, Foul Port was a notable place to catch fish, especially salmon. Salmon could not have progressed upstream from there, as the Mill Burn, which currently enters Foul Port by an engineered conduit, entered the sea further east at the time of the fish trap. Salmon are still caught today in the Ettrick Burn on the adjacent Isle of Bute (Gibson & Stephen, 1976), and are known to run up very narrow streams; a salmon run up an earlier, more natural, Mill Burn is therefore not inconceivable. The Mill Burn formerly entered the sea at Bessy's Port, immediately east of Foul Port, where a tidal pool accommodating fish is created each day. The exit from the pool is a narrow gap (a few metres) in a hard band of rock (Fig. 1), which probably also functioned as a fish trap.

Many old fish traps elsewhere are found in remote locations, but this may be partially because the evidence for them has been removed at sites which became developed as population centres. Inevitably a river mouth site would attract both fish and habitation (Bathgate, 1948). In this case the growth of the town of Millport was intricately tied to the history of the fish trap at Foul Port. The trap is, notably, the only fish trap mentioned in literature about the island, which emphasises the importance of the locality. Beyond its initial attraction to the Viking population, the town grew as it became the base of the revenue cutter and its crew in the late eighteenth century. The harbour was expanded to accommodate the fishing boats which supported the growing population. Quarrying out space to enlarge the harbour yielded the stone to export to customers like Portpatrick in the 1770s, at the same time as the revenue men were chasing smugglers (Campbell, 1994). The quarrymen maintained the fish trap, which was metres from new houses that had been built for the

revenue men (North Ayrshire Council, 2013). Then, when the pier of the enlarged harbour collapsed the fish trap supplied the means for mending it and ensured that the harbour could be further expanded into a steamer pier. At that time, the Mill Burn may still have supported fish, which would pass Foul Port and Bessy's Port. In several ways the Foul Port trap records the early history of the town of Millport.

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REFERENCES

Anonymous (1856). Jottings about Cumbrae. *Glasgow Herald* July 16th 1856.

Ayton, R. & Daniell, W. (1818). *A Voyage Round Great Britain, Undertaken in the Summer of 1813, Commencing with the Land's End, Cornwall, and with a Series of Views.* Vol. III. Longman, London.

Bannerman, N. & Jones, C. (1999). Fish-trap types: a component of the maritime cultural landscape. *The International Journal of Nautical Archaeology* 28, 70-84. https://doi.org/10.1111/j.1095-9270.1999.tb00823.x

Barrett, J.H., Locker, A.M. & Roberts, C.M. (2004). Dark Age economics revisited: the English fish bone evidence AD 600-1600. *Antiquity* 78, 618-636. https://doi.org/10.1017/S0003598X00113262

Bathgate, T.D. (1948). Ancient fish traps or yairs in Scotland. *Proceedings of the Society of Antiquaries of Scotland* 83, 98-102. https://doi.org/10.9750/PSAS.083.98.102

Breen, C. & Forsythe, W. (2007). The French shipwreck La Surveillante, lost in Bantry Bay, Ireland, in 1797. *Historical Archaeology* 41, 41–42. https://doi.org/10.1007/BF03377053

Buchanan, C.H. (2012). Scandinavians in Strathclyde: multiculturalism, material culture and manufactured identities in the Viking Age. In: Ritchie, A. (Editor). *Historic Bute: Land and People*, pp. 17-32. The Scottish Society for Northern Studies, University of Edinburgh, Edinburgh.

Campbell, J.R.D. (1994). *Clyde Coast Smuggling*. St. Maura Press, Millport.

Campbell, J.R.D. (2003). *Millport and the Cumbraes. A History and Guide*. North Ayrshire Council.

Clarkson, T. (2014). *Strathclyde and the Anglo-Saxons in the Viking Age*. Birlinn, Edinburgh.

Ferrier J. (1969). Tidal fish-traps in Bute. *Transactions of the Buteshire Natural History Society* 17, 31-35.

Gibson, J.A. & Stephen, A. (1976). The freshwater fishes of the Island of Bute. *Transactions of the Buteshire Natural History Society* 20, 71-75.

Graham, E.J. (2015). *A Maritime History of Scotland, 1650-1790*. Birlinn, Edinburgh.

Graham, H. (1794). Island and Parish of Cimbraes. *The Statistical Account of Scotland.* Vol. XI, Number XXX, pp. 391-397.

Graham-Campbell, J. & Batey, C.E. (1998) *Vikings in Scotland: An Archaeological Survey*. Edinburgh University Press, Edinburgh.

Hale, A.G.C. (2004). Fish-traps in Scotland: construction, supply, demand and destruction. In: Klápšte, J. (Editor). *Water Management in Medieval Rural Economy.* Ruralia 5. Památky archeologické, Supplementum 17, pp. 119-126. Institute of Archaeology, Prague.

Lilly, J., Honkanen, H.M., Bailey, D.M., Bean, C.W., Forrester, R., Rodger, J.R. & Adams, C.E. (2022). Investigating the behaviour of Atlantic salmon (*Salmo salar* L.) post-smolts during their early marine migration through the Clyde Marine Region. *Journal of Fish Biology* 101, 1285-1300. https://doi.org/10.1111/jfb.15200

Lytteil, W. (1877). *Landmarks of Scottish Life and Language*. J. Moodie Miller, Edinburgh.

Lytteil, W. (1886). *Guide-book to the Cumbraes, Firth of Clyde*. Menzies & Co., Carlisle and Edinburgh.

Mackay, D.W. & Doughty, C.R. (1986). Migratory salmonids of the Estuary and Firth of Clyde. *Proceedings of the Royal Society of Edinburgh Section B Biological Sciences* 90, 479-490. https://doi.org/10.1017/S0269727000005170

Maton, W.G. (1800). Account of the fall of some of the stones of Stonehenge, in a letter from William George Maton, M.B.F.A.S. to Aylmer Bourke Lambert, Esq. F.R.S. and F.A.S. *Archaeologia* 13, 103-106.

Montgomery, P., Forsythe, W. & Breen, C. (2015). Intertidal fish traps from Ireland: some recent discoveries in Lough Swilly, Co. Donegal. *Journal of Maritime Archaeology* 10, 117-139. https://doi.org/10.1007/s11457-015-9146-z

North Ayrshire Council (2013). *Millport Conservation Area Appraisal*. North Ayrshire Council, Irvine.

Patterson, E.M. (1989). Ancient fish traps on the North Ayrshire coast: Ardrossan to Hunterston. *Ayrshire Monographs, Ayrshire Archaeological & Natural History Society* September 1989, 29-42.

Ramstad, M., Halvorsen, L.S. & Olsen, A.B. (2011). Bjørkum: feasting, craft production and specialisation on a Viking Age rural site in Norway. *Antiquity* Project Gallery85 (328). https://antiquity.ac.uk/projgall/ramstad328 Accessed 23rd October 2025

Reid, J.E. (1864). *History of the County of Bute and Families Connected Therewith*. Thomas Murray & Son, Glasgow.

Rorke, M. (2005). The Scottish herring trade, 1470-1600. *The Scottish Historical Review* 84, 149-165.

Smeaton, J. (1812). *Reports of the Late John Smeaton F.R.S., Made on Various Occasions in the Course of his Employment as a Civil Engineer. Vol. 3*. Longman, London.

Tidal Harbours Commission (1847). *Appendix C to Second Report of the Commissioners, with Supplement and Index*. William Clowes & Sons, London.

Williamson, J. (2024). Fishing through the Viking Age, a tale of survival, economy, and culture. *The Viking Herald* https://thevikingherald.com/article/fishing-through-the-viking-age-a-tale-of-survival-economy-and-culture/585 Accessed 20th August 2025

Young, A.F. & Close, R. (2022). *The Diary of Thomas McClelland: Ayr in the 1790s. Ayrshire Monographs No. 51*. Ayrshire Archaeological and Natural History Society, Ayr.