The bloomery mounds of the Scottish Highlands. Part 1: the archaeological background

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Abstract

The ubiquitous presence of bloomery mounds in the Scottish Highlands and the speed of their destruction by forestry, agriculture and animal husbandry, combined with the limited understanding of the industry that produced them, has stimulated a one-year pilot investigation aimed at the development of a methodology for their study and means of preservation. Five disciplines (archaeology, history, geology, geophysics and archaeometallurgy) provided the foundations of three separate phases of activity to include (a) the evaluation of documentary sources, (b) the assessment of the mounds and their immediate natural environment by geological, geophysical and archaeological means of prospection, and (c) the scientific examination of potential ore sources and industrial waste. Three phases in bloomery making were revealed: traditional small-scale production, traditional large scale and advanced large-scale (probably making use of water power) at three different locations in the Highlands. Each displayed its own characteristic features, some uniquely Scottish. This paper presents the results of the work so far, and aims to put the Scottish Highland bloomeries back on the archaeometallurgical map. The work has been made possible through the generous support of Historic Scotland. This paper is the first of two parts; the second, to appear in a future issue of Historical Metallurgy, will be dedicated to Scottish iron ores and the mechanism of their formation, with particular reference to bog iron.

The Historical Background

Little is known about the early iron industry in the Highlands, the paucity of the documentary record being intensified by the relative scarcity of artefacts. Yet there are numerous folk traditions which must by default fill the existing void of historical information. Legends of smiths and their achievements abound. One such smith, by the name of Andrea Ferrara, was well known at Rannoch Moor for his excellent weaponry (Cunningham 1989, 61), and it is probable that he smelted his own iron. William (the Braveheart) Wallace’s two handed and cross-hilted longsword, the claymore, made famous in a recent film epic was probably another product of the same tradition. Contrary to the documentary record the field evidence in the form of bloomery mounds is substantial. These ‘monuments’, a ubiquitous feature of the Scottish Highlands, are usually small (about 3m by 5m by 1m) consisting of broken up fragments of dense, black tap slag lying in the proximity of furnace remains (MacAdam 1887; Aitken 1970). For the majority of these mounds the date is yet to be determined.

This form of small-scale activity appears to have been prevalent throughout the Highlands, with concentrations of monuments in areas as widely spread as the Cowal Peninsula, Argyll, Ardnamurchan Peninsula (Lochabar), Loch Maree, Wester Ross and Loch Rannoch, Perthshire (Fig 1).

The numerous bloomery mounds cannot readily be attributed to any particular individual or period. They represent the toil of the ‘unknown smith’ moving from place to place within a terrain defined by ties of association and kinship, to smelt his ore and most likely make his objects as well. His forced self-reliance may not have been due to the lack of goods and ideas to trade and exchange, but rather to the lack of routes over which trade could pass for a large part of the year. The mounds bear testimony to an industry that was built on self-reliance in a rugged landscape, with remote settlements and extremes of climate, but containing an abundance of natural resources.

There is one area in the Highlands which forms a notable exception to the above rule: Loch Maree, Wester Ross (Fig 1.2). The history of its local iron industry, spread along both shores of the loch, has been well documented by Dixon (1886). A total of six iron working sites and another eleven locations with bog iron have been listed (Dixon 1886) but it is only the three least accessible, along the north shore of the loch, which survive today. These include Poolewe (Red Smiddy), Letterewe and Fasagh (Fig 1.2). The sites are evenly spaced apart, at the upper end, the middle and the lower end of the loch, and all three contain extensive evidence for iron working. Poolewe and Letterewe have been associated with blast furnace and high bloomery (stucköfen) remains, respectively (Lewis 1984; Hume and Tabraham 1980), while Fasagh has been characterised as a bloomery site (Lewis 1984; Hume and Tabraham 1980; J Hume, pers comm).