the excavations

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Rhum - the excavations

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photos  Andy Barlow p1 p5 p14 (left) p15 p16
        Historic Buildings + Monuments p6 p8 (right) p9 p10 p11 p12
        Royal Scottish Museums p2 p13 p14 (right)
        Caroline Wickham-Jones p4 p7 p8 (left)

drawings  Marion O’Neil p2 p4 p5 (right) p7 p9 (right) p11 (left) p13 p14
         Pipeline p3 p5 (left) p6 p8 p9 (right) p10 p11 p12
         (drawings of thin, meadowside and royal fern, p.1, adapted fr:
"A new illustrated British Flora" R.W. Butcher 1961)

layout  Pipeline

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Scotland's earliest known inhabitants

Britain has been inhabited for at least a quarter of a million years, but in Scotland no palaeolithic sites have survived. Two major ice ages have remodelled the landscape and erased the earliest entries from the archaeological record.

By 10,000 years ago the last ice to cover Scotland had retreated into the high mountains. The climate was growing warmer and the hardier trees were covering the land. Animals were returning; with them came people.

The mesolithic inhabitants of Scotland lived off the land, hunting and fishing and collecting the nuts, berries and roots that were available from the countryside. They fashioned sharp stone flakes into knives and arrowheads and used the hides, bones and antlers from the animals they hunted to make shelters, clothes and other tools. Many of their settlement sites were used seasonally as convenient bases for fishing or hunting. On the west coast of Scotland they travelled around the lochs and
islands in their dug-out boats and skin canoes. Several early camp sites are known and a few have been examined. In 1984 and 1985 archaeological excavations took place at the earliest, at Kinloch on the Island of Rhum.

Discovery

In the summer of 1983 the Nature Conservancy Council took a plough to the eastern end of a group of fields north of Kinloch. As ploughing progressed, thousands of small stone flakes, including one barbed-and-tanged arrowhead, were turned over onto the surface. A collection of these flints from the ploughed field were shown to archaeological surveyors, by chance working on the island, and passed on to Caroline Wichmann-Jones in Edinburgh.

Potential of the site

At the Royal Museum of Scotland Caroline studies stone tools from Scottish sites. The high quality of knapping visible in both the waste cores and the regular blades and flakes from the new site was noticed immediately. Most flakes were Bloodstone, a hard flinty rock available at Bloodstone Hill, 8 km from the site. The enormous number of flints available from Kinloch provided an opportunity to study the techniques of early prehistoric production and use close to a raw material source. Bloodstone Hill is the main source of this stone in Scotland. Although bloodstone tools have been found on other early sites in western Scotland, none of these sites has been examined in detail.

The Historic Buildings and Monuments Directorate were then approached to fund an excavation in advance of further cultivation damage on the site. The first season of excavations was organised for spring 1984.

Site location

Rhum is mountainous; generally settlements on the island have been coastal, restricted to isolated pockets of fertile land. The excavation site is in one of the larger pockets, at the head of Loch Scresort. This is the only sheltered landfall on the island, and Kinloch is the only permanently inhabited settlement today.

The site is at the east end of Farm Fields, extending out beyond the field dyke and probably into the garden to the South. It lies between eleven and fifteen metres above local OD.

field walking before excavation, 84.

- the barbed-and-tanged arrowhead.
- (actual size)

- barb
- tang
Geology and soil
The underlying geology of the Kinloch area is a Torridonian sandstone, the Rudha na Roinne (Brit. At the site this is covered by stony glacial deposits which have been reworked by the sea when the land was under water towards the end of the last glaciation.

No ground surfaces survive to indicate the type of soil present during the early occupation of the site but, given the present environment, it is presumed to have been a peaty gley.

1984 Excavations
The first season of excavations examined the distribution of lithics in the ploughsoil across the field, and assessed the survival of features cut into the subsoil below.

A stratified random sample was drawn up to examine one percent of the field as a series of 38 quadrates, each of four square metres. All of the soil removed was sieved through meshes of 3mm minimum dimension and the archaeological finds collected. Excavation of this sample revealed the detailed distribution of a micro lithic scatter throughout the ploughzone of the field. The northern two-thirds of the area contained few lithic artifacts but to the south the boundary of the scatter was clearly defined by an abrupt rise in lithic density, up to a maximum of 2000 pieces per square metre.

A number of surviving features were uncovered. Five of the sample squares within the lithic scatter contained potentially early prehistoric features and two of these were excavated. In both the features contained early prehistoric artifacts.

An attempt was made to locate prehistoric features outside the scatter but none were found. Nonetheless the site is very big. In the order of 4500 m².
1985 Excavations
The features exposed in 1984 were large hollows, small pits, and potential postholes. A second season of excavation the following year examined these and other features. Four trenches were opened across the apparent area of mesolithic activity. In addition, four test pits were excavated outside the field dyke.

Survival
Unseen truncation of the land surface has taken place since the site was occupied, removing the crest of a low spur running down the centre of the site and smoothing natural irregularities. In one trench (AJ) on the crest of the ridge, three pits survived less than 0.2m deep below the present ploughsoil, whilst in another (AD), just of the crest of the ridge, two similar pits survived over 0.5m deep below ploughsoil in a slight natural hollow. Wall down the side of the ridge, where accumulation of soil rather than truncation was anticipated, trench AH produced no features and a surprisingly slight accumulation of ploughsoil. Only in trench AG was there a reasonable build-up of material, along the course of a burn. This was largely artificial, dumped stones and boulders with an associated peat formation.

The lack of structures
The four trenches opened in 1985 investigated only a small part of the Kinloch site. Where features were recognised, cut into the reworked, often loamy, subsoil, no patterns could be identified to represent early buildings. Stakeholes were conspicuously absent.
in the stony subsoil, reflecting the difficulty of driving posts into the ground.

Trench AD
Without stakeholes to define upstanding structures, the cluster of pits and hollows in trench AD cannot be related to original tents or shelters. The cluster represents at least three episodes of early prehistoric hole-digging, each group of holes being deliberately infilled before the next was cut. The earliest pit in the trench (D1) might be naturally formed, at the base of a fallen tree. It may have been used as a windbreak for outdoor work, or simply as a convenient rubbish pit.

The pit was backfilled and replaced by at least one large shallow hollow (D4) and two pits (D2, D3). Two patches of reddish clay, possibly oxidized, may have survived to represent the shallow hollows which are unlikely to have been roofed.

This hollow and pits were infilled with soil, burnt debris and gravel before two further pits (D5, D6) were dug, provided with upstanding posts and backfilled. The posts may have supported roofing, more likely they held an outdoor rack or frame.

Several thousand years later, a small shallow hollow (D7) was cut into the topfill of D6.

Trench AJ
The bases of three pits similar to the two used as post holes in trench AD were recorded in trench AJ. In the stony soil, with so little depth of feature surviving, no post settings could be recognised.

Trench AG
In 1985 a complex of pits was uncovered and partly excavated at the western end of trench AG. The charcoal rich fill with burnt and unburnt lithic material was dated to 5975 ± 65 bc, not long after most of the material in trenches AD and AJ. The subsoil here is a fine gravel, more suitable for stakeholes than elsewhere on site. In 1996 we shall be opening a large trench to find the elusive early prehistoric buildings.
Early Farmers
Trench AG also provided evidence of more recent prehistoric activity, from the early days of farming (dated to 1940 ± 65 bc). Crude cultivation scores were found beside an old burn that had been infilled with stones from the earliest fields. Amongst the stones and the peat that formed around them were sherdsof coarse pottery. these were examined in Edinburgh for traces of the original contents of the pots.

Samples from most sherdks were inconclusive but a few pieces produced evidence of cereals, surprising since there was no cereal pollen in the peat of the infilled burn, and one of these produced an unusual mixture of pollen and fern spores. Brian Moffat, who undertook the examination, suggests that the vessel once contained a "fermented drink", perhaps mead. If so, we have the earliest evidence for alcohol in Scotland.

The sherd bearing the debated assemblage of pollen and spores(x).

Calluna - ling
Ht: 0.6-1.2m
13 pollen grains

Filipendula - meadowsweet
Ht: 0.6-1.2m
61 pollen grains

Osmanda - royal fern
Ht: 0.6-1.2m
18 spores

At about the time that cultivation started south of the burn, the slope above underwent a catastrophe. Possibly aggravated by clearance of the vegetation cover, the ground became unstable and a length of hillside slipped down. A blanket of slopewash covered the upper half of the field and was found as far away as 350 m to the east in the most distant of our sample pits.

We do not know the effect of this disaster on the early farmers; we will know more when we find their settlement. We think they were living very close to trench AG, and their settlement may have been covered by the landslip. In 1886 we shall be opening up this area for signs of their damaged homes. Not only should we find a unique collection of household material (abandoned suddenly rather than discarded as rubbish) but we should find it well preserved. The ground below the slopewash is wet, preserving timber. Although the catastrophe will have swept away much, we hope to find pockets that have survived undisturbed.
Finds
Most of the finds are stone tools or debris from their manufacture. Most of these lithics are of local bloodstone, but some are of local flint and quartz. All of the stone was catalogued during the excavation, then removed to Edinburgh for analysis. There we are studying the ways in which the tools were made and the different uses to which they were put. We also found hammerstones, used to flake arrowheads and knives, and pieces of pumice, used to smooth and straighten wooden arrowshafts and bone needles.

Many of the pits contained burnt hazelnut shells. The nuts were a common source of food and the opened shells tended to build up in a fire before being swept away as rubbish when the hearth was cleared out. Although we found no traces of the wooden bowls and skin containers used by mesolithic hunters, we excavated many sherds of pottery dumped as rubbish by the neolithic farmers. Amongst the pottery were the farmers' stone tools, slightly different from the hunter-gatherers'. The neolithic tools included several characteristic leaf shaped arrowheads.
The environment
The mesolithic hunter-gatherers arrived on Rhum shortly after the last Ice Age. Their climate was probably a little warmer than today's, but the island would have had only a patchy tree cover. Peat was already forming in Kintloch Glen, and much of the higher ground would have been moorland with sparse shrubs. Over the succeeding four thousand years the light shrub and tree cover survived in roads for materials and fuel.

The introduction of farming involved stripping the vegetation from parts of the hillside overlooking Loch Scresort. Coinciding with a climatic change to damper conditions, neolithic field clearance probably triggered off the mass movement of soil on the hillside.

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