

## Lecture summaries

### Rhum: the excavations

C R Wickham-Jones\*

The island of Rhum lies off the west coast of Scotland. In 1983 a previously unrecorded site was revealed at Kinloch on the east coast, at the head of Loch Scresort. The evidence consisted of a scatter of flaked lithic material which clearly contained great archaeological potential.

Excavations began in 1984. The first season was designed to locate the site, to assess its preservation and to date it if possible. By the end of the season we had planned the distribution of the scatter and confirmed its association with a variety of pits. Two radiocarbon determinations were obtained. At  $8590 \pm 95$ bp (GU-1873) and  $8515 \pm 150$ bp (GU-1874) these indicated that the site provides the earliest evidence, so far, for the human settlement of Scotland. In 1985 a second season opened four larger trenches across the site and confirmed the preservation in one area in particular. In 1986 we returned to open a large trench, c 450 m<sup>2</sup>, and look at this area in detail.

Most of this trench fell within the area of Mesolithic activity. A number of features suggesting complex traces of settlement were uncovered. To the north the edge of this settlement was located. At the moment it is not possible to point out individual buildings though analysis of the fills and associated artefacts is underway and should shed more light upon the nature of occupation. The artefactual material is predominantly lithic, of local raw materials, mostly Rhum Bloodstone. Preliminary analysis indicates that it is a typical late Mesolithic assemblage composed largely of knapping debris but with many flakes and blades as well as a variety of narrow blade microliths and a number of other retouched pieces such as scrapers.

Environmental analysis is revealing details of the landscape at the time of occupation. Inland there was heather moorland. In places, light tree cover is indicated though there is no evidence of extensive forest. Palaeobotanical samples from the site itself reflected the habitats exploited by hunter-gatherers. Twenty radiocarbon determinations have been obtained from deposits associated with the work. Nine date the Mesolithic settlement to a thousand-year period between the mid seventh and mid sixth millennia bc. Eight relate to the environmental analysis and the final three are associated with Neolithic activity in the third and late second millennia bc.

The excavated Neolithic activity centres on the burn bounding the Mesolithic remains. Dumps of stone and spreads of gravel as well as a deposit of birch appear to represent attempts to reclaim the edge of a developing bog as peat started to form. To the west the creation of a deliberate causeway is suggested. As yet we have not located any Neolithic settlement, it is likely that this lies to the south, within the area of Mesolithic activity.

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Artefacts from this area were inevitably mixed with Mesolithic elements and few pieces are of unquestionably Neolithic origin. There is a small assemblage of pottery: a mixed assemblage of round-and flat-based vessels. Analysis of residue adhering to the surface of one sherd suggests the contents of the pot to have been a fermented brew.

The work of the project is not restricted to Kinloch. Other lithic scatters on the island have been recorded and the occurrence of Bloodstone, potentially from Rhum, in assemblages on both the adjacent mainland and surrounding islands is being catalogued. Little is known about the earliest post-glacial settlement of Scotland though the site appears to be typical of those which define the later Mesolithic of the British Isles. These are concentrated in the north of England but recent work has demonstrated that the lack of evidence in Scotland is due mainly to a lack of fieldwork. Conditions improved rapidly after the end of the last glaciation and settlement would have taken place quickly into what must have been a rich land.

I must thank the many, many people who have been and are working upon the project with me. We owe special thanks to all of our sponsors: Historic Buildings and Monuments Directorate have taken on the lion's share of the funding but we have also had much support from the Royal Museum of Scotland, the Nature Conservancy Council, the Robert Kiln Charitable Trust, the Russell Trust, the Society of Antiquaries of Scotland, George Morton Ltd, and Savacentre (Edinburgh) Ltd.

## From Neolithic to Viking – excavations at Pool, Sanday, Orkney

John Hunter\*

Excavations at Pool, Sanday, Orkney commenced in 1983 on behalf of the Scottish Development Department in order to examine a coastally eroding settlement mound which exhibited an exposed cliff section some 70 m long standing to a height of about 3.5 m. The strategy for investigation was based on the results of a contour survey, geophysical prospection and trial trenching. Seasonal excavation over the subsequent four years demonstrated that the mound could be divided into two distinct stratigraphic zones – a lower complex matrix of tip-like deposits belonging to the Neolithic, and an upper matrix of structures dating to the late Iron Age (Pictish) and Viking periods.

The Neolithic remains were principally those of domestic debris, occurring from the fourth millennium BC and deposited in complex tip sequences formed by the successive outcast of ashy materials. These ashy materials represented the burnt products of locally available fuels, probably turf, and had survived in a state of stratigraphic detail rarely found among Neolithic sites in North Britain. As a result, therefore, it was possible to apply specific research designs on the associated material, notably on the ceramic sequences for which thin-section petrology was utilized and also on the botanical remains. A programme of thermoluminescence dating was also implemented. Structures associated with these tips are still in the process of excavation, but the latest Neolithic form which surmounted the tip deposits was seen to be sub-circular and constructed using multi-revetted walling. The associated material included ceramics of the Grooved-ware tradition together with a slab decorated with a chevron and dot design more

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characteristic of Passage Grave types. It seems likely that occupation had ceased by the end of the third millennium.

On current evidence the site was next occupied during the fifth century AD, initially as an extended cellular dwelling, and subsequently as a village-like complex of stone-built structures. This developed to include interconnecting chambers and passageways, a rectangular structure and an extensive flagged external area. In settlement type the arrangement bore a close similarity to Howmae on North Ronaldsay. Of particular note was the discovery of an early symbol stone and a flagstone bearing an ogam inscription. By the eighth century the settlement had diminished in size and was subsumed by Viking settlers some time later.

The initial Viking activity on the site seems to have been limited to a utilization of existing structures although there was some evidence of new forms being created in the spaces between extant walls. The first indisputable Norse form probably belongs to the 10th century and was timber-supported, possibly a barn. The associated parent dwelling was presumed to lie outside the excavated area. A later form, however, some 30 m in length, contained a domestic sector and was of more traditional 'longhouse' type. Among the associated material was steatite, grass-tempered pottery and Dutch Grey ware. The last of these suggested a date in the late 12th or 13th centuries.

## Excavation of an Iron-Age fort at The Dunion, Roxburghshire

J S Rideout\*

The excavation at The Dunion was undertaken between 1984 and 1987 by the Central Excavation Unit of the Scottish Development Department (Historic Buildings and Monuments). The Dunion, a hill formed by the eroded stump of a volcanic intrusion and now much reduced by quarrying, is situated c 3 km south-west of Jedburgh (NGR NT 625 190). The surviving remains on the hill, originally thought to be an unenclosed platform settlement, proved to be part of a fort which had formerly been considered to occupy only the summit of the hill. The fort was tentatively identified as being of Dark-Age date. Later fieldwork, and the discoveries made by the CEU, have shown that the fort was much larger than originally thought, and, with a total enclosed area of between 6 and 6.5 hectares, was of a size comparable with the minor *oppida* of the Tweed Basin. A composite plan of The Dunion, based on many sources, suggests that the site started as a small fort on the summit, which later expanded in stages. The crude outermost 'rampart' on the north-east side, and two houses outside the fort to the south-west, suggested that the defensive nature of the settlement was of less importance towards the end of the occupation of the hill.

As well as the outermost line of defence and an inner rampart, the CEU investigated a total of seven houses and a small part of an eighth. Of the seven houses, six were built on platforms scooped into the hill-slope. The platform-houses were all roughly oval in plan, occupying all the available platform space. None of the houses was identical but each shared several elements of construction and internal arrangement. The house walls were either of

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timber, bedded in shallow wall-trenches, or walls comprising earth cores faced with stone. The stone-faced walls were crudely executed and probably served as foundations for timber walls, and as reinforcement for unstable soil, dumped to level the front of the platforms, and back scarps. Three houses had internal post-settings, presumably for timber uprights to support the roofs. Internally, the houses appear to have had 'split-level' floors, with a raised back arc, a lower front arc (sometimes paved), and an intermediate central area. Running past five of the houses was a contemporary metalled road. Where this road met the outermost rampart there was an entrance with no surviving gateway structure. The finds assemblage was small and generally similar to assemblages from other forts in south-east Scotland.

By the end of the excavation, the limited artefactual assemblage suggested that the excavated part of the fort dated to the later first millennium BC. Since this lecture was given, radiocarbon dates have been received. These are now published here. Nine samples of carbonized wood were submitted to the Scottish Universities Research and Reactor Centre for radiocarbon assay. Of these eight were suitable for dating. The errors are expressed at the one sigma level of confidence.

<i>Lab No</i>	<i>Date bp</i>	<i>Date</i>	<i>Context</i>
GU-2171	1970±80	20±80 bc	Soil under hearth of House 2
GU-2172	2080±50	130±50 bc	Drainage ditch around House 1
GU-2173	1910±120	ad 40±120	Drainage gully around House 8
GU-2174	2090±150	140±150 bc	Occupation layer in House 4
GU-2175	2120±50	170±50 bc	Accumulation of soil behind rampart
GU-2176	2120±110	170±110 bc	Pit under House 6
GU-2177	5550±100	3600±100 bc	Posthole in House 7
GU-2178	2000±55	50±55 bc	Pit containing beehive quern in House 2

## The Spanish Armada: its Irish legacy

Laurence Flanagan\*

The Spanish Armada of 1588, the greatest task-force the World had ever seen, consisted of 130 ships, from the mighty *Santa Ana* at 1200 tons to small despatch boats. Of this great force between 20 and 24 ships perished on or off the coasts of Ireland as they struggled to return to Spain.

Three of these have been located, identified and excavated. The first to be discovered was the *Girona*, a galleass of the Naples Squadron. It was located in 1967 by Robert Stenuit, the Belgian nautical archaeologist, at Lacada Point, Co Antrim. Two seasons of excavation produced a wealth of material: 1276 coins, of which 405 were gold; two of the ships original armament of 50 guns, a half-saker and a breech-loading esmeril; navigation equipment in the form of two astrolabes, a number of sets of dividers and several sounding-leads; the complete wooden stock of an arquebus, miraculously preserved and painstakingly excavated, as well as tons of lead in plates, ingots and cast as shot. In addition were fragments of table-ware in silver and silver-gilt (including a set of silver candle- and taper-sticks), probably the most extensive collection of early table forks (with two, three, four and even five prongs) known.

The most spectacular part of the assemblage, however, is undoubtedly the treasury of

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Renaissance jewellery recovered. There are Crosses of Orders of Chivalry: of the Order of St John of Jerusalem (which belonged to Fabricio Spinola, Captain of the *Girona*); of Santiago (which belonged to Don Alonso de Leiva, who was Commander Designate of the entire fleet if anything happened to the Duke of Medina Sidonia, and who had suffered two previous wrecks on the Irish coast) and of Alcantara, whose owner has not been identified. There are heavy gold chains, light gold chains and gold buttons from velvet tunics. There is a collection of gold rings, including one inscribed 'Madame de Champagne MDXXIII', which proved the wreck was that of the *Girona*, for it was being worn by Don Tomas Perrenoto, her grandson, who we know perished on the *Girona*. There is a superb set, not all equally well preserved, unfortunately, of lapis lazuli portrait-cameos of Roman Emperors; a gold pendant in the form of a salamander set with rubies; a bizarre combined tooth- and ear-pick in the form of a gold dolphin. The entire collection was acquired by the Ulster Museum and formed the nucleus of a growing collection of Armada material conserved and preserved there.

The next wreck to be found, with great danger and difficulty, was that of the *Santa Maria de la Rosa*, eventually located by an expedition led by Sydney Wignall, in Blasket Sound, Co Kerry. This produced no treasures, but, since part of its keel was located, did yield useful information about the structure of 16th-century Spanish ships. She also yielded two pewter plates inscribed 'Matute' which proved she was the *Santa Maria*, for we now know that Francisco Ruiz Matute was a Captain of infantry on board. All the surviving material from her, including a Brazil nut, is now in the Ulster Museum.

The third wreck was that of *la Trinidad Valencera*, found in Kinnagoe Bay, Co Donegal, by the City of Derry Sub-Aqua Club and excavated by them under the archaeological direction of Colin Martin of St Andrews University. The *Trinidad* has produced a whole battery of superb ordnance, including three fine siege-guns from the Royal Siege train of Philip II, cast in Malines in 1556 by Remigy de Halut, as well as Venetian guns by Zuanne Alberghetti and Nicole di Conti. She has also produced a range of rigging equipment: hearts, single and double blocks, large and small wooden sheaves, even a length of rope to represent the hundreds and hundreds of metres of rope required by a three-masted sailing-ship. She has produced a whole range of pewter table-ware – plates, bowls, dishes, jugs, flagons – some with the touch-marks of their makers, who include Edward Roe, who was Master of the London Company in 1581 and 1588. The most surprising finds were a collection of textiles: parts of garments of wool, silk and velvet and, quite unique, a campaign tent, one of two listed in her manifest. Several Bay leaves were also found. Again the material from the *Trinidad* was conserved by and is preserved in the Ulster Museum in Belfast, where now reposes some 95% of the World's stock of authenticated Armada material.

## The ancient sundials of Scotland

Andrew R Somerville\*

[See also the paper published on pp 233–64 of this volume.]

Scotland has a rich heritage of 'Renaissance' sundials which are more numerous than in any other country. These are free-standing stone sculptures dating from the 17th and early 18th

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centuries, with many dials marked on them. The author has attempted to track down all the dials of the Renaissance types mentioned by Ross or otherwise recorded, including those which had been moved, and has discovered others in the process.

These dials were divided by Ross into three groups: lectern, obelisk and facet-heads. The lecterns are so-called because of some resemblance to a reading desk. Although there are some dials in Holland and Germany which have features in common with the lecterns, the overall style of the Scottish dials is unique. The next type, the obelisk, has a square shaft swelling out to an eight-sided boss with a pyramidal finial. The obelisks are quite unique to Scotland but they were only briefly in fashion until about 1720–30, when the great dial-making period came to an end. ‘Facet-head’ includes a wide variety of types, from simple cube dials to elaborate structures. Few makers’ names are known but these are always Scottish.

Although the earliest printed descriptions, showing how to draw dials on surfaces set at any angle, originated in Germany, recent surveys on the Continent show that dials of these elaborate polyhedral types are both few in number there (and in England) compared to Scotland, and usually later, and that many of the Scottish types are not found elsewhere.

The reasons for their appearance in Scotland at that time are first of all material: more stable government and increased prosperity led to the building of mansion houses with pleasure gardens, but the Calvinist ethic of the time frowned on frivolous decoration and required function as well. Secondly, the 17th century was a period of transition from the Renaissance pre-occupation with magic and symbolism to the beginnings of modern science, so the free-standing multiple sundial, with its gnomons all pointing to the Pole Star, could have served both as a symbol of constant faith and as a ‘conversation piece’ to stimulate discussion of the new science. Some of the emblems on the dials are to be found in symbol books of the time and were used by the Hermetic and mystic philosophers. In addition, the Masonic lodges in Scotland took on many ‘non-operative’ members at this time and thus served as a meeting place for working masons and intellectuals. Exchange of ideas between these groups could have led to the everyday dials, already familiar to the masons, being given a new significance which went far beyond simple time-keeping.

## Buildings of St Kilda

Geoffrey Stell\*

The results of a field survey of buildings on Hirta carried out by the Royal Commission on the Ancient and Historical Monuments of Scotland, together with a survey of the *cleitean* (store houses) and bothies of the St Kilda archipelago previously undertaken by Miss Mary Harman, were reviewed in relation to the historical and demographic evidence.

The crescentic street village represents two major phases of house-building, in the 1830s and 1860s, and the crofting divisions, the building functions and the names of the occupiers on the eve of the second phase are accurately depicted in Sharbau’s survey of 1858–60. The houses of the 1830s were characteristically ‘black house’ byre-dwellings, although one structure of this type is known to have been erected after the 1858–60 survey. After the 1860s a few remained in use as dwellings, but most were eventually relegated to serve as byres. One of the black houses was demolished to make room for the later houses, and the remains of its foundations are being

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excavated by a team from the University of Durham. There are indications that a number of black houses probably contained wall-beds, now concealed behind re-faced end-walls. The recent survey has also identified the bull's 'house', a barn, a possible corn-drying kiln, and what was described in 1858–60 as the site of a mill.

Houses dating from before 1830 generally survive in modified form as *cleitean*. Their chief identifiable characteristic is an association with one or more attached cells. One heavily corbelled semi-subterranean structure still survives, and one small cell remains intact and attached to its parent structure through a narrow entrance-passage. The distribution of these early structures, mainly around Tobar Childa and loosely associated with 'streets' or terraces, relates to what is known of the disposition and character of the village as it appears in the earliest views and maps (which date from the early 19th century).

Many of the structures in Gleann Mór, including the 'Amazon's House', are of a similar, but more complex cellular construction, and in most cases have been subsequently converted into 'gathering folds' and *cleitean*. The dates of the earliest phases of these structures remain to be established, but there is a likelihood that they are of medieval, not prehistoric origin. All that can be said for certain from the historical evidence is that the 'Amazon's House' is AD 1600 or earlier. Folk memories and traditions of early buildings in Gleann Mór and elsewhere were almost certainly dislocated by the most serious of the known epidemics affecting the population of St Kilda; this was an outbreak of smallpox in about 1729 which reduced a population of around 180 to a mere handful comprising only four adult males. Population increase in the second and third quarters of the 19th century was largely the result of immigrant settlement from other Hebridean islands.

The material arising from recent survey work is to form the core of a monograph on the *Buildings of St Kilda* to be published by the Royal Commission on the Ancient and Historical Monuments of Scotland.

## The use of bloodstone on the island of Rhum, Scotland, and beyond

C R Wickham-Jones\*

[The Society awarded Miss Wickham-Jones a Young Scholar's Bursary to enable her to deliver the paper whose abstract is printed below to the *Vth International Flint Symposium* at Bordeaux, France, on 1 October 1987.]

Given the lack of primary flint deposits in Scotland the majority of prehistoric stone industries are made of other raw materials. The present paper describes one project set up in order to look at the procurement, manufacture and distribution of artefacts made of one such raw material. Rhum bloodstone, from the island of Rhum on the west coast.

In 1983 the opportunity arose to examine a prolific lithic scatter on the island of Rhum. The work consisted of four main parts:

- i a surface examination of the bloodstone source area;
- ii the examination by excavation of the lithic scatter at Kinloch on Rhum;
- iii the location of other lithic scatters on Rhum and the collection of surface material;

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iv a surface examination of all other archaeological sites from which bloodstone has been recorded.

In addition, all other possible sources of bloodstone were visited and sampled.

Bloodstone itself is a hydrothermal chalcedony, formed by the precipitation of silica within the gas bubbles of a cooling lava flow (Durant, pers comm). On Rhum the source used in prehistory lies at Bloodstone Hill, on the west coast of the island. This is 12 km from Kinloch, the site under excavation.

Altogether an assemblage of 140 000 lithic artefacts has been recovered from Kinloch. Detailed analysis is still underway, but the manufacture of characteristic blades and narrow microliths may already be seen during the Mesolithic. Given the stratigraphy of the site and ubiquitous nature of the Mesolithic remains it is unlikely that any specifically Neolithic manufacturing debris will be isolated. In both periods bloodstone was the main resource used, supplemented by other local materials such as flint, agate and quartz.

During the project several other lithic scatters were located on the island. None of these sites has been excavated and none produced a large surface collection. Few formal tools were recovered and no secure dates have been assigned to any of these sites.

The mainland and islands immediately adjacent to Rhum have received little archaeological attention. In 1954 Lacaille recorded a number of lithic assemblages into which bloodstone was incorporated and these have since been augmented by a few chance finds. Extensive field survey was outwith the remit of the present project, but all recorded sites were visited, and all extant assemblages examined. For a number of reasons precise quantification of the use of bloodstone is not possible, but from the chronological associations of some assemblages it is possible to ascertain that the stone provided a resource, both on and off the island, over a period of some 6000 years.

Other potential sources of bloodstone do exist, and all were visited in the course of the project. With the exception of Bloodstone Hill none produced material similar to that used in prehistory. Neither did they produce any material suitable for flaking. Preliminary electron spin resonance spectroscopy used to source material from the different outcrops has not proved conclusive, but at the moment all the available evidence suggests that Bloodstone Hill on Rhum was indeed the only source exploited in prehistory (Griffiths, pers comm).

Great thanks are due to the many people who are involved in the project. In particular Ann Clarke, Graham Durant, Daffydd Griffiths and Donald Sutherland who have spent many wind- and rain-swept days collecting data and have all allowed me to make use of their own information. A full report of the work of the project will appear as a *Monograph* of this Society in 1989. The Rhum project has received considerable support from the Historic Buildings and Monuments Directorate (Scottish Development Department), The Royal Museum of Scotland, The Nature Conservancy Council, The Robert Kiln Charitable Trust, The Russell Trust, and the Society of Antiquaries of Scotland. Especial thanks are due to the Society for providing a Young Scholar's Bursary which made my own attendance at the Symposium possible.