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Deposited on: 31 March 2010
EXCAVATIONS AT BIRNIE, MORAY, 2006

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2007
SUMMARY

In 2006 work at Birnie focussed on four main trenches. Good progress was made with the burnt-down roundhouse – the layers are complex, interleaved and varied, but they tell fascinating stories. Many of them derive from burnt turf, and it seems both walls and roof were turf-built, with collapsed wattle revetting from the inner wall face found at the base of the deposits. In places some possible floor deposits survived, but there is little sign of occupation debris. As a result, finds were sparse but choice – notably the terminal of a gold ribbon torc and an exotic amber bead, confirming the site’s status.

The late Bronze Age metalworking area located in 2005 was explored more thoroughly. There is no substantial workshop structure, and the activity was quite ephemeral. Two curved slots are probably temporary shelters or wind breaks. Along with mould fragments for pins, bangles and axes was debris from spearheads and perhaps swords. This will be a key assemblage for this period.

To the north-east, a possible iron-working area first seen in 2004 was examined. This revealed a well-preserved iron-smelting furnace complex, with stone foundations and a clay superstructure. It had met a catastrophic end, with the clay walls collapsing. A shallow horseshoe-shaped erosion gully aligned on the furnace probably arises from associated activity. In the south-west of the trench, a four-post structure was found, probably a typically Iron Age grain storage building.

Towards the north-west corner of the site, a large trench was opened over the remains of a possible medieval building exposed in 2000. This proved hard to trace, but a massive later prehistoric ring-ditch house was found. Within the house are a pair of clay iron-smelting furnaces, though they may not be contemporary with the building. There is also a rash of earlier activity, its nature still unclear.

Important finds included the moulds, the gold torc fragment and the amber bead noted above, which all confirm the inhabitants’ status, while a fragmentary brooch-pin from metal-detecting is the first secure Pictish evidence from the site.
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INTRODUCTION
The later prehistoric settlement at Birmie, south of Elgin in the valley of the river Lossie, has been a focus of excavations since 1998 (fig 1). Each year has revealed more surprises beneath the stubble of the arable field. The impetus was the discovery of two hoards of Roman silver coins, which are best seen as gifts or bribes to a local power centre as part of wider Roman diplomatic efforts to keep the northern frontier secure. This has led us to investigate the nature of this power centre and how it developed through time. The story starts in the late Bronze Age, if not before, with the settlement peaking during the Iron Age, but there was also activity in Pictish and medieval times.

Work resumed in 2006 from August 6th to September 1st, thanks to the support of the farmer, William Mustard. We were helped by a substantial team of between 22 and 45 diggers, drawn mainly from the Universities of Cardiff, Edinburgh and the UHI Project (Shetland and Moray College), along with a range of other enthusiastic volunteers, both old faces and new. The aims this year were five-fold:

- Further work on the well-preserved burnt-down roundhouse investigated in 1999 and 2005 (trench D).
- An expanded trench around the late Bronze Age metalworking area which was such an unexpected aspect of the 2005 season. This was intended to localise the activity area more closely and clarify its nature (trench AA).
- Thorough examination of a probable medieval structure located in 2000 in the north-east corner of trench J (expanded as trench AB).
- Investigation of a probable iron-working area located in 2004 to the north of trench P (opened as trench AC).
- Continued metal-detecting survey.

Trench locations are given in fig 2. We had originally intended to reopen the area around the coin hoards and investigate this more fully, but this part of the field was still in crop, and it will have to be saved for 2007.
THE BURNT-DOWN ROUNDFHOUSE (Trench D)

Introduction
The burnt-down house, first examined in 1998-9 and more extensively in 2005, is proving a slow, at times frustrating, but ultimately highly rewarding exercise. The individual destruction layers are thin, varied and sometimes hard to define, but they reveal a detailed story of the life and death of the building. The overall sequence is clear, with the upper levels more ashy and oxidised where the air blew through the fire, and the lower ones charcoal-rich, where air was scarce. However, there is considerable detailed variety, with lenses of ashy material reaching deep into the deposits and charcoal chunks high in the remains. This is exactly what we would expect. A good model is the way a bonfire burns, affected by gusts of wind and collapsing timbers. This creates tremendous local variation in conditions, which is reflected in these deposits.

In 2006 we focussed on three areas. Most effort was on the destruction deposits in segments 5 and 6 (the west side of the house), but we also cleaned off all overlying deposits in the east half of the house, so the plan (fig 3) shows the top of the house-related deposits in this area. We also investigated a few features, notably around the likely entrance.

The eastern half and entrance
There are tantalising hints of what is to come in the eastern area. Here, the large stones first seen last year are clearly part of a structure underlying the destruction deposits – but until these are removed, we won’t see what this is. A series of modern pits in this area may stem from attempts to dig out stones which were impeding the plough. A cobbled spread runs round the north-east edge of the building, but did not continue any great distance into the west half. This probably represents a late cobbled fill in the ring ditch, which was tapering off in the west area.

The building may have seen later reuse, but this too will only be clarified next season. There are hints of stone settings which seem to represent small postholes, but not where the roundhouse’s posts are expected. It may be that the hollow of the abandoned house was roughly surfaced and used as a building platform at some stage.
Fig 3: plan of trench D

Fig 4: detail of collapsed wattle walling in south-west side of house
On the south-east side of the spread, two features were excavated in the area of the likely entrance. The more westerly proved to be a pit; it may have been reused as a support for the entrance during later repairs, as flat stones had been placed in its upper fill to act as a post pad. The other, larger posthole is probably the southern side of the entrance, with the other side hidden under the bulge of deposits in this area – suggesting the door faced roughly ESE. The post had been replaced at some point.

*The western half*

The building is divided for excavation into six segments, numbered clockwise from the north, with 1-3 in the eastern half and 4-6 in the western. The thin skin of remaining deposits in segment 4 was removed, and segment 5 was taken down to its earliest levels. Under a complex sequence of burnt spreads was a small area of what may be trampled floor deposits, and a substantial deposit of burnt charcoal (fig 4). Some pieces (stippled in the drawing) were rather damaged, though their overall form was visible, but in many the original dimensions and orientation were clear. This allowed the links between the original bits of wood to be seen, showing they were definitely interwoven, as in a panel of wattling, rather than a series of horizontal struts lying on vertical beams, such as a roof. This strongly suggests that this is wattling from the inside face of the wall which had fallen inwards and been preserved by carbonisation. In the segments to the north, a small slot found under the burnt deposits may represent foundations for just such a wall. This in turn suggests that the burnt material has spread beyond the extent of the house, with the internal diameter perhaps being nearer 14.5m than 16m. Further work will clarify the building’s structure.

The destruction deposits, especially in segment 6, proved to contain considerable quantities of burnt turf; the sheer amount recorded implies that the roof was composed predominantly of turf. It is also possible that the walls were of turf, with the wattle forming an internal screen or support.

Although substantial pieces of charcoal have been recovered, there have been no big structural timbers yet. In fact, it seems that the major timbers were salvaged after the fire. In segment 6, a depression some 2.5m long in the deposits probably marks where one of the big fallen posts was recovered. None of the structural postholes were investigated this year, but in one spot on the expected post-ring, flat stones were
found, probably marking a post-pad. This is likely to represent a repair phase, with the base of the post rotting and being propped up by stones. The postholes excavated in 1999 and the entrance post from this season show there were two phases to the roundhouse; now it seems that the later phase was quite long-lived, with the post bases becoming unstable and requiring propped up. The building was old when it burnt down.

The main reason for digging the house in so many segments is to record sections through the deposits. These show the surviving topography of the sand, which weathers rapidly once it is exposed. However, the original shape is very important, as this reflects patterns of activity in the building, with heavy use wearing away the sand. This is probably how the ring-ditch formed, while in 2005 an erosion hollow was noted in a likely bay against the house wall. Careful recording of this will preserve a cumulative picture of the building’s use. One interesting aspect is the wear around the hearth; although only partly investigated, it seems there was an erosion hollow around the rear of the hearth but not the front. This suggests that activity focussed to the rear. Careful recording of similar features in the rest of the building, and the contrast between areas where floor deposits built up and those where the sand was eroded away, should give us a very vivid picture of the building’s use.

Finds
So far the quantity of finds from the building has been small, which suggests that it was largely empty when it was burnt. This provides support for the idea that the building was cleared and burnt deliberately, rather than accidentally, but the jury remains out until excavation is complete. However, the small number includes some highly significant items: our first piece of Iron Age decorated pottery, an amber bead, and the terminal of a gold ribbon torc. All are exceedingly unusual – the torc fragment is the first of its kind from an excavation – and they mark the inhabitants of the house out as people of significance. None show any clear sign of fire damage (although the amber bead may be slightly charred), but given the variability in the effects of the fire noted earlier, this is not as surprising as it seems. The finds are discussed in more detail below.
Discussion – the building so far

What can we tell about the building? The dating evidence so far indicates a Roman Iron Age date, but it was clearly a long-lived structure. There are two phases of roundhouse on exactly the same spot, implying a total rebuild, while the evidence for post-pads and expedient repairs indicates that the later building was rather elderly when it was burnt. Was the burning a deliberate act, perhaps a ritual of closure at the end of the building’s life? Further work will undoubtedly clarify the story.

The life of the building is also becoming clearer, with a footprint of its use-history preserved in the eroded sand surface. We can now see not only the ring ditch in the north-east part of the building, but a hollow around the back of the fire and another in a bay by the southern wall. We can also put flesh on the bare bones of the foundations, with the discovery of charred wattle from the walls and turf from the roof. The finds also enlarge the picture, their quality marking the inhabitants out as people of power. The ghost of the building and its users is gradually emerging from its cremated remains.
Fig 5: trench AA plan. Features producing metal-working debris are highlighted.
THE LATE BRONZE AGE METAL-WORKING AREA REVISITED
(Trench AA)

The metal-working area

In 2005 we made the completely unexpected discovery of a late Bronze Age (LBA) metal-working area towards the south-west edge of the site. However, the area investigated was too small to get a full picture of the activity, so we decided in 2006 to expand the trench, and opened a 20 x 20m area centred on the 2005 one (fig 5). This proved successful in clarifying the nature of the metal-working activity.

Once again, several pits produced fragments of LBA moulds (fig 6a, 20-21). As well as more examples of the bangle, pin and axe moulds found in 2005, this year revealed moulds for a spearhead and probably a sword. This wide range of products is rare indeed, and marks the site out as a major one for the study of LBA metalworking.

Equally important is the setting. There is no evidence of any formal workshop structure: while there are a number of postholes, they do not form a coherent pattern, and indeed may not even be the same date. In the north-east of the trench were two curved slots, which are the best candidates for metalworking facilities. They are interpreted provisionally as temporary structures or screens erected to shield the craft-workers. Sadly, no clear dating evidence was recovered from the excavated one, and the full extent of the other was not established. However, we can begin to reconstruct how the area may have looked in the LBA. The curved shelters could have screened activities focussed on the burnt wooden object found in 2005, perhaps the hearth. Some of the surrounding features are probably casting pits, while the debris is localised in a vaguely linear spread to the west, running approximately SE-NW and concentrated in an area of c. 16 x 6m. Overall, the lack of permanent structures suggests a short-lived metalworking phase, indicating an intermittent, perhaps even itinerant activity.
Fig 6a: sections of features producing metal-working debris

Fig 6b: palisade sections. A-B, C-D transverse E-F, longitudinal

Fig 6c: section of corn-drying kiln. Dark stipple represents charcoal-rich layers; the basal layer is heat-affected sand
Other features
The LBA metal-working was not the only interesting activity in the area. Two other features are worthy of note. One is the unexpected discovery of a palisade in the south-west corner of the trench (fig 5 & 6b). This consisted of two angled lengths of a narrow slot with posts driven into it, and an entrance at the angle between the two. Its full extent lies outside the field, in the scrubland to the west, but it seems to be an enclosure placed right on the edge of the scarp. No dating evidence was recovered, and none of the few other features in this area are certainly associated. Its angular form is unusual, and it would be worth further investigation.

The other interesting feature was a figure-of-eight pit located near the centre of the southern edge. This had two charcoal-rich layers near its base, full of carbonised grain, and a basal layer of burnt sand (fig 6c). The section and shape indicate this was a corn-drying kiln, with the broader end the kiln and the narrower end the flue and fire. The burnt layers suggest it met two nasty accidents during its life. Unlike the medieval kiln found in 2004, it had no stone lining. A similar unlined kiln from Kintore is Pictish, so we shall await the dating of this feature with considerable interest.

Discussion
The key target for this year was to understand the LBA metalworking better, and this was successful. It now looks like a short-lived phase, with no formal workshop structure. The mould finds have added significantly to the story, with spears and perhaps swords being made. However, there were other unexpected pluses, notably the stockade and the corn-drying kiln. Once more, the site throws surprises at us, and the dating results from these features will be of great interest.
Fig 7: plan of trench AB
ANOTHER ROUNDHOUSE – AND MORE … (Trench AB)

Introduction
Aerial photos suggested a clear roundhouse in the north-west of the site, although when tested in 2000 (trench J) no house was found. There were, however, the remains of what seemed to be a rectangular medieval structure, and these were targeted in 2006. The enlarged trench (fig 7) highlighted the problems of partial excavation – the previously elusive roundhouse appeared a few metres north of the old trench, while the ‘medieval’ structure turned out to be more elusive than we first thought! This trench produced a complex of activity which is only partly resolved – we will return to it in 2007 to disentangle the sequence.

The roundhouse
With a larger trench extended beyond the 2000 limits, the existence of a substantial roundhouse became very clear (fig 7). A large curving ring-ditch dominates the northern part of the trench, with an entrance to the ESE. One of the entrance posts was excavated, and proved to be two-phase (fig 8). The internal post-ring is mostly obscured by later deposits, but a couple of its constituent postholes were excavated in the western part of the trench.

The full details of the house will become clearer as later deposits are peeled off next season, but the remains suggest a house around 17m in diameter. The ring ditch is quite deep (fig 9, B-D, C-E), its sharp, steep profile suggesting it was deliberately dug in contrast to others on the site, such as the houses in areas D and N, which were probably eroded. Its base contained thin floor layers, but the bulk of the fill is later than the occupation, and represents demolition or later infill.

Fig 8: W-E section of entrance post
Fig 9: trench AB sections

A-B-C-D  west face of north-south slot
E-C      east-west section of ring-ditch
F-G      east face of north-south slot
There are very few finds so far from the house, though part of a saddle quern was built into the entrance post. In one section, a deposit of sea shells (mostly periwinkles) was found. This unusual find is probably an offering, perhaps when the house was abandoned. Similar caches of shells are known from the Iron Age sites of Traprain Law, East Lothian and High Pasture Cave, Skye; all these examples lie some distance from the sea.

The main ring ditch comes to an abrupt end on the west, where there is a short gap between it and the sunken scoop excavated in 2000. This was thought to be a workshop, but now another interpretation seems possible – this scoop may be part of the ring ditch, with the gap representing a second entrance to the building. This idea will be explored in more detail next year, but it raises an intriguing possibility – for, if it is an entrance, it leads directly to a furnace set within the building.

*The furnace* (fig 10)

In 2000 an iron-working area was noted in this trench. Full investigation in 2006 showed it comprised two clay-built iron-smelting furnaces set in shallow pits, one succeeding the other. The later one was filled with clay, suggesting the final rebuild of the furnace had collapsed or been demolished before it was used. These furnaces would be dismantled after each smelt to extract the iron bloom and clear out the slag, with each being used several times.

Their location throws up an intriguing question. They sit within the roundhouse—were they contemporary with it? On the face of it this seems ridiculous – the idea of having a blazing furnace in a timber building is a recipe for disaster. Yet there are examples from other sites of exactly this situation. In the days before modern science, the temperature of a furnace could be assessed by the colour of the flames, and this is best done in the dark, at night or inside a building. Around our furnaces were some small postholes which may have supported a screen or frame to restrict the light, perhaps with a fire-proof coating such as clay.

While plausible, we can’t show that the furnace is contemporary with the building — it could be much later. Frustratingly, it sits on an island of natural sand, unconnected to the surrounding stratigraphy, apart from one link. It is earlier than the uppermost fill.
of the ring ditch, but since this itself is probably much later than the use of the building, it doesn’t help much. One piece of circumstantial evidence is the suggestion of an entrance through the ring ditch close to the furnace, as noted above – perhaps a back door for accessing it. But this is still to be explored. We need to examine the ring ditch in this area, and the adjacent scoop, to see what they tell us. This will be a key target for 2007 – along with getting an archaeomagnetic date for the furnaces, if at all possible, to date their last firing.

![Diagram of ring ditch and furnace complex](image)

Fig 10: the furnace complex

**Other activity**

Apart from the roundhouse and the furnaces, the trench contained a wealth of other activity. A linear slot in the north-east corner may be a fence line, but it is difficult to say much more about it. Unfortunately its link to the house was destroyed by a later pit dug exactly at the junction of the two, while an extension to the north showed that it was badly plough-damaged, and faded away after a few metres. It could be part of an enclosure linked to the building, but we can’t be sure.
Another tantalising feature was a curving line of posts in the north-west corner of the trench. Their spacing suggests a palisade or sturdy fence line. It comes so close to the ring ditch that they are unlikely to be contemporary, as it would interfere with the roof. The curve suggests they may be part of a large enclosure, but test trenches to the north and west failed to find any continuation and the rest of the enclosure may have been ploughed away. Alternatively it could be a curved fence rather than an enclosure – the exposed portion does seem to be a series of short straight lengths rather than a continuous curve. The plan suggests it stops before the end of the trench, but this is misleading, as this area was more plough-damaged, and the gravelly subsoil made spotting features difficult.

While the test trenches failed to trace the post arc, one did find another feature to the north-west (trench AE; fig 11). A section showed this was a shallow spread of darker soil, very similar to the one excavated in 2005 area Z (Hunter 2006, 16-17); it too is probably a post-Medieval feature.

Turning back to the main trench, a slot through the deposits showed that the surface spreads concealed a mass of other features. Some may be linked to the roundhouse, but many seem to be earlier. As the sections show (fig 9 & 12), there is a profusion of pits, some of them massive, and one with a deposit of disarticulated animal bones in the base. They produced few clues to their date or function, and more excavation is needed before we can understand them. However they do indicate considerable pre-roundhouse activity in this area.

Fig 11: trench AE

Fig 12: the main west-east section
A later building?

One reason why these earlier features are hard to see is due to later spreads over the surface. A blanket of occupation and abandonment deposits covers much of the site, infilling the ring-ditch, covering the roundhouse foundations and obscuring earlier activity. These are invaluable, as on most sites they get ploughed away, but they are still only partly understood. Some may be occupation and abandonment deposits linked to the roundhouse and its collapse, but there also seems to be later activity.

It was this later activity which originally led us back to this trench. The 2000 results suggested there was a rectangular structure here, with stonework hinting at an entrance on the eastern side. In the intervening six years, the plough has taken its toll. Much of the stonework has been destroyed and the deposits damaged. The rectangle no longer looks so convincing – but there does seem to be something in this area. The evidence comes mainly from a stone structure, perhaps a hearth, lying on the more southerly of the E-W section lines. This lies across the projected line of the roundhouse’s post-ring, and is unlikely to be contemporary with it. The section (fig 12) is still incomplete, but hints that this structure and associated deposits overlie many of the pit features. There was also an area of heavily-burnt deposits with big chunks of charcoal (the lightly-stippled area on the west edge of the spread in fig 7) which may represent destruction of this later structure. Of course, the vaguely rectangular shape could be misleading – just an artefact of ploughing and machine stripping. But there are enough indications of post-roundhouse activity to suggest that there is something lurking in these spreads to surprise us in 2007.

Discussion

Trench AB is proving tantalising, and the story is still incomplete. The extensive spreads of occupation and abandonment debris are a valuable resource which we shall disentangle in 2007, and it is likely they include both roundhouse deposits and later activity. The roundhouse is well-preserved, and gives us another chance to study one of these substantial ring-ditch structures, while the hints of earlier activity may yet give clues to the elusive early phases of the site. Most interesting, however, are the furnaces – and in particular their relation to the roundhouse. Are these Iron Age furnaces located inside the building? Further work should throw more light on this intriguing possibility.
Fig 13: trench AC plan

0 5 m

Fig 14: charcoal-rich spreads in trench AC (heavy stipple) and other surviving surfaces (light stipple)
IRON SMELTING AND OTHER ACTIVITIES (Trench AC)

Introduction
In 2004, an extension to trench P located a charcoal-rich spread and a large feature rich in slag and burnt clay, suspected to be a furnace (Hunter 2005, 23, fig 10). This area was targeted in 2006, and our suspicions were confirmed. An expanded trench revealed a large, near-circular spread of charcoal-rich deposits with a furnace on its southern side. There was also a cluster of features in the south-west corner (fig 13).

The charcoal-rich spreads
When first exposed, the circular shape suggested there could be a roundhouse lurking under the deposits, and quadrant sections were laid out to test this. In fact, there was no house. Instead there was a series of shallow curved scoops, which are probably erosion hollows from activity in this area. They show most clearly in the pre-excavation plan as a horse-shoe of charcoal rich deposits cut into earlier ground surfaces (fig 14). There were few finds from them, but they appear to focus on the furnace which sits at the open end of the horse-shoe, and they are likely to be connected with the metal-working activity.

Fig 15: trench AC, baulk sections through the spreads
The furnaces (fig 16)
The furnace complex sat in a shallow charcoal-rich scoop at the southern end of the horse-shoe. There were two furnaces, one replacing the other. Their structure was rather different to the clay-built ones in area AB, with square stone foundations topped by a clay superstructure. The more southerly had become clogged with slag and been abandoned, its northern edge reused for the foundations of its successor. This later furnace saw repeated use, with slag attached to its walls, but it apparently ended in disaster, as the interior was filled with the collapsed, fired remains of its clay superstructure. Fragments indicate the furnace was open at the top, presumably so fuel could be added as smelting proceeded.

It is likely, as noted above, that the curved erosion hollows to the north are linked to the smelting activity, and some of the surrounding features are also connected. A shallow pit to the east contained a lot of ash and slag, while a few metres to the north, near the junction of the sections, was a pit full of ash, the sand in its base scorched from the heat.

Fig 16: trench AC furnace complex
Other features

The furnace was not the only activity in this part of the site. A number of features cut the charcoal spreads, including a complex of pits to the north, while earlier activity included a massive two-phase pit under the north-east corner of the spreads and a smaller one on the eastern edge (fig 17). This smaller pit included a saddle quern lying flat on its base, and another set vertically in its upper fill – further examples of the unusual treatment meted out to querns on the site (see Hunter 2006, 26).

Fig 17: upper, F.4434 with quern deposits; lower, F.4380 with recut F.4753

In the south-west corner of the trench was a series of postholes. These resolved into two phases of a four-post structure, c. 3.2 x 3.6 m in size (fig 18-19). The earlier one comprised four massive pits for posts up to 0.6m in diameter. This indicates a substantial structure, taking a considerable load. Four-posters are often interpreted as grain stores, elevated above ground for ventilation and to avoid vermin. The weight of grain could explain why such big posts were needed. A similar post just to the northwest of the structure may have been for additional support.

The four-poster was rebuilt with smaller (though still substantial) posts on the same spot, but with the long axis perpendicular to the earlier phase. An iron projecting ring-headed pin from one of the earlier posts confirms a later Iron Age date for the structure.
Fig 18: detail of the four-post structures

Fig 19: upper, the later four-poster (A-D)
Lower, the early four-poster (1-4) and possible related post (5)
In the extreme south-west corner, another burnt feature was partly exposed. Too little was seen to say what it is, but the quantities of charcoal and fire-reddened sand suggest it may well be another furnace.

Discussion

Time did not allow the complete excavation of the spreads and features, but the excavated sample gives us a good picture of activities in this area. Radiocarbon dates will help to understand the development, and especially to confirm whether the curved scoops are linked to the furnace. Their position strongly suggests they were, giving us valuable insights into the layout of an iron-smelting area. The other key discovery was the four-post structures – the first from the site, and an indication of where the agricultural wealth of the inhabitants was stored.

Fig 20: hypothetical reconstruction of iron-smelting at Binnie (by Alan Braby)
Fig 21: selection of LBA moulds (A-H), and pottery (I-L). A-C are for bangles, D pin, E spear, G axe, H perhaps a sword.
THE FINDS

Work in the trenches combined with Hamish Stuart’s continuing metal-detecting survey produced a good range of finds to breathe life into the site and its inhabitants.

Early activity

Once again, there are hints of activity in the area before the main late Bronze Age / Iron Age phase. A Mesolithic flint blade tool was recovered from trench AA as a stray find, while trench D produced a large fragment of Neolithic pottery (fig 25 O; fig 26 AA). This early prehistoric evidence is still very much low-level background noise, and there is no sign yet of any substantial early activity on the site.

The late Bronze Age metalworking

The trench AA LBA metalworking area has been discussed above. A wide range of diagnostic moulds was found (fig 21): pins (sadly lacking the diagnostic head), bangles (of a type known from nearby Cavesea), socketed axes and spears. There is also one fragment with part of a rounded hole which is probably the strengthening strut from a sword mould (compare Tylecote 1986, fig 45); because bronze swords were so long, the moulds had wooden rods built into them to prevent them bowing or breaking. Although the structural evidence suggests the metal-working was a short-lived phase, the craft-workers produced a wide range of objects – the power tools of the late Bronze Age elite.

Fig 22: speculative reconstructions of the axe and spearhead moulds
Fig 23: querns. AC is one of two querns from pit F.4434 (trench AC); AF comes from the entrance post of the AB roundhouse; AH is the rotary quern from the trench D house.
Domestic activity

There is a good range of more domestic items, including numerous saddle querns and rubbers, and a rotary quern fragment from the trench D house (fig 23-4). Other stone tools were less than in previous years, but included some whetstones (fig 25 M, P).

Fig 24: querns and other stone tools. AL was found in the same pit as fig 23 AC.
The pottery (fig 21 I-L; 26 Y-AA) included both plain rounded rims, typical of the first millennium BC, and everted rims which came into fashion in the Roman Iron Age. Unusually, there were two decorated sherds. One (fig 21 K) may be early Bronze Age; the other (fig 26 Y) is an Iron Age sherd from the trench D house. Iron Age decorated pottery is extremely rare in the area, and was probably restricted to vessels which were special in some way. Metal finds included an iron clamp and a copper alloy rivet (fig 25 N, R). These rivets were common from the Iron Age to the recent past, and were used particularly to repair bronze vessels.

Fig 25: stone and metal finds. M, P whetstones; N, copper alloy rivet; O, Mesolithic flint; R, iron clamp; Q, iron projecting ring-headed pin (trench AC 4-poster); S, yellow glass bead (trench D house)
Fig 26: ceramics. Y, decorated Iron Age sherd, trench D house; Z, later prehistoric sherd, trench AB F.4555. AA, Neolithic pot, trench D; AB, furnace rim, trench AC.
The Iron Age power centre – jewellery of iron, bronze, amber and gold

A number of finds provide further evidence of the site’s status in the Iron Age. Most spectacular was the terminal fragment of a gold torc from the trench D house (fig 27 V). This comes from a ribbon torc (fig 28; Eogan 1983), and appears to have been deliberately snipped off. Ribbon torcs are a much-debated type; for long they were thought to be middle Bronze Age (MBA) in date, but the Birnie find adds to the growing body of evidence for an Iron Age date. Richard Warner (2003) has argued convincingly for two different styles of ribbon torc, a loose-twisted MBA type and a tight-twisted Iron Age type. Much of the dating dispute arises because these torcs are, with very few exceptions, found as stray finds or in hoards with no associated items. Birnie is therefore valuable evidence for their dating.

Ribbon torcs are best known from Ireland, but in Scotland they cluster in the north-east, from the Forth to the Moray Firth. The most spectacular find is the great Law Farm hoard, found in 1857 close to a barrow near Urquhart, only about 10 km from Birnie (Coles 1968). The Birnie terminal is very similar to some from Law Farm. Given the absolute rarity of gold items in the Iron Age, it points once more to the site being a place of considerable importance.

Fig 27: unusual metal finds (copper alloy unless stated). T, Pictish brooch; U, ring-headed pin; V, gold ribbon torc fragment; W, curved fragment; X, Medieval buckle.
Because the type is best known from Ireland, it is often assumed that they were made from Irish gold. Yet the Scottish examples tend to be slightly different from the Irish ones in the shape of their terminals, and it is possible that more local gold sources were used. This is something we will try to test through scientific analysis.

Fig 28: a, intact ribbon torc (from Ballyshannon, Co. Donegal); b, distribution (both after Eogan 1983).
Another highly unusual find came from the trench D house – an amber bead (fig 29). Amber comes from the Baltic shores, although it is occasionally washed up on the east coast of England. It is a very rare find in the Iron Age, and the few known examples probably did not come directly across the North Sea, but made their way from hand to hand in a long chain of exchanges. While its ultimate owners at Birnie may not have known where it originated, they would have recognised it as an exotic and valuable object. This particular bead had a long life – it has two perforations, one probably replacing the other to prolong its use. Amber beads were also found at Sculptor’s Cave, Covesea, some of which are likely to be Roman Iron Age (Benton 1931, 198-9).

Other jewellery found in 2006 includes two examples of a more local style – the projecting ring-headed pin. This was the most popular pin type in Iron Age Scotland, and there is a fine iron example from the trench AC four-post structure (fig 25 Q). Much more unusual is a second, copper alloy example found in metal-detecting (fig 27 U). Ornate versions are known from the Roman Iron Age deposits at Sculptor’s Cave, Covesea (Benton 1931, fig 16), but this Birnie one seems to be a new type – I know of no others with similar knobs spaced round the head. Once more, Birnie’s inhabitants had access to objects which were rather out of the ordinary.

Pictish and Medieval activity
The metal-detecting also provided invaluable evidence of later activity. A D-shaped decorated fitting for a buckle was found (fig 27 X) – this is probably medieval in date. Most striking, however, was our first piece of Pictish metalwork – the first secure Pictish evidence from the site. This is the hoop of a brooch-pin or hinged-pin (fig 27 T) – a development of the penannular brooch, where the hoop is reduced to a decorative device (fig 30; Stevenson 1989; Youngs 1989, 92). A little over half the hoop survives, with a pair of snarling dragons or similar monsters facing one another, their gaping jaws forming a diamond-shaped device in the middle. Similar animal designs are found on late Pictish metalwork, such as penannular brooches from St
Ninian’s Isle, Shetland, and Freswick, Caithness (Wilson 1973, 96-7, pl XXXIVa, XLIXd); these suggest a late eighth-ninth century date for this item.

Fig 30: speculative reconstruction of the Pictish brooch-pin
OTHER WORK

Thanks to additional sponsorship from NMS, the museum’s Access & Outreach team organised a series of educational visits. For two weeks we hosted two school classes a day, introducing them to the site, explaining what had been found and getting them to sieve the spoil, to try their hand at archaeology and show them how the history of the field could be reconstructed from topsoil finds. This proved very successful, with twenty classes visiting, both primary and early secondary, from across Moray; feedback has been overwhelmingly positive. A Birnie educational box was launched, containing replica objects and a series of activities. It is hosted by Elgin Museum, from where schools can borrow it. It is hoped that, along with the display of finds in Elgin, this will provide an educational legacy beyond the life of the fieldwork.

We also had the chance to present the site to a wider public in a successful Open Day. Over 250 visitors came along, despite unpredictable weather, taking site tours, examining finds and (for the younger visitors) trying their hands at various Iron Age crafts. Local media coverage helped to spread the word, including the front page of the Press and Journal and a spot on Moray Firth Radio, while lectures in Elgin and Lossiemouth updated local audiences on the latest finds.

The excavation also acts as a training programme for university students, primarily from the University of Cardiff and the UHI. The RCAHMS kindly offered to support the project’s aims by providing one of their surveyors to train the students in advanced GPS techniques. This also provided us with a 3D terrain model of the core area of the site.
CONCLUSIONS AND FUTURE PLANS

The 2006 season, with the largest labour force yet, proved highly successful. Good progress was made with the trench D roundhouse, although the complexity of its deposits means we need a careful approach, and it will take another two or three years to finish it. The results so far show the value of such forensic disentangling of a well-preserved structure, and finds such as the gold torc are of considerable importance.

The LBA metalworking in trench AA has been successfully localised, with a valuable assemblage of material recovered. The lack of evidence for any buildings is important for developing models of how such metal-working was organised; it suggests a short-lived event rather than an established and long-lived workshop.

Trench AB produced the greatest surprises, with a large ring-ditch house where previous trenching had found none. It is a complex structure, with earlier and later activity, and will need a further season to disentangle it. The iron-smelting furnace located here is of particular importance.

Trench AC produced another iron-smelting area, with a brace of furnaces and linked remains whose full analysis will be of great interest. The four-post structures in this trench are the first from the site, and indicate the storage of agricultural wealth.

Finds flesh out the picture, not just the gold ribbon torc fragment but also the rare amber bead and the Pictish brooch fragment – the first secure Pictish activity on site.

Provisional targets for 2007 are:
- Trench D: completion of the western half of roundhouse and south-east quadrant of the eastern half
- Trench AB: clarify sequence
- Hoard area: re-open and excavate those features not yet examined; excavate larger sample of adjacent roundhouse

On the experience of the 2006 season, we can be assured that the site still has surprises to throw at us …
ACKNOWLEDGEMENTS

Once more we are indebted to the support and enthusiasm of the farmer, William Mustard, for his enthusiastic cooperation, and to the funders for supporting the work: National Museums Scotland, Historic Scotland, Ian Keillar, the Moray Society and the Moray Field Club. Hamish Stuart once more provided invaluable assistance with metal-detecting, and Hamish Clark’s skills with the JCB made initial site clearance quick and efficient.

The running of the project would be impossible without the hard work and skills of the supervisors (Mark Allen, Dave Anderson, Alan Braby, Grant Lock and Steven Orr) and assistants (Lisa Brown, Caroline Denton, Lauren Jenkins, Tanja Romankiewicz and Daniel Sahlén), and I am grateful to them all, while Murray Cook’s expertise proved invaluable at key points. Without the small army of volunteer diggers there could be no project, and I am indebted to them for their help—the students from Shetland and Moray College (UHI) led by Simon Clarke, and those from the Universities of Cardiff, Edinburgh, Glasgow, Lund and York. Cristina Mazzoli of the Römisch-Germanisches Zentralmuseum Mainz acted as finds assistant and provided on-site conservation support, a service which was very much appreciated. Assistance was also gratefully received from RCAHMS, through James Hepher of their survey team, who provided training in GPS techniques for the students, and Moira Greig of Aberdeenshire Council, who kindly took aerial photos.

The basic sorting of the archive material was done by Nives Kokeza and Lisa Brown, and I am very grateful for their efforts in getting on top of this ever-increasing workload. The illustrations are by Alan Braby, who tolerated shifting requirements, changes of mind and contracting deadlines with remarkable and much-appreciated good humour. For advice on various aspects, I am grateful to Trevor Cowie, Steve Lancaster, Sinclair Ross and Alison Sheridan.

The educational aspects which are such a key part of the project were organised by Jane Miller and led on site by Jennie Marshall, with support from Mandy Murray for the Open Day, and I am indebted to them for making this such a success.
Finally, I must thank the many Moravians who have made us feel welcome, visited the excavations, asked us what our scratchings meant, and left much-appreciated offerings of cakes and chocolate biscuits. Particular thanks to Elgin Museum and the Moray Society, and to Ian and Kerstin Keillar, René Harris and Susan Bennett for hospitality above and beyond the call of duty. The final plaudits must go to Mrs Mustard, who rose magnificently to the challenge of greatly-enhanced numbers of cake-consuming diggers ...
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