

Palaeoecology Research Services

**Assessment of biological remains from excavations at
Ross Bay, (nr Kirkcudbright), Dumfries and Galloway
(site code: RB02)**

by

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Summary

Six bulk sediment samples and a few fragments of hand-collected bone recovered from excavations at Ross Bay (nr Kirkcudbright), Dumfries and Galloway, were submitted for an assessment of their bioarchaeological potential. Initial dating evidence (though sparse) suggested a prehistoric (first millenium BC) date for the deposits.

Ancient charred plant remains were recovered from all of the samples, mostly small numbers of cereal grains and charcoal. The charred grain assemblage recovered from the pit fill Context 3 (Area A) was of considerable size, however.

The only invertebrate remains recovered were probably modern.

Only tiny amounts of hand-collected bone were recovered from three contexts in Area A. All of the fragments were burnt and very poorly preserved; none were identifiable.

There is clearly a high potential from at least some of these deposits for the recovery of information about cereal crops in an area and in a prehistoric period (subject to such a date being confirmed) for which little or nothing exists. In addition, some of the grain could be used to provide a radiocarbon date for the deposits.

KEYWORDS: ROSS BAY (NR KIRKCUDBRIGHT); DUMFRIES AND GALLOWAY; ASSESSMENT; LATER PREHISTORIC (FIRST MILLENIUM BC); PLANT REMAINS; CHARRED PLANT REMAINS; CHARRED GRAIN; VERTEBRATE REMAINS

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Assessment of biological remains from excavations at Ross Bay, (nr Kirkcudbright), Dumfries and Galloway (site code: RB02)

Introduction

Three previously unknown areas of archaeological features were revealed during the archaeological monitoring of topsoil stripping for the construction corridor of a gas pipeline at Ross Bay (nr Kirkcudbright), Dumfries and Galloway (NGR NX 650 450). Area A comprised two sub-rectangular pits (4 and 12) and four postholes (5, 8, 14 and 18); Area B consisted of two irregular spreads of flagstones, four heavily truncated postholes, and two shallow pits; Area C was principally a ring gully (217), representing the remains of a 10 metre diameter roundhouse, and associated postholes.

Areas B and C lie within 50 metres of each other with Area A approximately 500 metres north-north-west. A small amount of coarse hand-made pottery (preliminary examination dated this to the first millenium BC) was recovered from Area C but, in the absence of more closely dateable artefacts, a working hypothesis of an Iron Age date (assumed from the roundhouse structure) and an association between the three areas was adopted.

Fourteen bulk sediment samples ('BS' *sensu* Dobney *et al.* 1992), representing 13 contexts, and a few fragments of hand-collected bone were recovered from the deposits. Three samples from Area A and three from Area C (there were no samples from Area B), and the hand-collected bone fragments were submitted for an evaluation of their bioarchaeological potential.

Methods

All six of the submitted sediment samples were inspected in the laboratory and their lithologies were recorded, using a standard *pro forma*, prior to processing, following the

procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils.

The washovers resulting from processing were examined for plant and invertebrate macrofossils. The residues were scanned for larger plant macrofossils and other biological and artefactual remains.

The hand-collected bone fragments were quickly scanned.

Results

Sediment samples

The results are presented in context number order by area. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers (derived from the context numbers by PRS for internal record keeping purposes).

No ancient invertebrate remains were recovered from the samples.

All of the residues from processing were composed of mineral material ranging from fine sand through to large stones/pebbles (to approximately 100 mm), and, occasionally, charred grains and fine modern rootlets that had not separated off in the washovers.

AREA A

Context 3 [fill of pit 4]

Sample 301/BS (30 kg sieved to 300 microns with washover; all of the submitted sediment (3 tubs) was processed but 14 other tubs of raw sediment remain)

Moist, mid orange-brown to mid grey-brown, crumbly (working soft), slightly sandy clay silt (locally much more sandy) with abundant charred grain and a few modern contaminant seedlings present.

This sample yielded a huge washover of about 3.25 litres of more or less pure charred cereal grain with some chaff and a little charcoal (including oak, *Quercus*, to 20 mm in maximum dimension). The grains and chaff were well preserved and consisted primarily of wheat, amongst which there seemed, from the spikelet forks and glume-bases, to be a predominance of emmer, *Triticum dicoccon* Schrank and a small amount of material of spelt, *T. spelta* L. Also present were small numbers of barley (*Hordeum*) grains, some of them hulled, but no barley chaff. Some grains were rather shrivelled, with longitudinal ridges/wrinkles, though there was no evidence of germination, usually associated with grains showing shrivelling. No weed seeds were seen, and the crop was extremely clean.

Context 7 [primary fill of posthole 5]

Sample 701/BS (9 kg sieved to 300 microns with washover; no sediment remains)

Just moist, light to mid grey-brown, crumbly to unconsolidated (working soft and slightly sticky), moderately stony (stones 2 to 20 mm were common and 20 to 60 mm present), sandy clay silt. Charred grain was present in the sample.

The small washover of about 200 cm³ consisted mostly of well preserved though rather 'silted' charred wheat grains and charcoal (including oak and ash, *Fraxinus*, to 25 mm), with some modern rootlets and a few grains of barley. The wheat was present at a level of a few tens of grains per kilogramme of whole sediment. Some wheat grains were not fully burnt and had soft brownish patches; others were rather small, narrow and rather hump-backed and their identity was not clear—they had some resemblance to those of einkorn, *Triticum monococcum* L., which would perhaps be a rather late and unusual record of this wheat if confirmed. There was, unfortunately, no chaff. The few weed seeds were uncharred and seem likely to be modern.

Context 13 [fill of pit 12]

Sample 1301/BS (17 kg sieved to 300 microns with washover; all of the submitted sediment (2 tubs) was processed but 2 other tubs of raw sediment remain)

Just moist, mid orangish grey-brown to mid grey, crumbly to brittle (working soft and slightly sticky), moderately stony (stones 2 to 20 mm were common and 20 to 60 mm present), sandy clay silt. Modern rootlets were present in the sample.

The small washover of about 100 cm³ consisted of modern rootlets and a few charred wheat and barley grains, again rather 'silted' but otherwise not too badly preserved, though the concentrations were low. The few uncharred weed and other seeds present were probably of modern origin. There was a little charcoal (to 10 mm), including alder/hazel (*Alnus/Corylus*).

AREA C

Context 216 [fill in ring gully 217]

Sample 21601/BS (38 kg sieve to 300 microns with washover; no sediment remains)

Moist, mid brown, crumbly to unconsolidated (working more or less plastic), very stony (stones 2 to 60 mm abundant), clay silt (to silty clay) with some modern rootlets present.

There was a small washover, mainly comprising modern rootlets, with a very few cm³ of charred material: charcoal (to 10 mm), and a single oat (*Avena* sp.) grain. The traces of beetle remains and fly puparia observed are thought to be modern.

Context 230 [secondary fill of posthole 218]

Sample 23001/BS (3 kg sieved to 300 microns with washover; no sediment remains)

Just moist, light to mid brown (mottled lighter and darker on a mm-scale), unconsolidated, very stony (stones 2 to 60 mm were abundant and larger stones common), clay silt with some modern rootlets.

This sample yielded a very small washover of about 50 cm³ of fine (<5 mm) charcoal and a very few charred wheat and barley grains.

Context 236 [fill of posthole 232]

Sample 23601/BS (3 kg sieved to 300 microns with washover; no sediment remains)

Moist, light to mid brown to light to mid grey-brown, unconsolidated (working soft and sticky), very stony (stones 2 to 60 mm were common and larger stones present), sandy clay silt. Modern rootlets were present in the sample.

There was a small washover of about 20 cm³ of charcoal (to 10 mm), plus some modern rootlets, and

what appeared to be vesicular slag. The traces of uncharred seeds present may well be recent, as are the earthworm egg capsules.

Hand-collected vertebrate remains

Only tiny amounts of hand-collected bone were recovered from three contexts in Area A (Context 3 – 3 fragments; Context 7 – 11 fragments; Context 13 – 2 fragments). All of the fragments were burnt and very poorly preserved; none were identifiable.

Discussion and statement of potential

There is clearly a high potential from at least some of these deposits for the recovery of information about cereal crops in an area and in a prehistoric period (subject to such a date being confirmed) for which little or nothing exists, to judge from archaeobotanical records for the later prehistoric from S.W. Scotland known to the author (AH).

The very few fragments of bone recovered were not identifiable.

Recommendations

The large charred grain assemblage from Context 3, and any others from the site not seen in this assessment, should certainly be subjected to a more detailed analysis to check the identification of the cereals (mainly via the well-preserved chaff) and some quantification made of the components present in a subsample of suitable size.

Some of the grain could also be used to provide a radiocarbon date (there is enough to undertake a conventional date, assuming—as seems reasonable—that it represents material from a single season).

No further work is recommended on the bone.

Retention and disposal

All the material should be retained for the present.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

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