DATA PAPER

Archaeobotanical Data from Two Middle and Later Bronze Age Round House Sites in Cork, Ireland

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This dataset comprises two .csv files (containing archaeobotanical results) from two separate Bronze Age round house sites in southern Ireland (Mitchelstown and Ballynamona). It also comprises a .pdf file containing the text of a research report detailing the methodology, results and an interpretation of the archaeobotanical material from these two sites. This data was collated after archaeobotanical analysis of samples from the sites. It can be re-used as comparative material in research examining archaeobotanical datasets from Bronze Age sites in Ireland and beyond.

(1) Overview

Context

This archaeobotanical dataset is taken from two Bronze Age round house sites (Mitchelstown 1 and Ballynamona 2) in north Cork, in the south of Ireland. The circular plan of the round house is the characteristic house style found throughout the Irish Bronze Age. [1]

The sites were found within a short distance from one another, c. 3 km apart, in the rich farming landscape of north Cork. The sites were superficially similar, with evidence for multiple round house structures. Quern stones were recovered at both sites, suggesting a link to cereal processing. However, there were few other artefacts from the sites: there was no ceramic whatsoever from Mitchelstown and only a single rim sherd of a Late Bronze Age coarse vessel from a round house at Ballynamona. Radiocarbon results indicated that Mitchelstown was the earlier site, with a date range of c. 1490–1220 cal BC, placing it in the earliest part of the Middle Bronze Age. The date range from Ballynamona was slightly later, (c. 1380–1030 cal BC), suggesting occupation during the transition from the Middle to the Late Bronze Age.

This archaeobotanical dataset is an important one as it is derived from a period when the Irish archaeological record suggests evidence of transitions and developments in material culture, with the Middle Bronze Age marking a period when the use of metal (though present at an earlier time) becomes widespread, and the period generally reflecting a time of widespread changes that had significant impacts on the everyday lives of ordinary people. There are, however, relatively few ways of discovering how these changes were manifested in an economic or an agricultural context. This is particularly the case in southern Ireland, where the relative paucity of both animal bone and artefacts has hampered attempts to interpret and understand the archaeology of the period. [2] In the absence of these important types of evidence, archaeobotanical material becomes increasingly important, as it is one of the few available sources of evidence for agricultural practices.

Spatial coverage

· Mitchelstown 1, Cork, Ireland: 52° 16' 28.491" N / -8° 16' 51.583" E
· Ballynamona 2, Cork, Ireland: 52° 15' 29.883" N / -8° 15' 5.297" E

Temporal coverage

Middle to Late Bronze Age, where Middle Bronze Age lasts from c. 1600–1200 BC and Late Bronze Age lasts from c. 1200–600 BC. The radiocarbon date ranges from each site suggest that Mitchelstown 1 was occupied between c. 1490 and 1220 cal BC, and Ballynamona 2 was occupied between c. 1380 and 1030 cal BC.

(2) Methods

Sampling strategy

Bulk samples were taken during excavation at the excavators' discretion, concentrating sampling efforts on secure deposits from settlement contexts. The samples were initially sub-sampled (Phase 1 of the project) based on decisions taken by the excavation director. However, as subsequent funding was obtained for analysis of samples from these sites (Phase 2 of the project), the entire collection of bulk samples from both sites were ultimately processed and analysed. A total of 56 bulk soil samples dating to the Middle to Late Bronze Age was processed from Ballynamona 2, while 52 Middle Bronze Age samples from Mitchelstown 1 were examined.

Steps

Bulk soil samples were taken during excavation. They were collected and stored in sealed, labelled plastic bags.

In Phase 1 of the project (initial analysis phase) a subset of the samples were processed for carbonised plant remains using a flotation method. Phase 1 samples from Ballynamona 2 were processed using machine-assisted flotation. [3] Phase 1 samples from Mitchelstown 1 were processed by manual flotation, where each sample was saturated in water to allow carbonised plant material to float; this "flot" (the floating material) was then poured into a stack of geological sieves and trapped in the sieve meshes. In both machine-assisted and manual flotation, the smallest sieve mesh size used measured 250 microns. When all the carbonised material (the flot) was collected from both samples it was air-dried in paper-lined drying trays prior to storage in airtight plastic bags. The heavy residues from these samples were not retained.

The flots from all of the samples were sorted under low-powered magnification (x10 to x40) using a binocular microscope. The seeds found during sorting were identified at the same level of magnification. Identified seeds were separated and stored in sealed glass phials. Technical reports were written to describe the results from each site at this phase of analysis.

The remaining samples from the sites were processed by manual flotation and the seeds from each sample were sorted and identified (Phase 2 of the project) after research funding was granted for further analysis. The manual processing method for this phase duplicated that used in Phase 1 of the project for Mitchelstown 1 (described above).

Sample volumes varied according to context and as a result of decisions taken during excavation. Where these are available, the sample volumes have been included in the final dataset. However, volumes were not always recorded and/or incorporated into the dataset during Phase 1 of the project.

The results from Phases 1 and 2 of analysis were combined to produce the final dataset. The dataset uses nomenclature and taxonomic order that follows Stace. [4] A research report, detailing the findings, was produced.

Quality control

Seeds were identified with reference to a printed identification manual. [5] Material from this research project was brought to an Irish Archaeobotanical Discussion Group meeting on 29 June 2011, in the Department of Archaeology at University College Cork, to allow colleagues to see the material and to check identifications. The original archaeobotanical material has been deposited in the stores of the National Museum of Ireland and is available for research/verification purposes in the future, subject to institutional access policies.

Constraints

N/A

(3) Dataset description

Object name

- Archaeobotanical results from Ballynamona 2, Cork, Ireland (.csv file)
- Archaeobotanical results from Mitchelstown, County Cork, Ireland (.csv file)
- Archaeobotanical remains from Mitchelstown and Ballynamona, Middle/Late Bronze Age house sites in Cork, Ireland (.pdf file)

Data type

Primary data and final report.

Format names and versions

.csv, .pdf

Creation dates

This dataset was created between 1 December 2005 and 30 November 2011.

Dataset creators

Penny Johnston.

Language

English

License

CC-BY

Repository location

- DOI 10.5281/zenodo.8563 (https://zenodo.org/record/8563#.UzgiT6hdWSo)
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Publication date

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(4) Reuse potential

This dataset can be re-used by other archaeobotanical researchers wishing to compare results from other sites, within Ireland and beyond. The results could be used for the investigation of agriculture, economy, society and food, in particular when incorporated into larger datasets that look at these issues through space and time. The identification and quantification information is stored in .csv formats to enable other researchers to easily incorporate

the dataset into their own spreadsheets or databases, and to combine and/or compare it with material from other sites. A .pdf file with a full report documenting production of the dataset is also provided.

One limitation in the dataset may be that one of the sites (Ballynamona 2) is multi-period although the bulk of the archaeobotanical data is derived from the Bronze Age contexts excavated at the site. Use of the dataset from this site would therefore require some work to clarify the dates and phases of occupation associated with each individual sample. This would require use of the full excavation report from the site. [6] As a result, within the dataset from Ballynamona 2 it is indicated whether the samples were dated to the Middle to Late Bronze Age (M/LBA) or not (not M/LBA), to facilitate reuse.

References
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3. **Pearsall, D** 2000 *Paleoethnobotany: a Handbook of Procedures.* New York: Academic Press.
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