Atlantic Connections and Adaptations: Economies, environments and subsistence in lands bordering the North Atlantic.

Edited by R. A. Housley and G. Coles.

Series: Symposia of the Association for Environmental Archaeology No. 21
Publisher: Oxbow Books, Oxford
Year of publication: 2004
ISBN: 1 84217 106 2

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Introduction

This volume contains a selection of papers from the joint Association for Environmental Archaeology (AEA) and North Atlantic Biocultural Organisation (NABO) meeting held at Glasgow University between 29 and 31 March 2001, as well as extra contributions to the research fields covered in the volume. The papers are arranged in sections related to their geographical area: Atlantic Mainland Scotland, The Scottish Western Isles, The Scottish Northern Isles, and Iceland, as well as a section on contacts across the region entitled North Atlantic Networks. The final section, Looking Fore and Aft, relates to the previous and current research objectives of major international research projects.

The introduction by the editors sets the scene for the papers, describing the geography, climate, glacial history and geology of the North Atlantic Realm; i.e. Britain, Ireland, Norway, the Faroe Islands, Iceland, Greenland and north western North America. They then go on to summarise the four major research themes in the region: I) the origins of the biota and introduced plant and animal species; II) the spread of humans, their ‘cultural packages’, how they adapted to local conditions and the development of new packages; III) the influence of climatic variability and extreme events and IV) the establishment and development of exchange and trade networks.

The Text

Atlantic Mainland Scotland

The two papers concerning mainland Scotland focus on climatic variability and human settlement in the highlands (Davies et al.) and human impact and land use around the royal centre at Dunadd, Argyll (Housley et al.).

Davies et al. use pollen data to investigate human response to environmental change, and conclude that settlement persisted and that the population was well-equipped to deal with changes in the environment during the Holocene. Using pollen and plant macrofossils Housley et al. investigate the impact of the trade in exotic plants on land use associated with the foundation of the fifth century high status settlement at Dunadd. They conclude that, although there is some impact in the initial stages, the overall picture is of continuity in agricultural and economic practices.

The Scottish Western Isles

The papers in this section summarise the results of recent archaeological research on South Uist (Sharples et al.), an assessment of work on faunal and floral remains from the Outer Hebrides (Smith and Mulville) and the application of two scientific techniques: food residue analysis on Hebridean Iron Age pottery (Campbell et al.) and mineral magnetic measurements to investigate
fuel sources (Peters et al.) and taphonomy on Lewis (Church and Peters).

Sharples et al. and Smith and Mulville provide up-to-date chronological summaries of ongoing work that has been taking place in the Western Isles. The Sharples paper covers the period from the earliest (possibly Mesolithic) occupation to the post-Medieval period, summarising the evidence for occupation and discussing current interpretations. As well as being a comprehensive overview, the paper provides an extensive list of references essential for further study of the subject. Smith and Mulville summarise work on faunal and floral remains from the Hebrides from the Neolithic through to the Late Norse period. They find an expansion in both the number and range of domesticates over this period, and that the Norse period is one of particular intensification and innovation. Resource management strategies are also discussed.

The application of AMS dating and chemical analysis to charred food residues on pottery by Campbell et al. discusses the methods, results and implications of these techniques, based on a trial study carried out on Hebridean Iron Age material from Sollas and Ellen Olabhat on North Uist. The results indicate, among other things, a lack of correlation between food type and vessel form, and that terrestrial plant and animal resources, although not marine resources, were prepared in the pots analysed. This paper provides a good critique of the techniques and their usefulness (and limitations) in archaeological research.

The two papers on mineral magnetism use magnetic measurements to analyse fuel types (Peters et al.) and the spatial distribution of charred material across sites (Church and Peters). The first paper discusses the development of a technique using the magnetic measurement of modern ash residues of known fuel types and the comparison of these to archaeological data from sites on Lewis (which were found to have well-humified peat as the major fuel) and Cladh Hallan, South Uist, and Old Scatness Broch, Shetland, where more variable results were found. The second paper looks at several sites on West Lewis, and finds evidence for the spreading of ash around the sites. This has implications for the understanding of taphonomic processes for archaeobotanical assemblages. As with the paper by Campbell et al., the discussion of techniques and the usefulness of their application, is useful beyond the bounds of North Atlantic archaeology.

The Scottish Northern Isles

The papers on the Northern Isles have a broad scope, from the implications of genetic studies of the Orkney Vole for reconstructing human movements (Thaw et al.), through a discussion of the form and function of prehistoric field systems in Shetland (Turner et al.), the storage of fish in the Iron Age (Nicholson), the economic role of butter (Challinor), to the experimental construction of a wheelhouse (Malcolmson et al.). Three papers are presented on aspects of the site of Old Scatness Broch - power relations (Dockrill and Batt), the intensity of farming in the post-broch Iron Age (Bond et al.) and marine resources and ceramics (Brown and Heron).

Thaw et al.’s paper on origins of the Orkney Vole (Microtus arvalis orcadensis) presents new genetic data pointing to south-western Europe (particularly France or northern Spain) as the source population for the Orcadian subspecies, which is considered to have been introduced to the islands by humans. This pattern is placed into the context of recent work by Sheridan and others on early Neolithic contacts along the ‘Atlantic façade’ and presents directions for future research. Ethnographic, historical and archaeological evidence for prehistoric field systems in Shetland are reviewed in Turner et al’s paper. Preliminary definitions of characteristic landscapes are defined and provide the background to a new research project using GIS and soil analysis aiming to quantify field system form.

The papers on Old Scatness cover various aspects of the archaeology. The chronological sequence of Broch and post-broch periods are described by Dockrill and Batt, then integrated into the wider context of status estates – local power centres based on control over central storage facilities. In contrast to the
broad approach of the Smith and Mulville paper, Bond et al. focus their attention on the preliminary analysis of archaeobotanical and zooarchaeological assemblages, as well as soil micromorphological studies, from a single site and suggest that agricultural intensification begins in the mid to late Iron Age. In a similar approach to Peters et al., Brown and Heron apply an experimental model based on lipid biomarkers for fish oils to examine sherds in order to investigate evidence for the processing of fish at the site. Fishing is also the subject of Nicholson’s paper investigating strategies of exploitation of marine resources, including the storage of products during the Iron Age. The importance of another stored product in the economy of the Northern Isles, butter, is covered by Challinor from ethnographic and archaeological perspectives, and including a discussion of the biomolecular analysis of lipids from ceramic vessels from Old Scatness. The experimental construction of a wheelhouse based on Structure 6 from Old Scatness is described by Malcolmson et al., outlining the archaeological context, experimental design process and learning outcomes of the project.

Iceland

The selection of four papers on Iceland covers a range of subjects – environmental change (Caseldine et al.), recent excavations at Hofstaðir (Friðriksson et al.) and faunal remains (papers by Amundsen and Tinsley).

Caseldine et al. review the current state of research in evidence for environmental change from proxy sources (pollen, Coleoptera, testate amoeba and chironomid). They relate the discussion to an ongoing debate as to whether plants and animals survived the last glaciation or were reintroduced after the retreat of the ice-sheet, and their conclusions vary depending on the proxy concerned. Recent work at Hofstaðir, a large hall in the North of Iceland, is outlined by Friðriksson et al. and the results discussed in terms of its traditional interpretation as a ‘temple-farm’ and its relation to the landscape and society of the settlement period. Bird, fish and mollusca remains are the subject of the last two papers. Assemblages from a midden at Miðbær on Flatley in Breiðafjörður are presented and discussed by Amundsen, and indicate a reliance on marine resources compared to other sites in the region. Preliminary results from work in the Lake Mývatn region of Northern Iceland are presented by Tinsley, and a comparison is made between faunal assemblages from an abandoned farm and one still working in the present day. Similar strategies of exploitation are apparent at both sites.

North Atlantic Networks

The importance of connections across the North Atlantic region are highlighted in the three papers in the section entitled North Atlantic Networks. Discussions of the source of steatite (Forster and Bond) and fishing in the medieval Netherlands (Ervynck et al.) and 17th century Shetland (Melton) are presented.

The trade in steatite from Norway and Shetland across the Norse North Atlantic is covered by Forster and Bond. As the material cannot be sourced by scientific analysis, a preliminary typology of use in sourcing the objects is presented. Although this is very much a work-in-progress, the application of the typology across the Norse area of influence will undoubtedly have great importance for the understanding of trade networks. The importance of the medieval fishing industry in the Netherlands is discussed by Ervynck et al. A variety of archaeological and historical data are used to outline the development from coastal fisheries to exploitation of the open seas of the North Atlantic. Historical and archaeological evidence for the 17th century cod trade in Southern Shetland presented by Melton, indicate difficulties that may relate to climatic deterioration in the period.

Looking Fore and Aft

The final section contains two papers outlining research objectives in the North Atlantic region. McGovern discusses the first ten years of NABO, set up to cross-cut disciplinary research boundaries. Edwards et al. outline the
interdisciplinary *Landscapes circum-Landnám* project investigating the human and ecological consequences of the Viking settlement of the North Atlantic islands. At the time of publication, the project had received substantial funding from the Leverhulme Trust, and the research plan is outlined.

**Conclusion**

The range of subjects covered in this volume serves to illustrate the potential wealth of the archaeological record in the North Atlantic, and a wide range of data sets, time periods and geographical areas are covered (although the Faroe Islands and North America are only discussed in the more general sections). Most papers include an introductory section with an overview of the spatial and temporal context. However, some background knowledge of the region, chronology and archaeology would be required to make the best use of this volume, for example, some papers do not include location maps, and some of the maps would be difficult to decipher for people not familiar with the shape of the coastline of the region. The majority of the papers are written and presented in an accessible style and, although clearly aimed at an academic audience, would also be of use to members of the general public with a particular interest in the detail of North Atlantic archaeology and/or knowledge of archaeological techniques. The papers summarising work to date or contextualising new results in specialist fields (e.g. archaeobotany) will be of particular use at a variety of levels – specialists will appreciate the summary of references that are not easily accessible, other archaeologists will find the current interpretations of interest and archaeology students would be able to make use of the variety of case studies. The extensive bibliographies of many papers provides a route into further research in specialist areas or to source more detailed methodological information. The final section of the book outlines the development and future of research in the region, and the high degree of international and inter-institutional cooperation within this field is indicated by the list of contributors. This clearly shows the dynamic nature of research in the North Atlantic region at the beginning of the second millennium.

**The Reviewer**

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