Iron Age Houses in Flames

J. Kateřina DVORÁKOVÁ (UK)

On the 40th anniversary of the experimental burning of an Iron Age house, the Lejre Experimental Centre published a volume dedicated to this unique experiment including the following research set in a wider archaeological-experimental frame.

Its main section ‘House 1 – experimental fire and archaeological excavation’ gives a detailed description of the preparation, description and results of the experiment with an overview of the research of the burnt Iron Age houses in Denmark, results of the excavations of the site after 25 years and their comparison with both the original situation and archaeological findings. The accompanying articles debate the theory behind building house reconstructions and their use, presents a case study of a recently excavated burnt house A371 in Nørre Tranders, reminiscence of the experiment and take us further into the use of reconstruction for creating new questions for further research into the life of our forebears while introducing the possibility of the use of more flexible virtual reconstructions. Here I will concentrate only on two areas – the main article and the article dedicated to the habitation experiment.

We can follow the experimental burning of the house from its very beginning to the results of excavations of the southern part of the house in 1992 and 1993. The house used was one of the oldest reconstructed in Lejre, transferred there from its original location in Allerslev. The house was built from donated material which was of varied quality and during the transfer it was decided to use it in the experimental burning and it was therefore not maintained.

For the experiment the roof above the byre was made out of heather turf to correspond as closely as possible the house was carefully documented, parts of the construction were marked with metal tags and the experimenters placed, with the help and advice of a fire brigade, 23 thermocouples.

The fire was started on a hearth and the whole process was recorded through temperature measurements and also filmed and with the observers’ comments taped. After 9 minutes a flashover occurred, documented by a sharp rise in temperature. Anybody in the house at that point would not have survived. The whole roof was gone in fifteen minutes. It was originally planned to record temperatures only for the first two hours but as they were still high at that point the measurements were extended to twelve hours. At most points the maximum temperature was reached within the first 20 to 40 minutes although the highest temperature of 1126 °C was measured after about an hour on the central post of the house. The house was transformed into a smoking heap within 3 ½ hours, with the southeast corner completely burnt down while on the west site the heavily charred walls were still standing.

After the fire

Two weeks after the fire the experimenters excavated a number of 1 m² test pits in the southwest area. After recording the preserved artefacts, such as the still standing grain silo, were removed, the walls were pushed over and the remains covered by a layer of soil. The excavation could, thanks to markers, trace most of the construction elements. Nearly all of the west part which was originally covered with heather turf was covered by pale yellow layer of sand while in the east part there were stripes of ash alongside the walls where the thatch had slid down, otherwise the ash layer covered most of the area unevenly. The clay of the floor was less burnt where timber had fallen onto it.

After a period when the area of the remains of the house was in normal use – e.g. people were walking over it, it was also used as an enclosure for pigs at one time. The southern part of the house was excavated in years 1992 and 1993. The first excavation season was carried out as a ‘blind test’ meaning that the participants had no knowledge of the experiment preparation to allow for the evaluation of the excavating methods as well as uncovering the remains. This unfortunately meant that the metal markers were not recorded so the excavators were made aware of them for the second season.

The excavations found the materials in an advanced state of decay, far more advanced than was expected. Traces of walls, floor and other stratigraphic layers were apparent but the excavators’ impression was that the site resembled the remains of a burnt house from the Iron Age.

The excavation used a technique normally used in Mesolithic archaeology using a system of 0.25 m², surveys finds both horizontally and vertically. The results of the excavations were compared with the original inventories and plans. In general, the majority of the results and finds correspond to the situation in the original house, but a number of structures and artefacts changed location, which lead to some misinterpretations. For example the bones of two joints of meat which were originally hung in one place were scattered all over the living quarters. The excavated situation was interpreted as everyday situation with bones thrown on the floor at the end of a meal. Some later intrusions were interpreted as part of the house’s fittings – for example the trough which was used when the site housed pigs and also parts of plant Persicaria were found. From the construction parts a square hayloft was interpreted as a door analogically to an interpreted situation in Ginderup.

The experiment showed that many chance factors can have effect on the results starting with the weather and the condition of the house when the fire started on later disturbance of the site by both people and animals. A burnt house is better preserved when the site was sealed by covering material; a situation which occurred, among others, in the case of House A371 from Nørre Tranders described in the book in a separate arti-
The experimenters observed a lit by the fire in the hearth. Of course we cannot know the tolerance of Iron Age peoples to cold, smoke or draft as that is a cultural trait and varies widely, even within contemporary populations, but these experiments can give us a general idea what the environment the Iron Age people lived in could have been like.

Burnt houses offer us unique information concerning the construction, internal organisation and contents of houses. There is a question: Can we interpret our findings correctly? Visualisation of a hypothesis is an important starting point to testing it. Full scale models address themes concerning both the building and construction and its use and function. But reconstructing a house does not answer questions concerning the process of decay and destruction and the way the house changes into the remains we find in the ground. There were several reconstructed houses burnt either by acts of vandalism or by accidents and in a number of these cases the results were described, but as the fire was not intentional the house construction was not recorded in detail or variables throughout the fire not followed… Yet the expense of building a house reconstruction and the possibilities for educational purposes are such that we cannot expect many people to follow in the steps of Hans-Ole-Hansen and his team.

Habitation experiments, on the other hand, are more common and there is much discussion about their validity. One thing these experiments show us is that one should not uncritically accept ‘common truths’ and assumptions if there is no supporting practical knowledge. Also by learning how various structural details do or do not function this type of experiment creates new questions and prompts new research which would not be initiated via ‘normal’ archaeological research.

Marianne Rasmussen (ed.): Iron Age Houses in Flames. Testing house reconstructions at Lejre.
Lejre Forsøgscenter 2007. 191 pages, richly colour illustrated, including DVD.

Content
Building houses and building theories – archaeological experiments and house reconstructions (Marianne Rasmussen)
The burnt remains of a house from Pre-Roman Iron Age at Norre Tranoders, Aalborg (Jens N. Nielsen)
The fire we started (Hans-Ole Hansen)
House 1 – experimental fire and archaeological excavation (Lars Bjørke Christensen, Sofie J. Jensen, Anne Louise Lund Johansen, Pernille R. Johansen & Sara Lerager)
Reconstruction – and then what? Climatic experiments in reconstructed Iron Age houses during winter (Anne Severine Beck, Leine Mailand Christensen, Hanne Ebbe, Rune Brantil Larsen, Dynveke Larsen, Niels Algreen Møller, Tina Rasmussen, Lasse Sorensen & Leonora Thoft)

Virtual reconstruction – a tool for the future? (Nicolai Garhøj Larsen)

Bibliography

Summary
À l’occasion du 40e anniversaire de l’expérimentation consistant à brûler une maison de l’âge du fer au Centre expérimental de Lejre, ce dernier a publié un ouvrage entièrement consacré à cette expérience. Son chapitre principal donne au lecteur une description détaillée du travail préparatoire, de l’expérimentation et de ses résultats, avec une remise
en contexte au sein des différentes recherches sur les maisons brûlées de l’Âge du Fer au Danemark. Il compare également les résultats des fouilles qui ont eu lieu 25 ans après l’expérience à ceux du site original. Des articles accompagnent ces remarques, qui s’interrogent sur les démarches qui président aux reconstitutions d’habitats et sur leur utilité, qui présentent le cas pratique d’une fouille récente sur une maison brûlée, évoquant l’expérience originale, et qui approfondissent la question de l’utilisation de la reconstruction pour formuler de nouvelles hypothèses et l’intérêt de travailler avec des reconstitutions virtuelles.


Colourfull Fabrics and Shining Metal

Irene VUVINKEL
(NL)

When I first received this book, the title immediately made me curious. It holds a promise of further insights into the richness of the lives of the Celts in the Late Bronze Age. Going quickly through the book the photographs and pictures gave me a good impression of the shining metal and colourful fabrics described in the title.

The first thing to notice when reading the book is that the different chapters have been written by several different people. But as I do not know that much about the Hallstatt period I decided to start reading from the beginning and follow the chapters.

Every writer has written his or her chapter in an easy to understand language (even when German is not your mother tongue). One of the writers describes the ways in which our views on the Celts are created by the media and stories like comic books and to what extent these views are based on real finds. This really is fun to read with subchapters like “Wo bleibt das Trinkhorn” (“where does the drinking horn go”) and “Und was ist mit der Hose?” (“And what is wrong with the trousers?”).

A good part of the book describes assumptions about Celtic civilisation that where made in the past upon finding an item. The message is clear: because the findings are so few we cannot help but make assumptions, but we need to be careful with using the assumptions from the past and building on top of them.

The book starts with an explanation of the different eras and the main finds that have helped to define the time zones. This information is vital to the understanding of the rest of the book. However, later in the book one of the other writers refers to the time periods in a different way which makes it difficult to understand for the not so well informed reader.

Another inconsistence I found was the fact that someone mentioned that Celts did not wear trousers and another writer indicated that the Behlinge (legs) should be fastened to the trousers. However, it must be difficult enough to compose a book written by so many different people and these little inconsistencies do not affect the fact that it is because of these different writing styles that this book is so easy to read.

The beginning of the book describes the findings of the Hallstatt period and the latter details about reconstruction. Glass pearls and textile reconstructions are far better described than the reconstruction of metal findings, but the book does make it clear that the two would have to go hand in hand because the metal findings indicate the way in which the garments were worn.

For someone like me who has always been interested in textile techniques, the information given seemed a bit mixed. Some things were discussed in detail (like card weaving, making glass pearls) while others seemed to be missing (other ways of weaving and sewing techniques, dying of the different fabrics).

The book describes the card weaving technique in general for the people who have never seen the way in which it is done (with a picture text saying: this is how it works, you can do this everywhere) and at the same time it provides a briefing for the well informed. This was a bit surprising, but now that I think about it, it is very clever since it broadens the public who might be interested in the book.

All in all it is a very good book and I would recommend it to anyone who is interested in Hallstatt period find and in particular textile and card weaving techniques. What about the title? The book gives plenty of examples of the colourful and shining details of the garments of the Celts while at the same time trying to describe everyday life instead of Celtic warrior sagas.

Bunte Tuche und gleisendes Metall: Frühe Kelten der Hallstattzeit

Summary
Un catalogue d’exposition accompagne les travaux de reconstitution d’habitats, bijoux, accessoires, armes et armures du Premier Age du Fer. Les thèmes sont décrits à des degrés divers d’analyse, les perles de verre et le travail des textiles étant les plus précisément détaillés.

Replicating the past

Roeland PAARDEKOOPER (NL)

Recently an American textbook on experimental archaeology was published. This is a welcome addition to the overviews on experimental archaeology which already exist (like for example Coles 1979, still widely used). To students, it can offer a straightforward introduction in the subject.

Although the author presents a theoretical and methodological framework, it does not dominate. The book offers many anecdotal examples which can be used in another framework as every teacher will have her or his own view on the field. Those case studies are the heart of the book. The non-exhaustive selection of examples poses a few questions, when seen from a European view. Most of the case studies are non-European, when I would think that most experiments so far have actually been done in the Old World. Another category which would have deserved a few more case studies is the category of perishable materials such as textiles. Although examples are offered, the range in experiments is even wider.

The case studies are valuable in the sense that the author reviews each one of them, discussing what went right and what went wrong. Unfortunately none of them was a total disaster, from which can be learned the most. In some cases different but similar experiments are presented, with different outcomes, making clear that one should always do a good search for experiments and not reinvent the wheel. Important remarks are made, like for example: “it’s important to keep in mind that numbers can’t tell us everything we might wish to know” (p. 97). With the book title, Saraydar makes a point, that experimental archaeology, like archaeology itself, is not just about natural science, but also about art.

One can measure and decipher techniques and materials, but why not trying to see the social implications of these?

In the final chapter (experiments, humanistic science and education), Saraydar looks into the experience gained by experiment, both for the experimenter as well as the public. It is clear that experimenting materials and ancient techniques can enlarge one’s framework of reference and with these in mind, one can more easily judge archaeological hypotheses. The author refers in this case to “sensuous-intellectual complementarity” (p. 138). The author however makes clear that there are limits in the value of ‘going native’, as he puts it. Empathy is one thing, but we can never place ourselves in ‘our ancestors’. The value of experiencing is further described when Saraydar discusses experiments in the classroom and experiments where the public can participate. Living history is mentioned but this book is not the place to go into depth in that method. The author reviews the concept, that archaeology and the past is not controlled only by archaeologists anymore, if it ever was. This is a clear statement; archaeological research, and experimental activities in particular take place within modern society and not in a vacuum behind a desk or in a library.

The author refers to Lejre and especially to Butser as examples of archaeological open air museums. There may be at present over 300 of such facilities, most of them in Europe. Maybe that is the reason why Saraydar does not mention more, nor does he describe other facilities and universities working with experimental archaeology. In the end, there would be so much to tell the readers – so where to stop? Saraydar made a good choice with this introduction.

Unfortunately in the 10 pages of references, Saraydar offers not a single reference to non-English literature. Also some references to important authors who actually published in English are missing, for example Mathieu 2002 or Kelterborn 2005 (also published elsewhere). If this book is to be used as a general introduction, an invitation for further reading to students, I would have expected a list of 20 – 30 websites besides some addresses of useful organisations. Obviously, such a listing would soon be partially out of date, but it would have been a great support. Unfortunately, such listings are absent.

Saraydar frequently refers back to literature 20 or more years old. Of course, many of these older references are still valid and have not been superseded by newer versions yet, but such literature is hard to come by. However, by having more recent references, Saraydar could have made a point, showing how much experimental archaeology is gaining interest as almost half of all experiments published date to the past 20 years.

All in all, Saraydar offers a welcome textbook which is easy to use for introducing students to experimental archaeology. It is not exhaustive, but then again: that never was the intent. The publisher has presented the text book for a very reasonable price and so the introduction will be available to many.

Stephen C. Saraydar: Replicating the past. The art and science of the archaeological experiment. A textbook on Experimental Archaeology

Bibliography

Contents
1. Approaches to the Past
Introduction / Archaeology in the Twentieth and Twenty-First Centuries / A Look Ahead
2. The Experiment in the Sciences and Archaeology
Investigation by Experiment / The Logic of Archaeological Experimentation: Working Backwards and Moving Forward / The Design of the Experiment / Complementary Approaches
3. Experimental Approaches to Artifacts and Features
A Brief and Very Selective Survey / Case Studies: The Egyptian Drill / Brain Removal in Mumification / Palaeolithic Lamps / Handaxe Manufacture / The Functions of Stone Tools / The Discovery of Smelting / Clues to the Identification of Ancient Mesocamerican Kilns / Seeking the Long-Vanished Contents of Maya Chultuns / Chapter Summary
4. Building on the Basics: Replicating Complex Events and Processes
Overview / Case Studies: Working with Axes of Metal and Stone / Copper Casting in Mexico / Firing Romano-British Kilns / Monumental Undertakings / Modeling Ancient Buildings / Paddling about the Ocean Blue / Replicating Noncultural Processes: Neolithic Earthwork / Chapter Summary
5. Ceremonial Centers and Ancient Farms: Assembling the Big Picture, Piece by Piece
Overview / Case Studies: Constructing Uxmal / Maya Occupational Specialization in Copán / As You Sow, So Shall You Reap: Experiments in Ancient Agriculture / It Takes a Village: Lejre and Butser / Chapter Summary
6. Experiments, Humanistic Science, and Education
The Experiment and Sensuous–Intellectual Complementarity / Experiments in Education / Who Owns the Past?
Appendix: Lessons from Experimental Sites

Summary
Les études de cas sont au cœur d’un nouveau manuel américane sur l’archéologie expérimentale. L’auteur y examine chacune d’entre elles, relevant les points positifs et négatifs. Dans le dernier chapitre, Saraydar s’intéresse à l’expérience qu’acquièrent les chercheurs pour leurs propres travaux et pour leur diffusion auprès du public. Ce livre est loin d’être exhaustif mais propose une introduction facile d’accès à l’archéologie expérimentale.

Which Past, Whose Future?

J. Kateřina DVOŘÁKOVÁ (UK)

This volume presents the proceedings of a conference hosted by the Department of Archaeology, University of York in May 2005. The object of the conference was to discuss the range of problems connected to the process of understanding the past and communicating the findings of archaeological research to the wider public. Single contributions offer both local and international perspective, with case studies ranging from living with heritage and therefore also with the tourist industry and discussing how to deal with conflict situations, to the evaluating of landscape or exploring the myths defining the identity of modern states.

On the point of presentations, the volume offers two articles, from Bulgaria and the United Kingdom. Gabriela Petkova-Campbell in her contribution "The Past, the Present and the Future of Bulgaria’s Heritage Sites’ introduces the concept of the living town-museum. In contrast to the idea of open-air museums as artificially created educational facilities, a living town-museum preserves houses, craft shops and inns the way they used to be. She uses the example of the village of Bojentski which was as a whole given the status of an architectural and historic reserve in 1969. The original aim was not to make money but to preserve a living culture, the problem is that the only source of revenue for the people living there are the revenues raised through tourism. Because Bojentski lies off the usual tourist routes, it is unable on its own to secure sufficient funding, which may lead to its deterioration. The situation originates from the fact that there is no strategic plan for such institutions.

The author of "Roundhouse stories: Reconstruction and Public perceptions of the Iron Age", Michelle Collings, states that her aim was to see "how the development of archaeological knowledge is adopted by public presentation as a focus on the validity of building reconstructions detracted from considerations of how life and society are presented" (sic). The treatment of archaeological knowledge considered here is based on a visitor survey of reconstruction sites across Britain and Ireland. This study could have been extremely interesting. Unfortunately, the contribution seems to measure the validity of the presentation by counting how often the word ‘ Celt ’ is used on information boards or in guides speeches.

The conference from which these papers derive was intended to address the frustration of applying multiple interpretations of the past. Many of the works look at practical problems of communication between heritage management, archaeologists and locals and are very interesting, with only a few seen merely as rhetorical exercises in political correctness. The biggest problem is the language used by many contributors which is jargon heavy and difficult to read.


Summary
Ce volume présente le déroulement d’une conférence sur les divers problèmes liés au processus de compréhension du passé et à la communication des résultats des recherches archéologiques au grand public.

Dieser Band legt die Ergebnisse einer Konferenz vor, die die große Zahl von Problemen diskutierte, die beim Erkenntnisprozess gesellschaftlicher Abläufe und bei der Vermittlung der Funde und Befunde archäologischer Forschungen an die interessierte Öffentlichkeit auftreten können.
The BBC Timewatch programme followed the journey of 'Havhingsten fra Glendalough' (Sea Stallion from Glendalough) from Roskilde, Denmark to Dublin, Ireland. The Sea Stallion is a 'working hypothesis', a reconstruction of Skuldelev 2 – at 30 m length the largest Viking warrior ship ever excavated. It was discovered in 1957 together with four more ships in the Roskilde Fjord where these were deliberately sunk to block the entrance to the harbour.

The dendrochronological analysis of Skuldelev 2 showed it was built from trees felled in 1042 in the Dublin area and so after proving the seaworthiness of the replica in the sea around Denmark and Norway it was decided to test the ship on a true Viking expedition across the North Sea to where the original ship was built. On the 1st of July 2007, in what would become the wettest summer on record, a crew of over 60 men and women set on their way. They had less than 1 m² space per person, as the open ship was built for speed and not comfort. To manage, it was divided into 6 'rooms'. Each room has its own responsibilities and tasks such as keeping watch, handling sail, pumping water. This division is also a social structure, within each room crewmembers look out for each other.

The crew's task was to record everything. They observed the behaviour of the ship over the whole length of the journey, tested it in controlled conditions where the same course was repeated over and over again with different sail settings (and found out that rowing, especially with mast down, is faster than tacking), and recorded the amount of food used up.

The main insight the journey brought was their dependence on weather. In good weather they could get up to a 12 knot speed and at the beginning they managed to cross 400 km in one go only to wait for 10 days in Norway for a favourable wind. At the end, to manage the journey within the available 6 weeks they had to be towed part of the way across the North Sea, as the favourable wind did not happen in Norway but they could pick it up half way across the sea.

When on land they used their chance to dry sodden blankets, rest, check the ship for damage, clean up, make minor repairs and alterations. Throughout the journey they discovered two structural problems. One was too much tension on the pins securing the ropes which held the mast. The second one was potentially more dangerous. The leather strap holding the rudder snapped and while it was being replaced the ship was in danger of capsizing as, like a bicycle, it uses its forward momentum to gain stability. But those were the only really dangerous moments of the voyage; the ship negotiated successfully high waves, gales of up to force 7 and the strong tidal currents around the British Isles.

After arrival in Dublin the Sea Stallion went for a year on display in the National Museum of Ireland. It will travel back to Denmark in summer 2008.

At a length of one hour the programme was necessarily dense and showed only highlights, combined with interviews of the crew. It is a shame that the narrator tried to create artificial tension as the journey on its own was interesting enough.
The Building of The Green Valley

J. Kateřina DVOŘÁKOVÁ
(UK)

Stuart Peachy presents us with a very personal account of the origins and development of a project to create a base for living history events, which has so far culminated in the shooting of the BBC series ‘Tales from the Green Valley’ in 2003 and 2004 (see EuroREA 3/2007, pp 97).

The book is divided into two parts. While the second part presents the factual background for the developments, shows the history of the property, collects the lists of suitable plants for the gardens, the wildlife present within the area, and the financing of the project and organisations behind it, the first part could stand on its own as a story of a unique adventure. Here we learn about the beginnings of the Historical Builders Group, which stood behind the project. We find out how they found the land, the main condition being that it must not be far from the box of motorways M1, M4, M5 and M6 as the members of the group come from all over the country. This may be the reason why the project did not create any ties to the region within which it is situated was that the builders worked on the site irregularly as and when work and family commitments allowed. The aim of the project was to restore the whole agricultural landscape to its probable condition in the early 17th century, an unusual enterprise which caused problems with the planning authority. We can follow the excavations of the remains of the old buildings and finally the restoring of the valley. Unfortunately, the timelines of single chapters overlap and sometimes it is difficult to keep track of what was happening at any given time without flicking between chapters.

The book is written in an easily readable style with facts enlivened by anecdotes from the restoration work and social events, but I would have preferred it if the author had concentrated more on the site and left out the details of his personal life.

Stuart Peachy: The Building of The Green Valley

Summary
L’auteur présente sa contribution personnelle au lancement et au développement du projet visant à reconstituer le paysage agricole dans ses conditions présumées du début du XVIIe siècle.

Der Autor hat mit seinem Buch einen persönlichen Bericht über die Ursprünge und die Entwicklung eines Projektes vorgelegt, das die Wiederherstellung einer agrarisch genutzten Landschaft aus der Zeit des frühen 17. Jahrhunderts zum Ziel hat.