EDITORIAL

ENVIRONMENTAL AND SOCIAL CHANGE IN THE EARLY MIDDLE AGES IN NW SPAIN

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Hidacio, born in A Limia (South Galicia) around the year AD 400, was the bishop of Chaves (northern Portugal) and an important aristocrat of late antique Northwest Spain -then named *Gallaecia* -. Shortly before his death, he wrote a famous chronicle describing the events that occurred between the years AD 379 and 468, which is considered one of the first medieval chronicles. Althought the perspective of his chronicle is universal, covering the whole Roman Empire in process of dissolution, he often refers to *Gallaecia*. In this work, Hidacio pays special attention to wars and political events, but also to wonders and natural phenomena, following the pagan tradition that recorded these events as the will of the gods, but, as a Christian, interpreting them as signs of the next second coming of Christ and the Last Judgment (BURGESS 1993: 9-10). So he refers to wars, invasions, lootings, eclipses, earthquakes, plagues, famines and meteors, altogether as signs of a new era. A passage about the year AD 410 illustrates his view of the close connection between natural phenomena and human actions:

As the barbarians ran wild through Spain and the deadly pestilence continued on its savage course, the wealth and goods stored in the cities were plundered by the tyrannical tax-collector and consumed by the soldiers. A famine ran riot, so dire that driven by hunger human beings devoured human flesh; mothers too feasted upon the bodies of their own children whom they had killed and cooked with their own hands; wild beasts, habituated to feeding on the bodies of those slain by sword, famine, or pestilence, killed all the braver individuals and feasting on their flesh everywhere became brutally set upon the destruction of the human race. (Translation by BURGESS 1993:83)

Leaving aside the intentionally dramatic and pessimistic vision of Hidacio, his perception about the amalgam of natural and human events introduces us to this special issue of *Estudos do Quaternario/Quaternary Studies*. Contrary to Hidacio's contemporary perspective, current historians hardly consider environment when they analyse Late Antiquity and Early Middle Ages. In fact, these periods are rarely studied as part of the Quaternary, and, in consequence, approached from holistic views focused on the evolution of social ecosystems. It is true that some advances have been recently made in the fields of Agrarian Archaeology (QUIRÓS 2014; WILLIAMSON 2003; RIPPON 2010; BALLESTEROS *et al*. 2009) and Medieval Environmental History (ARNOLD 2008). Nevertheless, little attention has been paid by most early medieval historians and archaeologists to the perspectives of paleoenvironmental sciences and the reconstruction of the ecosystems of this period. Challenging the idea of "dark ages", a whole range of environmental data about this period remains unexplored. Moreover, Early Middle Ages are an interesting laboratory to approach human-environment relationships. Overall, this period provides an ideal case study to explore how societies and natural environments react during times of crisis or intense transformation. Contrary to the long or often hardly-datable processes characteristic from Prehistory, the early medieval times offer to the researcher an ideal field to detect and analyze specific changes and to test the potential of interdisciplinary research about precise contexts in order to address key historiographical questions.

The present volume of *Estudos do Quaternario/Quaternary Studies* focuses on the interesting and rather unknown case study of Northwest Iberia during Early Middle Ages. Although important social transformations are common to this period throughout Western Europe (WICKHAM 2005; DAVIS, MCCORMICK 2008), this peripherical region coincides to show deep contemporary environmental and social changes like the creation of churches, agrarian terraces, deforestation, accelerated soil erosion, atmospheric pollution due to mining and metallurgy, long-distance trade, climate change, etc (MARTÍNEZ CORTIZAS *et al*. 2005; SÁNCHEZ-PARDO 2013). This volume aims to put together new paleoenvironmental and archaeological research in order to explore the social and environmental responses to the early medieval transformations in Northwest Iberia. Nevertheless, beyond the simple and traditional overlapping of both perspectives, we intend to show how natural

and cultural realms are deeply interrelated and need to be understood in connection, during transformation periods in particular.

Our theoretical starting point is Van der Leeuw's explaination of environmental crisis as a degradation in the relation between any given society and its natural environment (thus, a socioenvironmental crisis) (VAN DER LEEUW 2009). This perspective brings us to the main question of whether and how palaeoenvironmental data are useful for understanding social change. Several studies have shown that higher pressure over natural resources drived to higher levels of social hierachisation in prehistoric times (EARLE 1997; DE MARRAIS *et al.* 1996). So we are allowed to think that harder climate conditions during the early medieval cold episode also resulted in stronger competition for resources. Moreover, we know that crises and transformation periods often imply changes in worldviews (VAN DER LEEUW 2009). This perspective can help us to analyse not only physical changes in Late Antique and Early Medieval landscapes, but also the creation of new symbolic and religious landscapes. As known, the expansion and consolidation of Christianity in most of Western Europe took place during these centuries, and was accompanied by the appearance of a miriad of churches and monasteries, saint places names, or Christian re-significance of old sacred spaces. In turn, as shown by several researchers, new religious and symbolic systems often helped to support new economical organisation and higher levels of environmental exploitation (CLEVE 1988; MANN 1986; ALDENFERFER 2010). Obviously, this must not be seen as a simple linear cause-effect relation; we would rather like to highlight how deeply interrelated social and environmental change are.

In this sense, the contributions to this special volume of EQ/QS needs to be understood in close connection. They follow a sequencial order, from a global approach to the environmental context of NW Iberia, through more specific case-studies to a global interpretation about the creation of Christian landscapes in this region during this period. Of course, the volume does not aim to cover all the topics of early medieval NW Iberia, but just to explore new perspectives born from the dialogue among different specialists and interdisciplinary approaches: paleoenvironmental data, archaeological record, texts, saint names, church orientation.

The first contribution, by Costa-Casais & Kaal, starts with a review of methologies, developed in the context of the Earth Sciences, which were applied in investigations carried out to reconstruct past environmental change (including human activity) in NW Spain. When the window of these diachronic investigations is narrowed to the specific period of Late Antiquity and Early Middle Ages, the story turns into one combining significant climate changes (from the Warm Roman period, into the cold early medieval spell and the later warm medieval phase) and increased human pressure in the environment (intense deforestation, fires, soil erosion and acidification) as a result of a re-shaping of the landscape.

Mining and metallurgy are among the main human activities involved in environmental change. Silva-Sánchez explores the direct effect on atmospheric metal pollution and the link between mining/metallurgy and the evolution of the forest in NW Spain, and compares them with reconstructions from investigations on environmental archives of other areas of N Iberia. The metal records obtained from these archives reveal a sudden decrease of atmospheric polution accompaning the collpase of the Roman Empire, most likely as a result of collapse in mining and metallurgical activities. After a brief period, these activites resumed and with them atmospheric metal pollution rose again. The reconstructions also show that, in some areas, forest cover was dramatically reduced and never recovered to its previous state (although other human activities, as agriculture and grazing, were surely involved).

The contribution of Tallon Armada *et al*. specificaly deals with an example of the transformations in the, fragile, coastal environment. The work was developed in an archaeological area containing a Roman salt mine. The study of the sedimentary evolution of the area (supported by chemical and mineralogical analyses and radiocarbon dating) shows that the abandonment of salt mine exploitation, around the 5th century AD, was followed by a progression of lagoon and dune systems. Thus, both the coastal landscape was deeply reorganised and human activities significantly changed (salt exploitation did not occur again but the area became a necropolis in early medieval times).

Agrarian landscapes were also profoundly modified during Late Antiquity and the Early Middle Ages. Although terracing of slopes in NW Spain may have started as early as the Late Bronze Age (MARTÍNEZ CORTIZAS *et al*. 2009), it is not until the middle ages that they become a general feature of the landscape. Ferro Vázquez *et al.* studied one of these systems, which started to be built around 1600 years ago and continues as an active agricultural soil at present. By means of the isotopic (C and N stable isotopes) fingerprint of the soil organic matter, they were able to reconstruct the history of land use changes and agricultural practices (use of fertility ammendments, addition of animal wastes, etc).

López-Costas contribution represents a good nexus between the more environmentaly-oriented and the archaeological/historical contributions. As she states "funerary rites and burial traditions are deeply rooted in societies". She presents the case study of the necropolis of A Lanzada, in which two different funerary areas were found, one Roman an another post-Roman. This offered the possibility to make a comparative study of taphonomy. It showed significant modifications on burial ritual in Late An-

tiquity (changes in grave orientation, body position, absence of grave goods, etc), pointing to a standardisation of the funerary rite possibly related to the significant socioeconomic and cultural changes (among them the introduction of Christianims) occurred in Late Antiquity.

The contribution by Blanco-Rotea's *et al.* deals with the late antique and early medieval reuse of the Roman camp of A Cidadela. Earlier excavations in this site were mainly focused on the Roman phases. Through a new methodological approach that combines archaeology of architecture and the whole revision of the previous excavations, the authors show the importance and extent of the post-Roman phases and highlight the evidence for interpreting this site as a real power-centre in Late Antique Northwest Spain. This paper introduces us to the common phenomenon of the early medieval reuse of earlier sites and materials, and the problems that lie behind its interpretation.

The topic of reuse is considered in more detail the next contribution, focused on the recicling of Roman materials and buildings in the early medieval churches of Galicia. Sánchez-Pardo explores the different reasons (practical, aesthetical and symbolic) for this phenomenon, and highlights the complexity behind this common practice in early medieval Galicia. Although new research on this topic is necessary, this work offers a first critical review of the available evidence, and proposes to study the reuse of material and structures as complementary topics.

Blanco-Rotea's *et al.*'s contribution on the Basilica da Ascension Augas - Os Fornos (Allariz) is a good example of the complexity of reusing. This site is placed in the heart of a sacred landscape strongly rooted in popular tradition. The building was an Iron Age sauna converted into a Christian place of worship associated to the martyrdom of Santa Marina. By means of an exhaustive study of archaeology of architecture, optically stimulated luminescence for dating the transformation in the mid-sixth century and the analysis of local hagiography, the creation of a Christian place in Late Antiquity is shown here in detail.

González-García brings the discussion to a wider perspective. In this pioneer work, he studied the orientation of 25 early medieval Galician churches and considered the slight variations presented among them. His work reveals that the main reference date chosen was the 25th of March, consistent with the orientation of the Cathedral of Santiago, but there were other spatial and temporal references. Especially interesting is the fact that the earliest churches like Ouvigo or Santa Eulalia de Bóveda faced westwards instead of eastward.

The last contribution offers a global view of the introduction of Christianity in Northwest Spain. Through the combination of landscape archaeology, archaeoastronomy and the history of religions, García Quintela deepens into the processes behind the resemantization of several previous religious landscapes by Christianity in Northwest Spain. Rather than simple explanations of religious continuity, the author explores the complexity of these processes, that are not single but multiple, and reflect the important changes that characterise this period.

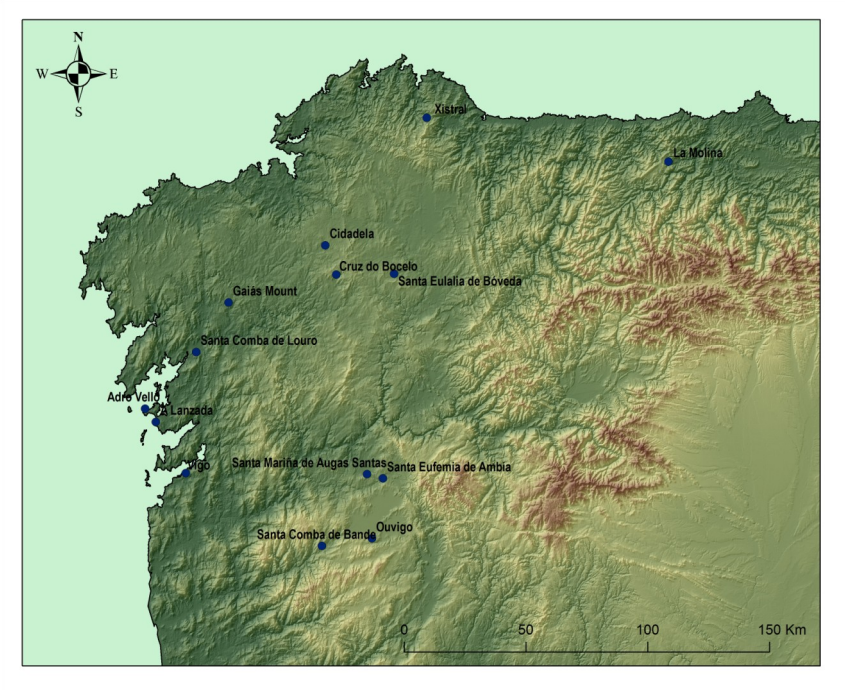

Fig. 1. Map of main sites of Early Medieval northwest Iberia studied in this volume.
Fig. 1. Mapa com localização dos principais locais da Alta Idade Média estudados neste volume.

Thus, the whole collection of papers in this volume, despite their different approaches, show how environmental and archaeological transformations can be understood as complementary reflections of the creation of a new physical, social and symbolic landscape during this period in NW Spain. A landscape that will settle many of the basis of the traditional countryside in this region (SÁNCHEZ PARDO 2013).

The range of very different disciplines that appear in this special issue deserves also some comments. In order to be fuitful, the dialogue between the different perspectives involved in this volume needs to face some frequent problems by means of some "meeting points". One of these problems is the risk of deterministic explanations for archaeologists, as well as the risk of cultural-centered arguments for palaeoenvionmentalists. The solution, as already said, is to understand both realms in deep connection, following the idea of coevolution (TELLO 1999; MARTÍNEZ CORTIZAS 2000). Another usual problem is the different temporal scale of the research for both discipines. The meeting point here is the diachronic perspective. Most of the papers in the volume are intentionally wide in chronological terms, although they have their main focus on the early medieval period. This is an advantage of the holistic perspectives, as it helps to frame the studied context within a wider evolution. Specifically, the Roman past is present in almost all the papers of this volume, both at an archaeological and palaeoenvironmental level. Roman past is, indeed, one of the main factors that influenced the early Middle Ages in NW Iberia. Early medieval landscapes are adaptations and transformations of this past in order to create something new (BRADLEY 2002, SEMPLE 2013).

To conclude, this volume intends to explore how social and natural systems reacted to the series of transformations occurred in early medieval Northwest Iberia. Although studied from different disciplines, they are deeply interrelated and need to be understood from a complex perspective that takes into account the human-environmental co-evolution. In this sense, the concepts of sustainability and resilience are key to analyse how new and old elements are combined during periods of changes both at environmental and cultural levels. The new early medieval and Christian landscape of Northwest Iberia was built over the previous background, and the binomy reuse-novelty is still valid to explain this transformation. However, it is necessary to carry out further research using this holistic approach in order to improve our knowledge on this period.

REFERENCES

ALDENDERFER, M. 2010. Gimme that Old Time Religion: Rethinking the Role of Religion in the Emergence of Social Inequality, Pathways to Power. New Perspectives on the Emergence of Social Inequality, New York, Springer: 77-94.

ARNOLD, E. F. 2008. An introduction to Medieval Environmental History, History Compass 6/3: 898-916.

BALLESTEROS ARIAS, P.; KIRCHNER, H.; FERNÁNDEZ MIER, M.; ORTEGA ORTEGA, J.; QUIRÓS CASTILLO, J.A.; RETAMERO, F.; SITJES, E.; TORRÓ, J.; VIGIL-ESCALERA GUIRADO, A. 2010. Por una arqueología agraria de las sociedades medievales hispánicas. Propuesta de un protocolo de investigación, Por una arqueología agraria. Perspectivas de investigación sobre espacios de cultivo en las sociedades medievales hispánicas, Oxford, Archaeopress: 185-202.

BRADLEY, R. 2002. *The Past in Prehistoric Societies*, London, Routledge.

BURGESS R. W. (ed. and transl.) 1993. *The Chronicle of Hidatius. And the Consularia Constantinopolitana: two contemporary accounts of the final years of the Roman Empire*, Oxford, Clarendon Press.

CLEVE, R. L. 1988. The triumph of Christianity: Religion as an Instrument of Control, Forms of control and subordination in Antiquity, Leiden, Brill: 530-542.

DAVIS, J. R.; MC CORMICK, M. (eds.) 2008. The long morning of medieval Europe: new directions in Early Medieval studies, Aldershot, Ashgate.

DE MARRAIS, E.; CASTILLO, J. L.; EARLE, T. 1996. Ideology, Materialization and Power Strategies, Current Anthropology 37 (1): 15-31.

EARLE, T.; KRISTIANSEN, K. 2010. Organising Bronze Age Societies: Concluding Thoughts, Organizing Bronze Age Societies. The Mediterranean, Central Europe, and Scandinavia compared, Cambridge, C.U.P.: 218-256.

MANN, M. 1986. The sources of social power, Cambridge, C.U.P.

MARTÍNEZ CORTIZAS, A. 2000. La reconstrucción de paleoambientes cuaternarios: ideas, ejemplos y una síntesis de la evolución del holoceno en el NW de la Península Ibérica, Estudos do Quaternario 3: 31-41.

MARTÍNEZ CORTIZAS, A.; MIGHALL, T.; PONTEVEDRA POMBAL, X.; NÓVOA MUÑOZ, J. C.; PEITEADO VARELA, E.; REBOLO PIÑEIRO, R. 2005. Linking changes in atmospheric dust deposition, vegetation change and human activities in northwest Spain during the last 5300 years, The Holocene 15, 5: 698-706.

MARTÍNEZ-CORTIZAS, A; COSTA-CASAIS, M; LÓPEZ-SÁEZ, J.A. 2009. Environmental change in NW Iberia between 7000 and 500 cal BC. *Quaternary International* 200: 77-89.

QUIROS CASTILLO, J. A. (Ed.) 2014. *Agrarian Archaeology in Early Medieval Europe. Quaternary International, special issue.* Volume 346: 1-162.

RIPPON, S. 2010. Landscape change during the "Long Eight Century" in Southern England, Landscape Archaeology of Anglo-Saxon England, Woodbridge: 39-64.

SÁNCHEZ-PARDO, J. C. 2013. Power and rural landscapes in early medieval Galicia (400–900 AD): towards a reincorporation of the archaeology into the historical narrative, Early Medieval Europe, 21-2: 140-168.

SEMPLE, S. 2013. *Perceptions of the Prehistoric in Anglo-Saxon England. Religion, Ritual, and Rulership in the Landscape*. Oxford, O. U.P.

TELLO, E. 1999. La formación histórica de los paisajes agrarios mediterráneos: una aproximación coevolutiva, Historia Agraria, 19: 195-211.

VAN DER LEEUW, S. E. 2009. What is an "Environmental crisis" to an archaeologist? The Archaeology of Environmental Change. Socionatural legacies of degradation and resilience, Phoenix: 40-61.

WICKHAM, C. 2005. Framing the Early Middle Ages. Europe and the Mediterranean, 400-800, Oxford, O.U.P.

WILLIAMSON, T. 2003. Shaping medieval landscapes: settlement, society, environment, Macclesfield, Windgather.