PLANT AND ANIMAL HUSBANDRY IN THE SECOND MILLENNIUM BC IN NORTHERN PORTUGAL

by

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Abstract: The article presents some of the archaeological evidence thought to be related to plant and animal husbandry in the 2nd millennium BC in northern Portugal and to the different forms of land settlement practised by human communities during this period. We have used archaeological data relating to settlements, ritual, artefacts and ecofacts found in the river basins of the Ave, Cávado, Neiva and Lima, areas studied in the interdisciplinary research project “The Entre-Douro-e-Minho landscape from the middle of the III millennium to the end of the II millennium BC”.

Key-words: Northern Portugal; 2nd millennium BC; agro-pastoral practices and settlements patterns.

Resumo: Este artigo pretende dar a conhecer algumas evidências arqueológicas que se pensa estarem relacionadas com as práticas agrícolas e pastoris existentes no II milénio AC do Norte de Portugal e os diferentes modos de fixação à terra por parte das comunidades humanas desse período. Para tal servimo-nos de dados arqueológicos relativos ao povoamento, ao mundo ritual, aos artefactos e aos ecofactos encontrados nas bacias fluviais do Ave, do Cávado, do Neiva e do Lima, áreas onde desenvolvemos um projecto de investigação interdisciplinar designado “The Entre-Douro-e-Minho landscape from the middle of the III to the end of the II millennium BC”.

Palavras-chave: Norte de Portugal; II milénio BC; práticas agro-pastoris e modos de ocupação do território.

1. INTRODUCTION

The 2nd millennium BC which, in general terms encompasses the Middle Bronze Age, is one of the least-known periods in recent prehistory in northern Portugal. Until the mid/late 90s there were virtually no research projects investigating this cultural-chronological phase, and no academically supervised excavations, so that the information available was extremely random and uneven in nature.

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There was known to be some evidence of burial practices in the Douro basin, from
the existence of tomb 1 at Outeiro de Gregos, Meninas do Crasto 4 and the Tapado da
Caldeira necropolis (in the Aboboreira mountains) but nothing was known about the
populations that could have been used to accurately assess their different settlement pat-
terns, nor was there sufficient paleoenvironmental data to supply information on the reconsti-
tution of the different landscapes of the time.

This lack of information was frequently assumed to be the “cultural reality” of a
period characterised by economic and demographic recession, in comparison to the pre-
vious period, and by the existence of an itinerant lifestyle, essentially linked to animal
husbandry.

As part of my doctoral thesis, entitled A Paisagem e o Homem na bacia do Câvado
durante o II e o I milénios AC (Landscape and man in the Câvado basin during the 2nd and
1st millennia BC) (BETTENCOURT 1999, 2003), I endeavoured to test, on a regional
level, some hypotheses on the settlements and economy of this period. It was seen that this
lack of data was the result of a methodological, rather than a real, problem, as had pre-
viously been suggested (BETTENCOURT & SANCHES 1998), and that there was, in fact,
evidence of sedentary populations in the areas connected with the alluvial valleys, where
communities who were the bearers of a farming system based on the rotation of cereals,
legumes and cruciferae and the exploitation of forest and woodland resources, had begun
the irreversible process of vegetation disturbance. There was, however, no data to explain
the reasons why these populations had chosen to occupy the valley lowlands, or to explain
how it had had been possible, with the technology then available, for them to have worked
the alluvial soils, which nowadays are heavy and solid. Did this phase, which is part of the
Sub-Boreal period, represent a drier era that had favoured the migration of populations to
the nearest permanent water resources? Do the current sedimentary characteristics of very
heavy and solid soils correspond to processes which have already been attributed to the
Sub-Atlantic period, when the greater part of the Late Bronze Age and the Iron Age
evolved? Are the hypothetical settlements of the 2nd millennium BC in the lower reaches
of the Câvado and Neiva basin a recurring phenomenon in other regions?

In the light of these questions, and given the lack of archaeological and paleo-
ecological information about the 2nd millennium BC in Northern Portugal, particularly in
the Entre-Douro-e-Minho region, there was sufficient justification for developing a new
project, with a broader range of analysis and involving a multidisciplinary approach, to
cover the lower and middle basins of the Ave, Lima and Minho. With this aim, a group
from the University of Minho, led by the author of this present article, in collaboration
with other researchers from the Universities of Santiago de Compostela and of Montpellier,
the Rocasolano Laboratory in Madrid, and elsewhere, designed and developed the project
titled “The Entre-Douro-e-Minho landscape from the middle of the III to the end of
the II millennium BC” project, which was financed by the Fundação para a Ciência e
Tecnologia (Foundation for Science and Technology). Its objectives, in general, were as
follows:

- paleoenvironmental reconstruction of the middle Holocene period, principally at
  the end of the Sub-Boreal period;
- study of the settlement patterns and lifestyles of the human communities;
- establishment of a framework for the cultural chronology of the coastal strip of the
  Entre-Douro-e-Minho region during the 3rd and 2nd millennia BC;
Plant and animal husbandry in the second millennium BC in Northern Portugal

- drawing up a framework of questions which would enable new lines of research to be developed in the future (BETTENCOURT et al 2003b).

In mid-2001, therefore, we embarked on a series of procedures that would lead to a study of the 2nd millennium BC in the Entre-Douro-e-Minho region. To this end we carried out systematic bibliographical research, reassessed some of the archaeological collections already housed in museums, carried out surveys in order to identify and map out old and new sites, and archaeological digs in certain areas, in order to place them correctly within a cultural chronology and in order to collect ecofacts that would enable them to be classified in paleoenvironmental terms.

In addition to the already established data on the Douro, Cávado and Neiva basin, this article also presents information on the new stations discovered in the Ave and Lima basins as a result of this recent work, which will enable us to test some hypotheses concerning the period that is the object of our research.

2. ARCHEOLOGICAL AND PALEOECOLOGICAL DATA

In terms of the middle reaches of the Cávado basin, our data relates to the Sola (Braga) settlement, where two occupations have been identified that can be dated to within the first half of the second millennium BC (Sola IIa, XIX-XVII BC and Sola IIb, XVII-XVI BC). The settlement is located on a low hill which slopes gently into the neighbouring valleys and is well drained. The class A soils which surround it also offer excellent conditions for farming. Within the 1st theoretical site exploitation territory, the inhabitants of Sola would have reached the alluvial valley of the Cávado and the river itself, and would also have been able to benefit from all the resources associated with this type of ecological system.

Macrofloral remains of cereals (millet), legumes (*Ficia Vaba* L.) and cruciferae (*Brassica*) were excavated from Sola IIb, in addition to remains of fruit such as acorns, a *Corylus avellana* L pericarp, the remains of a grape vine (AIRA RODRIGUEZ & RAMIL REGO 1995: 33), and a *Pyrus* seed.

In both occupations pollen columns were studied. At Sola IIa a continuous cereal curve was revealed and at Sola IIb, the presence of arable plants or weeds.

At the Sola IIb occupation, structures classified as storage areas were identified. We refer here to pits cut into the red sandy clay, one of which contained acorn and cork remains, material which provides excellent insulation against damp. It is also worth noting that this was found in the highest area of the settlement, which afforded better ventilation and drainage (BETTENCOURT 1999; 2000a).

In relation to the course of the lower Neiva, the vestiges of sedentism and farming activities are indirect. A necropolis has been recorded and a study of the bones will be undertaken soon. It has been dated at between the end of the 14th and the middle of the 12th centuries BC (CRUZ & GONÇALVES 1998/1999, BETTENCOURT 1999, 2003). We are referring here to Agra de Antas (Esposende), where, so far, approximately 12 adult and child flat graves have been discovered. This important archaeological station is located on a low-lying plateau, provided with soils which are good for farming.
In conjunction with this data, we would like to emphasise the inferences that can be drawn from the excavations of the Tapada da Venda/Pedroso (Celorico de Basto) settlement, in the Ave valley, where an occupation existed in the third quarter of the 2nd millennium BC (15th-13th centuries), in addition to other, more recent, ones. Here irregular slabs of broken stone have been excavated, which we have classified as relating to storage areas and areas for processing cereals and other agricultural products. They were discovered in association with silo-pits that had been cut into the red sandy clay and a relative abundance of cereal and cruciferae seeds, amongst other species.

This site is located on an extensive plateau of medium altitude, close to a small, well-irrigated alluvial valley (BETTENCOURT et al 2002b).

The Vale Ferreiro (Fafe) archaeological station, situated at the summit of a small, low hill in the middle of the Ave valley, also belongs to this period. Here a burial ground dating from between the mid 21st century to the end of the 20th century BC and not visible in the landscape has been discovered, together with a pit whose function has not yet been determined dating from the end 18th century to the start of the 15th century BC (BETTENCOURT et al 2002a & 2003a). Recent excavations, the results of which have still to be published, have revealed a vessel in a sub-oval pit, many other pits which are difficult to classify, some grinding equipment and, amongst other species, some cruciferae seeds.

In the Lima basin data relating to the 2nd millennium BC has been identified at the Penedos Grandes (Arcos de Valdevez) station, where it has been possible to isolate an early occupation dating from between the end of the 15th century to the start of the 13th century BC.

Penedos Grandes is situated on a hill in the lower slopes of the Soajo mountains where the Ázere and Vez rivers meet, near a large plateau and a small valley. Despite its favourable position and excellent visibility in terms of the Lima basin, this site, due to its altitude in relation to the valley lowlands, must be considered a mountain location. Although only a small area was excavated, we recovered a large quantity of domestic animal bone remains, in addition to weights for looms or netting in association with fireplaces and floors (BETTENCOURT et al 2002c).

In Prados (Arcos de Valdevez), in the midst of a large mountainous area, previously unrecorded ceramic receptacles have also been found, presently housed at the Lisbon Museu Nacional de Arqueologia (National Archaeological Museum). Prados is an area in which marshland and countless agricultural terraces predominate, linked to former summer quarters. It is an area which is extremely fertile and favourable to plant and animal husbandry, in an otherwise arid and unproductive zone which extends for many kilometres. The organic remains adhering to the inner surfaces of some vessels provide a date of between the end of the 18th century and the beginning of the 16th century BC.

In the Douro basin, in a mountainous though gently sloping area, close to marshes and flatlands and on the lower and middle platforms of the Bouça do Frade (Baião) settlement, there is an occupation dating from the Early/Middle Bronze Age in which there is frequent evidence of silo-pits cut into the red sandy clay. There is even a radiometric dating for the middle platform which places it at the transition from the first to the second quarter of the 2nd millennium BC (JORGE 1996 and personal communication).
Pollen data for this specific period in the coastal strip of the Entre-Douro-e-Minho region is scarce. In addition to the existing data for the two occupations in the Sola settlement (in the Cávado basin) we are only aware of that discovered in the coastal deposits at Aguçadoura (Póvoa do Varzim) in the Ave basin, the results of which, due to the nature of the geographical assumptions underlying the survey, basically represent local flora (GÓMEZ–ORELLANA et al 2001). To improve the situation, we have decided, in collaboration with Luís Gómez–Orellana and Pablo Ramil Rego of the University of Lugo, to undertake a pollen analysis of a column extracted from the Arga (Viana do Castelo) mountains, which will consolidate information on paleoenvironmental and paleoclimistic conditions in the lower and middle reaches of the Minho and Lima basins. We have also decided to search for new levels in the Ave valley which may provide paleoecological data relevant to this study.

3. DISCUSSION

Despite all these efforts, the set of data available for the area in question and for assessing this period is still sparse and fragmentary, and does not enable any broad generalisations to be made. The ideas expressed here should be seen, therefore, not as fixed points of view but rather as a part of a working method and as reflections on the period in question.

In general, what may be surmised from this set of data can be itemised as follows:

i. great obscurity of the archaeological record, often found in areas profoundly transformed by agricultural activities or urban spread;

ii. diversity of settlement strategies in geomorphological terms, representing, in effect, a "colonisation" of the various landscapes. The settlement patterns show proximity either to the valley lowlands (in the lower reaches of the river basin) or to the small valleys, marshes and damp meadowlands in the highland areas (in the upper reaches of the river basin), according to a logic of spatial occupation that seems close in some respects to that of the traditional rural settlements of the Entre-Douro-e-Minho region;

iii. generally unenclosed settlements, frequently of short/medium term duration;

iv. increase in anthropisation and domestication of the landscape, with consequent disturbance to vegetation, verified by archaeological and paleoenvironmental results (involving anthracology, zooarchaeology, archeozoology, paleoecarpology and palynology) that show a more systematic form of plant and animal husbandry and changes in the cognitive and behavioural codes related to the land;

v. adoption of new rituals linked with the concealing of prestige goods (normally of gold or bronze) in or near water, underground or close to large rocks, as seen in the Cávado valley (BETTENCOURT 1999, 2003), a situation related to a new social, economic and symbolic structuring of space and linked to a more intense colonisation of territory and the expansion of cultivated areas and areas beneficial to plant and animal husbandry.
If the data presented here, or previously published, facilitate arguments which make any of the above items plausible, we feel it is necessary to explain those which serve as a basis for the presuppositions contained in points iv and v more fully.

It is possible to infer, as a result of the paleoenvironmental data pertaining to the Sola settlement, that there was an increase in the domestication of the landscape in the Cávado basin. From this data we could define an unenclosed landscape, with few arboreal features and signs of marked anthropisation. There are also indications of intensive burning and advanced states of vegetation disturbance preventing forest regeneration, evident in the presence of Pteridium, Asphodelus, Cistaceae, Ericaceae and Legumes, both in the pollen diagram and in the anthropological results. We consider this to be related to animal and plant husbandry, given the presence of macrofloral cereal remains and the continuous cereal curve in the pollen diagram for Sola IIa (BETTENCOURT 1999, 2000a, FIGUEIRAL 2000; FIGUEIRAL & BETTENCOURT, to be published, RAMIL REGO & AIRA RODRIGUEZ 1995).

The data from the Douro basin is also relevant in validating this hypothesis. According to Figueiral (1990), the anthropological data collected and analysed from the various platforms of the Bouça do Frade settlement shows a landscape which had suffered from disturbance to vegetation, with strong indications of anthropic activity, mainly burning and farming in the surrounding area. At the time, these characteristics were merely attributed to occupation in the Late Bronze Age, dating from the beginning of the 1st millennium BC, but new data on the chronology of this settlement enables us to pre-date this to occupations that took place in the 2nd millennium BC (BETTENCOURT 1999).

Equally, the geomorphological location, the internal features and the ecofacts of the Tapada da Venda settlement, in addition to the ecofacts from Penedos Grandes, seem to support the hypothesis of populations irreversibly linked to the land by plant and animal husbandry. Moreover, the lowland location of the Agra de Antas necropolis and of many other necropolises and graves of this period (Alto da Vela/Gulpilhares, Belinho, Cavaleira, Cista da Anha, Monte da Ola, Quinta de Cima de Vila, Vale Ferreiro 1 and Vilar) in the lower reaches of the basins of the Ave, Câvado, Douro, Nêiva and Lima and invisible in the landscape, indicate a new form of ritual appropriation of space which can only be understood within the framework of societies that were effectively settled on the land for a prolonged period of time (BETTENCOURT 1999, 2003).

We believe that the communities that were the most sedentary and the most involved in farming must have lived near to their cemeteries, as may have been the case with those who occupied the lower and middle platforms of the Bouça do Frade settlement, a few dozen metres away from the Tapado da Caldeira necropolis or the Talhoz settlement close to Agra de Antas.

In relation to this proposition, it is worth noting, however, that there is evidence of tombs from this period that seem to be located well away from residential areas. This seems to be the case at Outeiro de Gregos 1 and at Meninas do Crasão 4, in the Douro basin, or with the various recycled megalithic monuments. Possibly communities associated with the construction of cairns or those who re-used former tombs had a more itinerant lifestyle, essentially linked to animal husbandry. By way of an example, we may surmise that the Penedos Grandes (Arcos de Valdevez) settlement was more seasonal and pastoral in nature, and it is roughly 2km away from the megalithic monuments of Chã das Arcas (Cunieira), where broad-sided vessels which may belong to this period, have been deposited.
The hypotheses posed here reflect a mosaic of situations which need to be defined more accurately and which probably correspond to different forms of occupation and exploitation of the land, as well as to different cultural traditions in the 2nd millennium BC in northern Portugal, which seem to be governed above all by a diversity of lifestyles and by their apparent obscurity.

**Chronology of the stations cited**

**OxCal version3.5 (Oxford University). INTCAL98 (24,000-0 cal BP)**

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