

# LANDSCAPE & IMAGINATION



*Towards a new baseline for education  
in a changing world*

Conference, Paris 2 - 4 May 2013



Bandecchi & Vivaldi  
Editori e Stampatori

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# The Terva Valley Archaeological Park/Pavt: Building a Landscape with Archaeology

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**Abstract:** The Upper Terva River Valley presents an interesting pattern of occupation evolution, which will provide a glimpse of the valley's landscape past through known archaeological remains and future research. The knowledge already garnered, coupled with the recognized importance of the Upper Terva River Valley's heritage justifies a convergence of interests and actions towards: a sustained valorisation and integrated management of the existing heritage to promote its wider dissemination; the creation of public services; the increase of Boticas' cultural value and the internationalization of its ancient history and identity. Therefore, Boticas Municipality and the University of Minho came together with the mutual interest of promoting the development of an ambitious cultural project: the creation of the Terva Valley Archaeological Park/ PAVT.

**Keywords:** Cultural landscape, social identity, heritage management

## I. The Upper Terva River Valley

The Terva River is a right bank tributary of the Tâmega River and flows from north to south. Throughout the first 8km its course is delimited to the east by the Pastoria Mountain and to the west by the Leiranco Mountain. These reliefs meet the North in Ardãos/ Seara Velha and form the headwater where the Terva river originates from several water lines, such as the Calvão, Sangrinheira and Videeiro streams that drain the slopes before coming together in the Sapelos area.

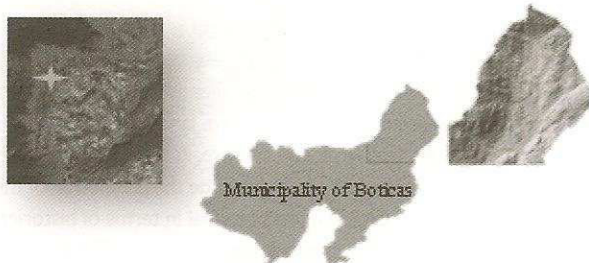


Fig. 1 Project location. Source: Google Earth, Municipality of Boticas, UAUM.

This initial section of the Terva River is referred to as the Upper Valley. It configures broad flattened alveoli punctuated by several hills where the granite masses modulated by late hercynic movements emerge. Several of those masses present veins or lodes of quartz that integrate gold mineralization corresponding to primary deposits.

The woodlands have a great level of biodiversity, boasting a faunal and floral variety that qualifies the Upper Terva River Valley as an interesting area in terms of preservation both at national and regional levels.

Concerning the flora, 480 vascular plant taxa were registered, revealing a high and well preserved diversity conferring a special importance to this area. The great floral diversity, which includes rare and protected species, is the result of the bio-geographical framework of this territory, located in the border of the great Euro-Siberian and Mediterranean regions.

Among the identified 480 taxa are included 10 Pteridophytes (Ferns), 2 Gymnosperm (2 Pines) and 468 Angiosperms, 8 of which are legally protected species including some rare Iberian ende-

misms - *Veronica micrantha*; *Festuca elegans*; *Festuca summilutana*; Angel Tears (*Narcissus triandrus*); *Narcissus bulbocodium*; Butcher's Broom (*Ruscus aculeatus*); Mountain Arnica (*Arnica montana* subsp. *atlantica*); *Scrophularia herminii*.

The fauna inventory registered 96 species of birds, including the European Nightjar, Montagu's Harrier and the Common Rock Thrush; 15 species of reptiles, including the European Pond Turtle; 33 species of non-flying mammals (including Roe Deer, Wild Boar and Wild Cat) and 8 species of bats. In addition, 4 species of fish were also registered as well as more than 100 species of invertebrates, 77 of which are spiders. A harsh climate has moulded the communities' lifestyle, and the basis of their economic system lies in agro-pastoral activities anchored by strong communal ties (Fig.2).

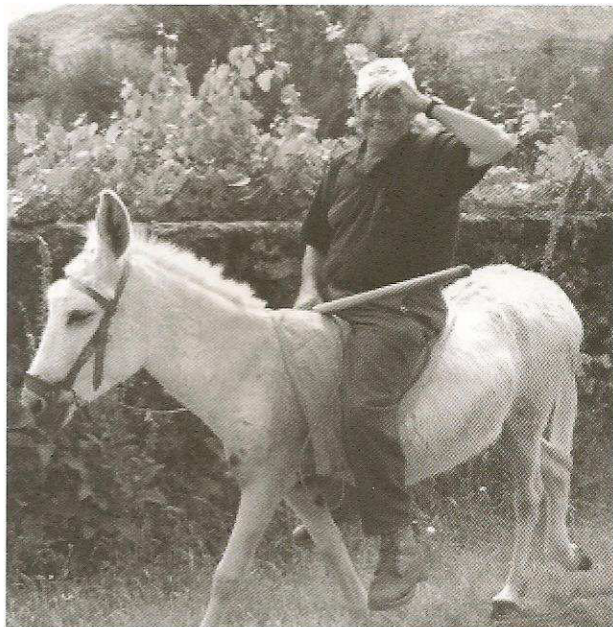


Fig. 2

Throughout the centuries and in the course of the daily struggle for survival, a very close relationship between human activities and nature was created in an attempt to preserve the balance of the frail ecosystems. Therefore, the life of people revolves around the precious resources essential for their survival: water, land and ani-

mals. The knowhow, refined by ancestral practices and passed on from generation to generation, is materialized in several everyday artefacts lovingly preserved by the populations, and displayed at the *House of Memories* (Casa das Memórias).

## 2. Living Landscape - Cultural Landscape

The contemporary human occupation in the Upper Terva River valley (Boticas, North Portugal), is concentrated in 5 villages of medieval origin, located at the valley's edges and associated with farmlands exclusively positioned around them. The Upper Terva River valley conserves multiple snapshots of its past use, which combined reveal quite a particular landscape assemblage.

The distinct use that human communities made of the valley's natural resources throughout time seems to follow two basic trends: until the end of Roman Times the exploitation of mineral resources seems to have been dominant; from the Middle Ages onwards there was a shift towards the exploitation of agro-pastoral resources, which became the main economic activity (Fig.3). Considering the human occupation of the territory it can be observed that the sparse and residual Chalcolithic and Bronze Age settlement gave rise to an expanding Iron Age occupation with nine known hill forts, located amongst the high borders of the valley. We believe that this settlement density cannot be dissociated from the type of mineral and metal resources existing in the geological substratum of the region, including its gold deposits.

These mineral resources were, in fact, the engine for the Romanization process in the Upper Valley and it is precisely in this period that we observe the intensive exploitation of gold deposits with profound impact on the landscape, still visible in the mining sites of Brejo, Sapelos, Poço das Freitas and Batocas.

In the Medieval Ages we observe a significant change in the settlement patterns with an increasing interest for the valley lowlands where the existing five villages of the upper valley were founded: Ardãos, Nogueira, Bobadela, Sapelos and Sapiãos.



Fig. 3 (a,b,c) Settlement Evolution: Iron Age, Roman Period and Medieval Age. Source: UAUM.

## 3. The PAVT Project

Nowadays archaeological knowledge and the recognized importance of the Upper Terva River Valley's heritage justifies efforts to secure the convergence of interests and measures to guarantee sustained valorisation and integrated management of the existing heritage, with the intention of promoting its wider dissemination, the creation of services, the cultural value of Boticas and the internationalisation of its ancient history and identity. Therefore, the Boticas Municipality and Minho University came together with the mutual interest of developing an ambitious cultural project and creating the Terva Valley Archaeological Park/ PAVT.

Presenting this landscape as a sustainable way of making this ter-

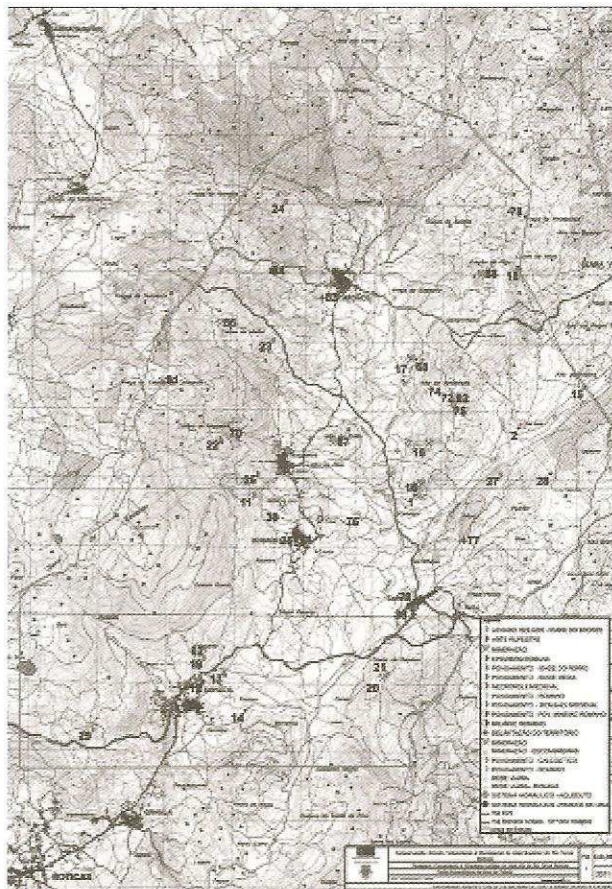


Fig. 4 PAVT archaeological chart. Source: UAUM.

ritory and its past known, the PAVT Project is expected to be an Archaeological Park with a continuous geographical character, integrating a set of historical, archaeological and natural monuments, which reveal the essence of the distinctive landscape used by the several communities that lived, and still live, in this territory today. The main objective of the PAVT will always be the promotion of this particular territory, by exploiting its potential in terms of historical, ethnographic and environmental sustainable tourism (Fig. 4).

The Bobadela Interpretation Centre (CIB) will be the center for PAVT recognition. The exhibition contents are designed to be the link between the landscape and on-site heritage realization, through the suggested itineraries. The CIB is conceived as a state of the art multimedia interpretative center, oriented towards a close interface interactive system, with several virtual and sensorial experiences for the visitor.

### 3.1 Landscape & Research

The dynamics of this area are complex, requiring a persistent, active and cross-scale reading. Understanding the forms of the landscape construction in the Upper Valley of the Terva River, in order to valorise it, is an essential step in our research.

Regarding this project, the Archaeology Unit of the University of Minho is developing advanced research analysis concerning landscape archaeology, long term settlement analysis and ancient mining and palaeoenvironmental changes due to settlement features.

The overall objective is to understand the landscape's construction process concerning the different settlement patterns. A solid scientific data set is being created to obtain detailed and accurate cartographical base maps for the entire valley, prerequisites for the identification of new archaeological sites and for the enlargement of the existing information for the sites already known, as well as

for the understanding of the different settlement patterns associated with the different uses of the landscape and its resources. In addition, we are also intending to understand the subsequent use costs for the environment and for the landscape in long-term diachronic frames.

Thus, large extensive and intensive archaeological surveys were performed, in order to obtain the historical reading of the valley area. The archaeological excavations conducted in the mining settlement of Batocas provided confirmation of the existence of a major building complex, unequivocally associated with a Roman mining complex, presenting evident traces of gold foundry. The results of this research reaffirmed and highlighted the existence in the Roman period of communities dedicated to the intensive exploitation of gold in various areas of the Upper Valley of the Terva River (Fig. 5).

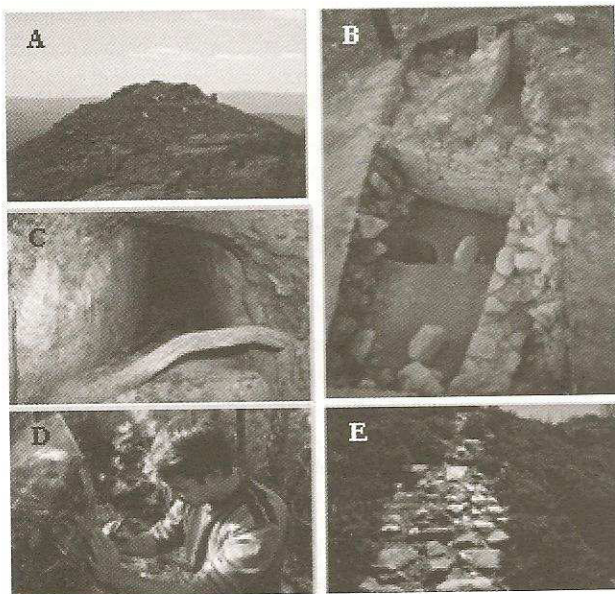


Fig. 5 A: Nogueira Hillfort; B: Batocas Roman Settlement; C: Poço das Freitas Mining Gallery; D: Technical Surveys; E: Sapelos Hillfort Wall. Source: UAUM.

We are also conducting palaeoenvironmental studies by collecting data in lacustrine deposits to achieve pollen columns that may illustrate not only the environmental consequences of the mining activity, but also the changes that occurred in the vegetal cover of this area over time. Additionally, samples from selected soil horizons for micromorphology studies are being collected.

### 3.2 Landscape & Management

Aside from the project development, the Archaeology Unit of the University of Minho submitted a request for the integration of the Upper Terva River Valley Ancient Mining Complex in the Public Interest Sites List. This petition was approved by the responsible governmental institute, IGESPAR, and is currently in the final stage of approval.<sup>1</sup> This classification endorses a great level of protection for the three mining sites identified, Poço of Freitas, Brejo and Batocas, delimiting a Special Protection Zone (ZEP) for each of them, requiring that any action involving soil disturbance be subject to previous archaeological survey, according to the National Heritage Laws (Fig. 6). Municipal Land Use Planning already defines the archaeological sites of Brejo and Batocas as "Cultural Spaces", permitting only the creation of study and/or public amenity facilities in these areas. The commendation from National Heritage policies endorses the future management plan being designed for

### Complexo Mineiro Antigo do Vale Superior do Rio Terva

Freguesias de Ardãos e Bobadela, Concelho de Boboia

1 - Poço das Freitas, 2 - Batocas, 3 - Brejo

● Imóvel a classificar - SIP

○ Zona Especial de Protecção



Fig. 6



Fig. 7

the PAVT Archaeological Park, which, according to Portuguese law, must incorporate archaeological, biophysical, architectural, socio-economical and landscape charts, as well as a full programme for the conservation, management and divulgation of the heritage in the territory of the Archaeological Park. The PAVT should provide an added value for local economics and for this it is essential to create and stimulate a cohesive synergy between the Archaeological Park's structure and local entrepreneurship, developing the Terva Valley into a cost-effective and sustainable economic model.

### 3.3 Landscape & Social Commitment

The communities of the Upper Terva Valley are made of real, authentic and welcoming people who love to share their knowledge once treated with respect.

The involvement of the local communities in the project's development has always been a major objective. For that reason, educa-

tional sessions were held in the valley's villages in order to present the project's activities and objectives to the local populations, so that they can feel a part of it themselves (Fig. 7).

Alongside these information sessions, we have also supported local cultural activities by providing training and consultation when needed. Last August the Municipal Annual Parade took place, where one of the villages, Bobadela, made a recreation of the Roman period, with our scientific guidance and logistical support.

#### 3.4 Landscape & Education

For the last three years we have been in contact with the local teaching community by participating in the annual meetings organized by the municipality in order to present the different aspects and values of the Upper Valley's natural and archaeological heritage. Additionally, training sessions involving the research team's biologists are scheduled for different schools in order to inform the local students about the biodiversity of the valley.

The University of Minho as a certified training institution has been providing its archaeology graduate students with the opportunity to develop several technical skills in the project area. Education and training is a fundamental aspect of this project's planning. In fact, heritage should be handled as a structural tool for future generations. Education towards the value of this non-renewable resource and making people feel part of their own authentic values is crucial for responsible landscape management and its sustainable preservation. Our fundamental role within the local communities is to pass on our belief that it is possible to ensure the future by conserving the past.

#### 4. The Future Ahead

A cultural landscape is an inalienable public asset. However, the conceptualization of landscape as a product for consumption must be changed into a tool for landscape preservation through sustainable use and for the maintenance of traditional practices. The stimulation and conservation agents of this type of scenery are, undoubtedly, the communities that maintain it as a living landscape. This project is designed with the ambition of providing heritage conservation through the sensorial on-site experiencing of the aspects that make it unique. Regardless, the true success of the PAVT Archaeological Park will be measured in the proportion of the collective awareness of the increased value of its territory if preserved.

The promotion of the Upper Terva River Valley's heritage values will allow the development of the local economy, also acting as an anchor for the growth of effective residents in these communities, currently affected by an increasing rate of population loss.

Conceived over an extraordinarily well preserved cultural landscape we expect the PAVT Archaeological Park to pave the way for sustainable maintenance and responsible development of this territory and its populations.

Overall, this is a complex multidisciplinary research project, oriented towards the enlargement of scientific knowledge about the Upper Valley whose results are expected to impact on the local populations, by incorporating a sustainable valorisation plan, designed to educate them about the exceptional potential of their heritage values, both archaeological and environmental.

#### Notes:

<sup>1</sup> Portuguese Republic Diary, 2.<sup>a</sup> Series, N.º 206, 24th of October, 2012

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