Introduction.
Archaeology of the Uplands: searching for models and methodology in high-altitude human-shaped landscapes. Lessons learned and future challenges.

Cristiano Putzolu

cristiano.putzolu@unibo.it - Dipartimento di Storia Culture Civiltà, Alma Mater Studiorum Università di Bologna

Federico Zoni

federico.zoni@unibg.it - Dipartimento di Lettere, Filosofia, Comunicazione, Università degli Studi di Bergamo

Introduction

The present volume originates from a session we chaired at the 2024 LAC conference, expertly organised at Alcalá de Henares by Pilar Diarte-Blasco, Almudena Orejas, and Brais X. Currás from the Spanish National Research Council (CSIC) and Manuel Castro Priego, and Primitiva Bueno Ramírez from the University of Alcalá.

By presenting a session entitled "Archaeology of the Uplands: Searching for Models and Methodology in High-Altitude Human-Shaped Landscapes", our primary objective was to foster dialogue among scholars working in different mountainous regions and across diverse chronological contexts, focusing on the complex and evolving relationships between human communities and mountain environments.

From later prehistory to the Classical period and the Middle Ages, interpretations of upland landscapes have often relied on explanatory models that are repeated with little critical reassessment. Our intention was that reflecting on the methods and theoretical frameworks that underpin our research would offer an opportunity to evaluate whether current fieldwork strategies and analytical approaches remain adequate or require refinement.

The session sought to explore which characteristics may be regarded as intrinsic to mountainous landscapes more broadly, which are shaped by specific geographical settings, and which are instead contingent upon particular historical periods. The discussions that took place during the conference and the contributions collected in this volume suggest that recurring patterns and processes can be identified across regions and periods, but that their social, economic, and political organisation remains historically contingent. But comparability should not be mistaken for uniformity: recurring mountain constraints may generate historically different responses. A diachronic perspective is therefore essential for recognising both patterns and discontinuities (Angelucci *et al.* 2023; Avanzini and Salvador 2022; Salvador 2022).

Discussing the exploitation of the Hindu Kush and Himalayan regions during the colonial period, Hermann Kreutzmann has recently underscored the Eurocentric tendency to portray mountain communities as characterized by "a high degree of backwardness and economic stagnation and a low level of civilization", thereby neglecting the deep historical trajectories of these regions (Kreutzmann 2024).

Similarly in Southern Europe—which is the regional frame of all the papers presented in this issue—contemporary understandings of mountain settlement may be conditioned by present-day demographic realities, leading to the projection of modern patterns of depopulation onto the past, particularly in those upland regions that have experienced sustained demographic decline since the First Industrial Revolution. Much of the mountainous landscape visible today is the product of profound socioeconomic transformations that began in the second half of the nineteenth century, when agriculture in many upland areas became progressively less competitive. This process triggered a sustained demographic decline that, in many regions, is still ongoing (Bätzing, Perlik, and Dekleva 1996, 348). Among its most significant consequences has been a widespread transformation of land use and land cover, with the abandonment of agricultural and pastoral activities promoting the natural reforestation of extensive areas (Anselmetto, Weisberg, and Garbarino 2024).

Mountain archaeology, therefore, should be understood as the study of the multidimensional relationships between upland communities, their environments, neighbouring societies, and the broader economic systems in which they were embedded. This perspective aligns with recent developments in human ecology by shifting the focus from static human–environment interactions to the transformation of landscapes over the *longue durée*, interpreted through the complementary concepts of affordances and ecosystem connectivity (Kempf 2020). Mountain landscapes should therefore be treated not as passive settings but as historical products of interactions between communities and changing environments. This requires linking sites to wider territorial, environmental and historical records (Angelucci et al. 2023; Stagno 2023; Quirós Castillo 2023).

In the chapter *Theoretical Approaches to Mountain Archaeology*, included in *The Oxford Handbook of Mountain Archaeology* (Carrer *et al.* 2024), Mark Aldenderfer (2024) distinguishes between "tried-and-true" theoretical orientations and a series of emerging perspectives. The former include (i) History and Ethnohistory, (ii) Culture History, and (iii) Cultural or Human Ecology, Historical Ecology, and Landscape Archaeology, whereas the latter encompass (iv) Montology and (v) Environmental Humanities.

A brief examination of these five approaches serves as the guiding thread for introducing the six contributions that follow.

(i) History and Ethnohistory. The importance of historical sources for archaeological research has been recognized since the earliest stages of the discipline. William Martin Leake's investigations, guided by Pausanias' Hellados Periegesis, and Heinrich Schliemann's excavations, inspired by the Homeric epics, remain two of the best-known examples of the productive interplay between textual and archaeological evidence. Beyond their value for identifying previously unknown archaeological sites,

historical sources also provide crucial evidence for reconstructing past landscapes and environments that have subsequently been transformed or lost.

(ii) Culture History. When studying landscapes, establishing a secure chronological and cultural framework for archaeological sites and material culture is essential. In mountain environments, where research is often hampered by limited accessibility and uneven archaeological visibility, this becomes an even greater methodological priority.

(iii) Cultural or Human Ecology, Historical Ecology, and Landscape Archaeology. Cultural ecology has become a major influence on the study of southern European mountain landscapes since the anthropological research on Alpine communities and their adaptive strategies carried out in the 1970s (Cole and Wolf 1974). Today, the importance of land use, access to raw material sources, and agropastoral economies is firmly established within mountain archaeology. Consequently, models exploring patterns of mobility, exchange networks, horizontal and vertical transhumance, and the exploitation of plant and animal resources have become fundamental tools for understanding the long-term dynamics of mountain landscapes. Within this framework, Palaeoenvironmental and archaeobotanical archives can reveal forms of human intervention that settlement evidence alone may miss, including clearance, grazing, cultivation, fire and abandonment. They are therefore historical sources, not simply reconstructions of environmental background (Furlanetto et al. 2023; Furlanetto et al. 2025; Saggioro 2025). Their interpretative potential becomes particularly significant when environmental change is read as the material outcome of historically situated practices. Rather than treating clearance, grazing or woodland management simply as forms of 'human impact', they can be approached as practices through which communities organised resources and actively produced mountain landscapes. Palaeoenvironmental evidence cannot, by itself, identify specific social actors or their intentions; agency becomes historically meaningful when environmental proxies are brought into dialogue with evidence for the ways land and resources were used, controlled and negotiated (Stagno 2023; Quirós Castillo 2023; Salvador 2022).

(iv) Montology. Although the term was coined as early as 1977 (Neustadtl 1977), Montology has only recently gained prominence as a transdisciplinary approach to the study of mountain regions. It places particular emphasis on the ways in which local communities understand, experience, and interact with their environments. In this respect, community-based participatory research shares a similar commitment to recognizing the central role of local actors in the production of knowledge about mountain landscapes.

(v) Environmental Humanities. The Environmental Humanities seek to develop narratives of landscapes by considering the broad spectrum of human and non-human actors that shape them. Particular attention is paid to the cultural dimensions of place, including the traditions, deities, saints, sacred and mysterious places, toponyms, and oral histories of local communities. Together, these elements contribute to what Quintman (2008) terms the geographic biography of a place, a concept that lies at the heart of this approach.

Overview of the volume

The contributions presented here share a common concern with the development of new narratives for mountainous landscapes, which have too often—within archaeology as well as in other fields—been examined and interpreted through the prism of contemporary conceptions of uplands as liminal spaces. At the same time, read through the lens of the five perspectives mentioned above, they highlight the importance of multiple approaches in present-day research on mountainous landscapes.

The first case study, by Bellandi *et al.*, presents the results of twelve excavation campaigns at the high-altitude site of Tor dei Pagà in the upper Valle Camonica (Italian Alps). The site, a Late Medieval defensive structure, is introduced through a seventeenth-century manuscript that records its existence. Building on this documentary evidence, the authors examine the site's toponym ("Tower of the Pagans"), which recalls a local version of the Charlemagne legend describing the emperor's passage through Valle Camonica. By combining historical sources, toponymy, and local traditions, Bellandi *et al.* demonstrate the potential of integrating History and Ethnohistory with the perspectives of the Environmental Humanities. The archaeological interpretation of the site is grounded in the analysis of the material culture, which identifies the remains as those of a Late Medieval fortified structure built upon an Iron Age Brandopferplatz-type cult site. Environmental reconstruction for both occupation phases is based on multiple proxy datasets, including anthracological, carpological, and palynological evidence. Finally, a GIS-based viewshed analysis explores the visual relationships between the Brandopferplatz and other Iron Age sites in the surrounding landscape.

The second contribution, by Bernardi *et al.*, draws on the experience of the Monti Lucretili Landscape Project (MoLuLaP) to reconsider survey practices in mountainous landscapes. The project, carried out in the Apennines northeast of Rome, adopts a diachronic perspective to reconstruct the socio-economic dynamics that shaped the landscape from late prehistory to the Middle Ages. Confronted with the methodological challenges posed by a landscape now extensively covered by forest, the authors developed survey strategies tailored to mountain environments, integrating digital technologies for under-canopy prospection and mobile GIS for field recording. A key aspect of their approach is the explicit recognition that digital technologies are not merely tools for data acquisition but also instruments for critically reflecting on archaeological practice. Survey strategies are likewise treated as methodological choices rather than fixed procedures: in areas where visibility and accessibility are particularly constrained, point sampling is sometimes preferred over the transect strategy employed elsewhere in the study area. In keeping with the principles of Montology, the project also places strong emphasis on participatory archaeology and community engagement through initiatives including community-based mapping, targeted survey campaigns, and experimental archaeology undertaken in collaboration with local communities.

In her contribution, Carbotti presents the results of a survey of Late Prehistoric hilltop sites in ancient northern Epirus (present-day Albania). Echoing the methodological concerns discussed in the previous paper, the research combines intensive fieldwalking with digital survey techniques, primarily UAV-based photogrammetry and DGNSS positioning, adapting the methodology to the specific characteristics of each site. Particular attention is paid to surface visibility, with different surveyor spacing tested under varying field conditions. This

flexible strategy results in the systematic collection of both diagnostic and non-diagnostic artefacts, allowing the author to critically assess the effectiveness of different survey methods. Rather than treating collection strategies as fixed procedures, Carbotti compares their outcomes to refine the interpretation of site function and chronology.

Chiti *et al.* present Underlandscape, a multidisciplinary and diachronic research project spanning the Apuan Alps and the Tuscan Apennines. Owing to the region's complex geomorphological history, the study area is characterized by an extensive karst landscape, with numerous caves and rock shelters distributed across different mountain environments. Many of these sites have been investigated previously, revealing repeated phases of occupation from the Palaeolithic onwards. The paper focuses on their episodic reoccupation following their primary abandonment—from Late Antiquity through the post-medieval period and into the early modern era—and seeks to reconstruct the economic systems that underpinned these later uses. As in several of the preceding contributions, the project combines digital survey methods and other non-invasive techniques with the systematic study of historical documents and cartographic sources. Archaeological excavations at selected cave sites are integrated with landscape survey, while all newly acquired data are incorporated into a GIS alongside an extensive body of legacy data. The paper concludes by examining the historically documented practice of *compascuo* (communal grazing) and demonstrates how a multidisciplinary approach can provide new insights into long-term strategies of mountain pastoralism and animal husbandry.

Matteoni and Pupella focus on the historic built heritage of the central Italian Alps, approaching it as a material expression of local identity. Through the analysis of the masonry techniques employed in vernacular buildings associated with traditional rural activities, the authors show how architectural evidence can provide valuable insights into the cultural specificities of mountain communities. Within this framework, the GIS developed from technical and cadastral maps serves not only as a research tool for documenting and analysing the built environment but also as a means of supporting the preservation of a heritage increasingly threatened by abandonment and transformation. A key component of the project is the active engagement of local families and communities, whose participation contributes both to the documentation of traditional building techniques and to the preservation of the knowledge associated with them.

Putzolu et *al.*'s analysis of the second-millennium BCE occupation of the Emilian Apennines is grounded in a robust methodological framework that recognizes the hermeneutic potential of digital approaches to landscape archaeology. Drawing on a comprehensive gazetteer that integrates both legacy data and the most recent archaeological research, the paper seeks to reassess established narratives concerning the definition of cultural areas, the dynamics of frontier zones, patterns of intra- and trans-Apennine mobility, and the identification of territorial entities through GIS-based geospatial analyses. The resulting framework moves beyond traditional settlement-pattern analyses by offering a more nuanced understanding of the spatial distribution of human occupation across the river basins of the Emilian Apennines and by proposing interpretative models that combine mobility, territorial organization, and the perception of mountain landscapes.

Lessons learned and future challenges

The contributions collected in this volume suggest that mountain archaeology cannot be reduced to the application of conventional archaeological methods at higher elevations. The particular visibility and preservation of the upland record often disperse evidence across sites and landscapes and across very different kinds of archives. Diachronic and interdisciplinary approaches are therefore not simply desirable: in many mountain contexts they are a methodological necessity (Angelucci et al. 2023; Aldenderfer 2024).

A first lesson concerns the status of the environment itself. The landscapes visible today should not be treated as stable ecological backdrops or as direct proxies for past conditions. Palaeoenvironmental and archaeobotanical studies increasingly show that present-day mountain environments are the outcome of long histories of intervention, reorganization and abandonment. Environmental reconstruction thus becomes part of historical reconstruction, allowing archaeology to ask not only where people lived, but how their practices reshaped mountain territories. (Anselmetto, Weisberg and Garbarino 2024; Furlanetto et al. 2023; Furlanetto et al. 2025; Saggioro 2025).

A second lesson concerns agency. Environmental change cannot automatically be translated into the intentions of a specific community. Yet, when environmental proxies are integrated with archaeological and historical evidence, they can reveal the cumulative effects of practices through which local groups organized and negotiated access to resources. From this perspective, the landscape is not simply a set of resources available to mountain communities, but one of the material arenas in which social relations were produced and reproduced. (Stagno 2023; Quirós Castillo 2023; Salvador 2022).

This also calls for caution when using continuity as an interpretative category. Similar forms of mountain exploitation may recur over very long periods without implying continuity in the societies that sustained them. The same resource could be incorporated, at different times, into very different systems of access, labour and authority. Long-term continuity in the use of mountain resources should therefore not be confused with social or economic immobility. (Salvador 2022; Avanzini and Salvador 2022; Stagno 2023).

Mountain environments may create recurring constraints, opportunities, and affordances, but the ways in which communities respond to them are historically contingent. Rejecting the image of uplands as timeless or marginal spaces consequently means recognizing mountain landscapes as historical products, continuously reshaped through the interaction between environmental change and human practices. A major challenge for future research will be to compare these long-term dynamics without flattening chronological differences, and thus to recover the distinct historical trajectories through which communities made and inhabited upland landscapes. (Kreutzmann 2024; Kempf 2020; Angelucci et al. 2023).

As Saggioro argues in the concluding contribution to this volume, a productive way forward for mountain archaeology is to move from elevation to system: upland sites acquire historical meaning when reconstructed within the networks of resources, mobility, practices and institutions that connected different environmental zones. In this perspective, mountain

landscapes emerge not as static ecological settings, but as historically produced and continuously reorganised socio-environmental systems (Saggioro infra).

References

Aldenderfer, Mark. 2024. "Theoretical Approaches to Mountain Archaeology". In *The Oxford Handbook of Mountain Archaeology,* edited by Francesco Carrer, Martin Callanan, Philippe Della Casa, Federica Fontana, Sabine Reinhold, and Hayley Saul. (online edn, Oxford Academic, 22 May 2024 -). https://doi.org/10.1093/oxfordhb/9780197608005.013.2.

Angelucci, Diego E., Enrico Croce, Mara Migliavacca, and Fabio Saggioro. 2023. "Per un'archeologia di montagna: alcune riflessioni". In *Montagne e Archeologie*, edited by Diego E. Angelucci, Enrico Croce, Mara Migliavacca, and Fabio Saggioro, 153–159. Sesto Fiorentino: All'Insegna del Giglio.

Anselmetto, Nicolò, Peter J. Weisberg, and Matteo Garbarino. 2024. "Global change in the European Alps: A century of post-abandonment natural reforestation at the landscape scale". *Landscape and Urban Planning* 243, 104973. https://doi.org/10.1016/j.landurbplan.2023.104973.

Avanzini, Marco, and Isabella Salvador (eds). 2022. *Memorie di terre alte. Archeologia di un paesaggio pastorale tra Pasubio e Piccole Dolomiti*. Trento: MUSE - Museo delle Scienze.

Bätzing, Werner, Manfred Perlik, and Majda Dekleva. 1996. "Urbanization and Depopulation in the Alps (with 3 Colored Maps)". *Mountain Research and Development* 16.4: 335-350.

Carrer, Francesco, Martin Callanan, Philippe Della Casa, Federica Fontana, Sabine Reinhold, and Hayley Saul (eds). 2024. *The Oxford Handbook of Mountain Archaeology*. (online edn, Oxford Academic, 22 May 2024 -). https://doi.org/10.1093/oxfordhb/9780197608005.001.0001.

Cole, John, and Eric Wolf. 1974. *The Hidden Frontier: Ecology and Environment in an Alpine Valley*. Academic Press.

Furlanetto, Giulia, Davide Abu El Khair, Federica Badino, Paolo Bertuletti, Roberto Comolli, Valter Maggi, Renata Perego, and Cesare Ravazzi. 2023. "Forest ecology and fire history of the mixed conifer forest belt in the Italian Alps from Late Roman fires to the 20th century under cultural and climate pressure". *Review of Palaeobotany and Palynology* 312: 104864.

Furlanetto, Giulia, Renata Perego, Marco Stefano Caccianiga, Roberto Comolli, Laura Ferigato, Giulia Frigerio, and Cesare Ravazzi. 2025. "Pastoralism and mining activities affecting timberline ecosystems in the Italian Alps during the last millennia". *Anthropocene* 51: 100478.

Kempf, Michael. 2020. "Modeling multivariate landscape affordances and functional ecosystem connectivity in landscape archeology". *Archaeological and Anthropological Sciences* 12: 159. https://doi.org/10.1007/s12520-020-01127-w.

Kreutzmann, Hermann. 2024. "Mountain Exceptionalism Perceived and Defined." In *The Oxford Handbook of Mountain Archaeology,* edited by Francesco Carrer, Martin Callanan, Philippe Della Casa, Federica Fontana, Sabine Reinhold, and Hayley Saul. (online edn, Oxford Academic, 22 May 2024 -). https://doi.org/10.1093/oxfordhb/9780197608005.013.1.

Neustadtl, Sydney. 1977. "Montology: The Ecology of Mountains". *Technology Review* 79.8: 64–66.

Quintman, Andrew. 2008. "Toward a Geographic Biography: Mi la ras pa in the Tibetan Landscape". *Numen* 55: 363–410.

Quirós Castillo, Juan Antonio. 2023. "Aistra a lo largo de la historia: las sociedades locales y las identidades de las élites en la Alta Edad Media". In *Arqueología de las sociedades locales en la*

Alta Edad Media: San Julián de Aistra y las residencias de las élites rurales, edited by J. A. Quirós Castillo and Andrew Reynolds 466–548. Archaeopress.

Salvador, Isabella. 2022. "Il ruolo delle comunità montane nella 'costruzione' e gestione dell'alpe". In *Memorie di terre alte. Archeologia di un paesaggio pastorale tra Pasubio e Piccole Dolomiti*, edited by Marco Avanzini and Isabella Salvador, 116–137. Trento: MUSE - Museo delle Scienze.

Stagno, Anna Maria. 2023. "Terre collettive, pratiche e saperi locali: una prospettiva archeologica alla dimensione sociale del paesaggio". In *Montagne e Archeologie*, edited by Diego E. Angelucci, Enrico Croce, Mara Migliavacca, and Fabio Saggioro, 129–138. Sesto Fiorentino: All'Insegna del Giglio.

Saggioro, Fabio (ed.). 2025. *Archeologia a Piuro. Scavi e ricerche su un paesaggio alpino di età medievale*. Storie di Paesaggi Medievali 8. Sesto Fiorentino: All'Insegna del Giglio.